OECD Reviews of Regulatory Reform

# REGULATORY IMPACT ANALYSIS

## A TOOL FOR POLICY COHERENCE


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# Regulatory Impact Analysis

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# *Foreword*

*Governments face increasing challenges to design regulatory systems which promote and protect the welfare of citizens. Part of this challenge is to improve the evidence basis for regulatory decision-making to ensure that regulations are only implemented if they are efficient and effective. Since the first OECD member countries adopted Regulatory Impact Analysis (RIA) in 1974 as a means of systematically improving the quality of regulation, growth in its use among members has been rapid. Currently, nearly all member countries now have regulatory management systems which require some form of RIA before new regulations are made. However, the implementation of RIA continues to present complex challenges. Experience of RIA systems is relatively recent for many OECD countries, RIA systems continue to develop and evolve in their scope and application, and the results of many reviews of the effectiveness of RIA suggest mixed success with influencing the quality of individual regulations.*

*RIA is only one part of a system of regulatory quality management but it is an important one. If it is done well it can produce significant benefits through improving the design of individual regulations. Since the publication in 1997 of* Regulatory Impact Analysis: Best Practice in OECD Countries, *the OECD has continued to analyse and commission research into methodological issues and country experiences with the conduct of RIA. This publication builds on and updates previous work by the OECD. It draws on multidisciplinary discussions held in the context of the OECD Horizontal Programme on Regulatory Reform held in 2006. It also includes subsequent analytical work developing both the methodological aspects of RIA, as well as its use for integrating competition assessment in the process of preparing new regulations. It also includes a specific contribution as an example of practical application of RIA to a consistent policy issue in multiple jurisdictions. These studies cover fundamental challenges to the effectiveness of RIA and provide guidance for resolving these challenges. They will be of use to practitioners concerned with the conduct of RIA and its application to individual regulations, and to those responsible for implementing or reviewing the performance of RIA systems.*

*Each paper contains concrete policy advice on how to improve the design and performance of RIA systems. The collection of papers in this book is intended to provide valuable, practical guidance on how to improve the potential of RIA to promote economic welfare through better quality regulation, as reflected in the OECD 2005* Guiding Principles for Regulatory Quality and Performance.

# *Acknowledgements*

*This publication was prepared and finalised by Gregory Bounds, Policy Analyst, under the direction of Josef Konvitz, Head of Division, within the Regulatory Policy Division of the OECD. The publication draws on a set of papers prepared for discussion by the OECD Working Party on Regulatory Management and Reform, the Group on Regulatory Policy as well as the Working Party on Competition and Regulation. This work was initially launched and co-ordinated by Stephane Jacobzone, Principal Administrator, Regulatory Policy Division, in the context of the OECD Horizontal Programme for Regulatory Reform. The paper "Regulatory Impact Analysis: a Tool for Policy Coherance" was drafted by Gregory Bounds. The papers on "Determinants of Quality in Regulatory Impact Analysis" and "Methodological Frameworks for Regulatory Impact Assessment" were drafted by Rex Deighton-Smith, consultant for the OECD Regulatory Policy Division. Ahmet Korkmaz, policy analyst at the OECD at that time made valuable contributions to the paper on methodological frameworks for regulatory impact analysis. The paper on "Integrating Competition Assessment in Regulatory Impact Assessment" was drafted by Rex Deighton-Smith and Sean Ennis, Principal Administrator, OECD Competition Policy Division, headed by Bernard Phillips, Head of Division. The paper "Towards Better Regulation in Corporate Governance: Experience in Implementing Regulatory Impact Assessment" was drafted by Grant Kirkpatrick, Senior Economist, for the meeting of the OECD Steering Group on Corporate Governance in November 2007. The report was prepared for publication by Jennifer Stein.*

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## ACRONYMS

| | |
|---|---|
| **BCA** | Benefit-Cost Analysis |
| **BRC** | Better Regulation Commission |
| **BTRE** | Bureau of Transport and Regional Economics |
| **CBS** | Central Bureau of Statistics |
| **CEA** | Cost Effectiveness Analysis |
| **CGE** | Computable-General-Equilibrium |
| **DfT** | Department for Transport |
| **EVA** | Economic Value Added |
| **FD** | Fair Disclosure |
| **FSA** | Financial Services Authority |
| **GDP** | Gross Domestic Product |
| **HSE** | Health and Safety Executive |
| **MCA** | Multi-Criteria Analysis |
| **MFA** | Market failure analysis |
| **MSN** | Major shareholding notifications |
| **NAO** | National Audit Office |
| **NCP** | National Competition Policy |
| **NPV** | Net Present Value |
| **OBPR** | Office of Best Practice Regulation |
| **OFR** | Operating and Financial Review |
| **OFT** | Office of Fair Trading |
| **OHSA** | Occupational Health and Safety Authority |
| **OMB** | Office of Management and Budget |
| **ORR** | Office of Regulation Review |
| **PDV** | Present discounted value |
| **RAS** | Risk Across Sectors |
| **Reg FD** | Regulation Fair Disclosure |
| **RIA** | Regulatory Impact Analysis |
| **SAB** | Science Advisory Board |
| **SEC** | Securities and Exchange Commission |
| **VSL** | Valuation of a Statistical Life |

# Executive Summary

This publication brings together recent research and analysis on important factors influencing the sucessful conduct of Regulatory Impact Analysis (RIA). It includes papers on relevant RIA topics covering methodological issues and country experiences, including; systemic factors which influence the quality of RIA, methodological frameworks which can assist RIA to improve regulation, guidance on using RIA to avoid unnecessary regulation of competitive markets and a review of the use of RIA in the regulation of corporate governance across a number of OECD countries. Taken together, this publication provides valuable, practical guidance on how to improve the performance of RIA systems to improve policy coherence and promote economic welfare through better quality regulation. It will be of use for countries with an interest in enhancing or refining the use of RIA and evaluating where a bigger investment of public resources in improvements to RIA may be of most benefit.

Chapter 1 discusses the use of RIA as an instrument to promote coherence in regulatory policy. The use of RIA has particular prominence in OECD countries as a systemic mechanism for assessing that the estimated benefits of proposed regulation exceed the estimated costs. The OECD has been a long-standing advocate of the use of RIA, recommending in 1997 that governments "integrate regulatory impact analysis into the development, review, and reform of regulations." The 2005 *Guiding Principles for Regulatory Quality and Performance* reinforced the benefits of RIA. In the context of increasing policy complexity, robust evidence-based policy mechanisms that are integrated in governance processes are important for maximising the welfare benefits of regulatory policy and minimising costs.

One of the fundamental challenges for RIA systems is ensuring that the analysis is undertaken at the inception of policy proposals, when there is an opportunity and interest in identifying the optimal approach and alternatives to regulation can be given serious consideration. How broadly RIA is applied will also influence its capacity to affect the quality of regulatory proposals. The application of RIA to regulatory instruments should be optimised to promote the best policy outcomes. Taking a proportionate approach is recommended so that the resources required by RIA are applied to those regulations likely to have the most significant impact.

Chapter 2 discusses how a focus on factors of institutional design can improve the quality of RIA. The implementation of RIA across OECD is a long-term endeavour and the experiences of OECD countries provide insights into ways of improving the overall quality of RIA. Important systemic factors that are likely to be influential in determining the quality of regulatory impact analysis are: the design of RIA processes and methodologies; the level of formal authority and political support given to the RIA process; and the

incorporation of specific quality assurance and oversight mechanisms in government to ensure that it is being performed effectively.

Chapter 3 examines the methodological frameworks for RIA. Undertaking RIA is a technically challenging exercise. Improving the methodological guidance available to practitioners can have a substantial impact on the quality of RIA and consequently, its ability to contribute to better regulation. This chapter surveys the guidance that is available to RIA practitioners and provides a reference on key topics that jurisdictions can adapt to assess and improve the quality of their own guidance material, or to commence drafting guidance material for use by policy analysts.

Chapter 4 is adapted from the 2007 *OECD Competition Assessment Toolkit*, and provides guidance on how to conduct a competition assessment on possible regulatory approaches. This chapter illustrates how even a relatively small investment of public sector resources in the removal of unnecessary restrictions on competition in regulation can have significant welfare improvements if it is done systematically. It also provides guidance on how to get maximum value by integrating competition assessment processes within the regulatory policy cycle.

Chapter 5 examines the use of RIA in corporate governance regulation by financial services regulators to strengthen their evidence-based policy-making. It is useful for policy practitioners to understand how to undertake RIA in their own field of policy interest, and to consider comparative examples of how analysts in other regulatory sectors go about it. The chapter draws on examples from OECD experience notably: Canada, Australia, the UK, US and the EU. It looks at how regulators have dealt with some of the challenges to effective RIA which include: defining the problem, undertaking effective consultation, and identifying and measuring costs and benefits. This paper makes an important contribution to this underdeveloped area of study for corporate governance and sets out an approach that could potentially be applied to the analysis of RIA experience in other regulatory fields.

Good governance processes are important to manage policy complexity and to assist governments to support an administrative culture that is well equipped to consider the consequences of policy options and to promote the economic, environmental and social welfare goals that serve the interests of citizens. The material in this publication can assist countries to improve their governance arrangements for promoting policy coherence through the incorporation of and refinements to systems for regulatory impact analysis producing more efficient regulation and delivering better regulatory outcomes.

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Regulatory Impact Analysis:
A Tool for Policy Coherence


*Chapter 1*

# Regulatory Impact Analysis: A Tool for Policy Coherence

*Chapter 1 discusses the potential for governments to improve the evidence basis for policy and promote coherence through the systematic integration of RIA in the policy process. It outlines some of the issues affecting the performance of RIA and opportunities for identifying improvements with reference to the chapters of this publication.*

## Introduction

In principle better decision-making processes should lead to better policy decisions. Policy decisions are by nature challenging, requiring a careful balance of the public interest which is not easy to determine. The rapid rate of technological development, global interconnectedness and increasing reliance on private capital to drive economic development all contribute to make the identification of public interests ever more complex. In the face of complexity, elected officials cannot abdicate their responsibility for making policy decisions to analysts. But, if governments are going to produce coherent and effective policies, it is increasingly important that political decision makers have the best advice and evidence available.

The quality of the advice provided depends largely on having robust analytical processes that are integrated with the policy making apparatus and capable of communicating information to decision makers at the time when it can have a positive influence. In political systems which rely on the exercise of delegated powers it is reasonable for citizens to expect that policy decisions take into account a prior consideration of the anticipated impacts, and are informed by the views of stakeholders that are likely to be affected by these decisions.

Regulatory Impact Analysis (RIA)[1] aims to be both a *tool* and a *decision process* for informing political decision makers on whether and how to regulate to achieve public policy goals. As a *tool* supporting decision making, RIA systematically examines the potential impacts of government actions by asking questions about the costs and benefits; how effective will the action be achieving its policy goals and; whether there are superior alternative approaches available to governments. As a *decision process*, RIA is integrated with systems for consultation, policy development and rule making within government in order to communicate information *ex ante* about the expected effects of regulatory proposals at a time and in a form that can be used by decision makers, and also *ex post* to assist governments to evaluate existing regulations.

The OECD is a long-standing advocate of the adoption of RIA by governments to ensure that regulation achieves its objectives effectively and efficiently in a changing world. The 1995 *Recommendation of the Council of the OECD on Improving the Quality of Government Regulation* promotes benefit-cost analysis of regulatory proposals and feasible alternatives to justify government action. In 1997 the OECD produced the volume *Regulatory Impact Analysis: Best Practices in OECD Countries*. The 2002 OECD report, *Regulatory Policies in OECD Countries: From Interventionism to Regulatory Governance*, identified many of the challenges for governments in implementing RIA noting that it is a long-term goal that "must involve the progressive development and dissemination of specific expertise, the refinement of implementation and control mechanisms and the achievement of change in administrative culture" (OECD, 2002, p. 51).

The updated 2005 OECD *Guiding Principles for Regulatory Quality* explicitly supports the integration of RIA in "the development, review and revision of significant regulation."

The 2007 OECD *Competition Assessment Toolkit* is predicated on the integration of competition assessment in RIA as a way of improving both competition assessment and RIA processes (OECD, 2007, p. 24 and OECD, 2008). The OECD has continued to collect experiences from members through dedicated research on the topic and also through the conduct of country studies to examine the experiences of members in promoting regulatory governance. This publication continues that tradition to disseminate the analysis of the OECD on how to improve the conduct of RIA.

The 1997 OECD publication on *Regulatory Impact Analysis: Best Practices in OECD Countries*, drew attention to the differences that were offered by RIA as a rational policy model from other models used to develop policy in governments. As an evidence-based method, RIA can be distinguished from other policy methods for reaching decisions based on the advice of trusted experts, consensus among stakeholders, partisan political position or the adoption of regulatory approaches in place in other jurisdictions. Of course the reality of policy development means that these and other decision methods will continue to be influential in policy design. Policy development is not necessarily linear and rational and the design and implementation of policy is influenced by many factors relating to the local cultural and administrative traditions and political processes.

Looking across the OECD, much has changed since 1997. As a governance process RIA now forms a core component of the regulatory management strategy of all governments throughout the OECD. As an integrated systemic procedure, it has become one of the most widely used processes for improving the quality of regulatory decision-making. The widespread adoption of RIA increases the need for information on how to improve the design of systems for undertaking RIA. A number of countries have built up many years of practical experience with the operation of RIA while others are still in the early stages of implementing their RIA systems. Country approaches to RIA systems are diverse. The papers reproduced here draw on the recent experiences of countries with methodological issues and system design, with the aim of synthesising important lessons.

It is worthwhile reiterating therefore that RIA alone is not sufficient for designing or selecting policy instruments. It is not a substitute for political decision-making. But as an empirical approach, RIA has a key role to play in strengthening the quality of policy debate by making the potential consequences of decisions more transparent and bringing more clarity to the relevant factors influencing the decision. If it is well integrated with other models for decision making, it can be a positive influence for improving policy outcomes and promoting policy coherence.

An important objective of policy is to improve the welfare of citizens. But if governments are to maximise the public value of their initiatives, it is important that government action is targeted and effective and that the benefits to society are higher than the costs. A coherent approach to regulation requires that decision makers have information about what these costs and benefits are and what the unintended effects of decisions may be for other areas of government policy. For example, a regulation that aims to improve service standards by limiting suppliers in a market may have the unintended effect of raising costs to consumers and business, inadvertently reducing productivity, increasing unemployment and ultimately preventing improvements to standards that may have come through competition. Or, as another example, the restriction of a dangerous product may stimulate an informal market for substitutes resulting in the uncontrolled use of similarly dangerous products and worse overall health outcomes. In each case regulatory

action by one part of government precipitates another possible regulatory action from another part of government. A coherent approach which identifies and anticipates these potential unintended effects before a policy is determined depends upon an *ex ante* impact assessment of the likely consequences.

In pursuit of policy coherence there is a strong case for integrating RIA practices within the administrative culture of governments. The development of policy and its adoption in regulation is a complex and involved process. Unconstrained use of regulation imposes economic costs on society, stifling entrepreneurship and competiveness. However, because the costs of regulation are diffuse and indirect and regulations are not subject to the budget constraints of fiscal policy, evidence of the costs of regulation is not always apparent. While there are limits to the cumulative amount of regulation that governments can impose on society without having a negative effect on welfare, there is no practical regulatory budget constraint as there is for fiscal budget measures. Because of this, it cannot be assumed that regulators will necessarily limit their use of regulation as a tool to achieve policy goals, even if regulation has not been demonstrated to be an efficient approach. Regulators play a vital role in delivering public policy, but without good governance arrangements such as the use of RIA, regulators do not have the tools or the incentives to examine whether an alternative approach to regulation may be a more efficient means of achieving a policy goal.

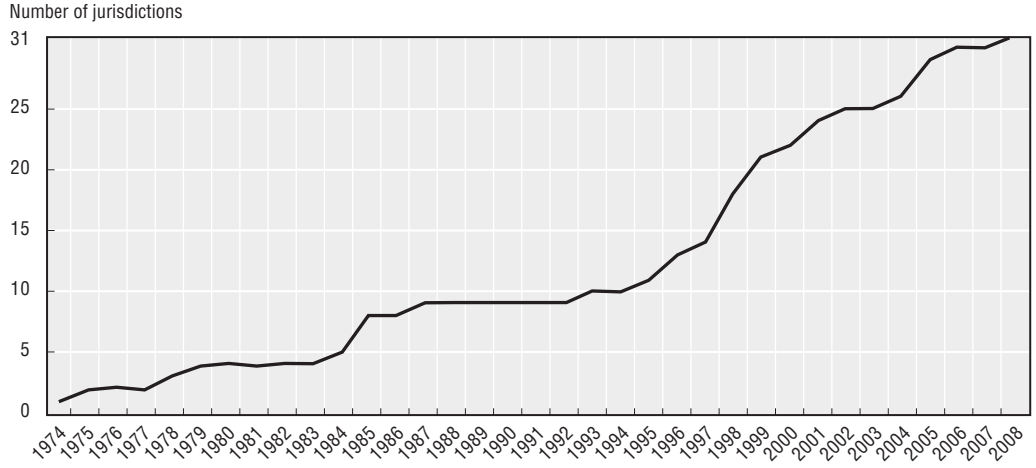
Governments are under pressure to respond to demands for social improvements, but all government action involves some sort of tradeoff. There are always groups that gain from government action and groups that lose, some stakeholders may have an incentive to demand regulation, others to remove regulation. Business groups are an important source of advice on the effects of regulation, but they also have incentives to engage in rent-seeking behaviour to improve their own economic returns at a cost to competitive outcomes. Citizens understandably want the government to regulate to remove risks, but as a group, citizens may not be aware that in some cases the costs of risk regulation may exceed the benefits to society. Not all risks can be reduced to zero, and the opportunity costs of attempts to remove some risks may have the perverse effect of increasing risks in another area of society. Regulators who act without first seeking input from groups affected by a regulation may easily fail to identify whether or how compliance with the regulation will be achieved. Regulators may also be vulnerable to regulatory capture, responding to the one-sided demands of interest groups; they may take an overly short-term view, or make reactive decisions and fail to consider the effects of their regulation on another part of government. These factors increase the risk that regulation will fail to achieve its goals and potentially reduces the coherence of government policy. This illustrates that without the oversight of good governance arrangements like those that are in a good RIA system, governments are more vulnerable to the problem of generating regulation that is excessive, unnecessary or poorly designed.

A well functioning RIA system can assist in promoting policy coherence by making transparent the tradeoffs inherent in regulatory proposals, identifying who is likely to benefit from the distribution of impacts from regulation, and how risk reduction in one area may create risks for another area of government policy. RIA improves the use of evidence in policy making and reduces the incidence of regulatory failure arising from regulating where there is no case for doing so, or failing to regulate when there is a clear need.

## Widely adopted but practised differently

An examination of RIA practices within OECD jurisdictions indicates that the adoption of RIA is now widespread, but its design and application varies significantly. In 1980 only two or three countries were using RIA. By 2000 14 of 28 OECD countries had adopted RIA programmes. The 2005 OECD survey of *Indicators of Regulatory Management Systems* (OECD, 2007)[2] (subsequently updated in 2008) revealed that all OECD juridictions now routinely carry out some form of RIA on new regulations before finalising and implementing them (Figure 1.1).

Figure 1.1. **Trend in RIA adoption across OECD juridictions**




*Note:* This represents the trend in the number of OECD juridictions with a formal requirement for regulatory impact analysis (beyond a simple budget or fiscal impact).

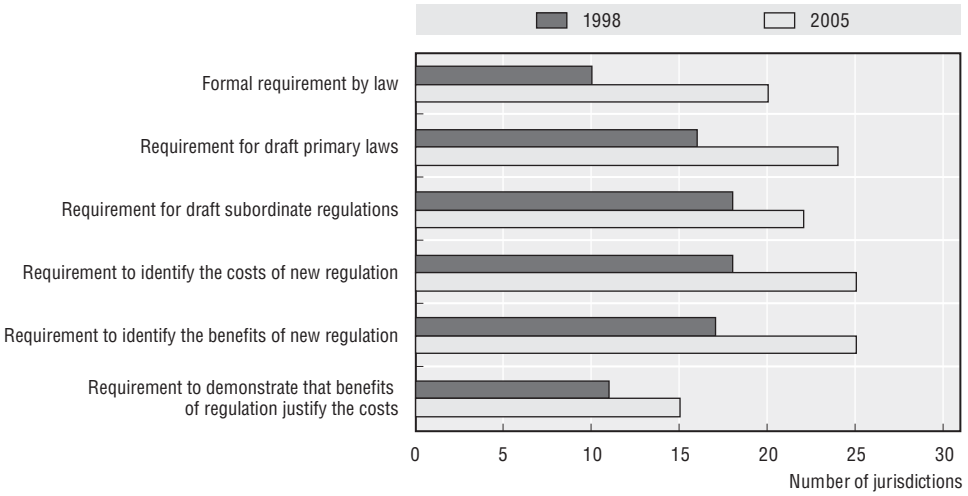
While the use of RIA is widespread, it is differently organised within governments. Because the success of RIA depends on its systematic incorporation in the development of policy that leads to regulation, a somewhat deeper view of the extent of the incorporation of RIA with policy development is necessary. To some extent this can be ascertained by looking at its component elements. The indicators try to give this view by examining key features of the scope of RIA processes that countries have adopted including the institutional underpinning for RIA in OECD countries. Among other areas, for each country the following aspects of RIA have been examined: is it required by law to be conducted on new regulation? is it applied to primary and subordinate legislation and is there a requirement to demonstrate that the benefits of regulation justify the costs? (Figure 1.2).

In 2005, more than two thirds of OECD jurisdictions reported a requirement to identify the costs and benefits of new regulation and around half of all OECD countries reported a formal requirement that a RIA demonstrate that the benefits of regulation justify the costs. Looking at the application of RIA within OECD jurisdictions indicates that there is also considerable variability in the range of impacts that are routinely required to be assessed within a RIA. The indicators sought information on the requirement to include in RIA an assessment of a range of impacts, including impacts on the budget, competition, small business, regions, specific social groups and the use of risk assessment tools. In 2005, many OECD countries continued to cover a relatively limited range of impacts within their formal RIA systems. The impact on the budget is the most prevalent with most OECD jurisdictions reporting this requirement, but an assessment of the budgetary impact of policy proposals would usually be required without a

RIA system. The requirement for an assessment of market openness and competition considerations for all regulations was required by fewer than half of the OECD countries. Marginally more countries required an assessment of the impact on small business, reflecting perhaps the origins and continued use of the RIA within many countries primarily as a tool to consider the costs of regulations on business.

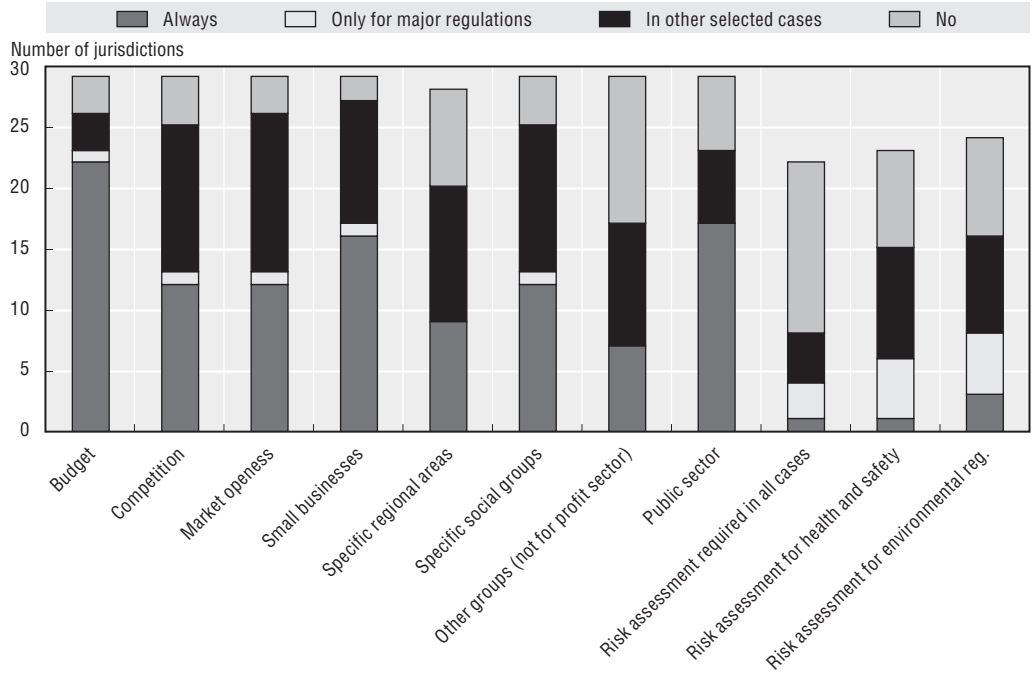
Figure 1.2. **Regulatory Impact Analysis: Requirement for RIA**

Recent trends 1998-2005




*Notes:* See Q11 on Regulatory Impact Analysis, 2005 OECD Regulatory Indicators Questionnaire.
The sample includes 27 countries. The responses of the EU, Luxembourg, Poland and the Slovak Republic could not be taken into account since no data was available for 1998. These data do not include any update as part of the 2008 data collection survey and peer review.

Figure 1.3. **The requirement to measure specific impacts in RIA**



## Potential issues with the performance of RIA

While Regulatory Impact Analysis aims to improve decision-making processes, an empirical assessment suggests that there are practical gaps between the performance of RIA within governments and its theoretical principles. In many cases RIA may not fully achieve the practical impact on policy making that it is intended to have mostly because it is not well integrated in the decision-making process. There are also criticisms that RIA is not applied to the most significant regulatory proposals, fails to fully assess the costs and benefits of proposals or give serious consideration to the range of feasible alternatives to regulation. In general, a "gap" seems to be perceived between the ideals of RIA and its actual practice within countries.

A specific criticism is that policy analysts do not quantify the monetary effects, and make an inadequate scrutiny of regulatory proposals. Despite its procedural requirements many RIAs typically list just a qualitative analysis of the expected costs and benefits of regulation. As a consequence a considerable element of rationalisation may be included in the assessment allowing regulations to pass a qualitative test. The principal concern here is that the RIA may be ineffective at identifying the best regulatory, or non regulatory, option. If the principles under which the RIA are produced are too general and the RIA is not required to include a benefit-cost analysis, the RIA is too easily captured and may simply be prepared as a justification of a predetermined position rather than as an examination of the potential options. By design RIA can act as a constraint on regulators, through its requirement for a justification of the case for proposed regulatory actions. Practically, RIA may not be as effective as intended, but can nonetheless be of benefit in limiting the scope of discretionary decisions in some cases that would otherwise not have passed an assessment of their efficacy.

Research on the effectiveness of RIA consistently points to a tendency among officials to perform an incomplete analysis of the economic costs and benefits of regulatory proposals. This is important to the effectiveness of RIA in generating a full evaluation of the possible impacts of regulation. The lack of full analysis in RIA appears sufficiently widespread to be a fundamental constraint on realising the full benefits of RIA. There are a number of possible reasons for this. It may for example be the result of a lack of adequate training in benefit-cost analysis, or a lack of faith in the capacity of the analysis to lead to any substantive change in policy outcomes. If it is the latter then this could lead to a tendency among officials to simply satisfy the requirements of a RIA system without a serious application of the analytical approach to improving policy. In order to better develop institutional responses to the problems of addressing the effectiveness of RIA, countries need to have a sense of why these problems arise in administrations and how to overcome them.

A further potential issue is that RIA can become incremental form filling. Because RIA targets regulations one by one, it may fail to assess the relationship of tradeoffs in policy, or to genuinely increase the participation of stakeholders in the overall policy processes.[3] In this way RIA can become a "check the box" approach that does not seriously influence policy development. Related to this is the concern that RIA can be a cold analytical approach that does not fully capture the breadth of the policy issues that it seeks to address, and therefore lacks legitimacy and is a marginal influence on regulatory decision-making. Policy development processes are situational and complex: the criticism here is that the RIA approach may attempt to standardise, de-contextualise and neutralise the language of

regulatory policy and can serve to conceal the political governance dimension of the policy process.

Because of its aim of promoting overall economic welfare, RIA can frustrate the aims of sectional interest groups and will therefore always have its opponents. The big challenge therefore is in ensuring that RIA is incorporated in the culture of policy making and that decision makers see the benefits of the analytical approach of RIA. Taking into account the goal of promoting policy coherence, effective policy advice has to be based on a "warm analysis" of the issues. This is what Prof. J. Wiener (2006) describes as "embodying serious analysis of the full variety of impacts and tradeoffs, some quantitative and some qualitative, with compassion for those who incur risks and those who incur abatement costs." (Weiner, 2006, p. 33) Clearly, integrating RIA with the policy development process is as dependant on securing cultural change as it is on having a procedurally integrated system for assessing the effects of regulation.

One of the difficulties in responding to critics of the incorporation of RIA in government policy models stems from problems with measuring its effectiveness in improving policy outcomes. Somewhat ironically, it is methodologically difficult to assess the costs and benefits of a RIA system. Economic analysis should *a priori* lead to better regulatory decisions than would otherwise have been made in the absence of the analysis. However, Coglianese (2003) notes the methodological problem of establishing a suitable counterfactual to measure what level of economic analysis an agency *might* have done in the absence of a *requirement* to prepare RIA.

One area of useful data being collected by some central oversight bodies is the number of initial regulatory proposals that have been improved as a consequence of RIA and the estimated marginal increase in expected benefits. Anecdotally, this data supports the intuitive conclusion that the RIA process is an effective filter of poor regulatory proposals and a strong stimulus to improved analytical rigour. At present this kind of empirical data is scarce and difficult to aggregate across countries, but in the future there is likely to be better information available about the practical benefits of RIA. Further research on the methods for evaluating the effectiveness of RIA in improving policy outcomes will help to garner continued support for the use of this reform tool.

Increasingly, RIA is being used as an iterative policy tool to disseminate information within the public administration about the likely costs and benefits of policy approaches and to incrementally improve the development of regulatory policy. For example a strategy with some merit being adopted by some OECD countries is to use a two-stage RIA process to provide a preliminary assessment of policy proposals before proceeding to undertake a full assessment.

## Strategies for long-term improvement

For many countries, and for a number of different policy areas, the implementation of RIA remains work in progress. In this respect the integration of RIA should be seen as a long-term policy goal. All countries, even those with many years of experience with undertaking RIA and with very advanced RIA systems in place still experience problems with the quality and timeliness of RIA documentation. There is an ongoing need to provide support for public officials responsible for RIA and to improve the way that RIA is prepared.

This publication provides examples and lessons from governments as to how to develop multidisciplinary strategies for long-term improvement of RIA processes. The

publication includes valuable, practical guidance on how to improve the performance of RIA systems to improve policy coherence and promote economic welfare through better quality regulation. It offers insights on how to improve the methodology for the conduct of RIA and the performance of RIA from an institutional and systems perspective. It presents recent work of the OECD on the topic of improving the use of RIA in government decision-making. It can be used as a resource by policy analysts and public officials interested in the potential use of RIA to improve the coherence of government policy by identifying opportunities for effective regulatory interventions through an assessment of costs, benefits and tradeoffs. It is intended to be of use for countries where there is an interest in enhancing or refining the use of RIA and also for countries that are evaluating where a bigger investment of public resources in improvements to RIA may be of most benefit.

The publication covers a number of topics where challenges to the capacity of RIA to improve the effectiveness of regulation have been identified, including:

- Systemic factors which influence the quality of RIA.
- Methodological frameworks which can assist RIA to improve regulation.
- Guidance on using RIA to avoid unnecessary regulation of competitive markets.
- A review of the use of RIA in the regulation of corporate governance across a number of OECD countries.

These four points are discussed in further detail below.

### *Systemic factors which influence the quality of RIA*

There are many systemic factors that influence the quality of RIA, and can potentially undermine its effectiveness. Among these factors are: the design of RIA processes and methodologies; the level of formal authority and political support for the process; and the incorporation of specific quality assurance mechanisms.

The most fundamental challenge for RIA system design is promoting its integration in the policy-making process beginning as early as possible. If the benefits to policy are to be realised, RIA has to be undertaken at the inception of policy proposals, when there is a genuine interest in identifying the optimal approach and there is an opportunity to consider alternatives to regulation. The scope of the application of RIA is also important for capturing significant regulatory proposals. In principle RIA should be applied to regulatory instruments that impose significant costs above some threshold where the costs of the RIA exercise are proportionate and justifiable. The design and rigour of the analytical approach that is applied will determine the quality of the analysis and can affect the utility of the RIA in influencing good regulatory decisions.

Like all regulatory reform strategies, the successful incorporation of RIA in regulatory policy depends on high political support. This is primarily derived from the expressed political endorsement of the role of RIA as part of an overall regulatory policy strategy. The adoption of RIA requirements in law also gives significant authority to the process.

The establishment of a central oversight body with responsibility for promoting the use of RIA is the single most significant quality assurance mechanism that has been taken up by OECD members. The advocacy role of oversight bodies covers a range of important factors including reviewing individual RIA, delivering training and providing methodological guidance. Oversight bodies can also play an effective role monitoring compliance with system requirements such as public consultation which promotes transparency in decision making

and improves the rigour of the analysis. All of these aspects are discussed in further detail in Chapter 2, which takes a principled and practical perspective, with reference to examples from OECD experience.

### *Methodological frameworks which can assist RIA to improve regulation*

RIA is primarily about improving evidence-based decision making in public policy. Accordingly, governments have found that a well-functioning RIA system depends upon both its systematic and methodological components. For the policy practitioner, particularly non experts, the methodological elements are the most relevant factor. When the systematic elements of RIA are put in the background, the quality of the advice in RIA depends upon the application of a useful and effective analytical methodology that is capable of revealing the evidence for policy options and communicating this to decision makers.

Undertaking RIA is a technically challenging exercise, and jurisdictions must provide practitioners with clear and useful methodological guidance if its benefits are to be seen in regulatory outcomes. Relevant practical issues include: the establishment of an appropriate threshold test to justify RIA; the selection of analytical methods, including benefit-cost analysis, break even analysis and multi-criteria analysis; the use of valuation methods; and the application of risk assessment tools.

These aspects are further developed in Chapter 3, which is directed at jurisdictions responsible for preparing guidance for regulatory policy analysts. This chapter provides detailed guidance on a range of methodological issues that are of fundamental importance to the overall quality of RIA and consequently, its ability to contribute to better regulation. It includes draft guidelines on key topics that jurisdictions can adapt to assess and improve the quality of their own guidance material, or to commence drafting guidance material for use by policy analysts.

### *Guidance on using RIA to avoid unnecessary regulation of competitive markets*

The promotion of beneficial competition, the situation in which suppliers challenge rivals and seek to improve their position by offering better products or services to customers, is a strong driver of consumer welfare. The OECD *Guiding Principles for Regulatory Quality and Performance* recognise this and encourage the periodic review of regulation that restricts competition to ensure that the benefits outweigh the costs and to identify if the objectives of the regulation can be achieved with less effect on competition.

RIA should be used to assess the impacts of restrictions on competition, both when new regulation is being considered and to review existing regulation. Regulation which unnecessarily restricts competition imposes costs on society and the inclusion of a competition analysis can avoid these costs. With appropriate guidance, competition analysis can be tailored to apply to a range of regulatory approaches. A competition analysis can provide important information to readily consider the expected benefits of possible approaches and the potential impacts on competition. This helps identify where particular regulatory approaches may be used appropriately and may reveal potential policy alternatives for achieving the same objectives at a lower cost to society without restricting competition. Significant public benefits can be obtained from even a relatively small investment of public sector resources by integrating competition assessment processes within the regulatory policy cycle if it is done systematically. Chapter 4 is adapted from the 2007 *OECD Competition Assessment Toolkit* and discusses the application of competition policy analysis to RIA.

### *A review of the use of RIA in the regulation of corporate governance across a number of OECD countries*

Much of the research in this publication concerns the application of RIA across multiple jurisdictions for a variety of regulatory issues but there are potential lessons from the consideration of the application of the general principles of RIA to a specific regulatory area in multiple jurisdictions. It is particularly useful for policy practitioners to understand and consider examples of how to undertake RIA in their own field of policy interest, but it is also useful to consider practical examples of how analysts in other regulatory sectors go about fulfilling the task.

A core challenge for securing successful RIA is promoting its effective use among regulators. Analysis of how RIA is conducted within specific policy fields across a variety of jurisdictions can be very helpful in improving its practical application to the design of regulation. Sector regulators can benefit from practical evidence on the application of techniques to measure the effects of regulation within specific policy areas. The sharing of results of RIA including methodological approaches among regulators in the same sector but across different jurisdictions has the potential to promote policy transfer and spread good ideas on successful policy approaches as well as improve the technical expertise on how to estimate the likely costs and benefits of regulatory proposals. Research in this area, as well as the establishment of mechanisms for sharing the analysis contained in individual RIA, such as through publication of a common database, can improve the quality of policy analysis. Despite this, surveys of how regulators conduct RIA in relation to particular regulatory problems of this type are not common. For this reason Chapter 5 makes an important contribution to this underdeveloped area of study for corporate governance and sets out a model approach that could potentially be applied to the analysis of RIA experience in other regulatory fields.

Chapter 5 looks at a study within the OECD of the application of RIA in the field of the regulation of corporate governance. Noting that the requirement to undertake RIA is an established part of the regulatory systems of OECD members, this chapter examines examples of the application of RIA by financial services regulators to strengthen their evidence-based policy making. It draws on examples from OECD experience notably Canada, Australia, the UK, US and the EU. It looks at how regulators have dealt with some of the challenges to effective RIA which include defining the problem, undertaking effective consultation, and identifying and measuring costs and benefits.

## Conclusion

The implementation of RIA is a long-term goal that can be assisted by the implementation of systemic frameworks and analytical support. The challenge of achieving policy coherence is becoming more complex in a more interdependent and globalised economy as increasingly governments have to manage the cross-sector implications of global events on domestic policy issues. In 2009, the global economic crisis and the consequences of climate change continue to stretch government's capacities to design effective responses taking into account the uncertainties and tradeoffs involved and, as events unfold, different more dynamic policy solutions are likely to be required in the future. In the face of this complexity, good governance processes are more important than ever to assist governments to support an administrative culture that is well equipped to consider the consequences of policy options and to identify policy solutions that promote the economic, environmental and social welfare goals that serve the interests of citizens.

The chapters of this publication focus on a set of core aspects of RIA, and are intended to advance the understanding of how, through the use of RIA, evidence-based policy-making can be applied to improve policy design and coherence. However, they are not exhaustive. Further research on, for example, the use of risk assessment and risk management strategies in regulation will be beneficial in improving the design and use of RIA systems.

Within OECD governments, RIA systems continue to evolve and the implementation of RIA continues to present challenges. System refinements can be observed with some countries now applying a greater emphasis to more technical challenges such as risk assessment and the development of methods for quantitatively estimating costs and benefits. Expertise in the use of RIA within certain regulatory sectors is expanding. Countries without a history of formalised regulatory management systems are starting to use RIA incrementally and at a basic level to improve policy and regulatory design, gradually improving the incorporation of evidence-based decision making in policy development.

### *Notes*

1. RIA is also routinely referred to as Regulatory Impact Assessment, sometimes interchangeably.
2. OECD 2007/4, "Indicators of Regulatory management systems", Stéphane Jacobzone, Chang-won Choi, Claire Miguet; OECD 2007/7, "Indicators of Regulatory management systems across OECD countries, Indicators of Recent Achievements and Challenges", *OECD Working Papers on Public Governance*, Stéphane Jacobzone, Gregory Bounds, Chang-won Choi, Claire Miguet.
3. Radaelli, Claudio (2007), "De Nobis Fabula Narratur (The story was about us): Three Better Regulation Tales", dinner speech to the meeting on Strategic Policy Making and Regulatory Reform, London, 4 June.

### *Bibliography*

Coglianese, Cary (2002), "Empirical Analysis and Administrative Law", *University of Illinois Law Review*, revised November 2003.

OECD (1997), *Regulatory Impact Analysis: Best Practices in OECD Countries*, OECD Publishing, Paris.

OECD (2002), *Regulatory Policies in OECD Countries: From Interventionism to Regulatory Governance*, OECD Publishing, p. 51.

OECD (2007), *Competition Assessment Toolkit Version 1.0*, OECD, Paris.

OECD (2008), *Building an Institutional Framework for Regulatory Impact Analysis (RIA): Guidance for Policy Makers*, Version 1.1, OECD, Paris.

Radaelli, Claudio (2007), "Towards better Research on Better Regulation", paper delivered to the Advanced Colloquium on Better Regulation 26-27 January, Centre for Regulatory Governance, University of Exeter.

Wiener, Jonathan B. (2006), "Better Regulation in Europe", *Duke Law School Working Paper Series*, Duke University Law School.

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Regulatory Impact Analysis:
A Tool for Policy Coherence


*Chapter 2*

# Determinants of Quality in Regulatory Impact Analysis

*Chapter 2 examines the important factors likely to be influential in determining the quality of regulatory impact analysis and discusses their application in OECD countries. These factors are: the design of RIA processes and methodologies; the level of formal authority and political support for the process; and the incorporation of specific quality assurance mechanisms. This chapter examines the experiences of OECD countries and considers ways of improving the overall quality of RIA.*

## Introduction

Regulatory impact analysis is a mechanism for systematically identifying and assessing the benefits and costs of a regulatory proposal. It constitutes a fundamental tool of regulatory quality assurance and is now used by almost all OECD countries, by the European Commission and in many countries in transition.

The implementation of regulatory impact analysis (RIA) requires substantial resources. Many OECD member countries are supporting significant efforts to refine and improve RIA systems and processes. This continuing evolution of RIA underlines the fact that RIA implementation is a long-term process which necessarily requires significant cultural changes to take place throughout the government policy making apparatus. Maximising the contribution of RIA to regulatory quality requires attention to the full range of RIA process elements as well as the range of specific quality assurance mechanisms.

In general, the picture is of RIA continuing to be more widely applied, with more countries applying RIA to primary legislation and, more generally, a wider range of regulatory instruments being subject to RIA. At the same time, a range of threshold tests is being applied in order to ensure that RIA is appropriately targeted toward substantive regulation where it has the potential to affect regulatory outcomes.

Greater assistance is being provided to regulators to improve the conduct of RIA, embracing guidance on methodological elements such as risk assessment, discount rates and the statistical valuation of a human life from a welfare perspective. Particular attention is being paid in several countries to means of ensuring that quantitative and qualitative RIA analysis are integrated effectively to provide better information to decision makers.

However, concerns that RIA is often adopted too late in the policy process and that, consequently, it often has little impact in determining regulatory choices, remain widespread. While some steps are being taken to address this issue, particularly through better integration of RIA and public consultation and through the use of *ex post* analysis of RIA in some areas, this remains one of the major challenges for RIA implementation.

The history of regulatory impact analysis as a formal regulatory quality tool extends over more than 25 years. Within the OECD context, the 10 point checklist accompanying the 1995 *Recommendation of the OECD Council on Regulatory Quality* highlighted the need to undertake an assessment to ensure that the benefits of regulations justified the costs. In 1997, the OECD formulated a set of RIA best practices (OECD, 1997). However, despite this extensive history, the implementation of RIA and its integration into public policy processes remains work in progress. The OECD, in common with those member countries that have substantial experience in implementing RIA, has consistently emphasised that developing and implementing RIA systems is a long-run process, which must involve achieving cultural change within regulatory agencies.

This paper is intended to provide practical assistance in relation to the implementation of high-quality RIA systems and the maximisation of their impact on regulatory quality

outcomes. It draws upon data included in the responses received to a questionnaire sent, in mid-2006, to selected OECD countries, each of which has substantial experience in the implementation of RIA. Responses were received from Australia, the Netherlands, the United Kingdom and the United States. It also draws upon the RIA Inventory prepared by the Secretariat in 2004 [GOV/PGC/RD(2004)1] and other previous OECD work in relation to RIA.

Experience shows that optimising the quality of RIA requires a multifaceted approach, embracing all elements of the design, implementation and review of RIA processes and procedures. The layout of this paper recognises this reality. The sections on the scope of RIA requirement and the analytical scope of RIA discuss contributors to RIA quality in broad terms, including process design, methodological requirements and authority elements. The section on RIA methodology discusses specific RIA quality assurance mechanisms, while the next section, dealing with risk and uncertainty, highlights practices that appear to be of particular importance in terms of achieved RIA quality, as well as identifying major future challenges for continuing RIA quality improvement.

## RIA processes and methodologies

### *Commencing RIA at an early stage of policy development*

The importance of the timing of the RIA process has long been highlighted, with the OECD's 1997 RIA best practices stating that it was necessary to "integrate RIA into the policy-making process, beginning as early as possible". As this statement suggests, it is only if RIA is commenced at an early stage of policy development that there is any real possibility of it being adopted as an integral part of the policy process, rather than as a separate, procedurally-based requirement which takes on the character of an *ex post* rationalisation of the policy choice already made.

In particular, a thorough analysis of alternatives to the regulatory proposal is only likely to be undertaken if the final policy choice has yet to be made. The emphasis contained in the Australian RIA guidelines (published as long ago as 1998) on the need for "*a comprehensive assessment of each option's expected impact*" to be prepared reflects a longstanding focus of regulatory reform authorities on the need to encourage regulators to undertake a serious and detailed assessment of different policy options.

RIA guidelines have, in most cases, taken up this emphasis on the need for early commencement of RIA and are often quite explicit about the stage of the policy process at which RIA ought to be commenced. For example, the Australian guide (ORR, 1998) states that the RIA document should be prepared after an administrative decision has been made that regulation may be necessary, but before a policy decision is made by government that regulation is necessary. The New Zealand guide (New Zealand Government, 1999, p. 2) makes an almost identical statement in this regard. Similarly, the current draft UK Impact Assessment Guide (United Kingdom Government, 2006a, Appendix B, p. 25) states that:

> The Impact Assessment should be a living document – which will need to be revised a number of times as information about the likely costs or benefits becomes clearer. In the early phase of policy making there are likely to be a number of options and departments should produce an Impact Assessment for each of these…

Recent assessments of RIA performance continue to emphasise the importance of commencing RIA at an early stage. A recent report of the UK National Audit Office (NAO, 2006, p. 3) states: "*Our analysis showed that the RIA process was often ineffective if started late…*" Some analysts, such as Jacobs (2006) go further, arguing that the timing of RIA may be more

important than the methodology employed in determining the quality of the assessment of alternatives and noting that multi-stage RIA requirements seem to encourage earlier use of RIA. Some Australian experience with two-stage RIA processes[1] appears to lend support to this view, with draft RIA documents being released for extensive public consultation processes well in advance of the consideration by ministers of final RIA documents. Substantial improvements to the analysis and, in many cases, significant changes to the regulatory proposal are commonly found during these processes.

However, multi-stage RIA appear to remain rare,[2] possibly due to concerns that a multi-stage process would add unduly to procedural complexity and length and reduce the flexibility of regulators to respond in a timely way to emerging issues. Arguably, multistage RIA requirements are also seen as likely to be unduly resource intensive in many cases.

There are numerous indications that the problem of RIA being commenced too late in the policy process and being, in effect, used to justify regulatory choices that have already been made, remains widespread. In the UK, for example, the National Audit Office, which annually reviews a sample of RIA, recently commented that:

> … too often RIAs are used to justify decisions already made rather than an *ex ante* appraisal of policy impacts. If RIAs are to fulfil their role to inform and challenge policy making, they should be started early in the decision-making process, and involve wide-ranging consultation with key stakeholders…[3]

A recent review of RIA in Australia found that around 14% of regulatory proposals in respect of which RIA were finalised in 2004-05 had been changed substantively during the course of the RIA process. However, regulatory reform officials reported that the degree of commitment to the RIA process as an inherent part of good regulatory processes was highly variable between policy officials in regulatory agencies and that the long awaited "cultural change" among regulators toward embracing RIA as a fundamental policy tool could not yet be said to have occurred.[4]

### *The scope of RIA requirements*

A fundamental determinant of the ability of RIA to contribute to improved regulatory quality is the breadth of its application. In principle, RIA should be applied to all regulatory instruments that potentially impose significant costs. At the same time, RIA should not be required in respect of relatively minor regulation, as it has limited ability to improve regulatory quality in such circumstances.

#### *Range of regulatory instruments subject to RIA*

Previous OECD work has emphasised that the most important benefits of RIA are likely to be obtained from its application to primary legislation, since it is here that the farthest reaching regulatory impacts are generally found. At the same time, the application of RIA to significant delegated legislation is also likely to be highly productive.

The 2004 RIA inventory showed that, despite a considerable of broadening of the scope of RIA in recent years, there remains considerable divergences between OECD countries in this respect. Most countries now apply RIA to both primary and subordinate legislation. However, a very large minority applies RIA only at one or the other of these levels of legislation, with similar numbers of countries applying RIA to primary legislation only and to subordinate legislation only.

### Box 2.1. **The RIA challenge**

Regulatory Impact Analysis (RIA) is one of the most important regulatory quality tools available to governments. Its aim is to influence policy makers to adopt the most efficient and effective regulatory options, by requiring the use of evidence-based techniques to analyse regulatory options. Much of the OECD's regulation checklist relates to RIA good practice.

The OECD has been recommending the use of RIA for some years, starting in 1995 with a *Council Recommendation on Improving the Quality of Government Regulation*. The 1997 *OECD Report on Regulatory Impact Analysis: Best Practice in OECD Countries* sets out a list of RIA best practices. The 2005 *Guiding Principles for Regulatory Quality and Performance* re-emphasise the use of RIA.

RIA is a challenging process that needs to be developed over time. Practice varies widely across the OECD but issues encountered in its application include:

- *Omissions*. Parts of the regulatory structure may not be covered, especially at sub central level.
- *Inadequate use of evaluation techniques*. Cost/benefit analysis and other techniques are often not well used.
- *Poor compliance*. Poorly prepared regulations often remain unchallenged.
- *Complexity and fragmentation*. Too many checklists can cover a bewildering range of issues.
- *Failure to target the most important rules*. To avoid administrative overload, RIA needs to be targeted at regulations with the largest potential impacts and the best prospects for changing outcomes.
- *Poor integration with consultation processes*. RIA is often separate from or not included in consultation processes, which limits its practical effectiveness.

Similar divergences can be found at the sub-national level. For example, the Australian Federal government applies RIA to both primary and secondary legislation but only one Australian State government (Victoria), follows suit. The rest apply RIA either to primary or to secondary legislation, or not at all.

Limited information is available regarding the reasons why many countries have chosen to apply RIA to only certain types of legislation. One likely explanation of the use of RIA only at the level of subordinate legislation is that governments and/or parliaments see a greater need to constrain regulatory authority that has been delegated, rather than that which is exercised directly. Indeed, the history of RIA implementation shows that this requirement is often perceived as an unreasonable intrusion on the decision-making authority of regulatory actors. Thus, it would be unsurprising to find that many governments had taken the view that they were not prepared to constrain themselves directly through the application of RIA to primary legislation.

A second explanation for the application of RIA only to subordinate legislation is that many countries view the processes by which primary legislation is made inherently more robust than those applied to subordinate legislation and, therefore, more capable of systematically yielding a high-quality outcome. For example, Canada comments (OECD, 2004, p. 16) that, while it applies formal RIA requirements only to subordinate legislation, the process for the adoption of primary laws typically involves a range of elements that

promote the development of high-quality legislation including consultation with stakeholders, discussion of policy proposals among government ministries with different mandates, discussion of the proposal by Cabinet and public debate in Parliament during the legislative process.

Certainly, the more extensive procedures typically applied to primary legislation can be expected to highlight shortcomings more reliably, identify possible alternative approaches and yield significant information as to the likely impact of the legislative proposal. However, unlike RIA, these processes do not require a systematic identification and assessment of benefits and costs to be undertaken, and nor do they specify standardised methodological approaches for analysing these impacts and interpreting the results.

Where RIA has been applied only to primary legislation this is likely to reflect the application of a highly targeted approach, and is consistent with the need to focus limited RIA related expertise on its most productive uses, particularly in the early stages of RIA implementation.

The question of the scope of RIA also has other dimensions. Particularly where RIA requirements are contained in legislation, some countries have found that the requirements cover only certain types of secondary legislation and exclude others which have similar impact, but a different legal status. For example, in the United States, RIA is applied only to secondary legislation (*i.e.* to agency made rules) but, even here, rules made by "independent" regulatory agencies are excluded from the coverage of RIA.

### *Threshold tests*

While the above discussion has focused on "gaps" in the coverage of RIA, the experience of some countries includes criticism that RIA is too widely applied, in the sense that it is applied either to regulation with relatively minor impacts or to regulation in respect of which there are few, if any, feasible policy alternatives for consideration. Here, the concern is that the RIA process itself would arguably fail a benefit-cost test in such cases.

A significant issue in this regard seems to be the difficulty of identifying suitable thresholds for the application of RIA to relatively minor regulation. Most countries have adopted explicit "filtering" mechanisms which limit the number of regulations that are subject to RIA requirements and, in some cases, vary the extent of the RIA required to be undertaken according to the defined threshold tests. However, there is considerable divergence between countries as to the nature of the specific filters applied.

While several countries specify quantitative thresholds in terms of regulatory costs for the application of RIA requirements, these have typically been supplemented by qualitative thresholds. For example, the United States defined "major" rules in 1981 as those which are likely to impose annual costs exceeding USD 100 million or those likely to impose major increases in costs for a specific sector or region, or have significant adverse effects on competition, employment, investment, productivity or innovation (OECD, 1999a, p. 157). Similarly, in addition to a quantitative threshold, the Korean test requires quantitative RIA to be undertaken if it affects more than one million people. There is a clear restriction on market competition or a clear departure from international standards (OECD, 2001, pp. 151-152). Mexico specifies three levels of required RIA and distinguishes between them by a combination of both quantitative cost thresholds and qualitative judgments as to whether the regulation would have non-negligible impacts on employment or business productivity.

Many other countries have adopted solely qualitative statements, requiring RIA in cases where regulations potentially impose "appreciable burdens", "non-negligible burdens" or the like.

The scope of these tests is itself subject to differences between countries. In some cases, the RIA requirement is triggered if an impact on any sector in society crosses the relevant threshold, while in other cases only impacts on business are considered. In the UK, impacts on business, charities and voluntary sector are considered in determining whether the RIA threshold has been crossed. Clearly, the welfare economics perspective underlying RIA would suggest that, whatever the threshold used, it should be assessed in terms of impact on any sector in society, rather than being limited to impact on certain sectors.

The Netherlands approach to "filtering" regulation for RIA purposes is different again. It has long used a two-step RIA process, where the results of a preliminary RIA are assessed by the regulatory reform authority to determine whether a full RIA must be completed and which RIA tests must be applied to the proposal. The European Commission has recently implemented a similar approach.

Interestingly, the Netherlands reports that when the two-step process was evaluated in 2004-05, it was concluded that the application of the initial "quick scan" assessment did not contribute significantly to the quality of the final RIA. While a critical approach to the application of particular RIA tests to specific regulatory proposals is still being undertaken, the "quick scan" test is now frequently being omitted; changes to the RIA process in response to the results of the review were to be considered by the Cabinet in 2007.

These filters appear to have a number of purposes. Most obviously, they are intended to reduce the demand that RIA requirements based on benefit-cost analysis place on scarce resources. This, in turn, suggests that relatively more resources will be able to be applied to carrying out RIA analysis in respect of the most important regulation. In the Dutch case, a selective approach to RIA tests of particular regulations aims to ensure the relevance of the RIA to the particular policy proposal. More broadly, restricting RIA requirements to those regulations where its impact is likely to be greatest and where the opportunity to affect the regulatory outcome is most substantial both improves its cost effectiveness and its credibility with regulators generally.

Perhaps coincidentally, the number of RIA completed annually shows a degree of consistency from country to country, despite the observed differences in the threshold tests for the completion of RIA that are used and differences in the extent of regulatory activity.[5] In the United Kingdom, around 200 RIA are finalised annually (NAO, 2006). In the United States, approximately 100 RIA are prepared annually (OECD, 2002, p. 132).[6] Similarly, in Australia, around 80-100 RIA are typically completed annually in respect of Federal government regulation (PC, 2005).

### *Analytical scope of RIA*

The second set of methodological issues relates to the breadth of the analysis that is required to be undertaken. A full benefit-cost analysis takes into account impacts on all groups within society. However, perhaps reflecting the historical/political genesis of regulatory reform programmes in many countries, it is common for there to be a particular focus on impacts on business (and/or in some cases, on small business). In other cases, while all impacts are required to be assessed, the threshold which determines whether or not RIA must be undertaken reflects whether there is likely be a substantial impact on

business. Of course, most countries have quite rigorous requirements for impacts on the government budget to be assessed. These requirements often pre-date the use of RIA and essentially reflect the better established controls that exist on government budgeting (*i.e.* taxing and spending) generally, rather than being a specific product of RIA requirements.

RIA is often begun as a requirement to analyse impacts from one or more partial perspectives, before broadening progressively over time.[7] This broadening of the required assessment appears to be partly pragmatic: as experience with RIA develops, expertise is also developed, so that more extensive analysis becomes feasible. As well, RIA becomes better accepted by stakeholders as it becomes better understood. As noted by the United Kingdom, the adoption of a broader analytical requirement, in preference to partial assessments, also favours acceptance of RIA as a neutral, evidential tool. This occurred in the UK in 1996, with a shift from compliance cost assessment, focused on business costs, to RIA embracing economic, social and environmental effects.

A distinction can be drawn between countries that have required a progressively wider range of impacts to be assessed, but have undertaken each assessment separately (*e.g.* the EC, prior to 2003, and Finland, which requires assessments of budget, economy, organisation and manpower, environment, society and health, regional policy and gender equity, all of which are conducted by individual ministries), and those that have broadened assessment requirements within the context of a single impact assessment document (*e.g.* the United Kingdom).

The case of the Netherlands also appears to fit within the group of countries that conduct several partial RIA largely separately. In the Netherlands, a new RIA policy implemented in early 2003 requires that four distinct tests must be carried out. These are the Business Impact Test, the Environmental Impact Test, the Predictability and Enforceability Test and Cost/Benefit Analysis. The quality of each of these tests must be assessed by a separate Ministry: the Ministry of Economic Affairs assesses BIT, the Environment Ministry assesses EIT and the Ministry of Justice assesses the P&ET. The BCA is described as clarifying the "financial consequences" of the legislative proposal. Thus, it appears that the BCA may not constitute an attempt to integrate the other three tests into a single analysis, but rather represent a limited analysis that focuses specifically on those benefits and costs that can be measured directly in terms of dollar amounts. The apparently separate nature of the various tests required to be undertaken as part of the RIA requirement reflects the broader Dutch approach to regulatory reform, in which there is no central regulatory reform authority, with reliance instead being placed upon a number of different ministries taking on specific regulatory reform related responsibilities.[8] The Netherlands believes that this shared approach to responsibility for regulatory reform policy ensures that several ministries are actively working in favour of reform objectives.

A second trend can also be identified in respect of partial impact analyses. In some contexts in which a broad BCA requirement already exists as the basis for RIA, additional requirements to focus explicitly on impacts on particular groups (*e.g.* small business, regional areas, the family) are being established, which may be more or less integrated with the general BCA requirement. In the United Kingdom, the National Audit Office (NAO, 2006, pp. 9-10) recently commented on this phenomenon, noting that:

> The RIA process initially consisted of a benefit-cost analysis of the regulatory proposal and a requirement to analyse the specific impacts on small business and competition. It has since expanded to include a range of other tests…

The report goes on to identify the following additional specific, or partial impact assessments that are currently required to be undertaken as part of British RIA:

- legal aid impact assessment;
- race equality impact assessment;
- health impact assessment;
- rural proofing;
- sustainable development;
- small firms impact tests;
- competition assessment.

Similarly, in Australia, regional impact assessments and small business impact assessments are required to be conducted, while the government has also agreed in principle to adopt a requirement for family impact assessments as part of the RIA process. Where fees or charges are to be levied, a Cost Recovery Impact Statement is also required to be prepared.

In Canada a Business Impact Test must be completed as part of the RIA requirement, with separate guidance on completing this requirement being published by the regulatory reform authority. In New Zealand a separate Business Compliance Cost Assessment is also required to be completed and submitted with the RIA and is intended as a mechanism to encourage the minimisation of administrative burdens. The requirement for a separate analysis to be prepared in this respect stands in contrast with the general approach taken in New Zealand in which impacts on competition, market openness, small businesses, regional areas and specific social groups are all expected to be included in the RIA itself.

Requirements for explicit analysis of a range of sectional impacts tend to focus on groups whose claims are considered to be particularly compelling from a distributional viewpoint. The apparent proliferation of these requirements is arguably an outgrowth of the historical concern, voiced in many countries, that RIA tends largely to ignore the distributional impacts of policy and, as such, is an inadequate, or even misleading guide to policy action. While such criticisms have not always been well founded, there is a clear potential for these requirements for explicit analyses of sectional impacts to be conducted to have an important political impact. By neutralising a frequent criticism of RIA and providing reassurance that distributional impacts are properly accounted for, greater "buy-in" to the RIA concept may be achieved among a wider range of stakeholders.

However, OECD (2002) highlights the potential negative impact of these approaches. In particular, these include the risk of failing to integrate multiple, sometimes conflicting sectional analyses into a concise and coherent policy conclusion. The process of completing a number of separate, sectional analyses can also multiply the resource costs of undertaking RIA. Moreover, as suggested above, the identification of particular sectional groupings as deserving of special consideration within the RIA context can suggest that impacts on these groups should somehow be more heavily weighted. It may, indeed, be that governments are prepared to make political choices to weight certain impacts more heavily in some cases. In such cases, it is essential that the extent of, and rationale for, any such weighting are made explicit in the RIA if the transparency and consistency of individual RIA are to be maintained and comparability between RIA is also to be retained.

Clearly, the integration of these partial analyses into the larger BCA is essential if they are not to pose significant risks for policy coherence or to unnecessarily increase the

resource cost of completing RIA. Arguably, a generic requirement for any significant distributional implications of a policy to be identified as part of the RIA process, supplemented by the inclusion of material on key sectional impacts to be considered in RIA guidance documents, would meet many of the underlying concerns that have given rise to these additional partial analyses while reducing the above risks. That said, such a requirement will almost certainly be less effective in meeting the political need to reassure stakeholders that such impacts are properly taken into account.

Again, the underlying principles of welfare economics indicate that the RIA should incorporate assessment of impacts on all groups within society. Moreover, all kinds of impacts must be integrated within RIA. While, to an economist, benefit-cost analysis necessarily accounts for all kinds of goods and bads, the history of RIA implementation indicates that many stakeholders are concerned that BCA focuses exclusively on "economic" benefits and costs to the exclusion of "environmental" and "social" benefits and costs. Indeed, this concern may underlie what can be interpreted as an explicit rejection of the principle of maximising net benefits as a BCA decision rule in Canada's 2005 draft RIA guidelines, which state:

> [Regulators] should look at the overall benefits and costs to Canadians, business and government, and choose the option that is the most appropriate, not necessarily the one that offers the greatest benefit at the lowest cost.

In this context, it can be noted that the EC implemented a fundamental change in its approach to RIA in 2003, when it replaced the use of separate, partial impact analyses with a single, integrated analytical approach. Perhaps in order to emphasise that BCA is intended to be conducted in as wide ranging a manner as possible, the European Commission now refers to "Integrated Impact Analysis", which is defined as an analytical approach which integrates the analysis of economic, social and environmental benefits and costs. Within this "integrated" framework, there can presumably be no objection to the adoption of a rule of maximising net benefit.

Concern that RIA may be failing to capture all regulatory impacts that are relevant to policy decision-making also appears to underlie a recent trend for some RIA guidance documents[9] to include requirements for a range of macroeconomic impacts to be assessed. These include requirements to highlight the impacts of certain regulatory interventions in relation to employment, GDP, innovation, poverty or other important macroeconomic variables.

However, such requirements are necessarily problematic: a full assessment of macroeconomic impacts necessarily requires the adoption of sophisticated economic modelling, based on a general equilibrium framework. While some RIA have attempted this task, it is unlikely to be feasible in the majority of cases, given the general scarcity of expertise and resources available for the conduct of RIA in most countries. Indeed, as the OECD country reviews of regulatory reform have frequently demonstrated, many government administrations (or, at least, regulatory agencies) lack the economic expertise required to complete more limited RIA tasks including reasonably comprehensive benefit-cost analyses.

In such circumstances, implementing requirements to undertake substantially more demanding analyses involving general equilibrium models risks having perverse impacts, by diverting resources and focus from more feasible RIA tasks. Substantial general equilibrium analyses of major regulatory interventions are to be found in the regulatory

literature. For example, as long ago as 1990, Hazilla and Kopp presented a study of the costs of the United States' Clean Air and Water Acts, using a dynamic computable-general-equilibrium (CGE) model developed for the study. Indeed, a key conclusion of this analysis was that compliance costs were a relatively poor surrogate for changes in individual well-being (*i.e.* economic welfare) (Kopp *et. al.*, 1997).

In sum, these broader approaches have the potential to provide a significantly enhanced analysis in relation to relatively small numbers of far reaching regulatory interventions, but are unlikely to constitute feasible approaches for the bulk of proposals that are subject to RIA requirements. Moreover, attempts to establish such requirements more broadly risk undermining support for RIA generally by confirming the fears of those within government who are, in any case, inclined to see RIA as amounting to "paralysis by analysis", being unduly resource intensive and generating results that are too technical in nature to be relevant to real policy decision-making at the political level.

Moreover, some analysts challenge the notion of requiring RIA to analyse impacts on specific macroeconomic variables such as poverty or innovation on conceptual grounds, at least when applied to less far-reaching regulatory proposals. Jacobs argues that macroeconomic variables such as innovation and poverty (required to be considered, *inter alia* by Ireland's RIA guidance documents) "*are not the result of a single government intervention or regulation, and there is no analytical technique for assessing these impacts in an RIA*" and, more generally, "*no method is capable of determining the macroeconomic impacts of isolated microeconomic intervention, except in its most static and short-term dimension*". To Jacobs, these requirements reflect "*fundamental confusion about the purpose and limits of RIA*" (Jacobs, 2006, pp. 82-83).

As well, an optimistic view of the analytical insights potentially available through RIA may not be the sole reason for this increasing focus on macroeconomic impacts. A second probable driver of the trend toward inclusion of macroeconomic analysis in RIA is that regulators (or economic consultants engaged to prepare RIA) sometimes present analyses of short-term macroeconomic benefits in order to distract attention from other shortcomings of regulatory proposals. A recent RIA prepared in relation to proposed regulations requiring the installation of solar hot water or rainwater tanks in all new houses in Victoria, Australia provides an example which fits this hypothesis.[10] It demonstrates some key problems with attempts to justify regulations by reference to supposed macroeconomic benefits. For example:

- GDP gains are identified due to the effect of regulation in mandating the use of a technology which is likely to lead to import substitution in the short term, but allocative efficiency losses are not accounted for;
- similarly, employment gains due to substitution in favour of products produced via more labour-intensive methods are cited, while probable losses in labour (and total factor) productivity are ignored.

Moreover, while these benefits were assessed in general equilibrium terms, no equivalent analyses of the major costs associated with the proposal were conducted.

Clearly, regulatory reform authorities ought to have been able to identify and challenge such a flawed analysis effectively as part of the RIA assessment process. That this did not occur perhaps highlights the fact that the adoption of more sophisticated economic methodologies in the RIA context will necessarily place greater demands on regulatory reformers, at least as much as those responsible for preparing RIA.

### *Competition impacts*

A further development in the direction of broadening the scope of RIA is that increasing numbers of countries are requiring RIA to incorporate an explicit consideration of the competition impacts of regulatory proposals. Given the general tendency for competition analysis to focus on market dynamics, this trend is likely to increase the degree of attention given to at least certain kinds of dynamic factors in the RIA context over time. The concept of competition policy assessment also increasingly embraces its international aspects, essentially constituting the concept of "market openness", although this broader competition perspective remains far from universal.

However, while the RIA inventory indicates that a large number of countries require competition issues to be addressed, little specific guidance is provided in most cases. Current OECD work is focusing on means of effectively integrating competition policy analysis with RIA, particularly by providing appropriate guidance for RIA authors. This reflects recent initiatives in a small number of member countries. The United Kingdom has adopted a specific competition impact test for use in the RIA context.[11] In addition, the Dutch Business Impact Test includes questions on competition related impacts of regulatory proposals, some of which are formulated in a benchmarking context. Thus, one question asks what equivalent regulation exists in the most relevant competitor countries for the affected businesses. Moreover, other questions ask whether the proposed regulation goes beyond the requirements of any relevant EU Directive and requires any regulation that would impose greater stringency than the relevant EU standard to be explicitly justified. Finally, the BIT also contains a "market mechanisms" test, which must be answered in terms of a range of standard competition related tests.

## *RIA methodology*

The 1997 OECD Principles state that a "flexible but consistent analytical methodology" should be employed for RIA. Benefit-cost analysis has subsequently (OECD, 2002) been identified as constituting "the gold standard" in respect of RIA methodologies. However, a range of other methods is also routinely used, reflecting in part the practical difficulties of completing quantitative benefit-cost analyses in respect of regulatory proposals.

### *Benefit-cost analysis*

Previous OECD work (see OECD, 2002, p. 45 *et passim*) has found that the sophistication of RIA methodology tends to increase over time as experience and expertise develop. This finding is reflected in the results of successive OECD Regulatory Indicator Surveys, which show that benefit-cost analysis is being increasingly widely adopted as the formal methodological requirement underpinning RIA within OECD countries. The survey results also show that requirements to quantify benefits and costs have been implemented by a substantial number of countries using RIA.

However, there appears to be widespread recognition that such requirements which constitute "best practice" are very frequently not met in individual RIA. Even those countries with the most extensive experience in implementing RIA acknowledge that the proportion of RIA that manage fully to quantify benefits and costs, and produce a robust net present value result, remains relatively small. Little quantitative data appears to be available on the extent to which RIA succeed in quantifying costs and benefits overall. The RIA inventory reported data for the US EPA which showed that only 39% of RIA prepared by

this agency reported a net benefit figure in the period 1996 to 1999. However, this represented a substantial improvement on the figures cited for previous periods. One analysis conducted in Australia in 2001 found that only 29% of RIS fully quantified costs. However, a more recent analysis conducted in the state of Victoria, Australia showed an increase in the number of RIS quantifying costs from 17% to 50% within a single year,[12] possibly underlining the importance of the role of the central regulatory reform authority in driving quality controls for RIA.[13]

Anecdotal information from a number of member countries also suggests that the degree of quantification of benefits and costs being achieved is continuing to increase. Certainly, numerous countries have recently implemented policy initiatives that aim to increase the degree of rigour required in RIA, leading Jacobs (2006, p. 78) to identify a "*global trend toward more rigour and more quantification in RIA*". However, the complete quantification and monetisation of benefits and costs appears to remain a goal that is not achieved in the majority of cases. Moreover, data limitations, resource constraints and other factors mean that the goal of fully quantifying and monetising benefits and costs is likely to remain elusive.

These problems are sufficiently intractable as to lead some to question the feasibility and appropriateness of establishing benefit-cost analysis as the formal methodological requirement to underpin RIA. However, as was pointed out in OECD (2002), the use of benefit-cost analysis is consistent with the underlying principle of welfare economics (and of regulatory policy), that the benefits to society as a whole of a particular policy proposal should exceed the costs. The adoption of benefit-cost of an analysis as a formal requirement ensures that the broadest possible approach is taken to RIA and therefore maximises the contribution of RIA to policy decision-making.

In the presence of uncertainty and inadequate information, benefit-cost analysis is most useful if it makes the underlying assumptions and assessments explicit and is accompanied by sophisticated sensitivity analyses in relation to the major variables. However, it must also ensure that quantitative and qualitative aspects of the analysis are appropriately integrated, so that factors that cannot be quantified are not effectively excluded from the analysis.

There is an increasing focus, among RIA leader countries, on the need for systematic and sophisticated integration of quantitative and qualitative analyses and monetised and non-monetised data in order to produce RIA that is as wide ranging and relevant to policy decision-making as possible and effectively recognises policy tradeoffs and interactions. Jacobs (2006, pp 78-80) dubs this approach "soft benefit-cost analysis". However, the European Commission stresses that this approach, while focusing on a better integration of a range of quantifiable and unquantifiable impacts, is also consistent with improved standards of economic analysis and quantification of benefits and costs:

> The assessment of economic impacts must be strengthened so as to contribute to the objectives of the renewed Lisbon strategy. Deepening the economic pillar of impact assessment does not compromise the importance of "sustainable development" and the integrated approach, which remains the basis of the Commission's approach. (European Commission, 2005, p. 5).

Effectively achieving this integration of RIA elements is likely to require the use of a range of strategies and methodological tools, many of which may not have been adopted in the RIA context to date. Some are relatively simple variations on benefit-cost analysis: for example, breakeven analysis can be deployed to clarify the nature of the qualitative

judgments that are required if the regulation is to be judged as having net benefits overall. Others constitute quite distinct disciplines, many of which have received little attention in the regulatory policy context to date.

For example, Kaplan and Norton developed the "Balanced Scorecard Approach" in the early 1990s as a strategic management tool to enable enterprise managers to integrate financial and non-financial considerations. One Australian RIA guidance document proposes the use of the balanced scorecard approach in RIA, in circumstances in which significant impacts of proposed regulations cannot be quantified and these unquantifiable impacts are fundamental to regulatory choice.[14]

Identifying and evaluating the utility, for RIA purposes, of tools such as this, that may be contained in the management literature and elsewhere, may be an important future task if the current emphasis on the need for "integrated analysis" or "soft benefit-cost analysis" is to be translated into real improvements in RIA methodology and the ability of RIA to contribute to regulatory decision-making. Determining how these tools can be used in the specific context of regulatory decision-making is likely to be a particular challenge for regulatory reform authorities in the future.

In sum, there appears to be an increasingly generalised acceptance of the need to adopt the benefit-cost principle as the core of RIA methodology, with the centre of the debate increasingly shifting toward the issues of how effectively to integrate quantitative and qualitative balance of analysis into an integrated whole which best supports policy decision-making.

**Valuation of a statistical life.** RIA guidance in many countries (and in most leading RIA countries) emphasises the need to quantify impacts as far as possible and to assign monetary values where practicable. In the context of social regulation dealing with health and safety issues this implies adopting guidance as to the valuation of a statistical life saved.

As Viscusi has consistently pointed out, maximising regulatory cost effectiveness requires that the cost effectiveness of individual regulations should be equalised. That is, as long as regulatory resources are constrained, maximising overall effectiveness requires us to forego less effective regulatory choices in favour of more effective ones. Thus, in the health and safety context, the "cost of the statistical life saved" should be equalised across different regulations.

RIA guidance has rarely provided concrete guidance to regulators on this issue. This remains the position in respect of most RIA guidance documentation, even among leading RIA countries. For example, the Australian guidelines (dating from 1998) are silent on the value of the statistical life, while the larger benefit-cost analysis handbook which they reference[15] contains a discussion of different valuation methodologies and their conceptual bases and recommends that valuations of a statistical life should be based on willingness to pay methodologies, rather than the human capital model. However, it declines to recommend a particular dollar value for adoption. The United Kingdom's RIA guidance documents advise that estimates of the value of the statistical life saved should be made, but do not provide any specific guidance on acceptable or unacceptable values.[16]

In Canada, the 1995 *Benefit-Cost Analysis Guide for Regulatory Programmes*,[17] while not explicitly endorsing any particular value of a statistical life, notes that "*most estimates are in the range CAD 1-10 million*". However, it also notes that some Federal departments have developed their own explicit valuations of the cost of a life and implicitly endorses their use in the RIA context.[18]

Despite the relative absence of guidance on the value of the statistical life in historical terms, there are indications of a move in this direction in some recently adopted guideline documents. The RIA guidance document adopted in 2003 in the United States notes, in common with the Canadian approach noted above, that most estimates of the value of a statistical life contained in the risk literature fall within the range of USD 1 million and USD 10 million.

### Box 2.2. **Valuation of a statistical life: Human capital and willingness to pay methodologies**

There are two basic approaches to valuing a statistical life in the context of benefit-cost analysis:

The ***Human Capital*** approach equates the value of a life with the productivity of the individual, as measured by the discounted stream of expected future earnings.

The ***Willingness to Pay*** or ***required compensation*** approach imputes a value of life from the wage premium that workers require as compensation for jobs which involve a higher risk of death.

The human capital approach is an *ex post* value of life based on what is lost after the event of death. Thus, it implicitly places a higher value on the statistical lives of young people or those with higher incomes. By contrast, empirical analysis suggests that WTP varies little with age (Alberini, 2002). For welfare economics and public policy purposes, it is more relevant to know what individuals are willing to pay to reduce the possibility of early death. Thus, the Willingness to Pay approach is often regarded as preferable for use in contexts such as RIA.

In general, calculations carried out under the two different methodologies yield significantly different outcomes, with WTP valuations almost invariably being substantially higher than those based on the human capital approach. This is reflected in the wide range of commonly used estimates cited above in relation to the US and Canadian RIA guides.

*Source:* Handbook of Cost-Benefit Analysis. Department of Finance and Administration (Australia), January 2006.

The 2005 European Commission Impact Assessment Guidelines[19] also provide specific quantitative advice on appropriate valuations of a statistical life. The EC proposes a "base case" valuation of EUR 1 million, with sensitivity analyses to be conducted at values of EUR 2.5 million and EUR 0.65 million, although the basis for these proposed values is not discussed. This represents a narrower range of values, with the upper bound representing a value slightly less than four times higher than the lower bound figure. However, it is apparent that the values selected for inclusion in these two guideline documents are broadly comparable. Expressed in terms of euros, the range of values suggested in the US guidance document is equivalent to approximately EUR 0.78-7.8 million.

In general, it appears that there may be a gradually increasing willingness to provide specific value of a statistical life estimate in the context of RIA and general policy guidance in recent years. The apparent historical reluctance of governments to cite specific valuations is easily understood given the obvious political sensitivities involved, not least in simply acknowledging explicitly that such policy tradeoffs do and must occur. In this light, the above evidence of progress in providing a basis for more consistent policy decision-making in these areas is clearly encouraging.

**Social discount rate.** The RIA inventory highlighted the importance of the social discount rate as a key issue in terms of benefit-cost methodology. An appropriate discount rate should be applied to benefit-cost analyses if the results are to be properly reflective of societal rates of time preference. Moreover, a consistent approach must be taken to the use of discount rates to analyse different regulatory proposals in order to ensure consistent decision criteria and the optimisation of the use of regulatory resources.

Guidance material on RIA varies significantly in its advice regarding the discount rate. For example:

- The EC specifies a real discount rate of 4.5%, stating that this corresponds with the average real yield on long-term government debt since the 1980s.
- Denmark sets the discount rate at 6%, in its Manual of Social Economic Analysis.
- The United States specifies a range of different real and nominal rates in respect of a different time horizons. The real rates vary from 3.0% (3 years) to 5.5% (30 years) and are based on the pre-tax rate of return on private sector investments in recent years (OECD, 2004, p. 7).
- The United Kingdom specifies a formula, rather than a rate, which takes into account the time preference of individuals, the elasticity of the marginal utility of consumption and the annual growth in per capita consumption (*ibid*).
- Australia recommends a discount rate based on the private cost of capital be used for most purposes, but does not specify any given rate (DoFA, 2006, p. 68).
- New Zealand's RIA Unit recommends a range of discount rates for different purposes, including rates of 5-7% in respect of health and safety based proposals, the long-term government bond rate in respect of matters involving government expenditures and lower [unspecified] rates in relation to environmental regulation (OECD, 2004).

In Canada, the Treasury Board Secretariat suggests using specialists to estimate discount rates that are appropriate to the particular regulatory context, but indicates that a social discount rate of around 10% is appropriate, with a range from 7.5% to 12% being acceptable. The Canadian Benefit-Cost Analysis Guide for Regulatory Programs (1995) cites an earlier (1976) guide and argues for a real discount rate of 10%, with sensitivity analysis to be conducted at 5% and 15%. These values seem substantially different to those cited above. However, the conceptual basis underlying the Canadian values is unknown.

Higher real discount rates, as suggested in the Canadian guidance material, will have the effect of reducing the estimated NPV of a wide range of regulatory programmes, given that regulation commonly imposes substantial costs in the early years, while many benefits are often delayed into the future. Indeed, critics of RIA frequently fault it for what they see as its tendency to bias decision-making against long-term considerations. However, from an economic viewpoint, discount rates used in the RIA context must be reflective of rates of time preference found in the relevant society if they are to ensure that regulation is welfare enhancing.

Of course, there may well be legitimate reasons for different countries to adopt different discount rates. As the discount rate, in the RIA contexts, essentially represents the social rate of time preference, differences between the populations of different countries in terms of this preference function should be reflected in different discount rates. However, the extent of the differences highlighted above suggests that at least a part of the difference may be due to different conceptual approaches. Again, there is more than

one defensible approach. Nonetheless, dialogue between policy officials may be fruitful in clarifying good practices in this area.

Clearly, where a specific rate or rates are cited, it is necessary to ensure that these are reviewed regularly and revised as necessary. That said, as some of the above approaches indicate, the rates specified should be based on long run average values for whatever benchmark is used, rather than point values. This suggests that frequent variation of advice on discount rates should not be required.

In the regulatory context, provision of specific advice on this and other methodological issues is likely to be consistent with the wishes of RIA authors who, for the most part, do not have the expertise required to make their own judgments in this area. Moreover, as suggested above, specification of a given rate will promote consistency in the rates used to analyse different regulations. While it is sometimes argued that discount rates should be varied to reflect differing degrees of uncertainty as to whether regulatory benefits will be obtained in practice, a preferred alternative approach is to use a common discount rate and deploy sensitivity analysis to deal with issues of uncertainty.

### *Cost effectiveness analysis*

While benefit-cost analysis is generally recognised as the RIA ideal, some countries with leading roles in RIA implementation also recognise benefits in adopting or encouraging the use of cost effectiveness analysis (CEA) in some circumstances. Cost effectiveness analysis differs from benefit-cost analysis in that it takes the regulatory goal as a given and simply ranks different alternatives in terms of the cost of achieving the given outcome. Recent (2003) guidance on RIA issued in the United States notes that:

> … you should prepare a CEA for all major rulemakings for which the primary benefits are improved public health and safety to the extent that a valid effectiveness measure can be developed to represent expected health and safety outcomes. You should also perform a BCA for major health and safety rulemakings to the extent that valid monetary values can be assigned to the primary expected health and safety outcomes. In undertaking these analyses, it is important to keep in mind the larger objective of analytical consistency in estimating benefits and costs across regulations and agencies, subject to statutory limitations. Failure to maintain such consistency may prevent achievement of the most risk reduction for a given level of resource expenditure.[20]

It is notable, however, that the requirement with respect to regulation relating to health and safety issues is to prepare both a BCA and a CEA. The reference to the need to achieve analytical consistency "subject to statutory limitations" reflects the fact that the regulatory mandates established in some legislation effectively prevent benefit-cost analysis being used as the basis for decision-making but will allow CEA to be employed. This is believed to explain the fact that the US guidance document requires CEA to be used only in respect of health and safety-related regulation, while mandating BCA be used in respect of all of the regulations.

CEA has also been recognised as likely to prove more acceptable as a decision-making tool than BCA to regulators or policy makers who reject the application of the statistical valuation of human lives, injuries, etc. It must also be recognised that, in circumstances in which benefits are quantified but not monetised, an analysis which sets out to comply with BCA requirements will, inevitably, take on some of the characteristics of CEA.

Apparently in recognition of this point, the US guidance states that CEA should also be undertaken wherever the "primary benefit categories" cannot be monetised.

### *Dealing with risk and uncertainty*

The concepts of risk and uncertainty are fundamental to public policy making and, therefore, to RIA. These issues were acknowledged in the OECD's 1997 publication on RIA (OECD, 1997, pp. 223-224) but it is notable that no best practices for dealing with risk and uncertainty were identified at that time. The 2004 RIA inventory shows that most countries require that risk assessment be addressed within the RIA context, at least to some degree:

> Many countries adopt risk assessment in health, safety and environmental regulations, some in all cases, while others require it only for major regulations….Australia, Belgium, Denmark, the EU, Mexico, New Zealand, the United Kingdom and the USA require risk assessment in all cases. Austria, the Czech Republic, France, Germany, Hungary, Norway, Iceland, Poland, Sweden and Switzerland require risk assessment only in selected cases. Some countries such as the Finland and Japan require risk assessment on environmental regulations in all cases, while only in selected cases in the area of health and safety.

These general characterisations of country practices provide little specific information as to what kinds of risk assessments are employed and the purposes for which they are used. Risk assessment can be used in pursuit of a number of goals within the RIA process, as follows:

#### *Threshold tests*

Acknowledging the limits to regulation, most RIA guidance emphasises the need to adopt a threshold test to determine whether the identified problem warrants a government policy response. However, specific guidance as to how to conduct threshold testing is rarely given in the context of RIA guidance material, while the use of a quantified threshold for separating "acceptable" from "unacceptable" risks is also unusual.

From the policy perspective this is, perhaps, unremarkable. There are clear political risks involved in setting one or more unambiguous quantitative risk benchmarks to function as separators of acceptable and unacceptable risks in the policy context. However, the absence of any more specific or practical guidance on the question of appropriate decision rules to use when applying risk assessments in the context of a threshold test has obvious negative implications for policy effectiveness.

The most recent RIA guidance document published in the United States avoids providing any quantified estimates of what constitute acceptable or tolerable risks or, indeed, any discussion of the issue of risk acceptability. However, it does include an extensive discussion of the treatment of risk in RIA generally, including the nomination of acceptable values for a "statistical life", as discussed above.

The Australian RIA guidance material includes a significantly less technical discussion of risk issues than its US equivalent but similarly avoids giving a quantified assessment of what constitutes an acceptable or tolerable risk. It does, however, propose a rule to guide risk reduction activity in the regulatory context, as follows:

> The objective of implementing a proposal to deal with risk should not be to reduce the risk at all costs or to reduce it to a minimum level, but rather to balance the benefits and costs to the community of reducing the risk (ORR, 1998, p. E28).

This arguably equates to a policy of increasing the stringency of risk-based regulation until the marginal benefits and costs of further risk reduction are equated.[21] The New Zealand RIA guidance document provides neither a quantitative threshold for acceptable or tolerable risks nor any significant discussion of risk assessment. Jacobs (2006, p. 7) notes that:

> In 2000, Canada adopted a detailed Integrated Risk Management Framework, but risk assessment scarcely appears in the framework, and is almost invisible in the 1995 RIA guide.

It is notable, in this context, that some governments have adopted guidance on risk assessment that includes the use of quantitative thresholds. For example, in the United Kingdom, the Health and Safety Executive (HSE) proposes the following quantitative thresholds (Health and Safety Executive, 2001, pp. 44-45):

- Fatality risks of 1 in 1 million years should be regarded as broadly acceptable.
- Fatality risks of 1 in 10 000 years should be regarded as at the boundary between tolerable and unacceptable risks for members of the public who have a risk imposed upon them in the broader interests of society.
- Fatality risks of one in 1 000 years should be regarded as the boundary between tolerable and unacceptable risks for workers to voluntarily assume a risk.

As the accompanying text indicates, these thresholds are essentially derived from observation of people's actual behaviour in terms of the voluntary assumption of risk, or avoidance of risk, and are consistent with much academic literature on risk assessment, including the writings of Viscusi.

Notwithstanding the availability of this very clear guidance on dealing with risk, neither the current nor the proposed RIA guidance material published in the UK summarises or refers to this material in any way. Certainly, many of the available RIA guidance documents appear deliberately to have been written with generalist policy officers in mind and to largely avoid highly technical discussions, presumably for this reason.[22] Nonetheless, a practice of referring the reader to sources of further guidance on technical matters would seem to be a useful approach in this regard.

There are clear risks for policy coherence if the risk approaches developed by bodies such as HSE (as the UK Government's main specialist body in this area), are not fully understood and reflected in the practice of other regulatory agencies as required. This suggests that authors of RIA guidance documents may need to act to ensure that government policy positions in relation to risk are fully reflected in the guidance material that they provide.

Interestingly, the Better Regulation Commission is currently completing a report that will "*look at how our understanding, acceptance and management of risk as a society influence our approach to regulation.*"[23] Such a focus on the specific issues surrounding risk and regulation would appear to be a highly positive step, potentially leading to a better integration of some of the important insights of the risk literature with regulatory practice.

### *Uncertainty/Sensitivity analysis*

Issues of uncertainty and the need to conduct sensitivity analysis are discussed in many RIS guidance documents, including those currently in place in the European Commission, Ireland, New Zealand, the United Kingdom and the United States. The treatment

given to these issues is broadly similar and emphasises the need to conduct sensitivity analysis where there are significant degrees of uncertainty attaching to major variables.

However, these guidelines generally do not specify any particular decision rules to be adopted when assessing the results of the multiple scenarios generated as a result of the conduct of sensitivity analysis. In no case is the issue of probability weighting of different scenarios to obtain expected values explicitly discussed or explained. This may, however, largely reflect the fact that RIA guidance documents are largely drafted with generalist policy officers in mind and, as a result, tend to avoid more technical discussions.

Nonetheless, it does appear that the issue of sensitivity analysis, having been identified, is subsequently given a relatively cursory treatment which is unlikely to convey an adequate understanding of the importance of this methodological tool. This implies that the role of regulatory reform authorities in advising on the development of individual RIS will be crucial in determining how effectively this tool is employed in individual circumstances.

*Peer review***.** There is some evidence of a tendency to promote peer review as both a means of dealing with uncertainty and, more generally, as a quality assurance mechanism within the RIA context. The EC has indicated its intention to adopt peer review by scientific experts with respect to the proposed methodology of major RIA, where appropriate. Similarly, the United States RIA guidance material recommends the use of formal external peer review of RIA. Jacobs (*op. cit*, p. 69) also cites the *Information Quality Act* as having increased the use of peer review and, as a result, data quality.

In the Netherlands, current RIA policy requires that agencies enlist external expertise or support in carrying out the required RIA tests in certain cases. For example, the Central Bureau of Statistics must be involved in the conduct of the BIT, the National Institute for Public Health and the Environment must be involved in the conduct of the EIT and the Law Enforcement Expertise Centre or the Council for the Judiciary must be involved in the assessment of practicability and enforceability.[24] These requirements arguably also involve an element of peer review, since the external agencies would, presumably take on the role of providing a critique of the initial analysis conducted by the ministry sponsoring the proposed regulation.

Peer review is a topic that remains unaddressed in the great majority of RIA guidance documents. Neither the UK, US, Canadian, New Zealand nor Australian RIA guidance documents proposes the use of peer review. Even the recently introduced (October 2005) Irish RIA guidelines are silent on this issue, although it can be noted that Ireland is currently only taking the first steps toward RIA implementation.

Greater use of peer review, at least where RIA of major regulation is concerned, has the potential to increase both quality and credibility of RIA. Peer review is a fundamental element of the scientific method and is clearly applicable to the RIA context, particularly given the highly technical nature that many analyses of regulatory proposals necessarily manifest.

Clearly there are risks associated with the use of peer review, particularly in terms of the potential for peer review to impose significant additional resource costs and time delays. Moreover, where RIA are not released as public documents, there may be confidentiality issues to be resolved. However, all of these concerns are clearly capable of resolution and a judicious use of peer review within the RIA context deserves a wider consideration.

*Risk neutrality and the precautionary principle.* The issue of whether affected populations should be assumed to be risk neutral, risk accepting or risk averse is widely discussed within risk literature. Given the generalist orientation of most RIA guidance, it is perhaps unsurprising that the issue receives little attention in this context. However, the increasingly widespread promulgation of the precautionary principle in the regulatory context necessarily introduces this concept in the substantive sense. That is, the precautionary principle amounts to the integration of varying, but unspecified, degrees of risk aversion into the policy decision-making process.

Majone, in a paper previously prepared for the OECD, argues that the precautionary principle is "an idea (perhaps a state of mind) rather than a clearly defined concept, much less a decision rule or a guide to consistent policy making". As a result of its ill-defined nature,[25] the precautionary principle risks leading to attempts to control poorly understood, low level risks, thereby consuming resources that could, in many cases be directed toward controlling more substantial risks. In this sense, the adoption of the precautionary principle potentially entails significant opportunity costs.

The precautionary principle has generally not been incorporated in RIA guidance material to date, perhaps largely due to this lack of any generally accepted definition of the concept, much less general agreement as to how it should be interpreted and applied in specific policy contexts.

### *Risk/risk analysis*

Several RIA guidance documents explicitly recognise the issue of risk/risk analysis: that is, the observation that regulation designed to address risks in one context frequently give rise to increases in other risks. In general, the advice presented seems to go little beyond enjoining those responsible for RIA to recognise this issue and seek to incorporate assessments of these secondary risk effects within their analysis.

However, Wiener (2006, p. 17) sees this issue as one that requires "… co-ordination and oversight to manage these tradeoffs and if possible overcome them through innovative policies that reduce multiple risks in concert." Wiener advocates a role for regulatory reform authorities in this regard, and notes that the proliferation of partial impact analyses, addressing regulatory effects on particular groups potentially increases this co-ordination difficulty.

### *Provision of training/assistance in RIA methods and requirements*

RIA requirements are generally targeted, so that resources are only expended on RIA where regulation is likely to have significant impacts. A result of this is that a relatively limited number of RIA is prepared and, in turn, this implies that policy officials tend to conduct RIA only rarely.

This highlights the importance of providing adequate support to regulators to enable them to prepare high-quality RIA. Three main forms of assistance can be identified:

- publication of RIA guidance documents;
- provision of RIA training; and
- Provision of technical assistance on an *ad hoc* basis.

### *Publication of RIA guidance documents*

Regulatory reform authorities in most countries with RIA requirements publish relatively detailed guidance material, typically covering both the procedural requirements associated with RIA and the substantive aspects of RIA preparation. Moreover, guidance on the conduct of benefit-cost analysis, as the core element of RIA, is widely available in a number of published sources. Given the technical nature of BCA, general RIA guidance documents sometimes refer readers to separate, more detailed BCA guidance documents.

Efforts to revise and update RIA guidance material appear largely to be *ad hoc* in nature, although there is significant variability in this regard. Many current RIA guides were first published some years ago; for example, the current edition of the Australian *Guide to Regulation* was first published in 1998, while the Canadian *RIAS Writers' Guide* dates from 1992. On the other hand, the current *Regulatory Analysis* circular in the United States dates from 2003 and replaces previous editions from 2000 and 1996. In the United Kingdom, the new draft RIA guidance document constitutes the third guidance document to be published since 2000.

Frequent revisions to guidance documents are obviously more likely to be observed where the RIA policy itself is subject to rapid development and change, as in the United Kingdom. However, there is a clear case for regularly revisiting RIA guidance materials in the light of accumulated experience with RIA implementation, developing understanding of RIA issues and best practices and the need to keep RIA consistent with broader government policy changes.

There is some evidence to suggest that regulatory reform authorities have sought consciously to ensure the standing and authoritativeness of this guidance material by linking it with the broader government policy agenda. For example, the preparation of the most recent edition of the United States' key guideline document[26] involved collaboration with the President's Council of Economic Advisers, as well as peer review and inter agency review processes. In Australia, the Office of Regulation Review's *Guide to Regulation* references the Department of Finance and Administration's *Handbook of Cost Benefit Analysis*, which has general application for policy and project analysis across government.

Interestingly, in the United Kingdom, a process of public consultation is being undertaken on the new draft RIA guidance document. This would appear to be a potentially effective means of ensuring the document meets user needs and demonstrates a commitment to responsiveness on the part of the central regulatory reform authority.

Such steps may constitute an additional mechanism by which the regulatory reform policy can be linked more closely with other government policy priorities thus helping reinforce the authority, and hence the effectiveness of the policy.

More recently, a number of countries have developed software based tools that can be used to assist in RIA development. The Netherlands developed the Standard Cost Model for measuring administrative burdens, which has subsequently been adopted by a more than a dozen other countries, who have formed the *Standard Cost Model Network*[27] to discuss developments within the area, and agree on what actions should be taken in the future. Interestingly, an independent Advisory Board on Administrative Burdens has existed in the Netherlands since 2000 and has the role of scrutinising RIA with specific reference to the quantification of administrative burdens. Its opinions are made public and may be drawn upon in either Cabinet or parliamentary debate on regulatory proposals. Another aspect of the role of the Advisory Board is that it provides advice on the most effective and least

burdensome (from the viewpoint of administrative burdens) way of achieving the identified regulatory goal.

In Australia, the government recently announced that all RIA would henceforth be required to measure compliance costs using two software based tools: the Business Cost Calculator and the Small-Business Compliance Costing Tool.[28] These software tools typically function as a combination of checklist and calculator; prompting users to enter values for a wide range of cost and benefit types and subsequently calculating totals, present values and the like. The checklist aspects of these tools may be particularly valuable in ensuring that all relevant benefits and costs are identified by RIA authors. In addition, the systematic approach which these tools require users to take may minimise the likelihood of double counting and/or categorisation errors. However, concerns have been expressed in some cases that the tools themselves impose significant compliance burdens as a substantial learning process must be undertaken in order to be able to operate them effectively. Thus, regulators have sometimes found, if required to adopt these tools compulsorily, that they have increased the burden associated with the completion of RIA. Moreover, there is arguably a danger that the focus of these tools on entering quantified values for a range of costs and benefits leads RIA authors to focus more on what information is not available rather than what is available.

*Provision of RIA training*. The 1997 OECD best practices highlighted the need to "train the regulators" to enhance RIA skills. However, while published RIA guidance seems to be provided almost universally, it appears that the performance of regulatory agencies in the area of training provision is less positive. The 2002 OECD report on regulatory governance, upon reviewing member countries' performance against the 1997 best practices, concluded that "*Most countries rate poorly against this criterion*" (p. 127), while there is limited evidence of subsequent improvements. A number of the OECD country reviews of regulatory reform have pointed to the need to increase efforts to train policy officials in the conduct of RIA analysis. Moreover, it was notable that only four countries (Australia, Greece, Italy and Mexico) cited the provision of training among the RIA quality control mechanisms that they identified in the context of the 2004 RIA inventory.

A few countries have undertaken substantial training efforts in recent years. Ireland has only recently implemented RIA requirements, but has made significant efforts to deliver relevant training as part of the implementation phase. This includes the delivery of several two day courses which place RIA requirements in a broader policy context.[29] A notable development in Australia is the implementation of tailored RIA training courses that are oriented toward the specific RIA needs of individual regulatory agencies. These courses are provided by the Office of Regulation Review on request and are developed in consultation with the requesting agency. The fact that more than 400 regulatory officials received training from the ORR in each of 2003/04 and 2004/05 (ORR, 2005, p 79) presumably indicates, in part, the popularity of this tailored approach to the provision of RIA training. A recent government announcement foreshadowed increased funding to the ORR are to further expand its training effort, including a focus on assisting regulatory agencies to develop skills in benefit-cost analysis.[30]

Another response to the ORR efforts in this area has been a degree of "internationalisation" of the RIA training task. A significant proportion (almost 20%) of the regulatory officials trained by the ORR during this period were officials of the New Zealand government (*ibid.*).

A commonly acknowledged issue in relation to RIA training is that there are frequently high rates of turnover among regulatory agency staff. This means that there will often be a high level of continuing demand for RIA training as new staff take on RIA responsibilities. Equally, it implies that most training will need to be conducted at relatively basic levels and that there may be limited opportunities to use more advanced training courses to develop higher-level RIA skills: in practice, few agency staff are likely to have the opportunity to complete large numbers of RIA and thus develop these skills over time.

*Provision of technical assistance on an ad hoc basis*. This observation of relatively few regulatory officials having the opportunity to develop high level RIA skills through frequent exposure to the RIA task highlights the need for external assistance to be provided if high-quality RIA are to be generated. Most regulatory reform authorities have, in addition to publishing RIA guidance documents, provided technical assistance on an informal basis to regulators in the context of the development of individual RIA. In a relatively small number of cases, this function has been formalised to some degree.[31] The Netherlands pioneered this approach in the late 1990s when it implemented the "helpdesk" function (OECD, 1999). Reflecting the multifaceted nature of RIA, the Dutch model sees the helpdesk function being a joint initiative between several government agencies.

An interesting variation on this approach is the recent proposal in Ireland to establish an "RIA network". This arguably constitutes a decentralised version of the helpdesk idea, as it is based on the notion of an exchange of ideas and practices between regulators on RIA techniques, issues, experiences etc.

Regulatory reform authorities sometimes act as providers of advice/assistance on RIA related issues to regulatory agencies. However, this can give rise to the appearance of conflict between this role and that which many of them undertake as "gatekeepers", with responsibility for assessing and approving the quality of the finished RIA document. The separation of this "support" function from the gatekeeper function, as achieved in the Netherlands via the creation of the helpdesk, constitutes one response to this perceived conflict. A more limited attempt at separation is currently being undertaken in Australia, where a "Benefit-cost Analysis Unit" is to be established within the Office of Regulation Review which will be clearly separated from the RIA assessment function of that body.[32]

### *Locus of RIA activity*

The 1997 OECD RIA best practices report clearly envisaged that RIA should, in the majority of cases, be completed by generalist policy officials within regulatory agencies. This view was promoted because of the fundamental value attached to the need to integrate RIA into the policy development process. Thus, it appeared to be essential that those who were responsible for initial policy development should undertake the RIA task at the same time.

There is, however, growing recognition that the completion of adequately rigorous RIA requires significant technical skills in many cases. This issue has become increasingly apparent as the standard of RIA required has progressively increased over time. While regulatory reform authorities in most countries have provided a range of support mechanisms, notably in terms of published RIA guidance material and RIA specific training courses, the issue remains substantial.

One, more recent, response would emphasise the need for all regulatory agencies to develop a centre of expertise in the relevant core skills of economic and benefit-cost

analysis. For example, the UK has established Better Regulation Units in each major department, while the Australian government has recently committed to providing additional resources to assist departments in improving their benefit-cost analysis and risk analysis skills.

However, it has also been argued (Deighton-Smith, 2006) that the use of external expertise (*e.g.* through the appointment of consultants) is not necessarily inconsistent with the achievement of the cultural change objectives in respect of RIA that were cited above. In this view, the fundamental issue is that of the nature of the relationship between the consultant and the policy officials: where the RIA consultant is brought into the policy process at an early stage, the relationship with departmental officials can be one of dialogue in which the work undertaken on the RIA can contribute to ongoing policy development, while also allowing for the transfer of expertise to departmental officials as part of the process.

Arguably, there is little operational difference between the employment of an external policy consultant and the use of departmental BRU staff, who can be considered to amount effectively to internal consultants. In both cases, the fundamental issue remains that of ensuring a direct and continuing dialogue between the RIA expert and departmental policy officials and decision-makers.

The key issue for regulatory reform officials is to improve RIA skills among policy officials over time. In Australia, there is some evidence to suggest (Deighton-Smith, 2006) that increasingly rigorous methodological requirements in respect of RIA is tending to lead to an increased use of external consultants in order to ensure that required standards are met. The Australian Office of Regulation Review states that it actively encourages the use of external consultants in the preparation of more detailed and technically demanding RIAs.

### *Use of RIA in reviews of existing legislation*

The RIA framework of analysis is, necessarily, as well adapted to the review of existing regulation as to the *ex ante* analysis of new regulatory proposals. Indeed, the conclusions of RIA are likely to be more reliable when applied to existing regulation, as the wealth of actual experience derived from the implementation of the regulations provides a much larger stock of data for use in the analysis.

Despite this, indications are that relatively few OECD countries use RIA systematically when reviewing existing regulation. Among the respondents to the 2004 RIA inventory, only Australia and Canada indicated that RIA was used systematically in this context. Moreover, while Australia's National Competition Policy requires the adoption of a benefit-cost framework for legislative reviews, is not clear that this approach is adopted in the context of other legislative review activity, undertaken outside the NCP framework.

The lack of use of RIA in this context appears fundamentally to reflect the failure, to date, of efforts to catalyse cultural change within regulatory agencies, such that RIA is recognised as a core part of the policy process and, accordingly, integrated into its procedures. Formal RIA policies are generally silent on the issue of the application of RIA to the review of existing regulation. Moreover, the fact that reviews of existing legislation are most commonly undertaken by individual regulatory agencies means that the processes for the conduct of these reviews are essentially a matter within the discretion of each agency.

The fact that RIA is not consistently used in reviewing stocks of existing regulation suggests that the rigour and effectiveness of these reviews will, in many cases, be

substantially less than could be achieved. Moreover, new regulatory proposals and existing regulation may be assessed according to inconsistent criteria and methodological approaches. Moves to increase the use of RIA in the context of reviews of existing legislation have the potential to greatly enhance the contribution of RIA to regulatory quality. Attempts to mandate more consistent approaches to the review of existing regulation, however imply a more centralised approach, which may be difficult to achieve in the context of the administrative culture of many OECD member countries.

## Authority elements and RIA quality

### *High level political support*

The importance of high level political support for regulatory policy generally has long been recognised. Indeed, the 2000 regulatory indicators survey found that all OECD member countries stated that their regulatory policy had been either issued, revised or reaffirmed by the present government (OECD 2002, p. 29). As RIA is, for most countries, a core element of the regulatory policy, it can be expected that high-level political support would have major importance for the success of RIA as well.

Indicators of the extent of high-level political support for RIA are however difficult to identify. By definition, any broadly based RIA process must be established via a decree or other decision at the centre of government. However, this tells us little about the level of practical support for ensuring a high level of compliance with the policy, once established. That said, the RIA inventory suggests that the adoption of RIA requirements in legislation can be seen as an indicator that the government is particularly committed to RIA (see below).

In the United States strong political support for the centralised enforcement of regulatory principles and procedures (including RIA) is a central factor in the US approach to regulatory policy. In the United Kingdom, responsible Ministers must sign a statement to accompany each RIA document, stating that they have reviewed it and are satisfied that the benefits of the proposed regulation justify the costs.[33]

In Australia, high-level political commitment to RIA is arguably demonstrated through allocating the role of assessing RIA quality oversight to a body that has statutory independence from government.[34] More broadly, given the importance of independent review of RIA to the success of the policy, the authority given to the review body is clearly a major consideration. This essentially has two elements. The first is the placement of that body within the government's administration. As discussed in previous OECD publications (see OECD, 2002), there has been a trend in recent years to locate regulatory review authorities in the centre of government, apparently in recognition of the importance of this authority issue. The second is the ability of the reform body to bring concerns with RIA quality, or the policy proposal more generally, to the attention of Cabinet or, in some cases, to prevent the policy from going forward for Cabinet consideration until the RIA has been approved as adequate.

A recent Australian report recommended that oversight of regulatory processes and reform should be elevated to Cabinet level. However, the government response declined to appoint a minister with specific responsibility for regulatory reform, pointing out that the Treasurer (*i.e.* Minister for Finance) has lead responsibility for regulatory reform under current arrangements.

### *Formal authority of the RIA requirements*

The legal or policy basis upon which the RIA requirement is established varies substantially across OECD countries. The 2004 RIA inventory identified four basic forms of authority for RIA requirements, as follows:

- Established by law (as in the Czech Republic, the Republic of Korea and Mexico, as well as a majority of Australian States).
- Based on a Presidential order or decree (as in the United States).
- Based on a prime ministerial decree, or guidelines of the Prime Minister (as in Australia, Austria, France, Italy and the Netherlands).
- Based on a directive or resolution of the Cabinet or the government (as in Canada, Denmark, Finland, Germany, Ireland, Japan, New Zealand, Norway, Poland, Portugal, Sweden, and the United Kingdom).

The key question in this regard is whether establishment of the RIA requirement via one instrument or another will necessarily invest it with a greater degree of authority and therefore assist in maximising the degree of compliance with policy. It could be expected, *a priori*, that establishment of RIA via legislation would convey the greatest degree of authority on the policy. However, there appears to be little, if any, evidence to support this supposition. Certainly, the above list indicates that few OECD countries have chosen to adopt their RIA processes by way of legislation.

Notably, although Australia adopted new legislation covering aspects of regulatory process and regulatory quality assurance in 2003, the final version of this legislation did not include reference to the RIA process, as did previous drafts.[35] A recent report to the Australian government on "Rethinking Regulation" again recommended the inclusion of RIA requirements in the legislation, but the government has declined to take up this recommendation. One possible explanation for the limited use of legislation to establish RIA processes is that, particularly in the early years of implementation, significant changes will likely be made to the initial system design and that these may occur relatively frequently. The need to amend legislation in order to update, extend or otherwise improve existing RIA requirements could be seen as an inhibiting factor toward the achievement of continuous improvement in this regard.

A number of countries with long experience of RIA requirements that are based on instruments other than legislation argue that non-legislative approaches are effective in providing adequate authority to underpin the efforts of regulatory reform bodies to ensure a high level of compliance. For example, the United States believes that the authority provided to the OMB in respect of the assessment of RIA under its Presidential decree[36] has been sufficient to allow this mechanism to constitute one of the key guarantors of RIA quality in that country. Similarly, Australia argues that a high level of compliance has been achieved under its system, whereby the RIA policy is established via a Prime Ministerial statement.

It appears that the formal basis upon which RIA policies are established may be less important than other, related elements in influencing RIA quality. In particular, if there is a high level of political support at the centre of government for the RIA policy, the regulatory reform authorities tasked with its enforcement are likely to be successful in ensuring a high level of compliance.

## Specific quality assurance mechanisms

Several elements in relation to RIA can be characterised as constituting quality assurance measures in the direct sense. These are the nature and extent of requirements for assessment of RIA quality by an external (to the regulatory agency) body within the administration, the nature and extent of other RIA quality assessment mechanisms, the degree of integration of RIA and public consultation processes, and the nature and extent of any requirements for *ex post* assessment of the results of *ex ante* RIA analysis.

### *Assessment/approval of RIA by a central regulatory reform authority*

The 1997 OECD best practices report argued that it was necessary to "allocate RIA responsibilities carefully". It was recommended that regulatory agencies should be primarily responsible for developing RIA, while an independent body should have responsibility for oversight and quality assurance. This oversight and quality assurance function has often been absent from countries' RIA processes, especially when first established. However, in the last decade, the number of countries that have adopted this approach has substantially increased, while the effectiveness of the quality assurance function undertaken by the central regulatory reform authorities has also, in most cases, increased.

The determinants of the effectiveness of this quality assurance function are several. Three elements can be highlighted:

- the level of formal authority granted to the regulatory reform policy;
- the level of resources and expertise within the regulatory reform body; and
- the degree of "informal" authority wielded by the regulatory reform body, reflecting factors such as:
  - whether the regulatory reform body is located at the centre of government; and
  - whether the regulatory reform body has high-level political support within government.

In terms of the formal requirements for compliance with RIA, a spectrum exists between cases where regulatory agencies may be wholly responsible for the preparation of RIA without being subject to any formal external quality control and those where regulatory reform authorities have the ability to prevent regulatory proposals from going forward if they believe that RIA requirements have not been adequately met. A number of different arrangements exist between these two extremes.

Perhaps the strongest powers are those wielded by the Office of Management and Budget in the United States, where agencies are prevented from publishing draft rules unless OMB has determined that the benefits of the rule are likely to justify the costs. Thus, the regulatory review authority has an effective power of veto over the regulatory process.

The United States believes that review by the Office of Management and Budget of regulatory proposals and the accompanying RIA is essential to ensuring high-quality RIA. Moreover, it identifies the existence of strong political support for central oversight of its regulatory policy as one of the three key elements of its approach to regulatory policy, along with robust RIA processes generally and transparency and accountability, particularly through open public consultation processes.

In recent times, the OMB appears to have made more extensive use of its powers, as indicated by the substantial increase in recent years in the number of rules returned to agencies for further development. For example, in the first year of the George W. Bush

administration, 20 rules were returned to agencies, exceeding the total number of rules returned during the eight previous years.

In other countries, while a review authority is required to provide an assessment of the RIA, non-compliance does not prevent the regulation from proceeding. For example, in Australia the Office of Regulation Review has, to date, only been able to notify non-compliance with RIA requirements to decision-makers, and annually publishes compliance data as a further sanction. However, a recent Government decision requires that, unless there are exceptional circumstances, a regulatory proposal with material business impacts cannot proceed to Cabinet or to another decision maker unless it has complied with the government's RIS requirements.[37] This would appear to be a level of authority similar to that wielded by the OMB in the United States.

Australia has commented that it believes the processes for review of RIA documents by the Office of Regulation Review are "quite important" to the quality of the RIA process as a whole. However, it also indicates that the level of integration of RIA into the policy process is a major contributor to overall RIA quality, stating that, in the experience of the ORR, a correlation exists between the quality of the policy-making process and the quality of the RIA. Recently announced policy changes will strengthen the role of the ORR by preventing regulatory proposals being considered by Cabinet unless the RIA has been assessed as adequate by that body and by broadening the range of grounds on which an RIA can be found to be inadequate.

A number of other countries have moved to increase the effectiveness of central oversight of RIA quality in recent years. For example, major changes have been made in the United Kingdom since 2003. RIA must now be "agreed" with the Cabinet Office Better Regulation Executive. Moreover, the role of the Cabinet Office Better Regulation Executive in RIA scrutiny has been supplemented through the creation of the Panel on Regulatory Accountability (see below), while the Small-Business Service also scrutinises RIA which have significant small-business impacts. The resources of the Cabinet Office Better Regulation Executive were also significantly increased in 2005, while its remit with regard to independent regulators was broadened.

New Zealand moved in 2002 to strengthen the role of its Regulatory Impact Analysis Unit by a requiring that the unit's comments on all RIA be included with Cabinet Submissions. Australia has recently adopted a requirement for all RIA to use a software-based "Business Cost Calculator" and, where relevant, a Small Business Compliance Costing Tool to assist in the identification and quantification of costs and to encourage greater consistency in methodological approaches taken in RIA.

### *Other review mechanisms for RIA documents*

While requirements for the RIA to be assessed by an independent body within the government administration constitute the most commonly found form of quality assurance, many countries have implemented additional mechanisms for assessment and/or review of the RIA.

The United Kingdom has implemented several additional review mechanisms, including one that is currently at the consultation stage. As noted above, Ministers are now required to certify personally the adequacy of the RIA document. Proposals for a revised RIA process which are currently subject to public consultation would require that Departmental

Chief Economists also provide a declaration regarding the evidence basis for the analysis contained in the RIA (Cabinet Office Better Regulation Executive, 2006).

Regulatory proposals that are likely to impose a major new burden on business are required to obtain clearance from the Panel on Regulatory Accountability, which is chaired by the Prime Minister. The Panel receives an RIA that has been agreed with the Cabinet Office Better Regulation Executive. Submission of the proposal to the Panel occurs before wider ministerial approval is sought for the proposal. According to the UK Government, "*The PRA continues to reject and delay a significant proportion of regulatory proposals, where departments have not properly justified extra burdens on business.*"[38]

### *Integrating RIA with public consultation*

Previous OECD work has shown that RIA is increasingly being integrated with public consultation processes. The data contained in the 2004 RIA inventory suggest that this trend is continuing. However, it suggests that countries differ in their approach to releasing RIA documents for consultation, while a significant number of countries still do not release RIA documents. According to the inventory:

- countries which disclose their RIA for consultation and during legislative development include Canada, Denmark, the European Commission, Finland, Italy, Mexico, New Zealand, Norway, Poland, Sweden, Switzerland, the United Kingdom and the United States;
- countries which disclose their RIA only in the case of major regulations or in selected cases include Japan and Portugal;
- countries that disclose their RIA only when regulation is submitted to the Parliament, or Council of Ministers, include Australia, France, Iceland and the Netherlands; and
- countries that do not disclose their RIA include Austria, Hungary, Ireland, Korea, Spain and Turkey.

Differences between countries as to the stage of the legislative process at which RIA documents are released presumably reflect different views as to the purpose of disclosing the RIA. When RIA are released at a relatively early stage in the regulatory development process, there are significant opportunities for consultation to affect the final shape of the regulation. Thus, RIA documents are being used to provide detailed information on the regulatory proposal to stakeholders and the public. Where this occurs, consulted groups are effectively providing a quality assurance mechanism in respect of the RIA, as additional information and feedback received during the consultation process will necessarily lead to reassessment and revision of the analysis. Consultation on the basis of RIA documents thus aims to obtain data and information on stakeholder attitudes and to contribute to policy development.

By contrast, where RIA are released at a later stage of the process, such as during Parliamentary debate on the proposed legislation, the opportunity for public feedback to effect the policy process is obviously much more limited. In such cases, it must be inferred that the purpose of the public release of RIA relates primarily to issues of transparency and accountability, rather than being focused on improving regulatory quality.

For many countries that release RIA late in the process, it is likely that other forms of consultation will have been conducted at earlier stages. For example, while Australia does not have a formal consultation policy at Federal government level,[39] some consultation will

almost invariably be undertaken by regulatory agencies during the course of developing new regulatory proposals. The question of whether individual agencies have organisational guidelines outlining consultation processes also constitutes one of nine regulatory performance indicators reported in Australia. However, the nondisclosure of the analytical basis underpinning the regulatory proposal during these earlier consultations necessarily limits the ability of stakeholders to engage fully in this process and challenge regulatory proposals.

The New Zealand government has, since 2001, adopted a requirement that all RIA should be published on the Internet sites of the relevant departments, as well as at a central point within the Internet site of the Ministry for Economic Development. However, the timing of the publication is left to the discretion of the responsible Minister and/or the Cabinet. Therefore, publication may not occur, in some cases, until after Cabinet consideration and decision on the issue.

By contrast, in the United States, before agencies can issue a final regulation, they must publish a proposed rule in the *Federal Register* and make public any associated RIA. Thus, The RIA forms the basis of an open process of consultation, based on "notice and comment" procedures.

Aspects of the design of RIA-based consultation processes can significantly affect the degree of impact which integration with consultation processes has on RIA quality. In particular, where there are procedural requirements for comments received to be addressed explicitly by regulators, a greater degree of responsiveness is likely. However, it is also likely that a more open consultation process will be more effective in terms of RIA quality assurance than selective consultation, as the degree of transparency and accountability involved are likely to be significantly higher.

As noted in previous OECD work (OECD, 2002, p. 69), consultation processes are increasingly becoming more open and accessible and are also increasingly being used to support RIA development.

Publication of RIA documents can constitute a quality assurance mechanism even where (as in the Australian Federal context) it is adopted primarily as a transparency mechanism, rather than a vehicle for consultation *per se*. That is, while public feedback will not have a significant impact in terms of leading to revisions and improvement of the analysis in this context, consciousness of the need to defend the RIA publicly is likely to encourage regulators to achieve higher analytical standards.

### Ex post *review of RIA*

RIA, when conducted in respect of new regulation, is necessarily *ex ante* analysis and, as such, it is subject to substantial error. Requirements for *ex post* review of regulatory impacts can also have a positive impact on the quality of *ex ante* RIA. Knowledge that the RIA will be revisited within a relatively short period may act to undermine any incentives that regulators would otherwise have to manipulate the analysis in a manner which favours the case for the proposed regulation.

Moreover, in a more dynamic sense, *ex post* review can help to reveal systemic errors in RIA methodologies and thereby promote methodological improvements over time. Of course, such an effect requires that the results of *ex post* reviews be themselves systematically assessed and any conclusions fed back into RIA guidance.

*Ex post* evaluations can be of several types. Harrington (2003) proposes the following three part taxonomy:

- *Content tests* assess RIA on the basis of whether they contain the elements specified in RIA requirements and, in some cases, assess the quality of each of these elements.
- *Outcome tests* assess RIA in terms of the degree of consistency between their *ex ante* assessments of regulatory impacts and actual (*i.e., ex post*) impacts.
- *Function tests* assess RIA according to their outcomes – *i.e.,* their ability to facilitate the regulatory process and produce efficient and equitable regulations.

A number of countries have begun to implement indicators of RIA performance that can be seen as constituting constitute content based *ex post* assessments of RIA, within Harrington's taxonomy. The United States tracks a range of input measures in relation to RIA, and has implemented targets of ensuring that:

- ensuring that at least 80% of economically significant rules include monetised estimates of benefits and/or costs; and
- ensuring that 60% of economically significant rules are fully compliant with OMB Circular A-4.

In the United Kingdom, the rate of compliance with RIA requirements is systematically monitored and, in recent years, is claimed to be close to 100%. It is not clear, however, what tests must be passed by an RIA document for it to be judged as being compliant. The UK National Audit Office also reports on the propensity for RIA to lead to changes in regulatory proposals.

In Australia, annual reports are published on compliance with a set of nine Regulatory Performance Indicators. These indicators were developed in 1997 and three can be said to relate directly to the quality of RIA processes:

- The proportion of RIA that adequately addressed the question of net benefits to the community.
- The proportion of RIA that adequately justified the compliance burden imposed on business.
- The proportion of RIA that included an adequate statement of consultation.

Reported compliance has generally been high, reaching 91% for all three indicators in 2003-04. However, despite this high level of reported compliance there has been continuing disquiet over regulatory quality issues, leading to the announcement of substantial enhancements to RIA and related regulatory quality requirements and processes in August 2006. Thus, the stringency of Australian RIA requirements in these areas is currently being increased, while the range of indicators collected is also to be expanded (Government of Australia, 2006, pp.75-82).

In addition to these indicator based approaches, some more substantive assessments of RIA content have also been implemented in recent years. A significant example is found in the United Kingdom. Since 2000, the National Audit Office has published an annual "Evaluation of Regulatory Impact Assessments" which provides a detailed review of RIA performance, based on a sample of the RIA published in the previous year. Particularly given the timing involved, there is little opportunity for outcome testing to be undertaken in this context. However, this review programme is considered to be an effective means of identifying significant issues in RIA practice and allowing action to be taken to improve the

quality of subsequent RIA. This form of assessment has a high level of independence as the NAO has statutory independence from the government and, moreover, it has no responsibility for the initial assessment of the adequacy of RIA.

In some cases, a parliamentary committee reviews RIA documents and can seek further information regarding the analysis. This function also constitutes a content based form of *ex post* review of RIA. The function represents a slight expansion of the traditional function of Parliamentary scrutiny committees, given that parliament generally retains a power to disallow delegated legislation (*i.e.* a legislative instrument made in reliance on an authority delegated by the Parliament). For example, in Australia the Senate Standing Committee on Regulations and Ordinances reviews all disallowable instruments and may take into consideration the adequacy of the RIA when deciding whether to disallow an instrument.

Where a Parliamentary scrutiny committee reviews the RIA documentation, it is effectively bringing this aspect of the procedural requirements for regulation making within the scope of its scrutiny function. Where an RIA document is found to be seriously inadequate, a recommendation for the disallowance of the regulation may result. In this respect, a Parliamentary committee unsurprisingly wields significantly greater authority than does a regulatory review body within the administration.

A further form of content based *ex post* review is provided by the courts, which can constitute an important check on the use of regulatory power in some countries (notably the United States). Again, a finding that the RIA is substantially inadequate has the potential to be deemed to be a material procedural inadequacy and lead to the regulation being invalidated. Thus, the prospect of court action can constitute an important quality assurance mechanism for RIA.

There is, as yet, little evidence of the systematic adoption of *ex post* assessments of the *ex ante* predictions about probable regulatory impacts made in RIA documents – that is, of "outcome testing", in Harrington's terms. In the UK, the National Audit Office has recently drawn attention to this issue, commenting that "e*x post evaluation of new regulations is largely neglected, as departmental evaluations are either embryonic or isolated*." (NAO, 2006, p. 9). It does note, however, that at least one department is currently considering how it can undertake *ex post* evaluation of its regulation and has recently commissioned research in this area.

In Australia, the Government has recently accepted a recommendation of the *Rethinking Regulation*[40] report that a selective programme of *ex post* reviews of regulation should be commenced one to two years after implementation, with the focus to be placed on those regulations exempted from the RIS process on urgency grounds and those in respect of which the RIS analysis revealed substantial uncertainty about either the extent of compliance burdens or the extent of net benefits. The report also recommended replacement of current 10 year sunsetting requirements with a very short (five yearly) "sunsetting" cycle, which would effectively require *ex post* assessments to be conducted at these intervals in the context of developing new RIA for replacement regulations. However, this recommendation was rejected.

It is notable that these recommendations have been made in the context in which RIA documents are already required to include an "implementation and review" section, which specifies what review processes will be followed in respect of the regulatory proposal. Similarly, the comments of the UK NAO are made in the context in which each RIA is

already required to state how the effectiveness of the regulation is to be measured, and when (OECD, 2004, p. 9). This suggests that, even where systematic provision is being made for *ex post* evaluation to be conducted, significant difficulties with compliance are encountered in practice. In turn, this may suggest the need for constant reporting of the results of such evaluations.

One notable example of outcome testing conducted in respect of RIA was that published by Harrington *et al.* (2001), which concluded that the expected costs of regulatory proposals were systematically overestimated in RIA. However, while this result provided a degree of support to RIA critics who frequently argue that this is the case, Harrington's analysis also showed that the expected benefits of regulation were systematically overstated. This degree of overstatement of expected benefits was so great that, considered as a whole, the RIA showed no systematic bias in terms of the estimation of unit costs (*i.e.* cost per unit of benefit achieved) (Harrington, 2004).

The RIA inventory lists a number of *ex post* review mechanisms currently in use. This list shows considerable variation in the approach to review and in the extent to which these *ex post* review requirements are specific to regulation. Some examples of particular relevance to regulation are:

- In Denmark, the government chooses approximately 15 laws each year that will be reviewed three years after implementation.
- Germany has created the concept of a retrospective RIA, which should be completed once operational experience is available with the new regulation.
- In the EC, services are asked to provide plans for monitoring and evaluation of proposals, while proposals should themselves include review clauses where appropriate, particularly in areas subject to rapid technological change.

Function tests – that is, systematic *ex post* assessments of the contribution of RIA to the efficiency and effectiveness of regulation remain almost unknown. However, it should be noted that the United States has attempted to calculate the aggregate benefits and costs of major regulations (*i.e.* those requiring RIA) over the last 20 years. The results indicate that significant net benefits were predicted to come about as a result of new major regulations in each year. However, the very wide year to year variation recorded in estimates of average benefits, in particular, tends to underscore the difficulty of this task and may reflect year on year differences in the proportion of benefits that could be quantified, as much as actual differences in regulatory performance.[41]

## Conclusion

This paper identifies substantial policy activity currently being undertaken in respect of RIA processes and substantive requirements in a range of OECD member countries. Much of the development activity in respect of RIA is occurring in countries in which there is very lengthy experience with RIA. This is consistent with the view that policy learning in relation to RIA is a long-term process and also suggests that there is a continuing political will to enhance RIA requirements and improve its contribution to regulatory quality among early adopting countries.

Development appears to be occurring at both the level of technical requirements for the completion of RIA and at the procedural level. In a number of areas, substantial challenges continue to exist and significant further work is required.

It is clear that RIA is too often commenced too late in the policy process to be able to have a significant effect on outcomes. While there is some evidence that the adoption of "2 stage" RIA requirements encourages earlier commencement of the process – with consequent gains in effectiveness –few jurisdictions have adopted this approach. There has been limited success in identifying other effective means of improving practice in this area. *Systematically ensuring that RIA is commenced early in the process remains a priority*.

Substantial gaps remain in terms of the completeness and the appropriateness of the methodological guidance made available on RIA. There is a lack of clear and transparent rules regarding acceptable RIA methodologies. While there has been a significant increase in the number of countries adopting a general commitment to the use of BCA as the basis of RIA, little seems to have been done, in most cases, to take account of the substantial technical literature on this issue, *to lay out clear methodological expectations and to provide comprehensive and well considered guidance to RIA authors*.

This may affect the quality of RIA in a range of areas, including the treatment of risk, dealing with the valuation of a statistical life, discount rates and the use of sensitivity analysis. A more substantial review of country practices in this area, and of underlying policy views, would be a useful first step toward the development of guidance on best practices in the use of BCA in the specific context of RIA. Acting to maximise the quality of quantitative RIA analysis is also an essential underpinning for recent and continuing efforts to better integrate quantitative and qualitative analysis and thereby provide more policy-relevant advice.

Moving beyond the confines of BCA, there is also a need for further research and discussion of the use of other types of analytical methods, including macroeconomic approaches or general equilibrium methods and the benefits and risks associated with the trend toward adopting these kinds of analysis.

The loss of policy coherence is also an important risk identified in relation to recent RIA trends. This is due to the trend toward a proliferation of requirements for partial impact analyses, focusing on the impacts of regulatory proposals on specific groups in society. While there are possible political gains from this trend, including increasing the acceptability of the RIA to some groups, strategies are needed to integrate all the impact assessments from a whole–of-government perspective, ensuring policy coherence.

The targeted nature of RIA means that officials in most regulatory agencies will inevitably have limited opportunities to conduct RIA. In a context of rising expectations as to the sophistication of RIA analysis, this may have internal implications in terms of the management of these agencies, including the need for internal or external expert groups able to provide these services. This also needs to be accompanied by cultural change, to promote an understanding of the purpose of RIA and its contribution to good policy processes.

Wider publication of RIA documents may also be leading to better exchange of information within the administration on RIA best practices, analytical approaches and data collection methodologies and could potentially constitute an important means of contributing to improve future RIA quality. Recent moves in at least one country to establish and RIA network to facilitate direct exchanges of information between regulators may further enhance this effect.

In sum, RIA continues to represents a policy priority in a wide range of OECD member countries as well as a fundamental tool in regulatory policy. However, the latest evidence

again underlines the fact that the development of a best practice system of RIA is necessarily a long-running task and indicates that much remains to be done, even in countries with the longest established RIA processes, if this tool is to achieve it potential within the wider context of regulatory policy as well as to cope with an ever changing policy environment.

### *Notes*

1. An important locus of regulatory decision-making in Australia is that of "Ministerial Councils", through which nationally harmonised regulatory standards are developed in areas that fall largely or wholly within the responsibility of State governments. RIA conducted in respect of proposals brought before Ministerial Councils are subject to a two-stage process. See *www.pc.gov.au/orr/reports/external/coag/index.html*.
2. "Two stage" RIA as discussed here is distinguished from models such as those of the Netherlands and the European Commission, in which a preliminary RIA is prepared, followed by a full RIA. The Australian process, used as an example of a "two stage" RIA involves two complete RIA documents being prepared at different stages of the policy process.
3. *Regulatory Impact Assessments and Sustainable Development*. Briefing for the Parliamentary Environmental Audit Committee, 22 May 2006. National Audit Office. London, p. 2.
4. Deighton-Smith, R. (2007), "Statistic on RIA and regulatory change" from *Regulation and Its Review 2004-05*, Office of Regulation Review. See: *www.pc.gov.au/orr*.
5. As noted below, the number of RIS prepared in the United States and in Australia is broadly similar. Despite this, approximately 10 times as many rules are made in the US, with around 35 00 rules being made annually (OECD, 2002, p. 132) compared with 341 rules made by the Australian government in 2005.
6. That is, approximately 100 rules pass the threshold of imposing USD 100 million per annum in costs and therefore require the completion of quantitative benefits/cost analysis. In addition, OMB reviews approximately another 500 rules annually and is required to satisfy itself that the benefits of these rules are likely to justify the costs.
7. A requirement for a full BCA can constitute a belated response to a proliferation of requirements for partial analyses, as occurred in the European Commission context in 2004. See *Impact Assessment: Next Steps* Commission of the European Communities, Commission Staff Working Paper, October 2004. SEC(2004)1377.
8. The Ministries of Economic Affairs, Environment and Justice act co-operatively in forming the Proposed Legislation Desk, which scrutinises new regulatory proposals to establish whether the relevant tests have been conducted adequately. While employees of each ministry are involved in the assessment of only one test, a single opinion will ultimately be provided on the half of the Proposed Legislation Desk as a whole.
9. Including the Australian, European Commission and Irish RIA guidance documents.
10. Plumbing (Water and Energy Savings) Regulations 2004 (Victoria). RIA available on request from Plumbing Industry Commission *www.pic.vic.gov.au*. A brief discussion of the methodological failings of the RIA is also available at *www.ipa.org.au/files/MORAN%20Housing%20speech%20July%202005.pdf*.
11. Draft guidance documents on integrating competition policy analysis into RIA were considered at a meeting of the OECD Competition Policy Working Party No. 2 in June 2006. See DAF/COMP/WP2(2006)4 and DAF/COMP/WP2(2006)5. The UK has recently issued revised guidance on this issue for use by RIA authors.
12. Deighton-Smith, R. (2007). The 2001 survey was sample based and related to RIA prepared under the Council of Australian Governments requirements. The Victorian data relate to 2004-05 and 2005-06 and are comprehensive.
13. It should be noted that simple comparisons of the proportion of RIA including quantification of benefits and costs across jurisdictions are likely to be misleading due to the different RIA thresholds applied. In Australia, RIA guidance states that the extent of quantification should be commensurate with the size of the regulatory impacts being assessed. However, Australia's RIA

requirement captures regulations of a significantly more minor nature than those covered by the US RIA requirement, for example.

14. See "Victorian Guide to Regulation", *www.vcec.vic.gov.au*. For general information on this tool, see *www.balancedscorecard.org/basics/bsc1.html*.

15. *Handbook on Benefit-Cost Analysis*. Department of Finance and Administration, Government of Australia, January 2006. Available at: *www.finance.gov.au*.

16. New RIA guidance is expected to be adopted shortly. The current draft is much abbreviated and would not be expected to include technical detail of this sort. However, it is anticipated that further technical guidance will be developed to supplement this general guide over time.

17. Consulting and Audit Canada, August 1995, p. 80. See *www.pco-bcp.gc.ca/raoics-srdc/docs/publications/CostBenefitGuideforRegul/CostBenefitGuideforRegul_e.pdf*.

18. For example, Health Canada's *Handbook on Health Impact Assessment* (2004) presents value of statistical life estimates drawn from Viscusi's research. It cites valuations of a statistical life (presented in 2000 Canadian dollars) ranging between CAD 1 million and CAD 22.6 million, and having a median value of CAD 6.8 million and a mean value of CAD 8.4 million.

19. SEC(2005)791, 15 June 2005, see Annexes, p. 38.

20. Circular A4 (September 17, 2003) to Heads of all Regulatory Agencies. *Regulatory Analysis*. Office of Management and Budget. See pp. 9-10.

21. A recent development in Australia is a policy announcement that failure to conduct adequate risk assessment will, formally, constitute grounds for assessing and RIA as inadequate.

22. The United States RIA guidance document is something of an exception in this regard.

23. See *www.brc.gov.uk/work_programme/*.

24. See Dutch RIA Manual, p. 2, (English edition).

25. Majone notes that 11 different definitions of the principle have been identified, even within the context of German environmental law, where it finds its genesis.

26. *Regulatory Analysis*. OMB Circular A-4, September 2003.

27. The Network currently consists of the UK, Norway, Sweden, Denmark, Belgium, The Netherlands, Poland, France, Hungary, Italy, the Czech Republic and Estonia. See *www.administrative-burdens.com*.

28. For information on the Australian Business Cost Calculator, see: *www.industry.gov.au/content/itrinternet/cmscontent.cfm?objectid=BA9E0CA8-D420-DD1E-84CB334C068AFE94&searchID=168216*.

29. See *www.finance.gov.ie/CSTC/viewdoc.asp?fn=/CSTC/CSTDCdocs/RegulatoryImpactAnalysis.htm*.

30. For details see: *www.treasurer.gov.au/tsr/content/pressreleases/2006/088.asp*.

31. Jacobs identifies Ireland, New Zealand and Sweden as other examples.

32. Yet another separate subsection of the ORR is to provide technical advice on the use of the, now mandatory "Business Cost Calculator".

33. Another indicator of the extent of political support for the RIA process as a whole in the UK is found in the fact that the foreword to the current RIA consultation document is provided by a Cabinet Office Minister.

34. The Office of Regulation Review forms part of the independent Productivity Commission. See *www.pc.gov.au*.

35. See the *Legislative Instruments Act 2003*. A recent report to the Australian government on "Rethinking Regulation" again recommended the inclusion of RIA requirements in the legislation, but the government has declined to take up this recommendation.

36. Under Executive Order 12 866, agencies cannot publish draft rules until OMB has been satisfied that the benefits of an action are likely to justify the costs.

37. In addition, the range of grounds on which an RIA can be found to be inadequate has been broadened as part of these changes.

38. Budget 2005, p. 48. UK Government.

39. The Australian government has recently announced (15 August 2006) that it will develop a "whole-of-government" policy on consultation which will include a business consultation web site. It has also committed itself to releasing Green Papers for consultation in respect of major regulatory

initiatives. However, the issue of whether RIA will be integrated with these enhanced consultation processes has not been addressed in the recent announcement.

40. *Rethinking Regulation*. Report of the Task Force on Reducing Regulatory Burdens on Business, January 2006. See *www.regulationtaskforce.gov.au*.

41. For example, OMB data suggest that the aggregate benefits associated with new major rules adopted in 2003 was around USD 4 billion, while the equivalent figure for 2004 was approximately USD 53 billion.

## *Bibliography*


Alberini, A., M. Cropper, A. Krupnick and NB. Simon (2002), "Does the Value of a Statistical Life Vary with Age and Health Status? Evidence from the United States and Canada", *Discussion paper 02-19*, Resources for the Future, Washington D.C.

Australian Government (1998), *A Guide to Regulation,* Office of Regulation Review.

Australian Government (2006a), *Handbook on Benefit-Cost Analysis*, Department of Finance and Administration.

Australian Government (2006b), *Rethinking Regulation,* Report of the Task Force on Reducing Regulatory Burdens on Business, January.

Cabinet Office Better Regulation Executive (2006), *The Tools to Deliver Better Regulation: Revising the Regulatory Impact Assessment – A Consultation*, Government of the United Kingdom, July.

Canadian Government (1995), *Benefit-Cost Analysis Guide for Regulatory Programs,* Consulting and Audit Canada.

Commission of the European Communities (2004), *Impact Assessment: Next Steps,* Commission Staff Working Paper, October, SEC(2004)1377.

Commission of the European Communities (2005), *European Impact Assessment Guidelines,* SEC(2005)791, 15 June.

Commission of the European Communities (2005), *Better Regulation for Growth and Jobs in the European Union,* Cited in Jacobs (2006).

Deighton-Smith, R. (2007), "Regulatory Impact Assessment in Australia: A Survey of Twenty Years of RIA Implementation", in *Regulatory Impact Analysis: Toward Better Regulation?* Edward Elgar, London.

Harrington, W. (2004), "RIA Assessment Methods. Resources for the Future", Washington DC. (Paper prepared for OECD/GOV).

Harrington, Winston, Richard D. Morgenstern and Peter Nelson (2001), "On the Accuracy of Regulatory Cost Estimates", *Journal of Public Policy and Management,* 19(3).

Hazilla, M., and R.J. Kopp (1990), "Social Costs of Environmental Quality Regulations: A General Equilibrium Analysis,"*Journal of Political Economy*, vol. 98, No. 4 (August), pp. 853-873.

Health and Safety Executive (2001), *Reducing Risks, Protecting People: HSE'S Decision-Making Process*, United Kingdom.

Jacobs, SH. (2006), "Regulatory Impact Analysis in Regulatory Process, Method and Co-operation: Lessons for Canada from International Trends", Government of Canada Policy Research Initiative, *Working Papers*, No. 26, June.

Kopp, RJ., A.J. Krupnick, and M. Toman (1997), *Cost-Benefit Analysis and Regulatory Reform: An Assessment of the Science and the ArtResources for the Future*, Washington D.C.

Majone, G. (2006), "Strategic Issues in Risk Regulation and Risk Management", GOV/PGC/REG(2006)1/ANN1.

New Zealand Government (1999), *A Guide to Preparing Regulatory Impact Statements*, Ministry of Commerce, 16 March.

OECD (1997), *Regulatory Impact Analysis: Best Practices in OECD Countries*, OECD Publishing, Paris.

OECD (1999), *Regulatory Reform in the Netherlands*, OECD Publishing, Paris.

OECD (1999a), *Regulatory Reform in the United States*, OECD Publishing, Paris.

OECD (2001), *Regulatory Reform in Korea*, OECD Publishing, Paris.

OECD (2003), "Regulatory Performance: *ex post* Evaluation of Regulatory Policies", Proceedings of the OECD expert meeting, 22 September.

OECD (2004b), "RIA Inventory", GOV/PGC/RD(2004)1.

OECD (2006a), "*Integrating Competition Assessment into Regulatory Impact Assessment: Executive Overview*", DAF/COMP/WP2(2006)4.

OECD (2006b), "Guide to Performing Competition Assessment of Regulations", DAF/COMP/WP2(2006)5.

United Kingdom Government (2001), *Reducing Risks, Protecting People: HSE'S Decision-Making Process*, Health and Safety Executive.

United Kingdom Government (2006a), *Regulatory Impact Assessment Guidance*, Cabinet Office Better Regulation Executive, available at: *www.cabinetoffice.gov.uk/regulation/ria/ria_guidance/index.asp*

United Kingdom Government (2006b), *The Tools to Deliver Better Regulation. Revising the Regulatory Impact Assessment: a Consultation*, Cabinet Office, Better Regulation Executive.

United Kingdom Government (2006c), "Regulatory Impact Assessments and Sustainable Development", Briefing for the Parliamentary Environmental Audit Committee, 22 May, National Audit Office.

United Kingdom Government (2006c), "Evaluation of Regulatory Impact Assessments 2005-06", National Audit Office, 28 June.

United States Government (1993), "Regulatory Planning and Review", Executive Order 12 866.

United States Government (2003), "Regulatory Analysis", Circular A4, September 17, to Heads of all Regulatory Agencies, Office of Management and Budget.

Victorian Government (2005), "Victorian Guide to Regulation", Government of Victoria, Australia.

Wiener, J.B. (2006), "Risk and Regulatory Governance", GOV/PGC/REG(2006)1/ANN2, OECD, Paris.

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Regulatory Impact Analysis:
A Tool for Policy Coherence


*Chapter 3*

# Methodological Frameworks for Regulatory Impact Analysis: Valuation, Risk and Benefit-Cost Analysis

*Chapter 3 examines the methodological frameworks for RIA. It overlaps with some similar material on the potential for methodological approaches to influence the quality of RIA, but expands considerably on the examination of the specific technical aspects of preparing RIA. RIA is primarily about improving evidence-based decision making in public policy. Chapter 3 focuses on those methodological issues which have the potential for substantial impact on the quality of RIA and those which are the most controversial. It reviews a range of RIA guidance material from within OECD countries to compare the differences in approach and consider specific areas for improvement. Topics include: the establishment of threshold tests to justify RIA; analytical methods including benefit-cost analysis, breakeven analysis and multi-criteria analysis; valuation methods; and risk assessment.*

## Introduction

Regulatory Impact Analysis (RIA) as a tool of regulatory quality assurance is now used by almost all OECD countries, by the European Commission and in many countries in transition. The history of RIA extends over more than 25 years in some member countries, while being substantially more recent in others. In all cases, practices and methodological approaches are continuing to evolve, reflecting continued policy learning and the accumulation of practical experience in implementing RIA in an ever-increasing range of countries.

Effective RIA implementation involves both systemic elements and methodological considerations. In the former category, key success factors include ensuring high-level political support for RIA, commencing RIA at an early stage in the policy process, ensuring adequate quality control processes are in place, integrating RIA and public consultation, provision of adequate training and support for RIA authors and ensuring that the results of RIA are properly communicated to decision makers.

In this context, it is important to assess that methodological issues are addressed properly and consistently to support coherence in policy making. As a result, this report focuses specifically on methodological issues in relation to RIA. However, the methodological aspects of RIA cannot be strictly separated from some of the systemic issues. A number of the methodological issues discussed in this paper have implications for the systemic application of RIA. While this paper focuses on a detailed analysis of RIA methodological issues, improvements to RIA methodology cannot be implemented without regard to systemic issues.

The methodological issues included in the paper have been chosen because of their substantial impact on the overall quality of RIA – and therefore of the resulting regulatory proposals – and, in many cases, because of the complexities and controversies that surround these issues.

The paper is intended to:

- Summarise similarities and differences in current methodological approaches and identify common practices and trends.
- In particular, identify differences in approach to benefit-cost analysis.
- Highlight key conceptual issues underlying differences in country practices.
- Highlight key issues for the formulation of best practice methodological guidance; and
- Consider what methodological issues should be included in such guidance.

Consistent with the above, Annex 3.A1 contains a set of draft guidelines on RIA methodological guidance for consideration.

This paper has been prepared on the basis of a detailed review and analysis of relevant, available documents from a range of OECD member countries. These documents largely comprise RIA guidance documents and Benefit-Cost Analysis (BCA), guidance documents published by member country governments. Given linguistic access issues, RIA guidance

documents from Australia, Canada, Ireland, New Zealand, the United Kingdom and the United States were reviewed. The guidance provided by finance ministries on the public sector use of BCA were also reviewed for a number of countries. Finally, a recent document stating French policy on the use of the discount rate in the public sector context was reviewed. A full list of the documents reviewed is contained in the bibliography. It may be the case that relevant material is also in the RIA guidance documents of other countries, but could not be fully exploited due to these linguistic limitations.

### Box 3.1. **Updating references to guidance documents analysed**

Updated versions of the Australian and New Zealand RIA guides have been published since the drafting of the initial version of this paper was completed.[1] In addition, a New Zealand Treasury BCA guide has been identified. References to the Australian RIA guide have, accordingly, been updated in this revised version of the paper, while appropriate reference has been added to the New Zealand BCA guide.

However, references to the previous edition of the New Zealand guide have been maintained, following consultation with New Zealand regulatory reform officials. This reflects the nature of the specific changes made to the New Zealand guidance material. Specifically, the new RIA guide deliberately moves away from providing detailed methodological guidance in order to provide a guidebook that is more accessible to regulators and, hence, more likely to be consulted systematically. Thus, the RIA guidebook now focuses more on process and policy issues, while methodological guidance is provided directly to regulators by the Ministry of Economic Development and via the use of the Treasury BCA guide and on the New Zealand Public Sector Intranet.

Given that a purpose of this paper is to highlight country practices and compare and contrast these in order to identify good practices, it is considered appropriate to retain the references to the methodological discussions contained in the 1999 New Zealand guide. This edition of the guide remains available from the MED as archived material.

1. The EU RIA guidebook is also currently under review. However, the new edition was not available at the time of writing, November 2007.

Data requests were also sent to a range of other member countries that had expressed an interest. In response, material relevant to RIA methodology received from Belgium, Denmark, Germany and Norway has been referenced where possible.[1] While the analysis is derived from a minority of countries, many of these countries have implemented regulatory impact analysis early on, and have therefore significant experience with the methodological aspects of RIA.

The analysis contained in this paper may provide specific guidance on the refinement of methodological approaches in key areas for some countries. The paper may also serve to highlight methodological issues that will require particular attention as countries further develop their RIA requirements. More generally, the focus of this paper is on facilitating enhanced methodological approaches in areas that are best able to contribute to improved policy outcomes: better methodologies imply better analysis and, consequently, better quality regulation.

There may also be benefits in encouraging greater consistency in RIA analytical methods and approaches between jurisdictions. To the extent that jurisdictions seek cross border regulatory co-operation as an aim, consistent analytical approaches should at least

tend to reduce regulatory differences, notwithstanding the adoption within jurisdictions of different priorities and policy approaches.

The next four sections consider different aspects of RIA methodologies and the guidance provided by member countries. The section on threshold questions looks at requirements and guidance in relation to the "threshold question" of whether to regulate. The section on basic methodological requirements considers general methodological requirements for conducting RIA. The section on BCA methodological elements looks specifically at a range of methodological issues in relation to benefit-cost analysis. The section on the role of specific partial analysis looks at the use of partial impact analysis and their relationship to the global analysis requirement.

## Threshold questions

### *Overview*

The decision as to whether regulation should be adopted properly belongs at the political level, with RIA constituting a means of providing relevant information to decision-makers in a systematic form. The 1995 *OECD Recommendation on Regulatory Quality*,[2] and specifically the 10 point reference checklist which forms a part of it, includes a range of questions designed to both ensure that sound decision-making principles are followed and that appropriate regulatory development processes are followed that will lead to high-quality information being provided to the decision makers.

Questions 2 and 3 of the checklist ask "Is government action justified?" and "Is regulation the best form of government action?" These questions, which reflect an appropriate approach to decision making in the light of the results of RIA, are also adapted in many RIA guidance documents as "threshold tests" that can also be applied to regulatory proposals at an early stage to enable a focus on whether a plausible rationale for regulatory intervention exists and what form that rationale takes. This approach can help to ensure that the problems that regulatory or other policy action seek to address are clearly and accurately defined and thereby increase the likelihood that the full range of feasible policy responses will be identified and subject to RIA. By contrast, if regulators are unable to articulate the general rationale for proposing policy action in a particular case (*i.e.,* is the problem market failure, a need to improve distributive equity, a need to address an unacceptable risk, etc), it is unlikely that a sound RIA can be developed to underpin the political decision-making process.

Among those RIA guidance documents that do provide substantial guidance in this area, the specific tests proposed or required vary significantly. From a best practice viewpoint, guidance in relation to threshold tests should highlight the full range of rationales for government intervention and provide guidance in relation to each. As an example, the Australian RIA guide attempts this approach:

Clearly define the problem, for example:

- market failure (such as a lack of, or misleading information, presence of externalities or public goods, or use of excessive market power);
- regulatory failure (such as a government imposed restriction on competition that is not in the public interest);
- unacceptable hazard or risk (such as human health and safety hazards, person or entity bearing risk ill-equipped to do so, or threat of damage to the physical environment); or

- social goals/equity issues (such as individuals or groups being unable to access available market information, goods or services) (OBPR, 2007, p. 58).

The identified rationales for regulation are much more broadly based than simply economic ("market failure") based approaches. It is notable, in particular, that the possibility of further regulatory action in response to past regulatory failure is explicitly cited as a possible rationale.

The accompanying text in the Australian RIA document requires regulators to assess the significance of the problem, including determining the magnitude of any risk being proposed as a rationale for regulation. It also proposes a test of whether there is a case for regulation or whether the problem is of "purely private interest". More unusually, the text proposes that the ability of existing regulation to deal with the issue, potentially by incorporating some modification, should be assessed, with preference given to modifying aspects of the existing regulatory structure, rather than adopting new regulation. This recommendation appears to have developed as a tool to limit regulatory inflation and enhance regulatory consistency by placing greater reliance on generalised regulatory approaches, rather than the use of regulation that is tailored to very specific circumstances.

As shown above, the Australian guide highlights a wide range of general rationales for regulatory intervention. Some guidance documents may still go further as is for example the case with the European Commission's RIA guidance document (2005). It proposes both economic (*i.e.,* market failure) based approaches to the threshold test and an assessment of whether there is a "Discrepancy between the fundamental goals of the Union and the existing Situation" (Annexes, p. 6). The guide enumerates 11 such "fundamental goals", most derived directly from EU treaties. These include broad economic goals (promoting sustainable economic development, competitiveness, a high level of employment, non-inflationary growth), social goals (promoting economic convergence and citizens' rights, reducing discrimination, strengthening social cohesion), environmental goals (protecting the environment, having regard to animal welfare) and foreign policy goals (promoting peace and international security).

The number and range of the "fundamental goals" cited in the EC document suggests a much broader approach to the question of the grounds on which regulation can be justified than the Australian formulation appears to contain. As a result, its ability to serve as a filter on regulatory proposals will be reduced.

Ireland adopts a combination of economic and "principles-based" approaches to the threshold question. The RIA guidance document does not, in itself, address the threshold question at all. However, the 2004 White Paper "Regulating Better" identifies six principles of better regulation: necessity, effectiveness, proportionality, transparency, accountability and consistency. Of these, the principles of necessity and proportionality relate most directly to the threshold question. The guide's discussion of the necessity principle emphasises the importance of an evidence-based approach to policy, as well as introducing principles of maximising competition and reducing red tape. The discussion of the proportionality principle effectively casts this in terms of the need to ensure that benefits outweigh costs and can therefore be seen as an economic threshold test.

Some of the RIA guidance documents prepared some time ago acknowledge the importance of the threshold issue, but provide little concrete guidance on how it is to be assessed. For example, Canada's guidance document (dating from 1992) highlights the

questions "does a problem or risk exist" and "is government intervention justified," but goes no further in indicating how the answers to these problems should be derived.

The UK RIA guide does not refer explicitly to the threshold test, but highlights the need for a clear statement as to whether social, economic, environmental or equity concerns are being addressed and for quantification of the problem to be undertaken where possible, to assist in determining whether proposed responses are proportionate (UK Government, undated, Section 2). Notably, where the previous (2003) edition of the guide refers to a "risk assessment", this terminology has been removed and replaced with reference to the "rationale for government intervention."

The United States RIA guide (citing Executive order 12 866) notes that:

> Federal agencies should promulgate only such regulations as are required by law, are necessary to interpret the law, or are made necessary by compelling need, such as material failures of private markets to protect or improve the health and safety of the public, the environment, or the well being of the American people... (United States Government, 2003, pp. 3-4)

This construction appears to emphasise the economic rationale for regulation, given the highlighting of "material failures of private markets". However, the guide also states that:

> Correcting market failures is a reason for regulation, but it is not the only reason. Other possible justifications include improving the functioning of government, removing distributional unfairness, or promoting privacy and personal freedom (p. 4).

However, the limited application of the guidelines to subordinate legislation only is made apparent by the acknowledgement of the need to make regulations required by law or necessary to interpret the law.

The New Zealand RIA guide (Ministry of Commerce, 1999) specifically requires that threshold testing be undertaken, although it provides limited guidance as to decision rules that should be followed in interpreting the test results. The guide largely focuses on market failure as a regulatory rationale, proposing in a "checklist" that the RIA document should include "discussion of why the market will not provide a satisfactory outcome (where this is not apparent)" (p. 5).

In sum, regulatory guidance documents appear generally to recognise the breadth of accepted rationales for regulation and, consequently, most discuss a range of potential justifications for regulation, rather than focusing solely or primarily on market failure. However, there are clear differences in emphasis between documents, as well as significant differences in the advice given under each of these headings. That said, most of the RIA guides analysed here give prominence to economic, or market failure, issues and to risk issues as being central to answering the "threshold question." Thus, the following considers these major elements in threshold testing in more detail.

### *Economic tests*

Many guidance documents discuss the use of economic concepts to determine whether there is a likely case for government intervention. Necessarily, the range of economic rationales for government intervention discussed differs relatively little between guidance documents. For example, the Australian RIA guidance document identifies the

following (OBPR, 2007, p. 60) and states that "any underlying market failure…should be identified" (*ibid*, p. 57):

- monopoly and abuse of market power;
- insufficient or inadequate information;
- public goods;
- externalities and spillovers.

The Australian guidance document does not require that these tests should necessarily be applied in establishing the case for regulation; rather, it introduces them by noting that:

> Government action has often been justified in cases of "market failure". (p. 60)

As noted above, the EC's RIA guidance proposes both economic approaches to the threshold question and an alternative of assessing whether there is a "Discrepancy between the fundamental goals of the Union and the existing situation". The "Market Failures" section of the document notes that "the outcome of market forces may fall short of society's ideals for a number of reasons", identifying market prices not reflecting real costs to society (due to externalities), insufficient supply of public goods, missing or weak competition, non-existent or incomplete markets and imperfect information as sources of market failure.

As noted above, the New Zealand RIA guide largely focuses on market failure as a regulatory rationale. An appendix discusses common causes of market failure (externalities, imperfect competition, information problems, public goods). However, these are balanced by discussion of several sources of "government (*i.e.*, regulatory) failure". The guide clearly indicates that merely establishing the existence of market failure is insufficient to justify regulation, with the additional step of assessing the risk of government failure being required:

> In developing options for government intervention, it is also important to consider the likelihood and nature of government failure… (New Zealand Government, 1999, p. 24)

The Australian guide arguably makes the same point in an indirect fashion by highlighting "regulatory failure" as a potential rationale for further regulatory change (implicitly including deregulation).

The US guide highlights externalities, common property resources and public good, market power and inadequate or asymmetric information as major sources of market failure. Where market failure is considered the key rationale for regulation, RIA documents are required to identify the nature of the market failure and to describe it qualitatively and, where possible, quantitatively. As well, they are required to show that "government intervention will do more good than harm". This is, of course, essentially a positing of a "positive net benefit" rule in the context of benefit-cost analysis. Its importance in this context is as an indicator that the threshold test extends to consideration not only of whether there is a possible rationale for regulation, but of whether regulation can effectively deal with the problem identified. The guide also indicates a need to show that regulation at the Federal against the State level is the best way to solve the problem, thus arguably introducing what, in the European context, would be described as the "principle of subsidiarity".

In Canada, neither the regulatory policy, the regulatory process standards nor the RIA guide address the issue of market failure and how this economic test can or should be employed in meeting the general threshold tests (set out in the regulatory process management standards) of ensuring that there is evidence "that a problem has arisen, that

government intervention is required and that new regulatory requirements are necessary." Even the guide to performing benefit-cost analysis in the regulatory context (Canadian Government, 1995) does not include a general discussion of market failure and its role in making the case for regulation.

### *Risk analysis*

Risk analysis clearly forms part of the "threshold test" of whether government intervention, and specifically regulation, can be justified. However, risk analysis clearly has a wider role in RIA methodology, also constituting a key means of assessing alternative approaches and having a significant part in the analysis of the appropriate degree of regulatory stringency. Thus, the following discussion of risk analysis focuses specifically on the issue of using risk analysis as part of the threshold test. (The section on risk assessment, below, considers a wider range of technical issues in relation to the use of risk analysis in the RIA context).

#### *Acceptable risk threshold*

In conducting threshold tests, the key concept in relation to risk is the distinction between acceptable and unacceptable risks. As noted above, the Australian RIA guide identifies "unacceptable hazard or risk" as one of the standard rationales for regulatory intervention. Similarly, the New Zealand RIA guide (p. 5) states that risks should be identified and quantified where possible, as part of a demonstration that government intervention is justified. However, neither of these documents explicitly discusses the question of how to determine whether an identified risk falls within the "acceptable" range, much less identifies a specific risk level (or levels) as being acceptable.

It can be argued that the requirement to conduct risk analysis itself functions as some degree of assurance that regulatory responses will not be adopted where risks are so low as to be arguably "acceptable". In this view, the existence of a requirement to conduct an objective assessment of the risk will help to address the danger of regulation being adopted in response to highly inaccurate risk perceptions. However, without a clear set of statements about how the acceptability of various levels of risk is to be judged, subjective – or at least inconsistent – judgements would appear to be the inevitable result.

Nonetheless, very few RIA guidance documents or government risk publications provide clear statements about the threshold between acceptable and unacceptable risks (OECD, 2006). The thresholds proposed by the United Kingdom's Health and Safety Executive[3] were identified as a rare exception. These thresholds are as follows:

- fatality risks of 1 in 1 million years should be regarded as broadly acceptable;
- fatality risks of 1 in 10 000 years should be regarded as at the boundary between tolerable and unacceptable risks for members of the public who have a risk imposed upon them in the broader interests of society;
- fatality risks of one in 1 000 years should be regarded as the boundary between tolerable and unacceptable risks for workers to voluntarily assume a risk.

The adoption of these thresholds by HSE would seem particularly important in practical terms, given the wide remit of that agency in relation to risk-based regulation. That is, the publication of these guidelines should lead to the adoption of consistent approaches to risk assessment across the wide range of regulatory areas within the UK for which HSE has responsibility.

That said, there is some reason to question the extent to which these thresholds are actually being employed in practice in regulatory decision making in the United Kingdom. It is notable that the major report on government management of risk issues (United Kingdom Government, 2006) does not cite the HSE acceptable risk thresholds, rather recommending that:

> … By the end of 2007, each Department and agency with responsibility for regulation should work with the Better Regulation Executive and Better Regulation Commission to identify the principal risks they are protecting against and what short and longer-term outcomes their interventions are designed to achieve. (p. 43)

In this case there appears to be an inconsistency between government guidance documents on key methodological issues. This issue of consistency between guidance documents is highlighted further in other sections of this document and appears to constitute a significant challenge for RIA methodological guidance, where a multidisciplinary approach would help improve coherence and consistency in policy making.

Another example of an explicit acceptable risk threshold is that adopted by the United States Occupational Health and Safety Authority (OHSA). OHSA describes as a "significant risk" any hazard that implies a mortality risk of more than 1 in 1 000 over a 45 year working life (*i.e.,* in effect, a risk of 1 in 45 000 years). The US Supreme Court has ruled that OHSA is not required to undertake BCA to justify its regulatory proposals and that it is entitled to rely instead on this significant risk concept. It can be noted that the significant risk threshold is rather lower than either that set in relation to workers or the general public by HSE.

The relative rarity of published "acceptable risk" thresholds may reflect a preference on the part of regulatory policy officials in most countries for adopting an explicit benefit-cost based approach to this risk, in preference to setting a threshold. For example, the Australian RIA guide argues that:

> Government-legislated principles frequently call on departments and agencies to "reduce overall risk" or "prevent unreasonable risk". However, achieving any level of risk reduction entails costs, and in reality individuals make decisions about the level of risk (versus the cost) they are prepared to accept every day. The achievement of zero risk is neither an appropriate, nor technically feasible, goal of government intervention.
>
> The aim of a RIS is to identify "how much" risk is acceptable to society, and the cost that society is prepared to pay to achieve that. In the end, transparency and consultation are the best way of identifying this trade-off. (OBPR, 2007, p. 138)

This appears to be a less explicit formulation of the rule, propounded in the previous edition of the Australian guide, that stringency of risk-based regulation should be set at the point at which the marginal benefits and costs of further risk reduction are equated. This differs from a policy based on an acceptable risk threshold in that it effectively requires that risk reduction activity should still be undertaken, regardless of any "acceptable risk" threshold, to the extent that there is robust evidence that a positive net benefit would be generated.

Given acceptable risk thresholds such as those cited above, it seems likely as a practical matter that any conflict between these two approaches would be rare: *i.e.,* that cases in which a positive net benefit from undertaking risk reduction below an identified acceptable risk threshold would be extremely uncommon. However, at the level of principle, the pure "benefit-cost based" rule advocated in the Australian RIA guide can be seen as directly contrary to the notion of acceptable risk and to its employment as a key element in

threshold testing. That is, the benefit-cost based approach adopts a purely utilitarian view of risk, requiring that risk reduction activity should always be undertaken where the expected benefit of so doing exceeds the expected cost, regardless of the severity of the *ex ante* risk.

By contrast, "acceptable risk" based approaches proceed from a view that implicitly sees a more limited scope for government intervention, with an underlying philosophical preference that citizens should be responsible for managing their own risk exposures as far as practicable. In this view, government intervenes only where the extent of the risk passes some threshold and, at least arguably, where citizens are not able to take effective private action to mitigate risks.

A clear exposition of the latter view appears in the recent report by the Better Regulation Commission (BRC, 2006), in which it is argued strongly that policies that fail to make clear that populations should bear the primary responsibility to make their own decisions on risk based issues will have wider costs to society that are likely to be extremely important. This view is based on the desirability, from broader social perspectives, of emphasising personal responsibility, as well as an acute consciousness of the limits to government capacity for regulatory (or other policy) action.

In comparing these two views it can be noted, firstly, that the pure benefit-cost based approach is clearly consistent with the general OECD view in favour of BCA as the core RIA methodology. At the same time, the work of the regulatory management and reform programme has also long highlighted the problem of regulatory inflation and the issue of the practical limits to governments' capacities to regulate – both factors which clearly underlie the "acceptable risk" based approach.

As the above discussion suggests, there is a degree of philosophical difference implicit in the contrast between approaches to risk that emphasise a dichotomy between "acceptable" and "unacceptable" risks and those that focus on a purely benefit-cost based approach. To the extent that this is so, it is clearly appropriate for RIA and general policy guidance to adopt different approaches in different countries. However, it is also likely that the use of the acceptable risk concept is, in part, used as a convenient means of seeking to distinguish between risks that are or are not likely to be susceptible to cost-effective policy action, without the need to undertake more detailed analysis.

### *Conclusions on threshold questions*

As indicated in the overview section above, RIA guidance on the issue of applying "threshold tests" identifies an extremely broad range of a potential rationales for government intervention generally, and regulations specifically. Some significant differences in coverage and emphasis between countries are visible. These may well reflect differences in legislative contexts and approaches, as well as institutional constraints imposed on the bodies in charge of the guidance documents, rather than underlying differences of view as to the circumstances in which regulation can be justified.

Moreover, notwithstanding this degree of difference between countries in terms of the rationales for intervention presented in their guidance documents, most of the individual documents reviewed advance a very broad range of potential rationales for regulation. Indeed, so broad is the range of conceptual rationales in many cases that they may not be very effective in guiding policy officials as to whether regulation may be justified in a particular instance.

This suggests that, if treatment of the "threshold test" issue is to form a useful part of RIA guidance documents, a significant rethinking of current approaches is necessary. Specifically, it appears that the discussion of the threshold tests may need to be integrated with a discussion of the characteristics of different policy tools, and their consequent merits in addressing different types of policy problems.

Such an approach would potentially allow the guidance documents to highlight in what precise circumstances regulation is, and is not, likely to constitute the most appropriate form of government intervention. By doing so, it may be possible to provide more precise guidance in relation to both the general threshold question of whether government intervention can be justified and the more specific formulation of this question: is regulation likely to constitute the most appropriate form of intervention.

## Basic methodological requirements

In 2002, the OECD stated that:

> The best practice is that a RIA system should require use of the benefit-cost principle for all regulatory decisions, but the form of analysis employed should be based on practical judgments about feasibility and cost. (p. 129)

It also pointed out that other RIA methodologies are essentially partial benefit-cost analyses. The use of BCA in OECD member countries RIA systems has steadily expanded and now reached a position in which it has, at least in formal terms, the dominant role, having been adopted by a majority of OECD countries that use RIA. Indeed, the seven RIA guides reviewed extensively in this paper all endorse the use of BCA as the preferred methodology for undertaking RIA. Norway also requires that BCA be used in RIA where feasible, although cost effectiveness analysis (CEA) is to be adopted where monetisation of benefits is found not to be feasible (Norwegian Government, 2005). Germany indicates that the use of BCA may be appropriate in some cases (German Government, 2005, p. 15).

However, OECD (2006) noted that a large proportion – probably a majority – of BCA continue to fail to quantify all major benefits and costs in monetary terms, largely as a result of data and/or analytical limitations. Thus, in practical terms, a range of other methods also continue to be routinely used in conducting RIA, reflecting a gap between the theoretical guidance and its implementation due to empirical constraints. This section briefly reviews the treatment of different methodologies in RIA guidance documents.

As a fundamental point, it should be underlined that the adoption of the "benefit-cost principle" implies that RIA should be comprehensive in nature. That is, all significant impacts should be brought within the scope of the analysis, whether they be economic, financial, social or environmental. There is arguably a common misconception that RIA, particularly that based on BCA, is primarily concerned with economic or financial impacts and does not give adequate weight to other factors. However, a distinction can be drawn between a "financial" analysis, which measures dollar impacts, and an "economic" analysis which, properly defined, includes all factors which are valued by people – necessarily incorporating environmental, social, distributional and other matters.

Of course, substantial difficulties arise in attempting to express these values in monetary terms and bring them within the framework of a formal BCA. It is for this reason that the concept of "soft benefit-cost analysis", which seeks a sophisticated integration of monetised and non-monetised impacts is increasingly prominent within the RIA debate. However, it is essential to recognise that, while the focus of much of the methodological

discussion contained in this paper is on BCA-related issues, this does not imply that RIA practice in the countries studied favours those impacts that can be expressed in dollar terms over other impacts, including the environmental and social, which often cannot be so expressed. Equally, the OECD's identified best practices in relation to RIA continue to emphasise the need to take account of all important policy impacts, not simply those expressible in monetary terms.

### *Benefit-cost analysis*

The results of successive OECD Regulatory Indicator Surveys show that BCA is increasingly the formal methodological requirement underpinning RIA within OECD countries, progressively supplanting more narrowly based analytical requirements.[4] This is consistent with the OECD's recommendation that the BCA principle should be used where feasible in conducting RIA. It should be noted that BCA, when applied appropriately in the regulatory context, attempts to take account of the full range of impacts, including environmental and social impacts, as well as financial (or "economic") impacts.

In the above context, it is unsurprising that all of the seven RIA guides reviewed extensively in this paper endorse BCA as the preferred RIA methodology, particularly given that there is a long history of RIA implementation in almost all of these countries.

In practical terms, however, the extent to which BCA can be adopted in practice, and guide actual regulatory decision-making depends crucially on both the technical expertise available within regulatory agencies and on the assistance provided by regulatory reform bodies. BCA is the only methodology theoretically capable of answering the fundamental question posed by welfare economics – would a particular policy intervention provide net benefits from the point of view of society as a whole. Its practical ability to do so depends on the extent to which sound quantitative estimates of benefits and costs can be derived.

As OECD (2006) points out, the formal adoption of BCA does ensure that the broadest possible approach is taken to RIA and therefore maximises the contribution of RIA to policy decision-making. However, given uncertainty and inadequate information, BCA must make underlying assumptions explicit and utilise tools such as sensitivity analyses in relation to the major variables. It must also ensure that quantitative and qualitative aspects of the analysis are appropriately integrated, so that factors that cannot be quantified are not effectively excluded from the analysis. The section BCA methodological elements includes a discussion of the issue of indirect valuation techniques that can be used to increase the degree of quantification achieved in BCA. The section on multi-criteria analysis below, discusses methodologies that can potentially assist in ensuring a better integration of qualitative and quantitative analysis and so enhance the ability of RIA to provide relevant and useful guidance to policy-makers in contexts in which major variables have not been able to be expressed in monetary terms.

### *Break even analysis*

Arguably, break even analysis does not constitute a separate methodology. On one view, it is a subset of BCA, with the basic approach being to provide monetary estimates of costs and then determine what degree of effectiveness must be achieved by the regulatory intervention in order for a positive net benefit to be attained. It can be distinguished from cost effectiveness analysis (see below) in that, with BEA, the major area of uncertainty relates to regulatory effectiveness, whereas CEA is most likely to be used where the major area of uncertainty relates to the appropriate valuation of the identified benefit.

A BEA is thus likely to be used when a new regulatory approach is being implemented and there is little or no basis in previous experience upon which to make estimates of likely effectiveness – or else past experience suggests that levels of effectiveness vary widely in ways that are not easily predictable.

BEA receives surprisingly little attention in RIA guidance manuals, given the widespread recognition of the problem of predicting regulatory effectiveness. Arguably, the use of BEA to deal with this uncertainty represents an alternative, or supplement, to the conduct of sensitivity analysis and the limited attention given to BEA may be indicative of a preference for the sensitivity analysis approach.

That said, the two approaches differ in that BEA allows analysis of effectiveness in relation to only one variable to be undertaken, whereas sensitivity testing can be conducted across a range of key variables.

### *Cost-effectiveness analysis*

Cost-effectiveness analysis involves comparing a range of policy options in terms of the respective costs of achieving a given outcome (or benefits). Given the general acceptance, on the countries whose RIA guidance has been reviewed, of the OECD position that BCA represents the "gold standard" for RIA, it is unsurprising that CEA is put forward in many guidance documents essentially as either a supplementary or alternative methodology to be used in particular circumstances. For example, the Australian guidance document states: (Australian Government, 2006a, C-6)

> Cost-effectiveness analysis is a widely used alternative to CBA in circumstances where policy officers are unable to monetise the most important policy impact. It compares alternatives on the basis of the ratio of their costs and a single quantified, but not monetised, effectiveness measure, such as lives saved. It may be reasonable to use cost-effectiveness analysis if the effectiveness measure captures most of the policy's benefits.

In contrast to the previous edition of this guide, the key drawbacks of CEA are not identified. The 2006 edition of the Australian RIA guide argued:

> Cost-effectiveness analysis does not provide an absolute criterion for accepting or rejecting options, and should not be used to aid decisions as to how much money or resources governments should allocate to a particular problem.

It is not clear why this additional guidance has been removed in the course of redrafting the guide.

The Irish RIA guidance document states the case for CEA and its drawbacks in similar terms:

> Its drawbacks are that it does not provide any insights into the level of benefits which should be sought, or whether the desired benefits are worthwhile. Nor does it identify unanticipated or secondary impacts. (p. 78)

By contrast to the above approaches, the US RIA guide arguably places BCA and CEA on a broadly equivalent footing. Since 2005, all major rules have been required to be supported by both CEA and BCA wherever possible. However, the Office of Management and Budget states that it continues to believe that the use of BCA, using willingness to pay based valuations, is theoretically superior to the use of CEA.[5] The US RIA guide states that:

> ... You should prepare a CEA for all major rulemakings for which the primary benefits are improved public health and safety to the extent that a valid effectiveness measure can be developed to represent expected health and safety outcomes. (US Government, 2003, p. 9)

The US guide provides significantly greater detail than other guides reviewed for this paper on the appropriate use of CEA. In particular, it discusses the need for care in using cost-effectiveness results based on averages, arguing that these suffer from the same drawbacks as benefit-cost ratios ("The alternative that exhibits the smallest cost-effectiveness ratio may not be the best option, just as the alternative with the highest benefit-cost ratio is not always the one that maximises net benefits." [p. 11]) and counselling the use of incremental cost-effectiveness ratios as a means of preventing such problems, with successively more stringent options being analysed in order to assist in identifying the preferred option.

The US guide also notes that BCA and CEA are not mutually exclusive analytical tools. For example, it states that, where some benefits can be monetised while others cannot, the value of these monetised benefits should be subtracted from estimated gross costs to obtain a net cost figure, which can be used in assessing the cost-effectiveness of the proposal in relation to the non-monetisable dimension(s) of benefit. (p. 12)

It would appear that CEA is accepted as having a significant role in RIA in the US and as being able to yield important analytical insights. OMB notes that rule of thumb decision rules can be adopted for use with CEA, for example setting a benchmark cost-effectiveness figure of USD X per life saved, or per QALY.[6] That said, there is also some suggestion that the prominence accorded to CEA stems in part from statutory limitations that exist on the use of BCA in some cases. The guide notes:

> In undertaking these analyses, it is important to keep in mind the larger objective of analytical consistency in estimating benefits and costs across regulations and agencies, subject to statutory limitations. Failure to maintain such consistency may prevent achievement of the most risk reduction for a given level of resource expenditure. (US Government, 2003, pp. 9-10)

The reference to the need to achieve analytical consistency "subject to statutory limitations" appears to reflect the fact that the regulatory mandates established in some legislation effectively prevent benefit-cost analysis being used as the basis for decision making but will allow CEA to be employed.

The EC guidance document (p. 42) suggests that CEA offers "a more relaxed approach to benefit measurement" and highlights the drawbacks of this methodology in very similar terms to the (2006) Australian guidance document. The New Zealand document is of note in providing a slightly different explanation of the circumstances in which it is appropriate to use CEA:

> Cost effective analysis can be used on those occasions when Government specifies an objective below which it will not be willing to trade off other objectives. For example, in introducing competition to the Employers' Account of the ACC Scheme, it was agreed that claimant access to entitlements was not to be compromised by insurer insolvency. The appropriate mechanism for assessing options for achieving this objective then becomes cost effectiveness analysis. That is, the option expected to achieve the specified objective at least cost. Analysis of benefits, in this case, is not required. (p. 19)

Finally, Norway's handbook on socio-economic analysis (published by the Ministry of Finance) identifies "Cost-effect analysis" as an appropriate methodological tool. This approach is arguably a variant of cost-effectiveness analysis which explicitly seeks to account for the fact that different policy or regulatory options will rarely have exactly the same degree of effectiveness in addressing the policy problem, as required by pure CEA:

> Sometimes various actions aimed at solving the same problem, have effects that are not identical. … In such cases one cannot simply chose the least-cost action. Measuring the costs in connection with a description of the effects of the various actions can anyway provide useful information to the decision-maker.[7]

Alternatively, this approach can be considered to amount to a partial BCA, in that it involves seeking to develop a qualitative assessment of the benefits attributable to different options and to compare these with identified costs. The explicit acknowledgement of this approach in the Norwegian guide suggests that a flexible approach to methodological issues which recognises feasibility constraints is generally taken in that country.

In sum, there appears to be broad consensus within the guidance documents reviewed to the effect that CEA is less preferred to BCA in cases where it is feasible to complete the latter. However, CEA can provide important analytical insights and is appropriately used in a range of circumstances, particularly where it is not considered practicable to take a BCA approach. Thus, CEA is seen as having a legitimate and important role in RIA, but one that is essentially subordinate to that of BCA.

### *Multi-criteria analysis*

Multi criteria analysis may have a number of important advantages as a supplementary methodology to BCA or, in some cases, as an alternative. Some member countries have emphasised that distributional or other ethical factors may frequently be of such major importance in assessing regulatory options as to render the outcomes of BCA of secondary importance in choosing between alternatives. In such cases, MCA may provide an alternative means of achieving a systematic and objective analysis which is better able to account for distributional factors.

MCA may also provide a useful alternative when monetisation presents significant challenges. As discussed above, the quantification and expression in monetary terms of all major regulatory impacts continues to be a fundamental challenge to BCA, and RIA generally, despite decades of accumulated experience. While progress continues to be made in developing more sophisticated approaches to quantification and the estimation of market values, there will remain significant regulatory impacts that cannot reasonably be quantified and monetised. In this context, previous OECD publications *(e.g.,* OECD, 2002; OECD, 2006), as well as other policy analysts RIA *(e.g.,* Jacobs, 2006) have highlighted the importance of ensuring that important impacts are not effectively excluded from the analysis, simply because they cannot be quantified. Discussing this concept, the European Commission refers to "integrated analysis" in its RIA guidance, while Jacobs speaks of "soft benefit-cost analysis" (Jacobs, 2006, pp. 78-80, *et passim*).

However, while discussions of RIA increasingly highlight the need to integrate qualitative and quantitative analyses, there appears to be little guidance provided on how this can be achieved in practice, with no widely accepted methodological approach being identifiable. Multi-Criteria Analysis (MCA) appears to be the sole, partial exception in this regard. While it is apparently not yet widely discussed, four RIA guidance documents have

been identified that highlight its potential utility and provide some discussion of when and how it should be used in the RIA context. All four of these guidance documents have been adopted in the past few years.

OECD (2006) pointed out that at least one Australian RIA guidance document (Victorian Government (2005, revised 2007)) requires the use of multi-criteria analysis in all cases in which significant impacts are unable to be quantified in monetary terms. The Irish and EC RIA guides also discuss MCA and support its use in at least some circumstances although, unlike the Victorian RIA guide, they do not mandate the use of multi-criteria analysis in circumstances in which all major impacts are not able to be quantified in monetary terms. The New Zealand RIA guide only briefly mentions MCA, simply noting that it constitutes "one systematic technique that can be used to undertake this type of analysis within the overall CBA framework." (New Zealand Government, 1999, p. 12)

A key benefit of MCA that is usually cited is that it is a mechanism for *systematically* comparing the impact of different alternative policy responses in circumstances in which major identified impacts cannot be quantified. The Irish RIA guide discusses this methodology in some detail, presenting it as a relatively non-technical method to be used where there are substantial difficulties in monetising benefits or costs. It also states that the methodology should be used "where possible" in initial screening RIA. The discussion sets out the fundamentals of the approach as follows:

> One technique which is often used is multi-criteria analysis (MCA). This involves the identification of the objectives behind a policy proposal as well as criteria which would indicate the achievement of these objectives. The various policy options are then compared as to which best meets the criteria identified and therefore are most likely to achieve the overall objectives. (pp. 45-46)

The Irish discussion of multi criteria analysis highlights the fact that this methodology can simultaneously incorporate both qualitative and quantitative elements. The Irish Government also provides training in the use of MCA to officials responsible for RIA.

The EU guide also highlights its use *in conjunction with* BCA or CEA as an appropriate means of combining quantitative and qualitative analysis. This is consistent with its emphasis on "integrated analysis," as indicated by the guide listing key advantages of this methodology as being that it "recognises the multi-dimensionality of sustainability" and "allows distributional issues and trade-offs to be highlighted." (p. 43)

The EU guide also highlights the fact that a number of different variants of MCA exist and cautions that this technique brings an element of subjectivity to the analysis, particularly where weightings of the different criteria are employed. It discusses the use of MCA in some detail and includes a detailed example (pp. 40-43).

While these examples suggest that several countries have embraced this methodology, several other recently adopted RIA guidance documents are silent on this mechanism. These include the new Australian guidance document (2007) and the US guidance document (2003). The UK RIA guidance document (undated) does not mention MCA either. However, the UK Treasury's Green Book does briefly discuss this methodology. Moreover, it is unique in providing a reference to a further document which deals extensively with the issue of MCA and places it in the context of other RIA methodologies.[8] This reference provides a much more detailed and technical discussion of MCA than that contained in any of the RIA guidance documents and, in so doing, implicitly raises the issue of the degree of sophistication that should be required where MCA is used in the RIA context.

If MCA is to become a core part of RIA methodology, it is likely that a medium term process of progressively developing expertise in this approach and disseminating it among policy officials will need to be undertaken, analogous to that which has occurred in respect of other RIA methodologies in most member countries. By contrast, there is a risk that an unsophisticated promotion of MCA as an easier alternative methodology in the RIA context could tend to undermine efforts to improve the rigour of BCA by increasing the extent of quantification of impacts.

The issue of the robustness of MCA is occasionally discussed in the guidance documents. The UK Treasury Green Book describes it as being a process of "weighting and scoring" and highlights the risk that certain criteria on which relatively high cost options score well will be weighted heavily by stakeholders who are most likely to benefit from them. It counsels that this risk should be "tempered by at least one stakeholder representing the opportunities that in an expensive solution would be foregone elsewhere."

More broadly, the risk that manipulation of the weightings applied to the different criteria will bias the outcome of the MCA toward one which would not otherwise be chosen is widely recognised. However, experience with the use of MCA in the State of Victoria (Australia) suggests that this risk may not, in practice, be particularly large: all RIA prepared in Victoria since mid-2004 have been required to utilise MCA whenever a fully quantified BCA has not been prepared. Victorian officials[9] have stated that the weightings employed in MCA have, in practice, rarely been determinant of the relative scores of the alternatives considered in the RIA. In some cases in which weightings have been employed, sensitivity analyses have been conducted on the basis of the use of different weightings (or no weightings) in order to demonstrate this fact explicitly. Given these results, these officials are relatively confident in the robustness of MCA as used in practice in their jurisdiction.[10] Moreover, they argue that the use of MCA has ensured that a consistent methodological approach is taken to the analysis of a wide range of regulatory proposals.

A key benefit of the MCA approach is that of transparency: An MCA makes transparent to the reader the specific criteria according to which regulatory proposals and alternatives have been assessed and compared, the weight accorded to each and the assessed merits of each option in respect of each criterion. In this respect, it has a number of significant advantages over a purely qualitative, text based discussion of alternatives:

- It promotes a robust consultation process, allowing stakeholders to contest each of the judgments made by regulators in reaching their conclusions.
- It encourages consistency and rigour in the analytical process by requiring that objectives, weightings and performance are identified and assessed at a disaggregated level.
- It potentially provides better information to political decision-makers, as a result of both of the above effects.

Moreover, as noted by a Victorian regulatory policy official, MCA forms the basic methodology used in most major tender evaluations and in most recruitment processes. That is, it is a methodology that is widely used for evaluative purposes in government and in the wider economy. This suggests, *a priori*, its likely suitability in the RIA context, at least where benefits are not easily quantified and where multiple objectives exist.

As noted in OECD (2006), the MCA approach was originally derived in the context of the management literature and is therefore not at all specific to public policy. However, there appear to be no substantive aspects of this approach that limit its suitability to public

policy applications. Certainly, the UK guide to MCA, noted above, cites no significant concerns in this regard, instead emphasising the need to match particular MCA methodologies to the appropriate problem types. Moreover, review of this material indicates the complexity and sophistication of some approaches to MCA and is suggestive of its potential power as a decision tool in areas in which significant impacts are not amenable to quantitative analysis.

That said, it is clear that MCA remains essentially a supplement to BCA and other, more quantitative methodologies. As noted in the UK MCA guide:

> [MCA is] in many respects an alternative' to defining monetary values for all the major costs and benefits *when this is impractical*. However MCA must not be seen as a short cut, or as an easier technique for inexperienced people to use. The use of these techniques is in important ways more demanding of experience and good training than the use of CEA … or of CBA… [emphasis added]. (p. 8)

In sum, while many or most RIA guidance documents emphasise the importance of providing a detailed, high-quality qualitative analysis of impacts that cannot be quantified, little usable guidance on how to comply with these injunctions is provided, other than the material on MCA discussed above. This constitutes a significant gap in the available guidance which should be addressed as a matter of priority.

An important question is whether the absence of usable guidance in this area reflects a lack of clearly formulated views on the part of regulatory reform officials as to preferred approaches to conducting qualitative analysis and integrating this analysis with quantitative analytical elements. The issue of whether MCA should be actively promoted in the RIA context must be considered within this broader context of what alternatives exist for conducting sophisticated and systematic qualitative analyses and integrating them with quantitative elements.

### *Conclusions on methodologies*

The OECD has previously stated as best practice that the benefit-cost principle should drive all regulatory decisions. All seven of the RIA guidance documents analysed for this paper recommend the use of BCA as the preferred RIA methodology, and they are consistent with this identified best practice.

The approaches taken to discussing the contexts in which cost-effectiveness analysis might constitute an appropriate alternative methodology also appear generally to be sound, placing significant stress in most cases on the disadvantages of using these methodology and the need, therefore, to ensure that it is adopted only where the use of BCA has been clearly established to be infeasible.

However, guidance on the use of break even analysis is largely absent from the documents analysed. This may reflect a view that break even analysis can be considered to constitute a form of cost effectiveness analysis. There would arguably be significant benefits in identifying break even analysis as a separate methodological approach and highlighting its potential uses to regulators.

The second major area in which RIA documents' current treatment of methodological approaches is clearly lacking is in providing practical advice on how to conduct qualitative analysis in a systematic and objective manner and how to integrate qualitative and quantitative elements in the analytical process. In this context, Multi-Criteria Analysis appears as an appropriate methodology. The question of whether its use should be mandated in cases

in which benefits and costs are not fully quantified (as in Victoria, Australia) should also be considered.

To the extent that MCA is promoted, consideration also needs to be given to the specific guidance to be provided regarding this methodology: given its wide-ranging uses, the issue of what form it should appropriately take to make it most suitable to the specific context of regulatory decision-making requires consideration. Finally, while regulatory reform officials frequently have well-developed skills in BCA and related methodologies, it is not clear that they commonly have equivalent skills in the technicalities of MCA. Thus, if MCA is to be promoted in the way indicated above, attention would need to be given to ensuring that reform officials had sufficient relevant skills to both ensure the provision of adequate training to regulators and conduct adequate quality control.

## BCA methodological elements

### *Overview*

Benefit-cost analysis is a well developed and widely accepted methodological tool. Given this, there would seem *a priori* to be little reason to expect that major methodological differences would be observed in terms of countries' RIA guidance materials, their general BCA guidance documents or their RIA practice more generally.

However, review of the seven countries' guidance documents indicates that there are areas of significant difference. At least three explanations for this can be advanced. First, while BCA is generally a well-developed methodology, its application to the regulatory context is specific in some respects *(e.g.,* in relation to issues relating to the discount rate, or to acceptable risk) and its use in this specific context is less well-established.

Second, RIA guidance on BCA is often relatively cursory (in the interests of producing generally accessible material) and often does not provide references to other, more authoritative sources. Related to this, there is often no officially endorsed source of detailed BCA guidance. Thus, the problem in some instances is that guidance material does not address important methodological issues, or addresses them in insufficient depth.

Third, and perhaps most obviously, different methodological guidance may reflect real differences in preferences and/or values between countries. To the extent that differences are attributable to this third explanation, there is clearly no reason to believe that there will or should be convergence over time.

The following discussion of specific BCA related methodological elements focuses on BCA guidance provided in the context of RIA guidance material and in documents published by governments that provide guidance on using BCA in broader contexts. Differences between RIA and BCA guidance documents have been highlighted in some cases, as have instances in which RIA guidance fails to refer the reader to the more detailed guidance provided in general BCA guides.

### *Valuation methodologies*

The difficulties encountered in quantifying and monetising the benefits and costs associated with regulatory proposals are widely acknowledged within the RIA literature. It is likely that recognition of the extent of these difficulties explains, at least in part, the fact that RIA guidance in many OECD countries does not explicitly require that regulatory benefits and costs be quantified. However, as suggested in OECD (2006, pp. 14-15), the contribution of RIA to policy decision-making will be maximised if attempts at

quantification are made wherever possible – even in the presence of significant uncertainty – provided that the underlying assumptions and assessment are made explicit and appropriate sensitivity analysis is also incorporated.

If regulators responsible for RIA are to be encouraged to quantify regulatory impacts wherever possible, RIA guidance documents clearly need to provide substantial information on the range of valuation methodologies that are available. These are, for the most part, quite well established in the economics literature, a fact that is reflected in the generally similar set of methods discussed where this issue is treated in RIA guidance documents. A (non-exhaustive) list of valuation methodologies that may be appropriately used, at least in some cases, in the RIA context includes the following:

Stated preference methods:

- Contingent valuation.
- Choice modelling.

Revealed preference methods:

- Travel cost studies.
- Hedonic price studies.
- Defensive expenditures.

Review of available RIA documents suggests that relatively few include substantial information on valuation methodologies. However, in those countries where more specialised guides to the conduct of BCA within policy contexts are published, most include detailed guidance on these points. RIA documents sometimes explicitly reference the specialised BCA guides for this purpose. In other cases, more general advice is given that specialist economic expertise should be sought.

For example, the UK RIA guidance document identifies a range of valuation techniques in general terms, but does not provide any explanation of their use or merits. It recommends that "In the absence of prices, you should, in consultation with departmental economists, consider if monetary quantification using economic valuation techniques is possible." It also cites the Treasury Green Book (United Kingdom Government, undated, a), which contains extensive discussion of valuation methodologies. However, the citation to the Green Book lists this source as only one among a "wide range of sources of information" that are available, rather than indicating that there is any presumption that approaches consistent with it should be adopted.

The Australian RIA guide includes a brief discussion of valuation methodologies within its main text, as well as devoting a substantial part of an appendix to this issue (pp. 79-80, Appendix B-2). The Department of Finance and Administration's *Handbook of Cost-Benefit Analysis* provides significant additional detail but, consistent with the UK practice noted above, is cited only as a source of "further reading", rather than as having any particular authority.

The US RIA guide includes a relatively detailed discussion of valuation methods (pp. 20-26), which divides these methods into categories of revealed preference, stated preference and benefit transfer approaches. It does not explicitly reference any other, more specialised material as a source of additional guidance. The Irish RIA guide includes no discussion of valuation techniques and does not refer to any other Irish sources of specialist advice on BCA. It provides general references to some BCA guidance material

from other countries (notably the UK Treasury Green Book), but does not highlight their coverage of valuation techniques.

The 1999 New Zealand RIA guide provides a single page appendix which identifies a range of valuation techniques and provides brief explanations of the purposes of each. The general bibliography identifies the Australian BCA guide as a source of guidance on BCA matters generally.[11]

The EC RIA guide includes a brief section on assessing and monetising non-market impacts (pp. 37-8) and, like the US RIA guide and the Australian BCA guide, focuses on the basic distinction between revealed preference and stated preference approaches. Unlike the Australian guide, it does not indicate any general view in favour of the former approach. No references to more detailed guidance are contained in the EC guide.

### *Conclusions*

Given the fundamental importance to BCA quality of maximising the extent of quantification and monetisation of regulatory impacts, RIA guidance documents will be more helpful if they alert the reader to the fact that a range of valuation methodologies is available to assist in this task. A number of the guidance documents reviewed here do not offer this information. This omission could be, clearly, relatively easily remedied, particularly given the well-established nature of the different methodologies and high degree of consensus on their relative merits.

A second basic requirement in this regard is that the RIA guide should contain a statement of what is expected in relation to the use of these valuation methodologies. Arguably, RIA guidance could indicate an expectation that consideration be given to available methodologies for valuing non-market impacts and that the rationale for those chosen (or for not adopting any such methodologies[12]) should also be made explicit in the RIA document.

As demonstrated by a number of the RIA guidance documents discussed above, it is feasible to provide an introduction to a range of these methodologies and their essential characteristics, even where the focus is on generalist audiences. It is almost certainly not feasible to incorporate detailed discussions of these methodologies in the RIA guides. However, where more specialised BCA guidance documents have been produced, as in a minority of the countries reviewed above, these should clearly be referenced in the RIA guides. Current practices in this area are variable, with one concern being that even where such specialist guides exist, they are often referenced in only general terms (rather than their discussions of specific issues, such as valuation methods, being highlighted) and are not presented as being authoritative, or required to be used.

A positive element is that, where specialist BCA guides have not been produced, some countries have demonstrated willingness to reference those of neighbouring countries (*e.g.,* Ireland and the United Kingdom, New Zealand and Australia).[13] Another positive observation is that works with a more general perspective are also sometimes cited, *e.g.,* academic works on BCA that do not relate specifically to its use in the government policy context.

### *Discount rates*

Discounting is fundamental to BCA methodology, yet OECD (2006) demonstrated that there is considerable divergence between member countries in terms of the guidance

provided on this issue. This divergence is evident both in terms of the specific rates recommended (or the absence of such recommendations) and in terms of the conceptual rationale advanced for the choice of discount rates.

### *Recommended discount rates*

Specific discount rates recommended in countries' RIA guidance documents, or related materials, include the following:

- France *requires* a 4% real discount rate to be used.[14] Prior to 2005, an 8% rate was required.
- Denmark *requires* a 6% real discount rate to be used.[15]
- The State of Victoria (Australia) *recommends* that the real 10 year government bond rate (currently 3.5%) be used. Previously a 5% real rate was recommended.
- The EC *recommends* a real discount rate of 4%.
- Norway *recommends* a real discount rate of 4% in most cases, with higher rates to be used in cases involving substantial "systemic risk".
- Ireland *recommended* a base rate of 5% real prior to 2005 and now *recommends* an "official discount rate" equal to the cost of government borrowing.
- The United States *recommends* a real discount rate of 7%, but also requires a sensitivity analysis to be conducted using a 3% discount rate.[16]
- Australia "*suggests*" a real discount rate of 7% be used, with sensitivity testing at 3% and 11%.
- Canada's BCA guide for regulation *recommends* that a default (real) social discount rate of 10% should be used (citing a Treasury Board BCA guide, published in 1976), with sensitivity analyses conducted at 5% and 15%.
- New Zealand's 1999 RIA guide recommends different approaches to setting discount rates for different purposes. It notes that where government expenditure is concerned, the long term bond rate is appropriate, reports a survey showing people's expressed preferences translate to a discount rate of 5-7% in respect of avoidance of death and injury and argues that much lower rates may be justifiable in relation to long-term environmental issues. It does not specifically indicate a preferred approach for regulatory purposes.
- By contrast, New Zealand's 2007 RIA guide does not address the issue of the appropriate discount rate. This issue is, instead, dealt with in the Treasury BCA Primer (2005), which argues that different rates are appropriate to different projects (or, by extension, regulations), dependent on assessed risk. However, it also notes that Treasury uses a benchmark rate of 10% "wherever there is no other agreed sector discount rate for costing policy proposals" (NZ Government, 2005, p. 27).
- The United Kingdom RIA guide simply suggests that departmental economists be approached for guidance on setting the discount rate and the time horizon. It fails to reference the Treasury Green Book, even though this sets out specific recommended rates, including a 3.5% real discount rate for time horizons of 1-30 years (see below).

These examples demonstrate, first, that member countries vary widely in terms of the degree of consistency they require (*i.e.,* between different RIA) in the discount rate used. While some require or strongly recommend a single rate, others accept rates within a given range and a few provide conceptual guidance but do not specifically nominate an acceptable

range at all. Others still specifically indicate that different rates can and should be used in respect of different regulatory proposals.

A notable element is the number of RIA guidance documents that refer regulators to the Department of Finance or other sources of expertise for guidance. This corresponds to a shift in responsibility. It would seem more effective for regulatory policy officials to assimilate general government guidance on project appraisal, including the appropriate discount rate(s) to be used, in consultation with the Finance ministry and integrate this in the context of RIA guidance.

Second, the extent of the divergence between recommended discount rates in member countries is great, with a range of 3.5% to 10% (in real terms) being apparent within this relatively small sample. The difference between these rates is likely to be substantial in terms of their impact on a long-term regulatory proposal characterised by significant differences between the timing of benefits and costs. As discussed in OECD (2006), higher discount rates will tend to reduce the number of regulatory proposals able to demonstrate a positive NPV, given that regulation is most commonly characterised by a preponderance of costs being incurred in the early years following implementation, while benefits are weighted more towards later years.

Divergence between countries in terms of recommended discount rates is not necessarily problematic – to the extent that the rate is intended to reflect the social rate of time preference (see below), real differences between countries in this rate should be reflected in different recommended RIA discount rates. The extent of the observed differences may be less reflective of real differences in the social rate of time preference and more related to differing views on the appropriate conceptual basis for setting discount rates.

### *Conceptual issues*

The BCA literature generally highlights two conceptual rationales that can be used as the basis for selecting discount rates: the social rate of time preference and the opportunity cost of capital. RIA guidance in some countries is silent on the conceptual rationale for the recommended discount rate, impeding analysis of the reasons for different rates being recommended. However, others indicate a different view on this issue. The US guidance document provides a general conceptual basis for approaching the setting of discount rates as follows:

> The analytically preferred method of handling temporal differences between benefits and costs is to adjust all the benefits and costs to reflect their value in equivalent units of consumption and to discount them at the rate consumers and savers would normally use in discounting future consumption benefits. This is sometimes called the "shadow price" approach to discounting because doing such calculations requires you to value benefits and costs using shadow prices, especially for capital goods, to correct for market distortions. (p. 33)

The guide goes on to highlight the practical difficulty of this task, before recommending that a real discount rate of 7% should be used as a base-case for regulatory analysis and stating that "The 7% rate is an estimate of the average before-tax rate of return to private capital in the US economy" (*ibid*). The guide then notes that:

> The effects of regulation do not always fall exclusively or primarily on the allocation of capital. When regulation primarily and directly affects private consumption *(e.g.,* through

higher consumer prices for goods and services), a lower discount rate is appropriate. The alternative most often used is sometimes called the social rate of time preference.

The guide identifies a 3% discount rate as the appropriate proxy for the social rate of time preference. It then states that RIA should be conducted using both the 3% and 7% discount rates, notwithstanding that it has identified the 7% rate as the appropriate "base case". Thus, the US guide appears to argue that the opportunity cost of capital approach is generally preferable, but that an alternative (or sensitivity analysis) based on the social rate of time preference should also be performed.

Norway similarly indicates that the discount rate should be set equal to the rate of return that a private investor would require in order to embark on a project with similar risk characteristics. It regards its recommended "standard" discount rate of 4% as comprising a risk free rate of return of 2% and a risk premium equal to 2%.[17]

The new Australian RIA guide argues that the appropriate discount rate is the social opportunity cost of capital and that this amount is conceptually derived as the weighted average return on different sources of capital, with the weights being given by "the proportion of funds drawn from each source" to fund regulatory compliance expenditures (OBPR, 2007, p. 130). The suggested 7% real rate of return is calculated as follows:

> Estimates of the real before-tax market return on investment in Australia are at least 8%, the real after-tax return to consumers at least 6%, and the marginal cost of foreign funds at least 5%. Using these bottom-of-the-range numbers, plausible weights on the sources of capital give a weighted average discount rate of between 6.5 and 7.5%. (*ibid*)

Thus, the current Australian RIA guide adopts a similar conceptual approach to its US equivalent and, interestingly, also recommends the same base case discount rate. This represents a significant change from the approach adopted in the 2006 edition of the Australian guide. In that edition, no recommendation was made as to whether the social rate of time preference or opportunity cost of capital approaches should be preferred and, concomitantly, no recommended value for the discount rate was provided. This constitutes a significant step forward in terms of the provision of clear methodological guidance to regulators and ensuring consistency in methodology between RIA.

It is arguable that the costs of capital measures are themselves proxies for the social discount rate. However, the question of whether the implicit risk premium involved should be applied to regulatory expenditures (in preference to a "risk free" social discount rate based on the long-term bond rate) necessarily arises, as does the issue of whether the post-tax rate of return should be preferred to the pre-tax rate.[18]

The approach taken in the US and Australian RIA guides inevitably includes an allowance for market risk in the calculation of the base case discount rate. By contrast, the new RIA guidance issued in the State of Victoria (Australia) states that the discount rate used should be the real risk-free opportunity cost of capital, as estimated by the Finance Ministry for use in the public/private partnerships context (Victorian Government, 2007, pp. 5-16. As noted above, this rate is currently 3.5%). The conceptual issue underlying the choice of whether to include allowance for market risk in selecting the discount rate is not discussed explicitly in either RIA guide. However, at least one other published Australian Government source does discuss this issue in some detail. This discussion (BTRE, 1999, pp. 73-77) concludes with the statement that:

> BCAs should make some allowance for risk,[19] because people tend to be risk-averse. However, raising the discount rate is a crude allowance that can introduce other

> distortions to the analysis. Researchers should be seeking to develop better allowances that are also practical.

However, this injunction clearly fails to provide any more useful practical guidance on the issue than does the RIA guidebook, since the policy-maker is presumably to fall back on the adoption of a premium for market risk in the absence of better alternatives having been derived by "researchers." This approach appears to have been adopted in formulating the advice contained in the current Australian RIA guide.

The New Zealand BCA guide states that the discount rate represents the sum of the social rate of time preference and an allowance for the risk that "a future dollar will not be received" (p. 27). Similarly, the 1999 New Zealand RIA guide (p. 16) argues that the discount rate should reflect the sum of the social rate of time preference, uncertainty and inflation (the latter obviously being irrelevant where real discount rates are considered). However, it appears to favour a "sector specific" discount rate in some cases, at least, noting that effective discount rates of 5-7% have been estimated via survey results of the population in relation to health and safety related issues.

The EU is essentially silent on the conceptual issue underlying the choice of the discount rate, although the RIA guidelines refer to the "social" discount rate – suggesting that a social rate of time preference concept may underlie their recommendations.

### *Inclusion of risk premiums*

The above discussion raises the possibility that a major factor explaining the difference between the lower recommended discount rates (*i.e.,* 3.5% to 5%) and the higher recommended rates (*i.e.,* 7% to 10%) is the question of whether a risk premium is used in the calculation of a rate. Where the rate is based on the concept of a social rate of time preference, a risk premium is clearly not applied. There appears to be a divergence in views as to whether a risk premium ought to be included when calculating a discount rate on the basis of a notional opportunity cost of capital: for example, the Victorian guide includes no allowance for risk, while the Australian, Norwegian and the US guides do include an allowance for market risk.

In this context, it is important to distinguish between "market" and "non-market" risk. Another Australian BCA guide distinguishes between these two concepts as follows:

> Market risk stems from unanticipated fluctuations in the overall state of the economy. Such fluctuations affect the returns to investments generally, including transport facilities. Non-market risk, on the other hand, stems from factors that are more specific to particular investments. (BTRE, 1999, p. 74)

As noted above, it argues that it may be appropriate to allow for market risks, but that non-market risks should be dealt with through the use of sensitivity analysis, since the use of the discount rate to make allowance for these risks introduces the possibility of significant distortions being brought into the analysis.[20]

Conceptually, proposed regulatory expenditures compete for scarce resources with private investments. In all cases, decisions about whether to undertake private investments effectively include a risk premium. Differing views appear to be expressed in the literature as to whether regulatory expenditures imply lesser risks, on average, then do private investments. However, there can be little doubt that significant risks are inherent in most regulation.

### Box 3.2. **Conceptual approach to the discount rate in France**

The French approach to the determination of the discount rate to be used for assessing public investments is based on a distinct conceptual approach. The basis for determining the rate is the addition of the values of three variables: the "pure" rate of time preference.[1] the elasticity of the marginal utility of consumption and the rate of growth of *per capita* consumption. These values have been estimated at 1%, 2% and 2% respectively.

However, while this suggests a real discount rate of 5%, other factors have also been taken into account. These include uncertainty as to the rate of growth of per capita consumption and the need to ensure that the discount rate used for public sector purposes does not depart significantly from that adopted by the market (which is estimated at 3-4% in real terms). Taking account of these factors, a rate of 4% was determined.

This rate is substantially lower than the 8% rate used from 1985-2005. Several factors were identified as contributing to the need to adopt a substantially lower rate. In general terms, the major contextual factors were identified as European integration, globalisation and freer international movement of capital. Specific contributing factors identified included significant reductions in real interest rates, increasing uncertainty over future rates of economic growth, a reduction in the "pure" rate of time preference and a substantial reduction in the extent of the "crowding out" of private investments by public investments, due to freer international movements of capital.

1. The appropriateness of including this factor is regarded as debatable in the French document.

*Source:* CGdP (2005), p. 37, pp. 77-81.

The BTRE view, cited above, can be paraphrased as being that these risks should be accounted for in one way or another in BCA and that, in the absence of a superior alternative, the discount rate should be adjusted to include an allowance for risk.

In the absence of a clear argument in favour of the proposition that regulation entails lesser risks than do private investments, the benchmark risk premium should probably equate to the concept of the "general market risk," as discussed in the Australian BCA guidance cited above.

#### *Social vs. "sector specific" discount rates*

The RIA guidance documents reviewed for this paper are largely silent on the conceptual issue of whether a single discount rate or varying discount rates should be used. The special case of whether lower discount rates should be used in respect of proposals with longer time horizons is considered below. However, in the more common case, the question arises whether it is more appropriate to adopt a rate that reflects a "whole of society" estimate of the time rate of preference or opportunity cost of capital, or whether attempts should be made to determine a "sector specific" value for one or other of these variables.

The latter view appears to imply that the rates used would need to be aligned with those experienced by the party or parties paying the main part of the regulatory cost or, alternatively, the party receiving the main part of the regulatory benefits. To do so might be considered to yield a theoretically superior outcome. However, at the practical level there would be no means of adopting this approach. Moreover, it appears quite likely that an attempt to do so would be extremely controversial. An alternative justification of adopting

differential rates might be that regulatory proposals involving higher risk should have higher discount rates applied to them.

However, the BTRE view, cited above, strongly suggests that alternative treatments of these kinds of risks will create less risk of distortions being introduced to the analysis. Similarly, it was argued in OECD (2006) that the preferred means of dealing with this issue is to apply sensitivity analysis to the major uncertain variables. This view is coherent with the various RIA guides which, on the one hand do not propose differential rates for different regulations but, on the other, frequently emphasise the need to conduct sensitivity analysis.

The use of a single discount rate can thus be defended on practical as well as conceptual grounds. Practically, it arguably represents the only feasible approach. Conceptually, the single discount rate represents the averaging of all the private discount rates. While its application in specific regulatory contexts may not be consistent with the discount rates of the affected parties, these "errors" are expected to be randomly distributed when the range of regulatory interventions is considered as a whole.

One document which does deal specifically with the question of whether differential discount rates should be adopted is the French guide on discount rates (CGdP, 2005). This document states that a single discount rate should be adopted, reasoning that:

> The discount rate, which expresses the effort that society is prepared to make to prepare for the future cannot vary from one sector to the other. To accept different rates would destroy the transparency and coherence that this method offers. Public investments should be evaluated according to the same rules. If certain sectors seem to require a specific approach, this should be achieved through direct adjustments to the valuations of benefits and costs associated with the project and not by manipulation of the discount rate. (CGdP, 2005, p. 73)

### *Varying discount rates with the time horizon*

An apparently increasing number of RIA and BCA guidance documents argue for the adoption of lower discount rates in respect of projects with very long time horizons. It might be speculated that this approach responds in part to the critique of BCA from environmentalists and others who argue that it systematically favours short-term perspectives in policy-making. However, a number of different conceptual views are advanced in favour of this proposition – some more generalised, while other appear to relate specifically to the environmental context.

The 1999 New Zealand RIA guide, arguing that lower discount rates may reasonably be applied to long-term projects in the environmental context states that:

> … It may be possible to justify applying much lower discount rates to environmental values in the expectation that 1) as people become wealthier; and 2) the extent and nature of the environment decline, people in the future can be expected to place greater value on the natural environment. (p. 17)

While both propositions appear plausible in themselves, their use to justify adopting a lower discount rate seems conceptually equivalent to estimating future social utility functions and postulating future relative prices accordingly. Considered alternatively: this approach does not simply posit that the real price of environmental goods is likely to increase in future, but that their *relative* price is also likely to rise. However, while increased

relative scarcity (plausible, though not inevitable) would underpin such a speculation, increased wealth would not.

Notably, current New Zealand guidance on this topic is less accepting of the use of lower discount rates for very long-term projects. While the BCA guide notes that some sources recommend using lower rates if the appraisal of the project depends materially on the valuation of very long term effects, citing the UK Treasury Green Book in this respect, it concludes that "It is anticipated that, in New Zealand, lower discount rates would be used only in exceptional circumstances". (New Zealand Government, 2005, pp. 28-29)

The EU RIA guidance document similarly argues (Appendices, p. 39) that, where very long time horizons are concerned, the application of lower discount rates "might be justified by the longer-term implications of sustainable development and in particular, the need to take proper account of the preferences of future generations." Interestingly, in neither of the above cases is any specific, lower discount rate proposed or recommended.

The French guidance on the public sector discount rate also supports the use of a declining discount rate for analyses with time horizons longer than 30 years. Its recommendation is for rates declining from 4% at 30 years to a minimum of 2%, although it does not recommend any specific set of rates for particular time-horizons. In common with the New Zealand guide, the French document argues that the relative price of environmental goods is likely to rise over time as their scarcity increases. However, contrary to the New Zealand view, the French guide explicitly argues that this does not constitute a justification for using a declining discount rate – rather, this effect should be taken into account by directly incorporating higher values for environmental goods into the present value calculations.

Rather, the French approach to justifying the use of a declining discount rate proceeds from consideration of the variables that are used to determine the discount rate. As noted above, these are the pure rate of time preference, the elasticity of the marginal utility of consumption and the rate of growth of per capita income. In respect of the latter variable, the guide argues that there is reason to believe that current rates of growth of per capita consumption may not be maintained into the future and that a precautionary approach should be introduced to take account of this uncertainty:

> The basic formula used for deriving the discount rate supposes that the mean rate of growth of consumption in the long term is known and constant. This optimistic vision of the future does not appear very realistic and the debates on sustainable development illustrate the degree of uncertainty which our societies face today when they consider the future. It appears more appropriate to introduce a precautionary effect to deal with the uncertainties of growth. This will tend to reduce the discount rate. (CGdP, 2005, p. 32)

That is, to the extent that the rate of growth of per capita consumption declines in future periods *vis-à-vis* current rates, a reduction in the discount rate as applied to these future periods is justified in terms of the formula. However, the French guide notes that "the decline in the discount rate over time, however, can only be very gradual, given the hypotheses underlying it." (CGdP, 2005, p. 46). The rationale for the use of a declining discount rate for very long-term time horizons adopted by the French guide is therefore based on a specific assumption about probable long-term future growth rates and seems inevitably to be based on judgements that this assumption is plausible. By contrast, other literature argues on more general grounds for the use of a declining rate.[21]

A generalised rationale for differentiating discount rates according to the relevant time horizon is recommended in the US guidance document. This rationale, attributed to Weitzman,[22] is conceptually entirely distinct from those noted above, being based on the argument that the *appropriate* value of the discount rate becomes increasingly uncertain as the time horizon lengthens. This seems to involve a proposition diametrically opposed to that advanced (see above) in the EU guidance document: *i.e.,* that it is not possible for us to know the effective discount rate of future generations. The US guidance document then argues that:

> The properly averaged certainty-equivalent discount factor (*i.e.,* $1/[1 + r]^t$) corresponds to the minimum discount rate having any substantial positive probability. From today's perspective, the only relevant limiting scenario is the one with the lowest discount rate – all of the other states at the far-distant time are relatively much less important because their expected present value is so severely reduced by the power of compounding at a higher rate. (p. 36)

The UK Green Book also argues in general terms, similarly citing Weitzman, for the use of lower discount rates where the time horizon exceeds 30 years. The Green Book provides a Table providing explicit discount rates for a range of different time horizons, as follows:

Table 3.1. **Recommended real discount rates (UK Green Book)**

| Time horizon | 1-30 years | 31-75 years | 76-125 years | 126-200 years | 201-300 years | 301+ years |
|---|---|---|---|---|---|---|
| Discount rate | 3.5% | 3.0% | 2.5% | 2.0% | 1.5% | 1.0% |

Notably, however, while the Green Book cites Weitzman as its primary authority in respect of the concept of declining long-term discount rates, the values reproduced above differ significantly from those proposed by that author and reproduced below. No reason for departing from Weitzman's conclusions on appropriate discount rates is cited.

Table 3.2. **Recommended real discount rates (Weitzman, 2001)**

| Time horizon | 1-5 years | 6-25 years | 26-75 years | 75-300 years | 301+ years |
|---|---|---|---|---|---|
| Discount rate | 4.0% | 3.0% | 2.0% | 1.0% | 0% |

While the US and UK guides have both adopted (variants of) the Weitzman view on this issue, there is evidence to suggest that this view constitutes a minority one. Portney and Weyant (1999),[23] in summarising contributions to a book dealing specifically with the appropriate discounting treatment of very long term projects, noted only four of 16 contributions advanced this proposition (p. 7). On the other hand, they refer to several studies of individuals' behaviour which appear to:

> … Show rather consistently that while individuals do appear to attach lower weights to distant benefits, they do not use a constant exponential discount rate. Rather, the longer the time period before effects are felt, the lower the implicit discount rate used.[24] (p. 7)

Regardless of the views taken on several issues in relation to very long-term project, Portney and Weyant report that there was virtual unanimity among contributors that a positive discount rate should be applied, while there was complete unanimity on the

proposition that a discount rate reflecting the opportunity cost of capital should be used in respect of all projects with a time horizon of forty years or less (p. 7).

In sum, while there is both some empirical and theoretical support for the notion of using lower discount rates where time horizons are very long, substantial objections to this approach also exist. Perhaps more importantly, the issue only arises in respect of time horizons of longer than forty years, indicating that this issue will not be relevant to the conduct of BCA on the great majority of regulatory proposals.

### *Incentive issues*

An additional issue in considering the appropriate discount rate to recommend for RIA purposes is that of whether there is a need to attempt to counterbalance an inherently pro-regulatory bias arguably held by regulators by adopting a higher than otherwise defensible discount rate.

In this view, RIA is conducted by regulators, who face strong pro-regulatory incentives, both because of their specific regulatory responsibilities (and the lobbying of interest groups) and as a result of political pressures. To this extent, they can be expected to incorporate, either consciously or unconsciously, a degree of systematic bias in favour of regulation in their RIA, either through over-estimation of benefits, under-estimation of costs, or both.

While regulatory reform agencies may have some ability to counteract such biases, to the extent that they have a quality assurance/gatekeeper role in relation to RIA, this mechanism is likely to function imperfectly in practice. If this is so, it is arguable that the adoption of a higher discount rate could be a mechanism through which compensation for this pro-regulatory bias could occur, given that most regulation is characterised by a greater proportion of costs occurring in the short term, while benefits are spread over a longer period.

### *Conclusions on discount rates*

There is a strong argument that RIA guidance documents should recommend a specific discount rate or rates to ensure policy coherence, rather than leaving this issue to be determined in a decentralised manner by regulators. This reflects the fact that the rate reflects a broader question of government policy, or its interpretation of social preferences and also implies that RIA guidance should state explicitly the conceptual rationale which underlies the recommended discount rate.

Moreover, consistency in the choice of discount rates favours optimisation of the expenditure of regulatory resources. This does not necessarily imply that a single rate should be used for all regulatory purposes, but does imply the need for consistent approaches, so that like regulatory expenditures are assessed using like discount rates.

There appears to be little consensus on the conceptual question of whether discount rates should reflect the social rate of time preference or the opportunity cost of capital. Given the need to include allowance for market risk in the latter case, the practical implications of this question are substantial. Indeed, the observed very broad spread of recommended discount rates in current RIA guidance materials appears likely to reflect the adoption of different views on this question. While there is clearly no "best practice" to be identified on this substantive issue, there is a strong argument that the conceptual view underlying the recommended discount rate should be made explicit and explained in some

### Box 3.3. **Systematic bias?**

It is arguable that the systematic bias toward over-regulation of risk identified by the Better Regulation Commission (2006, p. 11) is validated, even where rigorous BCA is undertaken, by a separate dynamic, identified in the Australian handbook of benefit-cost analysis. This argues that:

"Optimism bias occurs when favourable estimates of net benefits are presented as the most likely or mean estimates. It is an endemic problem in benefit-cost analysis and may reflect over-estimation of future benefits or underestimation of future costs." (DoFA, 2006, p. 78)

This optimism bias is identified by DoFA in the context of the use of BCA in project appraisal generally, rather than in the specific regulatory context. The New Zealand BCA guide similarly identifies optimism bias as a problem (p. 36), as does the UK Treasury Green Book. The latter argues that optimism bias is a "worldwide phenomenon, affecting both public and private sectors"[1] and states that explicit adjustments should be made to account for this bias, by increasing cost estimates and reducing or delaying benefits. However, the New Zealand guide argues that sensitivity analysis is the appropriate tool to use in this regard.

Others have argued that the incentives operating on regulators (who are primarily responsible for generating BCA) particularly incline them toward this bias. This view is certainly not unchallenged, however, with critics of the use of BCA in regulation[2] pointing to an alleged "pessimism bias" in which the costs of proposed regulations are said to be systematically over-estimated.

Harrington *et al*. (2001), having researched this issue empirically, has concluded that these biases, while both frequently present, tended to cancel each other, yielding no "net" bias in the estimation of the unit costs of regulatory benefits.

1. UK Government (2002), p. 29. This statement attributed to: Flyvbjerg, B., Holm, MS, and Buhl, S., "Underestimating Costs in Public Works Projects – Error or Lie", *Journal of the American Planning Association*, Vol. 68, Issue 3, pp. 279-296.
2. See, for example, OMBWatch: *www.ombwatch.org/article/articleview/2749/1/134*. This article contains links to a number of citations.

detail. This would enable stakeholders to understand the reasoning used by government and, as a result, facilitate debate about the appropriate approach to be taken.

There is clearly substantial support in the literature for lower discount rates to be applied in respect of very long time horizons. There appear to be unresolved conceptual issues in this regard, suggesting that governments should be cautious when considering the adoption of lower discount rates where longer time horizons are relevant. Only a small proportion of regulatory decisions are likely to involve time horizons beyond the 30-40 year period within which there is general consensus on the use of a single rate.

Appropriate discount rates can vary over time, if views of the underlying social rate of time preference change. However, they should not vary in the short term along with proxy measures such as the government borrowing rate, for at least two reasons. First, these factors are partially reflective of other factors that are transient and not conceptually relevant. Second, long run stability in the rate is also favourable for the achievement of optimum distribution of regulatory resources in the longer-term. At the other extreme, a review of rates actually recommended in various member countries indicates that, in some cases, these have remained unchanged over several decades. There would seem to be a

case for ensuring that the continuing appropriateness of the discount rate is reviewed from time to time – say at five, or even ten yearly intervals. In this context, it is noted that the French guide on discount rates explicitly argues that the rate to be used should be revised at five-yearly intervals (CGdP, 2005, p. 88). This document appears to be the only guide at present specifically arguing for regular review of the rate at fixed intervals.

Finally, while differences in discount rates within the range of recommendations cited above would seem to be potentially highly significant in determining whether regulatory proposals would be able to demonstrate a positive NPV, research by Hahn (2005) suggests that, in practice, this effect is not likely to be large.[25]

### *Valuation of a Statistical Life*

The issue of the Valuation of a Statistical Life (VSL) is discussed in a majority of the RIA guidance documents and BCA guides reviewed for this paper. Most of these discussions point to the desirability of adopting such a value in order to enable a quantified BCA to be completed in respect of risk-related regulation.

Perhaps paradoxically, only one guide recommends the use of a particular VSL. This is the EC guidance document, which recommends a VSL of EUR 1 million, with sensitivity analyses to be conducted at values of EUR 2.5 million and EUR 0.65 million. In Norway, the Ministry of Finance handbook on socio-economic analysis refers to a range of national and international studies and, on this basis, suggests a standard VSL figure of NOK 15 million (approximately EUR 1.9 million) for all public projects and regulations.[26]

Other guidance documents cite particular values of a statistical life but refrain from endorsing them. For example:

- The Canadian BCA guide noted that most values cited in the research literature fall in the range between CAD 1-10 million.
- The United States BCA guide makes the same statement.
- The 1999 New Zealand RIA guide does not directly address the issue of VSL, but does note in passing (p. 26) that a VSL of NZD 2 million was derived for use in the transport sector in 1991.
- The UK Treasury Green book notes that, the Department for Transport (DfT) values the reduction of the risk of death in the context of road transport at about GBP 1 145 m per fatal casualty prevented (in 2000 prices).

In other cases, the discussion of this issue mentions no specific values for a statistical life.

Several of the VSL cited in the guidance documents have been developed by transport departments. These included the New Zealand and United Kingdom valuations cited above. In addition, the Australian Bureau of Transport and Regional Economics (BTRE) has also published documents containing a specific VSL figure.[27] This suggests that, in this policy area at least, regulators are comfortable with the application of specific VSL figures as part of project analysis.

More broadly, a number of the RIA guides note that several government departments adopt specific, standardised VSL. For example, the Canadian BCA guide notes that "a number of Federal departments use explicit figures for the value of a life." Thus, there appears to be a level of recognition that the practice of adopting a standard VSL is relatively common. In this context, it is difficult to understand the apparent reluctance of the RIA/BCA guides to recommend specific figures. In the case of Australia, the RIA guide states

that the Office of Best Practice Regulation should be contacted for advice on an appropriate VSL to be used in analysing any particular regulatory option. OBPR officers indicate that, to date, inquirers have been directed to the general literature and that OBPR practice is currently to accept any proposed value that is regarded as defensible in these terms.[28] The new edition of the RIA guide, published in August 2007, is consistent with its predecessor in not including a specific recommended VSL figure. However, Australian officials have stated that it is intended to publish additional guidance, together with a recommended value or values for VSL on the OBPR website in the near future. This indicates an apparently significant change of approach on this issue.

A few guidance documents more or less explicitly address the question of whether a single VSL should be used for all purposes, or whether a range of VSL figures should be preferred. The Australian case, noted above, arguably adopts the latter view in referring to "the appropriate VSL to be used in analysing any particular regulatory option." The US guide addresses this issue more explicitly, stating:

> There is a continuing debate within the economic and public policy analysis community on the merits of using a single VSL for all situations *versus* adjusting the VSL estimates to reflect the specific rule context. A variety of factors have been identified, including whether the mortality risk involves sudden death, the fear of cancer, and the extent to which the risk is voluntarily incurred. The consensus of EPA's recent Science Advisory Board (SAB) review of this issue was that the available literature does not support adjustments of VSL for most of these factors. The panel did conclude that it was appropriate to adjust VSL to reflect changes in income and any time lag in the occurrence of adverse health effects.
>
> The age of the affected population has also been identified as an important factor in the theoretical literature. However, the empirical evidence on age and VSL is mixed. In light of the continuing questions over the effect of age on VSL estimates, you should not use an age-adjustment factor in an analysis using VSL estimates.

This advice seems to indicate that a single VSL should be used for most or all purposes. Thus, it inevitably appears somewhat paradoxical that the guide then does not put forward an appropriate VSL figure.

### *Conceptual basis for VSL*

A minority of guidance documents address the issue of the appropriate conceptual basis for calculating VSL. As noted in OECD (2006), the Australian guide discusses both the human capital and revealed preference (or willingness to pay) approaches and argues strongly for the latter. Similarly, the UK Treasury Green Book argues in favour of the willingness to pay approach (p. 61). The Canadian BCA guide mentions a number of revealed preference approaches, but does not mention the human capital approach, presumably indicating a clear preference for the former (p. 80).

The brief discussion of this issue contained in the EC guidance document also appears to demonstrate a preference for revealed preference or stated preference models. However, the notably low VSL figure employed in the EC RIA guidance document leaves one to speculate that it has been arrived at via the human capital approach.[29] That said, the *caveat* included in the text at this point (p. 38) indicates that this value is applicable to:

> … Deaths in a largely elderly population where the reduction in life expectancy is likely to be short – maybe one year or less.

Interestingly, recent work by Aldy and Viscusi (2007) suggest that the relationship between age and VSL is more complex than previously supposed. They argue that:

> ... It is clear that VSL does vary with age. The labour market VSL increases with age, peaks in midlife, and subsequently declines. (p. 19)

While this may be a fruitful area for future research, the current level of sophistication of the discussion of VSL issues in RIA guidance is well below this level. It would seem that the major challenge at present involves reaching agreement on a single VSL figure to be adopted in most or all RIA contexts. As Viscusi has previously pointed out, maximising regulatory cost effectiveness requires that the cost effectiveness of individual regulations should be equalised. If this outcome is to be achieved, the VSL used across the range of risk related regulation must be equalised.

Hahn (2005) argues that the impact of adopting different VSL figures may be relatively limited in practice. Reviewing a sample of over 100 sets of regulations in the United States, he concludes that:

> The percentage of regulations that pass [a benefit-cost test] varies from 47% when the VSL is very low and the discount rate is very high to 62% when the VSL is very high and the discount rate is very low. (pp. 26-27)

Hahn chose a base value for the VSL of USD 5 million, based on "a review of the literature and discussion with economic experts within and outside the government" and notes that "a meta-analysis of several studies by Viscusi and Aldy places the median value at USD 7 million (in year 2000 USD) for a worker in the United States."

Hahn's analysis suggests that the specific VSL adopted is relatively unimportant, but that the process of adopting a VSL figure and using it consistently in RIA is likely to be very important in improving the cost effectiveness of regulation. It arguably follows from this that a relatively high VSL figure should be selected from within the range offered by the literature, so as to render explicit the adoption of VSL and stem controversy as far as possible (*i.e.,* by minimising the scope for argument that this figure has been set too low).

### *Conclusions on the Valuation of a Statistical Life*

Notwithstanding the evidence of Hahn (above), which casts some doubt on the likely extent of the impact of adopting differing VSL on regulatory outcomes, the provision of clearer guidance on VSL would appear to be high priority area for improvement in RIA and BCA guidance documents in the future. This reflects the fact, discussed above, that it is not possible to complete a quantified BCA in respect of health and safety-related regulations without adopting, implicitly or explicitly, a VSL. Given the central importance of VSL to the conduct of BCA, RIA guidance should address this issue in a clear and consistent fashion and provide unambiguous advice to regulators.

Moreover, the presence of a substantial literature on this issue, which reflects a significant a degree of consensus, or at least convergence, on both conceptual issues and practical valuations, provides a sound basis for developing and adopting appropriate guidance in the RIA context.

### *Decision rules*

A number of different decision rules can be employed, where benefit-cost analysis is adopted in RIA. Among those commonly discussed in RIA guidance and/or in the literature upon benefit-cost analysis are:

### *Net Present Value*

A decision rule of NPV>0 effectively states that the benefits of the regulation must exceed the costs, when expressed in discounted terms. This is the basic condition for a regulation to be welfare enhancing and is the most commonly cited decision rule.

### *Benefit-cost Ratio*

A benefit-cost ratio of 1:1 is equivalent to NPV = zero. However, the important characteristic of a rule based on benefit-cost ratio is that it allows different alternatives to be ranked according to their *efficiency* (*i.e.,* dollars of benefit produced for each dollar of costs expended), rather than their effectiveness, as with the NPV rule.

### *Internal Rate of Return*

Conceptually equivalent to the benefit-cost ratio rule, this rule simply expresses the results in terms of an annual rate of return on the costs incurred (*i.e.,* the investment made). The equivalent of the rule NPV > 0 is IRR > 0.

### *Current practice*

While RIA guidance documents almost invariably discuss the question of decision rules few, if any, set out a definitive requirement to use one particular rule. Where a preferred decision criterion is identified, it is in most cases that alternatives should be ranked in terms of their NPVs, while NPV > 0 is in several cases established more or less explicitly as the decision rule to be employed.

For example, the US RIA guide indicates clearly that an NPV rule should be preferred:

> The size of net benefits, the absolute difference between the projected benefits and costs, indicates whether one policy is more efficient than another. The ratio of benefits to costs is not a meaningful indicator of net benefits and should not be used for that purpose. It is well known that considering such ratios alone can yield misleading results. (US Government, 2003, p. 10)

This appears to be an unusual use of the concept of "efficiency" which, it has been suggested above, is better determined through the application of benefit-cost ratios. It is also unclear why an explicit warning against the use of the benefit-cost ratio as an "indicator of net benefits" is required. However, it should be noted that the US guide also states that agencies should strive to *maximise* the net benefits associated with their regulatory activities, rather than simply ensuring that regulation has positive net benefits.

The UK Government Green Book argues in general terms for the use of an NPV rule, stating:

> The NPV is the primary criterion for deciding whether government action can be justified. If a full benefit-cost analysis has been undertaken, the best option is likely to be the one with the highest risk adjusted net present value. (UK Government, undated, a, pp. 26, 36)

It also states that:

> If there is a budget ceiling, then the combination of proposals should be chosen that maximises the value of benefits. The ratio of the net present value to the expenditure falling within the constraint can be a useful guide to developing the best combination of proposals. (UK Government, undated, a, p. 37)

The exact form of the ratio proposed as a "useful guide" is unclear, but it would appear to be correlated positively with the benefit-cost ratio. Indeed, in the example given (*ibid*) of a budget constraint, the Green Book advises choosing two options with higher benefit-cost ratios over that with the lowest ratio, even though the latter has the highest NPV. That the benefit-cost ratio is nowhere mentioned in the Green Book seems a surprising omission, given the possibility of using it to state a clear and unambiguous decision rule for deciding between projects where a budget constraint exists, and the lack of clarity in the advice actually given.

The EU RIA guidance document states that the use of BCA implies the adoption of a NPV>0 rule, but then argues that this rule is invalidated in circumstances in which different time horizons are considered. Instead, it argues that the "annualised value" of competing options should be calculated, given as "NPV/time horizon" (years) and states that the one with the highest "annualised value" represents "best value" (European Commission, 2005, p. 40). The rationale for this conclusion is not explained in any detail.

The 1999 New Zealand RIA guide also argues for the predominance of NPV over the benefit-cost ratio as a decision criterion:

> Without risk, or uncertainty surrounding the results of the analysis, the option with the highest NPV… is favoured as this would contribute the most to public welfare, *i.e.,* an expected gain of NZD 15 million against an expected gain of only NZD 10 million for option two. (New Zealand Government, 1999, p. 18)

This rule is clearly based on a simplified approach and does not take account of the possible need to trade off between different regulatory initiatives. By contrast, New Zealand's 2005 BCA Primer highlights the value of the benefit-cost ratio in guiding the allocation of limited expenditures where there are large numbers of potential initiatives which all have NPV > 0. Also of note, this guide highlights the fact that a definitive NPV, including monetised values for all major benefits and costs and properly accounting for distributional objectives, will often be infeasible in a government policy setting:

> In a commercial setting, it is typical for the project with the highest NPV to be chosen, but in a government setting where many costs and benefits may be difficult to quantify, the NPV may be just one of the decision-making criteria. Put simply, a proposal with a higher NPV ranks ahead of the alternative, assuming the proposals are otherwise equal. If the proposals are not the same in all other respects, a higher NPV is not conclusive. For example, one proposal may have much greater intangible net benefits. *A negative NPV does not rule out proceeding with a proposal. There may be other qualitative influences on the decision to proceed, and these may be important.* (New Zealand Government 2005, p. 29)

The Canadian RIA guides do not explicitly address the issue of choice between decision rules, but highlight the fact that government policy generally requires a net benefit to be demonstrated. This could equally be interpreted as endorsing an NPV > 0 rule or a B/C > 1 rule.

The current Australian RIA guide also fails explicitly to address the issue of choosing between NPV and B/C based decision rules, although its advice clearly favours the approach of maximising NPV. It also identifies, apparently with approval, the possibility of adopting a risk adverse use of sensitivity analysis as part of the decision rule:

> The policy officer should specify which option is the most efficient. Generally, it will be the one with the largest NPV. Given NPVs are predicted (average) values, the sensitivity

> analysis might suggest that the alternative with the largest NPV is not necessarily the best alternative under all circumstances. For example, the policy officer might be more confident in recommending the option with a lower expected value of net benefits, but with a smaller chance of imposing a significant net cost on the community (lower "downside risks"). (OBPR, 2007, p. 123)

Interestingly, the previous Australian RIA guidance document did explicitly discuss the use of a B/C based decision rule:

> Options can be ranked, on the basis of their economic impact, by their NPVs. An alternative step is to estimate benefit-cost ratios for each option. …The use of benefit-cost ratios can change the ranking of options, and may be useful when a decision maker has to choose between different projects when subject to a capital constraint. (OBPR, 2006, p. C-11)

It is not clear why the current guidance document has eliminated this discussion.

The Australian BCA guidance document does address both decision rules and also generally favours the NPV > 0 approach. It states that "Subject to budget constraints and other considerations, and assuming that there are no alternative projects under consideration" (DoFA 2006, p. 54) the rule of NPV > 0 may be used and notes that, where budget constraints intervene, that subset of projects which maximise total NPV should be chosen. In relation to the benefit-cost ratio, it states:

> … The BCR can assist with the selection of projects when agencies have capital constraints (more projects than can be funded at the selected discount rate), but it does not displace the objective of maximising net present value. However, in more general cases, the BCR is biased towards small projects and must be used cautiously. (DoFA 2006, p. 59)

Thus, both of the Australian guidance documents demonstrate a tendency to favour NPV based rule over rules based on the benefit-cost ratio. It is notable that the assertion in DoFA (2006) that the latter is biased towards small projects is not explained or justified.

The Irish RIA document is the only RIA guidance surveyed that states a clear preference for the use of the benefit-cost ratio, arguing: "There are a number of decision rules which can influence the choice of option but as a general rule the greater the ratio of benefits to costs the better" (Irish Government, 2004, p. 77). However, the basis for this preference is not elucidated. Moreover, the Irish guidelines on appraising public sector capital expenditure proposals argue the contrary view:

> In choosing between options A and B, the NPV method may suggest that A is preferable, while the IRR method may suggest that B is preferable. In such cases, the results indicated by the NPV method are more dependable. (Irish Government, 2005, pp. 35-36)

The reason for the allegedly greater dependability of NPV analysis is not cited. However, the existence of two directly contradictory views on the appropriate decision rule throws into sharp relief a wider problem of lack of co-ordination between RIA guidance and broader BCA and/or project appraisal guidance issued within governments.

### *Discussion*

The above discussion focuses specifically on the various formal decision rules traditionally associated with benefit-cost analysis. The difficulties associated with applying

benefit-cost analysis to the policy context and, in particular, to the regulatory context have long been recognised. As pointed out in OECD 2006, there is a current trend toward explicit recognition in RIA guidance documents of the limits to the ability to quantify all relevant benefits and costs in respect of many regulatory proposals. As a consequence, there has been an increasing focus on the need to integrate qualitative and quantitative elements of the analysis in order to ensure that all the important economic, social and environmental impact of a regulatory proposal are properly taken into account.

For example, the Norwegian guide to socioeconomic analysis emphasises that a simple NPV > 0 decision rule is insufficient in a range of circumstances including:

- where all effects of action cannot be measured satisfactorily;
- where distributional effects are important to the assessment of different alternatives; and
- where it is believed that measures of willingness to pay do not fully capture effects on individuals' utility.

The guide argues that a judgement must often be made as to how far attempts to monetise impacts should be taken:

> (…) It is hard to describe in general terms how far the analyser should go in monetising effects. Considering this question, one should have in mind the purpose of the analysis, which is to identify and provide information on effects of the possible action. Sometimes putting a monetised value on an effect is clearly problematic, *e.g.,* if the effect is closely linked to controversial ethical questions. A criterion for when to monetise is if describing in money terms gives the decision-makers (*i.e.,* politicians) a better and more complete understanding of the effects than an analysis in purely qualitative terms.[30]

Jacobs (2006) has dubbed attempts to integrate qualitative and quantitative elements in a more systematic way as "soft benefit-cost analysis". The section on Multi-Criteria Analysis above, discusses the use of Multi-Criteria Analysis as a promising means of incorporating a systematic and relatively objective approach to qualitative analysis within RIA. The integration of qualitative and quantitative aspects of RIA would seem to require that best practice qualitative approaches, such as MCA, should be applied and the outcomes explicitly considered in conjunction with quantitative information developed via BCA or CEA in the – many – cases in which quantified BCA results are not believed able to capture all of the significant impacts of a regulatory proposal.

In addition to these *caveats* concerning the use of strict BCA decision rules in the regulatory context, it is also arguable that, in practice, the choice of decision rules will only rarely affect the choices made between different identified policy alternatives. Nonetheless, the issue of the relative merits of these rules would seem to merit explicit consideration in RIA guidance documents, if only for the purpose of clarifying the conceptual concerns which regulatory decision-makers should consider. The issue of whether, in a regulatory context, decision-makers should see themselves as necessarily having to "choose between different projects" is clearly significant in determining views on decision rules. The preponderance of advice in favour of maximising NPV suggests that regulatory reformers are implicitly advancing a view that such trade-offs are not required to be made by regulators.

It is frequently argued that governments tend to favour regulation over "tax and spend" measures in many cases because there is less scrutiny over the size and effectiveness of

"regulatory expenditures." This argument suggests that regulatory expenditures are seen as essentially unlimited, so that decision-makers are not required to choose between different projects.

Although the concept of the regulatory budget has made little headway in OECD countries in formal terms, the development of the concept recognises, in part, the importance of the issue of consent in determining the effectiveness and legitimacy of regulation and, by implication, suggests that governments do increasingly recognise a constraint on the amount of regulation that can be implemented. More broadly, government policies with the announced objective of "reducing the regulatory burden" can be interpreted as being founded on the same recognition.

To the extent that this is the case, there is clearly merit in favouring decision rules that will maximise the *efficiency* of the regulations chosen, rather than their effectiveness. This implies that the benefit-cost ratio should be favoured over the NPV as the primary measure to be used, albeit that they should necessarily be applied in tandem. That is, if there is an implicit regulatory budget operating, the welfare maximising rule is to maximise the benefit-cost ratio: if cost is fixed in the global sense, maximising the ratio maximises global benefits.

Favouring options with the highest benefit-cost ratio will yield the goal put forward in this context in the Australian BCA guidance document (see above) of selecting that subset of projects which will maximise total NPV, and is also consistent with the advice in the UK Green Book. Indeed, it is at least arguable that this subset of projects can only be reliably identified by determining the benefit-cost ratio of each available project (or regulation), since achieving this goal *requires* all the projects (regulations) with the highest benefit-cost ratios to be chosen.

In practice, there are clearly additional sources of complexity. The above argument effectively assumes that the choices to be made are discrete choices between policy options. Regulatory decision-making frequently also includes the question of choosing between differing degrees of stringency within the context of the same policy approach. In this context, while the objective of maximising the (average) benefit-cost ratio remains, as a practical matter, changes in the marginal benefit-cost ratio at different levels of regulatory stringency would need to be tracked in order to identify reliably the point at which the (average) benefit-cost ratio is, in fact, maximised.

While the above provides theoretical guidance on how to maximise the contribution of regulation to economic welfare in conditions in which the supply of regulation is effectively limited, there will be significant practical constraints on implementing this approach.

For example, when considering different possible levels of stringency for a regulation, the point at which the average benefit-cost ratio is maximised may often occur at a stringency level which risk analysis would suggest was too low. That is, that the residual risks existing after regulation of this level of stringency had been introduced would continue to exceed benchmarks for "acceptable risk."

Secondly, because regulatory decisions are not being taken simultaneously, the rule of maximising the benefits/cost ratio can only be implemented in practice if a threshold for "acceptable" benefit-cost ratio can be identified. That is, a specific benefit-cost ratio must be put forward as constituting the threshold dividing "effective" from "ineffective" regulations. In theory, this ratio is knowable provided that all possible regulatory interventions are known.

However, even in this case, the value of the ratio will vary according to the size of the "regulatory budget."

These practical difficulties in formulating a specific rule based on the benefit-cost ratio are apparently insurmountable. The fundamental conclusion highlighted by the above discussion is that, given implicit constraints on the quantity of regulation that can be made, a decision rule that NPV>0 is insufficient to ensure that regulatory effectiveness is maximised.[31]

Moreover, while it is not possible to determine an optimal value of the benefit-cost ratio, it may be feasible to identify an appropriate "rule of thumb" threshold value by surveying the range of benefits/cost ratios identified in RIA documents that have been able to quantify most or all of the important benefits and costs and using the results as the basis for reaching such a judgment.

Even in the absence of such a limited calculation, it is at least arguable that acknowledgement of the practical limits to the overall quantum of regulation that can be made requires a more stringent rule than that of NPV>0 to be adopted in RIA guidance. The option of citing a threshold value for the benefit-cost ratio – for example a minimum of 2:1 – would seem to merit consideration for inclusion in RIA guidance as a general decision rule.

Such a rule would also have the benefit of providing a greater degree of certainty that the regulation will, in practice, achieve a positive NPV. As pointed out by some Australian regulatory reformers,[32] the higher is the benefit-cost ratio, the more robust is the conclusion that NPV will be greater than zero. That is, where the benefit-cost ratio is only 1.2:1, the true NPV figure will be negative if the true benefits turn out to be overestimated in the BCA by anything more than 20%. By contrast, if the benefit-cost ratio figure is 2:1, true NPV will be negative only where the true benefits are over estimated by at least 100% in the BCA. Thus, where projects with an equivalent NPV are considered, there should be a strong preference toward that with the higher benefit-cost ratio. However, the adoption of this approach can be criticised as amounting to the introduction of a degree of bias against regulation into the RIA process.

That said, it is arguable that this issue is dealt with most appropriately through the application of sensitivity analysis and the simultaneous presentation of both NPV and benefit-cost ratio results for all identified alternatives in the RIA context, with decision making being required to take account of performance in terms of both rules, rather than one or the other.

### *Other methodological issues*

The preceding sections discuss a non-exhaustive list of methodological issues in relation to benefit-cost analysis. As noted in the introduction, the issues highlighted for discussion are those that have substantial impact on the overall quality of RIA – and therefore of the resulting regulatory proposals – and those in respect of which there are major complexities and controversies among analysts. Within this context, two other methodological issues deserve brief attention.

#### *Sensitivity analysis*

All of the seven detailed RIA guidance documents reviewed for this paper include discussion of sensitivity analysis, as does that of Norway. These discussions are essentially similar and are, for the most part, quite brief. The advice given is that sensitivity analysis

should be undertaken wherever there is significant uncertainty surrounding the value of a variable and that variable may have a significant impact on the assessed outcome of the regulatory proposal. In some cases, the discussions also acknowledge that these are likely to be practical limitations on the amount of sensitivity analysis that can be undertaken and that judgement therefore needs to be exercised as to what variables, and what values of those variables, should be used in undertaking sensitivity testing.

Thus, the discussion of this topic reveals a relatively rare degree of consensus among the RIA guidance documents. To the extent that issues can be identified from the best practice perspective, the main point would appear to be that little detail on how to conduct sensitivity analysis in practice is given. Two issues in respect of which further guidance may be useful are:

- *How to identify appropriate variables for the conduct of sensitivity analysis*: The generic advice that variables that are uncertain and which may have a significant impact on the NPV could conceivably be supplemented with an indicative list of the types of variables likely frequently to fall within these criteria; and
- *How to select appropriate values for the conduct of sensitivity testing*: guidance on how to set limiting values, in terms of probability factors and, perhaps, consequences could also be considered.

Finally, some sources[33] argue that the use of alternative statistical techniques, notably Monte Carlo analysis, can constitute a better means of dealing with uncertainty than does sensitivity analysis, at least in some contexts. Thus, it may be appropriate for RIA guidance to include some discussion of the potential use of this alternative.

### *Adjusting prices to remove distortions*

Some of the specialist benefit-cost analysis guides reviewed for this paper discuss the question of adjusting market prices in order to account for a range of distortions (see, for example, Australian Government, 2006b, pp. 10-11).[34] This discusses potential adjustments to market prices under the headings of value of final outputs, the value of physical inputs, interest on borrowed capital, depreciation allowances and land.). This issue is rarely treated in RIA guidance documents, although the Norwegian handbook on socio-economic analysis provides an exception in this regard, containing an extensive discussion of the potential need for price adjustments to take account of factors such as imperfect competition, public monopoly, externalities, common goods and unemployment.

Such adjustments have the potential to have a substantial impact on the outcomes of RIA in some circumstances and, where relatively sophisticated RIA are being undertaken, it may well be reasonable to expect such adjustments to be incorporated within the analysis. Given this, the fact that this issue is not discussed at all in most RIA guidance documents would appear problematic.

Both fully explaining the underlying conceptual issues, and providing practical guidance on how to undertake the necessary adjustments, constitute highly technical tasks. Given this, and the mostly generalist audience for most RIA guidance, it would be unrealistic, and probably counterproductive, to expect a full discussion of the issue to be incorporated in these documents. However, there may be an argument for ensuring that the issue is at least acknowledged in the RIA guidance documents and reference made to available sources of more detailed guidance on the subject. Were this issue to be addressed in RIA guidance documents it would also presumably be necessary to indicate the circumstances

in which the making of such a price adjustments is likely to be required to ensure regulatory quality.

### *Assessing macroeconomic effects of regulatory actions*

OECD 2006 noted that several RIA guidance documents including those of Ireland, the European Commission and Australia, now require assessment of the effect of proposed regulation on a range of macroeconomic impacts, including employment, GDP, innovation, poverty or other important macroeconomic variables. This trend appears to result from concern that the traditional microeconomic approaches to RIA, based on BCA and related methodologies, do not always capture the full effects of a proposed regulatory intervention.

Certainly, for a small proportion of regulatory proposals which have impacts throughout many sectors of the economy, it is likely that their adoption will have a discernible impact on macroeconomic variables. In such cases, RIA based solely on microeconomic approaches will inevitably fail to capture the full impact of the proposal. Instead, a macroeconomic analysis, based on a general equilibrium approach will be required. Such an approach is inevitably relatively resource-intensive and can be justified only where there is a reasonable likelihood that a regulatory proposal will, indeed have a discernible macroeconomic effect. Requiring a macroeconomic analysis in other cases entails a serious risk of a misallocation of scarce RIA resources, as well as potentially undermining support for RIA by setting the required analytical standard at a level that is effectively reachable only by contracted specialists, rather than staff of regulatory agencies. It is not clear that all the RIA documents proposing that impacts on specific macro-variables be included in RIA do so from the point of view of an understanding and acceptance that this implies the use of general equilibrium approaches if it is to be properly executed.

An *ad hoc* expert committee reporting to the Norwegian Parliament in 1997 addressed this issue, highlighting both the need to use macroeconomic approaches in some cases and the need to recognise that, even for many very large scale regulatory proposals, an adequate RIA could be derived using only the microeconomic BCA approach:

> Fixed calculation prices can only be used for projects or reforms that do not significantly influence the opportunity costs of resources. To analyse large reforms, for instance a complete reform of Norwegian agricultural policy or a substantial change of the pension rules, it is necessary to use a more complete description of the economy. The usual procedure in such cases is to use so-called general equilibrium models to describe the economy…. [However] even relatively large projects, *inter alia* the winter Olympics in Lillehammer and the new main airport of Oslo, could as a good approximation be studied with fixed calculation prices.[35]

In addition to the high resource costs of adopting macroeconomic approaches to RIA, theoretical limitations also exist. Specifically, most available general equilibrium models have been designed to model changes in economic variables such as public spending, tariffs and taxation, rather than changes in regulation. Thus, they will often be limited in their ability to analyse such regulatory changes. The development of a dedicated model may be required in order to complete a sound general equilibrium analysis – as has occurred in Norway in recent times in the context of possible reforms to regulation governing the agriculture, fisheries and food processing sectors and previously in the United States.[36]

In sum, macroeconomic analysis may substantially enhance the accuracy and value of RIA in a relatively small number of cases involving far reaching regulatory proposals. The use of such approaches should not be widely mandated, given the high cost of these analyses, the substantial data and analytical constraints that often exist and the need to ensure that RIA resources are put to their highest value use.[37]

### *Measurement of administrative burdens*

Among the RIA guidance documents reviewed, only the Australian handbook specifically requires the administrative costs of regulatory proposals to be assessed using a standard methodology, based on the Standard Cost Model (SCM). This is perhaps surprisingly, given that some 22 European countries are currently members of the SCM network, but may also reflect the fact that the Standard Cost Model was developed and diffused relatively recently and that the estimates are both complex and still experimental in some countries.[38]

While the Australian government (and the Victorian State government) have only recently adopted approaches to administrative burden measurement that are based on the SCM, some concerns have already risen in relation to the practical application of this methodology. In particular, it is arguable that the application of the extremely disaggregated SCM model to administrative burdens implies that this subset of regulatory costs must be assessed in much greater detail, and with much greater rigour, than the significantly larger substantive compliance costs.

To the extent that this is the case, obvious issues of the potential misdirection of the RIA resources arise. Related to this, there may be implications for the perceived credibility among regulators of the RIA process. Detailed analysis of these emerging issues does not appear to be feasible at this time. Further review and discussion of these potential concerns would appear to be warranted.

## The role of specific partial analyses

OECD (2006) highlighted the apparent trend toward the adoption of requirements for an increasing range of partial impact assessments to be included within the larger RIA task. It analysed this trend in terms of sometimes widespread concerns that RIA tends to focus unduly on a narrow range of "economic" impacts, that is, those that are capable of expression in monetary terms, with inadequate attention being paid to important intangible impacts.

At the same time, a clear distinction must be made between: *i*) countries that require a comprehensive RIA covering all impacts to be completed and impose specific partial impact analysis requirements in addition to the general RIA, and *ii*) countries that have no comprehensive RIA requirement but do require certain specific impacts to be assessed. The latter group was formerly the more numerous among OECD member countries, but has declined in size as the BCA principle has increasingly been adopted as the basis of RIA and generalised RIA requirements have been established.

An example of a country which requires a number of partial impacts to be assessed but does not require a generalised RIA or use BCA is given by Belgium. The Belgian government requires the "Kafka test" to be applied to estimate the expected change in administrative burdens due to a regulatory proposal and adopts the Standard Cost Model methodology in undertaking the test. It also requires an assessment of fiscal impacts and

has also recently implemented requirements for environmental impacts (including impacts on sustainable development) to be assessed, as well as impacts on gender equality. However, Belgium has indicated its intention of progressively broadening these tests in order to implement a comprehensive RIA requirement in the near future.[39]

Table 3.3., below, provides a non exhaustive overview of partial impact assessments required to be included in the RIA in the countries whose guidance documents were assessed for this paper. The table highlights practices in relation to a sample of eight of the more commonly required partial impact assessments. Review of the RIA guidance documents clearly indicates that a substantially wider range of partial assessments is required to be completed in one or more of the countries reviewed. Other partial impact assessments required in some cases include: poverty and social inclusion, racial equality, voluntary organisations and charities, consumers, the rights of citizens, the disabled, those of differing sexual orientations, members of the traveller community, growth, competitiveness and jobs, health, those of different religions and races, industrial sectors and even the public sector – notwithstanding that, by definition, they are the sponsors of the regulatory proposal.

Table 3.3. **Specific partial impacts explicitly required to be assessed in RIA (where relevant)**

| Country | Competition[1] | Trade | Small business | Administrative burdens | Environment/ ESD | Regions | Gender equality | Native populations or ethnic impacts |
|---|---|---|---|---|---|---|---|---|
| Australia | ✓ | ✓ | ✓ | ✓ | ✓ | | | |
| Belgium | | | | ✓ | ✓ | | ✓ | |
| Canada | | | | | ✓ | ✓ | | |
| European Union | | | | ✓ | | ✓ | ✓ | ✓ |
| Ireland | ✓ | | | | ✓ | | ✓ | |
| New-Zealand | | | | ✓ | | | | ✓ |
| Norway | | | ✓ | ✓ | ✓ | ✓ | ✓ | |
| United Kingdom | ✓ | | ✓ | | | ✓ | ✓ | ✓ |
| United States | | | ✓ | | | | | |
| Victoria (Australia) | ✓ | | ✓ | ✓ | | | | |

1. Arguably, competition impact assessments should not be regarded as being "partial impact assessments" in the same sense as the other elements enumerated in this table. Rather, the increasing tendency to require these impacts to be assessed explicitly reflects increased acceptance of the concept of well-functioning competitive markets as the key guarantor of economic well-being and the importance of analysing all regulatory interventions in terms of their impacts on this fundamental economic organising principle.

This enumeration of partial impact assessments clearly indicates the potential, also highlighted in OECD (2006), for the proliferation of partial impact assessment requirements to undermine the coherence and focus of the generalised regulatory impact analysis, where this is also completed. Moreover, by adding layers of complexity, there is a substantial risk that the ability of RIA documents to communicate effectively with decision-makers, particularly at the political level, will be severely compromised.

A notable difference in approaches can be highlighted. Some RIA documents require that all RIA include a certain number of partial impact assessments whereas other guides (notably those of Canada, the European Commission and Norway) provide detailed templates, or checklists, and require that RIA authors assess whether their regulatory proposals would have any significant impacts in relation to each of the items noted.[40] This latter approach could have advantages in terms of ensuring that only particularly relevant partial impacts are highlighted in the assessment.

OECD (2006) suggested that the main driver of requirements for partial impact assessments to be completed in the RIA context was probably concern that BCA may have a systematic tendency to underplay distributional issues and so lead to them being given inadequate weight in the policy choice process. Thus, the choice of partial impact analyses required to be undertaken would tend to indicate which groups in a given society are believed to have particularly compelling distributional claims. Certainly, review of the various RIA guidance documents indicates that there are very substantial differences between countries as to which partial impact analyses are required. For example, the Irish RIA guidance particularly highlights issues of poverty and social exclusion, the Australian RIA guidance highlights small business impacts and impacts on competition and the New Zealand guidance document highlights impacts on the indigenous population.

At the same time, it seems likely that policy makers would agree that virtually all of the partial impact highlighted above could be potentially relevant to a consideration of the distributional impacts of a regulatory proposal. To this extent, the choice of particular partial impact assessments required to be completed might be seen as reflecting, to a considerable degree, medium-term currents in the political debate within a given country, rather than long-term differences in values, or social/economic circumstances.

Partial impact analyses tend to proliferate over time, once having been introduced to the RIA process. For example, requirements for Australian RIA to include assessments of impact on competition, implemented in the mid-1990s, have been followed by requirements to assess regional impacts, administrative burdens, small business impacts and impacts on ecologically sustainable development, with assessment of family impacts also on the horizon.

To the extent that this is so, there may be a case for reconsidering the most appropriate means of ensuring that important distributional impacts are taken into account in RIA. One possible approach would be to incorporate in RIA guidance documents a substantial discussion of the range of groups whose distributional claims may be particularly important to considering regulatory analysis, together with some general indication of how different kinds of regulatory proposals may affect different groups.[41] This could be combined with a requirement that RIA incorporate a generic "distributional impacts" section, which would highlight distributional impacts that were found to be important in the particular case, highlighting the impacts on each group that was substantially affected separately.

A second possibility, which could work in conjunction with the first, would involve requiring the regulatory reform authority responsible for RIA quality assurance to consider the potential distributional issues and determine which distributional impacts appeared to be potentially substantial and were required to be discussed explicitly in the particular RIA. This would then form the minimum set of distributional issues to be discussed, with the proponent regulatory agency able to add to them as desired.

By partially transferring responsibility to identify relevant impacts to the regulatory reform authority, one apparent underlying reason for requirements for all RIA to explicitly address particular impacts (*e.g.*, on competition) may be addressed more effectively. That is, it would no longer be necessary to create a requirement for a particular partial impact analysis to ensure that regulatory proponents did not avoid discussion of important partial impacts in the RIA because of competing incentives.

Whether via the adoption of one, or both of the above proposals, or in some other way, there appears to be an argument for RIA guidance documents to acknowledge the potential risks to policy coherence arising from the incorporation of several partial impact assessment into the larger RIA and to indicate to regulators how these risks might best be avoided or minimised.

## Risk assessment

The use of risk assessment in the specific context of undertaking the "threshold analysis" of whether there is a case for government intervention has been considered in the section on Threshold Questions, above. This section supplements that discussion by considering a number of more technical issues relating to the use of risk analysis in the RIA context more generally.

### *Subjective vs. objective risk*

The issue of the sometimes very substantial differences between subjective perceptions of risk magnitudes and their actual or objective magnitudes is widely discussed in the risk literature. This issue is also recognised in several RIA guidance documents, although its implications for policy, and for RIA, seem not always to be fully drawn out.

For example, the Australian RIA guide discusses the distinction between "perceived" and "actual" risk and argues that perceived risks may either under- or over-estimate actual risks. It argues that the RIA document should present an objective risk analysis:

> The problem section should distinguish between real (or actual) risks and perceived risks. Governments frequently implement regulation in response to public calls for increased protection, particularly following significant adverse events. Public perception of risk is often exaggerated and based on unfamiliar or "sinister" risks (such as the possibility of becoming sick from drinking recycled water), but frequently underestimates more common and much more likely risks (such as the likelihood of being involved in a motor vehicle accident). A RIS should always present an evidence-based assessment of risk. (OBPR, 2007, p. 138)

This statement seems to imply a clear view that it is a key role of RIA to separate objective risks from subjective risk perceptions. However, the guide seems to state quite unequivocally that RIA and subsequent policy decision-making should be based solely on the former.

By contrast, a recent publication by the UK Government's Better Regulation Commission (BRC) (United Kingdom Government, 2006) deals explicitly with the issue of the reasons for the influence of subjective risk perceptions in public policy decision making. The BRC effectively argues that subjective perceptions of risk are systematically biased toward over-estimation of objective risks, noting:

> There is a view that the policy dilemma at the heart of risk management is that policies responding to lay-people's perceptions of risk tend toward over-regulation, while policies based entirely on scientific evidence will be seen as an inadequate response and will not be supported by the public. (United Kingdom Government, 2006, p. 11)

This systematic bias is attributed to a range of factors, including the impact of the promotion of sectional interests (including the demands of opposition politics, the need to sell newspapers and "a bias for bad news rather than good") and poor communication of risk data to the public. The report suggests that an important source of this perceived bias

toward over-regulation of risk is the emergence of a "regulatory spiral", where the increasing propensity to regulate in response to perceptions of risk reinforces a generalised perception in the community that the world is characterised by "ever growing dangers that must be kept in check, usually by more government regulation" (*ibid*). This concept of increasing risk-aversion becoming self-reinforcing apparently underlies in large part the strong view of BRC about the need for policy action aimed at addressing these concerns.

Having considered some underlying causes for differences between objective and subject to risks and for what it analyses as a diminishing tolerance for risk, the BRC put forward recommendations aimed at changing perceptions of risk and of the role of government in managing risk. This approach would seem to be potentially more fruitful as a means of ensuring that regulatory decision-making increasingly responds to objective risk assessments than the alternative of simply arguing for a clear separation of objective risks and subjective risk perceptions and for ignoring the latter in the policy decision-making context.

That said, this approach seems largely to conflict with the underlying presumption of the risk literature, which is that subjective risk perceptions should be regarded as essentially exogenous by the policy-maker. For example, Hokstad and Steiro (2006) argue:

> Risk should neither be defined nor managed without placing it in a cultural, sociological and psychological context... This is one reason why a RAS[42] approach cannot be defined as a purely quantitative/mathematical model. One needs also to consider for instance the public's acceptance of risk.

More particularly, in the context of the current paper, the issue of changing societal risk perceptions and expectations regarding government responses to identified risk is a broad one which is probably not feasible to address fully in the context of RIA guidance documents. Perhaps the more relevant point is that it is not realistic to put forward the view that, having separated objective risks from subjective risk perceptions, the latter should simply be ignored in undertaking the analytical process.

This is perhaps an area in which the issue of integrating quantitative and qualitative elements of RIA becomes particularly important. From an economic perspective it can be suggested that subjective risks may be at least as important in policy analysis as objective risks. That is, to the extent that differences between subjective risk assessments and objective assessments are not attributable simply to lack of information, the utility gains that result from reducing risks that are subjectively highly rated are the same, regardless of whether the objective risk is high or low.

While subjective risk perceptions may be changeable over time in response to government actions, as suggested by the conclusions of the BRC report this is clearly a longer term issue while, in the RIA context, it is arguable that subjective risk perceptions should be regarded as essentially exogenous.

### *Risk rules (risk neutrality vs. risk aversion; the precautionary principle)*

#### *Are populations risk accepting, risk neutral or risk averse?*

Theoretically, it is not possible to weigh different policy responses to identified unacceptable risks without adopting assumptions as to whether the population as a whole can best be characterised as being risk accepting, risk neutral or risk averse. This is because the relative merits of different regulatory or other policy responses to the risk will differ according to this characteristic of the population.

Despite this, only one of the eight RIA guides reviewed for this paper discusses this issue. The United States RIA guide incorporates a brief discussion (p. 40) which states that RIA authors should assume risk neutrality in their analysis, while recognising that this assumption will not be met in practice in all cases. Importantly, the US guide points out that the assumption of risk neutrality validates the use of expected value analysis as the fundamental tool for weighing different alternatives. It may also be the case that guidance on specific risk analysis may not be contained in general document but may remain embedded in specific sectoral agencies in charge of managing specific risks, without necessarily being publicly available.

To the extent that one departs from this assumption, there would appear to be a need to specify the characteristics of the risk adverse nature being postulated for the relevant population, in order to be able to reach a definitive analytical conclusion using other approaches. This clearly involves major, perhaps insurmountable, difficulties. Based on the restricted sample above, an assumption of risk neutrality may represent the "second best" option, in that it is the only analytically feasible approach to adopt.

### *The precautionary principle*

OECD (2006) argued that:

> … The increasingly widespread promulgation of the precautionary principle in the regulatory context necessarily introduces this concept [of whether populations are risk neutral or risk averse] in the substantive sense. That is, the precautionary principle amounts to the integration of varying, but unspecified, degrees of risk aversion into the policy decision-making process.

Three of the eight RIA guides reviewed discuss the precautionary principle and, in all cases, counsel that it should be used in the RIA context. However there is some lack of clarity as to how it should be taken into account. The Australian RIA guide notes that the principle was specifically endorsed by Federal, State and Territory governments in the context of an inter-governmental agreement on ecologically sustainable development, implying that its use may be restricted to this context. No specific guidance is given as to how the principle is to be incorporated in RIA.

The EU guide states that the precautionary principle "must therefore be viewed within the overall framework of risk analysis, with the possible extreme scenarios identified by undertaking routine sensitivity analysis" (p. 48). The guide includes a brief (half page) discussion on the use of the principle in RIA.

The UK guide states that "you may need to apply the precautionary principle" and that "The UK, along with other developed countries, is committed to using this principle." The UK RIA guide is unique in that it provides a link to a paper providing a detailed discussion of the use of the precautionary principle (UK Government, 2002). A notable element of this paper is that it specifically counsels that action in pursuit of the precautionary principle should be consistent with principles of good regulation; specifically that it should be "proportionate, consistent, targeted, transparent and accountable."

The UK is thus apparently unique in having published a document that specifically seeks both to provide guidance on how the precautionary principle should be used in practical policy contexts and in seeking to reconcile the principle with the principles of good regulation. To the extent that the precautionary principle is actually adopted by governments, at least in some contexts, as an element in decision-making, it would seem

that this approach of interpreting it in light of the regulatory policy agenda is a significant step forward. The reality in many other countries may well be that the principle is a part of the policy process, but is not being examined as part of the regulatory policy and quality agenda.

The risks for regulatory quality inherent in the adoption of an ill-defined precautionary principle have been discussed by Majone (2006). Majone argues that the precautionary principle can divert efforts to control more substantial risks toward reducing risks that are poorly understood but of relatively low importance. The opportunity costs that arise, to the extent that this dynamic operates, underline the need to ensure that the interpretation of the precautionary principle in practice is consistent with regulatory quality concepts.

## Conclusion

### *Comprehensiveness vs. comprehensibility*

There is an apparent tension between issues of comprehensiveness and comprehensibility in RIA guidance. This paper has suggested at several points that RIA guidance is lacking in its coverage of particular methodological issues and that it often fails to set out the conceptual underpinnings of certain issues. These omissions are likely, in many cases, to result from efforts to ensure that RIA guidance is made accessible to generalist policy officers by avoiding both undue detail and technical complexity. Such considerations are clearly important in ensuring that RIA guidance is used by its intended audience and so able to assist in improving analytical standards.

However, there is obviously a tension, in that less sophisticated guidance is less able to support higher analytical standards in those cases where more complex analyses are needed. One potential way of resolving this tension could be to develop a relatively brief and non-technical RIA guide which is supported by a number of technical appendices, providing additional detail and sophistication in their coverage of relevant methodological issues. Alternatively, the RIA guide can be supplemented by other, stand-alone documents providing this additional detail. Several variants on this approach can be identified:

- In Australia, Canada, the United Kingdom, and the United States BCA guides are also published, which provide substantially greater methodological guidance but largely discuss BCA in more general terms, rather than specifically in the regulatory context.
- In Australia and in Victoria, the RIA guidance document is itself relatively brief, but is supported by a substantial number of appendices dealing in some detail with specific issues.
- In several countries, a range of RIA-related materials are published on the internet sites of regulatory reform authorities.

A significant problem is the lack of cross-referencing between the various guidance documents available. For example, The Australian RIA guidance document contains no reference to the Department of Finance and Administration's BCA guidance document. Similarly, while the UK RIA guide provides a small number of references to the Treasury Green Book, it makes no mention of the detailed guide to the use of Multi-Criteria Analysis published by the former Department of Transport and Local Government. More remarkably, the Irish RIA guide actually contradicts the guidelines on appraising public sector capital expenditure proposals with regard to BCA decision rules, as noted above.

These observations suggest that an important area for improvement is ensuring that the drive to make RIA guidance "user friendly" does not come at the expense of adequate levels of detail and sophistication being included in the guidance offered. This is likely to imply the use of several interlocking documents with different, but related purposes and means that efforts to ensure consistency between them and appropriate cross-referencing and cross-promotion of their availability should be seen as crucial.

A related issue in regard to the above is the need for RIA systems to incorporate the concept of proportionality in relation to required analytical standards. That is, regulatory proposals with relatively limited effects should be subject to more limited RIA requirements, with the commitment of resources to RIA being broadly proportionate to the likely extent of the regulatory impact. A number of member countries have "triage" arrangements in place which attempt to ensure this proportionality is achieved in practice. However, there is also a need for RIA guidance material to acknowledge this issue. This implies that, if RIA guidance is to be made more comprehensive and rigorous, it will be necessary to clarify that this, more detailed guidance is intended to apply largely to the more substantial regulatory proposals.

The perspective underlying the examination of RIA methodological guidance contained in this paper is that better quality RIA methodological practices should lead systematically to better quality regulation. The provision to regulators by regulatory reform authorities of published methodological guidance, supplemented by formal training and less formal advisory/helpdesk functions, can be expected to have a major influence on the quality of RIA achieved in practice. Thus, systematic attention needs to be paid to the quality of published RIA guidance documents and steps taken to update these documents on a regular basis in the light of policy learning, changes in RIA policy and improvements in RIA expertise and resource availability among regulators over time.

### *Notes*

1. The German RIA guidelines document was provided in English translation (see bibliography). However, the more detailed Handbook was not available. This latter document is understood to contain the majority of the relevant methodological material.
2. *Recommendation of the OECD Council on Improving the Quality of Government Regulation*. 9 March 1995.
3. *Reducing Risks, Protecting People: HSE'S Decision-Making Process*. Health and Safety Executive, United Kingdom, 2001, pp. 44-45.
4. In 2005, 17 member countries reported requiring in RIA a quantification of costs and benefits and the demonstration that benefits justify costs *always*, *at least for major regulation or in selected cases*. Jacobzone, Stéphane, Chang-Won Choi, and Claire Miguet (2006), "*Quality Indicators of Regulatory Management Systems*", OECD Working Papers on Public Governance, No. 4, Paris.
5. Communication with Mr Dominic Mancini, OMB, 1 November 2007.
6. QALY = Quality Adjusted Life Year. Communication with Dominic Mancini, OMB (1 November 2007).
7. Translation supplied by Mr Aarne Røvik, Ministry of Finance, 12 October 2007.
8. Department of Transport, Local Government and Regions Multi-Criteria Analysis Manual, (undated). See: *www.communities.gov.uk/pub/252/MulticriteriaanalysismanualPDF1380Kb_id1142252.pdf* Note that, in Australia, BTRE (1999) also includes a chapter discussing MCA in some detail.
9. Personal communications with author (various).
10. All Victorian RIA published since 2004 can be viewed in full text form at *www.vcec.vic.gov.au*.

11. The 2007 RIA Guidelines explicitly reference the New Zealand Treasury BCA primer and includes links to reference material on other valuation techniques.
12. Issues of proportionality might suggest that it is inappropriate to employ such indirect valuation methodologies in some cases. In others, it may be possible for a judgement to be reached that none of the available methodologies is likely to be appropriate to the particular case.
13. Since 2005, the New Zealand Treasury has published its own BCA guide.
14. This rate is applicable to public investments generally, rather than being specific to RIA.
15. Established in the Danish Manual of Socio-Economic Analysis cited in OECD (2004), p. 20.
16. See United States Government (2003), p. 33, United States Government (1992), p. 8.
17. Ministry of Finance (2005) "Behandling av kalkulasjonsrente, risiko, kalkulasjonspriser og skattekostnad i samfunnsøkonomiske analyser", stipulation of social discount rate, risk, calculation prices and cost of tax funding in socio-economic analyses (only in Norwegian).
18. Arguably, regulatory costs incurred by businesses constitute pre-tax expenses. The effective cost to equity holders of these expenses is thus the expense less the tax that would have been levied on the additional profit that would have been earned in the absence of the regulatory expense. This implies that, where a cost of capital approach is taken, a post-tax rate of return should be used. On the other hand, the US BCA guideline specifically states that the recommended 7% discount rate represents the pre-tax opportunity cost of (incremental) capital.
19. Risk here refers only to general market risk, with the discussion elsewhere specifically rejecting the notion of adopting an allowance for non-market risk in the discount rate (see below).
20. It also notes the practical difficulty of distinguishing between market and non-market risks.
21. It should be noted that the French guide also refers to the analysis of Weitzman and that of Gollier. However, these analyses are not discussed in detail and do not underpin the rationale for the use of a declining discount rate presented in the main part of the guide.
22. While the same author is cited, different articles are cited by the two sources. The US RIA guide cites Weitzman ML, *Just Keep Discounting, But…,* in Portney and Weyant (1999). The UK Green Book cites: Weitzman in *Gamma Discounting*, American Economic Review, Vol 91, No. 1, March 2001. Also cited is Gollier, C. (2002), *Time Horizon and the Discount Rate*, IDEI, University of Toulouse, mimeo.
23. This publication was based on commissioned papers, discussed at a workshop sponsored by Resources for the Future, Stanford University's Energy Modelling Forum, the US EPA and Department of Energy and the Electric Power Research Institute.
24. The authors also note problems with the use of time-dependent discount rate functions:
    > Using a discount rate that depends on the period over which the analysis is being conducted is not without problems. For one thing, it leads to time-inconsistent decisions: plans that people will not follow if given the opportunity to reconsider their actions. This property of hyperbolic discounting functions makes many people uneasy about their use in benefit-cost analysis. (p. 10)
25. Hahn reviews a sample of 108 regulations passed in the US and shows that substituting values of between 1% and 9% for the discount rate varies the proportion of regulations in the sample demonstrating net benefits by only 1-3% (depending on the VSL figure used). This reflects the very wide range in regulatory effectiveness found in the sample (See esp. Hahn 2005, p. 22).
26. Ministry of Finance *Handbook on Socio-economic Analysis*. The NOK 15 million figure is derived primarily from the EU Environment Directorate.
27. See, for example, BTRE (2002).
28. Personal communication with Rod Bogaards, head of BCA section, OBPR, 12 June 2007.
29. Given the general observation that human capital based VSL figures tend to be significantly lower than revealed preference based figures, as a result of the conceptual differences between them.
30. Translation supplied by Aarne Rovik, Ministry of Finance, Norway, 12 October 2007.
31. Note that the use of a rule of NPV>0 has also been criticised on the basis that it does not account for the alleged tendencies among regulators toward overestimating expected benefits and/or underestimating expected costs. However, some empirical work on this issue (see OECD, 2006) has concluded that the BCA contained in RIA documents do not exhibit any systematic bias in practice.
32. Personal communication with officials of the Victorian Competition and Efficiency Commission.

33. See for example: *On the value of formal assessment of uncertainty in regulatory analysis*, Judson Jaffe and Robert N. Stavins, Regulation and Governance (2007) 1, pp. 154-171, *www.blackwell-synergy.com/doi/abs/10.1111/j.1748-5991.2007.00008.x*.
34. The Norwegian Government has also indicated that it typically adjusts prices to account for the impact of taxation.
35. NOU (1997), p. 27 Nytte-kostnadsanalyser, report on BCA by an *ad hoc* expert committee (only in Norwegian) *www.regjeringen.no/Rpub/NOU/19971997/027/PDFA/NOU199719970027000DDDPDFA.pdf*.
36. See Ivar Gaasland (2003): "En numerisk model for analyse av norsk bioproduksjon og foredling", a numerical model of Norwegian bio-production and processing, Report 32/03, SNF Institute for Research in Economics and Business Administration (only in Norwegian). Similarly, as noted in OECD (2006), Hazilla and Kopp presented a study of the costs of the United States' Clean Air and Water Acts in 1990, using a dynamic computable-general-equilibrium (CGE) model developed for the study.
37. See also OECD (2006) for additional discussion of this issue.
38. Of particular note in this context is the fact that the EU RIA guidance document specifically discusses administrative burdens without mentioning the SCM model.
39. Communications from Mme Dominique de Vos, Prime Minister's Department, 10 July 2007, 7 October 2007.
40. Norwegian Government (2005): "Instructions for Official Studies and Reports", Ministry of Government Administration and Reform, translated into English, but only available in Norwegian online: *www.regjeringen.no/upload/FAD/Vedlegg/Statsforvaltning/Utredningsveileder_rev2007.pdf*.
The Norwegian checklist (Norwegian Government, 2005, p. 4) is explicitly stated to be non-exhaustive in nature, with any additional partial impacts of significance also required to be identified and assessed.
41. Comprehensive tables of potential impacts, such as those included in the EC RIA guidance document (pp. 29-32) could form appendices for reference purposes.
42. RAS = Risk Across Sectors.

## *Bibliography*

Aldy, J.E. and W.K. Viscusi (2007), "Age Differences in the Value of Statistical Life: Revealed Preference Evidence", Resources for the Future Discussion Paper RFF DP 07-05, April, available online at *www.rff.org*.

Australian Government (1999), "Facts and Furphies in Benefit-Cost Analysis: Transport", Research Report No. 100, Bureau of Transport and Regional Economics, Canberra.

Australian Government (2002), "Rail Accident Costs in Australia", Report No. 108, Bureau of Transport and Regional Economics, Canberra.

Australian Government (2006a), *Best Practice Regulation Handbook*, Office of Best Practice Regulation (OBPR), Canberra, November 2006.

Australian Government (2006b), *Handbook of Cost-Benefit Analysis*, Department of Finance and Administration, Canberra, January 2006.

Australian Government (2007), *Best Practice Regulation Handbook*, Office of Best Practice Regulation (OBPR), Canberra, August.

Canadian Government (1992), *RIAS Writers' Guide*, Treasury Board Secretariat, Ontario, August.

Canadian Government (1995), *Benefit-Cost Analysis Guide for Regulatory Programs*, Treasury Board Secretariat, Ontario, August.

European Commission (2005), *Impact Assessment Guidelines*, SEC (2005)791, European Commission, Brussels, 15 June.

French Government (2005), *Le Prix du Temps et la Décision Publique*, Commissariat General du Plan, Paris, February.

German Government (2004), *Guidelines on Regulatory Impact Assessment*, Bohret, C., and Konzendorf, G., prepared for the Federal Ministry of the Interior/Ministry of the Interior Baden-Wurtemburg.

Hahn, R; (2005), *In Defence of the Economic Analysis of Regulation*, AEI/Brookings Joint Centre for Regulatory Studies.

Harrington, Winston, Richard D. Morgenstern and Peter Nelson (2001), "On the Accuracy of Regulatory Cost Estimates,"*Journal of Public Policy and Management*, 19(3).

Hokstad, P. and T. Steiro, *Overall Strategy for Risk Evaluation and Priority-Setting of Risk Regulations, Reliability Engineering and System Safety*, Vol. 91, pp. 100-111.

Irish Government (2004), *Regulating Better*, Department of the Taoiseach, Dublin, January.

Irish Government (2005), *RIA Guidelines: How to Conduct a Regulatory Impact Analysis, Department of the Taoiseach*, Dublin, October.

Jacobs, S.H. (2006), "Regulatory Impact Analysis in Regulatory Process, Method and Co-operation: Lessons for Canada from International Trends", *Working Paper Series*, No. 026, Government of Canada.

Majone, G. (2006), "Strategic Issues in Risk Regulation and Risk Management", GOV/PGC/REG(2006)1/ANN1.

New Zealand Government (1999), *A Guide to Preparing Regulatory Impact Statements*, Ministry of Commerce, Wellington, 16 March.

New Zealand Government (2005), *Cost Benefit Analysis Primer*, Treasury, Wellington, December.

New Zealand Government (2007), *Guidelines on the Regulatory Impact Analysis Requirements,* Ministry of Economic Development, Wellington, March.

Norwegian Government (2005), "Instructions for Official Studies and Reports", Department of Administration, available on line at: *www.regjeringen.no/nn/dep/fad/Dokument/Rettleiingar-og-brosjyrer/2000/Instructions-for-official-studies-and-reports.html?id=419236*.

OECD (1995), *Recommendation of the OECD Council on Improving the Quality of Government Regulation, OECD, Paris*, March.

OECD (2004), "Regulatory Impact Analysis (RIA) Inventory: Note by the Secretariat", GOV/PGC/RD(2004)1.

OECD (2006), "Determinants of Quality in Regulatory Impact Analysis", SG/GRP(2006)3.

Portney P.R. and J.P. Weyant, eds. (1999), *Discounting and Intergenerational Equity, Resources for the Future*, Washington, D.C.

United Kingdom Government (2002), "The Precautionary Principle: Policy and Application, Inter-Departmental Liaison Group on Risk Assessment", London, available online at *www.hse.gov.uk/aboutus/meetings/ilgra/pppa.htm*.

United Kingdom Government (2006), *Risk, Regulation and Responsibility: Whose Risk is it Anyway?* Better Regulation Commission, London, October.

United Kingdom Government (undated), "Regulatory Impact Assessment Guidance", Cabinet Office, London, available online at *www.cabinetoffice.gov.uk/regulation/ria/ria_guidance/index.asp*.

United Kingdom Government (undated, a), *The Green Book: Appraisal and Evaluation in Central Government*, HM Treasury, London.

United Kingdom Government (2005), "Hampton review on regulatory inspections and enforcement", available online at *www.hm-treasury.gov.uk/budget/budget_05/other_documents/bud_bud05_hampton.cfm*.

United States Government (1992), *Guidelines and discount rates for benefit-cost analysis of Federal programs*, Circular A-94, Office of Management and Budget, Washington, D.C.

United States Government (2003), *Regulatory Analysis*, Circular A-4, September 17, Office of Management and Budget, Washington, D.C.

Victorian Government (2007), *Victorian Guide to Regulation* (2nd Edition), Victorian Competition and Efficiency Commission, Melbourne, April.

ANNEX 3.A1

# *Draft Guidelines on RIA Methodologies*

The OECD has produced a number of guidelines in relation to the conduct of RIA, commencing with the *Recommendation of the OECD Council on Improving the Quality of Government Regulation*, in 1995. The checklist accompanying the recommendation highlighted the importance of "a clear assessment of total costs and benefits" to ensure that the former justified the latter and also required that the distribution of effects across society should be made transparent.

In 1997, the OECD published ten RIA best practices, highlighting the need to adopt a consistent but flexible methodological approach and to ensure that RIA was integrated with the policy-making process. In 2005, the *OECD Guiding Principles on Regulatory Quality and Performance* confirmed and updated the 1997 best practices. The 2005 guidelines provide broad guidance on regulatory policy, including the role of RIA within this context.

The following draft guidelines on RIA methodologies are intended to be seen within this broad context of the OECD work on regulatory policy and regulatory impact analysis. These guidelines provide detailed guidance on a range of RIA methodological issues that are of fundamental importance to the overall quality of RIA and, consequently, its ability to contribute to better regulation.

The draft guidelines draw on the paper's comparative analysis of RIA guidance documents, other government published methodological guidance and the academic literature. The draft guidelines are intended to form the basis for further discussion with the Working Party on Regulatory Management and Reform and subsequent final endorsement by the Group on Regulatory Policy.

## Threshold tests

1. *RIA guidance should include information on the main generic rationales for regulation, including correcting market failure, creating the conditions in which efficient markets can operate and pursuing equity and distributional goals.*

   Regulatory officials should be able to identify the underlying rationale for a particular regulatory proposal in terms of one or more of the above factors. Undertaking this exercise will help to ensure that the problem being addressed is correctly defined and that the objective being sought by regulation is properly specified. This, in turn, will help to ensure that appropriate alternative policy interventions are identified and that impact analysis is relevant and accurate.

Integrating discussion of the characteristics of different policy tools and their merits in addressing different types of policy problems with the discussion of threshold tests is likely to be a useful addition to RIA guidance in this context.

## Guidance on appropriate methodologies

2. *Guidance on RIA methodologies should indicate what methodology or methodologies are required to be used in specific RIA context and should clearly set out the conceptual advantages and disadvantages of each methodology.*

   Information should be provided on both Benefit-cost Analysis (BCA) and Cost Effectiveness Analysis (CEA). Consideration should also be given to including an explicit discussion of the potential benefits of adopting break-even analysis as a supplementary methodology in situations where there is substantial uncertainty regarding major benefits.

3. *Practical guidance should be provided on how to conduct qualitative analysis in as systematic and objective a fashion as possible and on how to integrate qualitative and quantitative analyses.*

   Consideration should be given, in this context, to explicit endorsement of the use of Multi Criteria Analysis in contexts in which major benefits cannot be quantified and/or expressed in monetary terms. Where the use of Multi Criteria Analysis is endorsed, explicit guidance on its use should also be provided, either in the context of RIA guidance documents themselves or through referencing specialised guidance documents in relation to this particular methodology. Discussion of the need to integrate BCA and MCA should also be included.

## Guidance on valuation methodologies

4. *RIA guidance documents should highlight the range of methodologies available for indirectly estimating the values of benefits and costs in respect of which there is no direct market value.*

   Guidance documents should make clear what is expected in terms of the use of these indirect valuation methodologies in particular contexts. This will assist in ensuring that the resources devoted to RIA are proportionate to the expected sizes of the regulatory impacts being considered.

## Valuation of a statistical life (VSL)

5. *RIA guidance documents should specify a particular VSL, or a range of VSL, to be used for RIA purposes.*

   Providing a recommended VSL aids in ensuring that health and safety related benefits are monetised wherever feasible. It also ensures consistent treatment of these benefits between different RIA, thus aiding the direction of regulatory efforts towards their most productive uses. For reasons of transparency and acceptability, the conceptual basis for the VSL figure adopted should be made explicit in RIA guidance materials.

## Guidance on discount rates

6. *RIA guidance documents should recommend the use of a specific discount rate for regulatory purposes and should clearly specify any particular regulatory contexts in which different discount rates can, or should, be used.*

   Specifying a discount rate aids consistency between RIA, in turn helping to ensure regulatory resources are directed to their most productive uses. While the adopted discount rate would not be expected to change frequently, it should be reviewed from time to time to determine whether any changes in the average values of the variables which underpin it require revision of the rate. The conceptual rationale underlying the chosen discount rate should be made explicit in the RIA document.

## Sensitivity analysis

7. *Guidance on BCA should highlight the need to conduct sensitivity testing in relation to variables with uncertain values which are likely to affect significantly the outcome of the analysis.*

   Conducting sensitivity analysis makes BCA results more informative by illustrating how the results are affected by changes in the values of key variables. This acts as a test of the robustness of "base case" RIA results.

## Decision rules

8. *RIA guidance documents should include an explicit discussion of decision rules for BCA (where this methodology is recommended or required to be used) and should provide guidance on what rule or rules should be adopted.*

## Partial analyses

9. *Specific consideration of impacts on particular groups within society should be required only where these distributional concerns are likely to be germane to regulatory decision-making.*

   Care should be taken to ensure that requirements to conduct partial impact analyses do not risk undermining the coherence of the overall RIA and reduce its usefulness to decision-makers. This suggests that there should not be requirements to complete partial impact analyses relating to particular groups in all cases. Rather, RIA guidance should emphasise the need to identify and adequately assess any significant distributional impact that are likely to constitute significant considerations for decision-makers in assessing regulatory proposals.

   This outcome will be supported if RIA guidance includes an indicative list of possible partial impacts, together with discussion of the issues that are likely to require consideration in each case. Guidance on partial impact analyses should emphasise the need to discuss the results of the partial impact analysis in the broader RIA context in order to ensure that policy coherence is safeguarded.

## Risk assessment

10. *RIA guidance should include a discussion of risk issues which clearly sets out the governments' expectation in relation to dealing with risk in the regulatory context.*

    Guidance on risk assessment should include information on optimising the degree of risk reduction, potentially including an introduction to the concept of acceptable risk

thresholds. The issue of subjective *versus* objective risks should be discussed and policy guidance on highlighting any areas of conflict should be provided where feasible. If the "precautionary principle" is to be advocated as part of RIA decision making, the specific meaning to be ascribed to this principle in the RIA context should be set out as clearly as possible. This specific meaning should be made consistent with the principles of good regulation, and of RIA and BCA, as far as possible.

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Regulatory Impact Analysis:
A Tool for Policy Coherence


*Chapter 4*

# Options for Integrating Competition Assessment into Regulatory Impact Analysis[1]

*Chapter 4 is intended to assist policy officials with responsibility for conducting RIA to include a competition policy analysis. Regulation which unnecessarily restricts competition imposes costs on society and the inclusion of a competition analysis can avoid these costs. Chapter 4 addresses how to identify policies that merit a competition assessment and how to conduct a competition assessment within a RIA on possible regulatory approaches. For a range of regulatory approaches, it discusses the expected benefits of each approach, the potential impact on competition, where it may be used appropriately and potential policy alternatives for achieving the same objectives at a lower cost to society. It also provides guidance on how to get maximum value by integrating competition assessment processes within the regulatory policy cycle, and argues that significant public benefits can be obtained from even a relatively small investment of public sector resources if it is done systematically.*

## Introduction

Regulatory Impact Analysis (RIA) is now applied to most or all new regulation[2] in the majority of OECD member countries. The use of RIA has expanded rapidly throughout the OECD membership in the last decade in particular. Explaining this rapid expansion in the use of RIA as part of the regulatory decision-making process, the OECD has commented:

> High-quality regulation is increasingly seen as that which produces the desired results as cost effectively as possible. There is a developing understanding that all government policy action involves trade-offs between different uses of resources, while the underlying goal of policy action – including regulation – of maximising social welfare is increasingly being explicitly stated and accepted. (OECD, 2002, p. 44)

RIA is based on benefit-cost analysis disciplines, applied in a comparative context that weighs the relative performance of all feasible policy interventions identified as being capable of achieving the underlying policy objective.

As RIA has expanded, much of the OECD membership has moved toward broadening the scope of competition policy and general competition law, with increasingly effective enforcement undertaken in this area. This trend arises from an increasing recognition that maximising the degree of effective competition throughout the economy is fundamental to the achievement of the broad objectives of maximising economic growth and, consequently, of social welfare.

The process of reviewing government policies with a focus on competition: *i)* identifies those policies that may unnecessarily impede competition and *ii)* aids in their redesign so that competition is not unduly inhibited.

The goal of this "competition assessment" is to increase beneficial competition, the process of rivalry in which suppliers challenge each other in order to gain customers. In this process, suppliers attempt to improve their position by offering better deals to customers, through, for example, lowering prices, increasing quality or making their offerings closer to the customer desires. Customers benefit from such rivalry. Clearly, there are very strong links between competition policy analysis and RIA: the objectives of the two policy instruments reflect a high degree of congruence. The *OECD Guiding Principles for Regulatory Quality and Performance* state that consideration of the impacts on competition should be incorporated within the process of reviewing new and existing regulations. However, in practice, responsibility for the conduct of RIA and of competition policy analysis often resides in different parts of the government administration. As a result, there is often insufficient co-ordination in the conduct of these two interconnected forms of analysis.

In a few countries, attempts are underway to integrate RIA and competition policy analysis. For example, in the United Kingdom, assessment of competition impacts has been a mandatory part of RIA since 2002. In the European Commission, competition assessment has been part of the RIA process since 2005. In the United States, RIA guidance documents explicitly require consideration of market impacts. Similarly, the Australian

National Competition Policy requires that all RIA documents state whether the proposed regulation complies with the terms of the National Competition Policy agreements, and include analysis to support this conclusion. Mechanisms such as these can help to ensure that competition policy principles are considered at early stages of the broader policy development process.

This paper aims to provide an understanding of the key concepts and issues involved in competition policy analysis to policy officials who have responsibility for the conduct of RIA. In so doing, its objective is to assist policy officials to use competition policy analysis as one component of RIA. In most cases, competition analysis would be a minor component of RIA. In some cases, however, it would be more significant and this paper seeks to identify key situations that may merit a thorough competition assessment.

The paper proceeds by, first, contrasting in general terms the different features of RIA and competition policy approaches, to identify the potential benefit for RIA from explicit inclusion of competition assessment as an element of RIA. Second, the paper proposes a competition checklist to help identify the types of regulations that are most likely to involve unnecessary restrictions on competition. Third, the paper discusses negative impacts on competition that regulation often imposes. Fourth, the paper identifies the broad outlines and options for the process of competition assessment. More specifically, the paper seeks to answer the following questions:

- How is competition policy analysis related to RIA?
- Can competition policy analysis be included in RIA?
- What are the key factors of competition that would be relevant for RIA?
- Which policies merit a competition assessment?
- When should a competition assessment be performed in the policy development process?
- Who would be responsible for drafting and reviewing a competition assessment?
- How can policy makers without responsibility for regulatory quality or competition be given incentives to prepare an appropriate assessment?
- What resources are required for competition assessment?

There is no simple recipe for institutional implementation of competition policy analysis. The feasible solutions in a given jurisdiction may be based on a number of factors, such as the extent to which there is a federal system, the staffing strengths of different parts of government and the political environment. Feasible institutional solutions are likely to vary substantially across jurisdictions. Involving government officials with competition experience in the process of implementing competition assessment will help both to ensure that assessments are performed within a strong analytical framework and that the assessments adequately address all likely competitive effects. While this paper will draw on existing experience to identify potential options, those options identified are by no means exhaustive.

## RIA and competition policy analysis

The benefit-cost analyses undertaken within RIA generally compare likely outcomes based on the existing economic and regulatory environment and may not make an allowance for changes in the major parameters affecting these environments. In comparison, the focus of competition policy analysis is often more future-oriented. Competition policy analysis is concerned with the impact of particular changes to market conditions on the intensity of competition and, hence, on the likely outcomes for economic efficiency and consumer welfare.

While the above points to general differences in approach, the increasing trend for RIA guidance materials to require assessment of competition impacts to be undertaken as part of RIA is inevitably narrowing these differences in many countries. This paper is intended to contribute to this process.

It is the focus on dynamic market efficiency[3] that makes competition assessment most useful as an element of overall regulatory assessment. This element can help to avoid regulations that unduly restrict market activity. A further benefit of competition assessment is that it assists in identification of all parties likely to be affected by regulatory proposals, especially those that will be affected indirectly. This can assist in ensuring that RIA-based consultation is sufficiently inclusive and, thus, more effective.

One practical approach for implementing competition assessment is through a set of threshold questions (or a "checklist") that helps identify when proposed regulations may have the most potential to unduly reduce competitive pressures. In those situations where reductions in competitive pressures are most likely, an in-depth competition assessment would be justified. However, for most regulations, an in-depth competition assessment would not be needed.

## Conducting competition policy analysis as one element of RIA

As the following section will demonstrate, a number of the key issues in terms of potential anti-competitive impacts of regulation arise at the level of the design of the broad regulatory structure being considered. This suggests that policy officials should attempt to undertake competition policy analysis at an early stage in regulatory development. Similarly, long-standing OECD advice is that "*RIA should be integrated with the policy-making process, beginning as early as possible*" (OECD, 1997, p. 215). Thus, there is a consistent message that both of these forms of analysis should be seen by policy makers as integral components of the policy development process, rather than being "add-ons" or tasks that can be considered in isolation from the larger issues of policy development.

Of course, while at times there is a significant likelihood that a given regulatory intervention could yield anti-competitive impacts, it is equally true that much regulation has little, if any effect on competition within a given sector or market. Thus, a fundamental task is to determine via a "Competition Checklist" whether there is a strong likelihood that a particular regulation under consideration could have a significant anti-competitive impact and, as a result, require a more detailed and technical analysis to be undertaken.

The "Competition Checklist" presented below has been developed as a tool for aiding officials with an initial assessment. The checklist provides a simple test that can be applied to proposed regulations to determine whether an analysis of their impact on competition is likely to be required. If one or more of the three basic types of restriction on competition identified in the checklist exists, a full competition assessment is warranted. The details of

the full assessment may be in proportion to the size of the potential competitive harm. Thus, a judgment may be warranted to determine the apparent scale of the identified restriction on competition and thus inform decision-making on the scale and scope of the full competition assessment that is required. If, considering the circumstances and past experience, there is little likelihood of a significant restriction of competition resulting from the regulatory proposal, the full competitive effects assessment can be short and concise.

Box 4.1. **Competition Checklist for the conduct of competition assessments**

**A competition assessment should be conducted if the proposal has any of the following 3 effects:**

**1. Limits the number or range of suppliers**

This is likely to be the case if the proposal:

- Grants exclusive rights for a supplier to provide goods or services.
- Establishes a license, permit or authorisation process as a requirement of operation.
- Limits the ability of some types of suppliers to provide a good or service.
- Significantly raises cost of entry or exit by a supplier.
- Creates a geographical barrier to the ability of companies to supply goods or services, invest capital or supply labour.

**2. Limits the ability of suppliers to compete**

This is likely to be the case if the proposal:

- Controls or substantially influences the prices for goods or services.
- Limits freedom of suppliers to advertise or market their goods or services.
- Sets standards for product quality that provide an advantage to some suppliers over others or that are above the level that many well-informed customers would choose.
- Significantly raises costs of production for some suppliers relative to others (especially by treating incumbents differently from new entrants).

**3. Reduces the incentive of suppliers to compete vigorously**

This may be the case if the proposal:

- Creates a self-regulatory or co-regulatory regime.
- Requires or encourages information on supplier outputs, prices, sales or costs to be published.
- Exempts the activity of a particular industry or group of suppliers from the operation of general competition law.
- Reduces mobility of customers between suppliers of goods or services by increasing the explicit or implicit costs of changing suppliers.

## Review of major forms of restrictions on competition

The following section provides further detail on the importance of each of the main types of restriction on competition identified in the Checklist. It is intended to provide guidance to policy officials on undertaking an initial "competition assessment" should the "Competition Checklist" indicate that is necessary. An important focus of the discussion is on identifying the policy objectives governments usually seek to achieve via each of the

identified types of anti-competitive regulation. In general, a range of policy alternatives which are likely to achieve these objectives while being less restrictive is identified. Cases in which regulations with particular types of anti-competitive effects may be justifiable are also identified and guidance included on how these anti-competitive effects may be minimised.

The checklist organises the range of specific restrictions on competition identified under three broad headings that reflect the main general categories of restriction on competition. However, it should be recognised that some of the specific restrictions can relate to more than one of these broad categories. For example, the creation of a self-regulatory or co-regulatory regime may lead to limits on the number or range of suppliers or limit the ability of suppliers to compete. Thus, the placement of each type of restriction on competition under a particular category heading has been made according to the most common result of the use of that restriction. Analysts nevertheless need to consider all of the possible anti-competitive impacts associated with each type of restriction.

This section of the paper identifies a range of common regulatory provisions that have the potential to result in major anti-competitive impacts on a given market. It discusses the nature and extent of these likely anti-competitive impacts and considers their acceptability and potential alternative means of achieving the regulatory objectives that often underlie their use. The discussion included here is a general one that is intended to introduce these concepts to generalist policy officers. Further guidance is available in a longer companion paper.

### *Limits on the number or range of suppliers*

Regulation that limits the number of producers that can supply a market creates a risk that market power[4] will be created and the strength of competitive forces will be reduced. Where numbers of suppliers decline, the possibility of co-operation (or collusion) between them is increased. The resulting decline in competitive pressures will tend to reduce innovation and incentives to meet consumer demands effectively. Thus, there is a detriment to economic efficiency in the dynamic sense. As well, reduced price competition results in transfers from consumers to producers. Grants of exclusive rights, the establishment of licence and permit schemes and restrictions on participation in public procurement schemes constitute three very common forms of regulatory limitations on the number of suppliers. Regulations that significantly raise the cost of entering or leaving a market and those that geographically restrict the flow of goods or services can also effectively limit the number or range of suppliers of a given market. Moreover, other forms of limitation on supplier numbers also exist and, where identified, should lead to a competition review. Where a restriction reduces competition in one market, it may also have "flow-on" effects in markets for complementary goods, as well as those for substitutes. Competition analysis must also attempt to identify these flow-on effects.

#### *Grants of exclusive rights*

**Expected benefits of these provisions.** The grant of an exclusive right frequently occurs in the context of a "natural monopoly". That is, the situation in which the marginal cost of producing an additional unit of the good continues to decline right up to the point at which the scale of production is such that an individual supplier can meet the entire demand arising from the relevant market. In such cases, governments have sometimes provided exclusive rights in order to ensure that consumers are supplied at the lowest possible cost

while regulating the behaviour of the supplier granted this exclusive right in order to prevent the exploitation of its market power, so far as possible. However, the scope of natural monopoly, which tended to be defined broadly in the past, has been refined in recent times and is now often defined much more narrowly.

The grant of exclusive rights, particularly if it extends over a long period, has also frequently been considered a means of underwriting, or encouraging, substantial and/or strategic investments in infrastructure areas. Governments have frequently reached the view that such investments will be unlikely to occur without the incentives provided by the guaranteed market access that the grant of an exclusive right provides. However, at times the result of these policies has been over-investment.

**Nature and extent of anti-competitive impacts.** A grant of an exclusive right to produce a certain good or provide a certain service obviously constitutes the extreme case of a "barrier to entry". In effect, the grant of an exclusive right represents the establishment of a regulated private monopoly. This form of regulation necessarily has a substantial anti-competitive impact. Recent technological developments have significantly altered the nature of some previously monopolistic activities and potentially allow formerly regulated monopolies to be disaggregated into competitive and monopolistic elements.

**Indications for use and potential policy alternatives.** A fundamental problem with long-term grants of exclusive rights is that technological change can render the initial rationale for the granting of the right redundant long before the right itself has lapsed. Moreover, a State-sanctioned monopolist is likely to find itself in a strong position *vis-à-vis* the regulator that seeks to prevent it from exercising its market power. This, plus the need for a highly sophisticated regulatory approach to be taken in such contexts, often means that regulators experience a relatively low level of success in preventing the abuse of market power and in protecting consumers.

That said, there may be circumstances in which the grant of an exclusive right constitutes the only means of ensuring that a particular service will be brought to market. However, regulators should satisfy themselves that other alternatives that are less restrictive of competition are impracticable before considering the grant of such a right. If there are no other alternatives, regulators may wish to consider auctioning the exclusive right. Where such a right is granted, particular attention needs to be paid to regulatory design. For example, issues need to be addressed such as the relative appropriateness of "cost plus" pricing regulation *versus* "rate of return regulation" *versus* "price cap" regulation. Moreover, in many cases, the splitting of the exclusive right between two or three parties can conserve competitive dynamics to some degree while reaping the benefits sought.

### *Establishment of a licence or permit system as a requirement of operation*

**Expected benefits of these provisions.** Licences are generally used as a means of ensuring with a high degree of certainty that only suppliers who meet set standards are able to enter an industry. Licence conditions typically include minimum qualifications requirements, for example minimum standards for formal education and/or practical experience applied to members of certain occupational groups, such as various health professionals. They are often implemented in pursuit of well-founded consumer protection objectives. In particular, where consumers are not easily able to make judgements as to the competence of practitioners, qualifications requirements can help prevent harms due to incompetent

practice. Other common requirements include minimum insurance requirements, which may have important consumer protection benefits where there is the possibility of substantial consumer losses in the event of business failures, incompetence or fraud (*e.g.* property transfers, travel agencies).

**Nature and extent of anti-competitive impacts.** Where regulation results in barriers to entry that are more restrictive than necessary to adequately achieve the regulatory objectives, it can have the effect of promoting "producer protection" and will often be sought by existing producers on grounds of the need to promote "market stability". In the context of a requirement for a licence to practise, the extent of the restriction effectively imposed on entry is likely to be high, as qualification requirements are often supplemented by additional elements, such as character assessments. These character tests can also be applied to the directors of a company where the licence requirement applies to corporations, rather than individual practitioners. Common corporate licensing requirements include the need for certain insurances to be held or minimum working capital requirements to be met. Commonly there are "soft limits" on the number of firms or practitioners allowed to participate in the industry. These may be implemented through the application of "public interest" tests, which require that potential entrants demonstrate the "need" for an additional service to be provided and, in some cases, even that their entry would have no negative impact on the businesses of existing industry participants.

Some regulatory requirements may have the effect of increasing pressure on some suppliers to leave the industry due to the suppliers' being in a relatively poor position to comply and may thereby have a negative impact on competition if there are already significant barriers to new entry in place. Exit restrictions are less readily identifiable and are arguably less prevalent than entry restrictions. Exit restrictions may include overly onerous requirements to pay separation benefits to former staff or the loss of certain non-refundable performance bonds.

**Indications for use and potential policy alternatives.** The pursuit of "market stability" generally constitutes a poor reason for imposing regulatory restrictions on entry to an industry, as effective competition is a dynamic concept that necessarily encompasses the possibility of suppliers failing and, equally, requires that there be a steady flow of new entrants to an industry (or at least the possibility of new entry) if high standards of innovation and responsiveness to consumer demand are to be maintained.

As suggested above, qualifications requirements for professionals are likely to be legitimate in cases in which consumers are ill placed to make their own judgments as to practitioner competence and where the consequences (*i.e.* the potential harms to consumers) of making a poor choice are serious and irreversible. As in numerous areas of regulation, a fundamental principle is to ensure that the restrictions applied are no more restrictive than necessary to achieve the regulatory objectives. Ever higher qualifications requirements can substantially benefit producers, at the expense of consumers, by reducing entry and, therefore, competition. Product quality standards should be set no higher than necessary to ensure consumer safety. Restrictions on, for example, supplier size should not be set a level that creates substantial anti-competitive impacts.

When considering the need for compulsory insurance requirements, performance bonds and the like, consideration should be given to the nature and extent of the consumer harms that can potentially result from either poor practice or from the failure of a service

provider. Furthermore the ability of consumers to inform themselves of these potential harms and to protect themselves by making informed choices of providers is also a relevant consideration, while policies that can enhance consumer capacities in this area need to be considered as an alternative approach.

### *Limits on the ability of some types of suppliers to provide a good or service*

Policies limiting the ability of some types of suppliers to participate in public procurement often require that a certain degree of preference (which may, or may not, be stated explicitly) be accorded to suppliers established in a certain region, state or country. Alternatively, they may give preference to suppliers that exhibit other characteristics held to be desirable, for example establishing a quota on procurement participation for small suppliers, or those that implement particular employment policies. In extreme cases, these policies may completely preclude suppliers other than those conforming with the favoured characteristics from any participation in government procurement.

**Expected benefits of these provisions.** The objectives sought via limitations on what types of suppliers may participate in government procurement can be several. Perhaps the most common kinds are national and/or State preference schemes, which seek to encourage economic activity in the favoured area, often in respect of particular industries thought to be of "strategic" significance. Thus, preference schemes can be used to support general protectionist policies, or as an element of regional policy, industry policy or small business policy, among others. Their effectiveness derives from the powerful market position of governments as major purchasers of many kinds of goods and services.

**Nature and extent of anti-competitive impacts.** Limiting participation in procurement tends to increase the costs of government purchasing by limiting competition in that market. Given the overall size of government procurement budgets, the importance of such restrictions in relative terms is likely to be high. Moreover, there is significant potential for conflict between these preference arrangements and other areas of policy. For example, preference given to suppliers from a particular region may conflict with other policies favouring small business.

**Indications for use and potential policy alternatives.** Preference schemes can have significant impacts due to the powerful position of governments as purchasers. However, there is substantial potential for such policies to conflict with other objectives of government policy. Perhaps in recognition of this, over time many preference schemes have shifted from absolute exclusion of non-favoured groups to relative preferences for favoured groups. Moreover, many have disappeared as a result of conflict with obligations under international trade agreements.

Alternative means of pursuing the underlying objective sought via preference schemes exist in many areas. For example, where regional policy objectives are sought to be promoted, alternatives include a range of direct subsidies and/or tax expenditures, provision of a more favourable regulatory environment in key areas, or the use of publicity/educational campaigns. Where the promotion of small businesses is an objective, temporary tax/subsidy options and more flexible regulatory approaches may also constitute appropriate alternatives.

### *Significantly raises the costs of entry or exit*

**Expected benefits of these provisions.** One common example of regulations that raise entry costs is that of regulations that impose more stringent product testing standards. Another example is the imposition of minimum capital requirements or, more generally, requirements to demonstrate "financial capacity". Regulations that raise exit costs include those that set more stringent cleanup requirements in relation to former industrial sites. These forms of regulation may be used to pursue several regulatory objectives. These include consumer and environmental protection goals. In many cases, there may be few feasible alternative means of pursuing these objectives. For this reason, governments have sometimes acted to minimise the competitive impacts of such provisions by providing targeted exemptions or assistance to suppliers to help bring them into compliance. For example, low-volume car manufacturers are often exempted from aspects of vehicle testing regulations, or are subject to less onerous testing protocols.

**Nature and extent of anti-competitive impacts.** Regulations that raise the costs of entry to, or exit from, a market will tend to reduce the number of participants in that market. Higher gross revenues are required, in such circumstances, in order to achieve a given rate of return on entry. Moreover, higher exit costs will increase the risks involved in entry. Consequently, there is a high risk that less vigorous competition will be observed in the market.

**Indications for use and potential policy alternatives.** Regulations that set strict product-testing standards are likely to be justified where significant risks of serious consumer harms associated with the use of the product exist. Similarly, other regulations that raise entry costs by requiring certain insurances or the demonstration of financial capacity are likely to be justifiable where substantial financial risks to consumers may result from business failure, incompetence or fraud on the part of suppliers.

In some circumstances alternatives such as greater information provision or product disclosure requirements can be considered. In other cases, regulation may be required even though it raises entry costs and the focus should be on minimising anti-competitive potential by ensuring that the requirements set are the minimum necessary to achieve an adequate degree of consumer protection.

### *Restrictions on the inter-state (or intra-national) flow of goods, services, capital and labour*

**Expected benefits of these provisions.** Many regulations have historically limited the flow of goods, services, capital and/or labour across jurisdictional boundaries. These limitations can be considered to be a specific subset of the general category of "restrictions on entry" discussed above. Regulatory restrictions on the flow of goods and services, or capital and labour, have often been implemented as a tool of regional policy. That is, governments have implemented these restrictions in an attempt to maintain or enhance the viability of regional economies. Other related goals that may be pursued via such policies (particularly when considered at the national level) are those of self-sufficiency or the protection of "national champions", whether for prestige or other reasons.

A particular context in which such protective restrictions may be proposed is that of "infant industries".[5] That is, these restrictions may be promoted as being a temporary necessity in order to ensure the development of local industry in the context of relative

under-development. However, the risk is that such "temporary" protections develop into quasi-permanent arrangements due to substantial lobbying by the local suppliers that benefit from the continued existence of the protections.

**Nature and extent of anti-competitive impacts.** Limitations on the geographical flow of goods and services, imposed where trade would otherwise be technically and economically feasible, have the effect of artificially reducing the effective size of the market for the good or service in question. By reducing market size, several potential anti-competitive effects arise. First, the probability that the degree of concentration in the market may rise to a point at which market power can be exercised by producers necessarily rises. Second, a smaller and more isolated market is likely to be associated with lower levels of innovation, product differentiation and the like. Thus, consumers are likely to be less well served. It is also likely that the rate of entry may be slowed, to the extent that potential new entrants face greater difficulties in establishing themselves in what has become, due to regulatory factors, geographically and economically smaller markets.

**Indications for use and potential policy alternatives.** In recent years, there has been increasing recognition of the potential harms to competition of restricting flows of goods, services, capital and labour. Indeed, in the European context, the free movement of goods, services, capital and labour have been described as "the four freedoms" which constitute a pillar of the Single Market Program, pursued since 1992.

In general, there are relatively few contexts in which such restrictions are likely to pass a benefit-cost test. Therefore, policy makers should adopt the generally sceptical view of proposed regulation that includes such restrictions. Where restrictions are imposed they should be assessed in terms of a number of factors including whether there is a clear link between the restriction in question and the achievement of a specific, identified public policy goal, whether the restrictions are no more restrictive than necessary for achievement of the goal, whether a rational analysis supports the probability that the policy goal will be achieved by means of the restriction and whether the restrictions are restricted to a definite and limited time span via explicit regulatory provisions.

### *Limits on the ability of suppliers to compete*

The existence of large number of competitors is not a sufficient condition for the development of strongly competitive markets. There must also be strong incentives for competition between suppliers of goods and services. Regulation, in the form of the general competition law, has a significant role to play by outlawing a range of anti-competitive conduct (*e.g.* price-fixing, market sharing). However, regulation can also substantially reduce the ability of suppliers to compete. Most obviously, such restrictions can take the form of price controls. Alternatively, regulation may restrict the way that products can be sold or advertised or it may set product standards that are difficult for some suppliers to meet. A wide range of other regulations restricting the ability to compete has also been observed, including restrictions on profits, or market share, production quotas and the like.

#### *Controls on the prices at which goods or services are sold*

**Expected benefits of these provisions.** Maximum price regulations are frequently introduced as a necessary corollary of restrictions on entry to the market. For example, entry to the taxi market is highly restricted in most countries, leading to substantial excess demand

for taxi services developing over time. In a market characterised by significant excess demand, substantial price increases would be expected to result. In this context, maximum price regulation is generally introduced with the intention of protecting consumers. Conversely, when minimum price regulation has been used, it has sometimes been a response to extremely vigorous price competition and concerns that "predatory pricing"[6] has been employed. In these cases, minimum price regulation is generally seen as a means of protecting small producers, or local producers, and/or less efficient producers from "unfair" competition.

**Nature and extent of anti-competitive impacts.** Controls on the prices at which goods are sold directly impede the operation of normal market forces and disciplines. When minimum prices are set, lowest cost suppliers are prevented from winning market share by providing better value offerings to consumers. Similarly, where maximum prices exist, incentives to innovate by providing new and/or high-quality products can be substantially reduced. Again, the dynamic ability of the market to respond to consumer preferences is substantially limited. Minimum price laws may also allow inefficient producers to remain in the market, thus preventing the redeployment of resources to alternative, more productive uses. In this way price controls reduce economic efficiency.

**Indications for use and potential policy alternatives.** Price regulation rarely constitutes the most effective or efficient means of achieving the above objectives. For example, in the case of the taxi market, a better means of protecting consumers is to address the restrictions on supply in the market. In the case of "predatory pricing" concerns, the use of the general competition law is also likely to be a superior alternative. Thus, regulation proposing to control prices should be subject to especially rigorous scrutiny.

### *Restrictions on advertising and marketing*

**Expected benefits of these provisions.** Regulations sometimes restrict the ability to advertise or market goods and services. Such regulations often exist to prevent false or misleading advertising, while at the same time recognising the positive role that advertising and marketing play in conveying information to consumers and helping them to make choices in the marketplace. Prohibition of misleading or deceptive advertising ensures that the choices that a competitive market creates will not be undermined by deception and maintains consumer confidence in the market. Certain ancillary restrictions, such as requirements that sellers possess competent and reliable substantiation for claims that they make, are necessary to effectively prevent deception, especially in cases where evidence of falsity may be difficult to obtain. In a few cases, where products or services may be harmful under certain circumstances, general disclosure requirements are helpful in order to educate consumers about the potential harm. Common examples include the disclosure of the linkage between cigarette smoking and cancer in tobacco advertisements and detailed disclosures that accompany pharmaceutical advertising in most countries that permit such advertising. While some have advocated advertising restrictions as an indirect means of seeking to limit consumption of goods or services that are deemed to have a socially negative value or which are subject to excess consumption, these restrictions have generally been ineffective in reducing the use of these products. In such cases, advertising restrictions simply reduce information available to consumers, reduce choice, reduce competition, and increase price and profits.

At other times, advertising targeting certain groups (*e.g.* children) may be restricted in recognition that advertising may be perceived differently by members of those groups than by others. A common approach is to judge deception through the eyes of members of the group to whom advertising is directed. In some cases, such as advertising of tobacco and alcohol directed towards children, especially where the sale of alcohol or tobacco to minors is prohibited, the harm to public health may completely outweigh any consumer benefit to advertising, and such advertising may be prohibited altogether. Restrictions of this nature, when circumscribed to ensure they are not overly broad, can have significant social benefits.

**Nature and extent of anti-competitive impacts.** In many cases, advertising and marketing restrictions are too broad and have the impact of unduly restricting competition. Restrictions on advertising and marketing are likely to be particularly onerous in their impact on potential entrants to markets, as they restrict substantially an entrant's ability to inform potential customers of their presence in the market and of the nature and quality of the goods and services that they are able to offer.

A particular area of concern is that of restrictions on comparative advertising, particularly in relation to the making of price comparisons. As price is a substantial element in the consumer choice equation, restrictions on the ability of consumers to inform themselves of relative pricing at minimal cost have the clear potential to reduce market efficiency.

Many sectors have successfully shielded themselves from competition by restrictions on advertising and marketing. This has particularly been the case with the liberal professions. With regulation of the professions traditionally resting with members of the profession themselves, members of these sectors have claimed that advertising can be seen as "unethical" and that members of the professions are motivated by altruism in large part, with financial gain a secondary consideration. These claims have not withstood scrutiny. Studies have shown that restrictions on the commercial practices of professions do little or nothing to protect consumers, but act to significantly reduce consumer choice and access, and significantly increase costs.

**Indications for use and potential policy alternatives.** General consumer protection laws almost invariably contain prohibitions on misleading and deceptive advertising practices. These promote efficient markets and are effectively pro-competitive. There may also be limited circumstances in which additional restrictions are justified in relation to specific goods or services. However, these need to be carefully considered on benefit-cost grounds. The potential for advertising restrictions to contribute to the continuation of information asymmetry problems that disadvantage consumers and reduce economic efficiency must also be weighed. Alternative policy tools where there is a need to discourage "over-consumption" include information campaigns and consumption taxes. These constitute more direct means of treating the identified policy issue.

### *Setting product standards that provide an advantage to some suppliers over others or that are above the level that many fully informed customers would choose*

**Expected benefits of these provisions.** Minimum product standards are usually set to achieve consumer protection objectives in the presence of market failures, notably information asymmetry. However, if set at an excessively high level, they can reduce consumer welfare by preventing consumers from choosing a cheaper (but lower quality) market offering. Thus, product quality standards should not be set at a level above that

which is required to ensure a necessary minimum level of consumer safety. Emission standards in relation to productive processes clearly aim to pursue broad social objectives. Such objectives are clearly legitimate goals of regulation. However, the potential for anti-competitive impacts identified above highlights the need for a careful balance between regulatory costs and benefits in this area as well.

**Nature and extent of anti-competitive impacts.** Regulations setting standards that are significantly different from current practices can significantly restrict the ability of suppliers in the market to compete. A common example is environmental regulations that set limits on the allowable levels of emissions of various kinds of toxic substances. While such regulations are often entirely appropriate and necessary as a means of providing highly valued protections to public health and amenity, they can be set at levels that unfairly advantage small numbers of incumbent suppliers that have proprietary access to certain kinds of technologies.

Another area in which standard setting can have significant anti-competitive impact is setting minimum quality standards for particular product types. Again, there can be sound regulatory objectives underlying such standard setting, commonly protection of consumers from risks associated with the use of the product. However, where the standard is set at a level that is very much higher than current market practice, some market players may find it difficult or impossible to meet the standard. This may occur, for example, where only certain productive technologies (which may be subject to patent protection) are capable of meeting the new minimum quality standards.

Where other suppliers are unable, technologically, to meet the legislative requirement, significant exit from the industry may result and important anti-competitive impacts may occur. Where the only feasible means of reaching the standards are patent protected, patent holders may have incentives to refuse licences to potential competitors, in order to obtain competitive advantages in the market. Alternatively, even where patent protection is not an issue, smaller suppliers, or those that are less well resourced, may not be able to afford the major capital investment that may be required in order to install new technology to enable them to meet new product standards.

**Indications for use and potential policy alternatives.** Movements in regulatory standards relating to products, or productive processes, tend to occur in incremental steps over time, reflecting progressive changes in social preferences and in the wealth of the society. Very substantial one-off changes in the standards are far more likely to have anti-competitive impacts than are more moderate changes.

It may often be the case that alternative instruments can achieve the benefits sought through the implementation of minimum standards. For example, when minimum standards are pursued for consumer protection reasons, it may be possible to act instead by providing information directly to consumers regarding product risks or by requiring disclosure of certain product characteristics. Where major changes in emissions standards are contemplated, governments have sometimes sought to minimise possible anti-competitive impact by providing financial, technical or other assistance to smaller suppliers in particular, to make them better able to meet the proposed new requirements.

### *Raising the costs of some suppliers relative to others*

**Expected benefits of these provisions.** Perhaps the most common form of regulation that raises the costs of some suppliers relative to others is that which includes "grandfather clauses". These are arrangements that require new entrants to the industry to comply with the new, higher standards, while incumbents continue to be subjected to the lower, pre-existing standards. Several arguments are made in favour of the need to impose grandfather clauses in particular circumstances. In relation to occupational qualifications, it is often argued that the extensive practical experience of long established practitioners is an adequate substitute for a higher level of formal qualification. In relation to productive technologies, it may be argued that adequate time must be granted to amortise the sunk costs of investments made in plant that complied with relevant environmental and other standards at the time that it was commissioned.

**Nature and extent of anti-competitive impacts.** "Grandfather clauses" have substantial potential to distort competitive relations within the industry by raising costs to some suppliers (*i.e.* new entrants to the market, or those implementing new processes) to a substantially greater extent than others. This is likely to impede entry and thereby reduce innovation as well as the intensity of competitive pressure in the market.

**Indications for use and potential policy alternatives.** The anti-competitive impact of grandfather clauses can be minimised by ensuring that they are time-limited, rather than permanent, and that the duration of the exemption given is strictly proportionate to the underlying rationale for its being granted in the first place. More generally, however, a sceptical approach needs to be taken to arguments in favour of the need for grandfather clauses, as they are frequently a reflection of attempts to defend vested interests from potential competition.

### *Reductions in the incentives for suppliers to compete vigorously*

The previous section highlights the ability of regulation to reduce the *opportunities* for suppliers to compete. Regulation can also act to reduce the *incentives* for competition. In general, suppliers of a product or service who can co-ordinate amongst themselves to share a given market are able collectively to maximise potential monopoly profits. Thus, regulation that facilitates or encourages co-operation between producers will reduce incentives for vigorous competition. This is most likely to occur where regulation facilitates the sharing of information on market sensitive variables such as prices, costs and outputs. Moreover, regulation that reduces the effective ability of customers to switch between competing suppliers also reduces competitive pressures. The danger of regulation developing with this effect is greatest when producer groups have a significant role in the development and implementation of regulation.

### *Self-regulation and co-regulation*

**Expected benefits of these provisions.** Governments may choose to take full responsibility for designing and implementing a regulatory structure or, alternatively, they may choose to involve an industry or professional association in aspects of the design or implementation of the regulatory structure. Where an industry association takes full responsibility for regulating the conduct of its members, without government legislative backing (often at the urging of government) the term "self-regulation" is used. However, where government provides

legislative backing to rules that are either developed by the industry/professional association, or else jointly developed with government, then the results can be considered to be an example of "co-regulation".

Co-regulatory structures can have substantial benefits for governments seeking to regulate behaviour, particularly in the context of an industry or profession that has not previously been subject to regulation. The involvement of the industry or professional association can tend to lend credibility to the regulatory structure in the eyes of those who will be regulated. This credibility derives in part from the fact that the government is seen as utilising the high level of specific expertise and understanding of the industry in question that the practitioners undoubtedly possess. This can be attractive from the point of view of government, avoiding the necessity of developing internally a high level of specific expertise in issues relating to the market involved and the qualifications and duties of the relevant practitioners.

Governments may be able to develop co-regulatory structures at substantially lower cost than would be required to develop a fully government-based solution. This may occur to the extent that members of the profession can be persuaded to constitute regulatory and disciplinary bodies that undertake important aspects of the regulatory function but receive limited, if any, funding from government.

**Nature and extent of anti-competitive impacts.** Regulation that is established by those being regulated can yield substantial benefits from ensuring that technical standards are appropriate and that standards advance with technology. However, there is a strong risk that rules developed by industry or professional associations will have anti-competitive impacts. In many cases, these will be unanticipated effects arising from attempts to pursue legitimate policy goals. For example, strict qualification requirements may be introduced for consumer protection reasons but may (especially where incumbent practitioners are exempted) indirectly reduce entry to the market. Some "ethics-based" rules, such as restrictions on advertising prices, may reduce the ability of producers to compete. Thus, there may be an intention to benefit the members of the profession or industry, with public interest arguments being used to cloak the underlying purpose of the regulation.

The fundamental requirement when conducting competition assessment in these circumstances is to assess the regulation according to its expected effects, rather than focusing solely on its stated purpose or on judgements about the motives of its proponents. When evaluating barriers to competition, a careful analytical approach that considers costs and benefits to consumers and relies on empirical evidence is appropriate. Three questions can assist in the process: *i)* What specific harm to consumers is the barrier designed to address? *ii)* Is the proposed restriction appropriately tailored to address that harm? and *iii)* Does the consumer harm that the restriction seeks to prevent exceed the consumer loss from the restriction on competition? The third question is an essential part of the analysis in evaluating self-regulatory or co-regulatory restrictions.

Concerns regarding the development of anti-competitive regulations are likely to be particularly significant where the industry/professional association in question has a dominant role in developing the rules of conduct that must be followed. For example, rules governing the operation of the legal profession have historically banned "price cutting", "touting for business", incorporation by specialist advocates or employment of specialist advocates, as well as most forms of advertising. In many cases, such restrictions have been

removed following reforms that have led to the government taking a greater role in the regulation of the profession.

**Indications for use and potential policy alternatives.** A successful co-regulatory structure requires the existence of an industry/professional association with wide membership among the regulated group. The association must be seen by its members as having a relatively high level of prestige if it is to be able to impose effective sanctions (including exclusion from the association) on those who do not comply with regulatory requirements. The existence of effective sanctions is, in turn, necessary to convince consumers of the credibility of the regulatory structure.

Government should act to prevent attempts by the industry/professional association to use co-regulatory powers in an anti-competitive manner. This may include ensuring that the relevant Minister has the right to approve, or refuse to approve, codes of conduct and, as required, to substitute government regulations should the industry body continue to propose unacceptable versions.

### *Requirements to publish information on company prices, outputs or sales*

**Expected benefits of these provisions.** Regulation requiring the publication of information such as price and output levels is usually adopted as a means of reducing consumer search costs by making this information more readily available. In some circumstances, reducing transactions costs in this way can improve the efficiency of markets by increasing the actual degree of understanding of market offers by consumers in the marketplace.

**Nature and extent of anti-competitive impacts.** Regulations that require market participants to publish information on their prices or output levels can significantly assist in the formation of cartels, since a key requirement for cartel operation is for participants in the cartel to monitor effectively their competitors' (or co-conspirators) market behaviour. These possible anti-competitive impacts are evidently more likely to arise where there are fewer participants in the market, where entry barriers are high and where products are relatively undifferentiated.

Publication of price information is also more likely to have an anti-competitive effect in industries in which it is common practice to offer or negotiate private discounts on advertised, or "recommended" prices. This is so because competitors would otherwise have substantial difficulty in obtaining information on the actual prices paid to other competing suppliers. In a context in which actual price information is required to be published, cartel members are able to identify circumstances in which other members are not maintaining the "agreed" price or quantity.

**Indications for use and potential policy alternatives.** As suggested above, concerns about possible cartel behaviour are unlikely to be relevant in situations in which there are large numbers of competitors and/or relatively low barriers to entry. In these circumstances, the positive effects of such publication requirements in reducing markets search costs may well justify their use. However, in more concentrated markets, such requirements are more likely to have a net negative impact. In markets with few suppliers and a standardized product, the cost of searching among different suppliers may be smaller than when many suppliers are present while the risks of cartel agreements are higher. Thus, the potential benefits of such publication requirements are commensurately lower.

If publishing price or output information is viewed as supportive of cartel formation, alternatives exist that are less supportive of cartels. When the information is gathered primarily for government policy making, there may be no need to publish it at all. When the purpose is to aid consumers or provide general statistics, aggregate statistics are less supportive of cartels than company-specific statistics and historical statistics are less supportive than contemporaneous information. Statistics aggregated across companies will not help cartel members to identify a supplier that is violating the cartel agreement, while company-specific statistics could clearly identify a company that deviated from a cartel agreement over pricing or quantity. Historical statistics provide less useful information for cartels because cartels often need to share current information to decide how to allocate output and set price targets and historical information would not help them substantially in this task.

### *Exemptions from general competition laws*

**Expected benefits of these provisions.** In many countries, particular economic sectors benefit from exemptions from the general competition law. In some cases, these sectors are subject to their own, sector-specific competition laws. In other cases, there may be no restrictions on anti-competitive conduct undertaken in these sectors.

Numerous rationales for such exemptions have been advanced. In some cases, suppliers are permitted to co-operate in order to improve their ability to establish themselves and compete in export markets. In other cases, a market characterised by atomistic producers may be permitted to co-operate due to the existence of monopsonistic power on the part of the purchasers of its products and the consequent desire by government to create a degree of countervailing power (examples include a number agricultural commodities). Many relatively highly regulated companies have also been exempted from general competition law. In these cases, the view appears to be that the sector-specific regulatory structure constitutes an appropriate substitute for the general competition law.

**Nature and extent of anti-competitive impacts.** Where a substantial derogation from the general application of competition law exists there is a clear risk of cartels, pricing abuses and anticompetitive mergers resulting. Moreover, there is obviously a significant potential for economic distortions to arise, as different sectors are subject to what may be substantially different regulatory environments. Such distortions can have a major negative impact on economic welfare by distorting consumer decisions as to which products and services they purchase.

**Indications for use and potential policy alternatives.** The OECD has generally argued that exemptions from the general competition law should be minimised or eliminated:

> As a general reform strategy, governments should *expand the scope and effectiveness of competition policy.* The scope and effectiveness of competition law and competition authorities should be reviewed, and strengthened where necessary. Exemptions to competition law should be eliminated, absent evidence of compelling public interests that cannot be served in better ways.

Where a specific rationale for the continued existence of exemptions has been identified, consideration should be given to the means by which its scope can be minimised. For example, a legislated monopoly requiring all producers of a particular commodity to sell to a particular, licensed export marketer may be an inferior substitute to a system that

allows producers to engage in co-operative export selling arrangements, but does not compel them to do so.

### *Reducing the mobility of customers by increasing the costs of changing suppliers*

**Expected benefits of these provisions.** "Switching costs" can be defined as the costs borne by a consumer in changing suppliers of a product or service.

Examples of switching costs include:

- the use of long-term contracts that "lock in" consumers for lengthy periods and impose significant financial penalties in the event that they choose to change suppliers prior to the end of the period; and
- the absence of telephone number portability, which can make switching service providers relatively unattractive by imposing convenience/administrative costs on the consumer.

Legislative provisions for switching costs to be charged may reflect the existence of real and substantial costs, borne by suppliers, in the event of consumer switching occurring. To this extent, provisions allowing for some switching costs to be charged can be consistent with the application of equitable contract terms. For example, penalties associated with early termination of a fixed-term contract may reflect product "bundling" and the need for the supplier to recover the costs of capital items (*e.g.* mobile phone handsets) for which only partial payment has been received. Alternatively, some switching costs may be established in an attempt to reduce transactions costs.

**Nature and extent of anti-competitive impacts.** By raising the costs of changing suppliers, switching costs can substantially reduce the ability of suppliers to compete. Switching costs are likely to be of considerable importance in the context of newly competitive industries, where they can frequently constitute an important barrier to the reduction, over time, of the incumbent supplier's strong position in the marketplace. An example is given by the Nordic electricity markets, which demonstrate substantially different levels of consumer switching activity in different countries. Review of the regulatory arrangements in place indicates the extent to which these observed differences in the level of switching activity are highly correlated with the nature and extent of various switching costs applicable in each country.

In Finland, distribution system operators can charge fees if the customer changes supplier more than once a year. In Finland, Sweden and Norway a consumer can enter into a new supply contract orally or electronically, whereas in Denmark the consumer must physically sign the contract.

Where significant real costs to suppliers are associated with switching, allowing suppliers to pass these costs on to consumers may be unavoidable. However, in the case of switching costs imposed in an attempt to reduce transactions costs, consideration should be given to whether the reduction in transactions costs that may result from introducing the switching cost justifies its likely anti-competitive impact in reducing the actual incidence of switching.

The above is a case in which switching costs are actually set out in regulation. However, another possibility is that regulation may not explicitly impose switching costs but, rather, may fail to take account of either existing switching costs in the industry or those the incumbent suppliers may seek to impose in a newly competitive industry

context. The objective of achieving enhanced competition may be substantially compromised if regulation is silent on these issues and allows new or increased switching costs to be imposed by suppliers over time.

**Indications for use and potential policy alternatives.** Particularly in the case of newly restructured industries, characterised by a dominant incumbent facing competition for the first time from new entrants, ensuring that switching costs remain low is a necessary condition for the development of effective competition. While other conditions must also be in place (*e.g.* access on fair terms to a monopoly network) the switching costs issue remains fundamental to the competitive outcome.

It follows that, in reviewing proposed regulation that seeks to implement pro-competitive reform within an industry, any provisions explicitly allowing for the imposition of switching costs should receive careful scrutiny and should be regarded as acceptable only where there are strong arguments for their use. These might exist if it can be shown that there are significant costs associated with the particular activities that suppliers are required to undertake as part of the switching process. However, such circumstances are likely to be rare. Moreover, even in such cases, it may be that the pro-competitive impact of reducing or eliminating the switching costs is sufficiently large that the regulator will wish to prevent suppliers from explicitly recovering such switching costs from consumers.

As well, consideration is necessary of the potential for new or increased switching costs to be imposed by current incumbents in response to new competitive pressures. Where there is a clear risk of switching costs being imposed, the inclusion of provisions in the regulatory structure that will limit or prohibit the use of such devices may be required.

## Full competition assessment

The checklist proposed in this paper provides a reliable basis for identifying regulations that may give rise to an anti-competitive impact. Such regulations are candidates for a full competition assessment.

### *Proportionality*

Because the relative importance of different anti-competitive impacts varies substantially, the extent of the competitive effects analysis to be undertaken should be commensurate with an initial assessment of the likely extent of the anti-competitive impact identified. Conducting extensive competitive effects assessment is costly and such costs should only be incurred where an initial assessment indicates the potential costs of the anti-competitive aspects of a regulatory proposal are large enough to justify such an assessment.

A key contextual factor is the nature of the current competitive environment in the industries that are being regulated. Competition concerns will generally be less pressing where industries are vigorously competitive, characterised by large numbers of competing suppliers, significant rates of entry and exit and high levels of product and service innovation. Conversely, in relatively static markets, characterised by significant levels of concentration and limited entry, anti-competitive regulatory impacts are likely to be more important.

In assessing the likely importance of anti-competitive regulatory provisions, the focus should be on the likely extent of the regulatory proposal's impact in relation to the main determinants of the strength of competitive pressures in a market. In particular:

- Is it likely that the impact on the number of suppliers in the market will be large enough to reduce the number of market participants to a level at which co-ordination, or more extensive cartel-like behaviour, becomes feasible?
- Is the proposed regulation likely to have a significant impact on the dynamic aspects of competitive behaviour in the market, for example by significantly reducing entry or incentives for innovation?
- Is the proposed regulation likely to limit the ability of, or incentives for, suppliers to compete vigorously?

In producing an assessment, a clear view needs to be developed of the nature and extent of the market under consideration. A primary issue is the determination of the geographical dimension of the market. Is it local, regional, national, or international? Second, what products constitute the market? To what extent is there substitutability between the product or service that would be regulated and other products and services? Is the market a relatively static market, or is it characterised by high rates of technological change and the frequent implementation of new product types?

### *Procedure for completing a full competition assessment*

This section outlines an approach for performing competition assessments within the broader framework of RIA, to provide the analytical framework for competition assessments. As there are various ways that competition assessment could be incorporated within the RIA process, this is only one of various approaches that could be adopted. A full assessment would generally be conducted only if an initial assessment (based on the Competition Checklist) identified the potential for harm to the competitive process.

The first step in conducting a full competition assessment is to identify from the broader RIA process the underlying objective of the new regulation and ensure its appropriateness. Second, existing restrictions on competition should be identified and analysed as a precursor to the conduct of competition policy analysis of the new regulatory proposal. This necessarily entails the process of "market definition", whereby the relevant market is identified by reference to the degree of substitutability between related products, including the determination of the relevant geographic market. Third, the competitive effects of alternative policy options should be assessed and compared.

Regulations that restrict competition in order to achieve a public policy objective should first be assessed to ensure that they constitute the least restrictive means of achieving that objective. The expected degree of restriction on competition can be measured by posing the following set of questions and conducting further analysis wherever there is a "yes" response:

#### *Will the proposed regulation affect competition between incumbent businesses?*

Will the proposed regulation affect different incumbent suppliers differently and will it, as a consequence, alter competitive relations between these suppliers in a way that would reduce the intensity of competition in the market as a whole?

### *Would the regulation be likely to discourage the entry of new businesses?*

Will the proposed regulation restrict entry for all types of new businesses, or for particular types of businesses? What is the likely degree of this restriction and is it likely to significantly reduce competitive pressures in the industry in the longer term?

### *Would the regulation have a significant impact on prices or production?*

Will the regulation raise prices by imposing new costs on producers? Will it facilitate information exchange among producers, raising the prospect of collusion and increasing prices? Is it likely to lead to the exit of some incumbent suppliers, reducing output and increasing prices?

### *Would the regulation be likely to affect the quality and variety of goods and services in the market?*

Does the regulation include minimum standards requirements that will reduce the range of price/quality combinations available in the market? Is it likely to reduce product variety by restricting the entry of new suppliers?

### *Would the regulation be likely to have a negative effect on innovation?*

Innovation, and therefore responsiveness to consumer needs, can be restricted by regulation in various ways. Regulation may restrict entry by new suppliers, or it may restrict advertising of new products and so diminish pressures on incumbents to innovate. Restrictions on the movement of goods and/or services over borders may reduce the entry of innovative products originating in other markets.

### *Is the regulation likely to limit market growth?*

Regulation may have a negative impact on market growth, if it increases costs to all producers or limits the possibility of entry by new suppliers.

### *Would the regulation be likely to have a material effect on related markets?*

Reductions in competition in a given market may also have anti-competitive effects in upstream markets (those that supply inputs to the market in question), or in downstream markets (those in respect of which the product of the market in question constitutes an input, or intermediate good).

### *What is the expected total impact of the regulation?*

Where any of the above questions have been answered in the affirmative, a summary of the likely effects of the regulation on competition should be prepared, highlighting any impacts on prices, production, product variety and quality, and efficiency and innovation. These impacts should be summarised for both the primary market and for relevant related markets.

### *What are the available alternatives to the proposed regulation?*

As indicated at the outset, the regulation or other policy tool that is able to achieve the objective in the manner least restrictive of competition should generally be employed. Following the completion of competition assessments of feasible alternative policy options, the effects of each option should be compared. Regulators should be satisfied that the policy

alternative that is least restrictive of competition has been chosen, or that other benefits to society justify the choice of an alternative that is more restrictive of competition.

## Which policies merit a full competition assessment?

Most individual laws or regulations do not have significant potential to unduly harm competition. Consequently, most would not require a detailed analysis from the perspective of competition effects. To simplify the process of identifying policies with the potential to unduly harm competition, the Competition Assessment Toolkit includes a Competition Checklist that permits a quick screening of policies so that those with the potential to unduly impact competition can be identified for further assessment. The depth of a competition assessment can be proportional to the extent of the potential negative competitive effects of a policy.

*Laws, regulations and rules*. Policies that may be subject to competition assessment would include laws, regulations and rules that implement laws or regulations. Not all jurisdictions would consider laws as potentially subject to competition assessment. However, it is worth noting that the jurisdiction with the greatest success in competition assessment is also one that applied competition assessment broadly, including to laws (Box 4.2).

*New and existing policies*. Some governments have approached competition assessment both by looking at new and existing policies. This is the most effective way to broadly improve the competitive atmosphere across many sectors, but requires substantial political will. Other governments have implemented a form of competition assessment focused exclusively on new policies.

*National, regional, local*. Competition assessment is relevant to all government policies that may create substantial and undue restrictions on competition. Policies that create such limits are sometimes implemented at a national level, but are also implemented at a regional or local level. For example, taxi policies are often implemented at a local level. Professional regulation often occurs at a regional level. There is a strong economic case for suggesting that competition assessment be performed at both a national and a regional level.

### Box 4.2. **Australian national competition policy reforms**

Following the completion of the Hilmer Committee's report in 1993 that urged greater microeconomic openness with a focus on pro-competitive reforms, Australian governments agreed in 1995 to a programme of reviewing and revising legislation that limited competition and that was not in the public interest. This reform programme resulted in the identification of 1 700 laws that needed review. The national government offered funding to aid state and territorial governments with adjustment costs that might arise from revisions of legislation. Legislation was reviewed at a national and state or territorial level, with most reviews being completed by 2001. The programme was notable because it systematically identified existing laws and regulations that merited review and because, since the implementation of the programme, Australia's economic performance has been among the strongest in the OECD.

## When should a competition assessment be performed in the policy development process?

*New policies*. Competition assessments can positively contribute to the design of new policies. It is therefore important that, for new policies, competition assessments be performed *early* in the policy development process before a determination has been made by policy makers about exactly how they prefer to approach a given policy challenge. This permits the competition assessment to serve as a valuable analytical tool for identifying potential problems and addressing them early.

When a policy has the potential to unduly restrict competition, it is valuable to consult government competition experts or regulatory gatekeepers as early in the policy development process as possible, in order to develop alternatives for achieving the regulatory objectives with less harm to competition. Government competition experts or regulatory gatekeepers have substantial expertise in developing policy alternatives so they can often provide valuable input to a complex policy development process.

*Existing policies*. Most existing policies have not been subject to a competition assessment. Yet there are some existing policies that are more likely to merit review than others. In Australia, at the time of the National Competition Reviews, hundreds of existing government policies were identified that limited competition. These policies were prioritized for review and, if problems were found, revision occurred in almost all cases.

## Who drafts and reviews a competition assessment?

In order to ensure that competitive effects are considered by policy makers, it is valuable to ask the governmental bodies preparing a policy to complete a competition assessment of that policy. The process of completing the competition assessment helps to ensure that policy makers will ask relevant questions early and will initially develop policies while taking due account of competitive effects. However policy makers may not take the process of competition assessment seriously unless an external party reviews their work. Because of their advocacy activity, competition Authorities of all jurisdictions have developed a significant expertise in identifying the regulatory solutions least restrictive of competition. This is why it would be appropriate that in the process of competition impact assessment competition Authorities be allowed to participate so that the least restrictive regulatory solution is considered as a viable option early on in the decision-making process. In the United Kingdom, for example, the Office of Fair Trading (OFT), a competition authority, was given the responsibility to develop guidelines for competition assessment and to review competitive impacts of new policies.[7] The OFT took up these responsibilities in conjunction with the regulatory gatekeeper, the Better Regulation Executive (BRE). In order to promote common working methods and understanding, a small number of officials from the OFT split their working time between the OFT and the BRE.

Completing a competition assessment involves competencies related to competition analysis and market definition. For this reason, in some countries, new laws or regulations with an economic impact are reviewed by competition authorities. In Mexico, for example, new secondary legislation with effects on competition require a mandatory review by the competition authority. In Korea, the competition authority has responsibility for reviewing selected new regulations. Many other countries hold horizontal consultations prior to the adoption of new regulations. Such consultations work better when competition reviewers can enter the process early and are not required to submit their comments on all policies,

but only on those were the competition reviewers believe there may be a significant potential problem.

In Australia, a new body was created in 1995 for overseeing the National Competition Policy reviews of national and state or territory laws and regulations. This body, the National Competition Council, was distinct and independent both from the regulatory oversight office for reviewing new regulations and from the competition authority.[8] Since then, another body has been created with responsibilities to review competitive impacts of new regulations, the Office of Best Practice Regulation, which requires a Preliminary Assessment to be completed early in the regulatory development process (including a competition checklist).

The degree of independence of the reviewing body merits consideration. Independent bodies may be particularly valuable for reviewing laws and regulations. But the more an independent body designs laws and regulations, as opposed to reviewing them, the more the independent authority may appear to be acting as a direct implementer of the current government agenda.

The involvement of a competition authority or other government body in forming a prediction about competitive effects should not preclude later government legal action under competition laws, as predictions may turn out to understate competitive harms or overstate competitive benefits.

## Giving policy makers incentives to prepare an appropriate assessment?

The policy makers who develop a new regulation may have an incentive to under-report potential competition problems with a proposed regulation. They may perceive that identifying a potential competition problem or consulting with an outside agency, such as a regulatory gatekeeper or a competition authority, simply creates more work for them without a substantial benefit. It is therefore important to emphasize that competition assessment improves the policy output.

A number of options exist for improving incentives and abilities of policy makers with respect to competition assessment. These include:

- including competition assessment in Regulatory Impact Analysis (RIA);
- financial rewards; and
- best-practice training.

*Including competition assessment in RIA*. Both competition assessment and the RIA process itself can benefit from the inclusion of competition assessment as one part of the RIA process. This inclusion has the benefit of ensuring that dynamic, market-oriented considerations inherent in a competition assessment are dealt with analytically in the entire RIA and that competition assessment is widely performed by policy makers. Giving the competition authority some responsibility in this area can help to avoid the need for regulatory agencies or gatekeepers to retrain staff.[9]

*Financial rewards*. Because Australia is a federal system, implementing the National Competition Policy (NCP) at the state or territory level required agreement of the states. The Australian government made significant payments to states and territories, consisting of per capita payments based on the extent to which reviews and revisions of legislation were completed. "The NCP payments are the means by which gains from reform are distributed throughout the community. The payments recognise that, although the states

and territories are responsible for significant elements of NCP, much of the direct financial return accrues to the Australian Government via increases in taxation revenue that flows from greater economic activity."[10]

The payments to states and territories have amounted to between 0.5% and 1% of state budgets[11] While the payments accounted for a comparatively small portion of state budgets they were reportedly influential in convincing states to adopt reforms. The Australian government has estimated the annual benefits to the economy as a whole of 2.5% of GDP, or AUD 20 billion, from productivity improvements and price rebalancing in many different sectors where NCP and related reforms have occurred (Productivity Commission, 2005).[12]

*Best practice.* Training to policy making officials on best practice for competition assessment is of great importance if policy makers are to take account of competitive effects when preparing their policies. Many policy makers are specialised in a domain that does not relate to competitive effects or economics. Such officials could not reasonably be expected to address competition issues appropriately without training.

Best-practice training could potentially be provided by competition authorities, regulatory gatekeepers or the OECD.

## What resources are required for competition assessment?

The minimum resources required for competition assessment can be relatively limited. For example, when the United Kingdom implemented competition assessment two staff members from the OFT played a very active role and only a small percentage of the roughly 400 regulations per year received detailed scrutiny. The rest were reviewed through a competition filter that permitted officials to quickly diagnose whether there was a significant chance that competition problems would materialize from new policies.

The OECD's Competition Toolkit includes a Competition Checklist that is likewise designed to limit the need for detailed scrutiny of existing or new government policies.

Competition assessment can benefit from high levels of resource commitment. The Australian example illustrates a far-reaching and resource intensive approach that has promoted a very strong economic performance since the microeconomic reforms related to the NCP began. The payments from the national government to state and territorial governments should not be construed directly as expenses, moreover, since the payments were used for the provision of government goods and services. Even so, the expected benefits from improved productivity and rebalanced prices likely exceed these payments by a substantial amount.[13]

Resource requirements will be highest at the initial implementation stage. A detailed program of best practice training, for example, would require one-time resources. Training in later years would not need to be as substantial as a system would be better functioning and personal relationships between relevant policy officials would have been established. However, due to staff turnover, ongoing training would still be needed after the initial implementation.

## Integrating the outcomes

Integrating competition assessment into RIA can be particularly valuable in improving the dynamic component of the analysis. In rapidly changing economic and social contexts, the dynamic aspects of a regulation's likely impact can easily constitute the key determinant of its overall effect, considered over the course of the entire effective life of the regulation.

This paper has identified a number of different institutional options for introducing competition assessment. Given that the legal and federal environment of OECD jurisdictions differ substantially, the most effective institutional structures will likely vary from one jurisdiction to another. But a few points stand out. Competition authorities are ideally suited for performing selective competition assessments, advising on assessments or providing training for competition assessment. Regulatory gatekeepers are also well-suited to performing or overseeing such assessments, particularly when competition assessments are implemented as one part of a RIA process.

Only a minority of potential regulations is likely to have substantial anti-competitive impacts. However, where competition assessment identifies significant potential for a weakening of competition in the affected industry or related industries, the key elements of the regulatory design should be reconsidered in a comparative context in which alternative means of achieving the regulatory objective that are less restrictive of competition are identified and assessed.

Where such alternatives cannot be identified, the benefits and costs of the anti-competitive regulation must be compared systematically. Only if the adoption of the anti-competitive regulatory approach would yield net benefits, taking into account the costs of the anti-competitive impact identified – should the analysis conclude that the regulation is justified.[14]

## Conclusion

The use of RIA to assess the impacts of restrictions on competition, both when new regulation is being considered and to review existing regulation can have significant benefits for social welfare. Regulation which unnecessarily restricts competition imposes costs on society, and a competition analysis at the early stages of the design of a regulation can avoid these costs. This paper guides policy officials with responsibility for conducting RIA on how to identify policies that merit a competition assessment and how to conduct a competition assessment within an RIA on possible regulatory approaches. For a range of regulatory problems potential alternatives are available to policies that restrict competition and can achieve the same objectives at a lower cost to society. Significant public benefits can be obtained from even a relatively small investment of public sector resources in competition assessment processes if it is done systematically and integrated within the regulatory policy cycle.

### *Notes*

1. This chapter synthesises material prepared for the Working Party No. 2 on Competition and Regulation of the Competition Committee, combining elements of two previous papers, "Institutional Options for Competition Assessment" (Sean Ennis) and "Integrating Competition Assessment into Regulatory Impact Analysis" (Rex Deighton-Smith) that are part of the OECD Competition Assessment Toolkit (2007). For the complete Toolkit, please see *www.oecd.org/competition/toolkit*. Many delegations and outside observers have provided useful comments on this material, particularly the Working Party No. 2 Chair, Alberto Heimler. Within the Secretariat, Stéphane Jacobzone, Josef Konvitz and Bernard Phillips have provided particularly useful input.
2. In this paper of the term "regulation" is used generically to refer to all kinds of legislative instruments, including both primary and subordinate legislation.
3. Dynamic efficiency focuses on efficiency over time, with changes in efficiency resulting potentially from innovation, technological developments, the ability of firms to respond flexibly to new market conditions and of successful suppliers growing.

4. Market power of suppliers is the ability to profitably increase price, decrease quality, or decrease innovation relative to the levels that would prevail in a competitive market.
5. Infant industries are industries that may not be strong enough to survive open competition.
6. Predatory pricing occurs when a supplier temporarily sets prices that are substantially below its costs with an expectation that other suppliers will then exit or change their behaviour. The supplier would then later recoup its lost profits.
7. The 2006 OFT guidelines closely follow those of the OECD. *See: www.oft.gov.uk/NR/rdonlyres/BFD72799-03BD-428D-AB43-30408F794ACB/0/oft876.pdf*.
8. For more details, see *www.ncc.gov.au/articleZone.asp?articleZoneID=136*.
9. For more details on how to include competition assessment in RIA, see DAF/COMP/(2007)8/REV1 "Integrating competition assessment into regulatory impact analysis", OECD, Paris.
10. See *www.ncc.gov.au/articleZone.asp?articleZoneID=40*.
11. For the figures, see *www.ncc.gov.au/articleZone.asp?articleZoneID=40*.
12. Productivity Commission (2005), "Review of National Competition Policy Reforms", Productivity Commission Enquiry Report No. 33, 28 February, available at *www.pc.gov.au/inquiry/ncp/finalreport/ncp.pdf*. The review notes that direct causal links are difficult to establish empirically.
13. See OECD (2006), *Economic Survey of Australia*, Policy Brief. "Recent macroeconomic performance continues to be impressive: gross domestic product (GDP) growth since the turn of the millennium has averaged above 3% per annum and, including the terms-of-trade gains, growth in real gross domestic income has averaged over 4%, among the handful of OECD countries achieving such rapid growth; the unemployment rate has fallen to around 5%, its lowest level since the 1970s; inflation has remained within the target range; and, following a long stretch of fiscal surpluses, Australia is now one of the few OECD countries where general government net debt has been eliminated. Living standards have steadily improved since the beginning of the 1990s and now surpass all G7 countries except the United States. *Wide-ranging reforms, particularly to promote competition, were instrumental in this respect*. They promoted productivity growth, most notably in the second half of the 1990s. The greater flexibility engendered by these reforms, together with the introduction of robust monetary and fiscal policy frameworks, has also bolstered the economy's resilience to a series of major shocks over the last decade: the Asian crisis in the late 1990s, the global downturn at the turn of the millennium, followed by a major drought, the ending of a house price boom and currently, the commodity price boom." (Emphasis added)
14. This approach is already explicitly in use in Australia. The "Guiding Legislative Principle", adopted under the National Competition Policy agreements states that legislation that restricts competition should not be adopted unless it can be shown both that the benefits of the restriction to the community as a whole outweigh the costs *and* that the objectives of the regulation cannot be achieved by any other means that is less restrictive of competition. See Competition Principles Agreement, Clause 5 (1).

## *Bibliography*

OECD (2006), *Economic Survey of Australia*, Policy Brief, OECD, Paris.

OECD (2002), *Regulatory Policies in OECD Countries: From Interventionism to Regulatory Governance*, OECD Publishing, Paris.

OECD (1997), *Regulatory Impact Analysis*: *Best Practices in OECD Countries*, OECD Publishing, Paris.

Productivity Commission (2005), "Review of National Competition Policy Reforms", Productivity Commission Enquiry Report No. 33, 28 February.

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Regulatory Impact Analysis:
A Tool for Policy Coherence


*Chapter 5*

# Applying RIA to Policy Making in the Area of Corporate Governance

*Chapter 5 looks at a study within the OECD of the application of RIA in the field of the regulation of corporate governance. Noting that the requirement to undertake RIA is an established part of the regulatory systems of OECD members, this chapter examines examples of the application of RIA by financial services regulators to strengthen their evidence-based policy-making. It draws on examples from OECD experience notably; Canada, Australia, the United Kingdom, United States and the European Union. It looks at how regulators have dealt with some of the challenges to effective RIA which include; defining the problem, undertaking effective consultation, and identifying and measuring costs and benefits.*

## Introduction

The general requirement to undertake Regulatory Impact Analysis (RIA) on new policy initiatives is becoming more commonplace in OECD jurisdictions. This development has been aided by the *2005 OECD Guiding Principles for Regulatory Quality and Performance* (OECD, 2005) which promoted the use of RIA to assess impacts and review regulations systematically to ensure that they meet their objectives efficiently and effectively. However, the take-up has been neither universal across countries nor across policy branches. Thus RIA is quite firmly established in some countries in areas such as the environment and transport while other regulatory organs of the state remain relatively untouched by these developments. This is particularly so for the various policy makers concerned with corporate governance.[1]

There is nothing in principle to suggest that RIA is not a suitable technique for developing corporate governance policies. Policy decisions often appear to be reactions to scandals so that their adequacy and efficiency, including consideration of possible negative side-effects, have often been a cause for public concern. RIA demands systematic consideration of different options and so would aid better policy formulation even, or especially so, in times of scandal. The limited use of evidence-based approaches such as RIA is often put down to the difficulty, if not impossibility, of measuring benefits in this policy area and might be an important consideration with some policy makers such as a Ministry of Justice. However, full quantification of benefits is but one aspect of RIA and not necessarily the most important one.

To convince policy makers that RIA is a valuable technique also in the corporate governance policy area will require both political support as well as a change in culture. This will be made easier if one can point to successes in actually using the technique. This chapter therefore documents examples of policy makers in some jurisdictions in the OECD using RIA techniques effectively to improve the assessment of potential benefits and costs and therefore the potential effectiveness of different regulatory approaches. The examples are also relevant to practitioners in other policy areas where there is also resistance to a closer and more explicit consideration of policy alternatives.

The *OECD Principles* already recommend the use of what amounts to regulatory impact assessment in assessing policy options in the area of corporate governance. Principle I.A of the OECD Principles of Corporate Governance (OECD Principles hereafter) recommends that policy makers develop the corporate governance framework *with a view to its impact on overall economic performance, market integrity, and the incentives it creates for market participants and the promotion of transparent and efficient markets*. The OECD's Steering Group on Corporate Governance has therefore launched a study about issues that arise in the process of implementing RIA in the area of corporate governance. This chapter is based on this on-going work.[2]

The first section focuses on procedures to identify both market and regulatory failures which, *inter alia*, form the basis for government intervention even in the corporate governance area. The second section deals with *ex ante* RIA including the general approach

which might precede, and be a foundation for, public consultations. The section covers both cases where there is little quantification available, so that the analysis must remain essentially qualitative, and other areas where some quantification is both possible and desirable. Several different approaches to quantification are covered including econometric models, and potential pitfalls noted. Policy questions covered include the composition of audit committees, reporting obligations of directors, rights issues, special rights for some shares (*i.e.* golden shares), and improved disclosure.

The third section covers several processes and techniques that can be classed as *ex post* RIA. The classification *ex ante* and *ex post* is only for expositional purposes since *ex ante* analysis will often necessarily be based on *ex post* studies pointing to failures of regulatory intervention or excessive cost. Developments in this area appear to be less advanced than for *ex ante* analysis. Examples include disclosure regulations, insider trading and the impact of Sarbanes Oxley. Concluding comments are presented in the fourth section.

## Clarifying the policy questions

Regulatory impact assessment is as much a style of analysis and approach to solving policy issues in a coherent manner as it is an empirical technique and getting the policy question right is as important in corporate governance as in other areas. For example, how to stop corporate fraud and financial mis-statements, how to ensure "accurate" audits and how to control "excessive" executive compensation are just some of the policy questions that have been posed where the policy response is far from clear. The prohibition of fraud and ensuring total audit reliability are simply not possible without drastic and costly measures so that other measures based on a balance of likely costs and benefits are called for. Past measures to control executive compensation have been counter-productive with performance-based systems in the US circumventing a ban on tax deductibility for payments above USD 1 million. It is hardly surprising, therefore, that in a number of countries policy making appears to be moving in the direction of encouraging or empowering shareholders to object to compensation schemes (*e.g.* say on pay). The way the policy problem is defined has thus moved to some extent to be more in line with RIA approaches including threshold tests and market failure analysis.

### *Threshold tests to determine if policy action is justified*

The 1995 OECD recommendations on regulatory quality (OECD, 1995) highlighted the need for a "threshold test" to be undertaken to determine whether regulation, including more general legal measures, is justified. Such a test would respond to Questions 2 and 3 of the OECD checklist: "Is government action justified" and "Is regulation the best form of government action". Thus a threshold test should clearly define the problem and highlight the full rationale for government action. For example, a threshold test would clearly define the problem or the rationale for regulation to include:

- Market failure (such as a lack of, or misleading information, presence of externalities or public goods, or use of excessive market power);
- Regulatory failure (such as government imposed restriction on competition that is not in the public interest; ineffective regulation);
- Regulatory failure (such as government imposed restriction on competition that is not in the public interest; ineffective regulation);
- Unacceptable hazard or risk;

- Social goals/ equity issues, other goals etc.

Unacceptable hazard or risk might also be a rationale for whether government measures and specifically regulation can be justified. As OECD 2007 notes, risk analysis also has a wider role in RIA methodology, constituting a key means of assessing alternative approaches and having a significant role in the analysis of the appropriate degree of regulatory stringency.

From the viewpoint of RIA in the corporate governance context, more guidance would appear to be required than the broad threshold test above. This is because for RIA in a corporate governance context, it might be necessary to be clearer about the policy objectives or intermediate objectives before identifying "the problem", which might be market failure, regulatory failure, or even a risk issue, before recommending what type of regulatory intervention, if any, is required. Market failure should also be more widely interpreted. For example, bad corporate governance practices that result in an economic loss might be attributed to abuse of power by insiders rather than the more usual criteria, "use of excessive market power". A useful applied example is provided by market failure analysis in the area of financial market regulation which forms a part of the corporate governance framework. In this area there is a closer relationship between policy objectives and the type of potential market failure than in other areas of corporate governance.

### *Market failure analysis*

Market failure analysis (MFA) is a subset of threshold testing focusing only on market and regulatory failure. One very useful guide relevant for corporate governance issues is provided by the United Kingdom Financial Services Authority (FSA, 2006). As a financial markets regulator they have a clear set of objectives: preserving and enhancing market confidence, ensuring consumer protection, raising public awareness and combating financial crime. The first and last are closely related to corporate governance policy issues. These goals are in turn derived from broader government objectives such as maintaining market integrity so as to promote growth through a lower cost of capital and a more dynamic business sector.

The FSA practice is for the MFA to precede any benefit-cost analysis and it should be undertaken at the start of the policy-making process, not at the end. The MFA is largely conceptual in nature and is intended to tell policy makers whether the FSA can improve on the market solution to whatever the problem is. It is concerned with the economic case for intervention but the non-economic case also needs to be considered. By contrast, the benefit-cost analysis (CBA) is intended to tell policy makers whether the particular measure that is proposed is likely in reality to correct the market or regulatory failure in a way that produces net benefits.

According to the FSA guidance, the MFA and the initial CBA should deal with six questions. For the MFA they are: What is the relevant economic market or markets? What are the material market failures and /or regulatory failures in the relevant markets now? If no intervention or no further intervention takes place, will an improvement in economic welfare take place? Will the market failures be corrected in the short term? For the first stage of a CBA the questions are: What broadly are the regulatory options? What are the economic and other costs and benefits of the options relative to doing nothing? What further CBA might be required?

The FSA guidelines elaborate what they mean by regulatory failure and this is useful in the broader corporate governance context although some adjustments are necessary to

deal with specific issues. In its narrow sense, regulatory failure means an intervention whose economic costs were higher or economic benefits were lower than was originally expected such that the net effect is harmful or more harmful than it need have been. The latter typically occurs when there have been unintended or unforeseen consequences, which is often argued to have been the case in the initial stages of SOX404 implementation regarding external audit attestation of internal financial controls. Regulatory failure can also occur when the intervention is not correctly targeted on the relevant market failure. It can also occur when demand in the targeted market was much more sensitive to price increases than the authorities believed.

The FSA guidance as to how to answer the question – what are the material market failures and/or regulatory failures in the relevant market(s) now – is also useful in the corporate governance area more generally. The most important difference is that for the FSA the particular market failures are principally, though not exclusively, associated with their particular objectives. They propose five steps (FSA, 2006, p. 13):

- Determine which objective is the main motivation for the initiative and then determine which market failure is likely to be relevant;
- Determine whether this market failure and/or another one, is in principle relevant by considering the nature of the relevant economic market. For this purpose they recommend assuming the complete absence of financial regulation.
- Determine whether any relevant market failure identified in the above step has in principle been cured by appropriately targeted regulatory intervention (including rights or obligations created by primary legislation or the common law);
- Determine whether a regulatory failure is in principle relevant; this may be in addition to a market failure or, where a risk to objectives has been identified but the above process suggests that it is unlikely to be due to a market failure, regulatory failure may be the sole cause;
- Check that any relevant market and/or regulatory failure is material to the risk to objectives that is of concern.

FSA (2006) also provides broad guidance as to the contents and purpose of a high level or preliminary benefit-cost analysis that should only be several pages. The analytical structure is:

- What is the appropriate baseline for the CBA of the available options? Very often this will be the world without the rule since what is being assessed is the incremental impact of the proposed rule change.
- What is the appropriate baseline for the CBA of the available options? Very often this will be the world without the rule since what is being assessed is the incremental impact of the proposed rule change.
- Whose behaviour would be affected by the options, and in what ways?
- Relative to the baseline, what are each option's material economic costs and benefits? In what ways, and how far, would each option reduce or eliminate the market failures that have been identified in the MFA and that are considered relevant to achieving policy objectives?
- Relative to the baseline, what are each option's non-economic costs and benefits?

- What is the evidence on which the assessment is based? Are there any significant gaps in the evidence?

A good example relevant for corporate governance is provided by FSA (2007, Annex 1) which looks at whether disclosure requirements for major shareholders should also extend to a specific financial instrument, contract for differences. The question is whether the existing regulation constituted market failure. The study places the question firmly in the context of the rationale for the dissemination of information about the identity of major shareholders in public companies: such information should help to protect minority shareholders, help make markets operate more efficiently and thus improve market confidence. The benefit-cost study goes on to examine three options (see below).

### *The example of one share one vote and proportionality*

The analytical approach to public policy making outlined above has been used to consider whether there was a need at the EU level to require one-share-one-vote in European companies and to weaken control enhancing mechanisms. The case for market/regulatory failure where non-proportionate systems are in place, and therefore one reason for intervention, rests on the agency problem which arises when economic rights and ownership rights diverge. However, it also needs to be noted that even in firms with a unified equity structure agency problems exist, albeit ones that in principle are more easily tackled by, *inter alia*, active shareholders. For the purpose of an RIA, the potential market failures need to be kept separate in order that concerns can be precisely targeted later in the policy analysis. The typical potential market/regulatory failures include the controllers extracting private benefits of control, abuse of minority shareholders during a change in control and negative externalities whereby the demand by investors for compensation (*i.e.* through lower share prices) leading to an increased cost of capital is also paid for by other companies in the jurisdiction that might even have proportionate systems. The fundamental market failures include asymmetric information and negative externalities

Whether these potential market failures in fact exist will of course depend on other legal and regulatory aspects such as effective oversight of private benefits that also need to be considered. The points would include (European Policy Forum, 2007):

- any variation in voting rights would be reflected in the price paid by an investor;
- some may not wish to exercise voting rights but only concentrate on returns;
- differential voting systems encourage more firms to become publicly held companies since the founder entrepreneur will enjoy some protection (e.g. Google);
- other means of control that are substitutes for current mechanisms might be more costly in terms of economic efficiency such as pyramid company structures;
- the contractual relationship between investors and owners is more a market benefit than a market failure. This is especially so when investors are heterogeneous;
- market alternatives will tend to eliminate inefficient voting structures and measures such as control by the board of abusive transactions might also be a contractual solution;
- laws and regulations not directly related to the question of proportionality might have negated market failure. In the EU case, the Takeover Directive already addresses asymmetric information by requiring disclosure of control mechanisms.

The European Commission conducted an impact assessment (Commission of the European Communities, 2007) and in so doing clearly defined its objectives as being as

being to enhance investor confidence in capital markets which it said required "giving investors the opportunity to be more active across the different EU capital markets and to have confidence that the companies they invest in have sound and equivalent corporate governance frameworks". To achieve this general objective the study set a specific objective: reducing the risk of private benefits of extraction by insiders (management and controlling shareholders) to the detriment of non-controlling shareholders. The final report incorporated criticisms by the internal review committees (European Commission, 2007) that concluded that the "key problems arising from the separation of ownership and control should be presented in a clearer and more rigorous way and more coherently linked with the identified objectives. The identified options should be assessed against a thoroughly developed baseline scenario" (p. 2).

The final RIA concluded that it was not clear that "adopting a directive or a recommendation would represent the least onerous way to reduce the risk of private benefit extraction by insiders across the EU member states compared with the combined action of spontaneous market pressure, member state regulatory initiatives and the existing community legal framework. In the absence of empirical evidence on the existence and extent of shareholder expropriation, adopting further measures could entail a risk of imposing significant costs to issuers and controlling shareholders without a proportional benefit".

## Experience with *ex ante* regulatory impact assessment

As indicated above, RIA is as much a style of analysis as an empirical technique and emphasises the need to consider alternative solutions and how and why the current system actually functions. As such, it can be used to organise and to motivate consultations with stakeholders. For this purpose, it needs to be broadly understood. A useful example is provided by the explicit framework used by Australia in its current exercise to simplify the regulatory framework in which they have tackled typical corporate governance issues such as prospectus reforms to encourage rights issues and reporting by non-listed companies. The conceptual approach to costs is in general well understood so that only additional comments are in order. However, the approach to defining and measuring benefits is much more difficult so that this section describes a market-oriented proxy approach that has been developed. Several examples in the difficult area of transparency where both cost and benefits have been estimated are also described, the emphasis being on the methods.

### *A framework for public consultations*

The methodology used in Australia is an interesting example of qualitative analysis but in a formal setting which makes clear the existence of different groups (*i.e.* consumers/investors, business, regulator/government) and the differing nature of costs and benefits for each group. Typical impacts of an option on consumers might include changes in access to a market, the level of information and disclosure provided, or prices of goods and services. Typical impacts on business would be changes in the cost of compliance with a regulatory requirement and, of more recent concern, the opportunity costs of scarce company specific resources that must be used. Typical costs for a regulator/government would include the costs of administering a regulatory requirement.

The assessment of impacts in the Australian framework is based on a seven point scale relative to a "do nothing" scenario, an impact being allocated a positive rating of +1 to +3 depending on the magnitude of the relative benefit (small, moderate and large benefit

respectively), and *vice versa* for the magnitude of the relevant cost (Table 5.1). The method has now also been used by the Italian financial markets regulator (CONSOB, 2008) to examine changes to the regulations covering related party transactions. The magnitude of the rating of a particular impact associated with an option is assigned taking into account the overall potential impact on the impact group which includes whether the cost or benefit is one-off or recurring, and whether it would fall on a small or large proportion of the impact group. Thus a cost or benefit, even though large for the persons concerned, may not result in the maximum rating if it is a one-off event that only falls on a few individuals. Conversely, a small increase in costs or benefits might be given a moderate or high rating if it would be likely to recur or if it falls on a large share of the impact group. The methodology thus handles the need to discount cost and benefit streams in a qualitative manner.

Table 5.1. **Qualitatively rating an individual impact**

| +3 | +2 | +1 | 0 | –1 | –2 | –3 |
|---|---|---|---|---|---|---|
| Large benefit/ advantage compared with "do nothing" | Moderate benefit/ advantage compared with "do nothing" | Small benefit/ advantage compared with "do nothing" | No substantial change from do nothing | Small cost/ disadvantage compared with "do nothing" | Moderate cost/ disadvantage compared with "do nothing" | Large cost/ disadvantage compared with "do nothing" |

What is classed as large, moderate or small depends on the nature of the problem and the options being considered. However, as all the ratings are made relative to the status quo/do nothing option for a particular problem, the absolute value of large, moderate or small is not really important. All that matters is that within a problem assessment, the impacts of each option are given appropriate ratings relative to the status quo and each other. If that occurs, the individual impacts can be tallied to produce an overall outcome for the option that assists in assessing the relative merits of options, from a benefit-cost perspective, to address the particular problem. The methodology thus establishes a suitable framework for further consultations with stakeholders, which might result in a quantified assessment of costs and benefits that would be included in the final version of the regulation impact statement. The Australian authorities use the method in this way, asking for comments on whether all potential impacts have been considered, whether the rankings are appropriate, and whether the costs and benefits can be further quantified. This approach has been used to look at regulations covering rights issues. A similar procedure was followed in the case of the UK's RIA on a proposed new report to be made by company directors. Both examples are considered in the following section.

### *Measuring costs*

In the area of corporate governance, the definition of cost appears to require some care and require the use of incremental compliance cost: those costs that are incurred in complying with the regulation/law that would not be incurred or would not have been incurred in the absence of the mandatory rule. One study indicates that the incremental cost of regulation, legal requirements etc. varies between firms (Deloitte, 2005). Some specific requirements are regarded as being integral to the normal business practices of a firm but are regarded by others (perhaps only by a small number) as solely driven by regulation. For example, in a study of independent audit committees discussed below, it is clear that for a number of companies on the Toronto Stock Exchange, such committees are

regarded as normal business practice. In this particular case, the large number of firms that have not adopted the practice will face an incremental cost of compliance.

The Deloitte study also confirmed the need to separate start-up outlays from recurring costs, a distinction stressed in the Australian approach. The study found that the costs of changing business processes due to the introduction of new or changed requirements are often quite material, but that once embedded in a business's ongoing operations, the degree to which most such processes are seen as incremental (especially financial market regulation to which the study refers) is generally quite limited. The corollary is that the cost savings attached to the removal of any one underlying rule may only be marginal, a factor of some significance in studies considering the potential benefits of deregulation.

A number of countries have developed software based tools to assist in calculating administrative costs that are important in any RIA analysis. For example, the Netherlands has developed the Standard Cost Model for measuring administrative costs and this has now been adopted by more than a dozen other countries.[3] An independent Advisory Board on Administrative Burdens has existed in the Netherlands since 2000 and has the role of scrutinising RIA with specific reference to the quantification of administrative burdens.

A cost which has been given more emphasis in recent years in the wake on Sarbanes Oxley is the opportunity cost of firm specific resources. This is particularly the case with time devoted by the management and boards to a legal/regulatory requirement. Thus it is often claimed in the business press that boards and management have become more compliance oriented rather than strategy focused and that this is the reason for the relative decline in the rate of investment in the US. Even if the claim is accepted, testing and quantification will clearly be difficult. One study reviewed below (OFR) makes a rough estimate of the order of magnitude.

### *Measuring benefits*

Many existing studies often do not provide a comprehensive overview of the dimensions of benefits that a regulatory change might deliver, or may contain little discussion of how different types of potential benefit can be measured. On the empirical side, while costs are often estimated, existing benefit-cost analysis often leaves the benefits assessment to qualitative discussion, without measurement or explicit analysis of the mechanisms through which regulation is supposed to deliver the intended change. To address this deficiency, the UK's Financial Services Authority (FSA) has developed a framework for assessing the benefits of financial regulation that is also applicable for the most part to many aspects of corporate governance (FSA, 2006a). The framework presents at a conceptual level how benefits can be measured and guides the user to ask the right questions as a starting point for any assessment of the benefits of regulation. The empirical tools and techniques are discussed elsewhere in this chapter.

A key aspect of the FSA framework is that the benefits of regulation should be measured as the improvements in market outcomes that result from regulation. For *ex post* analysis, where the aim is to evaluate the impact of regulation already in place, measurement requires comparison of actual market outcomes in a regulated world with outcomes that would have arisen in the counter factual world without regulation. Where proposed changes in regulation need to be evaluated *ex ante*, the assessment requires measurement of the likely improvement in market outcomes compared with the status quo. The FSA framework takes the perspective of end "consumers" (*e.g.* private savers, investors, firms raising

capital) rather than intermediate consumers, and identifies seven broad dimensions of detrimental market outcomes that emerge from the combined effects of market failures, risks and incentive misalignment (Table 5.2). In the case of corporate governance issues, such as those measures seeking to lower agency costs, the classifications would require modification but the rigorous approach remains essentially the same.

Table 5.2. **Classifying types of detriment to consumers and potential benefits of regulation**

| Types of consumer detriment in the absence of regulation | Example/explanation of detriment | Potential benefits of regulation |
|---|---|---|
| Sub-optimal choice | Mis-buying of financial products | Value that consumers derive from better choice |
| Reduced choice | Lack of consumer confidence may make it less worthwhile for firms to offer certain types of products reducing choice available for the consumer | Value that consumers derive from increased choice (*i.e.* reduction in opportunity cost of not being able to buy what could be available). |
| Higher costs from operational risks | Losses that arise to consumers as a result of an operational failure by a firm (*e.g.* fraud, mis-selling); higher prices if failure is compensated by the firm and cost passed on to consumers | Reduction of expected losses and other costs associated with financial failure |
| Higher costs from financial risks | Losses that arise to consumers as a result of the default of a firm (*e.g.* pensions lost) | Reduction of expected losses and other costs associated with financial failure |
| Higher costs from systemic risks | Costs incurred by consumers due to widespread failures of the financial system | Reduction of expected losses and other costs associated with systemic failure |
| Higher prices from market power of firms | Consumers pay excessively high prices to a firm exercising its market power | Reduction of excessive prices |
| Higher costs from transaction/system inefficiencies | Consumers incur higher transaction costs (*e.g.* due to the need to monitor financial intermediaries if there is no regulator to perform this function) | Reduction of transaction costs/prices arising from inefficiencies, including consumer search costs |

*Source:* FSA, London, 2006 and Oxera.

Direct measurement of improvements in market outcomes is an option for *ex post* analysis when it is possible to compare the relevant indicator defining a particular outcome before and after the regulation. The techniques for *ex post* analysis include event studies but for *ex ante* analysis other techniques are more suitable. These techniques are discussed below. The importance of the FSA framework is that it relates the benefit to a measurement. For example, moves to improve outcomes for "consumers" arising from changing the agency arrangements of corporate governance might include improved valuations (*i.e.* share prices) and greater efficiency of resource utilisation (*i.e.* economic value added, EVA) and lower cost of capital. However, not all benefits lend themselves to measurement, even in *ex post* analysis. In Table 5.2, for example, it would be difficult to establish whether an increase in consumer choice as a result of regulation had actually contributed to improving the fit between what consumers purchase and what they really need.

While benefits measurement should aim to directly quantify improvements in market outcomes that flow from regulation or a specific rule, the FSA methodology recognizes that measurement can be difficult because, for example:

- Predictions are required;
- Market outcomes depend on a large range of factors, which cannot always be controlled to isolate the impact of regulation;

- Where the regulation is in place, data about outcomes prior to its introduction may not exist;
- Some of the relevant dimensions of market outcomes are inherently hard to measure and/or quantify in monetary terms.

These problems have led to an important innovation of the methodology: indirect measurement that involves the identification and measurement of proxies that are good and robust indicators of changes in the desired market outcomes (Table 5.3). The first step is to identify the detriment that a regulation or specific rule is supposed to mitigate (first row) and the next step is to consider the mechanism or processes by which the measure is likely to deliver the desired change in market outcome. Indirect measurement (second column) refers to quantifying intermediate improvements somewhere along the process. The final step is to confirm that the chosen proxies are suitable for drawing inferences about improvements in market outcomes. An example directly relevant for corporate governance is described below and involves a study of independent audit committees.

Table 5.3. **Illustration of indirect measurement of benefits**

| Process of identifying measurable benefits | Practical example |
|---|---|
| Identify market outcomes that regulation is intended to improve | Disclosure rule intended to reduce mis-buying by consumers |
| Identify the mechanisms by which regulation delivers the improvement | More information leads to better purchase decisions |
| Identify and measure the corresponding proxy metrics | Degree of information provision by firms |
| Validate the link between proxy and market outcome | Test whether consumers use/understand information and adjust their decisions |

*Source:* FSA.

Existing benefit-cost analysis often evaluates benefits by considering changes in indicators that are in fact proxies rather than market outcome measures. The strength of the FSA approach is that it calls for a discussion of the rationale for the chosen proxies and/or a validation of their suitability. Without this there is a risk that the estimated improvements generate incorrect inference about ultimate benefits. An example is provided by FSA (2008, Annex II) concerning a widening of major shareholding disclosure. The benefit-cost study noted that very little economic literature directly addresses the issue of major shareholding notifications (MSN) but that there is a vast body that examines the role of information in markets. This literature was then used to provide proxies for judging potential benefits from extending disclosure to include contracts for differences.

Another advantage is that the precise causal mechanisms for a benefit have to be clearly specified. In an increasing number of cases around the world, regulatory impact analysis is being called upon to make statements about macroeconomic benefits (*e.g.* innovation, growth, income distribution and poverty) for which the analytical framework is at best weak, at least when applied to less far reaching regulatory proposals (OECD, 2006).

## Case studies

### *Disclosure and transparency*

All stakeholders usually agree that transparency and disclosure are key to corporate governance systems allowing investors and others to make rational decisions. However, the balance between the costs to companies on the one hand, and the benefits to shareholders and other stakeholders on the other, are not always obvious and often subject to polemics.

This section therefore focuses on studies about transparency and disclosure including a RIA in the UK about directors' reports and two studies in Australia dealing with prospectus requirements and reporting by non-listed companies. The following section returns to this theme discussing attempts to measure benefits including those arising from improved transparency due to independent audit committees.

### *Improved reporting by board members: UK Operating and Financial Review*

The UK RIA study (DTI, 2006a) concerned the proposed introduction of a statutory directors' report for listed, UK registered companies: the Operating and Financial Review (OFR) that was intended to be a "balanced and comprehensive analysis of the development and performance of the business, including the main trends and factors underlying the performance and financial position of the business during the year, and those which are likely to affect its performance in future years". The RIA study has several best practice features: it was used in a preliminary version for public consultation and to draw out where initial cost estimates might be off the mark, including the danger that an audit requirement had not been clearly specified and thus could lead to large unforeseen costs; it considered a number of options; it considered enforcement and close specification of directors and auditors duties and; proposed follow-up studies. The RIA was also subject to an independent outside review by the National Audit Office (see below). On the other hand, benefits were not measured and the impression is gained that the policy decision to improve disclosure had already been taken so that the policy decision for the RIA is one of cost effectiveness.[4] It should also be noted that the RIA was in the context of an overall reform of company law (DTI, 2006a).

With respect to potential benefits, the RIA noted that a forward looking narrative report had been a matter of best practice for some time and was also supported by the Accounting Standards Board but that compliance had been uneven. One study quoted by the RIA from 2003 found that the forward looking narrative reports had an average length of 12 900 words, the longest being eighteen times longer than the shortest, with 47% of the content dedicated to operating performance, but only 5% to future strategy and 1% to vision and values. The RIA drew the conclusion that a mandatory requirement was therefore needed and noted that "continuing to leave to companies themselves the decision whether or not to prepare an OFR could result in shareholders not having sufficient information to understand and assess the businesses in which they have invested and to hold directors to account. It will also reduce the possibility of comparing companies' performance across the board". The reasons for market failure are only briefly enumerated.

Benefits are classified as those accruing to firms, shareholders and the economy in general.[5] Quoting a US FASB study, the RIA notes that investors benefit chiefly from the reduced likelihood that their capital will be misallocated while companies benefit from: lower average cost of capital, enhanced credibility and improved investor relations; and access to more liquid markets with narrower price changes between transactions. Some general studies are quoted in support but they are general transparency studies. They are therefore a proxy for the forward looking OFR and not definitive studies of forward-looking information where there are other mechanisms such as analysts and professional publications. The third category, benefits to the economy in general, is more questionable and might involve double counting. However, there are studies showing externalities from capital markets to growth, although they relate to transparency and capital markets in general and not to a forward looking statement such as the OFR.

The treatment of costs is closely related to the specification of alternative specifications of the proposed law. After a first round of consultations changes were made to the legislative proposal in order to better deal with issues where costs might have become excessive (Table 5.4). Costs covered preparation and distribution of the OFR including the time of directors and management, distribution and importantly, the cost of audit verification.[6] High distribution costs for the largest companies resulted in an electronic dissemination option being adopted with shareholders being able to request a printed copy. With respect to audit fees and director liability, the initial RIA elicited important responses that pointed to a significant under-estimate of expected costs. The initial draft and cost estimate required auditors to state in their assurance report: *i)* whether in their opinion the directors had prepared the OFR after due and careful enquiry; *ii)* whether in their opinion the information given in the OFR was consistent with the accounts; and *iii)* whether any matters had come to their attention, in their performance of their functions as auditors of the company, which in their opinion were inconsistent with the OFR. Apart from questions of liability for auditors, a number of respondents claimed that audit fees would rise by some 10-20% (Table 5.5) above that assumed by the initial RIA. Discussions with business groups suggested that retaining existing common law in lieu of "due and careful enquiry" and removing either the requirement for auditors to consider both the process directors follow in preparation of the OFR and consistency with any other matters arising in the course of the audit could reduce assurance costs by 60% (Table 5.5).

Table 5.4. **Summary of costs by option**

| Option number | Option | Total per annum cost in Sterling (millions) |
|---|---|---|
| 1 | Do nothing | 0 |
| 2 | Implement the Modernisation Directive only | 103.7 |
| 3 | Implement the Modernisation Directive and a non-assured statutory OFR for quoted companies | 107.9 |
| 3a | Extend OFR to large private companies | 142.9 |
| 3b | Narrow OFR to large Quoted companies | 107.4 |
| 4 | Implement the modernisation directive and a statutory OFR for quoted companies with a three stage assurance regime | 179.3 |
| 4a | Implement the modernisation directive and a statutory OFR for quoted companies with a two stage assurance regime | 137.2 |
| | NB If extended to large private companies (247.5) | |

*Source:* Final Regulatory Impact Assessment, Table 6, DTI, London.

Table 5.5. **Impact of changes to directors' care and auditors' role on audit review costs**

| | Audit fees (sterling) | Option 4 | Option 4 | Option 4a | Option 4a |
|---|---|---|---|---|---|
| | | Best case (10% times fees) | Worse case (20% times fees) | Best case (10% times fees) | Worse case (20% times fees) |
| | | | | Discount 60% | Discount 60% |
| Average quoted company | 272k | 27k | 54k | 11k | 22k |
| FTSE 100 company | 2.34m | 234k | 468k | 94k | 187k |

*Source:* Final Regulatory Impact assessment, Table 5, DTI, London.

Another key feature of the RIA was explicit consideration of enforcement and sanctions together with a cost estimate of 500 000 pounds per annum for the Financial Reporting Review Panel (FRRP). The same criminal sanctions for directors would apply to the OFR as to financial

accounts but with respect to the administrative aspect of enforcement (a court order obliging the company to prepare revised accounts) there was a great deal of concern about whether the FRRP would seek to second guess directors. The role of the FRRP was therefore clarified.

The RIA also contained a Small Firms Impact test, a Competition Assessment, a Market Structure and Company Growth assessment and an assessment of the Competitive Disadvantage for reporting companies *vis-à-vis* those that do not report. The potential effect on competition is recognised as an important issue by the OECD.[7] However, while supplementing a benefit-cost study with sectional impacts has become common (see SG/GRP(2006)3, pp. 9-13, for a list), the OECD has warned about this proliferation which has the potential to fragment and dilute a coherent economic analysis (Box 5.1).

Box 5.1. **The widening analytical scope of RIA: Potential problems**

In an increasing number of cases around the world, regulatory impact analysis of quite specific issues is being called upon to make statements about macroeconomic benefits (*e.g.* innovation, growth, income distribution and poverty, aggregate or regional employment). This development appears to be pushing RIA methodology beyond its limits and into areas where it can be simply misused. For example, (OECD, 2006) quotes the case of a RIA in Victoria, Australia where regulation was justified by its supposed effects on GDP (through import substitution) and through its positive employment effects (more labour intensive products). No mention was made of allocative efficiency questions and potential regulatory costs were ignored. Where policy proposals are wide ranging such as a big bang deregulation of financial markets, RIA is inappropriate and a full assessment of supposed macroeconomic effects requires sophisticated economic modelling based on a general equilibrium framework.

Where RIA is most useful is for less far reaching regulatory proposals (OECD, 2006) but this is inappropriate for considering macroeconomic effects. Indeed, one practitioner argues that macroeconomic variables are not the result of a single government intervention or regulation, and there is no analytical technique for assessing these impacts in a RIA and, more generally, no method is capable of determining the macroeconomic impacts of isolated microeconomic interventions, except in the most static and short term dimension. To this practitioner, the additional requirements to consider macroeconomic benefits reflect fundamental confusion about the purpose and limits of RIA.

1. See OECD (2006), *Determinants of Quality in Regulatory Impact Analysis*, Section 2.3, SG/GRP(2006)3 and for the quotation, Jacobs, S. (2006), "Regulatory Impact Analysis in Regulatory Process, Method and Co-operation: Lessons for Canada from international Trends". *Government of Canada Policy Research Initiative, Working Paper*, p. 26.

### *Reporting by non-listed companies and rights issues*

Difficult reporting and disclosure issues have been the subject of two RIAs in Australia. In Australia, rights issues must be accompanied by a prospectus but placement of shares to large institutional investors is exempt. As a result, there are few rights issues, with most placements going direct to institutional investors. At the same time, Australia has a well developed continuous reporting regime for companies so that the question arises whether this additional prospectus should be simplified or abolished.

The Regulatory Impact Statement described in Table 5.6 covered a number of alternatives and was used to solicit answers to three questions in a manner similar to the UK's OFR study discussed above:

- Are there additional costs and benefits for the above options, which are not listed?

Table 5.6. **Qualitative assessment of costs and benefits: Prospectus for rights issues**

| Option A: Do nothing | Benefits | Costs |
|---|---|---|
| Consumers | | Retail investors would continue to be disadvantaged as other forms of fundraising were used by companies to avoid the cost of preparing a prospectus. |
| Industry | Would avoid imposing any additional compliance costs on industry as they could continue to raise funds through methods not requiring prospectus disclosure. | The regulatory system would preserve a bias in favour of fundraising methods that do not require prospectus disclosure, without a fundamental policy reason for doing so. |
| Government | | |
| **Option B: Require a prospectus for all fundraisings** | **Benefits** | **Costs** |
| Consumers | All forms of fundraisings would be treated on an equal footing, by having to provide a prospectus (+2). Retail investors would be able to participate in share placements (+2). | Additional compliance costs would be imposed on listed entities through having to provide a prospectus in cases where none is currently required. Such costs may be significant depending on the amount of funds raised. Minimum costs for a small fundraising may be estimated at approximately AUD 30 000, largely in legal, accounting and other professional services fees, but would be much higher where larger amounts were raised. (–2) |
| Industry | | The imposition of additional compliance costs on fundraisings that currently do not require a prospectus could reduce the amount of funds raised in the Australian market. Larger entities may, for instance, be able to access the international capital markets at a lower cost. This could ultimately have a detrimental effect on the development of the capital markets and the financial services industry in Australia as a whole, with negative effects across all sectors of the economy. (–3) |
| Government | | This proposal would require increased oversight by ASIC, due to the larger number of prospectus lodged by the market. ASIC vets prospectuses for infringements of the contents requirements, and has the power to issue stop orders where such infringements are found. The increased costs would take the form of additional personnel and time spent on vetting prospectuses and taking regulatory action where necessary. (–3) |
| Sub-rating | +4 | –8 |
| Overall rating | –4 | |
| **Option C: Remove the prospectus requirement for rights issues subject to the obligation to provide certain defined information to the market** | **Benefits** | **Costs** |
| Consumers | This proposal would remove the bias in favour of placements done without a prospectus, leading to an increased use of rights issues. This would benefit retail investors who are unable to participate in placements to institutional investors, but would also benefit the fundraising market as a whole, as issuers would choose the most efficient means of raising the funds they require. (+3) | There will not be a reduction in the amount of information provided to investors as all relevant information will have to be disclosed either under the continuous disclosure requirements or through the provision of the cleansing notice. There may however be some loss of convenience to investors in accessing the information in comparison to the current situation, where all relevant information is summarised in the prospectus. (–1) |

Table 5.6. **Qualitative assessment of costs and benefits: Prospectus for rights issues** *(cont.)*

| | | |
|---|---|---|
| Industry | The requirement to provide an appropriate 'cleansing' notice would ensure that investors were fully informed about key information relating to the rights issue, in particular where there was a potential effect on the control of the company. (+2) Listed entities would no longer need to produce a prospectus for a rights issue. As mentioned above, the minimum cost of a prospectus may be estimated at about AUD 30 000, but could be much more where larger amounts are raised. (+2) | Listed entities would have to provide a 'cleansing' notice to the market prior to launching the rights offer. This would be done through the ASX's company announcements platform, which is a computerised system through which announcements by listed entities are transmitted to the ASX and published. The marginal cost of providing announcements using this system is small. (–1) |
| Government | | |
| Sub-rating | +7 | –2 |
| Overall rating | +5 | |

*Source:* Corporate and Financial Services Regulation Review Proposals 2006, Regulation Impact Statement: Fundraising, *www.treasury.gov.au*.

- Are the suggested relative ratings appropriate?
- Information to assist with quantification of costs and benefits was sought for inclusion in the final regulation impact statement.

Table 5.6 indicates that, on balance, option c is the preferable course of action unless major changes to the costs and benefits would be noted during consultations.

Another typical corporate governance issue and a sensitive one in some jurisdictions concerns reporting obligations for non-listed companies. Australia requires a proprietary company with no more than 50 shareholders and that has not raised money from the public to prepare and lodge an audited financial report and a directors report if it is large (*i.e.* economically significant). A 1995 Act defined large as a company that exceeds two of three criteria covering consolidated gross operating revenue, consolidated gross assets and the level of employment. With the criteria 20 years out of date, nominal growth and inflation have contributed to increasing the number of firms covered but which may not be economically important. 3 900 proprietary companies are required to prepare and lodge annual reports and a further 1 750 are required to prepare but not to lodge annual reports. The total population of proprietary companies is 1.4 million.

The average incremental cost for preparing and lodging accounts was estimated to be on average AUD 60 000. The estimate includes the assumption that many companies must in any case prepare accounts for both tax and internal control reasons (*i.e.* it is an incremental regulatory cost as discussed above).

The impact analysis covered four options including not requiring proprietary companies to prepare an annual report. The options were thus evaluated against each other as well as the status quo. The benefits in terms of cost savings were relatively straight forward although there was no information about firms that were currently exempt. The costs in terms of users no longer being able to access annual reports (*e.g.* credit rating companies, employee negotiators, credit providers) and the indirect costs to the market as a whole if people no longer have confidence in knowing that annual reports are available were not estimated. The authorities did however request information which might allow an estimate to be developed. The final recommendation thus balanced cost savings (benefits) with an assumption/judgement as to what constituted an economically important proprietary company.

The RIA is interesting in that it shows an application of the incremental cost approach. On the negative side, there was little research into proxies such as assessing whether lodged reports are even used by many stakeholders.

### *Studies involving quantification of benefits*

A major deficiency of the above studies is that they did not seek to quantify benefits, although they were still rigorous in specifying where the benefits might arise. This section focuses on two studies where there was a rigorous approach to quantification of benefits, one for the EC and another undertaken for the Ontario securities regulator.

#### *Assessing the economic impacts of special rights for shares*

An informative RIA study from the viewpoint of quantification and methodology was undertaken for the European Commission by consultants (Oxera) and also represents a systematic application of the FSA methodology concerning measuring benefits (discussed above). The study was intended to provide a systematic overview of special rights retained by public authorities in privatised companies in the EU ("golden shares"). The policy background was that the European Court of Justice had ruled in several judgements that the measures were generally incompatible with the EC Treaty. Before deciding how to respond *vis-a-vis* EU member countries, the European Commission commissioned a study to evaluate the economic impacts of such restrictions on the performance of affected companies, direct and portfolio investment, and EU financial market integration. The choice of the latter two for assessment is important given the policy objectives and competencies of the Commission. Addressing the tendency to link everything into a RIA, which is problematic and often not supported by sufficient theory, the mandate excluded an assessment in any detail of the wider social benefits or costs that may arise from special rights. The study also avoided other macroeconomic issues such as the affect on the growth rate.

Since the issue had not been empirically investigated, the study carefully listed the causal mechanisms in order to establish proxies that had already been studied or that could be studied in a new investigation. Four questions were identified that were directly relevant for the question at hand and that had been the object of empirical research: privatisation and the impact on firm performance; corporate control and the impact on firm performance; the voting rights premium and the valuation of block shareholdings; and restrictions on international direct and portfolio investment flows. In addition, they performed two other types of empirical work: an event analysis of the impact of the redemption of "golden shares" in the electricity and water sector and a comparison of companies with "golden shares" against their industry peers.

The first question of the four arises in the context of the companies in question having first been privatised – at least partially. It is therefore important to ask whether company performance increased following privatisation, and then to see what is implied for partial privatisation which is what "golden shares" amount to. A comprehensive review of the literature about changes in output, efficiency, capital investment and gearing following privatisations in the OECD area showed significant increases in the first three and significant declines in gearing (Megginson and Netter, 2001). However, a partial change from state ownership was found to have little effect on long run productivity growth and another study confirmed a negative relationship between state ownership and profitability.[8]

The second question pointed to studies of the direct impact of "golden shares" for which only one study was located. In fact, the study looked at government ownership,

suggesting a significant positive relationship between the percentage of shares held by the government and share price performance. The authors of the research attributed this to selection of only the best companies for privatisation.[9] Importantly for the RIA, the positive relationship is attributed only to state ownership and not to the benefits of state control which is the issue at hand. The study in question showed that a "golden share" led to a decline in the three year buy and hold return and "supports the hypothesis that the failure to transfer complete control to the private sector, combined with uncertainty surrounding the exercise of the 'golden share', has a detrimental effect on long run share price performance".[10]

The third question arises from tracing through the causality links: a "golden share" is often introduced to prevent hostile takeovers so that a proxy can be found in the extensive literature that addresses the relationship between the performance of companies and the likelihood of takeovers in private companies. The literature is extensive and the RIA study concluded that "while there is some conflicting evidence, overall the consensus among most authors in the literature is that a reduction in the probability of takeovers is likely to be associated with poorer corporate performance. It is also well-established that takeover restrictions prevent shareholders in potential target companies benefiting from takeover premia. To the extent that golden shares and other special rights influence the governance of firms and restrict changes in control, such arrangements are likely to have similar impacts".[11]

The third issue for proxy indicators concerns the voting rights premium: the empirical regularity of shares with superior voting power having a higher price. Although existing studies concern private companies, the findings were judged to be of relevance to the RIA to the extent that they provide an explanation both theoretically and empirically, of the value of special rights and control powers in companies. Overall, the evidence confirms that the market does value control: premia are paid for shares with greater voting rights and blocks of control. In linking the proxy back to the original question, the RIA concluded that "to the extent that special rights allow public authorities to influence manager's ability to govern firms and imply that control is not fully transferred to the private sector, the arrangements are likely to have a similar impact on firm valuation. Put differently, if public authorities withdrew the special rights and transferred control, a corresponding reaction can be expected in the market value of the companies affected by those rights" (page 12).

Finally, the study turned to the general literature on market segmentation to deal with the control of international direct and portfolio investment flows created by "golden shares". The evidence supports the case that stocks available to foreign investors are priced higher than the corresponding stocks available only to domestic investors.

The study also used another proxy which was to compare performance of companies subject to "golden shares" with comparator companies. The results were not conclusive but the study suffered from severe methodological issues: the choice of comparators was restricted to companies operating in other countries, subject to different regulatory regimes, or indeed still partly state-owned.

### *Investor confidence initiatives: Audit committees*

A good example of applied regulatory impact assessment is provided by the Ontario Securities Commission's study of a proposal to strengthen audit committees by requiring that each committee member be independent together with a disclosure about whether there is a financial expert on the committee (*i.e.* financially literate) (Ontario Securities

Commission, 2003). The study made an estimate of the number of additional independent directors required and used applied survey data to form general estimates of the total cost of implementation. Of perhaps even greater importance, the cost methodology leads to an informative analysis of likely side-effects such as a potential increase in directors and officers insurance costs. With respect to the much more demanding task of estimating potential benefits, the study uses the indirect approach similar to that of the FSA approach discussed above. They draw a connection between independent audit committees and the quality of accounting choices (earnings smoothing) and then link this to corporate valuations as reflected in economic value added. It is thus more rigorous than simply relating the decision variable (independent directors) to a market outcome, the causality chain being highlighted.

**Cost methodology.** The cost methodology is based on identifying those firms which already have independent audit committees and to estimate the additional costs associated with audit committee independence arising from committee member meeting fees, committee retainer fees, director meeting fees, director retainer fees and costs associated with D&O insurance. The study also investigated the supplementary costs associated with having an individual on the audit committee with financial expertise. The study was based on the knowledge that some companies already met the requirements of the proposed instrument. A sample of 306 companies was drawn from the population of 1 299 companies on the Toronto Stock Exchange (TSX) of which 154 companies met the 100% audit committee independence criteria. Information about board structure was used to calculate the number of new directors required. Using existing cost information, the sample means, medians and ranges of values for the cost criteria discussed above were calculated. To allow for size of company effects, the ranges were calculated for companies with assets greater than CAD 5 billion and for companies with less than CAD 500 million.

One-off costs such as search costs for new directors were separated from recurring costs and a present discounted value (PDV) over a ten year horizon was calculated using a discount rate of 7%. The time span raises the issue of assumptions about the potential increase of directors' fees as demand for independent directors increases. With no reliable reference for a probable increase in director compensation, the study assumed that the cost would rise in line with the discount rate of 7% over ten years. However, they report a sensitivity analysis that even if director compensation increases by a factor of 500% over this time period, it would not erase the net benefit projected. The study investigated potential changes in D&O insurance costs by conducting a survey of the major insurance companies in Canada. They hypothesised, correctly in retrospect, that D&O costs would not increase because improving corporate governance would lower potential losses for the insurers. This hypothesis was confirmed by the survey.[12]

The study did not consider either enforcement costs or the much discussed opportunity costs when company boards focus more on compliance rather than strategy. In line with practice in other countries, the study examined the effect on small firms and in particular whether they could face an excessive cost load.

**An econometric approach to estimating benefits.** The estimation of benefits uses the indirect approach discussed above since the objective of the proposed instrument – "strong, effective and independent audit committees enhance the quality of financial disclosure made by reporting issuers, and ultimately foster investor confidence in Canada's

capital markets" – is not directly observable and measurable. The assumed mechanisms are, however, clear from the proposal which in addition to calling for financial literacy on the audit committee and independence, also calls for them to direct the relationship with the external auditor and to review the issuer's financial statements, MD&A and earnings press releases before the issuer publicly discloses the information.

An important feature of the RIA is that the authors identify an accounting practice that can be related to the objective to enhance the quality of accounting disclosure: earnings management. The reasoning in terms of market processes is that the loss of investor confidence and the regulatory response have been based on issues relating to aggressive accounting. The latter is in turn based on information asymmetry: insiders, among both issuers and intermediaries, have access to information not available to the retail investor. When this asymmetry leads to misleading information, investors might pay excessive prices and subsequently suffer large losses when more accurate information becomes available. The uncertainty caused by information asymmetry raises the risk premium and the cost of capital for the market overall and also serves to decrease market liquidity. One aspect of aggressive accounting covers earnings management, including earnings smoothing.

The RIA acknowledges that earnings management is only one aspect and that others could include earnings misstatements and fraudulent reporting. However, these latter two would be more difficult to quantify but their omission means that benefits will be underestimated.

A number of methods have been proposed and evaluated in the literature to examine the impact and frequency of the various methods for earning management, including the examination of discretionary accruals. The RIA concluded from a review of the literature that earnings smoothing reflects most of the widely used techniques and calculated it as the average volatility in cash flow over twelve quarters divided by the average volatility in earnings. If no earnings management has taken place, the ratio should be close to one. Insiders are hypothesised to benefit from earnings management but independent directors are less likely to do so. That is the basis for the proposal.

The key element is defining the benefit, which has several dimensions (cost of capital, avoidance of large losses etc). The RIA is explicit that the proxy is the value of the firm and that market values (Tobins Q, etc.) that are often used in empirical studies of the value of good corporate governance could be misleading. This is because they might be directly influenced by earnings management but in a spurious way (*i.e.* the short run relationship will not at all reflect any "true" longer run causal connection). Rather, they use economic value added (EVA) which has since become the measure preferred in a number of recent corporate governance econometric studies. EVA takes into account the cost of acquiring capital, the returns generated from invested capital, and the amount of capital employed (Hall, 2002). The hypothesis is that audit committee independence impacts EVA through earnings management.

The RIA uses a two stage procedure: first, to estimate the impact of audit committee independence on earnings smoothing and second to determine the indirect effect of this independence on the average firm's EVA. The empirical work showed that independent audit committees lead to less smoothing of earnings by management and therefore improved financial disclosure. Increased earnings smoothing was found to have a negative effect on economic value added. Dollar amounts for audit committee independence were

then calculated for the average firm using the estimated coefficient including a one standard deviation error.

In moving to an aggregate estimate for benefits, the RIA makes several assumptions to ensure that the estimates remain conservative and realistic. First, it is assumed that the company sample used for the regressions is representative and that a half of companies already have independent audit committees. Most importantly, with an adjusted R-squared of 0.52 (*i.e.* only 52% of the variation in EVA is "explained" by the econometric model) this number is used to scale down the total benefits estimate. This last adjustment is often overlooked in empirical work.

The study found benefits to EVA for investors of CND 1 billion to CND 9.2 billion, on a PDF basis. The lower end of the benefits range measured substantially outweighs the upper end of the estimate of costs, leading the RIA to conclude that there was no need for a further refinement of the estimate.

### *Improving information asymmetry: cost and benefits of internal controls and auditor attestation*

One of the most controversial issues in recent years in corporate governance concerns attestation by management and auditors of internal controls. The most well known case is that of SOX404 reviewed in the following section on *ex post* analysis. Ontario has also introduced a similar requirement (hereafter s404) and conducted a full regulatory impact assessment (Ontario Securities Commission, 2004). The reasoning and the style of approach illustrate many issues found in other areas of corporate governance.

The RIA noted that even in the absence of regulatory mandates, management had private incentives to put in place some level of internal control. Internal controls have also been important in reducing the incidence of financial misstatements in the past (COSO, 1992). Moreover, even before discussion about s404, management in the US, Canada and in other countries was required to make materially accurate disclosure of publicly released information. Scandals in the US, Italy and in other countries led many policy makers to conclude that the existing self-interest and regulations were insufficient to prevent significant financial reporting mis-statements (*e.g.* fraud).

The economic rationale for intervention is to correct an identifiable market failure that would result in inadequate internal controls and poor financial reporting. There is market failure in that shareholders do not have as much information about the quality and effectiveness of internal controls as management and boards which might mean that they have a weaker incentive to maintain a sound system of internal controls. The market failure is asymmetric information and perhaps also a negative externality as good firms will also be penalised by an increase in the cost of capital. The study does not draw out the argument fully. Asymmetric information might lower the cost of capital for a period but bad news will result in a major reassessment and an increase in the cost of capital for all firms. Arguably, this is what happened after the Enron/Parmalat crisis so that there was a negative externality. The study recognises that the incremental cost of capital is a social cost that can potentially be reduced through regulatory intervention to correct market failure. But overregulation is also a possibility so that the policy question is whether the policy measure could generate sufficient added social benefits to offset the costs of intervention.

Unlike other studies and the idea behind RIA, the report only investigates a limited range of options: Attestation by management with and without attestation by auditors is considered. In the case of the OFR example above, the British authorities also considered a change in the type of audit statement in order to minimise costs. Other alternatives such as greater accountability by the board over internal control systems were also excluded. A possible reason for this is that the Ontario authorities wanted to retain mutual recognition with the SEC for Canadian listed companies, so that any serious deviation from the US implementation of SOX 404 could not be considered.

**Measuring costs.** The approach to costs covered both one-off and recurring costs distinguished by the size of company since studies in a number of jurisdictions points to cost burdens that fall disproportionally on smaller firms. Through interviews with a sample of companies and audit firms covering both internal costs and external costs the study was able to derive a regression equation that modelled total costs as a function of company size. The model was then used to calculate total costs for all listed companies using information about the total size distribution. Given the great differences between recurrent and initial cost it was important for the study to derive a net present value over a ten year period using a 7% discount rate. Finally, on the basis of interviews with companies and with audit firms, an estimate of audit attestation was calculated. Issuers estimated that removing the attestation requirement would reduce costs by 40% to 70%, though some of these savings might be due to a decrease in expenditure on internal controls in the absence of auditor attestation.

**Measuring benefits.** From the view point of RIA methodology, the most important aspect of the study is the calculation of benefits. In doing so the study followed the approach of Table 5.3. Following identification of the problem, four sources of benefits were noted: increased market liquidity leading to a low bid- ask spread (the negative externality noted above) and hence a lower cost of capital; overall improvement in the accuracy of financial reporting, allowing shareholder to more accurately determine the value of issuers resulting in enhanced incentives for management to increase true issuer value (another externality); and increasing the likelihood that the SEC would maintain mutual recognition. These benefits were not estimated. Rather the study focused on a fourth benefit, that the regulation would reduce the incidence of significant misstatements in corporation's financial reports that have led in the past to a significant decline in valuations. The study set out to measure this benefit.

As noted in Table 5.3 the indirect proxy method was used. The study used Ontario data on misstatements that were sufficiently large that they would have a detectible and important effect on the stock price of an issuer and combined this with research from the US on the stock price declines following misstatements (*i.e.* fraudulent financial reporting). The study derived benefits (*i.e.* the current expected cost of significant financial misstatements) by multiplying the probability of any issuer making such a misstatement by an estimate of the cost to shareholders of a significant financial misstatement. The study then estimated by how much expenditures on internal controls (including audit costs) reduced the probability of a significant financial misstatement and then calculated the expected value of the benefit. The reduction in the cost of capital for honest issuers in the form of reduced capital costs was also estimated. The probabilities were estimated using a regression technique and this also formed the basis for calculating the uncertainty about the results.

**Interpreting results.** The study is also useful since the initial results indicated that the measured costs exceeded the measured benefits (in present value terms). This led to further analysis about whether smaller firms should be exempt since a disproportionate share of the costs fall on them and about the cost/benefits of auditor attestation. It also forced a discussion about the likely size of the unmeasured benefits since at the end of the day the case for s404 largely depended on these.

## *Ex post* regulatory impact assessments

The OECD (2006) notes that *ex post* evaluations can be of three types and proposed a three part taxonomy: *Content tests* assess RIA on the basis of whether they contain the elements specified in RIA requirements and, in some cases, assess the quality of these elements; *Outcome tests* assess RIA in terms of the degree of consistency between their *ex ante* assessments of regulatory impacts and actual (*i.e. ex post)* impacts and; *Function tests* assess RIA according to their outcomes- *i.e.* their ability to facilitate the regulatory process and produce efficient and equitable regulations. While a number of countries perform some form of content test, OECD 2006 noted that in general there is little evidence of the systematic adoption of *ex post* assessments of the *ex ante* conclusions about probable regulatory impacts made in RIA documents: outcome tests. Function tests are not performed very often with respect to a RIA but more generally with respect to the regulatory intervention and whether it appears to have met expectations. This section reviews several *ex post* follow-ups including consultations and formal econometric studies.

## Content test: UK operating and financial review

An example of content testing is provided by the National Audit Office's (NAO) review of the UK's proposed operating and financial review (OFR) for companies, discussed above (National Audit Office, 2006). It should be noted that the NAO has statutory independence from the government, and, moreover, it has no responsibility for the initial assessment of the adequacy of the RIA. The NAO examined the OFR impact assessment using six criteria listed in Table 5.7 and while it found the quality of the analysis generally good, judged that there was room for improvement with respect to compliance and implementation monitoring and evaluation. They encouraged the responsible authorities to develop its post-implementation review process so as to judge whether the objectives of its regulations are being met. The Department of Trade and Industry has launched a research project to examine potential changes in methodology and processes. A content test was also undertaken in New Zealand of RIA studies in general, concluding that many RIAs were inadequate, the main areas of weakness being problem definition and the analysis of costs and benefits (NZIER, 2008).

Table 5.7. **National Audit Office evaluation of the OFR impact assessment: Criteria**

| Criteria | Key tests |
|---|---|
| Scope and purpose | State objectives clearly, analyse the do nothing option, consider non-regulatory option |
| Consultation | Start consultation early, use appropriate techniques, include all relevant stakeholder groups |
| Costs and benefits | Quantify costs and benefits where possible, use a robust methodology, test sensitivity |
| Compliance | Consider risk of non-compliance, measure existing compliance, consider how to improve compliance |
| Implementation/monitoring/ evaluation | Prepare an implementation plan, Establish procedure for monitoring and evaluating how regulation will meet its objectives |
| Competition | Complete a competition assessment. Complete Office of Fair Trading (OFT) competition filter. Consult OFT as required |

*Source:* National Audit Office, 2006.

## *Ex post* consultations

Several authorities have implemented some form of follow-up consultation and monitoring of changes to the corporate governance framework. Two similar approaches are discussed in this section. The first covers the case of a predominantly principles-based corporate governance framework, the UK, and its review of the 2003 amendments to the Combined Code. Other countries with elements of a principles-based approach have also initiated other forms of follow-up assessment For example, both the Dutch Tabaksblatt Code and the German Kodex have some form of permanent monitoring groups that report regularly and propose improvements to the standing bodies in charge of the codes. The second approach covers regulation and outlines the follow-up discussions conducted by the SEC in monitoring the impact of Sarbanes Oxley, especially Section 404.

### *The UK Combined Code*

The Combined Code was revised in 2003 to incorporate recommendations with respect to the role of non-executive directors and new guidance on audit committees. In July 2005, the Financial Reporting Council (FRC) announced a review to look at progress in implementing the code and whether any practical issues had emerged. The review was overseen by a group including representatives of listed companies, investors and other stakeholders and they considered 59 submissions in addition to other information. A consultation document with draft amendments was then issued for public comment and 38 responses considered (FRC, 2006a). Finally, a simple RIA describing the reasoning behind the choice of alternative modifications to the Combined Code was completed (FRC, 2006b).

In terms of the approach to better regulation, the most interesting aspect of the *ex post* review was that it used several specific questions to elicit responses, including information from focused surveys of companies. The questions are directly related to the fundamental objectives of the Code and so is an approach to asking whether it is achieving its objectives in a cost efficient manner. The questions were:

- Has the code begun to have an impact on the overall quality of corporate governance in UK listed companies? Are there areas in which practice has notably improved?
- Have companies come up against any practical barriers to implementing the Code?
- How informative are the corporate governance statements in the annual reports, and has there been a change in the overall level of disclosure?
- Where companies are choosing to explain rather than comply with a particular provision, how informative are those explanations and are they being accepted by shareholders?
- Has the code had an impact on the level and quality of dialogue between boards and their shareholders?
- What impact has the code had on smaller listed companies, in particular those outside the FTSE 350?

The review assembled important information about the operation of the code and did not just focus on a summary figure for the level of compliance. Contrary to some opinion, there appeared to be no systemic difficulties in recruiting non-executive directors. According to survey data received, there was an increase of almost 5% in the total number of non-executive directors in FTSE 350 companies between 2003/4 and 2004/5 and 95% of the smaller listed companies had at least two independent non-executive directors as

recommended in the Code. The review also elicited information from professional associations about how the objectives of the Code were being met. One large association of investment managers reported that "in recent years the level and quality of dialogue between boards and their shareholders has improved and the combined code has contributed to this…. Furthermore, company chairmen tend to be more proactive in meeting institutional investors" (FRC, 2006a). Evidence was also presented that the average voting level in AGMs had increased and across the FTSE All Share had reached 63% in 2005 (the FTSE 100 was lower at 59% but up from 54%).

However, a potential problem with audit committees was also highlighted by the *ex post* review. Several companies reported that they had experienced difficulties in finding suitably qualified candidates willing to serve as the audit committee member with "recent and relevant financial experience" as recommended by the Code. It was considered that this was in part because candidates were drawing parallels with the statutory requirements in the US for companies to identify a named individual as the "financial expert" that was felt to have increased those individuals potential exposure to liability. Some companies were choosing to explain rather than comply with the provision by stating that the audit committee as a whole had the necessary experience. The review highlighted this as an important issue when it comes to implementing the EU's 8th Company Law Directive that has requirements similar to those in the US.

### *The SEC follow-up about implementation of Sarbanes Oxley*

Section 404 of Sarbanes Oxley has proved controversial from the start with strong criticism being directed to the SEC for its regulations and to the PCAOB for its audit standards. It is therefore important to note that the SEC has maintained a robust *ex post* monitoring stance and, within the limits of its authority, has sought to control costs and to ensure that the ultimate objectives of the law are being met. This part briefly reviews the type of questions they posed and how they adjusted implementation in the light of the consultations that pointed to problems in achieving objectives (benefits) as well as issues of costs.

The SEC sought written feedback on the first year experience of implementation and convened a roundtable in April 2005. In their written response to the roundtable, they stated that two messages came through (SEC, 2005). First, compliance with the requirements related to internal control over financial reporting produced benefits, including a heightened focus on internal control at the top levels of management of public companies. Some argued at the time that this might be at a significant opportunity cost in terms of a reduced focus on strategy. Second, implementation in the first year resulted in significant costs. Some of these might be one-off, but the SEC concluded that other costs have continued and could continue, including some unnecessary costs due to excessive, duplicative, or mis-focused efforts.

In response, the SEC and the PCAOB provided additional guidance. The SEC's guidance focused on implementation areas that it believed needed further attention or clarification to reduce any unnecessary costs and other burdens of the new requirements. These areas included the importance of following a risk-based approach, the scope of testing and assessment, the evaluation of control deficiencies, the quality of disclosures about material weaknesses, and communications between auditors and management. The PCAOB's amended guidance focused on areas in which the efficiency of the audit could be substantially improved. Topics included the importance of an integrated audit, the role of risk assessment throughout the process, the importance of taking a top-down approach, and auditor's use of the work of others. The two institutions thus responded to accusations

### Box 5.2. **Assessment questions posed by the SEC in implementing Section 404**

For this review of the second year's experience with internal control reporting and auditing provisions, the SEC posed a number of questions including:

**Overview of the Second Year**

Have the requirements of Section 404 helped improve the quality of annual and quarterly financial statements? What are the countervailing costs of compliance?

What was the experience with the second year compared with the first year?

Management's Evaluation and Assessment

Was the additional guidance issued in 2005 helpful? Were processes for evaluating controls more risk focused in the second year? What are the biggest challenges in implementing a risk-based approach?

Were there instances where management believed that it had taken an appropriate, risk-based approach to assessing internal control over financial reporting, but modified that approach based on auditor demands?

What drove the high and costly level of documentation?

**The Audit of Internal Control over Financial Reporting**

What impact did the PCAOB's inspections of firm's first year internal control audits have on the audit process?

Were integrated audits performed in the second year?

Did the process of identifying significant accounts, significant processes, and major classes of transactions worsen or improve in the second year? If not, what is the primary difficulty in this area?

Are auditors tailoring the internal control audit to the complexity of the company?

**The effect on the market**

Do you believe that the goals of the Act are being met? Are they being met at a cost that is justified by the benefits delivered to shareholders? Is your view impacted by the size or complexity of the company?

Do investors benefit from internal control reporting? What is the source of the benefit?

Do investors and other market participants generally understand the existing definition of the term "material weakness"? Do companies' public disclosures about the existence of material weaknesses adequately inform investors and the market about the effect of those weaknesses on financial reporting?

**Further steps**

Are their specific amendments that could be made to either the Commission's rules or the PCAOB standards to improve the efficiency and effectiveness of management's assessment and the auditor's role?

that "the petty cash funds were being controlled but not the high levels where the ledger entries are made".

The SEC followed up improvements in guidance with a second meeting in 2006 to assess whether processes were more efficient and effective in the second year, and whether impediments remained to reaching a sustainable process that is both effective

and efficient (SEC, 2006). As in the discussion of the UK's review of its Code, it is informative to review the type of information the SEC was seeking in both soliciting written comments as well as in organising a second Roundtable on 10 May, 2006. They are summarised in Box 5.2. In brief, they sought to see whether adjustments at the end of the first year had proved to be effective, whether the approach had become more risk-based in the second year, the nature of remaining problems, how if at all the controls were improving management, whether investors were benefiting from internal control reporting and the specific amendments that may still be required to the rules and standards. In other words, they sought all the material that would normally be required for a RIA.

## Econometric studies: Selected examples

*Ex post* reviews of the costs and benefits of law and regulation are often carried out by academic research projects and are sometimes supported or commissioned by the authorities. In some cases, the studies perform a valuable function by identifying unintended side-effects and open questions, and could form the basis for an *ex ante* RIA regarding regulatory changes. On the other hand, results of different studies are often conflicting and unless commissioned by the authorities, focus on investigating variables only of indirect or partial interest to the authorities' policy-making objectives. The purpose of this section is simply to describe what can be done and where additional work is often necessary, rather than to draw any substantive conclusions.

### *Studies of policy changes*

In recent years, "event analysis" has been used to study policy changes and company behaviour linked to the corporate governance framework (*e.g.* tender offer regulation) (see Bhagat and Romano, 2005 for a review). Event analysis starts from the insight that equity prices are the discounted value of expected future cash flows. An "event" arises when new information arrives in the market place which leads investors to make a new valuation of this expected cash flow. Investor expectations might already include returns based on the market as a whole or a sub-set thereof so that these must be estimated and deducted from actual returns, the difference being "abnormal returns" due to the event or new information. Such returns, when converted from a rate of return to a change in the value of equity, reflect the private value attached to the action by investors and in principle would provide a net valuation of private (not social) benefits for the purpose of an *ex post* RIA of a relatively discrete change in regulation etc.

In practice, event analysis is much more difficult and as in all econometric techniques calls for caution. Three issues stand out.[13] First, defining the events must be done carefully and final results are sometimes sensitive to the choice. Adding an event with no new information (*e.g.* a signing event on something that was fully expected) will bias the result. Care is also needed to correct for other information, especially macro events affecting all companies and shareholders such as a change in interest rates on the same day. Second, a single date for an event is seldom possible since news might have been leaked before the official release/company announcement, and several days might be required till there is a full understanding of an event. This leads researchers to define an event window such as the day before (in case of leakage of information) and several days after an "event", the period being called an "event window". Results, and especially whether they are economically and statistically significant, will depend on this time frame.

Third, specifying an expected return is also far from simple with statistical and economic techniques sometimes leading to different results. It is the need to specify a baseline that leads to the need to keep an event window short. Thus even though it might be expected that markets might take some time to fully digest news, such an event window would leave the counterfactual even harder to define. In other words, as the event window is extended, the noise to signal ratio increases. A method used in practical work to deal with an extended event is to break down the periods into specific news carrying events each with a short window. The abnormal returns are then aggregated to produce cumulative abnormal returns (CAR).

Empirical work using event analysis is often complemented by cross-section regressions. Thus a study of a regulatory change using event analysis could take the abnormal returns of each event and investigate the size of the abnormal return for different types of firms, governance structures etc. The specification of the cross-section model presents all the usual issues arising with econometrics in the field of corporate governance: what is exogenous and what is endogenous. This issue is not relevant for event analysis since it is the impact of the event on the given firms which is being measured and not the potential effect on excluded firms.

Event analysis has been used, *inter alia,* to examine market integrity issues, fundamental to good corporate governance. Two case studies below cover the dissemination of corporate information and whether and to what extent information about takeovers might have been leaked ahead of the announcement resulting in insider trading. Another event study is more speculative and asks whether investors reacted positively to news of Sarbanes Oxley legislation.

### *SEC Regulation Fair Disclosure (FD). Did it work?*

Effective and efficient disclosure of information is a key feature of the Principles and principle V.E, states that "*channels for disseminating information should provide for equal, timely, and cost efficient access to relevant information by users*". Indeed, a number of jurisdictions have introduced continuous disclosure requirements. Apart from the US, there appear to be few follow-up studies. The introduction of Regulation FD (Fair Disclosure) by the SEC in 2000 represents an interesting area for *ex post* analysis since from the outset both benefits and costs were expected (or argued) to arise from the regulation. The thrust of Regulation FD is captured well in the final rule:

> Regulation FD is a new issuer disclosure rule that addresses selective disclosure. The regulation provides that when an issuer, or person acting on its behalf, discloses material non-public information to certain enumerated persons (in general, securities market professionals and holders of the issuer's securities who may well trade on the basis of the information), it must make public disclosure of that information.
>
> The SEC stated that:
>
> We have become increasingly concerned about the selective disclosure of material information by issuers. As reflected in recent publicised reports, many issuers are disclosing important non-public information, such as advance warnings of earnings results, to securities analysts or selected institutional investors or both, before making full disclosure of the same information to the general public. Where this has happened, those who were privy to the information beforehand were able to make a profit or avoid a loss at the expense of those kept in the dark.

On the other hand, there were market participants who strongly opposed the rule, arguing that the regulation would reduce the quality and the quantity of data available to market participants and reduce the overall efficiency of the markets. From the point of view of applied *ex post* RIA and econometric studies four questions arise: have the objectives set out by the SEC been achieved; has market efficiency declined; what is the nature of any side-effects and; do the benefits exceed the costs.

Only a few studies have attempted to examine whether the SEC's objectives have been achieved. One study examines directly the concerns of the SEC by testing for signs of information leakage both before and after Regulation FD was implemented but excluding a period of "contamination" when it was known by the market to be under discussion (Gadaowski and Sinha, 2005). The study uses event analysis and focuses on voluntary disclosures by companies. If there is leakage of information, this would show up by a relation between abnormal returns on the first day of the event window and those later in the window. Consistent with the premise of Reg. FD, they find a positive correlation of what appears to be preannouncement information leakage with the subsequent public reaction to the information contained in these disclosures. Consistent with the notion that Reg. FD improves fairness of the markets, they find evidence of a reduction in information leakage associated with these disclosures from before Reg. FD to after its implementation.

A large number of studies examine market efficiency but define it in widely differing ways such as flows of information, volatility etc. The results are mixed. Another study examines side-effects and finds that costs to small firms from Reg. FD have been significant: some small firms stopped being followed by analysts, and consistent with the investor recognition hypothesis, the cost of capital increased for those firms (Gomes *et al.*, 2006). It is not the place here to form a judgement, merely to note that if there are some costs to Reg. FD then an overall cost estimate similar to those for benefits would be possible although difficult given the various dimensions of market efficiency. To our knowledge this has not been attempted in the academic literature.

### *Market integrity: have new insider trading laws during takeovers been effective*

Two event studies have been conducted in the UK examining insider trading and investigating whether new powers of prosecution introduced in 2001 appear to have had an effect on an indirect measure of insider trading, termed informed trading in the studies (Monteiro, 2007, FSA, 2006).[14] The studies were conducted by the market regulator (Financial Services Authority, FSA) to develop a measure of market cleanliness in order to help evaluate the authority's overall performance. Two types of transaction were investigated: normal periodic company disclosures and takeover announcements. In the case of the latter, the announcement of a takeover was taken as a significant event, since prices invariably jump quite significantly on the announcement. The most recent study (Monteiro, 2007) uses an event window of both 2 and 5 days before the announcement and a two day post-event window comprising the day of the announcement itself and the day afterwards. The estimated returns (the baseline) is also checked for changes in the sample, including the size of firms, stock price volatility, liquidity (*e.g.* less liquid stocks might be expected to show greater price movements than more liquid stocks), innovativeness for firms (*e.g.* greater R&D might make firms harder to value), and industry affiliation.

The results of the analysis raised a number of questions for the FSA leading them to investigate directly how many persons have access to insider information during takeovers. For takeovers, the study defined market cleanliness as the proportion of significant

announcements (*i.e.* takeover announcement) where the announcement was preceded by an "informed price movement" (*i.e.* abnormal returns). They found a significant increase between 2000 and 2004 in the number of takeovers that were associated with informed price movements to nearly a third of takeover announcements. While the number declined to around a quarter in 2005 it was not statistically different from 2000, the year before the new law came into effect. They concluded that the "results suggest that leaks on insider information about public takeovers are higher than we would expect in a clean market". This could be due to the fact that the first enforcement was only in 2004 and that some time is still required for it to be effective. Nevertheless, the results for normal disclosures indicated very much lower abuse and a marked improvement since the first enforcement. The *ex post* analysis thus pointed to significant policy issues relating to whether the rules are effective in the takeover market and what makes this market special.

### *Changes in arrangements covering gate keepers: Sarbanes Oxley*

Another area where cost assessments have been formed using event analysis is with respect to Sarbanes Oxley. One study that carefully defines events and expected stock returns comes to the conclusion that the cumulative abnormal returns during the passage and implementation of the Sarbanes Oxley Act were significantly negative. Put another way, investors expected that the provisions in Sarbanes Oxley would involve private costs that far outweighed private returns. It might also have resulted from an expectation of further perceived business unfriendly legislation. Other studies have produced different results but appear to mis-classify some events and to confound days when there could have been other information impacting the market. It would be informative to examine the market reactions to the important changes in the implementation of SOX introduced by the SEC in 2005 and 2006.

## Conclusion

This chapter finds that a number of authorities in the OECD area are using RIA methods to strengthen their evidence-based policy making in the area of corporate governance. What at first appear to be insurmountable problems with implementing RIA techniques in the area of corporate governance (especially in difficult areas such as transparency, voting rights and audit committee structure) can and have been overcome by the judicious use of proxies and qualitative techniques based on a clearly defined analytical framework. This is particularly so with regards to estimating potential benefits.

The chapter indicates that there is thus no good reason for other jurisdictions and perhaps policy areas to avoid improving policy making by using the available RIA techniques. Indeed, more and more securities regulators are now moving in this direction. Other policy-making bodies might be lagging and require assistance to improve. Such assistance is also necessary given indications that not all current RIA can be judged as satisfactory. Strong political endorsement is thus still necessary and this is particularly so in the corporate governance area where the political pressure to act following a scandal can be intense.

Experience in the corporate governance area confirms lessons from other policy areas: the sooner RIA considerations are introduced into the policy-making process the better which means identifying and keeping open a number of policy alternatives. This also makes the consultation process potentially more productive and informative. In some cases there might be a need to act quickly such as during the financial market turmoil in

the course of 2008. However, best practice indicates that there should at least be an *ex post* analysis to determine whether the emergency or hastily introduced measures were indeed effective and efficient.

The OECD's Steering Group on Corporate Governance will continue to assist the diffusion of best practices in the future.

### *Notes*

1. The relevant policy making institution varies widely across OECD countries. In some it is the preserve of ministries of Economy and Finance (*e.g.* Australia, UK) while in others financial market regulators play a dominant role. Ministries of Justice might also play a key role. In other cases, the legal competence is held by sub-central governments (US, Canada). For the purposes of this paper, the term policy maker is used throughout to cover all institutional forms even though some like financial market regulators might have a greater predilection to use RIA techniques than might for example a Ministry of Justice.
2. For further information please consult *www.oecd.org/daf/corporate-affairs*.
3. These countries have formed the Standard Cost Model Network to discuss developments within the area and agree on future actions, see *www.administrative-burdens.com*.
4. The RIA notes that the concurrent introduction of a Directors report under EU company law (the Modernisation Directive, 2003) for large companies would also cover quoted companies so that there was a potential overlap between these requirements and those of the OFR so that a quoted company potentially might have to do both. To remove such duplication, the RIA noted that that "the Government is proposing that quoted companies completing an OFR will not have to duplicate information in a separate directors Report". In the event, at the very last minute, the government cancelled the OFR citing cost savings of some 10 million pounds, small in comparison to the total costs listed in the RIA, and that it would not "gold plate" EU regulation.
5. There are a number of references in the RIA to stakeholders. Indeed, in a 2004 report by MORI quoted by the RIA, the strongest support for the OFR came from CSR experts and NGO's with institutional investors split with 41% supporting and 34% opposing an OFR. This finding might suggest the presence of other information systems. See OECD (2006a) for a description of some of the mechanisms covering the area of intellectual assets.
6. For the purpose of estimation the RIA relied on a new census of "live companies": 36 000 large and medium sized UK registered companies plus 1 290 registered quoted companies. The FTSE 100 companies were treated separately since their audit costs were much higher.
7. See "Competition Assessment Guidance", SG/GRP(2006)4/ANN1.
8. See Oxera, *op cit*., p. 7 for the list of references consulted.
9. This raise the problem that privatisation is not an exogenous variable for the purpose of regressions but endogenous. Thus two equations would need to be estimated, one being the probability of privatisation. Unless the endogeneity issue is addressed, the estimated parameters purporting to show the independent affect of privatisation will be biased.
10. As quoted in Oxera, *op cit*. from Boardman, A.E. and Laurin, C. (2000).
11. Oxera, *op cit*., p. 9. The econometric problems with a number of existing studies concerns simultaneity: the causation might run from poor performance to takeover defences, rather than the other way around. See Bhagat, S. and R.H. Jefferis, 2002.
12. It is worth recalling that at the time one view was that the SOX Act would increase D&O costs (Foley Lardner, 2003). However, that study made the erroneous assumption that rising D&O costs were a function of SOX. In fact they had been rising for some time before the Act due to rising litigation and in the wake of Enron and Worldcom.
13. A fourth issue not discussed is the sample size: how many companies are included when calculating the value of abnormal returns. See Bhagat and Romano (2005), for an extended discussion.
14. The Financial Services and Markets Act (2001) introduced a civil regime for prosecuting market abuse making it quicker and allowing the FSA to take action against a broader range of conduct. The Disclosure Rules have also introduced unlimited fines for those firms which do not make timely, accurate and full disclosures to the market. However, the first enforcement action only took place in 2004.

## *Bibliography*


Boardman, A.E. and C. Laurin (2000), "Factors affecting stock price performance of share issued privatisations", *Applied Economics*, p. 32.

Bhagat, S. and R.H. Jefferis (2002), *The Econometrics of Corporate Governance*, MIT.

Bhagat, S. and R. Romano (2005), "Empirical Studies of Corporate Law", *ECGI Law Working Paper Series*, 44/2005.

Coates J. (2003), "Ownership, Takeovers and EU: How contestable should EU corporations be?"*ECGI Law Working Papers*, 11/2003.

Commission of the European Communities (2007 ), *Impact Assessment on the Proportionality between Capital and control in Listed Companies*, Commission Staff Working Document, December.

Commonwealth of Australia, Treasury (2006a), "Corporate and Financial Services Regulation, Review Proposals Paper 2006, Draft Regulation Impact statement", *www.treasury.gov.au, Canberra*.

Commonwealth of Australia (2006b), "Corporate and Financial Services Regulation Review", Proposals Paper, November 2006.

CONSOB (2008), *CONSOB issues a consultation document on the regulation of related party transactions*, *www.consob.it/eng*.

Deloitte (2005), *The Cost of Regulation Study*, Financial Services Authority, London.

Department of Trade and Industry (2006), *Company Law Reform Bill, Regulatory Impact Assessment*, London, *www.dti.gov.uk*.

Department of Trade and Industry (2006), *Final Regulatory Impact Assessment on the Operating and Financial Review*, London.

European Commission Impact Assessment Board (2007), *Impact Assessment on the commission Recommendation on the proportionality between capital and control in EU companies*, Brussels.

European Policy Forum (2007), *One share one vote: European Commission study impact assessment template*, mimeo.

Financial Services Authority (2006b), *Better Regulation Action Plan*, London.

Financial Services Authority (2006a), *A Framework for Assessing the Benefits of Financial Regulation*, London.

Financial Services Authority (2006c), *A Guide to Market Failure Analysis*, London.

Financial Services Authority (2007), "Disclosure of Contracts for Differences", *Consultation Paper*, 7/20, London.

Financial Reporting Council (2006a), *Review of the 2003 Combined Code: The findings of the Review*, January, London.

Financial Reporting Council (2006b), *Amendments to the 2003 Combined Code: Regulatory Impact Assessment*, June, London.

Foley Lardner (2003), *The increased financial and non-financial costs of staying public*.

Gadarowski,C. and P. Sinha (2005), *On the Efficacy of Regulation Fair Disclosure*, SSRN.

Gomes, A., *et al.* (2006), *SEC Regulation Fair Disclosure*, SSRN.

Hall, J. (2002), *Dissecting EVA: The value drivers determining the shareholder value of industrial companies*, University of Pretoria, SSRN abstract= 304196.

Jacobs S.H. (2006), "Regulatory Impact Analysis in Regulatory Process, Method and Co-operation: Lessons for Canada from International Trends", *Government of Canada Policy Research Initiative Working Paper Series*, 026, 2006. *http://policyresearch.gc.ca/page.asp?pagenm=pub_wp_abs#WP026*.

Megginson, W.L. and J.M. Netter (2001), "From state to market: a survey of empirical studies on privatisation", *Journal of Economic Literature*, p. 39.

Monteiro, N. *et al.* (2007), "Updated Measurement of Market cleanliness", *Financial Services Authority Occasional Paper Series*, 25, London.

MORI (2004), *Where have the goal posts gone?*

National Audit Office (2006), *Evaluation of Regulatory Impact Assessments 2005-2006*, London.

NZIER (2008), *Compliance with Regulatory Impact Analysis Requirements, 2007 Evaluation*, *www.nzier.org.nz*.

OECD (1995), *Recommendation of the Council of the OECD on Improving the Quality of Government Regulation*, adopted March 1995.

OECD (2002), *Regulatory Policies in OECD countries: From interventionism to Regulatory Governance*, OECD Publishing, Paris.

OECD (2004a), "RIA Inventory", GOV/PGC/RD(2004)1.

OECD (2005), *OECD Guiding Principles for Regulatory Quality and Performance* endorsed by the Council of the OECD on 28 April.

OECD (2006), "Determinants of Quality in Regulatory Impact Analysis", SG/GRP(2006)3, OECD, Paris.

OECD (2006a), "Intellectual Assets and Value Creation: Implications for Corporate Reporting", Paris.

OECD (2007), "Methodological Guidance and Frameworks for RIA", GOV/PGC/REG(2007)8, Paris.

Ontario Securities Commission (2003), *Investor Confidence initiatives: A Cost Benefit Analysis of Proposed Multilateral Instrument 52-110 Audit Committees*, The Office of the Chief Economist.

Ontario Securities Commission (2004), "The cost and benefits of management reporting and auditor attestation on internal controls over financial reporting", paper prepared by Charles River Associates.

Oxera (2005), "Special rights of public authorities in privatised EU companies: the microeconomic impact", prepared by Oxera for the European Commission, Oxford.

Oxera (2006), "A framework for assessing the benefits of financial regulation", report prepared for Financial Services Authority, Oxford.

Romano, R. (2004), "The Sarbanes-Oxley Act and the Making of Quack Corporate Governance", *ECGI Finance Working Papers*, 52/2004.

Securities and Exchange Commission (2005), "Staff statement on Management' Report on Internal control Over Financial Reporting", *www.sec.gov/info/accountants/stafficreporting.htm*.

Securities and Exchange Commission (2006), "Briefing Paper: Roundtable on Second-Year Experiences with Internal Control Reporting and Auditing Provisions", *www.sec.gov/spotlight/soxcomp/soxcomp-briefing0506.htm*.

Wiener, J.B. (2006), "Better Regulation in Europe", *Joint Centre Related Publication*, 06-26.

Zhang, I. X. (2005), Economic consequences of the Sarbanes-Oxley Act of 2002, *Joint Center Related Publication*, 05-07.

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# REGULATORY IMPACT ANALYSIS

## A TOOL FOR POLICY COHERENCE

Regulatory impact analysis (RIA) is a systemic approach to critically assessing the positive and negative effects of proposed and existing regulations and non-regulatory alternatives. As employed in OECD countries it encompasses a range of methods. At its core it is an important element of an evidence-based approach to policy making. OECD analysis shows that the conduct of RIA within an appropriate systematic framework can underpin the capacity of governments to ensure that regulations are efficient and effective in a changing and complex world. Some form of RIA has now been adopted by nearly all OECD members, and they have all nevertheless found the successful implementation of RIA administratively and technically challenging.

This publication brings together recent OECD research and analysis concerning methodological issues and country experiences with RIA. The collected papers cover a number of challenges to the effectiveness of RIA including: systemic factors which influence the quality of RIA; methodological frameworks that can assist RIA to improve regulation; guidance on using RIA to avoid unnecessary regulation of competitive markets; and a review of the use of RIA in the regulation of corporate governance with reference to several OECD countries. Taken together, this publication provides valuable, practical guidance on how to improve the performance of RIA systems to promote economic welfare through better quality regulation.



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