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Policy advice and Treasury's wellbeing framework

This paper is based on a background paper presented to the meeting of the Australian Statistics Advisory Council on 25 May 2004. The wellbeing framework has been developed in Treasury over a number of years as a corporate tool to improve the quality of our policy analysis and advice to Treasury Ministers and, through them, to the Government.

Introduction

Treasury's mission is 'to improve the wellbeing of the Australian people by providing sound and timely advice to the Government, based on objective and thorough analysis of options, and by assisting Treasury Ministers in the administration of their responsibilities and the implementation of Government decisions'. Developing a consistent and robust understanding of wellbeing is thus critical to Treasury's work.

In this regard, Treasury has developed a wellbeing framework to underpin analysis and advice across the full range of our public policy responsibilities. The framework is drawn from broadly applicable economic principles, which are Treasury's comparative advantage in the provision of policy analysis and advice to Government.

The dimensions chosen for the wellbeing framework are: (i) the level of opportunity and freedom that people enjoy; (ii) the level of consumption possibilities; (iii) the distribution of those consumption possibilities; (iv) the level of risk that people are required to bear; and (v) the level of complexity that people are required to deal with. These dimensions are not necessarily comprehensive, unique or independent. They have been chosen simply because they describe the aspects of wellbeing that are considered to be most relevant to Treasury's responsibilities.

This paper considers the conceptual basis for the wellbeing framework, discusses some issues concerning the framework as a whole, examines each of the dimensions in further detail and then considers some interactions between them. The paper concludes by discussing some public policy implications in applying the framework, and its value for policy analysis and advice.

Conceptual basis

Wellbeing has different meanings for different people. The Australian Bureau of Statistics (ABS) suggests that wellbeing relates to 'the desire for optimal health, for better living conditions and improved quality of life'.¹ However, each person will have their own interpretation of what is specifically important with respect to their own wellbeing, the wellbeing of others, and the weight that they place on each dimension of wellbeing. The diversity of these interpretations, and the fundamental nature of the questions posed, means that it is a significant challenge to create a useful and comprehensive framework for the consideration of wellbeing.

A range of disciplines (amongst others, economics, sociology, politics, theology and philosophy) bring some notion of wellbeing into their intellectual foundation.

1 Australian Bureau of Statistics (2001), p. 3.

Consistent with Treasury's grounding in the intellectual history of economics, the Treasury wellbeing framework draws primarily on the methods of *welfare economics* and the related philosophical tradition of *utilitarianism*.

The challenge to conceptualise wellbeing has a long tradition in this intellectual history. Indeed, economists have sought to understand, measure, and model wellbeing since 1776 when Adam Smith discussed the 'invisible hand', which transformed self-interest into outcomes for the public good.²

The modern approach to considering such wellbeing questions in welfare economics is in terms of the *social welfare function*. Within this approach, the unit of analysis is the *utility* of individuals, defined to be some measure of their pleasure or happiness.³

Conventional economic analysis is strongly founded in this *utilitarian* social welfare approach. Each individual's choices are characterised by the respective utilities of the options available to them.⁴ Social welfare is judged as an aggregate function of the levels of utility across society.⁵ Maximising aggregate utility, or happiness, then corresponds to maximising overall wellbeing.

In theory, the determinants of utility may be quite general, reflecting a range of material and non-material influences. In practice, however, the conventional analysis usually assumes that the level of income or consumption is the most important determinant. At an aggregate level, measures of overall income such as Gross Domestic Product (GDP) are often used as a proxy for social welfare.

In recent years, however, it has become increasingly accepted that analyses of economic development or progress that only take income into account neglect other important determinants of wellbeing. As the Australian Statistician notes, 'a

2 Note, however, that although Smith's work is characterised as the foundation of wellbeing analysis in economics, it was itself strongly grounded in the intellectual history of moral philosophy. This underscores that there is considerable cross-fertilisation between different fields in considering issues of wellbeing.

3 The identification of utility as a hedonic outcome has a long history. Edgeworth (1881) once imagined a hedonimeter that could measure individual utilities. However, the foundation of utilitarianism can be found in the work of Bentham (1789), Sidgwick (1874) and Mill (1848). Kahneman et al. (1999) also provide some of the more recent literature on wellbeing as a hedonic outcome.

4 Economic treatments of utility and choice can be found in Marshall (1920), Hicks (1956) or Samuelson (1974). Varian (1992) also provides a good overview of these concepts.

5 The formalisation of the social welfare function has its origin in the work of Bergson (1938) and Samuelson (1956) and can be defined as some function of all of the utility functions of the constituent members of the society. The form of the social welfare function is not necessarily additive and depends, to some extent, on the ethical basis being used (cf. Bentham, 1789 or Rawls, 1971).

consensus is growing that countries and governments need to develop a more comprehensive view of progress, rather than focussing mainly on economic indicators such as Gross Domestic Product' (ABS, 2002).⁶ Thus, it is important that utility functions that purport to capture wellbeing incorporate determinants that are broader than simply increasing income or consumption.⁷

In fact, these wider determinants have always been at the core of practical economic thought. Sen (1999) notes that 'while the national accounts devised by these leaders of economic analysis [including, amongst others, Adam Smith, William Petty, Antoine-Laurent Lavoisier and Joseph-Louis Lagrange] established the foundations of the modern concept of income, their attention was never confined to this one concept'.⁸ The move towards generalised determinants for utility, beyond income as an inadequate (though practical) proxy for welfare, can thus be seen as reclaiming the original heritage of welfare economics.

Even with generalised determinants for utility, however, the utilitarian approach has been criticised on conceptual grounds. Sen (1999) has argued that 'it is sensible enough to take note of happiness, but we do not necessarily want to be happy slaves or delirious vassals'.⁹ He therefore proposes a broader *capabilities* framework that takes into account 'not only the primary goods the persons respectively hold, but also the relevant personal characteristics that govern the *conversion* of primary goods into the person's ability to promote her ends'.¹⁰

That is, Sen argues that capabilities are important in their own right, and not just because they have an indirect impact on happiness. His framework is thus *beyond-utilitarian*, in the sense that there are factors other than utility that also impact directly on wellbeing.¹¹

An alternative approach is to generalise the constituents of utility, as well as the determinants. In this more abstract approach, utility is a measure of not just

6 ABS (2002), pv.

7 The generalisation of the set of variables that constitute utility functions has been central to the development of theory around decision making in economics. Lancaster (1966) and Becker (1975) expanded the utility function to include the attributes of the choices available to a consumer. McFadden (1974) and Manski (1977) also pioneered methods for incorporating unobservable differences across consumers in the utility analysis.

8 Sen (1999), pp. 24-25.

9 Sen (1999), p. 62.

10 Sen (1999), p. 74, italics in original text. Primary goods are those goods that allow a person to meet their objectives and include rights, liberties and opportunities, income and wealth, and the social bases of self-respect (Rawls, 1971). See also the discussion of these concepts in Nagel (1986).

11 For example, most prominently, libertarian theories privilege liberty as important in and of itself, and not just because it is a component of happiness (see, for example, Nozick, 1974).

happiness, but all of the elements of life that are valued by an individual. This type of utility function can encapsulate capabilities, as discussed by Sen, to the extent that they are valued by the individual.¹²

Such a *generalised-utilitarian* paradigm requires considerable supplemental information on determinants and constituents of wellbeing, beyond traditional measurements of income and GDP alone. In this context, the Australian Bureau of Statistics publication, *Measures of Australia's Progress*, has brought together statistics across a wide range of economic, social and environmental considerations to provide a better information base for considering wellbeing in Australia (ABS, 2004). For example, apart from conventional economic statistics of income, consumption and productivity, it also provides information on other key indicators such as life expectancy, education levels, rate of unemployment, biodiversity levels, air pollution and levels of crime.¹³

To summarise, the intention of Treasury's wellbeing framework is to ensure a broad assessment of the costs and benefits of all policies in our analysis and advice. It recognises a range of determinants for utility (beyond just income and GDP), and also a range of constituents of utility (beyond just individual happiness). It thus takes a generalised-utilitarian form, but with elements of the more contemporary capabilities framework. By taking into account a wider informational basis for what is valued in wellbeing, it facilitates the objective and thorough analysis of options that is central to Treasury's mission.

It is important to note that Treasury's framework is intended *only as a descriptive tool* to provide background context for public policy advice, and *not as an analytic framework*. It is therefore beyond the scope of this paper to enter the debate on the exact conditions under which a more generalised utilitarian framework may break down, or when an alternative framework may be necessary for formal analysis.

12 Indeed, in concept, there is no limit to the constituents of utility that might be considered to be important. However, to remain a utilitarian framework in principle, the generalised utility functions need to be still sufficiently (mathematically) 'well-behaved' as to preserve higher-order utilitarian analysis.

13 ABS (2004), pp. 22-23. The primary interest in this paper is the conceptual understanding of wellbeing, not issues regarding measuring wellbeing or producing wellbeing indicators. However, we note that the portfolio approach used by the ABS is similar to that used by the United Nations Development Programme for its Human Development Indicators (UNDP, 2001). In contrast, other approaches have sought to combine disparate elements into a single 'headline' figure. For example, the Australia Institute has used this approach to propose a Genuine Progress Indicator for Australia (Hamilton and Denniss, 2000). The results from these combined indicators are, by definition, strongly dependent on the weightings used for the individual elements. Donovan and Halpern (2002) have produced an excellent critical analysis of broader wellbeing indicators and their usefulness for policy.

The framework as a whole

As noted above, the dimensions chosen for Treasury's wellbeing framework are:

(i) the level of opportunity and freedom that people enjoy; (ii) the level of consumption possibilities; (iii) the distribution of those consumption possibilities; (iv) the level of risk that people are required to bear; and (v) the level of complexity that people are required to deal with.

Consistent with being primarily a descriptive tool, rather than a framework for more formal analysis, the set of dimensions are not designed to meet more formal analytic criteria, such as being comprehensive, unique or independent.¹⁴

Depending on the approach, the framework could be argued to be comprehensive by definition. In the utilitarian approach, the level of consumption possibilities could be considered the primary dimension of the framework, and could technically reflect all of the preferences implicit in a generalised utility function.¹⁵ Alternatively, in Sen's approach, opportunity and freedom could be considered to be the primary dimension, and could encompass all of the capabilities required for people to lead lives that they value. In either case, the other dimensions would then be considered to be a useful set of determinants for the primary dimension.

However, this interpretation simply shifts the question of comprehensiveness down a level. That is, it is still an open question whether the dimensions are a comprehensive set for describing everything that is important to people.¹⁶ This is an issue that is open to substantial debate, and is beyond the scope of this paper.

In any case, the dimensions are certainly not unique. As noted above, Treasury recognises that there are a range of alternative frameworks for mapping the impact of public policies onto wellbeing.¹⁷ The selection of this framework simply reflects the issues that have been found to be most pertinent to Treasury's particular role, as a central policy department within the Australian Public Service, and to Treasury's particular intellectual history, derived primarily from the traditions of welfare economics and utilitarianism.

14 Using terminology analogous to analysing a mathematically based set of dimensions.

15 That is, ultimately all preferences for what is important to people could perhaps be expressed as 'consumption' of some form of a generalised good, even if this good is intangible.

16 Possible extra dimensions that may be required under such an interpretation may include issues of identity, culture or spirituality.

17 For example, on the basis of alternate cultural value systems.

In addition, the dimensions are also not independent. On the contrary, there are strong interactions between the dimensions for almost all public policy issues. These are discussed further in a later section.

The individual dimensions

In this section, each of the dimensions is considered in further detail. For each of the dimensions, in addition to a static analysis, it is important to consider the dynamics of wellbeing over time.

(i) Level of opportunity and freedom that people enjoy

Opportunity and freedom refers to the capacity for people to choose the lives they want to live.¹⁸

The concept of freedom has been integral to the development of modern market economics.¹⁹ The efficiency benefits of markets are predicated on people being free to choose what is most important to them, and being free to satisfy these choices through mutually beneficial exchanges.²⁰

As well as these efficiency benefits, the utilitarian framework acknowledges that freedom may be valued in itself. However, unless a generalised-utilitarian framework is used, freedom is assumed to have only an indirect impact on wellbeing through pleasure or happiness, rather than having an independent status.²¹

In contrast, the classical liberal framework suggests that freedom is the central right of individuals, and thus should be accorded special status.²² This ethical position has underpinned a long history of classical liberal economics, which 'favours policies that promote and enlarge economic freedom, both for their own sake, and because they make for greater prosperity' (Henderson, 2000).²³

The recent work of Sen has sought to incorporate aspects of freedom from both the utilitarian and classical liberal approaches. He argues that freedom does have a special

18 This incorporates aspects of both negative freedom, which is freedom from oppression or constraint, and positive freedom, which is freedom to act (as per Berlin, 1969).

19 As set out in some detail by the Secretary to the Treasury, Dr Ken Henry, in his speech to the Australian Business Economists in May 2001 (Henry, 2001).

20 See, for example, the discussion of the fundamental theorems of welfare economics in Varian (1992).

21 See discussion in Sen (1999).

22 As set out, for example, by Nozick (1974).

23 That is, this view holds that economic and political freedoms are inextricably intertwined. This citation is drawn from Henry (2001). Hicks (1981) also discusses similar themes.

status for wellbeing, beyond its impact on happiness or pleasure. However, he expands the focus beyond simply the rights available to individuals, to include their effective opportunities to exercise those rights, given their personal and social circumstances.²⁴

In this conception, there remains a critical role for government, not least in providing basic infrastructure for economic and social interaction of individuals, including, amongst others, property rights, contract law, criminal law, other economic regulation and enforcement. These all limit liberties for some individuals, but provide the essential underpinning for the exercise of every individual's substantive freedoms.²⁵

Applying these insights regarding opportunity and freedom can have important implications for policy design across almost the full range of government social and economic policy areas. In particular, freedom can be considered to be both a goal and an instrument for public policy.²⁶

(ii) Level of consumption possibilities

The level of consumption possibilities refers to people's command over resources to obtain goods and services to satisfy their needs and wants.

This definition should be considered in its broadest conceptual sense. That is, people's command over resources encompasses traditional economic concepts of income, as well as non-economic concepts such as application of political authority. As well as traditional market goods and services, the definition considers non-market goods and services such as, amongst others, voluntary and community work, personal and professional relationships, social capital, the quality of the physical environment, health and leisure.

24 In his synthesis approach, Sen follows (and extends) the social contract theory of Rawls (1971).

25 That is, in technical terms, there is a distinction between 'liberty', which usually denotes a consequence-independent basic right, and 'freedom', which denotes a consequence-dependent right (since its exercise depends on the impact on others).

26 That is, Sen (1999, p. 4) argues that freedom is important to development both for evaluative reasons (that is, development should aim to enhance people's essential freedoms) and effectiveness reasons (that is, development is best achieved through free agency of people).

In addition, the needs and wants to be satisfied range from meeting basic material necessities such as food and shelter, through to non-material desires for emotional satisfaction or political participation.²⁷

The traditional focus on improving living standards through economic growth still constitutes a substantial portion of the expanded consumption possibilities dimension.²⁸ This means that effective policy advice and design still requires the application of the tools of economic analysis, but with a wider appreciation of the world in which we live. This incorporates, but is not restricted to, considerations of economic efficiency, through the rank-ordering of consumption possibility outcomes according to the Pareto condition.²⁹

It is also important to consider explicitly the path of consumption possibilities over time. Solow (1992) defines the duty of sustainability to be 'to endow [the next generation] with whatever it takes to achieve a standard of living at least as good as our own and to look after their next generation similarly'.³⁰ Sen (2004) extends this to include 'sustaining people's freedom to have – or safeguard – what they value and to which they have reason to attach importance'.³¹ Advice on policies to achieve sustainable development therefore needs to consider carefully incentives for consumption over time, and in particular, the impact of social, technological or environmental externalities that may not be adequately priced by the market.

(iii) Distribution of consumption possibilities

The distribution dimension refers to the spread of all aspects of consumption possibilities across the population, including across different groups in society, across different geographic regions and across generations. In addition, it considers the distribution of the other aspects of the wellbeing framework (risk, complexity and

27 As noted in the previous section, this broader definition represents a desire to incorporate broader determinants and constituents of utility. Sources for supplemental information for these broader considerations include, amongst others, ABS (2004) and UNDP (2001). The conceptual underpinning for incorporating broader considerations is discussed in Lancaster (1966) and Sen (1999).

28 As set out, for example, in Sen (1999).

29 As set out, for example, in the discussion of the fundamental theorems of welfare economics in Varian (1992). A Pareto-optimal outcome is one in which it is impossible to make some individuals better off without making others worse off. Note that different initial allocations are likely to lead to different Pareto-optimal outcomes. The relative social value of these outcomes can only be judged by applying the weightings of a specific social welfare function.

30 Solow (1992), p. 15.

31 That is, Sen (2004, pp. 10-11) argues that 'there can be a loss of freedoms (and of corresponding human rights) even when there is no diminution in the overall standard of living', for example, extinction of species denies future generations the opportunity to appreciate their existence.

opportunity and freedom), which may or may not be considered to be explicitly part of consumption possibilities in themselves.³²

Welfare economics has historically been characterised as only being prepared to provide definitive advice regarding efficiency, and not being prepared to address equity. This is because distribution has been seen as a matter of direct political choice, and hence not a matter for conventional economic analysis.³³

In fact, distribution issues are fundamentally interrelated with other economic considerations, and hence economic tools can provide important insights in this dimension as well.³⁴ For example, this analysis underpins the crucial distributional criteria of horizontal and vertical equity. Horizontal equity calls for individuals in similar positions (often defined through income or consumption) to be treated in a consistently similar manner, while vertical equity calls for individuals in different positions to be treated in a consistently different manner.³⁵

Economic policy analysis is also critical in assessing the intergenerational equity issues embodied in the impact of an ageing population on fiscal and economic sustainability. As noted in *Australia's Demographic Challenges*, 'many of the benefits enjoyed by Australians today are the outcomes of sacrifices and investments of earlier generations. So too the prosperity of future generations depends on the decisions we make today'.³⁶

Behavioural economics has also furnished some important insights for the distribution dimension. These include an increased awareness of the higher value of an extra dollar to a poor person versus a rich person, the greater value attached to losses versus

32 Konow (2003) provides an excellent summary of the literature on theories of distribution, as they relate to economics. Frankfurt (1987) has also set out some interesting conceptual ground for thinking about economics and equality. He critiques the views, amongst others, of Dworkin (1985) and Nagel (1979).

33 This view is set out, for example, by Varian (1992, p. 335), who states that 'a competitive market system will give efficient allocations but this says nothing about distribution. The choice of distribution of income is the same as the choice of a reallocation of endowments ...'

34 In addition, as discussed in a later section, the distribution dimension has particularly strong interactions with the other dimensions of the framework, reinforcing its central role in economic policy analysis and advice. Hence, for example, the social exclusion of the poor may be amongst the most important factors in their disconnection from the workforce, which has important GDP implications. On the other hand, redistribution has important incentive effects on the production of goods and services, and may create perverse incentives under some circumstances.

35 For example, horizontal equity suggests that people on a similar income should pay a similar amount of tax, while vertical equity suggests that the tax burden should be borne more heavily by those with a stronger capacity to pay. See Zajac (1995) for a broader discussion of these issues.

36 Australian Government (2004), p. 2.

gains, and the higher importance attached to relative position in income distributions as against absolute income.³⁷ These insights have important implications for policy design and implementation.³⁸

(iv) Level of risk that people are required to bear

Risk refers to the intrinsic uncertainty in possible outcomes that is present in almost all decisions. In this broadest conceptual sense, risk impacts on all individuals, and is everywhere in the economy and in society.³⁹

People have different preferences regarding risk, depending on factors such as their relative financial security, their aspirations for the future, or their desire for risk as a good in its own right. All else being equal, it would be expected that wellbeing would be improved if there is a better match between people's risk preferences and the risk borne.⁴⁰

The conventional analysis, which assumes that individuals have well-ordered risk preferences, suggests that an optimal allocation in aggregate can be achieved by facilitating full risk-trading amongst complete markets.⁴¹ This suggests that addressing risk market failures of information, contracts and externalities provides a potential agenda for future economic policy reform to improve wellbeing.⁴² However, since risks and resources are inextricably linked, each potential intervention needs to be assessed in terms of its resource impacts as well as its risk impacts.⁴³

Prospect theory suggests that actual behaviour often contradicts the crucial classical assumption of well-ordered risk preferences. Under these circumstances, facilitating risk trading may not be sufficient to improve the match between their preferences and

37 See, for example, Kahneman et al. (1986) and Kahneman et al. (1999).

38 Some policy implications are summarised in Konow (2003).

39 Bernstein (1996) is an excellent general reference on risk as an economic policy issue, including the central role of risk in the development of modern economic thought. The conceptual basis for this broad definition of risk is set out in Arrow (1951).

40 Note that in conventional usage, discussion of risk often focuses on 'risk management', that is, decision-making processes and frameworks that enable an individual or organisation to better manage risks. As a dimension of the wellbeing framework, however, the focus is on the risks themselves, and their implications for public policy, rather than the management of these risks.

41 The culmination of the classical analysis is the work of Arrow and Debreu (1954), who integrated the impact of risk on decision-making across the whole of the economy.

42 Moss (2002) provides an excellent analysis of the role of government as the 'ultimate risk manager' through addressing risk market failures. Stiglitz (2002) has made some important contributions on the role of information risk market failures in particular. Shiller (2003) suggests some potential new useful markets for risk, although it is beyond the scope of this paper to provide an analysis of the practicalities of their application.

43 As per the general equilibrium framework set out by Arrow and Debreu (1954).

the risk borne. Instead, policies may need to be designed specifically to address issues of context, paths and perceptions.⁴⁴

(v) Level of complexity that people are required to deal with

Complexity refers to the proliferation of the number of considerations, and the interconnections between those considerations, for many economic and broader social decisions.

Conventional analysis of complexity has focused on the economic impact of sets of rules, especially in the areas of government regulation and the tax system.⁴⁵ Increasing complexity usually brings benefits both through a better targeting of rules and through the provision of greater certainty. However, it may also impose significant costs through increasing resources devoted to verification and compliance.

A critical difference with some of the other dimensions is that opportunities to trade directly in exposure to complexity may be limited, especially with regard to complexity associated with dealing with the government.⁴⁶ This puts a stronger onus on designing policies which meet community preferences directly.⁴⁷

More recent work on complexity has examined emergent properties of systems, which are properties of the system as a whole beyond the sum of the individual interactions.⁴⁸ These may arise, in particular, in complex adaptive systems, where the constituent parts are able to adapt their behaviour to changing circumstances. Analysis of such systems suggests that issues such as the dynamics of equilibrium formation and the potential for positive and negative system feedbacks can be crucial for policy design and implementation.

44 Tversky and Kahneman (1974) have famously set out a range of behavioural puzzles that contradict the assumptions of well-order risk preferences. Some policy implications are set out in Kahneman (2003).

45 Krugman (1996) provides an interesting overall introduction to complexity as an economic policy issue. Prominent examples of the classical analysis are Kaplow (1992) and (1994), and Krueger and Duncan (1993).

46 Instead, individuals may increasingly turn to brokers to manage complexity on their behalf.

47 In particular, care must be taken when implementing policy reforms to take account of the potential for increased complexity over time (Krueger and Duncan, 1993).

48 Axelrod and Cohen (1999) provide an interesting overview of modern complexity analysis, including the application of the concept of complex adaptive systems. Some policy implications are suggested by Durlauf (1997) and Chapman (2002).

Interaction between the dimensions

As noted previously, there are strong interactions between the dimensions for almost all public policy issues. These strong interactions between the dimensions represent trade-offs between aspects of individual or societal wellbeing.

A critical consideration remains that increasing economic growth over the long term, and hence increasing the level of consumption possibilities in a sustainable manner, is likely to increase the capacity of governments to improve other dimensions of wellbeing. However, pursuing improvements in one dimension to the exclusion of the others is likely to undermine public support for reform and may ultimately be counter-productive.

Table 1 provides some simplified examples of how such interactions can potentially occur across the whole matrix of dimensions.⁴⁹

49 Note that, in some cases, the nature of an interaction may change over time, so that an initial 'win/lose' trade-off may become a 'win/win' situation in the longer term. See, for example, the discussion of species extinction in Sen (2004).

Table 1: Interactions between the dimensions of Treasury's wellbeing framework

		... affects this element of wellbeing				
		Opportunity and freedom	Level of consumption possibilities	Distribution	Risk	Complexity
Improving this element of wellbeing...	Opportunity and freedom		Increasing the freedom of operation of markets may provide increased consumption possibilities. However, it may reduce the consumption possibilities of future generations, unless achieved in a sustainable manner.	Addressing deprivation of opportunities and freedom is both a goal and an instrument of alleviating poverty.	Increased capabilities allow better matching of risks to preferences. However, they may increase risks borne, due to the greater variability in individual outcomes compared with universal provision.	Increased capabilities may imply increased complexity, but are also likely to increase the capacity to deal with complexity.
	Level of consumption possibilities	Addressing market failures may restrict individual freedoms in the short-term, but may increase substantive freedoms in the long-term.		Efficient markets may increase disparities in income. However, they may also increase absolute incomes for the least-well-off.	Efficient markets may expose individuals to increased risks. However, increased incomes may also increase capacity to bear risks.	More consumption possibilities may increase complexity. However, increased incomes may increase capacity to use brokers to manage complexity.
	Distribution	Redistribution of resources can provide low income groups with substantive freedom to participate in the economy and society more generally.	Redistribution of resources may create disincentives for production. However, it may enable greater participation in the workforce among low-income groups.		Redistribution of resources will also redistribute risk. It may reduce the vulnerability to risk amongst low-income groups, but may also weaken incentives for good risk management.	Mechanisms for redistribution, especially highly targeted programmes, can result in increased complexity.

Table 1: Interactions between the dimensions of Treasury's wellbeing framework (continued)

		... affects this element of wellbeing				
		Opportunity and freedom	Level of consumption possibilities	Distribution	Risk	Complexity
Improving this element of wellbeing...	Risk	Risk trading enables greater choice with regard to risk borne, and provides opportunities for entrepreneurial activity.	Better matching of risk with preferences can lead to better resource allocation in the short-term, and can facilitate entrepreneurial activity in the longer-term.	Better matching of risk with preferences can reduce vulnerability of disadvantaged people in both risk and resource terms.		Risk trading requires more sophisticated instruments, and may increase complexity.
	Complexity	Simplification may reduce the choice of instruments to match individual wellbeing preferences. However, assisting participation in society by disadvantaged groups increases their substantive freedoms.	Simplification can reduce economic costs with regard to compliance and verification. However, it may be at the expense of better targeting to individual circumstances.	Simplification, especially of government programmes, can be particularly beneficial for the participation of disadvantaged groups in the economy and society more broadly.	Simplification may require fewer instruments for risk-trading, and hence reduce matching of risk preferences. However, simplification of regulation may also reduce the costs of beneficial risk trading.	

Public policy implications

Treasury's role as a central policy agency means that it has an interest in all key policy areas and frameworks integral to the functioning of the economy and wellbeing of Australians. This covers the full range of the Government's responsibilities, ranging from traditional economic issues such as macroeconomic management, fiscal and tax policy, and advice on sound markets, through to broader issues such as social and environmental policy, international engagement and capacity-building, and direct delivery of certain programmes. The wellbeing framework is designed to ensure that Treasury brings a consistent and robust understanding of wellbeing across the full range of this remit, based on (but not restricted to) the application of economic principles and tools.

The purpose of the framework is to provide guidance on the key issues Treasury officers should be thinking about in framing their policy advice to Government. It is not a 'checklist' to be applied in every circumstance, and its application differs across different areas reflecting their different responsibilities and tasks. Nevertheless, it serves an important unifying function for the Department's policy analysis and advice, through providing a broader intellectual context for our work.

The framework reinforces Treasury's strongly-held conviction, inherited from the intellectual tradition of economics, that *trade-offs matter deeply*. Most policy reforms will involve trade-offs within or between dimensions of wellbeing. As noted in the previous section, such trade-offs can be complex and multidimensional. Decisions regarding policies involving such trade-offs ultimately require judgments to be made about valuing different aspects of social welfare, which can only be done through the political process.

The ultimate value of the wellbeing framework is that it improves the quality of Treasury's policy advice to Government, through helping to identify the important trade-offs for wellbeing, and providing a consistent basis for understanding their impact. Treasury considers that helping to understand wellbeing is an important part of our contribution to improving wellbeing, and that this contribution can potentially impact on each of the dimensions of our own wellbeing framework.

The initial process of developing the framework has been important in itself, since it has required Treasury to think carefully about what people value in wellbeing, and how this relates to policy analysis and advice. However, the framework will also be an important iterative learning process for the Department, as application of the framework will require ongoing examination of each of these dimensions in detail, and provide opportunities to consider potential future improvements to the dimensions and the framework as a whole.

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Risk, wellbeing and public policy

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This article explores the relationship between risk and wellbeing, and the implications for public policy. Risk is an important dimension of wellbeing in its own right. People have different risk preferences, so policies to improve the match between preferences and risk actually borne have the potential to improve wellbeing. However, policies that affect risk often have significant trade-offs in other dimensions of wellbeing. Overall, a more sophisticated understanding of risk can make an important contribution to deliberations across almost the full range of government policy areas.

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Introduction

Risk is one of the five dimensions included in Treasury's wellbeing framework, as set out in 'Policy Advice and Treasury's Wellbeing Framework' (*Economic Round Up*, Winter 2004). The justification for risk being considered a dimension of wellbeing is expressed eloquently by Arrow (1951, p. 404), who argued that:

There is no need to enlarge upon the importance of a realistic theory explaining how individuals choose among alternate courses of action when the consequences of their actions are incompletely known to them. It is no exaggeration to say that every choice made by human beings would meet this description if attention were paid to the ultimate implications.

Following Arrow, risk is defined in this article to be the intrinsic uncertainty in possible outcomes that is present in almost all decisions.² In this broadest conceptual sense, risk impacts on all individuals, and is everywhere in the economy and in society.³

This article explores the relationship between risk and wellbeing, and the implications for public policy. The article first sets out some conceptual tools for the economic understanding of risk, derived from both the classical theories of risk, and more recent developments from behavioural economics. With these tools, the article then examines the implications that risk has for the rationale and design of government policy across a range of areas. It concludes with a discussion of risk as a dimension of wellbeing in its own right, as well as the interactions that risk has with the other dimensions of wellbeing.

2 We take uncertainty to be intrinsic in the sense that it is not possible, in practice, to assemble an information set about most decisions that is sufficiently complete as to predict the outcome with certainty. It is beyond the scope of this paper to enter the philosophical debate as to whether, in theory, such a complete set might be possible even for archetypal uncertain decisions such as coin tosses.

3 Note that this definition does not distinguish between *risk* and *uncertainty* when describing variability in outcomes. This is in accordance with modern risk literature, but in contrast to Knight's famous distinction between them (Knight, 1921). Although the Knightian distinction between 'measurable' risk and 'unmeasurable' uncertainty has intuitive appeal, it is extremely difficult to apply in practice. Risks are only entirely measurable in highly simplified representations of decisions. Instead, they almost always include some degree of subjective judgment, and are hence not substantively different to the Knightian unmeasurable uncertainties in all subsequent analysis.

The intent is to provide a broad overview, rather than pursuing the detail of various risk concepts or policies. Through providing this overview, it is hoped to provide a richer background context for policy discussions in this area.⁴

Classical analysis of risk

This section outlines the conventional or ‘classical’ analysis of risk, which is founded on the assumption that an individual’s risk preferences are essentially well-ordered.⁵ The use of an historical chronology of the development of theory in this area is designed to illustrate the critical role of risk in the development of modern economic thought.⁶

The fundamental theoretical framework for the consideration of risk in decision-making is the *theory of probability*, developed by French mathematicians Pascal and Fermat in the mid 17th century (Bernstein, 1996). This allowed sophisticated mathematical techniques to be applied, for the first time, to build up risk profiles from uncertainties in disparate decisions, whether those decisions occurred simultaneously, in series, or complex combinations of both.

Decision-making under uncertainty cannot be fully described by considering the probability of various outcomes alone. It is also necessary to consider the consequences of the outcomes themselves. Huygens in 1657 showed that this could be done by rank-ordering decisions in terms of their *expected values*, defined to be the average of all possible outcomes weighted by their respective probabilities (Moss, 2001).⁷

Daniel Bernoulli challenged the usefulness of this expected value decision rule in 1738, on the grounds that ‘the determination of the *value* of an item must not be based on its *price* but rather on the *utility* it yields’ (Bernoulli, translation, italics in the original,

4 In conventional usage, discussion of risk often focuses on risk management, that is, decision-making processes and frameworks that enable an individual or organisation to better manage risks. However, in this paper, the focus is instead on the risks themselves, and their implications for public policy. In effect, it is assumed that individuals are perfect risk managers. That is, they have full awareness of the risks that they face and how to manipulate them efficiently (for example, by trading them in risk markets such as insurance, and by constructing appropriate portfolios of risk).

5 ‘Well-ordered’ means broadly that choices on the basis of these preferences are consistent. The term will be defined more precisely as technical terms are introduced later in the article.

6 The historical overview is, by necessity, highly simplified and selective. It draws heavily from Bernstein (1996), which provides a far more detailed historical treatment. Moss (2002) also provides some interesting historical context.

7 For example, the expected value of lottery with an equal chance of paying \$0 or \$1000 is $\frac{1}{2} \times \$0 + \frac{1}{2} \times \$1000 = \$500$.

1954). Bernoulli used this new concept of *utility* to describe two results of fundamental ongoing importance regarding the impact of risk on wellbeing, namely that individuals generally have a *diminishing marginal utility of wealth*, and that this leads them to be generally *risk-averse*.⁸

The concept of utility was the centrepiece of the development of modern classical economics in the 19th century. As Bernstein (1996, p. 110) explains:

Utility provided the underpinnings for the Law of Supply and Demand, the striking innovation of Victorian economists that marked the jumping off point for understanding how markets behave and how buyers and sellers reach agreement on price. Utility was such a powerful concept that over the next two hundred years it formed the foundation for the dominant paradigm that explained human decision-making and theories of choice in areas far beyond financial matters.

In this incarnation, utility had lost its direct connection with risk *per se*, as initially conceived by Bernoulli. Instead, 'classical economists had defined economics as a riskless system that always produced optimal results' (Bernstein, 1996, p. 216).

In the early 20th century, the riskless classical theory was challenged by authors such as Knight and Keynes. They considered that these existing models were inadequate in modelling real-world complexity, and in particular, the critical economic driver of entrepreneurial activity. In their view, the fundamental dynamics of the economy could only be explained if risk was (again) explicitly incorporated into models of economic decision-making.

Von Neumann and Morgenstern developed a mathematical formalisation of this re-connection between risk, utility and decision-making through their *game theory* (also known as *rational choice* or *expected utility theory*), published in 1944. This theory brought together all of the strands of the risk story explored thus far:

- Decision making under uncertainty was the fundamental action of all agents.
- The characteristics of the agents were expressed in terms of utility curves, which were required to satisfy conditions of a diminishing marginal utility of wealth, and of risk aversion.

8 Diminishing marginal utility of wealth describes the result that people generally value each successive unit of wealth less highly than the one before it. This implies that rational actors will generally be risk averse, that is, they will prefer a sure pay-off rather than an equivalent expected value gamble (since the potential losses outweigh the equivalent potential gains).

- Choices were codified according to probabilities in various strategy games, and decisions were ranked by their expected utility.⁹
- Agents then sought to make decisions that maximise their expected utility under their particular circumstances.

Von Neumann and Morgenstern's theory provided comprehensive conceptual tools for understanding the impact of risks on individuals. The integration of these impacts into an aggregate model was done by Arrow and Debreu in 1954, as part of their pioneering theoretical work on the theorems of welfare economics and general equilibrium formulations of the economy.

Arrow and Debreu developed a different formulation to von Neumann and Morgenstern for modelling decision-making under uncertainty. This involved mapping choices in terms of *contingent states*, rather than uncertain outcomes.¹⁰

Using this formulation, Arrow and Debreu showed that, in the presence of a full set of contingent-state markets, competition will lead to an equilibrium with a Pareto-optimal allocation of risk in the economy.¹¹

In their formulation, risk has all the properties of a standard good within conventional welfare economics. Risk trading must, by definition, leave both parties better-off in terms of their risk-return commodity bundle.¹² This means that, to the extent that individuals are able to trade risk as much as they desire, they will be able to meet their

9 This is underpinned by the classical assumption of well-ordered preferences noted earlier. That is, the expected utility functions are required to be mathematically well-behaved, so that choices are consistent. This is in contrast to prospect theory, as described in the next section, where risk preferences may be inconsistent. For instance, while classical theory suggests that a choice between two possible choices should always be treated the same regardless of how it is presented, prospect theory finds that issues such as framing can (in some circumstances) determine which of the two possible choices will be made.

10 Contingent states refer to the proposition that 'commodities can be differentiated not only by their physical properties and location in space and time but also by their location in 'state'. By this we mean that 'ice cream when it is raining' is a different commodity than 'ice cream when it is sunny' and thus is treated differently by agents and can command different prices' (Fonseca and Ussher, 2004).

11 Pareto optimality for the allocation implies that 'no other choice will make every individual better off' (Arrow, 1964, p. 91). Note that different initial allocations are likely to lead to different Pareto-optimal outcomes. The relative social value of these outcomes can only be judged by applying the weightings of a specific social welfare function, as determined (implicitly) by the political process.

12 This is a 'by definition' argument because unless both parties are better-off, there would be no trade.

preferences for risk more fully within given resource constraints.¹³ This is an allocative welfare gain, and hence would be expected to improve wellbeing.¹⁴

In addition, when individuals are able to tailor risks to their preferences, it enhances their capacity to undertake entrepreneurial activities (Bernstein, 1996). That is, in the absence of risk trading arrangements, many new economic activities may involve substantial risk for the entrepreneur. Facilitating risk trading provides the possibility for the risk borne to be made commensurate to the expected return. As well as an initial allocative welfare gain, risk trading would then also be expected to lead to dynamic welfare gains.

Risk trading for entrepreneurial activity often happens through the market for equity, where there is a 'risk premium', which reflects how the return on the equity differs from that of a risk free asset. This premium then represents the price that the investors receive for taking on the risks that have been implicitly traded.

The Arrow-Debreu approach, and subsequent general equilibrium analysis, involves high level conceptual modelling of the economy. Its value is in providing a general framework for understanding how risk operates in the economy and society, rather than providing detailed guidance for understanding individual decision-making.

Possible imperfections in risk markets

As noted above, the theoretical Arrow-Debreu construct relies on a complete set of contingent-state markets for a Pareto-optimal risk allocation to be achieved. Arrow and Lind (1970, p. 374) argued that the existence of missing or failed risk markets was 'perhaps one of the strongest criticisms of a system of freely competitive markets'. There are three main categories of possible risk market failures identified in the classical approach: *information problems*, *contractual problems* and *externalities*.

13 Individuals may well seek to arrange a portfolio of (at least partially) offsetting risks to meet an overall risk preference, rather than trying to arrange risk trades to meet a uniform risk condition for all goods.

14 That is, assuming an underlying social welfare function that put a strong (or even exclusive) value on the utility of individuals, all risk trades would be expected to be welfare enhancing (since the utility of both parties must increase). Indeed, the Arrow-Debreu result is even stronger — full risk trading will achieve a Pareto optimal point, such that there are no further welfare gains to be made (assuming a given distribution of resources).

Many risk markets suffer *information problems* due to asymmetric information, where the underwriter is not party to critical information about the risk profile of the other party.¹⁵ Specific examples include *moral hazard* and *adverse selection*.¹⁶

Asymmetric information problems can lead to markets rapidly becoming unsustainable, with the result that they can no longer perform their economic risk-trading function. Under some circumstances, the information constraint may be so severe as to prevent the formation of a risk market at all.¹⁷

Contractual problems refer to the difficulty of constructing complete contracts for some types of risk-trading. An example is the impossibility of contracting directly between generations over time. As Stiglitz notes, 'of necessity, then, the set of contingent claims markets must be incomplete' (as quoted by Moss, 2002, p. 47).

In some cases, even though a contract can be constructed in theory, it is impossible to guarantee that it will be honoured. For example, 'private financial institutions face commitment problems whenever there exists a threat of systematic (highly correlated) losses' (Moss, 2002, p. 307).¹⁸

Finally, *externalities* arise when operations have an external impact that is not captured in prices in the risk market. As per the standard treatment in welfare economics, competition may not then push towards a market equilibrium outcome that is Pareto-optimal.

In some cases, risk externalities can induce positive feedback loops. For example, during the Great Depression, Douglas argued that the provision of unemployment benefits 'would diminish the fears which the employed workers would entertain towards the prospect of unemployment and hence would lessen their frantic personal savings at such times ... there would be a better balance between spending and saving and less unemployment would be created' (as quoted by Moss, 2002, p. 311).

15 Not all information problems need be asymmetric, of course. There are many areas where understanding of the risks involved is relatively poor. One example of this is in environmental systems, where our scientific understanding of the long term possible consequences of some changes is still relatively undeveloped. These ill-defined risks may be particularly difficult to manage effectively.

16 *Moral hazard* is where there is an incentive to stop taking precautions against risky events (or even induce their occurrence) once the costs of the risk is being borne by an insurer (for example, in fire insurance). *Adverse selection* is where parties most at risk are most likely to purchase insurance (for example, in health insurance), hence biasing the selection pool.

17 It is interesting to note that the use of sophisticated derivatives and other risk instruments in financial markets has increased vastly the range and sophistication or risk trading in the modern economy (Shiller, 2003).

18 For instance, when there are systemic losses due to an economic downturn.

Insights for risk from behavioural economics

Recent work in behavioural economics, under the rubric of 'prospect theory', has challenged the key classical assumption of well-ordered risk preferences.

Kahneman and Tversky, in a landmark paper published in 1979, documented the following inconsistent risk preference behaviours in empirical tests:

- *Loss aversion*: People generally regard a loss as being more 'costly' than an equivalent gain would be 'beneficial'.
- *Framing*: The way that problems are framed is important, independent of the underlying risks involved in the decision.
- *Nonlinear perception of risk*: A change in the probability of the event will have different effects depending on what is the starting probability.
- *Losses versus costs*: Whether a change in wealth is structured as a cost (for example, the payment of an amount) or as a loss (for example, a foregone earning) can have a significant impact.
- *Source dependence*: Where uncertainty comes from seems to matter. For instance, people prefer a flip of a fair coin to a flip of a coin with an unknown bias. This reflects different treatment about uncertainty in the risk itself than in risk generally.
- *Risk seeking*: Despite the near universality of risk aversion, most people show a preference for risk under some conditions.

The key issue in these scenarios may appear to be 'incorrect' perceptions, or a failure to grasp the underlying structure of the problem. That is, it might be assumed that with further information, people may change their choices to be more consistent.

But when well informed observers are questioned, they are normally puzzled that their initial choices would be seen as inconsistent, and have no inclination to change their choice. This suggests that these are not solely issues of perception, but instead reflect true underlying preferences of individuals.

Kahneman and Tversky's 'prospect theory' developed some systematic predictions regarding these behavioural puzzles.

First, rather than using the full set of information available, prospect theory suggests that any set of possible outcomes (called a 'prospect') is edited to simplify the

information used. For example, this might be done by reducing the number of options, rounding numbers, or focusing on the parts of the different options that are identical.

The second major difference is in the way that the value of each outcome is measured. The classical approach suggests that these can be measured in absolute terms. In prospect theory, they are measured relative to a reference point which is dependent on how the prospect has been framed.

The third, and most significant, difference that prospect theory suggests is the way each of these possible outcomes is weighted. In the classical approach, this decision weight is simply the probability of the possible outcome. Prospect theory suggests that the decision weight is more complicated than this, and may include a component based on the subjective perception of the event's likelihood.

There is a consistent pattern that decision weights are generally higher than the actual probability for very unlikely events, and lower than the actual probability for very likely events.

There may be an additional weighting according to whether the uncertainty is 'known' or 'unknown'.¹⁹ Specifically, when people are aware of the extent of their ignorance they are more likely to be averse to the risks involved.

More generally, the source of the uncertainty appears to be important. People generally preferred to take risks in the areas of their expertise. For example, football fans would generally prefer to be more risk seeking on gambles on a football game than on a pure chance.

Prospect theory thus provides a more sophisticated understanding of actual behaviours in decision-making under uncertainty. These newer forms of expected utilities mean that higher order classical analysis may need to be treated somewhat more carefully, with a greater consideration of behaviours in the real world.²⁰ In some cases, the newer forms may indicate that some risk market failures identified under the

19 This difference is reminiscent of Knight's predictions regarding different behaviour under 'measurable' risk and 'unmeasurable' uncertainty (Knight, 1921).

20 In more formal terms, higher order classical analysis requires that expected utility functions are mathematically well-behaved. It is beyond the scope of this article to examine the question of when the expected utilities implied by prospect theory may no longer meet this condition. Instead, it is assumed, in broad terms, that any behavioural impacts can be treated as a small perturbation on the underlying classical analysis.

classical theory are more severe than previously recognised. They may also point to market failures in risk that would not be identified at all under the classical theory.²¹

Risk and public policy

In this section, the concepts discussed in previous sections are applied at a more practical level to some issues surrounding risk and public policy.²²

As noted previously, in its broadest conceptual sense, risk impacts on all individuals, and is everywhere in the economy and in society. By definition then, government is inextricably involved with risk in almost all of its activities.

A fundamental distinction for the impact of government actions on risk is between those which affect the *level of overall risk* in society, and those which *reallocate risk* between groups in society.

Government actions which seek to affect the level of risk in society are generally aimed at reducing overall risk. Examples range from general actions such as providing a system of enforceable and consistent property rights, to risk-specific regulation which seeks to prohibit or constrain risky activities.

While the presence of government tends to reduce overall risk, some government actions can also add to the level of risk at the margin. For example, sovereign risk is created by the possibility of unexpected changes in government decisions.

Government actions can also affect the *distribution of risks* between groups in society. Such risk reallocation may shift risk from one group to another, or spread the risk across a large number of groups. As Moss (2003, p. 18) notes, 'in some cases, risk reallocation can lead to risk reduction, but not always'.

Risk rationales for policies

The classical analysis notes that guaranteeing a Pareto-optimal allocation requires full risk trading across a complete set of risk markets. However, in some cases, markets for risk may be missing altogether. Even where they do exist, they may suffer market failures associated with information problems, contractual problems or externalities.

21 More recent work addresses some of the issues raised by prospect theory through extensions to the classical expected utility approach, which are beyond the scope of our discussion here. See Quiggin (1993) for more details on this area.

22 It is emphasised again that the analysis is highly simplified, and only intended to provide a broad overview. In particular, the examples are for illustrative purposes only, and do not capture real-world policy complexity.

In addition, from prospect theory, it was noted that some observed behaviours which deviate from classical expected utilities may indicate that some risk market failures identified under the classical theory are more severe than previously recognised, and may also point to additional risk market failures not recognised under the classical theory.

The desire to address these risk market failures thus provides a range of risk-related rationales for government policies to work towards a Pareto-optimal allocation of risk across the economy.²³

Policies to address market failures might take the form of intervention in *explicit risk markets*. For example, a possible (second order) rationale for government intervention in the health insurance market is to address the potential market failure due to adverse selection in the private health insurance pool. In this case, policy may be aimed at reallocating risk by expanding the group over which it can be pooled, and hence improving the efficiency of an explicit risk market.

In some cases, governments may seek to reduce the number of *missing markets for risk*. Indeed, the increasing availability and lower price of information through modern information technology may mean this can be done purely through information provision and market infrastructure regulation, rather than through more traditional intervention instruments (Shiller, 2003).

Intervention may also occur in markets which are not conventionally thought of as explicit risk markets, but are instead *implicit risk markets*. For example, Diamond (1977) and Merton (1983) have conceptualised the social security system as an implicit means of risk sharing between generations. This addresses a contractual risk market failure by reallocating risk between groups, in an attempt to improve (or substitute for) the operation of an implicit risk market.

One important type of intervention across most areas relating to risk is to increase transparency. When consumers and decision makers are better able to observe the true position or structure of other agents in the economy they will be able to make better judgments about the risks that they might take on. Transparency alone will not improve risk allocations, however, unless consumers are able to use this information to more closely match their own allocation of risk to their preferences.

23 As noted previously, pushing towards Pareto-optimality implicitly assumes a social welfare function that has a strong (or even exclusive) value on the utility of individuals. Furthermore, it is noted again that any particular Pareto-optimal outcome will depend strongly on the initial allocation.

Risk interventions can also happen even in policy areas that are not normally thought of as being related to risk. For example, see Box 1 for a discussion of how tariff policy can have flow-on impacts on risk.

The risk rationale may also apply to government actions which are on a *whole-of-economy basis*, rather than acting on any specific market, risk-related or otherwise. For example, dealing with risk is a key feature of overall Commonwealth Government fiscal strategy. The government can address certain market failures through fiscal policy that are almost impossible to deal with on an individual basis. For example, during an economic downturn, individually rational risk decisions might involve individuals and businesses reducing their expenditure levels. However, in aggregate, this could further reduce economic activity, thus imposing a risk externality. Fiscal policy aimed at enhancing macroeconomic stability can thus be framed as having a risk rationale of reducing the incidence of such feedback loops.²⁴ Unlike the private health insurance and social security examples, however, this policy aims to reduce the level of risk in society, not merely reallocate it.

24 Shiller (2003) has proposed a means of addressing some of the risk implications of broad macroeconomic fluctuations through the creation of 'macro markets'. At a conceptual level, such macro markets do seem to have the potential to provide additional useful markets for risk, but it is beyond the scope of this paper to provide an analysis of the practicalities of their application. The Economist (2004) notes that Goldman Sachs and Deutsche Bank have set up prototypes of these forms of economic derivatives.

Box 1: Tariffs and barriers to trade

The conventional economic analysis of trade protection focuses on the impact of trade barriers on the potential efficiency of the economy, and hence the potential income and consumption levels of individuals within the economy. Lowering trade barriers, such as tariff levels, has significant positive benefits for an economy, expanding opportunities for consumption and the competitiveness of the economy. But lowering trade barriers will have impacts on the risk dimension.

The most prominent risk associated with reducing a tariff wall is the increased risk of unemployment and business failure in the short term in the sectors that have had their effective level of assistance reduced. Firms behind a tariff wall are likely to be relatively uncompetitive internationally, due to the price protection afforded by the tariff wall. The entry of competing imports will cause some firms to improve their business practices and become more competitive. But some firms may find themselves unable to do so, and their business may contract or fail with a consequent reduction in employment, other factors unchanged.

At the same time, however, other areas of the economy will expand – the change in relative prices for the economy will create new opportunities that firms will take up. Indeed, there are likely to be positive overall impacts on economy wide employment and the unemployment rate over the medium term, once these adjustments take place, and national income is likely to be higher, reflecting a more efficient use of the nation's resources.

Nevertheless, for some individuals there are more risks – an employee within the protected area of the economy will have a greater risk of becoming unemployed, at least temporarily, when the tariffs are lowered. In the longer run this increased risk of unemployment is reduced by the increase in the possibility of getting a new job in another expanding sector of the economy. But the short run risk of unemployment for the individual is likely to increase.

With many trade barrier changes it is likely that incidents of unemployment will be concentrated in only a few areas of the economy, while the positive benefits from increased employment will be more broadly dispersed. This distribution element to risk is critical to how the impact of tariff reforms is perceived in the general community. The impact on those that bear the increase in risk may be more apparent than the impact on those that benefited from a reduction in risk. The connection between the reforms and decrease in job security in some areas appears to be far more direct than any possible connection between reforms and an increase in job security in another sector (such increases are often indistinguishable from the impacts of normal economic growth). So while lowering trade barriers is positive for the overall economy, some individuals may experience increased levels of risk.

Risk implications for policy design

Prospect theory provides some additional insights regarding the design of policies, whether or not the original intent of the action is risk-related.

First, framing is critically important to understanding behaviour when risk is involved. In particular, the way that a transaction is structured will have a real impact on the way that people behave. For example, individuals may prefer government bearing of risk, even at higher overall cost, because of the perception that such costs are only a small part of the overall government budget.

Second, different paths to the same result may have different implications for society, due to the asymmetry of gains and losses. This has some significant implications for how risks should be treated. It implies that paths matter, and in particular, that decisions about the initial allocations matter deeply.

Finally, the way that things are perceived can affect the end result. Unlike the classical theory, prospect theory does not assume that people always perceive probabilities accurately. Particularly with regard to very likely or very unlikely events, the decision weights do not appear to accord with the actual probabilities. For example, events such as the failure of a large company, or a 100 year flood will be rare enough that people tend not to experience them personally. Within a population there will normally be a wide range of perceptions about the likelihood of these events, which will most likely not be very accurate, and are likely to change with exposure to news reports. People tend to exhibit a very strong aversion to large potential losses, even if such losses only have a very small actual probability.

Resource impacts of risk-related government policies

Governments may use a variety of conventional government policy instruments such as outlays, taxation measures or regulations for risk-related purposes. In addition, they may also use specific risk transfer instruments (RTIs), such as concessional loans, government guarantees and non-traded equity. Regardless of the specific instrument used, it is important to consider the full economy-wide impacts of any risk-related government policy.

General equilibrium models emphasise that risk and resources are inextricably linked together in decision-making under uncertainty, so each of these risk-related policies has real resource implications.²⁵

Under the assumption that a policy addresses a risk market failure and does not have any flow-on impacts in related risk markets, wider risk trading would be predicted to lead to an overall efficiency dividend. However, even under these circumstances, the intervention will usually impose additional transactions costs in the market, and may require further fiscal expenditures for purposes of verification and compliance.

For example, the Commonwealth's involvement in prudential supervision of the financial system can be considered a policy to manage risk. Amongst other issues, it addresses the externality issue that failure of financial institutions can have system-wide effects, and the information issue that depositors cannot make a fully informed decision about the solvency of core financial institutions. However, at a conceptual level at least, the prudential safeguards on matters such as capital requirements place restrictions at the margin on the operation of risk markets. This will have real efficiency costs in resource allocation. In addition, substantial resources are devoted to such prudential supervision by the Commonwealth. However, these costs must, of course, be weighed against the benefits accruing to depositors due to the increased security of their investments, and the society wide benefits from increased financial sector stability.

In practice, given the complex interrelationships between risk markets, it is likely that most government interventions will have flow-on impacts in related risk markets. The static resource implications of these flow-on impacts thus need to be taken into account when assessing the net impact of any such policies. In addition, there are likely to be dynamic incentive impacts in the economy, since the operation of risk markets underpins ongoing entrepreneurial economic activity.

In some cases, government policies which ostensibly seek to mitigate a market failure may even increase risk-related costs. For example, Kaplow (1991, p. 167) notes that in the presence of certain moral hazard problems and for certain designs of intervention,

... government relief distorts individuals' incentives: individuals' decisions take into account only their own exposure to loss – the portion of loss uncompensated by government relief – rather than the total loss. Moreover, given the availability of private insurance, the resulting loss from distorted incentives exceeds any benefit from relief in allocating risk.

25 The general equilibrium approach also implies the converse, namely that almost all government actions that have resource impacts will also change risk distributions in the economy.

Government preference for risk

As discussed above, government is inextricably involved with risk in almost all of its activities. It is then of interest to consider the characteristics of the government's own preferences for risk.

Even if a stylised government preference function was identical to a generic individual, the government may react differently to risk because of scale effects. That is, for any particular venture, the government has the capacity to spread the risk over a much larger budget.²⁶ It can also take a risk that affects a particular subset of the population, and spread it over the whole of the population.

In addition to these scale effects, however, governments might actually have different preferences than a generic individual.²⁷ Most notably, in conceptual terms at least, government may have the capacity to be less risk-averse than individuals because of its capacity to make decisions based on an indefinite time horizon, its capacity to arrange its portfolio so that some of its risks are offsetting, its lower cost of capital or its reduced exposure to some perception problems. However, it is important to remember that risk-bearing by government still has real resource costs, so these costs may still potentially offset all of these risk-bearing benefits.

The government's preferences for risk may also change over time, reflecting judgments made through the political process.

Risk as a dimension of wellbeing

People have different preferences regarding risk, and this can be codified in terms of their expected utility functions. Their preferences may depend on factors such as their relative financial security, their aspirations for the future, or their desire for risk as a good in its own right.

This underlines that *risk is an important dimension of wellbeing in its own right*. All else being equal, it would be expected that wellbeing would be improved if there is a better match between people's risk preferences and the risk borne.

The classical analysis suggests that, for a given initial allocation, the optimal matching between individual's risk preferences and the risk borne occurs with the facilitation of

26 Even with the (same) marginal utility of wealth curve, the government would place a lower value on an extra dollar than a generic individual because of the different scale of respective budgets.

27 If the government and the generic individual had the same size budget and risk-spreading capacity, there still might be differences in risk preferences.

full risk trading in complete risk markets. While much work has been done on this area in recent years, there are still risk market failures of information, contractual problems and externalities that provide a potential agenda for future risk-related economic policy reform to improve wellbeing.²⁸

However, prospect theory suggests that people's expected utility functions may not necessarily be well-ordered. Under these circumstances, simply facilitating risk trading may not be sufficient to improve the match between their preferences and the risk borne. Instead, policies may need to be designed specifically to address issues of context, paths and perceptions.

Interactions with the other dimensions of wellbeing

As well as being a dimension of wellbeing in its own right, risk has strong interactions with the other dimensions of Treasury's wellbeing framework.²⁹

Reflecting the current literature, the focus in this article has mainly been on the critical interaction of risk with the *consumption possibilities* dimension. However, it has also drawn out some important interactions with the other dimensions of the wellbeing framework (*distribution, complexity and opportunity and freedom*).

These strong interactions emphasise that decisions about risk-related policies require judgments to be made about valuing different aspects of social welfare. This means that they can only ultimately be made through the political process.

Level of consumption possibilities

The central feature of the classical analysis is that risks and resources are inextricably bound together in all decision-making under uncertainty. This means that changes in risk distributions impact directly on the level of consumption possibilities throughout the economy.

Some policies may lead both to a better matching of risk to preferences, and an increased level of consumption possibilities. That is, the static and dynamic efficiency dividend from addressing a risk market failure may more than offset any additional economic costs.

28 Again with the caveat that this is on the basis that achieving a Pareto-optimal outcome is desirable, which implicitly assumes a social welfare function that has a strong (or even exclusive) value on the utility of individuals.

29 See 'Policy Advice and Treasury's Wellbeing Framework' (*Economic Roundup, Winter 2004*) for more detail on the other dimensions of the framework.

However, in many cases, risk policies involve a trade-off where improved risk matching leads to a reduction in the aggregate level of consumption possibilities.³⁰ For example, policies to regulate against various risky behaviours, or to address various perception issues regarding risk, are likely to involve this trade-off.

The insights from prospect theory may also complicate the understanding of such trade-offs. For example, if a policy involves losses for a part of the population, prospect theory suggests that losers may need to be more than equivalently compensated to return to their original level of wellbeing. The extent of this trade-off, and the capacity for government to ameliorate it, will depend critically on the specific risk-related costs for the issue at stake.

Distribution of consumption possibilities

The direct link between risks and resources also means policies that have a distributional implication for risk must have a distributional implication for consumption possibilities as well.

For example, some government policies act to pool risks which were previously borne by particular groups. Others may reallocate risks to individuals which were previously borne by government.

When considering the equity implications of such distributive impacts, a key consideration is the capacity of different groups to deal with the risks that they bear. This may depend on factors such as the level of information available to them, their command of resources and their access to risk markets.

Complexity

The classical analysis notes that extensive risk-trading may be required to optimise the risk allocation within the economy. In theory, this requires a sophisticated understanding of an individual's own risk preferences, and a willingness to execute beneficial risk trades over a wide variety of contingent states. This may introduce a significant degree of complexity to individual decision-making.

For example, financial deregulation in Australia has substantially expanded the choices for individuals with respect to various investment products.

30 This may sometimes be due to flow-on impacts in related risk-markets.

This has enabled greater matching of risks to individual preferences, but has also significantly increased the complexity of the choice of the appropriate financial product.³¹

Opportunity and freedom

Risk trading facilitates individual's capacity to undertake risky activities, which can substantially increase their future life opportunities. Although this was applied specifically to increasing the capacity to undertake entrepreneurial activities in the preceding analysis, it can be interpreted as broadly as desired.³²

For example, the Higher Education Contribution Scheme (HECS) can be conceptualised as a risk instrument to overcome the contracting problems caused by the inability to trade in human capital. This facilitates educational opportunities, which are held by authors such as Sen to play a foundation role in expanding human capabilities (Sen, 1999). Box 2 further discusses the role of HECS as a risk policy instrument.

31 Another complexity interaction from financial deregulation arises due to the increasing intricacy of financial institutions 'laying off' their risks through risk trading. This has made it increasingly difficult to determine the final destination of this risk for prudential regulation purposes (*The Economist*, 2004).

32 The work of Rawls (1971) provides a possible alternative perspective on the interaction between risk and opportunity and freedom. In his philosophical thought experiment of an 'original position', all individuals face an equal risk of facing severely constrained opportunities and freedom in society. He argues that the essential ethical justification for the social compact is to ameliorate this risk.

Box 2: The Higher Education Contribution Scheme

The cost of a university education in Australia is heavily subsidised by the Australian Government, which covers around three quarters of the costs while students themselves are responsible for the remaining quarter. To assist students in financing this cost, the Higher Education Contribution Scheme (HECS) was introduced in 1989. It provides students with a loan from the government to finance a portion of university costs during study, with students agreeing to repay a set fee per course. HECS substantially reduces the up front cost of education to the individual.

In terms of a broad economic analysis, the impact of the HECS scheme can be separated into a financing and subsidy component. The financing component relates to the provision of deferred loans, which may not have otherwise been accessible to students. The subsidy component is due to limiting the interest charges and the fees themselves to below commercial rates, with some of the cost then being borne by the government. The need for an individual contribution arises whenever the subsidy is not sufficient on its own to cover the complete costs of education. Most of the gains from education flow to the individual, and so providing education without any fees would be a subsidy to future high earners. This discussion focuses on the role of risk, and hence will look only at the first of these two effects.

HECS substitutes for private provision of finance for the individual's share of university fees. The risk analysis suggests that such a scheme can potentially be beneficial for overall economic efficiency if it addresses the contractual and informational risk constraints otherwise faced in private provision.

The contractual issue arises because people undertake education now to increase their income in the future, but they aren't able to access these future earnings when they need to pay the current costs. They therefore require finance to bridge this intertemporal gap. What makes this case different from most investments is that the individual about to undertake education generally has little in the way of available collateral, which will in turn mean that finance providers will either charge a risk premium, or not provide finance at all.

In addition, the finance provider faces a substantial information constraint, since they have little control over the most important factors involved in determining if the education will actually lead to increased earnings in the future. For example, it is extremely difficult to monitor the effort put in by the individual, which is a crucial predictor of university success. A substantial number of people never complete

Box 2: The Higher Education Contribution Scheme (continued)

their university course, and some will not end up with any improvement in their earning ability. These problems also exist in many forms of business lending, but the unsecured nature of loans for education may make them particularly problematic. The collection of HECS payments through the tax system provides some immediate advantages over private arrangements. The financing contract with the student is over the course of their working life in Australia, and hence the debt is much less vulnerable to short-term evasion mechanisms. Also, wholesale provision through HECS enables risk-pooling in a manner which minimises the impact of the individual risks. For example, while the individual default rate due to non-completions may be the same as for private provision, the government may be in a better position to spread these losses across a larger pool. Education is an investment that can sometimes fail, with the possibility of significant costs for little or no gain. The reallocation of risks from individuals to the government because of the HECS system has a dramatic effect on the risk that an individual faces when deciding whether or not to enter higher education.

First, they face no risk of having to make repayments when they have a very low income level. This is a benefit regardless of whether the individual succeeds in their course of study or not, as it removes the risk of having to make payments when suffering serious illness, or during an extended period of unemployment.

Second, repayments vary with income, and don't start at all until a moderate level of income is reached. As successful higher education is associated with generally higher incomes, those who fail their course can be expected to have a lower income on average. Hence those who don't succeed in education will face a lower, possibly zero, burden of repayments as they aren't receiving the benefits of education. This reduces the risk of failure, although does not eliminate it, as HECS covers only a portion of the total costs of education.

Overall the HECS system substantially reduces the risk levels faced by individuals choosing to enter the higher education system. This reduction in risk is likely to enhance the individual's wellbeing, as they face lower risk while still consuming the same amount of education (or indeed, they may now be able to consume education where previously this was not accessible due to financing constraints). This facilitates educational opportunities, which are held by authors such as Sen to play a foundation role in expanding human capabilities (Sen, 1999).

This reduction in risk may not be without cost to the individual, however, as it also reduces the incentive for individuals to apply a high level of effort to passing their studies. The reduced cost of failure could be expected, on the margin, to reduce the amount of effort people choose to put into studying. However, as there are still substantial costs of education even with HECS, this effect is likely to be small.

Conclusion

This article has provided a conceptual overview of the relationship between risk and wellbeing, and the implications for public policy.

The key messages are that risk is ubiquitous in the economy and in society, that risks and resources are bound inextricably together, and hence that changes in risk distributions impact directly on resource allocation throughout the economy.

Policy reforms to facilitate optimal allocation through risk trading across the economy have the potential to improve wellbeing. However, issues of context, paths and perceptions are crucial as well, and apply in areas of policy that may have little to do with explicit risk trading.

The benefits of such risk-related reforms must, of course, be judged against the real costs imposed through changing decision structures in the economy, and also against potential trade-offs in other dimensions of wellbeing.

Overall, a more sophisticated understanding of risk can make an important contribution to deliberations across almost the full range of government policy areas.

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Might the United States continue to run large current account deficits?

David Gruen and Jason Harris¹

It is often argued that the United States cannot continue for long to run current account deficits of their current size of 5 per cent of Gross Domestic Product (GDP). This article questions this conventional wisdom by examining the implications were the United States to continue to run current account deficits of 5 per cent of GDP for the next ten years. It suggests:

- Despite the size of the United States, the asset-composition of the wealth portfolio of the average non-United States citizen would need to change by less than might be anticipated.
- The risk premium on United States assets might remain quite small.
- The most serious risk to the medium term outlook for the United States is a continuation of large fiscal deficits, not large current account deficits, per se.

1 The authors are from Macroeconomic Group, Australian Treasury. They are grateful for comments and suggestions from Steven Kennedy and Martin Parkinson. The views in this article are those of the authors and not necessarily those of the Australian Treasury.

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At the end of the 1980s, after a decade in which Australia's current account deficit averaged 4½ per cent of GDP, the high current account deficit and the associated strongly rising level of foreign liabilities was widely regarded as the most serious economic problem facing Australia.² Over the subsequent nearly decade-and-a-half to the present, the Australian current account deficit has averaged a slightly smaller 4¼ per cent of GDP.³ Despite this, the performance of the Australian macroeconomy has been impressive over this time. Are there any lessons for the United States from this experience?

The United States net external asset position

As a result of persistent current account deficits, the foreign asset position of the United States moved from net external asset holdings of 13 per cent of GDP in 1980 to net external liabilities of 21.3 per cent of GDP in 2002. If the current account deficit were to remain at 5 per cent of GDP over the next ten years, United States net external liabilities would rise to around 56 per cent of GDP in 2014.⁴

This would represent the highest ratio of net external liabilities to GDP in United States history. Nevertheless, there are a number of advanced economies with ratios of net external liabilities to GDP higher than this: the Scandinavian countries in the mid-1990s; and Canada, New Zealand and Australia at present. In terms of their wider macroeconomic performance, these countries do not seem to have been adversely affected by these relatively large stocks of net external liabilities.⁵

In contrast to these small open economies, the trade-to-GDP ratio in the United States is relatively low, which means that a given percentage-point-of-GDP adjustment to the

2 A couple of newspaper headlines give a flavour of the times: 'Australia's [Foreign] Debt Hovering On The Cliff-Face Of Crisis', *Australian Financial Review* 21 September 1989; 'Australia Sliding Into [Foreign] Debt Trap Says Bank', *The Age*, 20 November 1989. And not to forget Macquarie Bank's November 1989 contribution to the debate, *A Boiling Frog: Australia's Economic Challenge*, a booklet that argued that Australia's current account problem could be likened to that of a frog immersed in initially cold, but gradually warming, water. Failing to realise the impending danger, the frog is eventually boiled.

3 The averages over the two sub-periods of the 1990s, and thus far in the 2000s, are both 4¼ per cent of GDP.

4 This estimate ignores any valuation effects on the stocks of non-United States-dollar-denominated external assets and liabilities from possible future changes in the value of the United States dollar.

5 Of course, a similar statement would not apply to developing countries, with their less-developed financial markets and significant mis-matches in the currency denomination of their foreign debts.

trade balance would require a larger real depreciation than it would were the United States economy more open to trade. Perhaps more importantly, the United States is the world's largest economy, and the United States current account deficit currently represents a daily flow, to the rest of the world, of claims on United States assets of around US\$1.5 billion.

Over the past few years, much of the United States current account deficit has been funded by Asian central bank purchases of United States assets – largely United States Treasury securities. In 2003, for example, Asian official purchases funded about three-quarters of the United States current account deficit.

This article examines the implications were the United States to continue to run sizeable current account deficits, but with foreign central banks not continuing to raise their holdings of United States assets. It begins by examining whether the private sectors in the economies of the rest of the world could comfortably absorb a flow of asset claims of this magnitude for an extended period.

Implications for the global wealth portfolio

To derive quantitative estimates of what would be implied, we begin by generating estimates of the stock of non-United States private-sector wealth. For simplicity, the analysis is restricted to the non-United States Organisation for Economic Co-operation and Development (OECD) private sector. Results are presented for two measures of non-United States OECD private-sector wealth. The first measure is non-United States OECD private-sector net wealth, which is financial and non-financial assets less liabilities. Since not all these assets and liabilities are traded, results are also presented using a second measure: non-United States OECD private-sector net financial wealth. This measure includes tradeable financial assets, such as currency, equities, other securities and accounts receivable/payable, but excludes largely non-internationally tradeable assets such as dwellings and non-durable goods. All financial liabilities with the exception of mortgage liabilities are subtracted from the financial asset measure to give net financial assets.

Lacking wealth data for the whole non-United States OECD, we use OECD data on wealth and GDP for the G6 (the G7 excluding the United States), and scale the numbers up.

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That is, to estimate each measure of non-United States OECD private-sector nominal wealth, the corresponding estimate of G6 private-sector nominal wealth is scaled up by the ratio: (non-United States OECD nominal GDP)/(G6 nominal GDP). To convert wealth measures and GDPs into a common currency, December 2003 exchange rates are used.⁶

It will come as no surprise that the private sector owns large stocks of wealth. In 2002, the derived measure of non-United States OECD private-sector net wealth was 8.1 times as large as annual United States GDP, while the derived measure of non-United States OECD private-sector net financial wealth was 4.1 times annual United States GDP.

In 2002, non-United States public sector holdings of United States assets (official foreign exchange reserves) amounted to 54 per cent of United States net external liabilities. (United States official holdings of foreign exchange reserves were trivial by comparison, and we ignore them.) So, to fund cumulated past United States current account deficits, the non-United States private sector needed to hold 46 per cent of United States net external liabilities in 2002.

Of course, the non-United States private sector's actual holdings of United States assets were (and are) much larger than this — because there are big gross asset holdings in both directions, with the United States private sector holding sizeable stocks of foreign assets and vice versa. But we are interested in how much of the non-United States private-sector wealth portfolio *must be* taken up by United States assets to fund past and future United States current account deficits, and so these are the numbers on which we focus.

In 2002, the 46 per cent of United States net external liabilities that needed to be held by the non-United States private sector amounted to 1.2 per cent of non-United States OECD private-sector net wealth, or 2.3 per cent of non-United States OECD private-sector net financial wealth (from now on, we assume for simplicity that non-OECD private sector holdings of United States assets are zero).

To project these numbers out over the next ten years, the entire flow of assets (5 per cent of United States GDP) is assumed to be purchased by the non-United States OECD private sector. That is, there is no change in the non-United States public sector's holdings of United States assets, and no flow of assets to the non-OECD. As a result, the required adjustment in the wealth portfolio of the non-United States OECD private sector is likely over-estimated.

6 Market exchange rates seem more appropriate for our purposes than Purchasing Power Parity exchange rates, because United States assets change hands at market exchange rates.

Assumptions about how each of the relevant aggregates grows over time are also needed. We assume average annual growth rates equal to those over the period since 1990, which are 5.0 per cent for United States nominal GDP, 2.5 per cent for non-United States OECD private-sector net wealth, and 5.6 per cent for non-United States OECD private-sector net financial wealth.

Finally, no further depreciation of the United States dollar is assumed and therefore December 2003 exchange rates are used to convert future stocks of non-United States OECD wealth into United States dollars.

In contrast, if the United States dollar were to depreciate further over this period as part of the adjustment to the large current account deficits, our assumption would again overestimate the required adjustment in the wealth portfolio of the non-United States OECD private sector, since non-United States OECD citizens would then be able to buy United States assets at lower prices in the future with a depreciated United States dollar.⁷

Chart 1 shows projections of the two measures of non-United States OECD wealth over the next decade, based on these assumptions. By 2014, United States assets would need to make up 8.3 per cent of non-United States OECD private-sector net wealth, or 11.2 per cent of non-United States OECD private-sector net financial wealth. Of course, the results change with changes in the assumptions. But the chart suggests, for both wealth measures, that the proportion of United States assets that must be held in the non-United States OECD private sector wealth portfolio is quite modest and rises only gradually over time.

The willingness of foreign investors to increase their holdings of United States assets in the future presumably depends on the current composition of their asset holdings. A study by Bertaut and Grier (2004), examining the foreign equity and debt holdings of the world's major developed economies other than the US, found that almost all of them were *underweight* in United States assets at the time of the latest available data in 2001.

This applied to holdings of United States assets relative to total assets, which we would expect because of 'home bias' – the widespread tendency for individuals and firms to hold a disproportionate share of their wealth in domestic, rather than foreign, assets. But it also applies to holdings of United States assets relative to holdings of

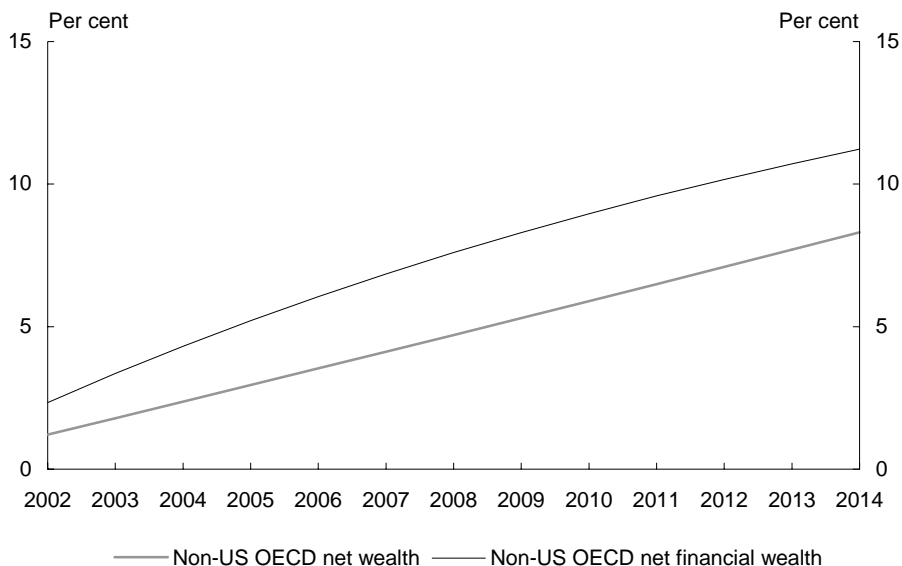
7 If there was a widely held view that the United States dollar would continue to depreciate, investors might demand a higher US-dollar return on United States assets. This argument seems a valid one, but the Australian experience suggests that a long history of large current account deficits does not lead to a noticeable premium on domestic real interest rates (see Chart 2 and the associated discussion).

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other foreign assets. Bertaut's and Grier's results therefore suggest that there remains substantial room for increased holdings of United States assets in the non-United States OECD wealth portfolio.

On the basis of this evidence, it seems possible that the United States could continue to run sizeable current account deficits for quite some time.

Chart 1: Proportion of United States assets that would need to be held in the wealth portfolio of the non-United States OECD private sector to fund a United States current account deficit of 5 per cent of GDP



Source: OECD Economic Outlook 74, Bureau of Economic Analysis, Treasury calculations.

A rising risk premium on United States interest rates?

If the United States were to continue to run sizeable current account deficits, would there be significant implications for the risk premium on United States interest rates? Recent cross-country evidence on the link between net foreign assets and real interest rates seems unconvincing.⁸ Australia's experience may, however, be illuminating.⁹

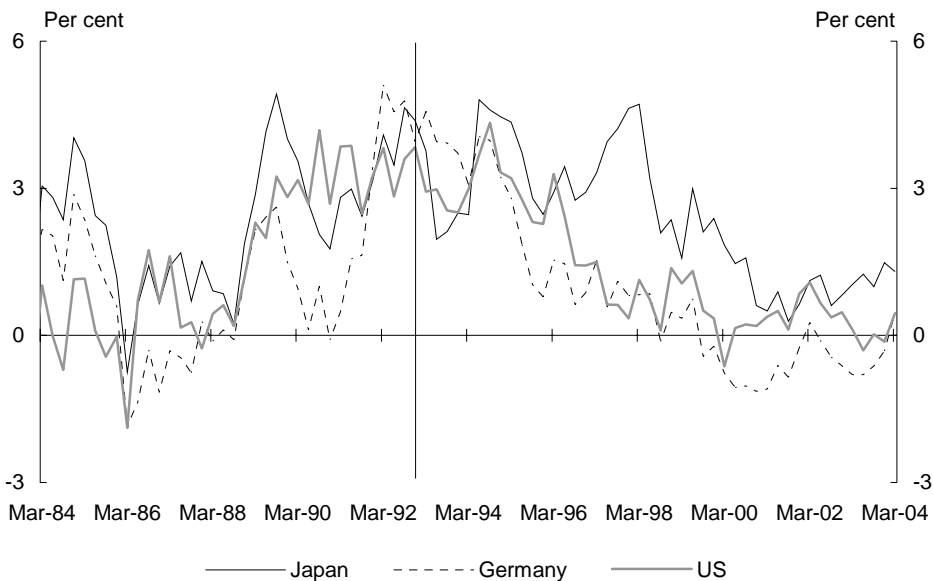
8 Influential observations in recent cross-country regressions run with 1990s data (Lane and Milesi-Ferretti, 2001) are those for Australia and New Zealand, with high levels of net external liabilities and high real interest rates, and Japan, with a high level of net foreign assets and low real interest rates. But, as we argue in the text, Australia had high real interest rates for much of the 1990s for another reason (and the same argument applies to New Zealand). And we suspect that Japan had low real interest rates because of the parlous state of its economy in the 1990s, not because of its high stock of foreign assets. It follows that the negative correlation between net foreign assets and real interest rates found in cross-country regressions in the 1990s may be largely spurious.

9 See also Treasury (2001).

In his report to the Government on Australian national saving, FitzGerald (1993) provided estimates of the real interest differential between 10-year bonds in Australia and in the US, Germany, and Japan. He argued, on the basis of data up to the end of 1992, that a sizeable risk premium was being added to Australian real interest rates because of the high level of Australia's net external liabilities, which at the time amounted to around 50 per cent of GDP.

Chart 2 shows the relevant real interest differentials, with the dark vertical line marking the end of the sample used by FitzGerald. While the data up to the end of 1992 do suggest the emergence of a sizeable Australian risk premium, the experience of the subsequent decade or so has not been kind to this hypothesis. Australian net foreign liabilities are now close to 60 per cent of GDP, but the more recent experience suggests a much smaller risk premium on Australian real long bond yields than appeared to be the case on the basis of data up to 1992.¹⁰

**Chart 2: Real long term interest differentials
Australia versus US, Germany and Japan^(a)**



(a) 10-year government bond yields deflated by core consumer price inflation over the previous year in each country.

Source: RBA, OECD, Thomson Financial.

10 Japan is something of an outlier in Chart 2, with lower real bond yields than Australia, United States or Germany since the mid 1990s. This is presumably for domestic Japanese reasons, with the Bank of Japan holding the policy rate at zero for the past several years.

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A natural explanation for the relatively high Australian real bond yields in the early 1990s, and their subsequent fall, is that markets took a long time to be convinced that the early 1990s step-down in inflation in Australia would be sustained.

But this argument can be taken further. Along with the well established floating exchange rate regime, it has surely been the development of medium-term macroeconomic frameworks for both monetary and fiscal policy in Australia in the 1990s – and the demonstrated commitment to use these frameworks to discipline monetary and fiscal outcomes – that has been important in retaining the confidence of foreign investors, and enabling Australia to borrow in international capital markets on favourable terms.¹¹ Despite a backdrop, since the early 1990s, of sustained large current account deficits and a gradually rising ratio of net external liabilities to GDP, over the years 1999-2003, rating agencies Moody's and Standard and Poors unwound the downgrades they had imposed in the 1980s, and returned Australia to Aaa and AAA ratings. The treatment of Australia as a financial safe haven during the Asian crisis, with Australian bond yields falling despite a rise in the current account deficit of more than two per cent of GDP, also suggests that the combination of the floating exchange rate and the medium-term macroeconomic policy frameworks played an important role in retaining international confidence at that time.

In the United States, the Federal Reserve has substantial anti-inflation credibility, having maintained low inflation in the United States since the early 1980s. Although it does not have a formal inflation target, the Federal Reserve aims for 'practical price stability' which amounts to much the same thing.

In contrast, the rapid deterioration of the United States fiscal position over recent years has been a cause for rising concern, as explained by Rubin et al (2004), Kohn (2004) and the IMF (2004). Public dissaving now accounts for almost all of the United States current account deficit, with baseline fiscal deficits projected out to 2013, and likely legislative changes expected to further add to them (Congressional Budget Office, 2004).

The relevance of the Australian and New Zealand experiences may be that the United States could perhaps continue to run sizeable current account deficits for many years with no obvious harmful side-effects – provided the United States fiscal deficit is significantly reduced (or eliminated). If, over time, the United States fiscal deficit was significantly reduced, that might also see a significant narrowing of the United States current account deficit – but the experiences of Australia and New Zealand caution against automatically assuming that outcome.

11 Of course, much the same argument, and timing, applies to New Zealand.

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Continued large fiscal deficits seem to pose a much more serious risk to the United States outlook than continued large current account deficits on their own. If government debt continues to rise inexorably, with no convincing signs that it will be brought under control, it makes sense for investors to demand a rising risk premium – or at some point, to rush for the exits. On the one hand, investors may come to doubt the commitment to avoid inflation, since inflation would erode the real value of government debt. On the other hand, high public debt, in the absence of substantial inflation, eventually needs to be repaid, implying future surpluses and probably higher future taxes. Given that these taxes could be imposed on investment income earned in the United States – including interest and dividend payments on foreign owned United States assets – investors might at some point begin to demand an additional premium on United States assets.

Just how long the United States could continue to run fiscal deficits of their current size without a serious loss of confidence is a question we hope will not be answered.

Might the United States continue to run large current account deficits?

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Transparency obligations in international investment agreements

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This article is based on a presentation given at a seminar 'Current Foreign Direct Investment (FDI) Trends and Investment Agreements: Challenges and Opportunities'. This seminar was organised by the Ministry of Foreign Affairs of Chile and sponsored by the Governments of Canada and Japan, as a co-operative initiative on international investment among the Asia Pacific Economic Cooperation (APEC) Investment Experts Group and the Investment Committee of the Organisation for Economic Cooperation and Development (OECD) Directorate for Financial and Enterprises Affairs in May 2004.

1 The author is from Foreign Investment Policy Division, Australian Treasury. This article has benefited from comments and suggestions provided by Chris Legg and Jim Murphy. The views in this article are those of the author and not necessarily those of the Australian Treasury.

Introduction

In the last two decades, debate among FDI policy makers has focussed increasingly on the most appropriate policy response to attract FDI whilst balancing domestic community concerns about levels of foreign ownership and control. Out of this has emerged an international legal framework for FDI consisting of many kinds of national and international rules and principles. International investment agreements (IIAs) play a major role in capturing the benefits from FDI and the structure and content of these agreements has been evolving. IIAs contain provisions linked to the process of liberalising FDI and importantly to the protection of foreign investors and their investments.

This article discusses the growing trend for international organisations and individual countries to incorporate transparency standards into IIAs. Transparency is generally viewed as an important element of good public and private sector governance. It also figures prominently among investors' concerns and has been embraced by APEC and OECD as a key liberalisation principle. In October 2003 both organisations announced new steps towards the implementation of more transparent legal regimes. These initiatives show a remarkable degree of convergence on the economic benefits and the means for achieving regulatory transparency.

The topic of public sector transparency is a very large one. This article is by no means a comprehensive discussion of this topic so interested readers are encouraged to consult the suggested further reading at the end of the article for more detailed coverage. The article discusses what we mean by transparency, its importance for good governance and the benefits it offers. The article looks at recent work on transparency in APEC, OECD and the United Nations Conference on Trade and Development (UNCTAD).

What is transparency?

There is no commonly agreed definition of transparency. It means different things to different groups – be they international organisations like OECD or APEC, foreign investment regulators or investors themselves. This in part reflects the evolutionary nature of understandings of transparency.

Some concepts of transparency focus on the core measures or practices that promote and protect rights to public sector information. For example, APEC, in its transparency standards adopted in 2003 notes that the removal of barriers to trade and investment are 'in large part only meaningful to the extent that the members of the public know what laws, regulations, procedures and administrative ruling affect their

interests, can participate in their development ... and can request review of their application under domestic law ...'²

The OECD has a much broader view of transparency: 'While these (core measures and) practices are of near universal relevance, they involve a narrow view of transparency. They focus on concrete measures that promote and protect rights to public sector information. A broader view is that transparency is what results from successful two-way communication about policy between governments and other interested parties.'³ Importantly, the OECD found that ultimately what determines how successful this process of communication is, are national culture, history and values.

UNCTAD seems to share the OECD's broader view: 'The concept of transparency is closely associated with promotion and protection in the field of international investment. In the present context, transparency denotes a state of affairs in which the participants in the investment process are able to obtain sufficient information from each other in order to make informed decisions and meet obligations and commitments. As such, it may denote both an obligation and a requirement on the part of all participants in the investment process.'⁴

Benefits of greater transparency for the investor

Transparency is a critical input to the investment decision. This has been well documented by business surveys. Lack of transparency and predictability often tops the list of concerns expressed by foreign investors. On the flip side, access to relevant information is often cited as a powerful incentive to invest. Transparent policy environments offset what may be foreigners' disadvantages to investing in a host country, that is, language barriers and more limited knowledge of local institutions. A good summary was recently provided by the OECD's Business and Industry Advisory Committee: 'From a business point of view, transparency reduces risks and uncertainties, promotes patient investment, reduces opportunities for bribery and corruption, helps unveil hidden investment barriers and draws the line between genuine and less genuine policy objectives, assists investors dealing with "thin" rules, discourages "conflicting requirements" situations between home country or host country, contributes to the playing field among firms and facilitates sustainable development.'⁵

Transparency is also linked to higher investment flows and higher quality investments. Recent OECD and IMF studies show that there is a strong positive relationship

2 APEC (2002/2003).

3 OECD (2003), p. 21.

4 UNCTAD (2004), p. 3.

5 OECD (2003), p. 8.

between international investment flows and the quality of governance. The OECD report plotted a measure of the quality of institutional governance (itself made up of a number of important factors such as the rule of law, the judicial system, enforcement, corruption, and shareholder and creditor rights) against FDI inflows. It found that the overall relationship between the quality of governance and the level of inflows is clear and positive.⁶

The IMF studied the relationship between transparency and the behaviour of managers of emerging market funds and found that these funds hold fewer assets in less transparent markets. Moreover, transparency reduced 'herding' or the tendency of investors to make decisions based on what they see other investors doing.⁷

If countries want to attract more and higher quality investment, fostering a fair, open and accountable policy environment is a more efficient way (and involves fewer distortions) than other types of direct incentives – for example, tax holidays etc.

Barriers to transparency reform

While there may be a growing consensus internationally about the importance of transparency reform, this does not necessarily mean there is consensus about how to go about such reform or that it will be easy to implement.

In World Trade Organisation discussions about core elements of possible international investment rules, many members expressed the view that any transparency obligations should not be too burdensome as many developing countries do not have the technical resources to implement demanding commitments. The Doha Declaration identifies a role for capacities building to assist developing countries implement new transparency obligations.⁸

However, OECD experience suggests that the underlying challenge in seeking to improve transparency is similar in all countries, viz the desire to protect 'concentrated benefits' at the expense of broader wellbeing. Lack of transparency also shields government officials from accountability. Thus, many actors, both inside and outside the public sector, can have a stake in non-transparent practices.

Since the institutional arrangements in a country reflect the national culture, history and values of that country, there is no 'one-size-fits-all' policy for improving transparency. Instead, the core measures identified by both APEC and OECD can be seen as good starting points for communication processes that are closely linked to

6 OECD (2002b).

7 Gelos and Wei (2002).

8 WTO (2002).

national institutions. It is assumed that national institutions will evolve gradually to incorporate the transparency measures. Another barrier to reform is that it requires technological, financial and human resources and entails administrative costs. The core transparency measures involve – the creation of registers, websites, the development of ‘plain language’ texts, and other mechanisms for making legal and regulatory codes, and any changes or new regulations being made accessible to interested parties.

OECD work on public sector transparency

The OECD has done a considerable amount of very useful work in the area of public sector transparency, including a large horizontal project on regulatory reform based on a survey of transparency measures in the OECD area between 1998 and 2000 (26 countries were surveyed). The synthesis report,⁹ which was finalised in 2002, suggested that despite there being signs of progress and a trend toward improved transparency, there is still considerable scope for improving transparency policies and practices. (Other data suggests this is also the case for non-OECD countries.)

Significant progress was noted including the more widespread use of public consultations about new laws and regulations, more widespread adoption of centralised registers of laws and regulations and three-quarters of the countries surveyed made most of their primary legislations available on the internet.

In its in-depth regulatory review of 16 OECD countries¹⁰ over the same period,¹¹ OECD found a number of regulatory transparency problems namely:

- lack of transparency at regional, state and local levels of government;
- public consultation not undertaken systematically when developing new or changing existing regulations;
- a tendency toward participation bias in public consultations; and
- inadequate use of communication technologies.

9 OECD (2002a).

10 Canada, Czech Republic, Denmark, Greece, Hungary, Italy, Ireland, Japan, Korea, Mexico, Netherlands, Poland, Spain, Turkey, United Kingdom and United States.

11 OECD (2002c).

OECD Investment Policy Transparency Framework

Following on from its analytical work on regulatory reform, in late 2003, the OECD developed an Investment Policy Transparency Framework. The Framework is intended to assist OECD and non-OECD countries enhance their transparency efforts and to share experiences. It is non-prescriptive in approach and recognises the need for flexibility in country approaches to transparency reform. In other words, transparency arrangements must adapt to local circumstances, reflect national culture, history and values and the availability of resources and skills, to be effective.

The Framework poses 15 questions. The questions have a strong focus on meeting the special needs of foreign investors (through ensuring the availability of all 'relevant' information). The Framework is also intended to assist public officials in conducting self-evaluations, can support peer review and can highlight where technical assistance may be required. The Framework also highlights the ways in which international treaty commitments can enhance domestic transparency measures. A copy of the Framework is at Attachment A.

The questions contained in the Framework are practical and cover issues such as:

- To what extent are the authorities aware of the benefits of greater transparency?
- How and what information is made readily available to foreign investors and how was this determined?
- What are the exceptions to making information available?
- How is information kept and how is it presented?
- Are investors consulted in advance about the purpose and nature of regulatory change?
- How are investors assisted in handling 'red tape' and what rights of appeal exist to dispute administrative decisions?
- How are capacity bottlenecks being addressed?

APEC Transparency Standards on Investment

In October 2002, APEC leaders adopted the Statement to Implement APEC Transparency Standards ('Leaders' Statement'), and directed that these standards be implemented as soon as possible, and in no case later than January 2005. APEC Leaders also instructed APEC sub-forums that have elaborated transparency provisions to review these regularly, and, where appropriate, improve, revise or

expand them further. In October 2003, the Investment Experts Group developed a set of transparency standards on investment for incorporation into the Leaders' Statement. These standards flowed from the General Principles on Transparency agreed to by APEC Leaders in 2002 and also built on the Options for Investment Liberalization and Business Facilitation to Strengthen the APEC Economies – For Voluntary Inclusion in Individual Action Plans. A copy of APEC's Transparency Standards on Investment is at Attachment B.

APEC's investment transparency standards recognise that transparency is an important element in promoting economic growth and financial stability at domestic and international levels. It is conducive to fairer and more effective governance and contributes to public confidence in government. The standards encourage each APEC economy to make increased use of the Internet to ensure that laws and regulations, and progressively procedures and administrative rulings, of general application are published promptly or otherwise made available and that interested persons and other economies become acquainted with them. Other matters explicitly covered by the standards include screening guidelines, procedures for registration and government licensing, prior authorisation requirements and investment promotion programs. When negotiating regional trade agreements and free trade agreements that contain provisions with an investor/state dispute settlement mechanism, Member economies are also encouraged to consider the inclusion of transparency provisions.

Trends in international investment agreements and FTAs

Issues about transparency in the relationship between a foreign investor and a host government are nothing new. However, while it is probably still the case that these issues have and continue to be addressed primarily by recourse to the national law of the host country, questions concerning transparency have begun to be addressed in provisions arising in a number of bilateral, regional and multilateral treaties. Moreover, according to recent work by UNCTAD, this trend towards having transparency provisions in international agreements has found its way into other related areas such as efforts to combat bribery and corruption, environmental agreements and agreements on corporate social responsibility more generally.

The earliest bilateral investment treaties (sometimes called investment protection and promotion agreements as in Australia) more often than not expressly acknowledged that investments of the other Party are to be admitted subject to national laws and regulations whilst at the same time not requiring the host government to publish those laws and regulations. Of course, if there are national transparency laws (and this may cover corporate 'disclosure' requirements), investors must abide by them.

The next generation of BITs or IPPAs generally contained a relatively narrowly focussed transparency requirement. A good example is Australia's first such agreement with China in 1988 where Article 6 read:

'Each Contracting Party shall, with a view to promoting the understanding of its laws and policies that pertain to or affect investments in its territory of nationals of the other Contracting Party:

- (a) make such laws and policies public and readily accessible;
- (b) if requested, provide copies of specified laws and policies to the other Contracting Party; and
- (c) if requested, consult with the other Contracting Party with a view to explaining specified laws and policies.'

By limiting the transparency obligation to laws and policies pertaining to the investment *in each country's territory of nationals of the other Contracting party*, the obligation to make laws and policies public apply to Australia and China only in their capacity as the host country.

More recently, the transparency obligation has been broadened. A good example is the provision in the Singapore United States Free Trade Agreement where each party:

'shall, to the extent practicable, ensure that its laws, regulations, procedures, and administrative rulings of general application respecting any matter covered by this Agreement are promptly published or otherwise made available in such a manner as to enable interested persons and the other Contracting Party to become acquainted with them.'

As foreign investment is affected by the regulatory framework of the host and home countries, such transparency obligations, formulated in these terms, should thus cover laws and regulations of both countries involved.

Turning to the type of information required to be made transparent, clear trends are emerging in international investment agreements towards a broader obligation. In addition to the widespread inclusion of governmental 'laws and regulations', many agreements (as in the Singapore United States Free Trade Agreement noted above) now extend to procedural transparency and include a reference to 'procedures' 'administrative procedures' and/or 'administrative rulings'. Some go further and extend to judicial decisions. Publishing draft laws and regulations together with affording interested parties an opportunity to comment on such draft legislation is another emerging refinement of the transparency obligation with origins in NAFTA.

Then there is the question of where agreements draw the boundary between investment matters *per se*, and other matters indirectly related to investment. Most agreements requiring publication of laws apply transparency rules to matters ‘pertaining to investment’, ‘relevant to investment’, or ‘affected by’ investment. It becomes a matter of legal interpretation where that boundary line is drawn where the agreement does not offer any guidance (for example, the Chile-United States FTA inserted the words ‘materially’ and ‘significantly’ to qualify the broad term ‘affect’).

The trend to increased transparency obligations in international investment agreements has also extended to:

- the manner in which disclosure should occur (encouraging or mandating consultation and exchanges of information);
- whether information is simply made public (that is, no secrecy restriction) or has to be published (actually physically printed in hard copy);
- replacing ‘where practicable’ requirements with ‘publish promptly’;
- requiring parties to answer specific questions and provide information upon request from the other party;
- imposing notification obligations to ensure parties are paying due regard to their obligations and to ensure investors are made aware of decisions made under authorisation requirements);
- requiring investors of the other Party to provide information concerning an investment solely for informational or statistical purposes subject to the requesting Party protecting any confidential information from any disclosure that would prejudice the competitive position of the investor or the investment; and
- broadening the participation of interested parties in dispute settlement processes and increasing the transparency of such processes *per se*. For example, the investor-State dispute settlement provisions of the Free Trade Agreement between Chile and the United States provide authority for the tribunal to accept and consider *amicus curiae* submissions from a person or entity that is not a disputing party.

Conclusions

Analysis of the most recent trends of FDI-enhancing transparency rules and practices shows that prominent international organisations and individual governments are paying closer attention to this issue. Investors, both foreign and domestic, have clearly benefited from enhanced transparency through regulatory reform and efforts to make

existing domestic laws and regulations more accessible and to consult more effectively on the making of new ones. Experience shows that more transparent rules for foreign and local investors promote openness and accountability which is conducive to enhancing economic development. The recent trend toward broader transparency obligations at multilateral, regional and bilateral levels can enhance this process and complement national policies. UNCTAD cautions that we must be careful not to consider transparency provisions or standards as an end in themselves, but rather as a means to an end:

‘Transparency being essentially a means to other ends in investment policy, the addressees, content and modalities of any transparency provision depend on the nature and objective of the particular international agreement under consideration. For example, agreements for the protection of investment, on the one hand, and investment liberalization agreements, on the other, do not address the same actors of the investment relationship (the former dealing mainly with the “host country”, the latter with all “members” of the agreement); and if they do, the type of transparency provisions may differ.’¹²

It is important that OECD countries like Australia give careful thought to the inclusion of transparency provisions in its bilateral and regional agreements affecting investment.

12 UNCTAD (2004), p. 55.

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Attachment A: OECD Framework for Investment Policy Transparency (reprinted from OECD 2003)

Desirability and appropriateness of transparency for international investment

Question 1: Are the economic benefits of transparency for international investment adequately recognised by public authorities? How is this being achieved?

The OECD Investment Committee has stated that transparency is one of the most effective actions that public authorities may take to meet (domestic and) foreign investor's expectations. In particular, it reduces business risks and uncertainties, helps combat bribery and corruption and ultimately promotes patient investment. Public authorities may not always be aware of these benefits or simply take them for granted. Conscious efforts are required to promote regulatory transparency.

How to make 'relevant' information available to foreign investors

Question 2: What information pertaining to investment measures is made 'readily available', or 'available' upon request to foreign investors?

Ideally foreign investors should be able to obtain easily meaningful information on all the regulatory measures which may materially affect their investments. Investment measures may include laws, regulations, international agreements, administrative practices/rulings, judicial decisions and/or policies. Their sheer number and increased complexity and the potentially broad ramifications of business operations, however, may not always make this possible. It is nevertheless in governments' interests to provide 'essential' information on how 'to get a business started' and 'operate it effectively'. Recent trends in government practices, international co-operative instruments, business circles, and independent analysis converge to suggest that foreign investors need to be informed, *inter alia*, about ownership and exchange control restrictions, administrative requirements, taxation, investment incentives, monopolies and concessions, access to local finance, intellectual property protection and competition policy as well as environmental and social requirements and corporate responsibilities.

Question 3: What are the legal requirements for making this information 'public'? Do these requirements apply to primary and secondary legislation? Do they apply to both the national and sub-national levels? Is this information also made available to foreign investors in their countries of origin?

Legal requirements may derive from several sources (the constitution, laws and regulations, delegated regulatory powers...). They may also originate from public authorities at various levels of governments (central/federal, provincial, regional, municipalities). Moreover, it is not unusual nowadays for governments to take 'pro-active' steps to inform foreign investors (including in their home countries) about prevailing investment conditions.

Question 4: Are exceptions/qualifications to making information available clearly defined and delimited?

The most common exceptions/qualifications to transparency are protection of confidential information or commercial interests, national security and public order, and pursuit of monetary and exchange rate policies. Special care should be given, however, to limit their application to the minimum extent possible and ensure that they are used within their legitimate purposes.

Publication avenues and tools

Question 5: What are the main vehicles of information on investment measures of interest to foreign investors? What may determine the choice of publication avenues? What efforts are made to simplify the dissemination of this information?

While culture and traditions and institutional capacity play a determinant role, there are various means of communicating regulatory information to foreign investors (official gazettes, communications by government departments or regulatory agencies, government websites, formal and informal contacts). Better public governance, new regulatory tools and technologies are contributing to a more effective and simpler communication on public policy between governments and stakeholders.

Question 6: Is this information centralised? Is it couched in layman's terms? In English or another language? What is the role of Internet in disseminating essential/relevant information to foreign investors?

This may be done through national investment promotion agencies, special web sites online compendiums and e-gateways, special publications, etc. Even in this modern age, however, Internet is not an end in itself or automatic. It is a rapidly changing technology and environment, and for the information to remain 'fresh', it must where feasible be collected and up-dated on a regular basis.

Question 7: Have special enquiry points been created? Can investment promotion agencies fulfil this role?

Because foreign investors may be in a disadvantageous position in comparison to national investors in understanding the domestic regulatory framework, they are bound to profit from special measures to make key information easily accessible and understandable to them.

Question 8: How much transparency is achieved via international agreements or by international organisations?

Transparency requirements under international agreements can provide a valuable source of information on domestic investment regulatory frameworks. Adhering governments may be called upon to notify regulatory changes, respond to special enquiries or requests for consultations, or subject themselves to peer reviews. International secretariats may also undertake their own studies on country policies.

Prior notification and consultation

Question 9: Are foreign investors normally notified and consulted in advance of the purpose and nature of regulatory changes of interest to them? What are the main avenues? Are these avenues available to all stakeholders?

Involving foreign investors and other stakeholders in the process of relevant regulatory changes can contribute to the legitimacy and effectiveness of the new regulatory investment measures. Allowing feedback through prior notification and consultation prior to actual decisions can help public authorities to devise better regulations and build support for compliance. Various notification and consultation avenues can be used. In addition to statutory notification or consultation requirements, governments may also take advantage of regular contacts with business associations or advice from business advisory bodies.

Question 10: Are the notice and comment procedures codified? Do they provide for timely opportunities for comment by foreign investors and accountability on how their comments are to be handled?

Better results are normally achieved when procedures are timely, transparent, open and accessible to all investors.

Question 11: Are exceptions to openness and accessibility to procedures clearly defined and delimited?

Procedural transparency

Question 12: What are the available means for informing and assisting foreign investors in obtaining the necessary licensing, permits, registration or other formalities? What recourse is made to 'silent and consent' clauses or 'a posteriori' verification procedures?

Registration, authorisation or permit formalities can impose large costs on business, both in time and money. These formalities may also be a source of administrative discretion, red tape and corruption. Every possible effort should thus be made to lighten the burden on business. It is important that they be administered in a transparent, uniform, impartial and reasonably speedy manner.

Question 13: What are foreign investors' legal rights in regard to administrative decisions?

Procedural transparency also implies a right to complain or appeal and the existence of prompt and impartial review and remedies. This may involve providing a clear description or other necessary explanation of the administrative requirements, statutory delays for rendering decisions and the possibility of presenting additional facts and arguments.

Question 14: To what extent 'one-stop' shops may assist foreign investors fulfil administrative requirements?

Administration simplification and reduction programme, 'one-stop' service shops and application of new technology may be additional means to enhance procedural transparency.

Capacity building

Question 15: What efforts are being made to address capacity building bottle-necks?

Setting transparency goals and drawing on other country experiences go hand in hand with improvements in administrative structures, staff training and investment in new technologies.

Attachment B: APEC Transparency Standards on Investment

1. Each Economy will, in the manner provided for in paragraph 1 of the Leaders' Statement, ensure that its investment laws, regulations, and progressively procedures and administrative rulings of general application ('investment measures') are promptly published or otherwise made available in such a manner as to enable interested persons and other economies to become acquainted with them.
2. In accordance with paragraph 2 of the Leaders' Statement, each Economy will, to the extent possible, publish in advance any investment measures proposed for adoption and provide a reasonable opportunity for public comment.
3. In accordance with paragraph 3 of the Leaders' Statement, upon request from an interested person or another Economy, each Economy will:
 - (a) endeavor to promptly provide information and respond to questions pertaining to any actual or proposed investment measures referred to in paragraph 1 above; and
 - (b) provide contact points for the office or official responsible for the subject matter of the questions and assist, as necessary, in facilitating communications with the requesting economy.
4. Where warranted, each Economy will ensure that appropriate domestic procedures are in place to enable prompt review and correction of final administrative actions, other than those taken for sensitive prudential reasons, regarding investment matters covered by these standards, that:
 - (a) provide for tribunals or panels that are impartial and independent of any office or authority entrusted with administrative enforcement and have no substantial interest in the outcome of the investment matter;
 - (b) provide parties to any proceeding with a reasonable opportunity to present their respective positions;
 - (c) provide parties to any proceeding with a decision based on the evidence and submissions of record or, where required by domestic law, the record compiled by the administrative authority; and
 - (d) ensure subject to appeal or further review under domestic law, that such decisions will be implemented by, and govern the practice of, the offices or authorities regarding the administrative action at issue.

5. If screening of investments is used based on guidelines for evaluating projects for approval and for scoring such projects if scoring is used, in accordance with paragraph 1 of the Leaders' Statement each Economy will publish and/or make publicly available through other means those guidelines.
6. Each Economy will maintain clear procedures regarding application, registration, and government licensing of investments by:
 - (a) publishing and/or making available clear and simple instructions, and an explanation of the process (the steps) involved in applying/ government licensing/registering; and
 - (b) publishing and/or making available definitions of criteria for assessment of investment proposals.
7. Where prior authorization requirement procedures exist, each Economy will conduct reviews at the appropriate time to ensure that such procedures are simple and transparent.
8. Each Economy will make available to investors all rules and other appropriate information relating to investment promotion programs.
9. When negotiating regional trade agreements and free trade agreements that contain provisions with an investor/state dispute settlement mechanism, each Economy should consider whether or not to include transparency provisions.
10. Each Economy will participate fully in APEC-wide efforts to update the APEC Investment Guidebook.

Key themes from the Treasury Business Liaison Program — April 2004

The following article is a summary of findings from the Treasury Business Liaison Program conducted in April 2004.¹

The general view of businesses on the outlook for the economy over the coming year was positive, as was the outlook for their own business. The most optimistic views on the outlook were held by participants in the construction, retail and mining sectors.

Treasury greatly appreciates the commitment of time and effort made by the Australian businesses and industry associations that participate in this program.²

1 A detailed explanation of the Treasury Business Liaison Program is provided in the Treasury *Spring 2001 Economic Roundup*.

2 Summary reports of Treasury's business liaison meetings reflect the views and opinions of participants. A summary of business conditions reported in liaison meetings is provided for the information of readers. While Treasury's evaluation of the economic outlook is informed by findings from business liaison, a much wider range of information and data is utilised to ensure a rigorous assessment of the Australian economy.

Overview

The April business liaison round comprised meetings in Sydney and Melbourne with businesses and industry associations from a range of sectors.

Overall, business liaison continues to present an upbeat view about both the economic outlook and prospects for individual businesses.

The most optimistic sectors were construction, retail and mining. The tone of meetings with participants from the manufacturing sector was also positive, with sales volumes and profits generally remaining healthy. Participants in the agricultural sector provided a mixed outlook depending on the type of product and the region of production.

Most industries reported that cost pressures were under control and that profitability was sound or strong. However, a number of contacts noted that the cost of meeting regulatory requirements, such as workers compensation insurance and financial reporting standards, was rising significantly.

In general, wage pressures were reported as manageable in most industries. However, as in previous rounds, there were indications of skill shortages in specific occupations, and this was putting some pressure on wages in certain occupational groups.

Most industries reported that product markets remain highly competitive. As a result, the majority of businesses were reducing costs through actions such as improving logistics, outsourcing non-core operations and sourcing imported products directly from manufacturers.

General business conditions and outlook

Consistent with previous liaison rounds, most participants reported solid business conditions and had positive expectations about both the economic outlook and their own businesses prospects. Furthermore, a high proportion of contacts expressed the view that their own business would continue to perform strongly even if the domestic economy slowed in the year ahead.

- Supporting this upbeat perspective, contacts in the business services sector indicated that there had been no growth in work relating to business failures and bankruptcies.

Retailers reported that consumer demand continued to grow at a strong rate. High sales volumes meant that businesses were recording strong profitability despite a high

level of competition making trading conditions 'tough'. Further information on the retail sector is included below.

Participants from the mining and metal processing sectors were also optimistic, noting that international demand for most commodities continued to be strong (especially from China) and international prices remained high. The outlook was also positive, with several contacts in the process of negotiating long-term supply contracts, which would typically lead to further investment to increase capacity. However, it was reported that a reduction in exploration activity could pose a constraint to increasing capacity in the future.

In the petroleum industry, it was noted that strong competition in refining and retail operations meant that profitability was very tight. However, upstream oil and gas mining operations remained rewarding.

Transport contacts reported strong business activity and were optimistic about the future. Also, the hotel and accommodation sector continued to pick up, supported by an increase in the number of inbound tourists and strong domestic travel (driven largely by low airfares).

Meetings with businesses in the manufacturing sector indicated that sales volumes and profits generally remain healthy. Employment agency contacts also reported that employment vacancies have been strong in the manufacturing sector.

Participants in the business liaison program from the pharmaceutical and health industry generally reported steady growth. However, a number of contacts noted that they were uncertain about the outlook as it was dependent on future policy decisions – both the direction of the Pharmaceutical Benefits Scheme in Australia and the health policy of overseas governments.

The views of agricultural sector contacts varied reflecting the fact that recovery from the drought is uneven. For example, while those in grain production indicated that output had rebounded, contacts in other products – such as oilseeds – noted that their growing regions were almost entirely still in drought. Likewise, some downstream agricultural sectors – such as rural transport – reported strong activity, while other downstream sectors noted that demand for their products was yet to return to pre-drought levels.

Entertainment services were reportedly performing strongly, although the outlook is uncertain for this sector as it depends on non-economic factors (such as the quality of new films and recording artists).

The majority of participants in the business liaison program reported that overall they were not facing significant cost pressures. However, some contacts noted that insurance costs (including workers compensation insurance) continue to be an issue, reflecting either continued increases in premiums or the fact that costs have stabilised but remain at high levels. It was also reported that freight costs had risen markedly over the past year.

Retail

Retail industry participants reported strong turnover and good profitability on the back of ongoing growth in consumer demand. Consistent with this, contacts managing retail shopping centres also reported strong business over the past year, although they are anticipating a slowdown in the near future. Media contacts also reported strong advertising activity.

Despite the high level of activity, however, almost all contacts noted that a high level of competition continues to exist in the retail sector. Contacts highlighted this increasing competition as evident in retailers holding a greater number of sales than was previously the case. A number of businesses indicated that this was being led by the larger retailers and was having a flow-on effect through the entire sector.

To remain competitive, most businesses were working to reduce their costs. At a general level this has involved improving transport and logistics operations, outsourcing non-core functions and improving inventory management. In some sectors – notably hardware – retailers had also moved to import more of their products as well as to import directly from manufacturers – rather than using import wholesalers. Some contacts expected the strong competition to result in further consolidation of retail outlets, particularly once consumer demand started to ease.

Participants also raised a number of specific retail challenges. For example, some retailers cited the continuation of warm days through autumn as having a negative effect on business. In particular, clothing retailers were not able to sell winter stock and demand had fallen for indoor recreation activities. A number of businesses also noted that they were facing continued competition for consumer's disposable income from the sale of mobile phones. In particular, they suggested that the contract nature of phone agreements saw an ongoing transfer of expenditure from areas such as fashion to the communication sector.

Construction

Participants in the business liaison program from the construction sector expected activity to hold up for at least the next 12 months and were anticipating a shift from residential to non-residential construction after this time.

- One contact noted that that demand was exceeding their normal supply capacity and that they were using higher cost options to meet the excess demand. This was reducing their margins, although overall profits remained very strong.

It was noted that cost pressures remain in the sector and that skill shortages continue to exist. This shortage of skilled labour, particularly in regional areas, was flowing through to wage pressures.

Contacts reported that there remains a high level of competition in the sector as firms seek to increase market share. These competitive pressures led a number of contacts to suggest that the consolidation in the construction sector would continue to take place.

Related to the construction sector, it was reported that continued strong growth in the do-it-yourself (DIY) segment of the market continued. It was suggested that this trend would continue for a further 10 years.

Employment and wages

Employment agency contacts reported strong business especially in Western Australia and Queensland where large resource projects are raising employment. Other sectors reported as driving employment growth were business services, tourism, retail and construction.

This high level of employment was supported by contacts in most sectors of the economy reporting stable or slightly increasing employment intentions. The main exception was in the manufacturing sector where although employment agencies reported strong activity, a number of manufacturers indicated they would be looking to reduce their workforce over the next 2 years — in some cases by a considerable amount.

In general, most participants were not having difficulty attracting good quality labour. However, some businesses continue to report a shortage of skilled tradespeople, including in particular apprentices and trainees, as well as a shortage of nurses and other essential services staff. Employment agencies who participated in the liaison meetings also reported a continuing trend towards casual and part-time employment.

Aside from the specific cases noted above, contacts typically reported that no significant wage pressures had emerged. However, the overall expected level of wage negotiation outcomes was slightly higher than reported in February – with these higher expectations being especially evident in the manufacturing sector in Melbourne. Participants also reported that it was becoming harder to find productivity offsets as part of wage bargaining processes.

Regulation and infrastructure

Over the course of the April liaison round, a number of participants raised concerns relating to government regulation and also infrastructure.

The most common issue raised was the difficulty for nation-wide companies in dealing with varying regulations and legislation across states. In particular, the need to deal with several sets of occupational health and safety legislation, and multiple workers compensation insurance schemes was adding significantly to costs.

- Related to this, several contacts noted that the cost of workers compensation insurance had risen considerably (especially in NSW) in recent years.

Financial sector contacts also noted that although they recognised the benefits of the improved regulation, the cost of meeting financial sector requirements had increased 3 to 4 times over the past 5 years. They also suggested that overlap between Australian Competition and Consumer Commission (ACCC), Australian Prudential Regulation Authority (APRA) and Australian Securities and Investments Commission (ASIC) was placing additional burdens on their business from a reporting perspective.

Some business liaison participants also reported that transport infrastructure was creating bottlenecks in some areas. The most notable of these was the rail and road infrastructure feeding certain ports which was restricting the flow of goods to the docks and resulting in ships standing idle outside certain ports. Some participants in the program noted that state-owned railway monopolies meant that there was often no alternative approach to getting product to ports. Contacts also raised restrictions on the number and size of ships able to access certain ports – in particular the Port of Melbourne – as an issue.

Sources of economic data

The following table provides sources for key economic data. Australian Bureau of Statistics (ABS) data can be obtained over the internet at <http://www.abs.gov.au>. The Reserve Bank of Australia information is available at <http://www.rba.gov.au>. Similarly, OECD information is available at <http://www.oecd.org>. Information on individual economies is also available via the IMF at <http://www.imf.org>.

International economy

Output, current account balance and interest rates	OECD Main Economic Indicators
Consumer price inflation	ABS cat. no. 6401.0

National accounts

Components of GDP, contributions to change in GDP	ABS cat. no. 5206.0
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Incomes, costs and prices

Real household income	ABS cat. nos. 5204.0 and 5206.0
Wages, labour costs and company income	ABS cat. nos. 5204.0, 5206.0 and 6302.0
Prices	ABS cat. nos. 6401.0 and 5206.0
Labour market	ABS cat. no. 6202.0

External sector

Australia's current account, external liabilities and income flows	ABS cat. nos. 5368.0, 5302.0 and 5206.0
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Past editions of Economic Roundup

Details of articles published in the past two editions of the Economic Roundup are listed below:

Autumn 2004

A review of compositional developments in the Australian Labour market
The impact of 2002-03 drought on the economy and agricultural employment
Developments in the United States labour market
The Japanese economy and future growth prospects
The Review of Aspects of Income Tax Self Assessment
Key themes from the Treasury Business Liaison Program – February 2004

Summer 2003-04

First home buyers in Australia
Recent developments in the Australian housing market
Australian net private wealth
Globalisation: the role of institution building in the financial sector
Key themes from the Treasury Business Liaison Program – November 2003

Copies of these articles are available from the Treasury. Written requests should be sent to the Manager, Domestic Economy Division, The Treasury, Langton Crescent, Parkes, ACT, 2600. Telephone requests should be directed to Ms Susan O'Shea on (02) 6263 3797.

Copies may be downloaded from the Treasury web site <http://www.treasury.gov.au>.

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