

**Research Study**

**Cost-Benefit Analysis in Canadian  
Securities Regulation**

Lawrence P. Schwartz

August 31, 2006

**Commissioned by the  
Task Force to Modernize Securities Legislation in Canada**



## Lawrence P. Schwartz

Lawrence Schwartz has provided expert quantitative economic and financial analysis and research for private and public companies and governments in major competition/antitrust, securities and regulatory hearings and in litigation concerning merger, monopolization, patent damages, and international trade. His work frequently involves econometrics, present value/discounted cash flow, sales and earnings forecasts, and financial statement analysis.

In addition to his experience as policy advisor, Office of the Chair, Ontario Securities Commission, Larry has consulted on financial-sector policy and regulatory issues to the federal Department of Finance (bond brokerage), Office of the Superintendent of Financial Institutions (securities activities of chartered banks), Ontario Securities Commission (statistical analysis of bought deals), Investment Funds Institute (regulatory fees), and the Toronto Stock Exchange (impact of 1992 Bank Act amendments on the securities industry). He was an expert economic witness for Canadian Bankers Association on student loans litigation and advised Federal Business Development Bank on privatization planning and accessing private capital markets.

As an advisor to World Bank missions to Uganda, Tanzania and Pakistan, Larry evaluated opportunities for stock exchange operations, advised central banks on financial sector policy; and recommended and obtained agreement for key reforms to securities law and regulation.

As a full-time Lay Member of Canada's Competition Tribunal from 1998-2003, he adjudicated landmark merger cases, abuse of dominance, and refusals to deal in airlines, natural resources, and waste management, and participated in numerous consent-order hearings. He was responsible for examination of witnesses, analysis of expert economic and financial reports, decision-writing, review of Tribunal procedure and research of domestic and international competition legislation.

With his previous business experience in banking and finance, Larry is a frequent writer and lecturer on competition policy and financial market regulation and has twice appeared before the Senate Standing Committee on Banking, Trade and Commerce. He has taught the corporate finance and the financial institutions management courses at the Schulich Business School, York University where he was appointed Adjunct Professor of Business, 1999-2003.



## Table of Contents

<b>1.</b>	<b>Executive Summary</b> .....	355
<b>2.</b>	<b>Summary of Recommendations</b> .....	358
<b>3.</b>	<b>Introduction</b> .....	360
<b>4.</b>	<b>Principles of Cost-Benefit Analysis</b> .....	362
	i. Cost-Benefit Analysis and Market Failures.....	362
	a) Externalities.....	362
	b) Public Goods.....	364
	c) Asymmetric Information.....	365
	d) Pecuniary Gains.....	366
	e) Summary.....	367
	ii. Other Methods of Regulatory Impact Analysis.....	368
	a) Environmental Impact Assessment (EIA).....	368
	b) Cost-Effectiveness Analysis (CEA).....	368
	c) Multi-Criteria Analysis (MCA).....	369
	d) Risk Assessment (RA).....	369
	e) Observation.....	370
	iii. Cost-Benefit Analysis: Examples in Canada.....	370
	iv. Why is Cost-Benefit Analysis Controversial? .....	371
<b>5.</b>	<b>The Statutory Basis for Cost-Benefit Analysis</b> .....	373
	i. Government of Canada Regulatory Policy.....	373
	ii. Ontario.....	374
	iii. Quebec.....	377
	iv. United States.....	378
	a) Executive Order.....	378
	b) OMB Guidelines.....	379
	c) Securities and Exchange Commission.....	380
	v. United Kingdom.....	381
	a) Statutory Requirement.....	381
	b) FSA Guidelines.....	381
	c) Experience.....	382
	vi. Observations.....	382
<b>6.</b>	<b>Cost-Benefit Studies in Securities Regulation</b> .....	383
	i. FSA Analysis of Rules for Soft-Dollar Commission and Bundling.....	383
	a) Background.....	383
	b) FSA Rulemaking.....	384
	c) Cost-Benefit Analysis Methodology.....	384
	d) Comments.....	385
	ii. OSC Analysis of Rule on Internal Controls over Financial Reporting.....	385
	a) Background.....	385
	b) OSC Rulemaking.....	386
	c) Cost-Benefit Analysis Methodology.....	386
	d) Comments.....	388
	iii. BCSC Study of Continuous Market Access System.....	389
	a) Background.....	389
	b) Cost-Benefit Analysis Methodology.....	389
	c) Comments.....	390
	iv. Cost-Benefit Analysis of Mutual Fund Governance.....	391

	a)	Background.....	391
	b)	60-Day Rule.....	392
	c)	Inter-Fund Trading.....	392
	d)	Other Issues.....	393
v.		SEC Disclosure of the Application of Critical Accounting Policies.....	394
	a)	Potential Benefits.....	394
	b)	Potential Costs.....	394
	c)	Observations.....	395
<b>7.</b>		<b>What Have We Learned?</b> .....	<b>396</b>
	i.	Requirement to Quantify.....	397
	ii.	Internal Organization.....	398
	iii.	Transparency, Review and Follow-Up.....	399
	iv.	Compliance Costs, Indirect Costs and Benefits Generally.....	399
	v.	Cost-Shifting versus Cost-Savings, Pecuniary Gains.....	400
	vi.	Implementation Issues.....	401
<b>Appendix:</b>		<b>Exhibits</b>	

## 1. Executive Summary

The Task Force to Modernize Canadian Securities Legislation commissioned this study of the role of cost-benefit analysis (“CBA”) in securities regulation. Securities commissions and quasi-regulatory entities in the capital markets are increasingly making use of cost-benefit analysis when considering and proposing regulatory reform. In the United States, the Securities and Exchange Commission is required to release a cost-benefit analysis together with proposed rules. In Canada, the Ontario Securities Commission has released a paper on their methodology for these analyses. Securities commissions are increasingly hiring an economist or a team of economists on staff for this purpose.

The Task Force requested a review of the use of CBA in Canada’s public sector generally, other methods of regulatory evaluation, examples of the application to securities regulation in Canada and abroad, and an overall assessment of CBA as an evaluative technique

Part 4 of this study reviews welfare economics and locates the rationale for regulation in the conventional analysis of market failure in a decentralized (market) economy. To the extent that regulation is a response to externalities, public goods and asymmetric information, regulation can be welfare-enhancing when the associated costs of compliance and monitoring are included. The most important attributes of cost-benefit analysis are its emphasis on individual valuations of outcomes, neutrality regarding the social merit of “winners” and “losers”, and the insistence that all costs and benefits of a proposal be considered in the analysis. Accordingly, the focus of regulatory evaluation cannot be limited solely to investor protection or even to the costs to market participants. Rather, the appropriate perspective is “national economic profitability” of the proposed regulation.

For a variety of reasons discussed, CBA is controversial and other formal methods of regulatory evaluation such as “regulatory impact analysis” are in common use. Upon inspection however, these techniques are found to have no basis in any theory of welfare and do not answer the basic question whether a regulatory change is welfare-improving. Indeed, the risk is that these techniques may lead to the adoption of welfare-reducing regulations.

At the federal level, examples of initiatives that were subject to CBA include drug evaluation fees analysis (Health Canada), new substance notification regulation, minimum energy efficiency requirements and ozone-depleting substances regulation (Environment Canada).

Part 5 of the study examines the statutory basis for CBA in Canada and elsewhere. The Government of Canada has established a Regulatory Policy that applies to all government departments and agencies. In the securities field, only Ontario has a specific statutory requirement that the Securities Commission consider the proportionality of business and regulatory costs of regulation. In addition, in its rulemaking, the Commission is required to publish a notice that includes a description of the anticipated costs and benefits of a proposed rule although, reasonably, the Commission is not bound by its analysis of costs and benefits.

In the United Kingdom, the Financial Services Authority also faces a statutory obligation to consider whether the burden or restriction imposed is proportional to the benefits. The Authority has issued guidelines for its staff that establish CBA as part of the general policymaking process, as opposed to an analysis to justify a particular decision.

In the United States, departments and executive agencies of the federal government are required to conduct CBA under President Clinton's 1993 Executive Order. In 2003, the Office of Management and Budget released guidelines for compliance with the Order. However, the Securities and Exchange Commission is not bound by the Order or the guidelines because it is an independent, rather than an executive, agency.

The U.S. experience is instructive. Although CBA is commonly used in areas such as health, safety and environmental regulation, there are instances where courts have specifically ruled that CBA is not to be used because the "public interest" overrides any consideration of costs and benefits.

Part 6 of this study discusses five examples of CBA in securities regulation: the FSA regulations regarding soft-dollar commissions; the Ontario Securities Commission proposed rules on internal controls over financial reporting (similar to s.404 of the Sarbanes-Oxley Act in the United States); the OSC proposed rules for mutual fund governance reform; the SEC disclosure requirements for the application of critical accounting policies; and the BCSC proposal for continuous market access. These studies demonstrate a wide variety of expertise in, and commitment to, the use of CBA in regulatory evaluation.

On the basis of the above, Part 7 draws several conclusions about CBA and its implementation in securities regulation in Canada. The requirement to quantify all costs and benefits in commensurable terms is sometimes difficult to meet. This issue arises in all areas of application and is therefore not an objection to the adoption of CBA in securities regulation. Where costs and benefits are subject to

considerable uncertainty, care must be taken to prevent the quantified factors from dominating other important concerns.

There is a shortage of qualified professionals with the requisite knowledge and experience in CBA, and an even greater shortage of those with backgrounds in capital markets. For this reason, and for reasons of independence, regulators should contract out analyses of major regulatory proposals to specialists. There is also an important role for self-regulatory bodies and other interested parties to present such studies in support of their positions.

The various studies undertaken to date by Canadian securities regulators have been exposed to the public. This practice is highly desirable and could be complemented by formal peer review of major initiatives.

Industry participants understandably emphasize the costs of compliance, and regulators should consider such costs. However, an evaluation limited to compliance costs risks making serious mistakes. Under the framework of “national economic profitability”, a complete CBA requires a consideration of costs and benefits beyond those that fall upon the parties most directly affected.

CBA makes a key distinction between cost-savings to society as a whole and cost-shifting within society. A regulation that merely shifts costs and risks to other parties or sectors of the economy has not reduced costs borne by the economy as a whole and has not increased social welfare. Proposals to change the regulation of disclosure raise such concerns if, by reducing the costs to issuers, the regulation simply imposes additional burdens on investors. In such cases, the gains to issuers are pecuniary only; there is no social benefit.

The FSA’s experience in implementing its requirements for CBA in the U.K. also raises important questions. There is a strong sense that CBA has become the final step in the process of gaining support for a particular outcome, rather than a methodology for evaluating potential outcomes. There is also a concern that the studies are too limited in their scope and constrained by lack of resources and/or expertise on the part of those responsible for them.

These lessons provide the basis for recommendations that the Task Force may wish to consider.

## **2. Summary of Recommendations**

The Task Force to Modernize Canadian Securities Legislation in Canada may wish to consider the following recommendations for enhancing the role of cost –benefit analysis in Canadian securities regulation.

**Recommendation #1: All Provinces should, following Ontario, amend their securities legislation to emphasize the goal of achieving fair and efficient markets and direct their regulatory bodies to implement cost-benefit analysis. A national regulator should have the same obligations.**

**Recommendation #2: Cost-benefit analysis should be required for all major securities regulatory initiatives, and regulators should produce uniform guidelines for CBA including a definition of what constitutes a “major” initiative.**

**Recommendation #3: Anticipated costs and benefits of proposed regulations should be quantified and expressed in commensurable terms wherever possible.**

**Recommendation #4: Best estimates of costs and benefits should be presented along with a description of uncertainties.**

**Recommendation #5: Regulatory options should be identified and evaluated as part of the normal policy development process.**

**Recommendation #6: Securities regulators should not be strictly bound by cost-benefit analyses. However, when they adopt a regulation despite reliable evidence that the benefits are significantly less than the expected costs, they should provide an explanation.**

**Recommendation #7: Regulators should routinely commission cost-benefit studies of major initiatives by knowledgeable external experts.**

**Recommendation #8: Self-regulatory bodies and other interest groups should be encouraged to support their positions on regulatory issues with cost-benefit studies of their own.**

**Recommendation #9: All cost-benefit studies should be available to the public on a timely basis.**

**Recommendation #10: Regulatory bodies should devote resources to building internal capacity to support and critically evaluate cost-benefit analyses, and to conduct studies where time, resources and independence concerns may be less critical. The professional staff should also undertake follow-up studies.**

**Recommendation #11: Regulators should establish an external advisory committee on cost-benefit analysis consisting of academics and disinterested professionals with relevant backgrounds to advise on the strengths and weaknesses of particular studies.**

### **3. Introduction**

The Task Force to Modernize Canadian Securities Legislation was established by the Investment Dealers Association of Canada in June 2005. In its mandate to study regulatory issues associated with investor protection, access to capital, enforcement, governance and regulatory burden, the Task Force expressed interest in the role of cost-benefit analysis in the evaluation of regulatory proposals. It commissioned this study to review the principles of cost-benefit analysis and the experience with it in Canada and abroad.

Cost-benefit analysis is finding increasing acceptance as a tool for evaluating prospective regulations in the fields of health, safety, environment and, in financial services, particularly in securities markets.

Whether as a response to a statutory requirement or as a tool adopted voluntarily by government regulatory departments and agencies to assist them in policy analysis, cost-benefit analysis has become the principal analytical method in the United States and United Kingdom and, increasingly, in Canada.

The application of cost-benefit analysis to securities regulation in Canada is relatively recent, with the publication of several studies by regulatory agencies in Ontario and British Columbia, and it is likely that cost-benefit analysis will find even greater acceptance in the anticipated national body that is currently receiving consideration by the federal and provincial governments.

Securities regulation is complex; it affects the efficiency of securities markets themselves and thereby the national economic development. Directly or indirectly, securities regulation also reflects government's concern for the distribution of income and wealth in society, the protection of small and relatively uninformed investors, and the separation of political influence from securities administration and enforcement. Any assessment of the contribution of cost-benefit analysis to securities regulation requires a firm understanding of what cost-benefit analysis is, and what it is not.

This study is divided in four parts. The first part reviews the principles of cost-benefit analysis and the role of regulation from the perspective of conventional welfare economics. It also discusses alternate evaluative techniques and presents some examples of its adoption in Canada in fields other than securities regulation. The second part of the study describes the statutory basis for cost-benefit analysis in Canada with special attention to the Securities Act (Ontario). Developments in the United Kingdom and the United States are also discussed.

Next, five cost-benefit studies are reviewed: the U.K. regulations regarding soft-dollar commissions; the Ontario Securities Commission proposed rules on internal controls over financial reporting (similar to s.404 of the Sarbanes-Oxley Act in the United States); the OSC proposed rules for mutual fund governance reform; the U.S. SEC disclosure requirements for the application of critical accounting policies; and the British Columbia Securities Commission proposal for continuous market access.

Based on this experience, the study then discusses the strengths and weaknesses of cost-benefit analysis and argues that it is conceptually correct and is as applicable to capital markets regulation as it is to other areas. There are significant concerns, however, with respect to resource availability and organizational commitment.

#### **4. Principles of Cost-Benefit Analysis**

This chapter examines cost-benefit analysis as an analytical technique for improving social welfare and its roots in welfare economics. The chapter then briefly compares some alternate methodologies for regulatory impact assessment, and provides some examples of regulatory assessment in the federal government.

##### **i. Cost-Benefit Analysis and Market Failures**

Cost-benefit analysis is an extension of conventional welfare economics that deals with the question “when is a change desirable?”. In conventional economic theory, decentralized (competitive) markets allocate economic resources efficiently; in such markets a reallocation of resources through regulation cannot increase total output and therefore there is no need for regulation in pursuit of that objective.

However, changes might be desirable where the decentralized market fails to achieve efficiency; such market failures are studied in welfare economics and include *externalities*, *public goods*, and especially in connection with financial markets, *asymmetric information*. Considering these sources of market failure helps to establish the proper role and requirements of cost-benefit analysis<sup>1</sup>.

##### **a) Externalities**

Industrial air pollution is the classic example of an externality. In its normal operation, a factory that discharges smoke into the air imposes external costs on surrounding residents in the form of health dangers that reduce aggregate welfare in the community. Operating in a decentralized market, the factory has no incentive to take these costs into consideration when determining its profit-maximizing technology and level of output and thus, the regulation of emissions may raise aggregate welfare. Such regulation may take the form of required changes to production technology, the input mix, or output restrictions.

The word “may” is important because regulation itself is costly, especially given the costs of administration and enforcement. Indeed, such costs may suggest that, to increase aggregate welfare,

---

<sup>1</sup> This discussion illustrates basic principles of cost-benefit analysis. It is not intended as a manual of procedure, e.g. United Nations, Guidelines for Project Evaluation, New York, 1972; Canada. Benefit Cost Analysis Guidelines, Treasury Board Secretariat, draft, 1998 (available at [www.tbs-sct.gc.ca/fin/sigs/revolving\\_funds/bcag/bca2\\_e.asp](http://www.tbs-sct.gc.ca/fin/sigs/revolving_funds/bcag/bca2_e.asp))

regulation of the residents is preferable to regulation of the factory. For example, the health risks may be avoided by relocating the residents through zoning or by requiring them to install filters in their homes. The optimal regulation would be determined by a rigorous consideration of all available alternatives and the selection of the least-cost alternative having regard to the costs imposed on participants and the costs of regulation itself.

Cost-benefit analysis is concerned with the costs and benefits to society as a whole in each alternative. The lowest overall cost to society may indeed be the option of regulating the output level of the factory. Depending on the number of factories, monitoring and enforcement costs may be high. Alternately, imposing costs on both the factory and the residents may minimize that cost. In all instances, however, the proper regulation is the one for which the benefits exceed the costs by the greatest amount.

In this regard, cost-benefit analysis is individualistic. The analysis is based on the costs and benefits it imposes on all individuals affected -- be they consumers, shareholders, managers or simply bystanders, whether now or in the future.

It is tempting to suggest that in the analysis of pollution such detailed consideration should be short-circuited in favour of the residents: especially if the factory owners are wealthier than the residents, it should be the factory that makes all the changes and those costs should be borne by the factory owners (who presumably would be prevented by further regulation from passing on the cost increases through higher prices to consumers). If social decisions are to be made in this way, i.e. by assigning greater social merit to residents than to factory owners at the outset, cost-benefit analysis will be of little assistance because welfare economics is silent on how such weights should be determined. The presumption of neutrality in weightings for wealth or other criteria, at the outset at least, is fundamental to determining the least-cost regulatory solution to society.

Even if weights are to be determined in designing regulation, it is not necessarily easy to do, particularly in securities markets. If the criterion is wealth, a company's shareholders are not necessarily wealthier than its customers. If the criterion is financial acumen, the professional management of pension and mutual funds means that the smaller, less-sophisticated plan members and unitholders are not disadvantaged as compared with larger shareholders. As a result, the analysis of regulatory options should be premised on the equal merit of the interests of individuals affected.

## **b) Public Goods**

In decentralized markets, consumers express their preferences for different goods and services by their expenditures. Suppose there were goods or services that could only be consumed jointly, i.e. where the acquisition by one consumer necessarily provided the same amount of that good to one or more consumers. Conventional welfare economics has shown that in decentralized markets consumers will not express their preferences for such goods through expenditure. Rather, their market demand will tend to understate their preferences on the expectation that they will benefit from the consumption decisions of others. Accordingly, the market will not produce such “public goods” in the efficient manner associated with decentralized markets and regulation or direct public provision may be required to achieve the efficient level of output and consumption of such goods and services.

The standard example of a public good is national security. While sought by all citizens, no one citizen will be willing to pay for the provision of national security because, unlike privately consumed goods and services, the benefits of individual choice will accrue very largely to others. Accordingly, the provision of national security falls on the public sector.

Public confidence in capital markets is a feature of those markets that all market participants including investors value. It increases the flow of funds through financial markets and the efficiency of those markets. However, it is a public good: no single participant will have the incentive to pay for its provision because the benefits accrue to all participants. Indeed, market participants that “pay” for such confidence by observing strict, self-imposed codes of conduct and self-regulation may, as a result, be less profitable than those that do not; those unethical participants are “free-riders” on the confidence-building measures of ethical participants.

If the capital market is to operate efficiently, some form of regulatory response is required. But since free-riders cannot be detected *ex ante*, the regulatory costs incurred to increase public confidence will be imposed on all market participants. The range of regulatory responses typically includes capital-adequacy requirements, account-opening procedures, inspections, membership in contingency plans, etc. These regulations must be applied to all market participants even though most of them are not free-riders.

Public goods and free-riding also arise in the governance of the large corporation with many small shareholders. No individual shareholder will undertake the degree of monitoring of management that

would be needed to determine the extent to which managers were fully maximizing shareholder wealth. The benefits of monitoring are public, accruing to all shareholders, while the costs would be borne privately. To some extent, the establishment of the corporation's board of directors mitigates this divergence between social benefits and private costs.

This discussion highlights the distinction between "willingness to pay" and "ability to pay". The welfare economics of a proposed change is solely concerned with the former concept, which expresses individual valuations or preferences. Where decentralized markets exist, the aggregate willingness to pay is reflected in the demand curve for the good or service. As public goods do not appear on the market, some incentive for individuals to reveal their preferences correctly must be established, or the provision must be based on some form of collective action.

### **c) Asymmetric Information**

Asymmetric information is a particularly important source of failure in financial markets. It reflects a situation where economic agents do not have the same information and where that information is incomplete and, at times, biased. For example, when issuers and promoters can distinguish bad equity investments from good ones but investors cannot, their investment performance will suffer and they will direct their savings to lower-risk instruments. As a result, there will be only a limited and inefficient market for risky assets. The costs of relying on decentralized markets may therefore be quite large, particularly when considered over time.

Regulation is the rational response to such market failures. Alternatives include the regulation of market participants and/or the imposition of mandatory disclosure requirements on issuers.

Nevertheless, the costs and benefits of such regulation must be carefully considered for their own efficiency: the comparison of total cost and total benefits leaves open the possibility that some regulations are not contributing positively to welfare. Thus, even if the equity market is deemed to be working well in a given regulatory scheme, it may still be the case that improvement in the efficiency of that market through additional regulation could be cost-justified. Equally, the liberalization of the regulatory regime may reduce costs to society by more than the consequential reduction in market efficiency.

Accordingly, proponents of cost-benefit analysis of regulation maintain that costs and benefits of regulatory proposals be examined both in total and at the margin (or incrementally). Stated otherwise, the

costs and benefits of a regulatory proposal must be measured in relation to some meaningful “baseline” situation. For example, regulations regarding mandatory disclosure are sometimes developed on the basis that the costs and benefits thereof would be the same whether existing disclosure rules are taken into account or not. Thus the costs and benefits of all proposed disclosure regulations are evaluated, implicitly or explicitly, with respect to the unregulated environment.

This situation is not lost on issuers, who experience the incremental cost each time another regulation is introduced. Determining the proper baseline for evaluating the costs and benefits is important because incremental benefits tend to diminish as additional regulations are introduced while the incremental costs may rise dramatically. While the idea of asymmetric information commonly provides the rationale for regulating, it does not establish that the next rule has positive net benefits.

#### **d) Pecuniary Gains**

As noted above, the cost-benefit analysis of a proposed regulation guides the inquiry into whether a change is desirable. More specifically, it poses the question whether total output could be expected to increase by reallocating economic resources through regulation. It is therefore important to distinguish benefits that represent increases in output from those that accrue to certain parties at the expense of others. Benefits of the latter type are pecuniary gains rather than real gains.

To illustrate with a simple example, the removal of domestic ownership regulations on securities dealers in Ontario in 1986 allowed foreign dealers to enter the market. As a result, some portion of the trading activity and profits of the domestic dealers was captured by the newly-established foreign dealer subsidiaries. If that shift were the only result of the regulatory change, then there was no increase in total output: the benefits that accrued to the foreign dealers came at the expense of the domestic dealers.

In fact, although no formal cost-benefit analysis was undertaken, the regulators considered that the introduction of foreign dealers into the Ontario market would bring new capital, increased expertise, and heightened competition that would increase efficiency and real output.

In evaluating the costs and benefits of securities regulatory proposals, it is important that purely pecuniary gains be excluded. Other forms of policy analysis that do not make this distinction may identify gains to certain groups, but not to society as a whole.

**e) Summary**

Clearly, there are strong reasons to regulate securities markets in the interest of efficiency: unregulated markets are beset by externalities, free riding on public goods, and asymmetric information. These sources of market failure have important implications for the long-term development of the Canadian economy and therefore regulation is appropriate.

At the same time, regulatory initiatives are themselves costly and their imposition entails the reasonable belief that the resulting efficiency gains exceed the additional costs to all market participants and to society as a whole. Viewed in this way, the formal analysis of costs and benefits has much to offer in terms of establishing this reasonable belief.

The costs and benefits of regulation that should be considered are those that fall on all members of society, now and in the future. However, the tendency in securities regulation has been to focus on only certain subsets of society. Traditionally, the focus on “investor protection” limited the range of regulatory alternatives considered and the benefits and costs of those alternatives. Similarly, industry’s concern for the direct cost of regulation has also tended to limit the scope of regulatory review.

Properly conceived as a tool for enhancing aggregate social welfare, cost-benefit analysis avoids the charge that it favours the interests of one group over another. Rather, it considers the costs and benefits to all individuals in society. Thus, it may be said to concern “national economic profitability” rather than solely the private profits of market participants or the welfare of investors. In light of the impact of securities markets on aggregate economic performance, this perspective is appropriate.

The adoption of cost-benefit analysis in regulatory analysis appears to be growing in the leading jurisdictions in matters relating to health, environment, safety, and increasingly in the financial-sector. It is a development that Canada should consider seriously.<sup>2</sup>

---

<sup>2</sup> See, for example, the 2005 review by Pearce, D. et al, “Cost-Benefit Analysis and the Environment: Recent Developments” for the Organization for Economic Cooperation and Development, (the “OECD paper”)

## ii. **Other Methods of Regulatory Impact Analysis<sup>3</sup>**

While cost-benefit analysis has strong links to conventional welfare economics and can be recommended on this basis alone, there are other decision-making procedures that are used in evaluating regulatory proposals. The reasons for adopting other procedures include:

- cost-benefit analysis demands too much information;
- cost-benefit analysis is applied welfare economics and requires expertise therein; and
- cost-benefit analysis takes too long for political decisions.

Briefly comparing some of these other procedures to cost-benefit analysis reveals that, conceptually at least, the former are not designed to answer the questions that are central to the latter.

### a) **Environmental Impact Assessment (EIA)**

EIA is a set of procedures for collecting information about the environmental impacts of a project, policy or regulation and for measuring those impacts. Its concern is for those impacts that conventional analysis omits; accordingly, it is a complement to, rather than an alternative to, cost-benefit analysis. However, EIA does not attempt to express environmental impacts in units (i.e. money) used in cost-benefit analysis and therefore does not answer the question whether the benefits of the proposal exceed the costs. Thus, it offers no corresponding decision rule (e.g. benefits must exceed costs).

### b) **Cost-Effectiveness Analysis (CEA)**

CEA derives a ratio of effectiveness (E) to cost (C) for a specified alternative. However, E and C are typically measured in different units as in, for example, the number of lives saved per dollar of project cost. As such, the ratio says nothing about whether the project is worth undertaking. If a dollar value could be derived for lives saved, then the ratio would indicate whether the savings exceeded their cost, but CEA does not purport to do this.

On the assumption that one or more of a set of projects will be undertaken, CEA can rank those projects on the selected dimension, but it does not identify whether the selected project is itself worth doing. As

---

<sup>3</sup> This section is drawn from chapter 18 of the OECD paper. See *supra*, footnote 2.

distinct from the individualistic cost-benefit analysis, CEA relies heavily on experts for the ultimate decisions.

**c) Multi-Criteria Analysis (MCA)**

CEA does not indicate how ratios involving different dimensions are to be combined to evaluate a project or regulation. MCA addresses this problem by scoring and weighting the dimensions, and then aggregating in some way.

To illustrate, a policy might, according to expert evaluation, score 6 out of 10 on one dimension, 2 out of 10 on another and 7 out of 10 on a third. The experts may regard the first dimension as twice as important as the second, but only half as important as the third. The weighted average score for a project can be calculated and assigned to that project, and the project to be selected is the one with the highest such score; more sophisticated aggregation methods are available.

As with CEA, MCA can rank alternatives but it cannot evaluate whether a given alternative should be accepted or rejected. Thus, the project with the highest weighted average score could easily be one for which the costs exceed the benefits.

**d) Risk Assessment (RA)**

RA examines the health or environmental risks of a product, process, policy or project. Such assessments might be expressed as the probability of some adverse effect from a product, or the number of times a given outcome obtains in a particular population.

Unlike cost-benefit analysis, RA provides no decision rule. The typical decision is the result of an expert opinion on the level of “acceptable” risk, a public survey, or an observation that the relevant population tolerates the existing risk level. Whether benefits of the project may compensate society for the increase in risk is not determinable in RA procedures.

Nevertheless, the importance of risk is sometimes overlooked in cost-benefit analysis. Where the costs or benefits are very large but highly uncertain, this risk should be taken into account.

**e) Observation**

It should be clear that, whatever their merits, these alternatives to cost-benefit analysis are not substitutes. They may indeed be quicker, less demanding and more acceptable politically, but they are not individualistic or less dependent on expert input than cost-benefit analysis and, lacking a basis in a theory of social welfare, they offer no decision rule.

Of particular concern is the failure of these methods to address pecuniary gains. If one of these methods favours a particular policy, but the benefits simply accrue to one group in society at the expense of others, there is no social gain. The challenge, therefore, is to improve cost-benefit analysis with inputs from these other methods, rather than to reject it in favour of methods that may approve welfare-decreasing policies.

**iii. Cost-Benefit Analysis: Examples in Canada**

Canada's experience with regulatory reform has emphasized "regulatory impact analysis". Given its emphasis on the rational analysis of regulation, cost-benefit analysis would be expected to form an integral part of the reform process. As summarized in Exhibits 1-4 of the appendix, four case studies drawn from a study for the Treasury Board Secretariat will illustrate the extent to which this has occurred<sup>4</sup>.

It would appear that only one - Minimum Energy Efficiency Regulations - attempted to assess costs and benefits in detail. However, this assessment concerned a major policy development that had very large associated costs and benefits. The other three apparently did not study benefits in any detail, but the indicated costs were quite small in comparison.

Anticipated benefits were generally not explicitly quantified. One reason for this may have been the sensitivity involved in assigning monetary values to lives saved in both the New Substance Notification Regulation and the Ozone-depleting Substances Regulation - Methyl Bromide. However, in each case, the number of lives saved was estimated, indicating that such quantification was clearly undertaken although implicitly. This indicates that there may be value in the centralized determination of such

---

<sup>4</sup> These summaries are provided in Treasury Board of Canada Secretariat. Public Affairs Branch. "Regulatory Reform Through Regulatory Impact Analysis: The Canadian Experience", Managing Better, Number 14, Evaluation, Audit and Review Group, February, 1997 (available at <http://publicservice.tbs-sct.gc.ca>)

critical estimates (as is done with the social discount rate) in order that line regulatory departments and agencies use common estimates.

It also appears that the costs considered are those that the proposed regulation would impose on producers. This perspective may be too narrow and may lead to a narrower range of alternatives to be considered. The study for the Treasury Board Secretariat addresses this point:

“Second, good analysis requires resources. Because of limited budgets, innovative alternatives to regulation are frequently dismissed without exploring the detailed design options that would overcome initial concerns about their implementation.”<sup>5</sup>

If a regulatory agency is committed to useful cost-benefit analysis, it should expect a substantial investment in human and capital resources.

The study for the Treasury Board Secretariat also points out that cost-benefit analysis does not “cope well with non-quantifiable criteria which may be the most important”. As an example, the study refers to an instance in the Ottawa area where an unusually large number of cases of meningococcal infections created considerable public fear about the safety of school children. As a result, public authorities committed resources to an inoculation programme that, from the perspective of pure risk reduction, was not cost-effective. The study then observes that the decision was taken on the basis that it was necessary to reduce the “near-panic situation among parents”.

Somewhat surprisingly, the study for the Treasury Board Secretariat concludes that this situation is not well-handled by cost-benefit analysis because it is difficult to develop a quantitative proxy for “peace of mind”. Even if such a proxy were available, it is unlikely that local authorities would have adopted it unless it contributed to supporting the decision that the parents in the community had sought. Clearly, the problem here is not with the procedures of cost-benefit analysis.

#### **iv. Why Is Cost-Benefit Analysis Controversial?**

For all of its apparent advantages, cost-benefit analysis has received considerable criticism. Criticism appears to focus on instances where the analysis produced the wrong outcome, where the outcome was

---

<sup>5</sup> *ibid.*, at 10.

correct but politically unacceptable or where, as with human life, the attempt to estimate a quantitative value is held to be undignified.

In the United States, courts have held that certain environmental and safety statutes prohibit or limit the use of cost-benefit analysis in rulemaking. Such laws apparently require the government agency or department to regulate in the “public interest”, i.e. without regard to costs or economic consequences.<sup>6</sup>

Unlike health and safety, financial-sector regulation does not generally require detailed inquiry into the value of human life, so that criticisms based on dignity are unfounded.

However, “public interest” considerations are frequently invoked in Canadian securities rulemaking. To the extent that such considerations are used to justify rules and regulations whose costs greatly exceed their benefits, it is likely that those rules are not in the public interest.

On balance, the criticism of cost-benefit analysis as a tool for securities rulemaking is likely based on practical concerns that the required data are hard to come by, that the analysis is time-consuming and perhaps unnecessary when the only acceptable decision is already apparent to regulators, and that policymakers do not understand it and reject non-traditional ways of doing their jobs. On these concerns, the public interest is apparently achieved by not diverting from the status quo.

The more appropriate criticism is that cost-benefit analysis, even when it is done well, cannot answer questions about distributional matters, i.e. the merit-weightings discussed above. An efficient capital market can be achieved with different configurations of winners and losers, and conflicts over such matters are not part of the analysis. At the same time, efficiency is itself a goal to which virtually all participants would subscribe, simply because inefficient capital markets have important consequences for social welfare now and in the future.

---

<sup>6</sup> See Sherwin, E., “Cost-Benefit Analysis of Financial Regulation: Why Dollars Don’t Always Make Sense in SEC Rulemaking”, Harvard Law School, April 27, 2005 at 22.

## **5. The Statutory Basis for Cost-Benefit Analysis**

Cost-benefit analysis in securities regulation is increasingly a requirement that governments impose on regulators or regulators impose on themselves. In some jurisdictions, the requirement is imposed by statute; in others by directive pursuant to authorities in other legislation.

Some insight into the issues posed can be gained by examining the institutional basis for cost-benefit analysis in other jurisdictions.

### **i. Government of Canada Regulatory Policy**

The federal government's approach to cost-benefit analysis and regulatory impact assessment more generally is set out in "The Government of Canada Regulatory Policy", introduced in 1986 and subsequently amended<sup>7</sup>. The Regulatory Policy spells out both substantive and procedural requirements for regulating, and allocates responsibilities for the Policy among central units of the federal government.

The Regulatory Policy applies to all federal regulatory authorities, including government departments and specialized agencies. Exhibit 3-1 lists the requirements that those authorities must meet. Concerning cost-benefit analysis, the Regulatory Policy requires that authorities ensure that the benefits outweigh the costs to Canadians, their governments and businesses and that adverse impacts on the capacity of the economy to generate wealth and employment are minimized and no unnecessary regulatory burden is imposed.

More recently, proposed revisions to the Regulatory Policy indicate that departments and agencies are expected to demonstrate that the option maximizes the benefits in relation to the costs and results over time in greater overall benefits than any other type of regulatory or non-regulatory action. Departments and agencies are to undertake social, environmental and economic impact assessments to:

- identify and, where possible, quantify the benefits and costs to Canadians, business and government of the proposed regulation and its alternatives
- link benefits to the intended policy objectives and show how they advance the public interest as defined in legislation

---

<sup>7</sup> Government of Canada. "Government of Canada Regulatory Policy", Privy Council Office, November 1999

- identify how the benefits and costs are distributed across the affected parties, the economy and society, and whether one particular group may experience the benefits or bear the cost more than others
- weigh the benefits against their costs and use this weighting to rank the options and make a recommendation; and
- identify and describe uncertainties wherever possible.<sup>8</sup>

It is apparent that the requirements for cost-benefit analysis in the federal government do not demand significant economic analyses for all regulatory proposals. In 1995, the federal Treasury Board Secretariat published a guide to cost-benefit analysis in the evaluation of regulations.<sup>9</sup> It is of interest that this guide is directed at regulatory proposals that are deemed not to have “major” implications (i.e. costs greater than \$50 million) and therefore do not require detailed economic analysis.

## ii. Ontario

Section 1.1 of the Securities Act (Ontario) provides as follows:

The purposes of this Act are,

- (a) to provide protection to investors from unfair, improper or fraudulent practices; and
- (b) to foster fair and efficient capital markets and confidence in capital markets.

(1994, c. 33, s. 2.)

Section 2.1 of the Act instructs the Ontario Securities Commission as follows:

In pursuing the purposes of this Act, the Commission shall have regard to the following fundamental principles:

1. Balancing the importance to be given to each of the purposes of this Act may be required in specific cases.
2. The primary means for achieving the purposes of this Act are:
  - i. requirements for timely, accurate and efficient disclosure of information,
  - ii. restrictions on fraudulent and unfair market practices and procedures, and

---

<sup>8</sup> See draft consultation document, “Government Directive on Regulating”, available at [http://www.regulation.gc.ca/docs/smartregint/gdrfinalv4\\_e.pdf](http://www.regulation.gc.ca/docs/smartregint/gdrfinalv4_e.pdf)

<sup>9</sup> See [http://www.pco-bcp.gc.ca/raoics-srdc/docs/publications/CostBenefitGuideforRegul/CostBenefitGuideforRegul\\_e.pdf](http://www.pco-bcp.gc.ca/raoics-srdc/docs/publications/CostBenefitGuideforRegul/CostBenefitGuideforRegul_e.pdf)

- iii. requirements for the maintenance of high standards of fitness and business conduct to ensure honest and responsible conduct by market participants.
3. Effective and responsive securities regulation requires timely, open and efficient administration and enforcement of this Act by the Commission.
4. The Commission should, subject to an appropriate system of supervision, use the enforcement capability and regulatory expertise of recognized self-regulatory organizations.
5. The integration of capital markets is supported and promoted by the sound and responsible harmonization and co-ordination of securities regulation regimes.
6. Business and regulatory costs and other restrictions on the business and investment activities of market participants should be proportionate to the significance of the regulatory objectives sought to be realized. (1994, c. 33, s.2.)

It is not entirely clear what meaning is to be given to the purpose of “fostering fair...markets” in section 1.1 of the Act. It could mean the fairness of outcome in the sense of redistributive social policy. Alternately, it could mean the fairness of opportunity, according to which, for example, information that could affect the price of a share must be released to all investors at the same time. The restrictions on fraudulent and unfair market practices and procedures identified in section 2.1 as means of achieving the principles of the Act suggest the latter meaning.

Section 143 of the Securities Act gives the Commission the authority to make rules; such rules have the status of regulations. With respect to every rule that the Commission proposes to make under this provision, s.143.2 requires the Commission to publish a notice and s.143.2(2) requires that the notice contain, among other things:

- a discussion of all alternatives to the proposed rule that were considered by the Commission and the reasons for not proposing the adoption of the alternatives considered;
- a reference to any significant unpublished study, report or other written materials on which the Commission relies in proposing the rule; and

- a description of the anticipated costs and benefits of the proposed rule.<sup>10</sup>

The requirement that the notice contain a description of anticipated costs and benefits is meaningful and not simply a proforma matter.

It is noteworthy that the description required by s.143.2(2) need not be the result of analysis undertaken by the Ontario Securities Commission itself. The published description might be that provided to the Commission by an interested party, a public-interest advocate, or perhaps a party with particular expertise.

Moreover, the statute does not oblige the Commission to adopt a rule on the basis of the anticipated costs and benefits described in the required notice. Hence, the adopted rule may or may not be the alternative that maximizes the net benefits; indeed the statute does not preclude the adoption of a rule the costs of which exceed the benefits.

The Ontario Securities Commission first called for cost-benefit analysis in 2002, when it announced the creation of the Regulatory Burden Task Force. The purpose of the Task Force was to allow stakeholders to identify opportunities to reduce regulatory costs for market participants by pinpointing activities that are inefficient or whose costs outweigh their benefits<sup>11</sup>.

Although focused on simplification<sup>12</sup>, the initiative appears to have had a broader policy goal:

“Reducing the regulatory burden also includes finding ways to reduce excess costs to our stakeholders, and this begins with our internal processes. Now, before initiating any regulatory activity, the OSC conducts a comprehensive cost benefit analysis: stating the problem clearly; identifying projected outcomes; and rigorously considering alternatives (both regulatory and non-regulatory) in order to evaluate the merits of projects, justify the allocation of resources and, ultimately, produce the most effective regulation.”<sup>13</sup>

---

<sup>10</sup> S. 143.2(5) provides exceptions to the notice requirement.

<sup>11</sup> Ontario Securities Commission. Annual Report, 2002

<sup>12</sup> Meaning making the process easier to do or to understand and making regulation less complex and more understandable, *ibid.*

<sup>13</sup> *ibid.*

Thus, cost-benefit analysis was conceived of as part of the policy development process, and not just a method for ensuring least-cost outcomes to industry participants. In 2004, the Commission restated its commitment to “balanced and merit-based” regulatory interventions by:

“improving accountability through the use of rigorous cost benefit analysis, impact analysis and risk-based assessments for all proposed initiatives.”<sup>14</sup>

The Commission undertook to measure its success in this regard by imposing regulatory costs and burdens that would be “competitive with our peers, without undermining investor protection and confidence”<sup>15</sup>.

The Commission has undertaken or commissioned cost-benefit analyses of the multi-jurisdictional disclosure system, internal controls on financial reporting, and mutual fund governance.

### **iii. Quebec**

While not specifically authorizing the balancing of regulatory costs and benefits, the Quebec statute explicitly refers to the promotion of market efficiency<sup>16</sup>:

276. The Autorité des marchés financiers established under section 1 of the Act respecting the Autorité des marchés financiers ( chapter A-33.2) is responsible for the administration of this Act and shall discharge the functions and exercise the powers specified thereunder.

In addition, the Authority's mission is:

1) to promote efficiency in the securities market;

[...]

Further, the Quebec statute creating the Autorité des Marchés Financiers provides a regulatory framework that is consistent with the use of cost-benefit analysis<sup>17</sup>:

8. The Authority shall perform its functions and exercise its powers in a way as to:

---

<sup>14</sup> See “Statement of Priorities for Fiscal 2004/2005”, 27 OSCB 5937, June 25, 2004.

<sup>15</sup> Ibid.

<sup>16</sup> Securities Act, R.S.Q., c. V-1.1

<sup>17</sup> AN ACT RESPECTING THE AUTORITÉ DES MARCHÉS FINANCIERS, R.S.Q., C. A-33.2

- 1) foster the confidence of the public and of the business community as regards financial institutions and practitioners in the financial sector as regards solvency and the competence of agents, advisers, brokers, representatives and other practitioners in the financial sector;
- 2) promote the availability of high-quality, competitively priced financial products and services for individuals and enterprises in all regions of Québec;
- 3) see to the establishment of an effective and efficient regulatory framework that promotes the development of the financial sector and facilitates innovative management and commercial practices;

[...]

The securities statutes of the other provinces appear to have no similar provisions.

#### **iv. United States**

The requirements for cost-benefit analysis in the United States government departments and agencies are found in administrative orders and directives. It is apparent, however, that the Securities and Exchange Commission (“SEC”) is not bound by those instruments.<sup>18</sup>

##### **a) Executive Order**

The requirement for cost-benefit analysis by departments and executive agencies derives from President Clinton’s Executive Order 12,866 in 1993. The order states in part:

“Each agency shall assess both the costs and benefits of the intended regulation and, recognizing that some costs and benefits are difficult to quantify, propose or adopt a regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs”.

The order further requires that the agency provides the U.S. Office of Management and Budget’s (“OMB”) Office of Information and Regulatory Affairs with an assessment of the potential costs and

---

<sup>18</sup> This discussion is drawn from Sherwin, E. “Cost-Benefit Analysis of Financial Regulation: Why Dollars Don’t Always Make Sense in SEC Rulemaking”, written in fulfillment of the J.D. Written Work Requirement, Harvard Law School, April 27, 2005

benefits of each “significant regulatory action”. When a significant regulatory action is likely to have an economic impact of \$100 million or more, the agency must provide the assessment of the anticipated costs and benefits of the regulation, including the underlying analysis.

The order further requires that costs and benefits be quantified to the furthest extent possible. The agency must also provide an assessment of the costs and benefits of alternatives to the proposed regulation, including non-regulatory alternatives, along with an explanation of why regulatory action is preferred.

As an independent regulatory agency, the Securities Exchange Commission is exempt from the major provisions of the Executive Order. Such agencies do not have to produce assessments of the costs and benefits of, and the possible alternatives to, each proposed regulation. They must, however, prepare a regulatory agenda listing all regulations under development or review. They must also submit a regulatory plan twice yearly listing the most important significant regulatory actions that the agency reasonably expects to issue.

#### **b) OMB Guidelines**

Circular A-4 issued by the OMB in 2003 prescribes guidelines for departments and agencies to follow in performing cost-benefit analyses under the Executive Order<sup>19</sup>. The guidelines received public comment and peer review. They address health, safety and environment regulation, they do not address financial regulation.

The guidelines for cost-benefit analysis provided in Circular A-4 include, inter alia:

- the establishment of a “baseline” that is the best assessment of the way the world would look absent the proposed regulation;
- the identification of available regulatory alternatives;
- the selection of the alternative that produces the greatest net benefits, rather than the one that has the best ratio of benefits to costs;
- the proper measure for valuing costs and benefits is “willingness to pay” expressed in dollar terms as observed in the market prices for goods and services affected by the regulation;
- procedures for situations where costs and benefits cannot be quantified or monetized; and

---

<sup>19</sup> United States. Office of Management and Budget. Circular A-4, September 17, 2003 (available at <http://www.whitehouse.gov/OMB/circulars/a004/a-4.pdf>)

- the distinction between costs and benefits on one hand and transfer payments and pecuniary gains (where one party's loss is offset by another's gain) on the other.

The guidelines note that there will be instances where non-quantified costs and benefits are so crucial to the decision that no meaningful comparison can be made between the quantified costs and benefits.

The guidelines recognize that many estimates of costs and benefits will be highly uncertain. Agencies are expected to produce quantitative and qualitative analysis of this uncertainty. When uncertainty results from lack of data, agencies should consider deferring decisions pending further study.

**c. Securities and Exchange Commission<sup>20</sup>**

The SEC conducts cost-benefit analysis on different levels. The first level is the informal consideration of costs and benefits by staff in developing a regulatory proposal

The second level of analysis is for reports, including a cost-benefit analysis of each proposed rule, required to be submitted to the Government Accounting Office for eventual submission to Congress by the Comptroller General. Such reports are brief, convey little information or support, and sometimes ignore the existence of benefits or dismiss them as hard to quantify.

The SEC's most detailed discussions of cost-benefit analysis are found in the Federal Register notices of proposed and final rulemakings. The example discussed in the next chapter indicates that these analyses tend to be rather short and qualitative, and do not meet the analytical rigour required of other agencies as per the Executive Order or Circular A-4.

However, the SEC does engage in research that bears directly on regulatory matters and publishes the resulting studies. These analyses are undertaken by staff economists in their private capacities and include a disclaimer that they do not reflect the opinion of the SEC.

---

<sup>20</sup> see Sherwin, *supra* footnote 10.

**v. United Kingdom**

The principal financial regulator in the UK is the Financial Services Authority (“FSA”). Unlike the SEC and Canadian securities regulatory authorities, the FSA is financed by the financial services industry; FSA members are appointed by the government.

**a) Statutory Requirement**

The Financial Services and Markets Act of 2000 enlarged the mandate of the FSA and included a general requirement for cost-benefit analysis of regulations. In its rulemaking, the FSA is required to observe the principle that

“a burden or restriction which is imposed on a person, or on the carrying on of an activity, should be proportionate to the benefits, considered in general terms, which are expected to result from the imposition of that burden or restriction.”<sup>21</sup>

The Act further requires the FSA to publish a draft of every proposed rule, which must be accompanied by a cost-benefit analysis. There is no statutory requirement for expressing costs and benefits in monetary terms.

**b) FSA Guidelines**

The FSA has issued guidelines on cost-benefit analysis for its staff<sup>22</sup> that envisage that analysis as part of the policy-making process, as opposed to an analysis to support a particular decision. It is noteworthy that these guidelines place the responsibility for cost-benefit analysis on the line policy units.<sup>23</sup>

The guidelines articulate a four-stage process of analysis:

Stage 1: Statement of the goal to be achieved, the external constraints that must be satisfied, and the range of policy options to consider. This stage will identify the groups in society that need to be considered.

---

<sup>21</sup> Financial Services and Markets Act of 2000, c.8, s.2(3)(c) (Eng.)

<sup>22</sup> Financial Services Authority, Central Policy. “Practical Cost-Benefit Analysis for Financial Regulators: Version 1.1, June 2000 (available at [www.fsa.gov.uk/pubs/foi/cost-benefit-analysis.pdf](http://www.fsa.gov.uk/pubs/foi/cost-benefit-analysis.pdf))

<sup>23</sup> *ibid.*, at 5.

Stage 2: Determination of the scope and depth of the analysis required. Not every policy is major, but major policies (about which outside parties are likely to have stronger opinions) require analysis of greater scope than minor policies.

Stage 3: Assessment of the costs and benefits of the policy options and the distributional effects thereof. Where quantitative estimates of costs and benefits cannot reasonably be obtained, a qualitative estimate that permits a judgment of net benefits of an option and a ranking of options is required.

Stage 4: An output containing the analysis of the costs and benefits considered, and any other advantages and disadvantages that have been identified.

**c) Experience**

The FSA has published cost-benefit analyses in several areas including anti-money laundering rules, insurance regulation, securities trading systems and mutual funds. An example regarding rules for bundling and soft-dollar arrangements is discussed below.

**vi. Observations**

It is not surprising that the statutory provisions in the Ontario Securities Act regarding cost-benefit analysis would be somewhat general. What is lacking is the more specific directions that the authorities in the United States and United Kingdom have put into guidelines. For example, in what situations will a cost-benefit analysis be required? Within the organization, who should be responsible for producing the analysis? Who within the organization will be responsible for reviewing it, and who must accept or reject the study's conclusions?

Other considerations for the guidelines relate to the choice of the discount rate and timeframe for the analyses, the proposed treatment of uncertainty, and the situations when non-quantitative and/or non-monetized results will be acceptable.

Recognizing that guidelines produced by securities regulators are not law, they will not be binding upon regulators in all cases and will therefore afford flexibility to deal with special cases. Moreover, guidelines will provide a framework for the preparation of estimates by other participants in the regulatory process that regulators may wish to rely upon.

## **6. Cost-Benefit Studies in Securities Regulation**

This Part reviews several applications of cost-benefit analysis in evaluating securities regulation. It is not the purpose here to engage in detailed evaluation of the individual studies. Rather, the studies discussed here show that cost-benefit analysis is capable of providing a useful framework for evaluation of a range of policy issues that arise in securities markets.

### **i. FSA Analysis of Rules for Soft-Dollar Commissions and Bundling**

#### **a) Background**

In 2001, the UK Treasury received a report that identified the problem that, while fund managers are better placed than pension fund trustees to exercise control over dealing costs (in particular, broker commissions), they have few incentives to do so because these costs are passed on to the pension and other institutional funds. These broker commissions include payment for services the broker provides to the fund manager in addition to trade execution (for example, market price services, certain computer hardware and software, access to IPOs, conferences) in the form of bundled and soft-dollar commissioned services.

The Treasury report distinguished between the management fee, expressed as a percentage of the value of the fund for the duration of the management contract between the manager and the fund, and the dealing costs that are deducted from the value of the fund when incurred. Such dealing costs are not specified in advance but rather depend on the commission rates and trading volumes which the fund manager can determine. Whereas pension funds pay considerable attention to management fees when selecting a manager, they pay less attention to commission rates.

The selection process for managers, being based largely on past performance, thus gives little attention to dealing costs because they are small compared to fund assets and are not monitored as closely by the funds as other factors influencing performance. Given that the monitoring of dealing costs is not optimal, a cost pass-through could result in total commission costs being too high, either because of excessive levels of trading or because of an excessive usage by fund managers of soft-dollar and bundled services.

## **b) FSA Rulemaking**

In light of the Treasury's concern, the FSA undertook an extensive regulatory review of soft-dollar commission arrangements and bundled brokerage services and prepared two draft rules. The FSA released the draft rules together with a consultation paper and a cost-benefit analysis of the draft rules by Oxford Economic Research Associates in April, 2003.

The draft Part 1 rule proposed to narrow the range of goods and services permitted under both bundling and soft-dollar arrangements. Specifically, it proposed to prohibit the bundling of, and soft-dollar arrangements for, screen-based market pricing and information services.

The draft Part 2 rule would make fund managers responsible for paying the cost of any additional services they obtain in connection with trade execution. The policy would still allow the additional services to be provided through bundling and soft-dollar arrangements and to be priced into the rate or amount of broker commissions charged to the fund. In that case, the fund manager would be required to determine the pro-rata cost to the fund of the additional services and to repay an equivalent amount to the fund. It would be left to market forces to determine if the costs of services should be recovered through an increase in the management fee or some other explicit charge.

## **c) Cost-Benefit Analysis Methodology**

The cost-benefit analysis assessed the incremental change in costs and benefits of the draft rules compared with the current situation, i.e. using the regulation of bundled brokerage services and soft-dollar arrangements under the existing rules as a baseline.

Following the FSA's standard approach to cost-benefit analysis, the draft rules were assessed on the following six categories of market impact:

- direct or regulator's cost, both one-time and ongoing;
- compliance costs, both one-time and ongoing;
- quantity of transactions;
- quality of transactions;
- variety of transactions; and
- efficiency of competition.

Oxford Economic Research Associates relied upon in-depth industry interviews with market participants; data analysis regarding bundling and soft-dollar arrangements from FSA databases, other public sources and private market research; and an industry survey consisting of three separate questionnaires for pension funds, fund managers and brokers.

The estimates of costs and benefits of draft Part 1 rule are shown in Exhibit 6. The analysis strongly supports the finding of positive net benefits from implementing the Part 1 rule even though many of the benefits are not quantified.

**d) Comments**

The distinguishing parts of the cost-benefit analysis are the thorough review of the underlying issues and the identification of the specific costs and benefits included in the analysis. It is clear that, while the experts were unable to quantify many of the anticipated benefits, the cost-benefit analysis was presented convincingly.

**ii. OSC Analysis of Rules on Internal Controls over Financial Reporting**

**a) Background**

The *Sarbanes-Oxley Act* of 2002 in the United States followed the Enron, WorldCom and other scandals involving financial reporting. This legislation was designed to make senior management more accountable, boards of directors more independent, and auditors less susceptible to compromise. Section 404 requires that management (i) state its responsibility for establishing and maintaining adequate internal controls; (ii) report on its assessment of the effectiveness of its internal control structure and procedures regarding financial reporting; and (iii) provide a report by the external auditor that attests to management's assessment.

The proposed rule addresses a market failure due to asymmetric information and free-riding that suggests inadequate internal controls on financial reporting. Shareholders do not have as much information about the quality or effectiveness of internal controls as management has and, as with other aspects of governance, individual shareholders lack the incentive to monitor managers in this regard. When managers believe that the shareholders are satisfied with the current system of internal controls, they have

incentives to institute less effective controls, particularly when their compensation is tied to observed results in financial reports rather than actual results that cannot be observed perhaps for some time.

Compounding the problem is the lack of means by which management might signal that effective controls are in place, particularly when the external auditors are not sufficiently independent.

## **b) OSC Rulemaking**

In 2004, the Canadian Securities Administrators proposed the Multilateral Instrument 52-111, *Reporting Requirements for Internal Control over Financial Reporting*, an instrument substantially similar to section 404 of the Sarbanes-Oxley Act. The proposed rule was issued on behalf of all provincial securities regulators with the exception of the British Columbia Securities Commission.

The proposed rule requires management of an issuer to evaluate the effectiveness of the issuer's internal control over financial reporting, as at the end of the issuer's financial year, against a suitable control framework. It also requires the issuer to file (i) management's assessment of the effectiveness of the issuer's internal control over financial reporting and (ii) the auditor's report prepared according to the auditing standard for internal control audit engagements of the Canadian Institute of Chartered Accountants.<sup>24</sup>

In 2004, the Ontario Securities Commission released an analysis prepared by Charles River Associates Canada Ltd. ("CRA") of the costs and benefits of implementing MI 52-111.<sup>25</sup> The CRA study observed that there was a social cost, in the form of a higher cost of capital that might be reduced through regulatory intervention to correct the market failure. It also pointed out that through regulation the standards for internal controls might be set at too high a level so that the costs outweigh the benefits.

## **c) Cost-Benefit Analysis Methodology**

Through interviews with issuers and accounting firms, the CRA study obtained quantitative information on both the initial and ongoing internal and external costs and ongoing annual internal and external costs

---

<sup>24</sup> See CSA Notice 52-310, (2005) 28 OCSB 6377

<sup>25</sup> The Cost and Benefits of Management Reporting and Auditor Attestation on Internal Controls over Financial Reporting, prepared for Ontario Securities Commission by Charles River Associates Canada Ltd., April 2004 (final version with editorial revisions, July 2004), henceforth the "CRA study".

incurred or expected by a sample of Canadian issuers planning or implementing changes to comply with s.404 of the *Sarbanes-Oxley Act* in the United States.

The direct social benefit, the improved investor confidence from more accurate financial reporting and reduced risk of significant financial misstatements, could not be measured directly. However, the CRA study formulated testable questions about the potential reduction in the incidence of significant misstatements in interim and annual filings and the value that this reduction would have for honest issuers in the form of reduced capital costs. This quantification of benefits took the following steps:

- calculating the current expected cost of significant financial misstatement by multiplying the probability of any issuer making such a misstatement by an estimate of the cost to shareholders of a significant financial misstatement;
- estimating how expenditures on internal controls will reduce the probability of a significant financial misstatement and recalculate the expected cost.

The change in expected cost provides an estimate of the expected avoided costs of a significant misstatement, calculated as the difference between the first and second steps noted above.

The CRA study identified other benefits that could be expected to arise from an increase in the quality of internal controls over financial reporting: a general improvement in reporting accuracy and the corresponding increased ability of shareholders to monitor value, and an increase in liquidity in the form of reduced bid-ask spreads due to increased market confidence. A third benefit cited was the savings in costs that might otherwise be incurred if the SEC were to abandon the Multi-Jurisdiction Disclosure System absent MI 52-111. The CRA study did not attempt to quantify these benefits or formulate testable hypotheses.

The results of the analysis of measured costs and benefits are shown in Exhibit 7 which groups issuers by exchange and by asset size. For all issuer groups, the CRA study found that, when central<sup>26</sup> estimates of costs and benefits are considered, the former exceed the latter. It also found that these estimates were subject to considerable variation and that except for the smallest issuer category, the upper end of the benefit range exceeded the lower bound of the cost range.

---

<sup>26</sup> According to the CRA Study, “central” refers to the central value of the parameter estimates. It is not the midpoint of the range, more likely the median.

From this, the CRA study concludes that measured costs and benefits are of similar orders of magnitude for the largest issuers (assets greater than \$500 million). For all issuers in the \$50 million-\$500 million range, the uncertainty of the estimates is too high to permit an inference. For smaller issues, the upper bound on the range of measured benefits is below the lower bound on cost.

The CRA study notes that the costs of the auditor attestation requirement are a significant portion of total costs of MI 52-111 and finds that certain issuers, if exempt from the requirement, would still undertake improvements in internal controls. If expenditures of only 20% of the amount under the auditor attestation requirement were acceptable, then exempting issuers with assets of less than \$525 million from that requirement would achieve the desired compliance based on only the measured costs and benefits. However, the CRA study regards as highly uncertain the cost and benefit estimates associated with auditor attestation.

#### **d) Comments**

The fact that the OSC commissioned a significant cost-benefit analysis is itself of interest. It appears that no corresponding cost-benefit study has been undertaken in the United States regarding section 404 of the *Sarbanes-Oxley Act*. In light of the SEC's responsibility to produce rules and guidelines for issuers to follow in implementing this legislation, it might be expected to have considered various alternatives and to attempt to ascertain the one that maximized net benefits.

The CRA study is noteworthy for its attempt to establish quantitative relationships that capture elements of the "investor confidence". It is also clear that the CRA study has recognized the considerable uncertainty in its findings and has not over interpreted results. Certain aspects of the CRA study raise important issues.

As part of the review of auditor attestation, the CRA study makes brief mention of an alternative, the random auditing of internal controls of issuers that have issued positive management reports and imposing sufficient penalties on issuers found to be out of compliance.<sup>27</sup> The CSA has not indicated its attitude toward this alternative that might itself be the subject of cost-benefit analysis.

Second, the impact of the proposed rule on regulators was not analyzed. The CRA study notes that the "effectiveness of the reporting requirements in Canada or the U.S. will ultimately depend on how these

---

<sup>27</sup> CRA study, fn. 22 at 17

regulations are enforced.”<sup>28</sup> Since cost-benefit analysis is an instrument for social evaluation, some provision for this cost would be worthwhile.

Third, there are significant issues around the *Sarbanes-Oxley Act* that require consideration because they are associated with the proposed rule. One such is the possible impact of that regime on decisions to remain public, or go, private<sup>29</sup>. A cost-benefit analysis of a similar rule in Canada should take this important “indirect” cost into account. Indeed, these and similar effects may be of much greater significance than the costs of compliance that have drawn so much attention from issuers.

### **iii. BCSC Study of Continuous Market Access System**

#### **a) Background**

In June 2002, the British Columbia Securities Commission proposed that the prevailing prospectus regime in Canada be replaced with a new system called Continuous Market Access (“CMA”)<sup>30</sup>. As part of the effort to reduce the costs to issuers of raising capital, CMA would benefit investors by improving disclosure since, under the current system, issuers file prospectuses at lengthy intervals. By requiring continuous, up-to-date disclosure of all material information, the overall level of disclosure would increase and would be consistent among all issuers whether or not they raised capital in a given year.

#### **b) Cost-Benefit Analysis Methodology**

In support of this initiative, the BCSC undertook a cost-benefit analysis of the proposed disclosure system (the “B.C. study”).<sup>31</sup>

The BC study gathered data on the costs and benefits of CMA through two surveys, one for issuers that had recently completed an initial public offering and one directed at issuers that had recently completed debt or equity offerings. The surveys asked:

---

<sup>28</sup> CRA study at 17

<sup>29</sup> See, for example, Kamar, E., P. Karacha-Mandic and E. Talley, “Going-private decisions and the Sarbanes-Oxley Act of 2002: A Cross-country Analysis”, University of California, Berkeley Law and Economics Paper #12, 2005.

<sup>30</sup> BCSC. New Proposals for Securities Regulation, June 5, 2002 (available at [http://www.bcsc.bc.ca/uploadedFiles/2002\\_New\\_Proposals.pdf](http://www.bcsc.bc.ca/uploadedFiles/2002_New_Proposals.pdf))

<sup>31</sup> BCSC. “Better Disclosure, Lower Costs: A Cost-Benefit Analysis of the Continuous Market Access System”, by Christina Wolf, Economist, Deregulation Project, October 31, 2002.

- How much it had cost under the current system to complete a prospectus and, for subsequent offering filers, an annual information form? These costs were divided into ten categories of internal (e.g. senior management time) and external costs (e.g. auditors, legal)
- How would these costs change under the proposed CMA?
- How long did the issuers wait before going to market under the current system?
- How much did issuers pay underwriters?

The BC study surveyed 270 issuers that had financed between December 2000 and June 2002<sup>32</sup> and received responses from 58 of those issuers, distinguished by exchange listing, market capitalization, issue size and region.

The findings of the survey include the following:

- under CMA, issuers would save \$170 million in net present value over five years in reduced prospectus preparation and filing costs;
- the CMA system would cut time to market by 16% to 56%;
- prospectus costs average \$1.4 million for TSX issuers and \$225,000 for TSX Venture issuers. For TSX issuers, prospectus cost is related to length - each page of additional prospectus disclosure costs a TSX issuer about \$29,000;
- AIF costs would increase by 11%. This cost is offset by CMA benefits even if the issuer goes to market just once every 12 to 15 years; and
- issuers are inclined to retain underwriters for due diligence and sales functions even if other options were available.

### **c) Comments**

The entire focus of the BC study is on issuer compliance costs. No attempt is made to analyze, for example, the impact of the CMA on the regulator. This element could be important if, for example, the new system leads to an increase in financings.

More importantly, there is only limited discussion in the document of the impact on investors. The broader BCSC initiative contains investor remedies that include, for example, liability for CMA issuers

---

<sup>32</sup> The intended sample was larger, but the commercial database used had omitted 130 issuers on the Toronto Stock Exchange.

that is not considered in the BC study. If, for example, the CMA system were likely to lead to increased litigation, this is a feature of the system that a full cost-benefit analysis would consider.

One of the benefits considered in the BC study is the various savings in management resources. The survey results provide estimates of the hours of management time saved, and values them at the salary scale of the issuer. The BC study's attempt to measure the opportunity cost of management time appears to be unique.

The BC study does not refer to the Canadian experience with the short-form prospectus and the shelf prospectus systems in Ontario. The results of previous regulatory attempts to reduce the costs of issuing securities might be taken into account in the estimation of the cost-savings of the CMA.

#### **iv. Cost-Benefit Analysis of Mutual Fund Governance**

##### **a) Background**

As part of the Canadian Securities Administrators' consideration of mutual fund governance, the Ontario Securities Commission commissioned a cost-benefit analysis<sup>33</sup> of proposals discussed in Concept Proposal 81-402.<sup>34</sup>

The proposed regime would remove prohibitions on related-party transactions and require the establishment of an independent review committee (IRC) that would review them. In particular, the Martin study provides quantitative estimates of the impact of eliminating the 60-Day rule and of permitting inter-fund trading. It discusses other impacts as well, e.g. the likely benefit of the new governance regime on soft-dollar arrangements.

The Martin study analyzed these impacts on four groups:

- mutual funds related to securities dealers (dealer-related funds);
- mutual Funds not related to a securities dealer;
- the mutual fund industry as a whole;

---

<sup>33</sup> Mutual Fund Governance Cost Benefit Analysis Final Report, prepared for the Ontario Securities Commission by Keith A. Martin, July 2003. (henceforth, "the Martin study")

<sup>34</sup> Canadian Securities Administrators, "Striking a New Balance: A Framework for Regulating Mutual Funds and their Managers", Concept Proposal 81-402.

- the securities and capital markets in general.

It estimates total annual benefits of between \$86 million and \$158 million, although some benefits of eliminating the 60-Day Rule appear to be pecuniary. The important contribution of the Martin study lies in the identification of opportunities for private cost-savings and social gains in the form of increased market efficiency.

#### **b) 60-Day Rule**

The 60-Day Rule prevents dealer-related funds from participating in certain IPO's, corporate bonds and commercial paper. The Martin study cites the improvement in sector exposures of dealer-related funds as a clear benefit of eliminating the rule, while noting the ambiguous effect of oversubscriptions on IPO's. It also calls attention to, but does not provide a quantitative estimate of, the possible reduction in the cost of capital to Canadian issuers.

Other efficiencies might be considered as well. If the elimination of the 60-Day rule and the greater involvement in IPOs by dealer-related funds enabled more new issues to come to market, this could lead to a true gain in the sense of cost-benefit analysis. Similarly, it could be argued that the greater involvement of dealer-related funds would increase the demand for, and the offering prices of, existing IPOs. This would also be a true gain, although the higher prices would be expected to reduce the abnormal returns earned by investors.

On the other hand, the IRCs of dealer-related funds may, and likely will, limit their funds' investments in related new issues (particularly IPOs) now prohibited by the 60-Day Rule. In this case, the potential benefits from eliminating the rule may be optimistic.

#### **c) Inter-Fund Trading**

The analysis of the benefit of inter-fund trading focuses on efficiency issues. The Martin study identifies savings as arising from reduced brokerage commissions, transaction fees, and back office costs. The overall annual savings to the fund industry are estimated at between \$35 million and \$63 million.

The Martin study also notes that inter-fund trading may also reduce the market impact of block trading. It comments, however, that such impacts are already reduced by the electronic order-matching capabilities

of the Toronto Stock Exchange and that the reduction in liquidity and price discovery would also be costs. The Martin study does not attempt to quantify these latter costs of inter-fund trading and does not provide for them in its estimate of total benefits. As these costs could be quite significant, some further treatment may be appropriate.

**d) Other Issues**

The Martin study raises a variety of other efficiency-based concerns for consideration. One such is the relief from prohibitions on transactions by mutual funds in securities of a related party, conditional on the creation of an IRC the responsibilities of which would include reviewing such transactions. The resulting savings would include lower costs to the funds, the avoidance of block trades and the resulting stock-price impact, and more rapid decision-making in respect to such transactions.

Similar savings to funds and fund investors arise from relief from the prohibition on investments by a dealer-managed fund in an issuer in which a related party is an officer, partner, director or employee.

Although the Martin study does not mention it, it would also be appropriate to consider cost-savings to the regulator since it would no longer have to review exemption applications in regard to investments in related parties.

The Martin study attempts to quantify several of the identified benefits in dollar terms. In light of the author's expertise, these calculations were neither difficult nor time-consuming and perhaps, with appropriate assumptions, could be conducted in respect of other identified benefits.

The on-going costs of IRCs themselves deserve consideration<sup>35</sup>. Included in the various costs of the IRC requirement are the costs associated with the proposed civil liability of the members of the IRC including, for example, the right of the IRC to legal counsel and expected costs to members and the fund of lawsuits by unitholders and/or the costs incurred to avoid such lawsuits. Similarly, IRCs will place new demands on management time and resources that, as the BC study shows, have significant value.

---

<sup>35</sup> IRC startup costs were studied by the OSC's Office of the Chief Economist.

**v. SEC Disclosure of the Application of Critical Accounting Policies**

In 2001, the SEC proposed a rule that would provide greater transparency regarding the application of companies' accounting policies and their effects in disclosure documents<sup>36</sup>. The proposed disclosure in Management's Discussion and Analysis concerning the application of critical accounting policies would include a company's critical accounting estimates and its initial adoption of accounting policies that have a material impact.

In connection with the proposed rule, the SEC conducted a cost-benefit analysis that considered alternate regulatory approaches, potential benefits and costs of the proposal, possible competitive harm therefrom, the impact on small-business issuers, and the effects on efficiency, competition and capital formation.

**a) Potential Benefits**

The SEC proposal discusses potential benefits briefly:

- The increased transparency of the financial condition of companies, changes therein and in operating results, and the reduction in the information asymmetry between management and investors. Greater transparency to financial analysts, credit rating agencies, and investors themselves would lead to more informed investment decisions and more efficient allocation of capital.
- A possible by-product may be to deter improper accounting
- Another possible benefit could be to increase the discipline and oversight of management

**b) Potential Costs**

The SEC estimates that the proposed rules would impose new disclosure requirements on approximately 14,000 public companies. The typical company's disclosure would expand by six pages of text but would require the involvement of in-house preparers, senior management, in-house counsel, outside auditors and audit committee members.

---

<sup>36</sup> Securities Exchange Commission. "Disclosure in Management's Discussion and Analysis about the Application of Critical Accounting Policies", Proposed Rule: File No. S7-I6-02 (available at [www.sec.gov/rules/proposed/33-8098.htm](http://www.sec.gov/rules/proposed/33-8098.htm))

Specific annual cost estimates are:

- Additional 780,000 personnel hours (56 hours per company) and \$98 million in in-house staff time.
- Additional \$98 million in additional company expenditure on outside professionals.
- Printing and dissemination costs that are difficult to estimate, in part because of the wide range of choices of paper and ink that companies face.

Based on information from a few companies that voluntarily provided information about critical accounting policies in their 2001 Form 10-Ks, the preparation of the proposed disclosure would cost from approximately \$5,000 to \$500,000 per year.

Other cost considerations that the SEC considered are the possibility of competitive harm from the disclosure, the possibly greater chance of litigation from making a materially misleading statement or omission in its disclosure document, and the impacts on small businesses and foreign issuers.

Regarding all of the above, the SEC requests that comment providers provide data and factual support.

**c) Observations**

The SEC makes no effort to quantify the identified benefits of the rule. Accordingly, it is difficult to determine whether those benefits exceed the anticipated costs. Its approach is in contrast to the CRA study and the Martin study that made some efforts in this regard.

It is not even clear that the SEC itself regards the identified benefits as likely to be realized. Notably absent is any reference to the impact of disclosure on market efficiency. Since the SEC was charged with producing rules to support the Sarbanes-Oxley Act, perhaps it felt that more detailed consideration was unnecessary.

## 7. What Have We Learned?

There is a growing feeling in Canada and abroad that the regulatory process, whether in environment, health and safety, or securities, has a strong and largely unappreciated impact on the economy and that greater reliance on economic analysis in the development and evaluation of regulation is warranted.

On the basis of the above, it is clear that cost-benefit analysis offers the correct conceptual approach to evaluating proposed rules and regulations in these areas. In securities matters, the experience in Canada and elsewhere indicates that it can be fruitfully applied to a wide variety of issues, providing that the appropriate perspective of “national economic profitability”, as opposed to simply private commercial profitability, is adopted. In this perspective, the costs and benefits of all affected individuals in the national economy, including those in future generations, are required to be considered. In this, the application of cost-benefit analysis to securities regulation is no different than its application to other projects, policies or regulations in other sectors.

At the same time, there appear to be misconceptions as to what cost-benefit analysis is and what it achieves. Conceptually, the essence of cost-benefit analysis is the decision rule that identifies the option (whether a project, policy or regulation) that maximizes the difference between expected benefits and costs. This decision rule makes it clear that those benefits and costs must be quantified and expressed in like units. If this is not done, then there is a strong risk that the chosen option will not improve, let alone maximize, social welfare.

Conceptually, this general decision rule is broadly accepted. The problems with cost-benefit analysis arise when the required data are not easily available, when costs and benefits cannot be expressed in commensurable terms, and when the best available analysis produces an answer that decision makers, for whatever reason, cannot accept. These “practical” problems are real and, as seen above, lead regulators and interested parties to seek other methods of evaluation.

On inspection, however, these other methods turn out to be even more problematic, but the problems they pose are more conceptual than practical. To avoid the real possibilities that, lacking social decision rules, such methods result in decisions that reduce social welfare, the only alternative is to develop procedures that make cost-benefit analysis more useful. The experience to date suggests some ideas to this end.

**i. Requirement to Quantify**

The requirement to quantify is an integral part of the social decision rule. This does not mean that every cost-benefit analysis must undertake a detailed econometric analysis. What is important is that the policymaker be persuaded that the benefits of the chosen alternative exceed the costs, and this may often be established by less-demanding procedures.

Certain parts of the Martin study proceed by making assumptions about likely activity levels and the types and amounts of benefits that may be reasonably expected on the basis of expert knowledge. On the other hand, the CRA study made a detailed statistical inquiry because the benefits were so difficult to establish and because the stakes were very high.

Because the CRA study presents a detailed statistical analysis, it may obscure the fundamental point that cost-benefit analysis is, like investment analysis in the corporate context, an “ex ante” analysis. One uses the most credible information available, including informed judgment but excluding anecdotal evidence. The analysis focuses on the expected future costs and benefits and this analysis may or may not require advanced techniques. The larger point is that cost-benefit analysis is comprehensive; all benefits and costs must be considered.

It is to be expected that when highly abstract issues are involved, such as the value to be placed on human life in health and safety regulations or the value of ecosystems in environmental rulemaking, the analytical tools will themselves be highly theoretical and require advanced statistical investigation. Not surprisingly, there is a substantial body of literature on these issues with which regulatory officials will not be familiar. Inasmuch as these values do not arise in securities regulation, there should be less need for such highly abstract theory and techniques.

It is frequently stated that the benefits of a proposed regulation are sizable, but diffuse and non-quantifiable as, for example, “improvement in investor protection”. Both of the above-mentioned studies attempt to make such general propositions more specific in order to derive quantitative estimates.

The criticism that quantification of costs and benefits of proposed securities regulations is difficult is found in virtually all areas of regulatory evaluation. To some extent, this reflects the uncertainty of estimated results, rather than the inherent inability to measure. Where benefits and costs are uncertain,

care should be taken not to allow the quantified factors to dominate important qualitative concerns. The CRA study provides an example of the reasonable treatment of uncertainty in the results.

The cost-benefit analysis of the FSA proposal to limit bundling and soft-dollar arrangements was persuasive even though it was unable to quantify many of the benefits. The report presented a thorough analysis that relied heavily on conventional economic and finance theory and thus provided convincing support for the net benefits of the proposal in the absence of quantitative evidence.

## **ii. Internal Organization**

It is also apparent that the use of cost-benefit analysis is at an early stage among Canadian securities regulators. As a result, there is no cadre of professionals with the detailed experience required to evaluate securities regulatory proposals. This should not be surprising, because the relevant knowledge areas have become so specialized.

For example, the studies cited above draw on the research in trading systems and market microstructure, mutual funds, corporate governance and cost of capital, among other areas. It is doubtful that any one expert can claim to have the detailed knowledge of the research in all of these areas. When the requirements for expertise in cost-benefit analysis are added, it becomes readily apparent that regulatory authorities cannot expect to have all of the required substantive knowledge and evaluation skills concentrated in a small number of professionals.

Accordingly, some division of labour is essential. Regulators should develop the internal capacity to support and evaluate cost-benefit studies, but should contract out the analyses of major regulatory issues to specialists.

Securities regulatory bodies need not be the only ones to undertake cost-benefit analyses. In Ontario, for example, the regulator is required to publish a notice that includes its anticipated costs and benefits. While the regulator may undertake the required study internally or by contracting out, it could also insist that interested parties present their own analyses.

### **iii. Transparency, Review and Follow-Up**

It is noteworthy that the Ontario Securities Commission and the Financial Services Authority in the U.K. have published the cost-benefit studies that they have undertaken or commissioned. This practice is highly desirable and could be complemented by external review and, for major initiatives, peer review.

There does not appear to be any coordination with other units of government. For example, where costs and benefits vary over time, discounting will be required. Yet, the choice of a social discount rate, a critical variable, may vary from study to study, from agency to agency, and province to province. A core set of critical assumptions that could be adopted nationally would enhance the quality of cost-benefit studies.

As the adoption of cost-benefit analysis is fairly recent, it is perhaps too soon for regulators to conduct follow-up studies. The FSA study may be one of particular interest in this regard, as its proposed rules for bundling and soft-dollar arrangements have significant implications for the structure of the fund management industry.

### **iv. Compliance Costs, Indirect Costs and Benefits Generally**

Industry participants typically emphasize the compliance costs of proposed regulation, and regulators should take such costs into consideration. Cost-benefit analysis requires that such costs be considered, but an evaluation limited to compliance costs risks making serious mistakes.

For example, a regulation that imposes significant compliance costs on existing participants may also have significant implications for entry and innovation by potential entrants. Although criticisms of the *Sarbanes-Oxley Act* in the United States focus on the compliance costs to existing issuers, the possibility that corporations may go, or remain, private represents a cost to the economy that is very likely much greater.

Market impact costs are also among the costs of regulation or potential regulation that do not generally receive attention in regulatory evaluation. Such impacts are usually well-understood, as witnessed in the recent stock price reactions to proposed changes in the taxation of Canadian income trusts. Regulations that make takeover bids less likely will lead to declines in the stock prices of takeover targets. There is some evidence that various regulatory attempts to require the sharing of control premiums on takeovers

through private agreements also led to reductions in the market value of those issuers that subsequently reorganized their stock into voting and restricted-voting classes. Such wealth-reducing measures arguably hurt the small investors they were intended to help, as well as the economy as a whole.

Correspondingly, there may be indirect benefits of a regulatory proposal that should be included in the cost-benefit analysis because they increase aggregate wealth. Requirements for independent review committees for mutual funds are largely premised on the reductions in compliance costs to fund managers. As discussed above, the Martin study identified and attempted to quantify some of the indirect benefits of those requirements.

At the same time, there seems to be a tendency to rely on the mere identification of indirect costs and benefits when the quantified estimates are inconclusive. Such efforts indicate the need for further research rather than the acceptance of unjustified claims. If, for example, there is uncertainty about the indirect costs of the *Sarbanes-Oxley Act*, the appropriate regulatory response is to undertake further research rather than risk a regulatory regime with aggregate net negative (or wealth destroying) benefits.

#### **v. Cost-Shifting versus Cost-Savings, Pecuniary Gains**

Cost-benefit analysis insists that an acceptable project, policy or regulation have anticipated benefits that exceed the costs, regardless of the incidence of those benefits and costs. In this regard, a regulation that is accepted because it simply shifts costs to other participants or sectors in the economy will not increase total output.

Discussions of changes in disclosure regulation sometimes do not make this distinction. It is true that other jurisdictions have different disclosure regimes that may impose lower compliance costs on issuers. If, however, these regimes expose investors to greater risk of loss, then adopting such a regime merely shifts, rather than reduces, the costs of compliance. The benefits to issuers are offset by the increased costs to investors and there is no aggregate social benefit. Such thinking appears to characterize parts of the BC study, which offers only limited discussion of how investors would be affected by the proposed CMA.

True disclosure cost-savings, as opposed to purely pecuniary savings, will be obtained either by (i) innovation in the methods of disclosure, as perhaps in the greater adoption of information technology, and (ii) by a considered conclusion that parts of the current regime are unnecessary, or both.

The need to strictly avoid pecuniary gains is less emphasized in evaluative techniques other than cost-benefit analysis. These other techniques lack a basis in any theory of social welfare and rely heavily on industry experts to make social evaluations. Cost-benefit analysis maintains that the values to be assigned to regulatory effects should be those of affected individuals as inferred from observed behaviour, not by experts.

#### **vi. Implementation Issues**

The FSA experience is notable for its commitment to making cost-benefit analysis a regular part of securities policy development. In addition to requiring that the analysis be undertaken, the FSA procedures place the obligation to conduct it on the “policymaker”, usually the line manager responsible for proposing the regulation.

The FSA’s Economics of Financial Regulation (EFR) team may provide staff support to the policymaker. EFR is also responsible for “signing off” on the cost-benefit analysis. There is some ambiguity in what “signing off” means; it appears that the EFR is required to review and comment on the cost-benefit analysis, but the FSA is not bound by the results of that review.

In 2004, the FSA commissioned an external consultant’s report on its methodology for cost-benefit analysis<sup>37</sup>. Among that report’s conclusions are the following based on interviews with policymakers:

- Policymakers do not always use CBA as an integral part of the policy process but sometimes regard it as a final step in obtaining sign off for a policy proposal
- Policymakers find CBA useful in some cases but in others, particularly where policy is non-discretionary (eg implementing EU directives), they do not believe the exercise to be valuable.
- EFR is not always satisfied with the quality of analysis produced by policy-makers, particularly on market impacts. Policy makers, however, do not feel they have the technical expertise or resources to produce analysis that meets the expectations of EFR.
- Both EFR and policy makers said that CBAs tend to focus too much on compliance costs, with insufficient attention paid to the analysis of market impacts. Similarly, the Consumer Panel stated that it was concerned about the fact that published CBAs often present “hard”

---

<sup>37</sup> “The FSA’s Methodology for Cost-Benefit Analysis”, a report to the FSA by NERA Economic Consulting, November 26, 2004 (available at [www.fsa.gov.uk](http://www.fsa.gov.uk)).

costs but “soft” benefits. They asked that more effort should be made to estimate benefits to consumers.

- The practitioner panel expressed concern that CBA is used to justify policy decisions that have already been made, rather than to inform those decisions in the first place. This impression may persist even when it is incorrect, since the published consultation paper may set out only the preferred option and its costs and benefits. Explaining how CBA has been used up to that point to reject other options and refine the proposals could enhance the credibility of CBA with the industry. It is crucial that the industry regard CBA as a credible and useful process if firms are to be engaged constructively in providing information for CBA.

Such concerns point to the need to seriously consider process, organizational and resource issues. In particular, senior management commitment to the adoption of cost-benefit analysis is essential, but unless accompanied by similar commitment by agency policymakers who must implement the approach, it will be insufficient. It would be pointless to require cost-benefit analysis of regulatory proposals if, in the final analysis, the studies were poorly done or simply undertaken to approve an alternative that was already decided upon.

On the other hand, it would be equally inappropriate to make cost-benefit analysis the determining factor in all cases. Factors other than aggregate economic benefits and costs, such as equity within and between generations, may be important in some decisions. Further, in contrast to the emphasis on individual values in cost-benefit analysis, securities regulation sometimes seeks non-individualist goals such as “market integrity”, the attainment of which is deemed to be justified even if it reduces efficiency and increases overall costs to society. Rules against “insider trading” are often justified on this basis.<sup>38</sup>

---

<sup>38</sup> Nevertheless, it is clear that regulators do pay attention to costs and benefits in insider trading policy.

## **Appendix: Impacts of Regulatory Impact Analysis**

### **Exhibit 1: Drug Evaluation Fees Analysis**

#### **Sponsoring Department:**

Health Canada

#### **Purpose:**

To recover program costs by establishing fees for reviewing applications for approval of new drugs

#### **Estimated Cost:**

\$65 million per year to industry, plus administrative cost to government

#### **Estimated Benefit:**

None quantified

#### **Impact of the Regulatory Impact Analysis:**

The RIA identified industry's major concerns regarding the proposal's disincentives to introduce new products into a relatively small market like Canada. Application of the Business Impact Test played an important role in the impact analysis. Three major changes to the proposed fee structure resulted from the analysis:

- domestic R&D
- additional fee reductions were implemented for products with very low sales; and
- companies were allowed to stagger payment of the fees instead of bearing the entire cost prior to product approval.

On the basis of the impact analysis, the proposal was revised and accepted by both industry and government.

## **Exhibit 2: New Substance Notification Regulation**

### **Sponsoring Department:**

Environment Canada

### **Purpose:**

To establish an evaluation and approval system for all substances new to Canada

### **Estimated Cost:**

\$10 million per year to industry and government

### **Estimated Benefit:**

None quantified. Assessed “offsetting benefits,” i.e., reductions in cancer-related health care costs and number of lives save to offset costs.

### **Impact of Regulatory Impact Analysis:**

Consultation and development of the regulation occurred over an eight-year period. Given the relatively small size of the Canadian market for many new substances, chemical suppliers were very concerned about the impact of the regulation on innovation.

A study to assess regulatory impacts was commissioned jointly by Industry Canada and Environment Canada. The Canadian Chemical Producers’ Association seconded a staff member to Industry Canada for the duration of the study.

The study conducted case studies of over 1,000 chemicals and polymers introduced during the period 1987-1992 by chemical companies participating in the study. Using an analytical framework agreed upon with industry representatives, it was found that nearly all substances would have been introduced had the notification regulation been in place during that period.

The study reduced industry opposition and the regulation was promulgated shortly after its completion.

### **Exhibit 3: Minimum Energy Efficiency Regulations**

**Sponsoring Department:**

Natural Resources Canada

**Purpose:**

To reduce energy consumption

**Estimated Cost:**

See below

**Estimated Benefit:**

See below

**Impact of the Regulatory Impact Analysis:**

Under the Energy Efficiency Act, Natural Resources Canada is promulgating a series of standards for numerous types of energy-using equipment. Success rounds of regulatory development processes will look at a group of similar energy-using equipment. To date, requirements for about 25 products have been prescribed.

An initial regulation harmonized with existing provincial requirements. Three representative products affected by those requirements were selected for benefit-cost analysis. For each subsequent requirement, a separate benefit-cost analysis is being conducted to take into account industry's costs of compliance and the economic benefits from reduced energy consumption. Cost of compliance here is the cost incurred by firms in installing the technology necessary to bring the product up to standard; costs to administer the program are not included. Where applicable, estimates in tonnes of greenhouse gas emissions are included, though no monetary value is being placed on reducing these emissions.

In the most recent requirements for fluorescent and incandescent reflector lamps, in the preponderance of product applications the benefit-cost ratios exceeded one and the standards were promulgated. The cost-benefit analyses have identified several instances in which more stringent standards would lead to higher net benefits; these are under review and a decision will be made on whether or not to proceed. As well, the analyses identified five standards for which costs exceeded benefits. These five standards are not being promulgated in this round of regulations. Instead, further analysis will be conducted.

## **Exhibit 4: Ozone-depleting Substances Regulation - Methyl Bromide**

### **Sponsoring Department:**

Environment Canada

### **Purpose:**

To reduce methyl bromide consumption to meet national commitments under the Montreal Protocol

### **Estimated Cost:**

\$10 million per year to industry and government

### **Estimated Benefit:**

None quantified. Assessed “offsetting benefits,” i.e., reductions in cancer-related health care costs and number of lives saved to offset costs

### **Impact of the Regulatory Impact Analysis:**

The analysis identified a design change, eventually incorporated into the final regulation that reduced the potential to significantly alter the market structure of the post-control industry.

The regulation establishes a system of tradable allowances for the consumption of methyl bromide. The allowances are capped, thereby controlling total consumption. The design issue in question was who should receive the tradable allowances: methyl bromide producers/importers, or methyl bromide consumers. The analysis identified that production/import allowances should have provided a significant advantage for one company.

To avoid risking major changes in the structure of the markets for methyl bromide, the decision was made to implement consumption allowances.

## **Exhibit 5: Government of Canada Regulatory Policy**

When regulating, regulatory authorities must ensure that:

1. Canadians are consulted, and that they have an opportunity to participate in developing or modifying regulations and regulatory programs;
2. they can demonstrate that a problem or risk exists, federal government intervention is justified and regulation is the best alternative;
3. the benefits outweigh the costs to Canadians, their governments and businesses. In particular, when managing risks on behalf of Canadians, regulatory authorities must ensure that the limited resources available to government are used where they do the most good;
4. adverse impacts on the capacity of the economy to generate wealth and employment are minimized and no unnecessary regulatory burden is imposed. In particular, regulatory authorities must ensure that:
  - information and administrative requirements are limited to what is absolutely necessary and that they impose the least possible cost;
  - the special circumstances of small businesses are addressed; and
  - parties proposing equivalent means to conform with regulatory requirements are given positive consideration.
5. international and intergovernmental agreements are respected and full advantage is taken of opportunities for coordination with other governments and agencies;
6. systems are in place to manage regulatory resources effectively. In particular, regulatory authorities must ensure that:
  - the Regulatory Process Management Standards are followed;
  - compliance and enforcement policies are articulated, as appropriate;
  - resources have been approved and are adequate to discharge enforcement responsibilities effectively and to ensure compliance where the regulation binds the government; and
  - other directives from Cabinet concerning policy and law making are followed such as the Cabinet Directive on Law-making and the Cabinet Directive on the Environmental Assessment of Policy, Plan and Program Proposals and the Cost Recovery and Charging Policy.

## Exhibit 6

**Table 3.4: Costs and benefits of Part 1 of the policy proposition**

Market impact	Type of cost	Magnitude	Type of benefit	Magnitude
Direct costs	Design and implementation	£2,600 (one-off)	n.a.	n.a.
	Ongoing costs	£6,240 per year	n.a.	n.a.
Compliance costs	One-off compliance costs to brokers and fund managers	Around £3.3m	n.a.	n.a.
	Ongoing compliance costs to brokers and fund managers	Close to zero		
Quantity of transactions	n.a.	n.a.	Reduction of excess consumption of market and price information services—leads to reduction in total management costs paid by funds	Around £2.8m per year
			Reduction in excessive trading—leads to better execution quality and reduction in total management costs paid by funds	Not quantifiable; incentives in the right direction
Quality of transactions	n.a.	n.a.	Providers of information services may increase product quality—leads to improved efficiency of fund managers	Not quantifiable; incentives in the right direction
			Increase in quality of trade execution	
Variety of transactions	n.a.	n.a.	Providers of information services may increase product variety—leads to improved efficiency of fund managers	Not quantifiable; incentives in the right direction
Efficiency of competition	Small fund managers disadvantaged	No economic cost	Increased transparency and hence increased competitive pressure on fund managers (in particular for institutional funds)—leads to reduction in total management costs paid by funds  Increased pressure from buyers on screen providers—leads to reduction in total management costs paid by funds	Not quantifiable; incentives in the right direction
	Execution-only brokers disadvantaged	Likely to be low; negligible if implemented in conjunction with Part 2		

Note: n.a. = not applicable.

Source: OXERA.

## Exhibit 7

### Measured Costs and Benefits: Central Estimates and Ranges (Dollar Amounts Are Per \$1,000 in Assets, Ranges are in Parentheses)\*

	<i>By Exchange</i>		<i>By Size (\$ Millions of Assets)</i>			
	<i>TSX</i>	<i>Venture-Exchange</i>	<i>&lt; \$50</i>	<i>\$50 - \$500</i>	<i>\$500 - \$5,000</i>	<i>&gt;\$5,000</i>
<b>Costs</b>	\$1.2	\$14.5	\$15.2	\$5.2	\$2.0	\$0.6
<i>(range)</i>	<i>(\$1.0 - \$1.5)</i>	<i>(\$9.2 - \$22.8)</i>	<i>(\$10.4 - \$22.4)</i>	<i>(\$4.0 - \$6.7)</i>	<i>(\$1.6 - \$2.5)</i>	<i>(\$0.5 - \$0.8)</i>
<b>Benefits</b>	\$0.7	\$3.8	\$4.2	\$2.1	\$1.2	\$0.5
<i>(range)</i>	<i>(\$0.2 - \$1.8)</i>	<i>(\$1.8 - \$8.8)</i>	<i>(\$1.9 - \$9.7)</i>	<i>(\$0.8 - \$5.3)</i>	<i>(\$0.4 - \$2.8)</i>	<i>(\$0.1 - \$1.2)</i>
<i>Approximate Share of Assets**</i>			2%	6%	20%	72%
<i>Approximate Share of Market Capitalization**</i>			10%	15%	27%	48%
<i>Approximate Share of Listed Issuers**</i>			81%	14%	4%	1%

#### Additional Unmeasured Benefits

*Increased market liquidity, which decreases inventory holding costs and leads to lower bid-ask spreads*

*Overall improvement in the accuracy of financial information, allowing shareholders to more accurately determine the value of issuers resulting in enhanced incentives for management to increase true issuer value*

*Increase likelihood that MJDS will be preserved*

**Lawrence P. Schwartz, Ph.D., Consulting Economist**  
**82 Ridge Hill Drive**  
**Toronto, Ontario M6C 2J8**  
**Tel: 416-785-4985**

**[lschwartz5205@rogers.com](mailto:lschwartz5205@rogers.com)**