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This issue includes data up to 27 June 2003

The IMF and the challenge of relevance in the international financial architecture

Martin Parkinson and Adam McKissack¹

This paper was prepared for the International Monetary Convention held in Madrid on 13-14 May 2003, organised by the Reinventing Bretton Woods Committee and the Spanish Ministry of Finance. The paper reviews the role of the IMF since its inception in 1944 and discusses some of the challenges for the IMF, and the international community more broadly, arising from recent developments in the world economy.

Introduction

The end of the 20th century, and beginning of the 21st, has proven to be something of a watershed period for the IMF. The string of major crises of the past decade, and the associated reassessment of how to maintain international financial stability, saw significant questioning of the role of the Fund.² The resulting soul searching — and the acknowledgment by the Fund and its shareholders of the need for change — has led to a substantial refocusing of its activities onto its core responsibilities in the last five years.

This change has not been without pain. But more change is needed still. The IMF must continue to evolve as the world changes in order to retain its relevance to the international financial system. But its evolution must be around its core responsibilities. It must avoid having its focus fragmented by straying into areas better dealt with by other parts of the international financial architecture.

This need for further change provides an opportune time to reconsider the evolution of the IMF's role since it was established in the 1940s and to ponder some of the challenges ahead. Despite criticism, the Fund retains a central role in today's international financial architecture, suggesting that the evolution to date has been broadly viewed as successful. However, the choices it makes

1 The authors are, respectively, Executive Director of Macroeconomic Group and Manager, IMF Unit, Australian Treasury. The views expressed in this article are those of the authors and are not necessarily those of the Commonwealth Treasury. The authors would like to thank Michael Callaghan, Gordon de Brouwer, Ted Evans, Ken Henry, Neil Hyden, Maryanne Mrakovcic, Terry O'Brien and Alice Peterson, for helpful input and comments.

2 See, for example, Feldstein (1998) and Meltzer (2000).

now in response to pressures for further change will help determine whether it remains equally relevant over the next half century.

While the actions of the Fund are important, the debate about its role is not simply about what the institution should, or should not, do. It is also about what the national government shareholders of the IMF expect from the Fund as an institution and their commitment to the role they bestow upon it. The appropriate role of, and the interactions among, the various institutions within the international financial architecture also bears on the debate. The shareholders of the Fund comprise virtually all countries in the world; its future effectiveness is, therefore, the responsibility of the international community writ large.

Original role of the IMF

The IMF was established in 1944 to promote international financial stability in the post World War II reconstruction period. The Fund's purpose, as set out in its Articles of Agreement (see Box 1), is to promote international monetary cooperation, financial stability and world economic growth. This purpose remains broadly relevant to the present day, although the means of achieving this purpose have clearly changed.

Box 1: Articles of Agreement of the IMF

Article I

Purposes

The purposes of the International Monetary Fund are:

- (i) To promote international monetary cooperation through a permanent institution which provides the machinery for consultation and collaboration on international monetary problems.
- (ii) To facilitate the expansion and balanced growth of international trade, and to contribute thereby to the promotion and maintenance of high levels of employment and real income and to the development of the productive resources of all members as primary objectives of economic policy.
- (iii) To promote exchange stability, to maintain orderly exchange arrangements among members, and to avoid competitive exchange depreciation.
- (iv) To assist in the establishment of a multilateral system of payments in respect of current transactions between members and in the elimination of foreign exchange restrictions which hamper the growth of world trade.
- (v) To give confidence to members by making the general resources of the Fund temporarily available to them under adequate safeguards, thus providing them with opportunity to correct maladjustments in their balance of payments without resorting to measures destructive of national or international prosperity.
- (vi) In accordance with the above, to shorten the duration and lessen the degree of disequilibrium in the international balances of payments of members.

The Fund shall be guided in all its policies and decisions by the purposes set forth in this Article.

At the time the IMF was established the experience of the 1930s remained fresh in many minds. Competitive devaluations associated with 'beggar-thy-neighbour' policies were seen as a key source of instability in the international financial system. A key part of the answer to this problem, as conceived by the architects of the Bretton Woods system, was to create a system of pegged exchange rates to counter such destabilising behaviour.³ The system provided for a set of exchange rate parities between members linked to gold or the US dollar, with the value of the dollar in turn linked to the price of gold at \$US35 to the ounce.

The Fund's primary function under this system was to support the maintenance of these exchange rate parities, including by lending to members facing short term balance of payments disequilibria. The Fund essentially acted as an international credit union. Members contributed to a pool of reserves from which countries facing balance of payments deficits could borrow to maintain their pegged exchange rate.⁴

The Articles of Agreement (Clause (V) of Article 1) arguably presume conditionality in referring to resources being made temporarily available 'under adequate safeguards'. But the nature of conditionality was not defined. Rather, it has emerged over time with the development and operation of Fund-supported programs of adjustment. The introduction of Stand By Arrangements in 1952 to provide medium term assistance saw the introduction of explicit conditionality, whereby countries were required to adopt policies to resolve balance of payments difficulties in exchange for Fund support.⁵ The introduction of the Extended Fund Facility in 1974 for longer term balance of payments difficulties saw the introduction of three year programs of conditionality covering structural, not just macroeconomic, policies relevant to the balance of payments⁶.

3 The response goes beyond the creation of exchange parities *per se* to include the other matters set out in Box 1 above.

4 For an interesting description how this lending occurred during the Fund's first major financial crisis, see Boughton (2000).

5 However, as noted by Boughton (2000), while the first SBA 'in which drawings were made conditional on the country adhering to specified policies was for Peru in 1954', this did not become standard practice until the 1960s.

6 See IMF Annual Report (2002).

Changing role of the IMF

The international financial system has seen many changes since 1944. Most notably, these include abandonment of the original Bretton Woods system of pegged exchange rates in the early 1970s and the emergence of capital account crises in the 1990s on the back of rapid growth in private capital flows.

Breakdown of the Bretton Woods System

A defining change was the breakdown of the Bretton Woods system of exchange rate parities between 1968 and 1971.⁷ While no consensus exists on the reasons for the breakdown, some common factors are generally put forward. Among these are the breaking of the link between the US dollar and the monetary gold stock, as the Vietnam War and the growth in world output and liquidity strained the convertibility of the US dollar into gold. Increasing capital mobility also put strains on the system through facilitating speculation against fixed parities. Finally, greater price instability in the US meant that the system of fixed exchange rates increasingly ran the risk of providing a transmission mechanism for higher world inflation, in turn placing pressure on parities.

Since the collapse of the Bretton Woods system, but especially since the Asian crisis of 1997-98, there has been growing acceptance of the benefits of more flexible exchange rates. Economic orthodoxy moved from regarding floating rates as a source of instability in the 1940s, to increasingly perceiving them as a means of absorbing the impact of international shocks (although acceptance of this argument is by no means universal).⁸

The 'shock absorber' role of floating rates became relatively more important with the increased output and price instability seen from the early 1970s onwards. It has become increasingly accepted that the trinity of a monetary policy directed at domestic balance, a fixed exchange rate and international capital mobility was not sustainable. That is, it was recognised that it was not

7 The abandonment of the pegged exchange rate system was, however, a symptom of a broader problem manifest in recurring current account crises among the developed economies and successively weakening political will in favour of seeking IMF support.

8 This view is perhaps more widely held in Australia than in some other countries given our experimentation in the period after World War II with a wide range of exchange rate regimes. The \$A was pegged to the pound sterling to November 1971, then to the \$US to September 1974. It was subsequently pegged to the trade weighted exchange rate — a basket peg — to November 1976, which became a crawling peg until December 1983, at which point the currency was allowed to float freely.

possible to pursue an independent monetary policy while defending a fixed exchange rate with mobile capital, and that this limited the flexibility of policy makers in addressing issues of price and output instability.

The fact that the end of the Bretton Woods system did not mean an end to the role of the IMF is itself informative of the way in which the IMF had evolved since its inception. While the system of pegged exchange rates had proved unsustainable, countries were not indifferent to exchange volatility. Exchange rates were free to move, but desirably in an 'orderly' fashion. So the need remained strong for an institution that would promote international financial stability, including through lending to countries requiring liquidity to correct for short term macroeconomic imbalances. However, the changing trends in the world economy clearly altered the way the Fund approached its role.

In particular, the beginning of the era of flexible exchange rates saw significant development in the concept of IMF surveillance. The Fund acquired a formal surveillance role following an amendment to its Articles of Agreement in 1978. Associated with this role, the IMF was charged with conducting surveillance over member policies. Equally, members were obliged to provide the information necessary for the conduct of that surveillance.

This reflected the broadening of the Fund's focus away from one of achieving balance of payments outcomes consistent with the relevant exchange rate towards considering issues of whether general macroeconomic policy settings were consistent with internal and external balance; identifying stresses before they had reached breaking point. This represented an evolution in the role for the Fund, but one which remains consistent with its overall purposes.

The introduction of the Extended Fund Facility in 1974, which focused on longer term policies affecting the balance of payments, is indicative of the associated broadening in scope of Fund programs. With the broader scope of programs came increasingly sophisticated conditionality addressing the longer term policy settings of member countries.

In retrospect, the IMF's role up to the end of the 1970's evolved in a broadly sensible fashion. The overarching purpose of ensuring international financial stability remained the same, but the assessment of the problem moved from one of exchange rate management, narrowly defined, to the compatibility of broader macroeconomic settings with orderly exchange rate behaviour, and the IMF's approach moved in step with this change.

More recent trends

More recently, an important development has been the rapid expansion of private capital flows between countries and closer integration of global capital markets. While potentially beneficial for the growth of recipient countries, these developments have had a number of less benign consequences.

First, countries have become more exposed to the risk of capital account crises. The presence of large amounts of mobile private capital has increased the risk of sharp market reactions in the face of emerging economic imbalances. This has meant that the loss of confidence in domestic policies can be quite sudden and can result in dramatic reversals in capital flows with consequent disorderly and damaging adjustment.

A second consequence has been that crises have increasingly been triggered by, and have exposed, serious structural policy weaknesses, particularly in relation to the financial sector. This has seen a distinction drawn between financial crises and 'traditional' balance of payments crises. While it would be overly simplistic to seek to draw a strict dichotomy between the two, it is clear that the strains on domestic financial systems posed by the increasing scale of capital flows have introduced a new element into modern crises. This has dragged the focus of Fund surveillance further beyond that of macroeconomic stabilisation and into areas of prudential and regulatory reform in the financial sector.

An additional feature of modern crises has been the presence of contagion effects arising from the closer integration of global capital flows. This has seen the loss of confidence in one country trigger similar losses of confidence in other countries. The transmission of crises from one country to another has posed new threats to the stability of the international financial system as a whole.

The changing nature and increased severity of crises has had a number of implications for the Fund's role. It has seen a further evolution in the role of Fund surveillance. The scope of surveillance has been broadened. First, to address structural issues which pose a threat to macroeconomic stability. Second, to better and earlier detect emerging vulnerabilities, which has led to a

focus on issues such as the size, maturity and currency composition of external debt.⁹ The widened scope of individual country monitoring has been complemented by an increased emphasis on multilateral and regional surveillance to identify interactions and linkages that might facilitate the spread of crises.

There has also been an increased focus on the stability of domestic financial systems, particularly following the Asian financial crisis of the late 1990s. This has seen the development and broadening of a role for bodies which complement the role of the Fund. Included amongst these is the Financial Stability Forum (FSF), which promotes discussion amongst members on appropriate regulatory and prudential practices. The FSF is not alone, however, with the work of the various standard setting bodies gaining greater attention in recent years.¹⁰

Increases in the size of private capital flows have also introduced a new element to crisis resolution. In 'traditional' current account crises, the challenge was to provide finance to support countries in making the appropriate domestic policy adjustments to correct the imbalance. While this role remains, the build up of large amounts of privately held debt has meant that IMF lending and domestic policy adjustment may not be sufficient to achieve macroeconomic stability. That is, countries increasingly appear to find themselves in situations where there may be no set of domestic policies that can place them onto a sustainable path without some restructuring of their debts. This has led to calls for mechanisms to better coordinate the restructuring of privately held sovereign debt in crisis situations.

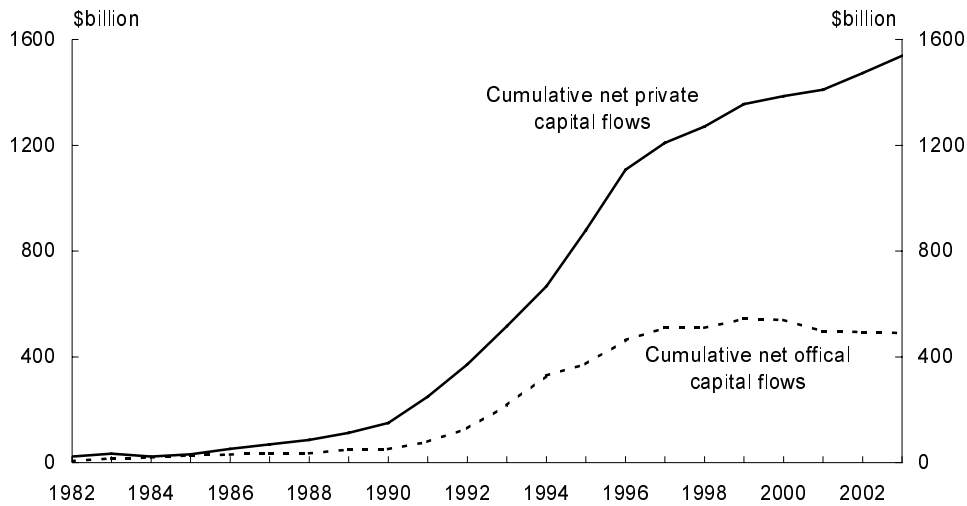
The relatively reduced importance of official sector capital flows has produced a situation in which the credibility and success of Fund-supported programs, Fund lending and conditionality are at a premium. In recent years the Fund has tried to stem crises with finance that is small relative to volatile private capital flows, notwithstanding a period in which the scale of Fund interventions has grown very large by its own historical benchmarks. Consensus also exists that, even were they large enough to do so, official sector resources cannot be used to 'bail-out' the private sector. The need for Fund

9 While the Fund's focus on structural issues expanded dramatically in the 1980s, it has been recognised that Fund conditionality with respect to structural issues may have 'overreached' in the 1990s. As a result, the Fund has recently emphasised that structural conditions should only be imposed in areas where an absence of structural reform will pose a threat to efforts to achieve macro stabilisation.

10 See, for example, <http://www.imf.org/external/standards/agency.htm>.

involvement in crisis prevention to be catalytic — to be confidence inspiring and to 'bail-in' the private sector — has therefore become all the more important.

Chart 1: Emerging market economies — cumulation of capital flows¹¹



The recent period has also seen increased debate about the effectiveness of the Fund's policies in terms of crisis prevention and crisis resolution. Following the Asian financial crisis, some criticised the Fund for 'missing the signs' of the emerging crisis and for relying too much on 'old' solutions in seeking to resolve 'new' problems, for example through relying on macroeconomic stabilisation policies when many of the underlying problems were essentially structural in nature. Still others argued that the macroeconomic policy settings appropriate to the avoidance of a crisis were not those that should be pursued in the aftermath of a capital account crisis.¹² Some critics also argued that the pursuit of structural reforms as part of crisis management was inappropriate, while others believed the Fund had no role in structural issues at all. This debate has intensified with the emergence of crises in countries that have been subject to ongoing and extensive Fund support. This has reduced the

¹¹ Based on data from International Monetary Fund, World Economic Outlook, September 2002.

¹² See, for example, Stiglitz (2002). On whether the crises are really new, Boughton (2000) draws interesting parallels between the pressures on Sterling associated with the 1956 Suez crisis and the experiences in Asia in 1997-98.

credibility of the Fund in the eyes of some commentators and raised questions about its effectiveness in both preventing and resolving modern day crises.

Recent developments have also led to increased public scrutiny of the IMF's role and questions about its legitimacy. The Fund is considered to have experienced 'mission creep', moving into areas beyond its original mandate and areas of expertise.

At one level, these criticisms are unfair.

First, there is still no consensus on how best to identify, prevent, and resolve capital account crises. Even if such a consensus had by now emerged, hindsight is blessed with 20:20 vision — it may still be too much to expect the Fund to have known this in the mid-1990s.

Second, the Fund has experienced mission creep at the behest of its shareholders, and in response to broader international opinion (for example, as represented by some NGOs), who have demanded attention move to include structural policies in a wide range of areas only loosely related to the original purpose of the institution. These include military expenditures and environmental and gender issues. But mission creep has also arisen as the nature of the membership has changed. The membership of the transition economies in the early 1990s brought with it new sets of issues; different from those the Fund had previously to deal with, especially related to structural policy and its interaction with growth and macroeconomic stability.

Similarly, the increased emphasis placed on growth and poverty reduction — at the behest of the international community — has thrown up new and different issues upon which the Fund is expected to advise. Indeed, a checklist would indicate that Fund missions should now address perhaps as many as 40 separate issues in every Article IV surveillance report. The wider the range of responsibilities placed on the Fund, the greater the risk that its focus becomes fragmented, a risk that needs to be recognised explicitly by its shareholders.

That said, there is also a legitimate basis for criticism.

It is only in recent years that the Fund has begun to engage with its critics, and to become more transparent and accountable for its surveillance and policy advice. By exposing its judgements to public gaze, the Fund can help educate the broader community and make it easier for outsiders to see and assess the types of 'on balance' judgements it is required to make — this has been a good

discipline for national policymakers and there is no reason to believe it will not be equally valuable for the Fund.

The progressive redefinition of the problem of how to maintain international financial stability has taken the Fund into a widening range of structural, financial and institutional issues. Having embarked on this path the challenge is knowing when to stop, since virtually every aspect of an economy can be said to be macroeconomically relevant to at least some degree. Despite the success of recent efforts to refocus the Fund on its core responsibilities, the need to avoid excessive mission creep will remain an ongoing challenge.

Almost six years after the start of the Asian crisis, it needs to be recognised that there has been considerable evolution in the Fund's focus and *modus operandi*. This evolution must continue in response to the changing nature of the international economic and financial system. All institutions need to evolve if they are to remain effective. The question is how to get the right balance.

Future role

General considerations

Notwithstanding recent criticisms, the Fund has an on-going and important role to play in the international financial architecture. Its purposes as set out in its Articles of Agreement remain relevant to addressing the challenges confronting the global economy today and those likely to arise in the decades ahead. However, given the changes in the world economy of the last decade it is clear that there is a need to continue to re-evaluate the nature of its role going forward.

This is a critical point. As discussed above, the Fund's role is not, and has never been, static.

It was initially established to support a system of pegged exchange rates and had to adapt when this system broke down. It was established at a time of limited international capital mobility and has had to adapt to a world of large and rapid private capital flows.

While the trend toward increased capital market integration is unlikely to be reversed, appropriate exchange rate regimes have been a matter of debate for over a century. With proposals for target zones and currency unions continuing to be discussed as a means of promoting regional stability, it cannot be ruled out that fixed exchange rates will again become a more

important feature of the global financial system in the future. Further, it is unclear what additional pressures the forces of globalisation will place on domestic policy settings. The Fund needs to be flexible enough to continue to adapt to these, and other, trends as they develop.

The Fund's future role is, in many ways, endogenous. The role will evolve based on how it performs; specifically to how well it adapts to changes in the international environment. The Fund is likely to still exist in one form or another in the decades ahead, but whether it remains a relevant institution is a function of the decisions made now and in the future. It is one thing to survive as an institution — all national policy makers can attest to the difficulty of closing institutions and fora that have outlived their usefulness — but another to survive as a credible institution.

Credibility therefore emerges as a key issue that will shape the Fund's direction in the future. What do we mean by credibility? There are two key aspects to the concept. The first is the issue of effectiveness. Recent crises have highlighted the tension between providing funds to help 'bail-out' countries in crisis and encouraging countries, whether before, during or after a crisis, to make difficult, but necessary, domestic policy adjustments. The Fund has been seen in some quarters as too ready to dole out financial assistance without sufficient policy adjustment. Critics in the 'effectiveness camp' argue that the Fund is not doing enough to push the reforms necessary for domestic adjustment but is in some cases deferring (or even exacerbating) the necessary adjustment through its financing packages.¹³

In contrast, others argue that the Fund goes too far in seeking to impose changes to domestic policies and question the Fund's legitimacy in undertaking such a role. Critics in the 'legitimacy camp' argue that the Fund is not sufficiently accountable to its members and, as evidence, point to the lack of country ownership of the types of policies endorsed by the Fund. They would argue that a lack of legitimacy leads to an inability to achieve reform, in turn creating problems of low Fund credibility.

This would appear to place the Fund between the proverbial 'rock and a hard place'. For example, Feldstein (1998) has argued, 'A nation's desperate need for short-term financial help does not give the IMF the moral right to substitute its technical judgments for the outcomes of the nation's political process.' Equally, though, we would suggest that a nation has no automatic right to be bailed out

¹³ These criticisms have been made most recently in the case of the current IMF-supported program for Argentina.

by the rest of the international community if it persistently pursues inappropriate policies.

There are no easy answers to this dilemma, but it is clear that the Fund needs to address issues of both effectiveness and legitimacy if it is to have credibility. In fact, the two concepts can be mutually supporting — for example, greater country ownership and broader support for the Fund among the international community may increase country and communal support acceptance of programs that recommend difficult policy choices. A fundamental challenge for the international community moving forward is to find an appropriate balance between measures that increase the Fund's effectiveness and measures to address its legitimacy.

Streamlining conditionality and promoting country ownership

The task of promoting ownership of policy adjustments is often more difficult the greater is the needed adjustment, which may explain perceptions of low ownership of Fund-supported programs in recent crises. Often a lack of country ownership of policy *failures* makes ownership of policy *adjustments* difficult to achieve. Indeed, it is hard to recall any government saying that its policies led to crisis, although many are happy to attribute blame to the IMF for the failure to recover from crisis.¹⁴

Discontent with its policy advice has led to pressures for the Fund to adopt a role more like that of an international central bank, providing swift access to finance without applying excessive policy conditionality.¹⁵ The idea would be to play down the Fund's role of policy adviser in favour of its role as a provider of liquidity.

Against this background, the Fund has taken a number of steps to streamline conditionality and promote better ownership of Fund-supported programs. Following reviews of conditionality beginning in 2000, revised conditionality guidelines were agreed in 2002. The revised guidelines aim to ensure that policy conditions in IMF programs enhance the prospects of program success by including only those conditions that are 'critical' or 'relevant' to achieving

14 This is particularly the case in the Asian crisis where, as noted in Parkinson et al (2002), legitimate criticisms of the Fund's actions have not been matched by a willingness to acknowledge that some crisis affected countries rejected warnings and refused repeated offers of assistance from the IMF until the crisis was in full flight.

15 This is by no means a new development. The IMF envisaged by Keynes was more along the lines of a global central bank, as are the lender of last resort models put forward since by Fischer (1999) and others.

the goals of the program. The guidelines also aim to provide greater emphasis on national ownership of IMF-supported programs.

These efforts are to be welcomed, but they are unlikely to be sufficient.

We would venture that they need to be married to a focussed and effective communication strategy within countries with Fund-supported programs if support for IMF policy advice is to be maximised.

But is this the role of the Fund?

Governments adopt Fund-supported programs, meaning that governments should be the ones to engage with their citizens on these issues. This highlights an intractable dilemma — the very existence of the Fund may provide 'cover' for governments to pursue policies that are necessary but for which support is lacking. While we believe that governments ultimately expend scarce political capital whether they educate their populace on the need for given policies or argue 'the Fund made us do it', it has to be conceded the IMF may be a convenient whipping boy at times. If this is the case, perhaps a lack of 'in-country' legitimacy is to be expected.

But if this is the case, it makes it even more imperative that the Fund have 'global' legitimacy. That is, when it provides policy advice it does so from a position of strength — with a good track record of effective advice and with the clearly recognised support of its membership behind the policy recommendations being made. That is, the 'they' in 'they made us do it' becomes the international community and not the Fund in isolation.

This suggests two critical issues. First, that the advice must be recognised as of high quality and appropriate for the country. Second, that the Fund be seen to receive 'direction' and 'guidance' on its policies from a broadly representative group of members. If it is seen to dance to the tune of a small group of like-minded countries to the exclusion of others this global 'legitimacy' will always be under threat.

Improved surveillance

We argue that the role of the Fund revolves around providing sound policy advice to members to promote macroeconomic stability and prevent the emergence of crises. Macroeconomic stability is crucial as it is a pre-requisite for ensuring the effective operation of the international financial and trading systems and meeting the ultimate goals of economic growth and development. Consistent with this, the IMF should also only provide members with access

to its resources where demonstrably necessary, and likely, to assist in achieving stability.

Central to the effectiveness of the Fund's policy advice is the strength of its surveillance, where surveillance encompasses both the identification of necessary policy adjustments and, equally importantly, the effective implementation of policy advice by member countries.

The current and future shape of Fund surveillance is a topic that merits detailed consideration in its own right and we will not cover it here. The important point to note is that as the nature of problems facing countries has evolved, so has Fund surveillance. Indeed, a commentator from 1993 would be astounded by the change in surveillance over the last decade. We hope to be equally astounded by the change in the shape of surveillance between now and 2013.

The formal surveillance function was introduced when the move away from the pegged exchange rate system saw more of a focus on broader macroeconomic stabilisation policies. With more recent crises raising issues of longer term solvency, this has created a need to extend surveillance to examine underlying structural problems, particularly in the financial sector. This has stretched the Fund's traditional areas of expertise and made the task of surveillance more challenging.

Since the Asian financial crisis the Fund has introduced a range of measures to strengthen its surveillance function. These include measures to increase transparency and accountability through the voluntary publication of Article IV staff reports and program documentation, and through the publication of all policy papers. The promulgation of standards and codes has helped promote sound policies in member countries, particularly in the critical area of financial sector stability. The rapid development of the Reports on the Observance of Standards and Codes (ROSCs) and the Financial Sector Assessment Program (FSAP) — both introduced at the end of the 1990s — has been impressive. Enhanced data dissemination standards have improved the consistency and comparability of data available to the Fund while supporting the monitoring of developments within member countries. Improvements to debt sustainability assessment methodologies and to multilateral and regional surveillance, including monitoring of capital market developments, and the development of early warning systems, are all designed to assist the Fund to

identify vulnerabilities in the international financial system at an earlier stage.¹⁶

The list of measures adopted by the Fund is long and represents a constructive response to the changing international landscape¹⁷. While it might be desirable for all the new initiatives to be a mandatory part of surveillance, the Fund has made a pragmatic decision to move slowly to overcome opposition among some members to the broadened scope of surveillance. It is evident that the Fund is continuing to evolve to the changing circumstances of the world economy, just as it did in the 1970s following the breakdown of the Bretton Woods system of pegged exchange rates. That said, there is more that needs to be done to enhance the Fund's surveillance function.

The relationship between the Fund's surveillance function and its role in providing policy advice is central to the effectiveness of the Fund in preventing crises. Unfortunately, poor surveillance appears to have resulted in an excessive level of optimism by the Fund in relation to many members, particularly program countries. While a reluctance to make candid and critical assessments of economies may be understandable — perhaps in the hope of engendering confidence in the policies of the program country — such an approach is short-sighted and ultimately damaging to both the Fund and the member.

It is for this reason that we have championed the application of a 'fresh pair of eyes' to surveillance in program countries. The introduction of a fresh perspective will in many cases be necessary to ensure that surveillance remains objective and supports robust policy advice.

That said, we would not go as far as advocating a strict separation of surveillance from the Fund's program function. Put simply, the creation of parallel institutional edifices comprising something called 'surveillance' and something called 'programs' would, in our view, be a retrograde step. This

16 While not established for the direct purpose of improving surveillance, the existence of the new Independent Evaluation Office is a critical step in creating a culture which learns from experience and, as such, is likely to enhance the effectiveness of surveillance, albeit indirectly. As evidence of this, the IEO is soon to produce an evaluation of the Fund's actions during some of the early capital account crises. Not only should this help to throw some light on the validity of the 'old solutions for new problems' claim cited earlier, it may provide pointers to early signs of crisis and hence contribute to better surveillance.

17 It is somewhat ironic that the scope of surveillance — the keystone of crisis prevention — has been broadened at the same time that conditionality — the foundation of crisis resolution — has been narrowed.

would be more so the more 'surveillance' looked like the activities of rating agencies.

The Fund's judgements carry weight because they are, in principle, the voice of the international community, placing it in a powerful position as policy adviser. To be effective, it is important that the Fund engage in open and honest dialogue with its members. If the Fund fragments its focus by attempting to become both an entirely independent and open observer and a candid and confidential policy adviser, then it risks the breakdown of its relationship with its members.

Instead, we would argue that the 'fresh pair of eyes' should be approached pragmatically. We could support the development of a specialist 'programs department' if that would more effectively bring cross-country experience to bear on emerging problems. But the IMF would need to establish internal arrangements to effectively ensure the advice of that department, the relevant area department and the Fund's surveillance watchdog — the Policy Development and Review Department — were confronted. A simpler model still would see management facilitate the development of an evaluation culture in the organisation by periodically augmenting country teams with 'outsiders' tasked with reviewing and evaluating the approaches being pursued.

The need for a 'fresh pair of eyes' highlights what is the single most striking problem in the operation of the IMF — the capacity of the Executive Board and Management to take hard decisions.

Clearly, the IMF must respect national sovereignty and it is recognised that there can be legitimate differences in approach to addressing particular economic problems. However, it is incumbent on the Board and Management to tell governments when risks are emerging¹⁸, to be rigorous in assessing requests for assistance and to refuse requests for assistance when they do not believe that the policies being pursued will contribute to achieving macroeconomic stability. Major shareholders should encourage the Board to make such clear-eyed assessments and should support hard decisions rather than pursue short-term political objectives. This issue is taken up further below.

18 While there is much to be gained from making such assessments public, this needs to be balanced against the likelihood of the Fund precipitating the very crisis it is attempting to prevent.

Another challenge thrown up by the evolution of surveillance is how to improve the 'traction' of policy advice. In short, how can Fund advice be made more compelling to national governments?

It is striking that the Fund has singularly failed over the last decade to encourage faster corporate and financial restructuring in Japan, to move Europe to address persistent constraints to product and labour market flexibility and, more recently, to address emerging financial sector weakness, or to convince the United States of the dangers of disorderly current account adjustment. These failures constitute a set of serious structural weaknesses that now constrain global growth, yet they have been apparent for five, and in some cases, 10 or more years. This raises a question — has the failure been with the message, or simply that countries that believe they will never be borrowers feel comfortable in ignoring advice? While the Fund may have had no discernible impact on economic management in the major advanced economies, it is hard to believe that developing economies would have been able to avoid responding to Fund advice for anything like this length of time.

If Fund advice is to be legitimate, there needs to be a presumption that it will be given *appropriate* consideration by developed, emerging market, and developing economies. What constitutes 'appropriate' may differ among countries and may require the Fund to develop a better appreciation of the political constraints operating in member countries at any point in time. At the least, the Fund may need to begin to think about how it can best help governments persuade their citizens of the desirability of particular policy reforms.

Financial support

While the Fund's approach to surveillance has evolved since the Asian crisis, its lending activities have changed in a more radical fashion.

The Fund currently has resources outstanding on the General Resources Account of around SDR 65 billion. However, a substantial proportion of this amount — SDR 45 billion — is accounted for by just three countries, Argentina, Brazil and Turkey. Moreover, Brazil has the capacity to draw down a further SDR 15 billion.

In contrast to the way in which it would caution financial supervisors to avoid concentrated lending, the IMF has more of its resources concentrated in a small group of countries than at any time in its history. This concentration of risk is striking. In the event that the Fund were to find itself faced with substantial

arrears this could constitute a true watershed, with profound consequences for the operation of the institution.

This concentration of resources is a consequence of the way in which the Fund has responded to capital account crises — through large packages involving exceptional access. But exceptional access carries with it risks that magnify the risks inherent in these types of crises. While such an approach may be inevitable given the changing nature of crises, it again places a premium on rigorous assessment of the likelihood of success, and the capacity to take, and stick to, hard decisions — to learn how to 'just say no'.

Governance issues

As noted earlier, bolstering the IMF's role as a policy adviser is not only about the advice and actions of its Executive Board, Management or staff. The IMF is a creature of its member governments. It is difficult, if not impossible, for the Fund to make hard decisions with respect to individual member countries without the backing of its other members. This suggests that the responsibility for ensuring that Fund surveillance and programs are effective is shared by all member countries.

The backing of national governments is key to ensuring the legitimacy of the Fund. Unless the Fund's membership has collective ownership of the types of policies it pursues, the legitimacy of these policies will always be questioned. But this need not involve the Fund stepping back from its role of policy adviser. Rather, it involves national governments, through their representation on the IMF Board, supporting the Fund in giving robust policy advice and making rigorous assessments of requests for resources by the Fund. Importantly, it means governments accepting some ownership of that advice. It means not pursuing short term 'fixes' for individual countries that undermine the future and effectiveness of the Fund. It also means being willing to operate bilaterally to reinforce Fund advice to other members.

This is admittedly not easy to achieve in practice. The desire of individual governments to use the Fund to achieve such short-term political aims is a sign of the relevance of the institution. There will always be political pressures on the Board to provide assistance to countries in crisis and there is the risk of these immediate pressures forcing decisions that go against the aim of implementing sound policies in the medium term. This is a difficult tension for the Board to address, but it is important that member countries avoid sacrificing Fund credibility in pursuit of short-term goals.

In this light, it is also important for the Fund to address voice and representation issues. While this means different things to different players, we believe that Fund representation should better reflect developments in global economic weight, subject to some minimum and effective representation of all members. In the current economic environment, this requires greater representation for some Asian economies, especially Korea, at the expense of reduced representation of older developed economies.

In the interest of operational effectiveness, it would be undesirable to further increase the size of the Executive Board although a strong case can be made for measures to assist the capacity of smaller, multi-country or constituency, based chairs, and especially those representing developing countries predominantly or wholly. Our own experience points to the benefit of mixed constituencies — comprising both developed and developing economies — for reasons of voice, representation and importantly, enhanced recognition of different perspectives. It is recognised, though, that this experience will not be compelling for others.

The IMF's role in the overall financial architecture

The legitimacy of the Fund depends not only on its internal governance and the support provided by its members, but also on 'external governance' arrangements i.e. where it is seen to sit in the overall financial architecture. Many of the challenges it faces raise issues not just of how the IMF operates but are equally relevant for the other fora and institutions that provide direction and/or assistance to the Fund.

Our premise is that the IMF should retain a central role in the international financial architecture. It should fill this role, first, because it has near universal representation.¹⁹ Second, the IMF's mandate to promote international financial stability forms a foundation stone for the work of the other international financial institutions, and has done so since the Bretton Woods institutions were established.

¹⁹ That said, it is worth noting that the IMF (with 184 members), and the United Nations (191), are both less representative than FIFA — the International Federation of Football Associations — which has 204 members!

In addition, the IMF also has the resources to back up its decisions, which sets it apart from other, more consultative, forums such as the G-7, G-20, G-24, FSF, the standard setting bodies, and so on. However, an effective relationship with these representative fora is critical in maintaining and enhancing the IMF's effectiveness and legitimacy.

Groups such as the G-20 will not replace the Fund — they are fora, not institutions, and lack a mandate or the resources to intervene in the international financial system in the manner of the IMF. However, they can play an important role in bringing together IMF member countries to consult on issues that are both relevant for, and go beyond, the IMF.

Notwithstanding the Fund's advantages, it cannot always easily play a consultative role, in part because issues fall outside its mandate but also because its membership is large and its processes for coordinating the views of such a broad membership are inherently unwieldy. The Fund should not expect, or try, to be expert on all issues or represent all the needs of regional groups. The emergence of bodies such as the G-20 and FSF reflect an understanding in the international community that the Fund cannot do all these things and that its governance mechanisms are relatively unwieldy and unrepresentative. Pressures for regional bodies have arisen for similar reasons. A key challenge for the Fund moving forward is to ensure that these bodies help to reinforce its role rather than seek to supplant it.

Groups such as the G-20 and the OECD would appear better suited to facilitating the exchange of views between member countries than the IMF with its diffuse membership and rigid institutional structures. Similarly, the FSF and other specialist bodies are able to harness technical expertise on a range of issues outside the Fund's traditional areas of expertise. In recent times, such bodies have made an important contribution to developing accepted practices for strengthening domestic financial systems. The presence of such consultative and technical support mechanisms can reinforce the IMF's role by shoring up support for, promoting ownership of, and enhancing the technical basis of, the types of policies it pursues. They can also help constrain the development of 'mission creep', whereby the Fund's resources are continually stretched outside its traditional areas of expertise and ensure that issues do not

'fall between the cracks' of the mandates of the Fund and other international financial institutions.²⁰

But to maximise the benefits of a larger and more diverse group of players in the international financial architecture, these other fora need the support, not hostility, of the IMF. With respect to the relationship among the G-20, IMF and the World Bank, it would seem that the Bank has been the quicker of the two institutions to recognise the potential synergies and influence to be gained from extensive interaction with the G-20.

Despite this, as Germain (2003) has noted, the current international architecture is perhaps more consensual than previously, in part because of this specialised division of labour (see Chart 2). There is also arguably greater public and academic appreciation of the issues confronting the international financial system than a decade ago. This enhanced appreciation has led to a more sophisticated dialogue regarding IMF policies — that is, the IMF's own enhanced transparency is leading to more widely shared expertise and resulting in strengthened accountability.

The issue is how to 'optimise' the guidance provided to the Fund by other groupings while ensuring appropriate accountability for all.

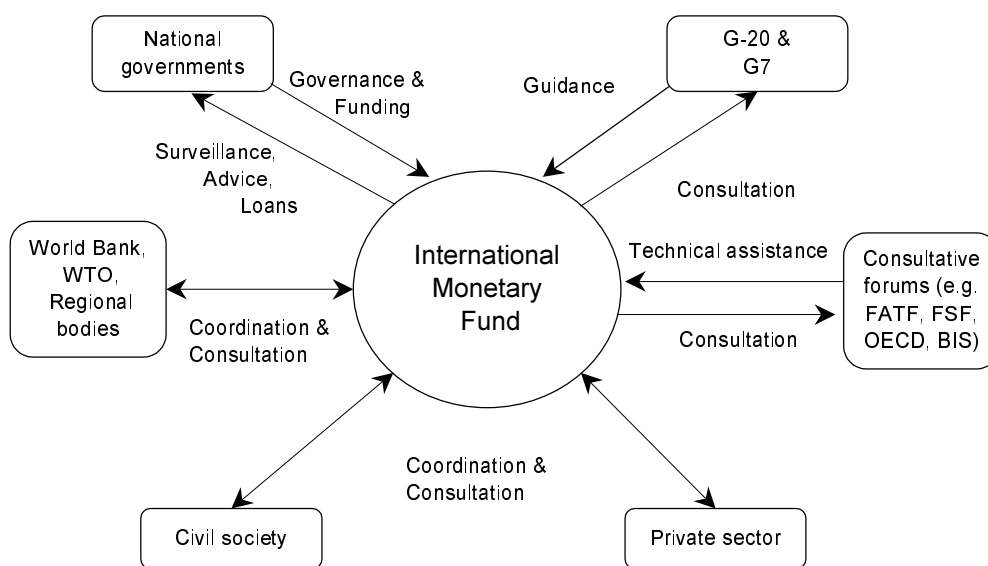
The G-7 has played the most important 'guidance' role for the Fund to date. However, the G-7 cannot provide the Fund with great legitimacy as it only represents the interests of larger developed economies. In fact, it has been argued that guidance from the G-7 has detracted from the Fund's legitimacy as its members have been seen to be pursuing their own agendas through the Fund (Meltzer, 2000). Downplaying the G-7 role in favour of a more representative grouping could, therefore, be an important step towards ensuring greater legitimacy and enhanced effectiveness of the IMF.

²⁰ There has also been pressure in recent years for the development of regional institutions, particularly in the Asia-Pacific region. The appeal of such institutions is that they provide the scope to give regions a greater sense of ownership of outcomes in international crisis management and to fill gaps in the representativeness of the Fund, which may not be well placed to handle region-specific issues. Consequently, a regional body that plays a complementary role to the IMF can improve the credibility of the overall financial architecture and thus help reinforce the Fund's role. However, there is a danger that the development of regional institutions — particularly regional monetary funds — may have the opposite effect. If they lead to a situation of competing crisis managers or are seen as a soft alternative to the IMF, they risk undermining the credibility of the international financial architecture. (see Parkinson et al, 2002). The extent to which regional funds seek to replace, rather than complement the Fund, will reflect perceptions of the Fund's effectiveness and legitimacy.

The G-20 may be an effective consultative grouping able to offer valuable guidance to the Fund. G-20 members account for around 2/3 of the world's population, nearly 90 per cent of world GDP and almost 60 per cent of the world's poor (Martin, 2001). The G-20 therefore represents a reasonable approximation of the IMF's membership, bringing in both developed and emerging market views and capturing well the growing influence of the fast-developing economies. As such, is a potentially powerful tool for facilitating a dialogue between a representative group of member governments, for achieving agreement among key economies on issues of common interest, and for getting emerging concerns of these key economies (especially the non G-7 members) onto the IMF's radar. This has been shown by the G-20's work in recent years identifying policy lessons for member countries in the areas of globalisation, economic growth and poverty, much of which has the potential to be directly relevant to the activities of the Fund.²¹

Consequently, guidance from the G-20 can support the legitimacy of Fund policies.

Chart 2: The IMF and the international financial architecture



²¹ See, for example, the results of the workshop on Globalisation, Living Standards and Inequality held in Sydney in May 2002. A series of case studies on members experiences with globalisation are currently in preparation, while Mexico, the current G-20 chair, is coordinating further work on globalisation and the role of institution building in the financial sector, to be discussed by G-20 Finance Ministers later in the year.

Conclusion

It is a major achievement of the IMF, and the architects of the Bretton Woods system, that the Fund remains relevant today despite the momentous changes in the global economy since it was first established in 1944. The challenge for the Fund moving forward is to maintain that relevance in the face of significant changes to the underlying 'problems' which the institution was established to address.

There are, today, important tensions underlying the IMF's role. How does the Fund maximise its effectiveness in crisis prevention and resolution? How can it continue to improve its surveillance when so many of the recent initiatives are voluntary? Is there a case for a 'fresh pair of eyes'? How does it best catalyse the actions of debtor countries and their creditors through sound policy advice? Does it have a role in helping members better communicate the desirability of particular policy choices? Is it possible to strengthen the capacity of the Executive Board to make hard decisions? Is it excessively exposed to individual countries? How can the right balance be struck between ensuring legitimacy (through measures to improve the overall architecture and governance) and improving effectiveness (through stronger surveillance and programs)? How can it ensure appropriate voice and effective representation of all members? What role can other groups, such as the G-20, play in helping the Fund confront these issues?

The Fund's role has evolved. The challenges it faces going forward call for further evolution. The question is whether the international community — the Fund's shareholders — is up to the challenge.

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Educational attainment and labour force participation in Australia

Steven Kennedy and David Hedley¹

The Commonwealth Government's Intergenerational Report (published in the 2002-03 Budget) and, more recently, 2003-04 Budget Statement 4: Sustaining Growth in Australia's Living Standards (reproduced in this edition of the Roundup) noted the importance of labour force participation in the context of an ageing population. Productivity growth is also a central theme of these documents, as is the interaction between participation and productivity. This article examines trends in labour force participation for people with different levels of educational attainment. The article offers insights into the labour market behaviour of people with different skill attributes and discusses the possible implications of a more highly educated workforce.

Introduction

This article describes the labour force participation of people with different levels of educational attainment over the last 20 years. Knowing and understanding these data and associated trends offers useful insights into the labour market confronting workers with different levels of skill and improves our understanding of aggregate changes in participation.²

We find that while the labour force participation rates of prime age (25 to 54 years) males have fallen for all educational attainment groups between 1981 and 2001, the fall for those males with no post-school qualifications has been particularly dramatic. In 2001, males with no post-school qualifications were over 50 per cent of the male population aged 25 years and over. The participation rates of older males, those aged 55 years and over, fell similarly across all educational attainment categories. In contrast, female participation rose for all educational attainment categories and for most age groups, though at a slower rate in the 1990s compared with the 1980s.

1 The authors are from the Domestic Economy Division, Australian Treasury. We are grateful for comments and suggestions by David Gruen, Jim Hagan, Robert Gardner, Frank Di Giorgio, Paul O'Mara and Martin Parkinson, Hui Wei of the ABS for providing data, and to Bruce Bastian and Stephanie Tsikleas for research assistance. The views in this article are those of the authors and are not necessarily those of the Australian Treasury.

2 This article uses educational attainment as a broad indicator of skill level. There are a number of other approaches to capturing the skill level of workers including occupational classifications. For a discussion of measures of skill see Sheehan (2001).

In countries such as Australia, where the population is ageing, labour force participation and labour supply in general have become key policy issues. The Commonwealth Government's Intergenerational Report (2002) presents projections of economic growth and the fiscal pressures arising from Australia's ageing population and related changes in labour force participation. Naturally there is a robust debate as to the magnitude and implications for economic growth and fiscal sustainability of population ageing (see for example, Dowrick and McDonald, 2002).³ Gruen and Garbutt (2003) explore the potential to offset the decline in aggregate labour force participation by increasing the labour force participation of older persons, in part, by reversing the trend over recent years towards early retirement by male workers.

To better understand the implications of an ageing population for labour supply we must first understand past trends in participation rates and what drives them. Further, the relationship between labour force participation and productivity is potentially an important aspect of future growth scenarios. Clearly the skill characteristics of the Australian labour force and the demand and supply of workers with different skill levels is central to such analysis.⁴

This article begins by briefly reviewing the trends in aggregate male and female participation rates. This is followed by an examination of participation rates by educational attainment, age and gender using census data over the last 20 years. The paper concludes with a discussion of the observed changes in participation rates and possible implications for policy makers.

Aggregate labour force participation trends

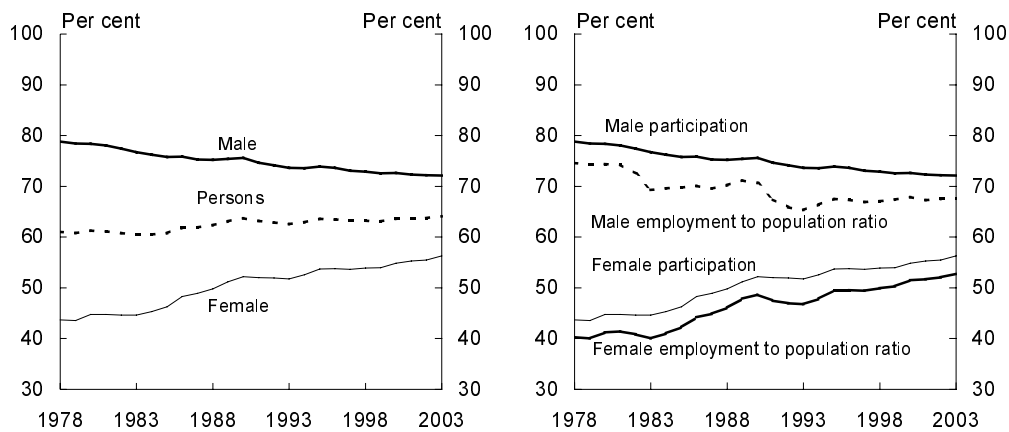
The overall trends in aggregate participation rates are well known, with rising female participation partly offset by declining male participation (see Chart 1). Female participation has tended to vary with economic activity over the last two decades more so than male participation. In particular, it appears that females have tended to withdraw from the labour force rather than become unemployed during economic downturns, whereas males have tended to stay in the labour force. We can see this in Chart 1 where the employment to population ratio of females moves more closely with their participation rate than is the case for males.

3 For example, there are a number of factors that can potentially offset demographic change such as an increasingly skilled labour force and related improvements in productivity.

4 It is also important to understand trends in participation rates given that many analyses of demographic change rely on statistical trend extrapolations of participation rates, which are then applied to a projected population in deriving aggregate participation.

Over 80 per cent of the increase in female labour force participation between 1981 and 2001 reflects increases in female part-time participation.⁵ Part-time female participation is defined as the sum of part-time employment and unemployed females seeking part-time employment as a proportion of the female population. The decline in male participation over this period primarily reflects a fall in full-time participation of 11.8 percentage points, partly offset by an increase in part-time participation of 6.0 percentage points.

Chart 1: Labour force participation rates



Source: Australian Bureau of Statistics, *Labour Force, Australia*, cat. no. 6203.0, Canberra, 2003.

Participation in the labour force varies by age and changes in aggregate labour force participation are often composed of many different trends for specific age and gender groups.⁶ In Chart 2, we show the age profiles of participation rates for males and females in 1981 and 2001.

From Chart 2 we can see that male participation rates have fallen in most age groups while the reverse is true for females. An interesting feature of female participation rates is the reduction in the dip in female participation in the

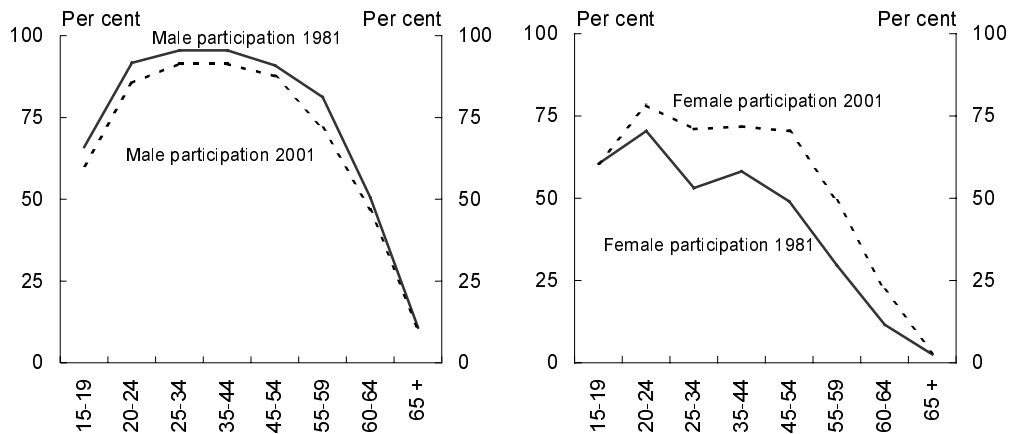
5 This period is chosen for discussion so these trends can be compared with data obtained from Australian censuses between 1981 and 2001.

6 In addition to better understanding aggregate change in participation rates, examining participation rates by age groups allows us to abstract from the broad demographic changes that affect aggregate participation. For example, applying the 2001 demographic profile (population proportions) to 1981 age group participation rates results in an aggregate participation rate of 59.6 compared with 61.1 in 1981. Thus, participation would have fallen by 1.5 percentage points between 1981 and 2001 due entirely to demographic influences.

25 to 34 years age group. This reflects increasing part-time participation by females in this age group, particularly married females.

A trend towards males leaving the labour force earlier is also identifiable in the data, with a fall of 9.5 percentage points between 1981 and 2001 in the participation rate of males aged 55 to 59 years.

Chart 2: Labour force participation rates, males and females by age



Source: Australian Bureau of Statistics, *Labour Force, Australia, Detailed - Electronic Delivery*, cat. no. 6291.0.55.001, Canberra, 2003.

Educational attainment and labour force participation rates

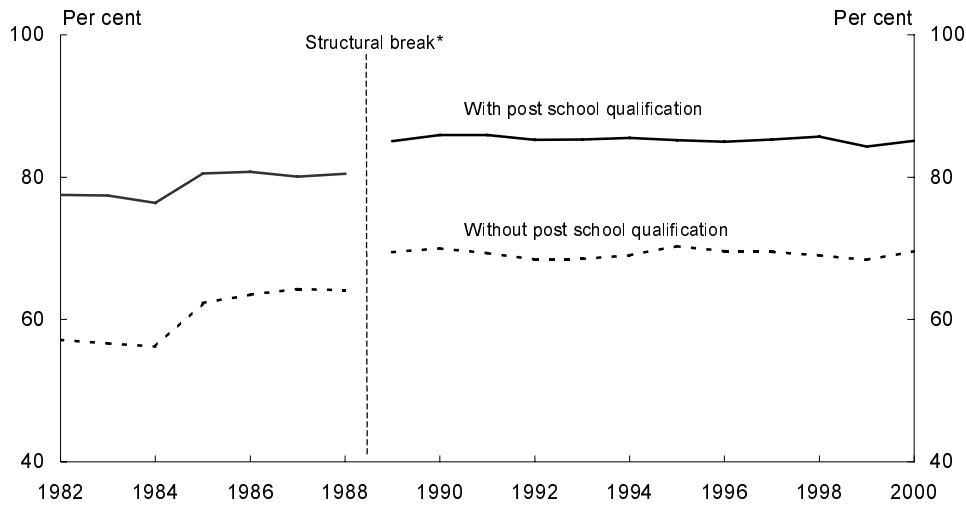
In Chart 3 we use data from various labour force surveys to examine labour force participation rates by educational attainment.⁷ These data show that over the 1990s, participation rates remained reasonably stable for both categories of educational attainment.

While the data in Chart 3 are useful, it is difficult to construct a valid comparison through time given changes in the nature and scope of the surveys underlying the data. It is also the case that dissections of these data are not readily available and the data do not support detailed analysis by educational attainment, age and gender.⁸

⁷ There are a number of changes to the surveys that underlie these data that make it difficult to make comparisons over time. Some of these issues are discussed in DeBelle and Swann (1998) and Vickery (1999) and include change to the age group from which data were collected and change to the educational attainment classifications themselves.

⁸ An alternative source of data with which to calculate participation rates by age, gender and educational attainment is the Australian Bureau of Statistics' Survey of Income and Housing Costs and Income Distribution Survey.

Chart 3: Labour force participation rates by qualifications



*Prior to 1989 the labour force and participation rates included 15-69 year old persons, after 1989 this definition changed to 15-64 year old persons creating a structural break in the series. In addition, in 1994 due to the adoption of the Australian Bureau of Statistics Classification of Qualifications, approximately 300 000 people were reclassified from skilled to unskilled in February 1994. This was due to the new series excluding certificate qualifications of a duration equivalent to less than 1 semester full-time.
 Source: Australian Bureau of Statistics, *Labour Force Status and Educational Attainment*, cat. no. 6235.0, Canberra, 1994 and Australian Bureau of Statistics, *Transition from Education to Work*, cat. no. 6227.0, Canberra, 2000.

Census data

In the following discussion we use Census data for 1981, 1986, 1991, 1996 and 2001 to compare the single-year age-specific participation rates of men and women with different levels of educational attainment.⁹ While censuses are a very useful source of data, it is important to appreciate the difficulties in using census data to compare the labour force status of individuals with different levels of educational attainment. For example, while questions on labour force status in the various censuses are largely consistent and allow accurate estimates at a fine level of detail by age, the estimates are not directly comparable to those from the labour force survey.¹⁰ Similarly, census questions on educational attainment are not consistent through time and for the purposes of this paper have been collapsed into three groupings: no

9 We are very grateful to Hui Wei of the Australian Bureau of Statistics for providing these data.

10 See Australian Bureau of Statistics (1994) and Carew, Woods and Brady (1999).

post-school qualifications; non-degree post-school qualifications; and degree qualifications.¹¹

Despite the difficulties in deriving comparable estimates of labour force status by educational attainment across various censuses, these data remain a valuable source of information and should still provide a broadly accurate picture of changes in labour force participation.

Educational attainment, participation rates and age profiles

We begin by comparing labour force participation rates by single-year age groups for the three levels of educational attainment for men and women. We have chosen to look at people aged 25 years and older so that the educational attainment category 'degree or higher qualifications' will be largely full formed. That is, most persons who will obtain this qualification will have done so by age 25 years.

Males

The most striking aspect of the male participation rate age profiles is the substantially lower participation of males with no post-school qualifications in 2001, both compared to their level in 1981 and relative to other male education groups (see Chart 4).¹² Another interesting aspect of the data is the fall in participation rates of males aged 55 to 59 years in all educational attainment categories. We can see both these effects more clearly in the fifth panel of Chart 4, where the percentage point difference in participation rates between 2001 and 1981 is calculated for one-year age groups. This panel shows that a

11 In addition, census data contain a number of other difficulties, in particular, the treatment of the large numbers of 'not stated' responses to labour force and educational attainment questions. In this paper we follow Wei (2001) in the derivation of various educational attainment and labour force categories. Wei treats 'not stated' responses for labour force questions as not in the labour force, which simplifies somewhat comparisons through time. However, by treating 'not stated' responses as not in the labour force, participation rates will tend to understate those derived from the labour force survey. Perhaps more importantly, this practice will more substantially understate participation for the no post-school qualifications category given that 'not stated' labour force is highly correlated with 'not stated' educational attainment. These aspects of the data should be kept in mind when considering the comparisons presented in this article. A table detailing the correspondence between the censuses highest educational attainment questions is contained in the Appendix.

12 A preliminary analysis of participation rates for males with no post-school qualifications using the 1982 Income Distribution Survey and 1999-2000 Survey of Income and Housing Costs, suggests somewhat smaller falls in participation than those derived from census data and reported in this article. However, both sources of data suggest that falls in participation for prime age males with no post-school qualifications were significantly larger than for males with higher levels of educational attainment.

consistent fall in participation rates of around 14 percentage points is evident for prime age males with no post-school qualifications.

We also examined the change in participation rates across the intervening censuses between 1981 and 2001 and found that participation rates for prime age males with no post-school qualifications fell steadily across censuses (see Chart 5). The falls in participation for other male education groups tended to be more pronounced for older males and occur in the 1980s.

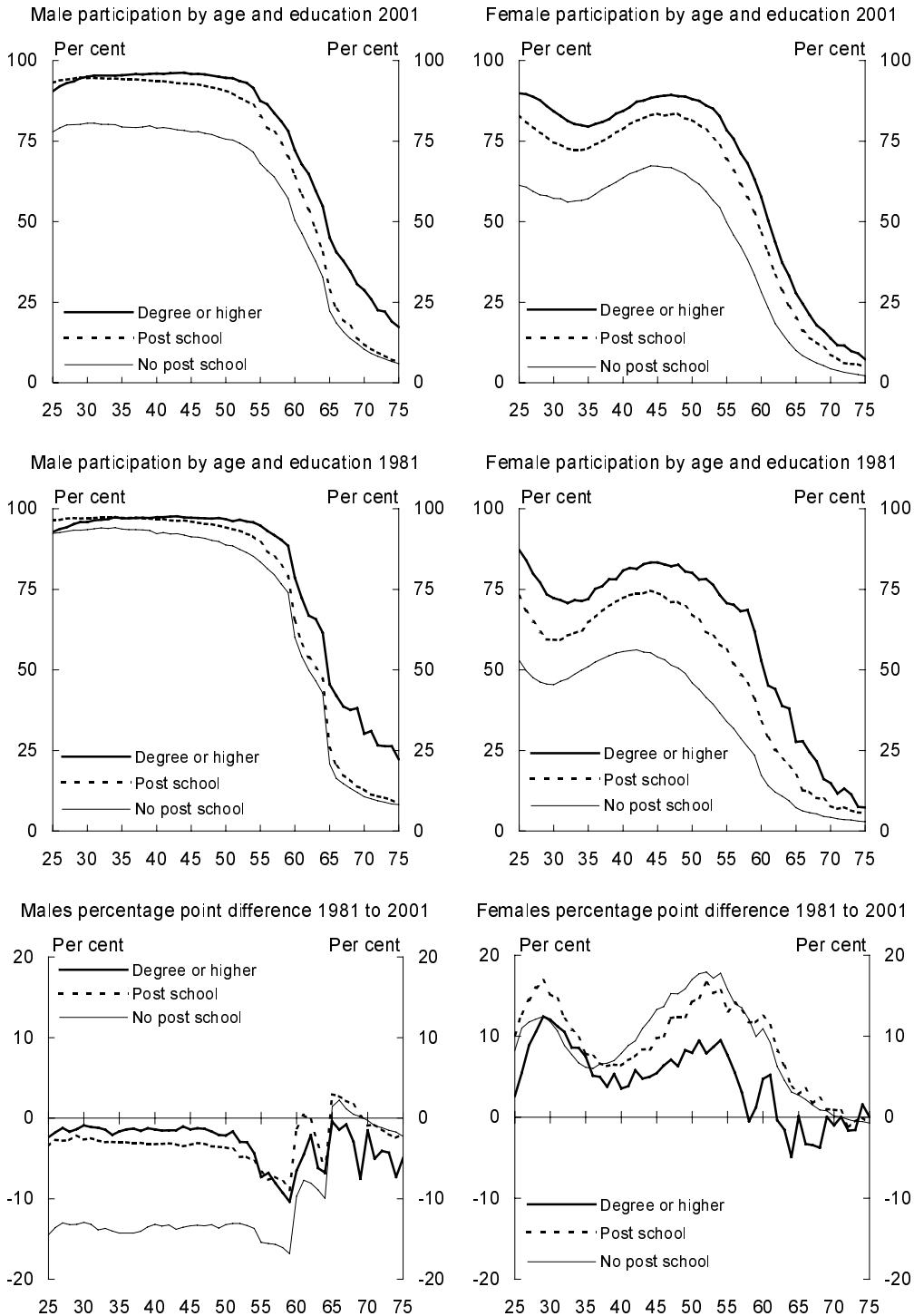
In Table 1, we summarise the changes in participation rates evident in Charts 4 and 5 and show the total falls in male labour force participation by educational attainment and the falls for males aged 25 to 54 years, and 55 years and over. While all educational attainment categories show substantial falls in participation for males aged 55 years or more, the no post-school qualifications category is unique in the large fall in participation recorded for those aged 25 to 54 years compared with the other educational attainment groups. The total fall in participation amongst males with no post-school qualifications is larger than both the fall in those aged 25 to 54 years and those aged over 55 years as the aggregate change reflects demographic change (ageing of population) in addition to the fall in each sub-group.

Table 1: Change in participation rates from 1981 to 2001 (percentage points)

Educational Attainment	Age 25 years & over	Age 25 to 54 years	Age 55 years & over
Males			
Degree or higher	-4.1	-1.4	-6.6
Non-degree post-school	-7.6	-3.5	-8.8
No post-school	-14.2	-13.7	-10.9
Females			
Degree or higher	6.0	8.0	4.9
Non-degree post-school	10.6	12.0	7.4
No post-school	6.3	11.6	2.1

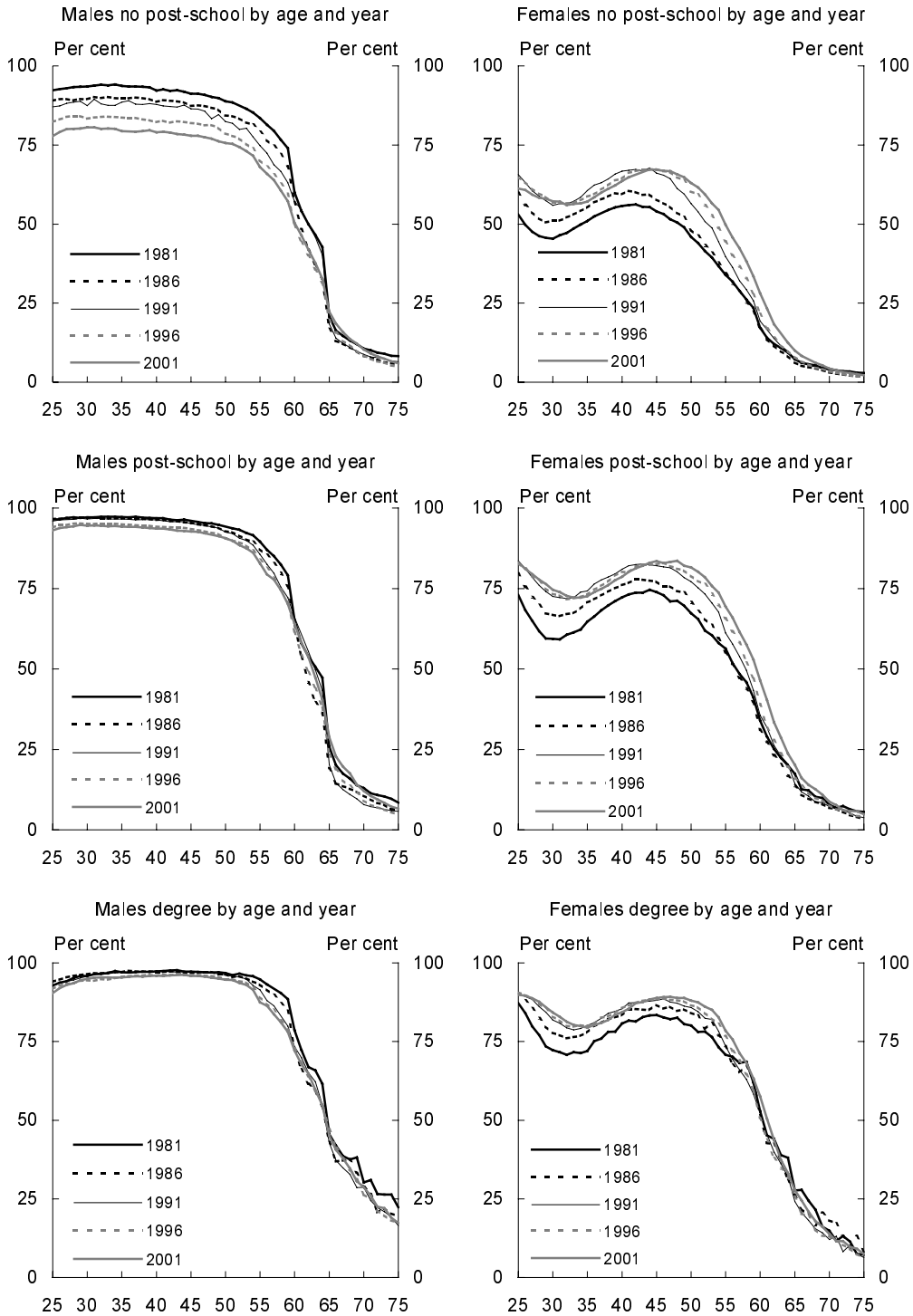
Note: The change in participation rates for age groups 25 to 54 years and 55 years and older for each education category don't add to the total change due to changes in population proportions over the period (ageing of the population). We conducted a shift-share analysis to determine the effect of ageing compared with participation rate changes on the overall change in participation. For males with non-degree post-school and degree qualifications, ageing accounted for around 40 and 30 percent of the overall fall respectively, while for those with no post-school qualifications only 10 percent of the fall was due to ageing. For females, age group participation rate changes dominated the increase in overall participation for all educational attainment categories and were only partially offset by ageing effects.

Chart 4: Participation rates by age, educational attainment and sex



Source: Australian Bureau of Statistics, 1981 and 2001 Censuses.

Chart 5: Participation rates by age, educational attainment, sex and year



Source: Australian Bureau of Statistics, 1981, 1986, 1991, 1996 and 2001 Censuses.

Females

In contrast to males, participation rates for all female educational attainment categories increased significantly between 1981 and 2001. The largest increases were for women with post-school and no post-school qualifications. Despite these increases, females with degree or higher qualifications aged 25 to 54 years in 2001 had participation rates over 20 percentage points higher than those with no post-school qualifications.

The increase in female participation rates by educational attainment across censuses is consistent with the aggregate trends in female participation. That is, the largest increases in participation were in the 1980s, with much more modest increases since 1991 (see Chart 5).

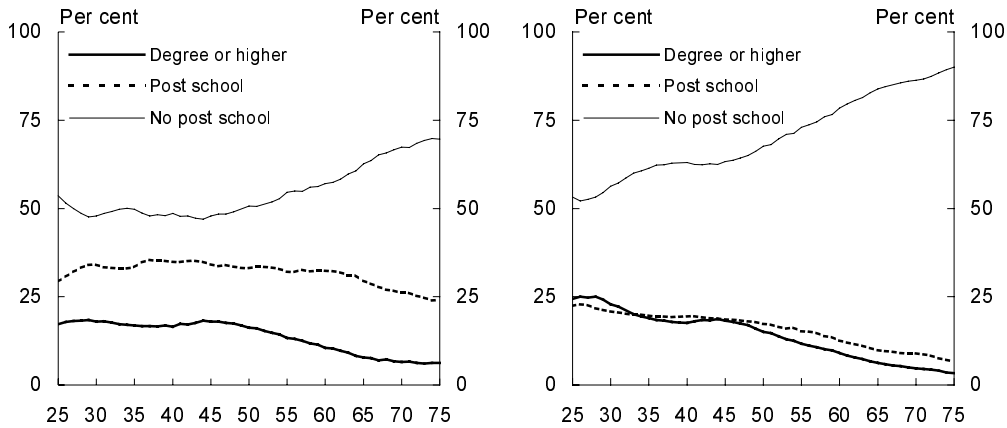
Unlike males there has been no increase in early exit from the labour force for females aged 55 years and over. In fact, there has been a moderate increase in female participation in this age group. The increase in participation of older females may, in part, reflect earlier increases in the participation of younger females. In this case a cohort effect is operating with higher participation being reflected over females' lifecycle.

Educational attainment and implications for aggregate changes in participation

In Chart 6 we show the proportion of females and males in the three educational attainment categories in 2001. Given the differences in participation rates between educational attainment groups, the higher proportions of males and females with post-school qualifications in younger age groups will have a positive effect on aggregate participation rates in years to come (see Gruen and Garbutt, 2003). In addition, the higher productivity associated with more highly skilled individuals means that an increasing proportion of these persons in the population should also have a positive effect on economic growth.

Chart 6: Proportion of population by educational attainment in 2001

Male proportion of population by education and age Female proportion of population by education and age



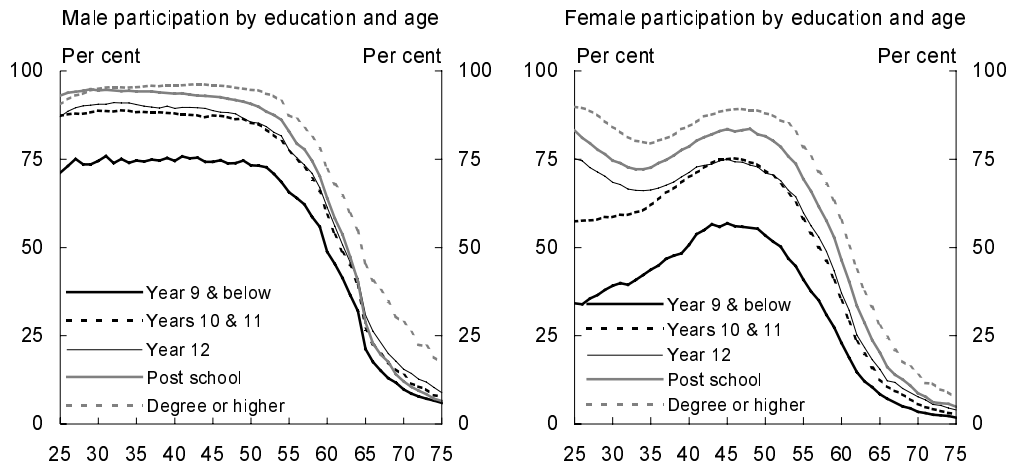
Source: Australian Bureau of Statistics, 2001 Census.

The participation rates of unskilled males and females in more detail

The large fall in participation rates for males with no post-school qualifications, and the substantial differences in female participation rates between those with no post-school qualifications and those with higher educational levels prompts a closer examination of the no post-school group. In Chart 7 we have partially disaggregated the no post-school group by the level of schooling completed. The participation rates of males who have completed year 12 schooling are only just below those with post-school qualifications. However, as the level of schooling completed declines, participation rates fall dramatically.¹³ Similar to the experience of males, female participation rates are lowest for those with the least schooling across all age groups. Female participation rate age profiles also varied with the level of educational attainment. Females who did not complete year 12 had much lower participation rates at younger ages than other female education groups. This pattern probably reflects when women in different education groups tend to have children.

¹³ A substantial portion of the no post-school qualifications category is persons who did not state their level of schooling. This group had extremely low participation rates reflecting, in part, that many of these persons also didn't state their labour force status. Exclusion of the 'not stated' group would substantially increase (for example, by around 5 to 6 percentage points for prime age males) participation rates for the no post-school qualifications group. However, to promote consistent treatment of this group across censuses we have chosen to follow Wei's (2001) approach and include 'not stated' labour force status as not in the labour force. These issues remind us that these data need to be interpreted cautiously.

Chart 7: Participation rates by educational attainment and age in 2001



Source: Australian Bureau of Statistics, 2001 Census.

The differences within both the male and female no post-school qualifications groups suggest that the increase in year 12 retention rates is likely to have a positive effect on participation regardless of whether these people obtain additional qualifications. Further, it suggests, not surprisingly, that policies that increase education retention are likely to increase labour force participation and promote improved labour market outcomes.

Concluding comments

In this article we have identified substantial variations in the labour force participation rates of males and females with different levels of educational attainment. For males, these differences have grown over the past 20 years, with those in the no post-school qualifications category participating less in the labour force in all age groups. There was also a significant increase in early exit from the labour force for all males aged 55 years and over for all educational attainment categories.

Consistent with the increase in aggregate female labour force participation, participation rates increased for the three female educational attainment categories for all age groups. However, there remain large differences in participation rates between educational groups, with females with post-school qualifications having much higher participation rates than those without post-school qualifications. Since the early 1990s, the increase in female participation for all educational attainment groups has slowed substantially.

To better understand the participation rates of those with no post-school qualifications we looked at selected sub-groups of this category. For both males and females, those who had not completed year 12 schooling had noticeably lower participation rates than those who had completed year 12.

The changes in male and female participation rates by educational attainment level identified using census data in this article are consistent with the aggregate trends obtained from the labour force survey. They reflect declining male participation which, this article suggests, is primarily composed of falls in low-skilled male participation and early exit from the labour force, and increasing female participation composed of increases in participation for all skill and age groups. These findings are also consistent with other studies, which have found that there has been a relative increase in demand for high-skilled workers matched by an increase in supply, see for example, Vickery (1999) and Borland (1999).¹⁴ Interestingly, while studies have found that unemployment rate differences between skill groups have remained stable (Vickery, 1999), this article suggests that the composition of supply of low-skilled workers has changed dramatically. That is, the supply of male (mostly full-time) low-skilled workers has contracted while the supply of female (mostly part-time) has increased. Wooden (2000) found that the increase in jobs for low-skilled workers was mostly explained by increased part-time and casual work and that the total volume of low-skilled work (taking into account hours worked) had changed very little over the 1990s.

The relatively low participation rates for low-skilled males and females, coupled with other research, suggest that there are challenges in the area of low-skilled labour in Australia, especially in relation to policies affecting skill formation in low-skilled workers and school retention rates. On a more positive note, notwithstanding the ageing of the population, Australia's more highly educated labour force is likely to contribute to future economic growth through higher participation in the labour force and higher productivity.

14 Vickery (1999) found that for Australia the relative increase in demand for high-skilled workers had been matched by an increase in supply and that relative unemployment rates between low and high skilled workers had remained fairly stable. Borland (1999) noted that the relative earnings of low and high skilled workers had varied little over time and did not explain increases in earnings inequality. Increases in earnings inequality were mostly explained by increases in within-education-group earnings differences.

Appendix

Educational attainment as measured in Australian censuses

For census data, the measure of educational attainment is highest post-school educational qualifications. In this paper we follow Wei's (2001) construction of consistent educational attainment categories for censuses though we reduce Wei's four categories of educational attainment to three - essentially collapsing degree and post degree qualifications into one category.

Table A1: Correspondence of educational attainment categories

Collapsed Educational Attainment Categories	1981 Census	1986 Census	1991 and 1996 Censuses	2001 Census
Degree plus qualifications	Graduate Diploma, Bachelor Degree, Higher Degree	Graduate Diploma, Bachelor Degree, Higher Degree	Postgraduate Diploma, Bachelor Degree, Higher Degree	Graduate Diploma and Graduate Certificate Level, Bachelor Degree Level, Postgraduate Degree Level
Non-degree post-school qualifications	Diploma, Certificate-Trade Level; Certificate-Other Level	Diploma, Certificate-Trade Level; Certificate-Other Level	Undergraduate Diploma, Associate Diploma, Skilled Vocational Qualifications, Basic Vocational Qualifications	Advanced Diploma and Diploma Level, Certificate Level
No post- school qualifications	Not Classifiable, Other, Not applicable	Level of Attainment Inadequately Described, Not Classifiable, Level of Attainment Not Stated, No qualifications, Not Applicable	Level of Attainment Inadequately Described, Level of Attainment Not Stated, Not Applicable	Level of Education Inadequately Described, Level of Education Not Stated, Not Applicable

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The economic impact of Severe Acute Respiratory Syndrome (SARS)

SARS has severely disrupted the economies of some of Australia's major trading partners in the region and is expected to reduce GDP growth in East Asia by around ½ to 1 percentage point in 2003. This has occurred in an environment of an already subdued global economy. SARS has caused a large demand shock in East Asia, particularly to the consumption of services, especially travel. However, barring further outbreaks, the economic disruption should be relatively short-lived, with the worst of the economic impact expected in the June quarter 2003. Tourism should gradually recover over coming months. For some regional economies, SARS will add to existing stresses, especially fiscal pressures as governments respond by investing greater resources in public health. The overall economic impact of SARS on the Australian economy has been relatively limited, although tourist arrivals from East Asia have fallen sharply.

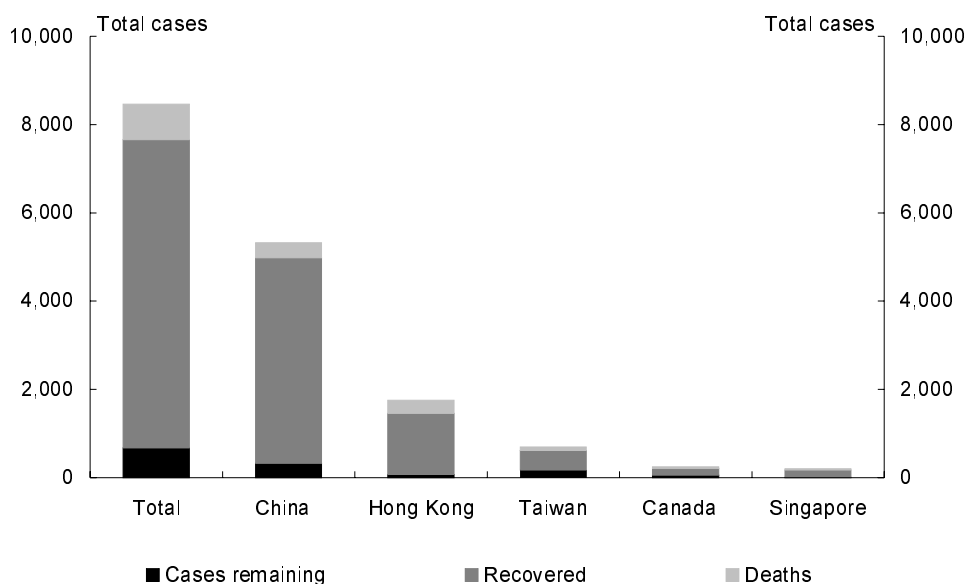
The outbreak of SARS

Severe Acute Respiratory Syndrome (SARS) is a deadly atypical pneumonia that became publicly recognised at the end of February 2003. It first appeared in the Chinese province of Guangdong in November 2002 and spread to Hong Kong during late February. By mid-June 2003, the SARS virus had infected around 8500 people worldwide and caused around 800 deaths (Chart 1). SARS has largely affected the greater China area. To mid-June 2003, close to 63 per cent of cases occurred in China, with 85 per cent in China and Hong Kong together. The third largest outbreak has been in Taiwan. Canada and Singapore also experienced significant outbreaks.

The World Health Organisation began reporting the daily spread and rising death toll of the disease outside of China in mid-March. Information on the spread of SARS in China became available from late March, following international pressure for China to publicly address the growing health concerns within its borders. During these early stages, governments and individuals were required to make decisions about how to best deal with the situation, with scant knowledge about the epidemiology of the virus or how it spread. These uncertainties created a lot of fear that strongly influenced

economic behaviour and SARS also raised questions about the adequacy of the public health systems in affected countries¹.

Chart 1: Cumulative number of SARS cases, deaths and recoveries (to mid-June 2003)

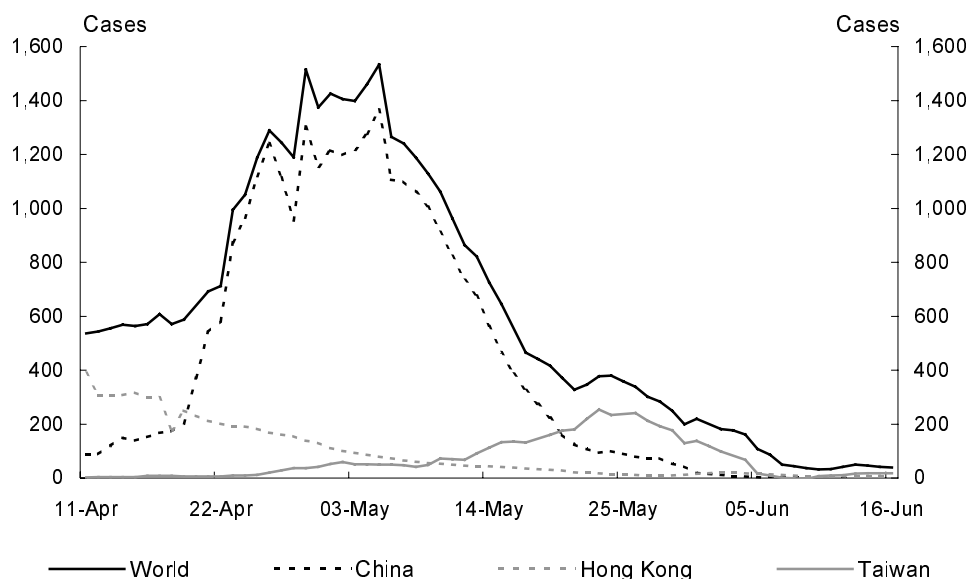


Source: Cumulative number of reported probable cases of SARS, World Health Organization (WHO), www.who.int.

Measures taken by governments (including quarantine and pre-departure checks at airports and seaports), along with attempts by individuals to limit exposure, appear to have successfully limited the spread of the virus. By mid-June 2003, the spread of SARS appeared to have waned, after peaking in early May 2003 (Chart 2). The number of countries with SARS cases remaining has declined from 32 to 10. However, the possibility of future outbreaks remains, as displayed by developments in Canada where a significant outbreak occurred when the disease was thought to be almost eliminated. The risk remains of further outbreaks in China's rural areas, or to other densely populated countries with poor medical facilities. In addition, it remains to be seen if SARS is affected by seasonal patterns.

¹ Compared with other contagious diseases, SARS has had a relatively small impact in terms of overall health and deaths. For example, the influenza virus causes between 250,000 to 500,000 deaths annually.

Chart 2: Through-the-week change in new SARS cases



Source: Derived from WHO data.

The economic impact of SARS

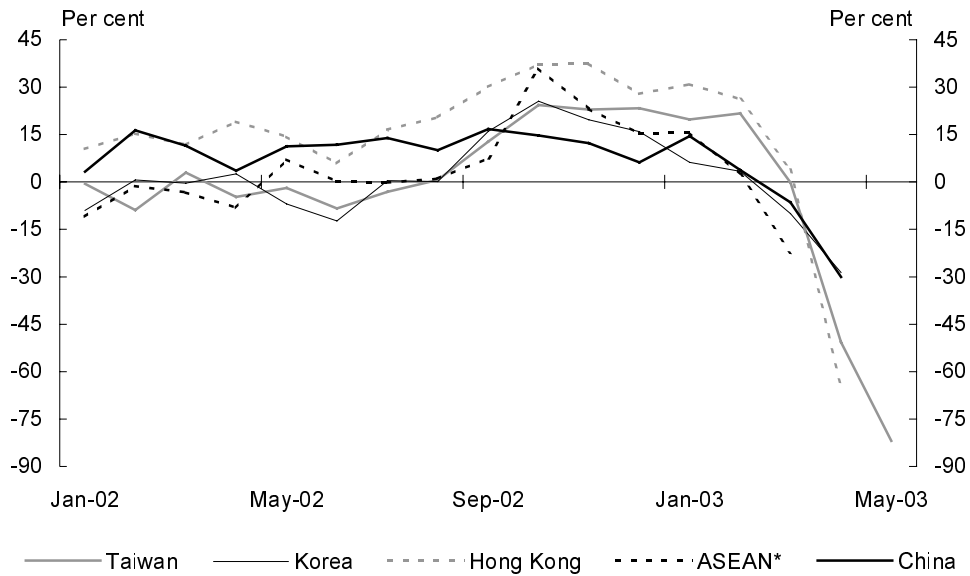
In economic terms, SARS represents a crisis of confidence and a demand shock that hit East Asia, especially China, hard. This occurred at a time when East Asian growth prospects were already clouded by geopolitical uncertainties and high oil prices, the stalling in technology exports, and overall weak economic growth in major industrialised economies. GDP growth slowed significantly in a number of East Asian economies in the first quarter of 2003.

Fear of contracting SARS influenced the behaviour of individuals, making them avoid public places, travel and face to face contact. In Hong Kong, Singapore, and parts of China, schools closed, meetings and conventions were postponed or unattended, while restaurants and shopping malls experienced declining patronage. As a consequence, consumption expenditure and especially the consumption of services fell sharply.

SARS has heavily reduced domestic and international travel and tourism in East Asia, with tourist arrivals (Chart 3), airline travel and hotel occupancy rates plummeting. Tourism accounts for well over 5 per cent of GDP for several economies in the region (Chart 4) and was already weak following the Bali bombing on 12 October 2002 and the events of September 11. Weakness in these sectors aggravated the shock to consumption demand, with retail sales

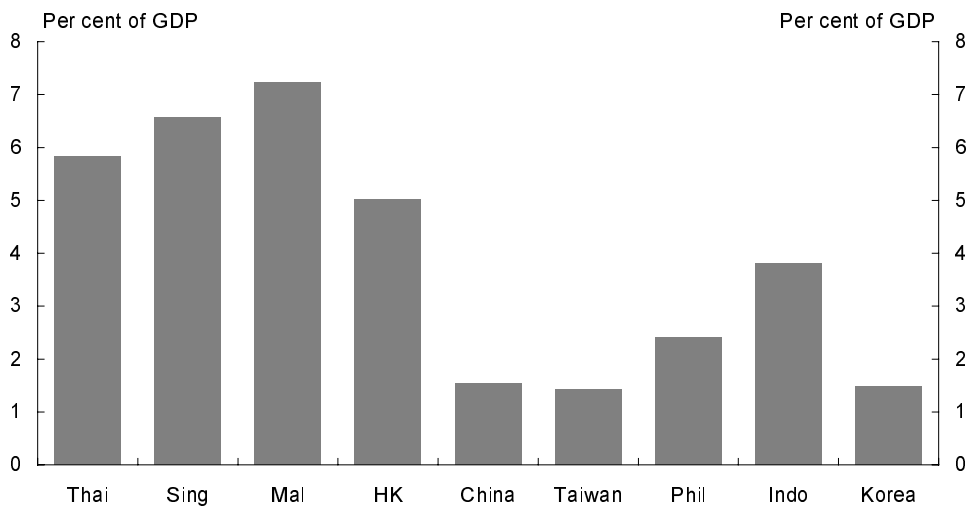
falling in a number of East Asian economies (Chart 5) in the early part of the outbreak period.

Chart 3: Tourist arrivals (per cent change, through-the-year)



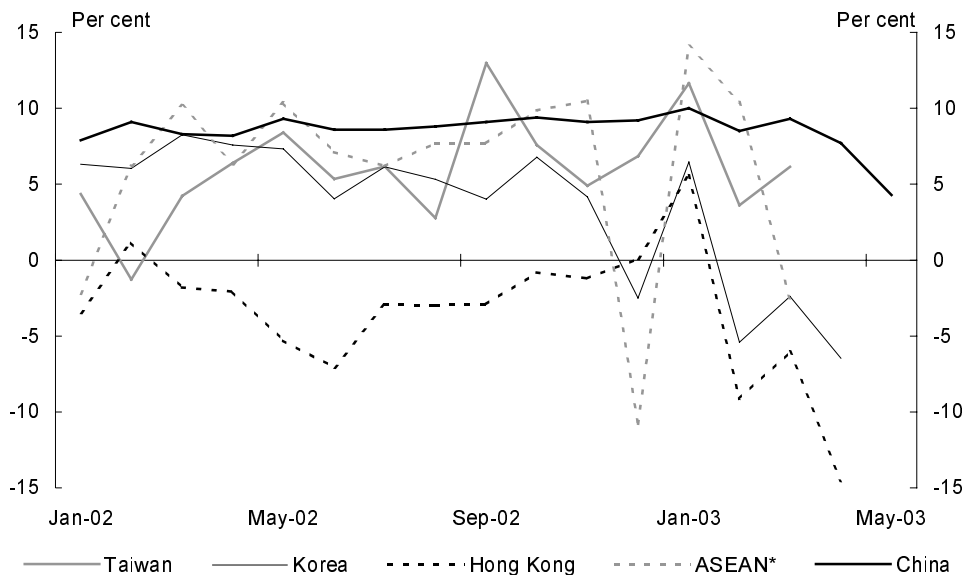
*ASEAN countries comprising of Malaysia, Philippines, Singapore, and Thailand.
Source: CEIC.

Chart 4: Tourism as per cent of GDP (2001)



Source: CEIC.

**Chart 5: Retail sales
(per cent change, through-the-year)**



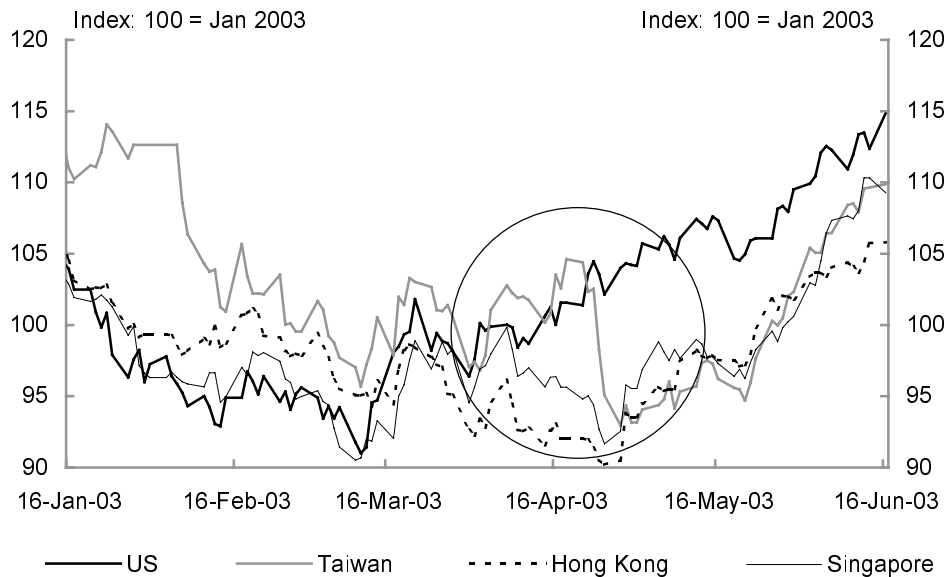
* ASEAN countries comprising of Indonesia, Singapore and Thailand.
 ASEAN retail sales growth calculated using purchasing power parity (PPP) weights.
 Source: CEIC and IMF WEO April 2003 for PPP weights.

Business costs have risen somewhat since February 2003 due to the loss of working hours from SARS-related illness or absences, and the introduction of precautionary measures to prevent the spread of SARS. International and regional shipments of inputs and final goods may have also been delayed, with cross-border trade hampered. The loss of confidence was also reflected in East Asian financial markets, with stock prices falling following news of the outbreak. When US stocks rallied following reduced uncertainty surrounding Iraq in late March, East Asian stocks continued to fall. Stock prices in Hong Kong and Singapore hit their lowest levels since the Asian financial crisis, although they have since recovered as the outbreak appears to have been largely contained (Chart 6).

As the outbreak appears to be coming under control, the worst of the economic decline in East Asia should be largely limited to the June quarter. Anecdotal evidence suggests that economic activity and behaviour is gradually returning to normal in East Asia. This suggests that the SARS-induced economic shock to East Asia should be relatively short-lived, and the overall impact on world economic growth should be relatively small.

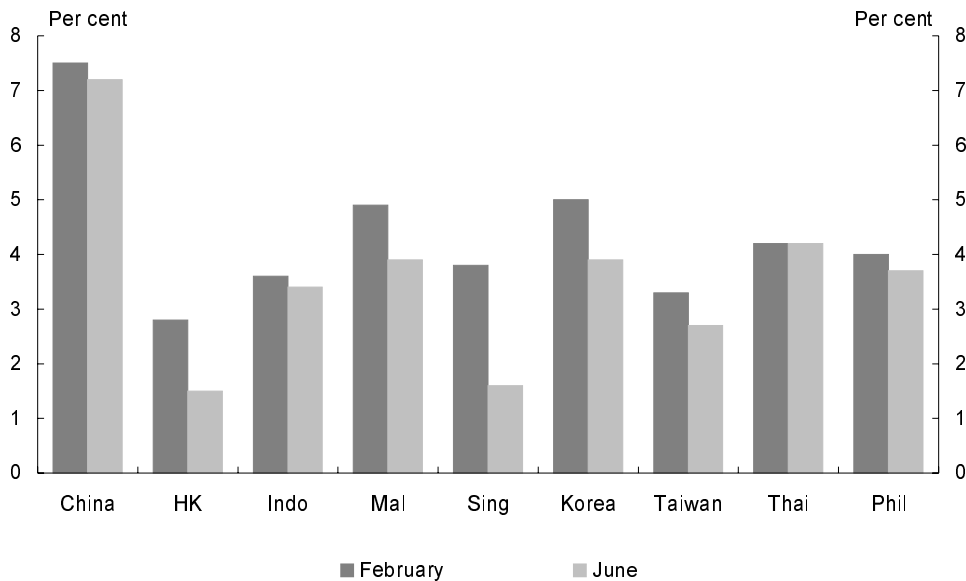
The country most affected by SARS is Hong Kong, with the largest number of infections and deaths relative to its population. With services, business travel and tourism comprising a very high proportion of economic activity (around 80 per cent of GDP), the negative impact on growth will be significant. Real GDP in the March quarter 2003 contracted by 0.3 per cent from the December quarter as the effect of SARS on services and inbound tourism commenced. April data reveal severe falls in tourism, the retail sector and international trade (Charts 3, 5, and 8). Private sector forecasters have slashed GDP growth forecasts for Hong Kong in 2003 from around 3 per cent prior to the outbreak to around 1½ per cent after the outbreak (Chart 7).

Chart 6: US and East Asian stock prices



Source: Thomson Financial Datastream.

Chart 7: Consensus GDP growth forecasts for 2003

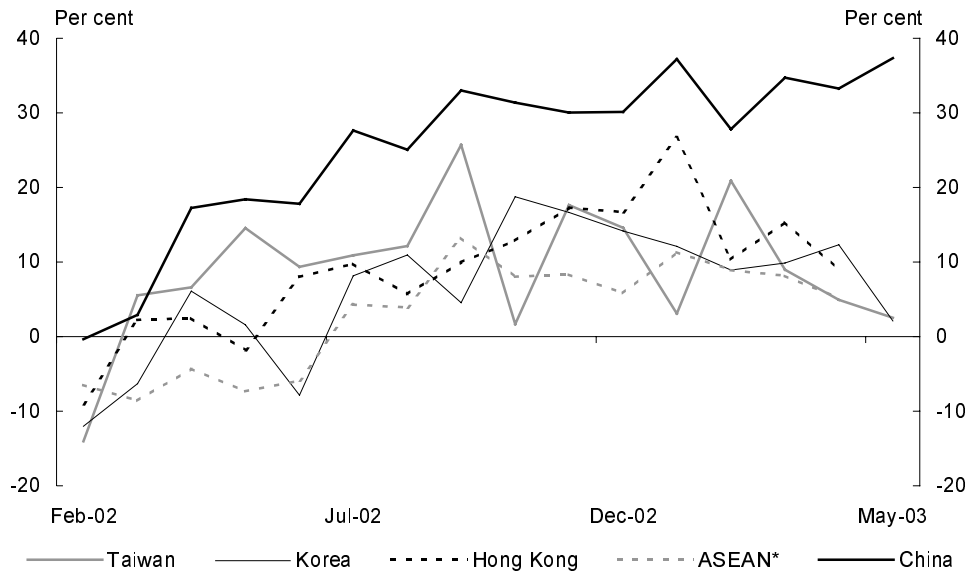


Source: Asia-Pacific Consensus Forecasts.

In Hong Kong, there has been a deterioration in labour market conditions in the manufacturing and construction sectors since the mid-1990s. Job losses have fallen mainly on low-skilled workers, with the service sector providing some cushion. However, the severe impact of SARS on the service sector has also created significant job losses in this sector, causing a further deterioration in labour market conditions. Since the SARS outbreak, the unemployment rate has risen in Hong Kong from 7.2 per cent in January to 8.3 per cent in May.

China experienced the greatest absolute number of SARS infections and deaths of any country. SARS was only publicised widely in China towards the end of April and government measures to contain SARS, including public investment in a medical facility were implemented in May. China's exceptionally strong GDP growth of 9.9 per cent in the year to March 2003 declined to 8.6 per cent in the year to April. Growth in retail sales to May slowed sharply to the lowest expansion rate in five years (Chart 5). In addition, foreign direct investment growth also slowed, rising by only 18 per cent in the year to May after growing by over 60 per cent in the year to March. However, Chinese exports have continued to boom, growing by over 35 per cent in the year to May (Chart 8), in part due to China's increasing competitiveness with its currency linked to the decline in the value of the US dollar.

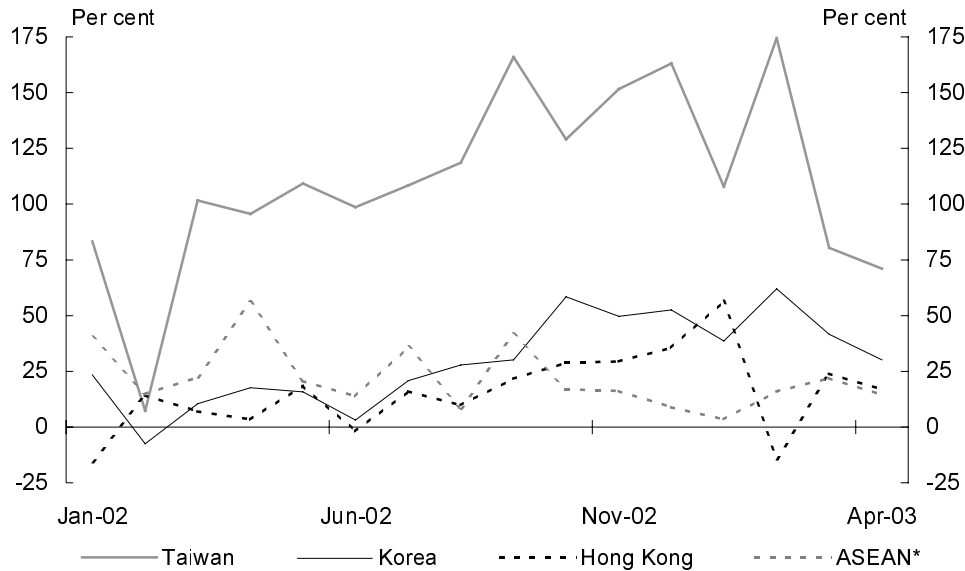
**Chart 8: Merchandise exports
(percent change, through-the-year)**



* ASEAN countries comprising of Indonesia, Malaysia, Philippines, Singapore and Thailand.
 ASEAN export growth calculated using purchasing power parity (PPP) weights.
 Source: CEIC and IMF WEO April 2003 for PPP weights.

With the Chinese economy being an increasingly important driver of intra-regional trade and production growth (China accounted for around 20 per cent of intra-regional trade and over 10 per cent of the region's total trade in 2001), a significant slowing in China could have a substantial impact on regional trade. Trade data to April show that export growth to China for most East Asian economies fell significantly, particularly from Taiwan (Chart 9). Private sector GDP growth forecasts for China in 2003 have been downgraded to between around 6½ to 7¼ per cent, compared with around 7½ per cent prior to the outbreak (Chart 7).

**Chart 9: Merchandise exports to China
(per cent change, through-the-year)**



*ASEAN countries comprising of Malaysia, Philippines, Singapore and Thailand.
 ASEAN export growth to China calculated using purchasing power parity (PPP) weights.
 Source: CEIC and IMF WEO April 2003 for PPP weights.

The outbreak of SARS in Taiwan occurred later than in other countries. While the outbreak in Taiwan was on a smaller scale than in China and Hong Kong, it was broad enough to require large-scale containment policies and is likely to cause a significant negative economic impact. Consensus GDP growth forecasts for Taiwan in 2003 have been downgraded by more than ½ of a percentage point from February to June 2003, partly due to the SARS outbreak.

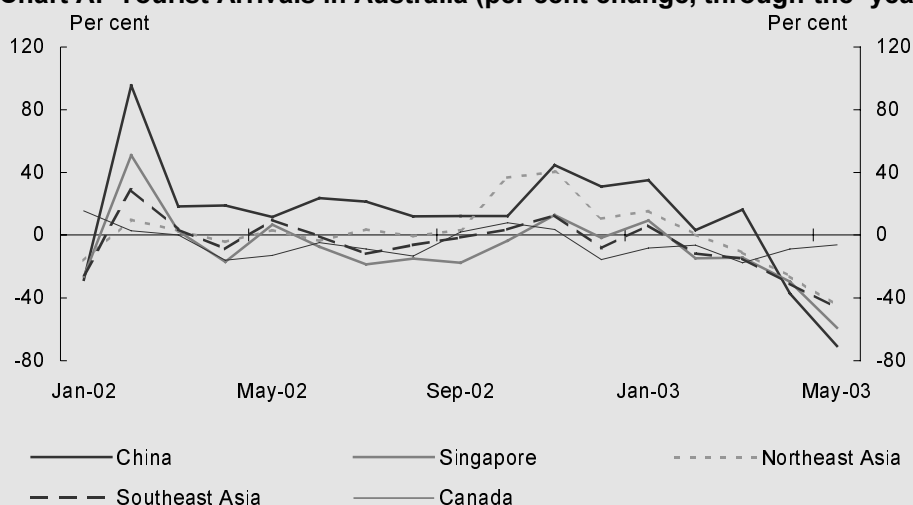
Singapore was one of the first countries to experience a large SARS outbreak, which was effectively contained. Vietnam was also successful in containing an outbreak. Thailand, Malaysia and other East Asian countries only experienced a few SARS cases. However, these economies are likely to also experience negative economic impacts due to weaker tourism and spillover from slower economic activity and intra-regional trade with their more affected neighbours. With the exception of Thailand, Consensus GDP growth forecasts for these economies have been revised downwards since the SARS outbreak (Chart 7).

The economic impact of SARS on Australia has been relatively limited, falling mainly on the tourism sector (see Box 1).

Box 1: Economic Impact of SARS on the Australian Economy

The recent outbreak of SARS will have a mild and temporary impact on the Australian economy — primarily through weaker growth in Asia that has reduced some exports, disrupted tourism and possibly reduced business confidence. The limited impact of the SARS epidemic on the Australian economy will nevertheless be predicated on the continued containment of the virus and no substantial outbreak of SARS in Australia; however, this latter risk appears to be diminishing.

Chart A: Tourist Arrivals in Australia (per cent change, through-the-year)



Source: Australia Bureau of Statistics Catalogue No. 3401.0.

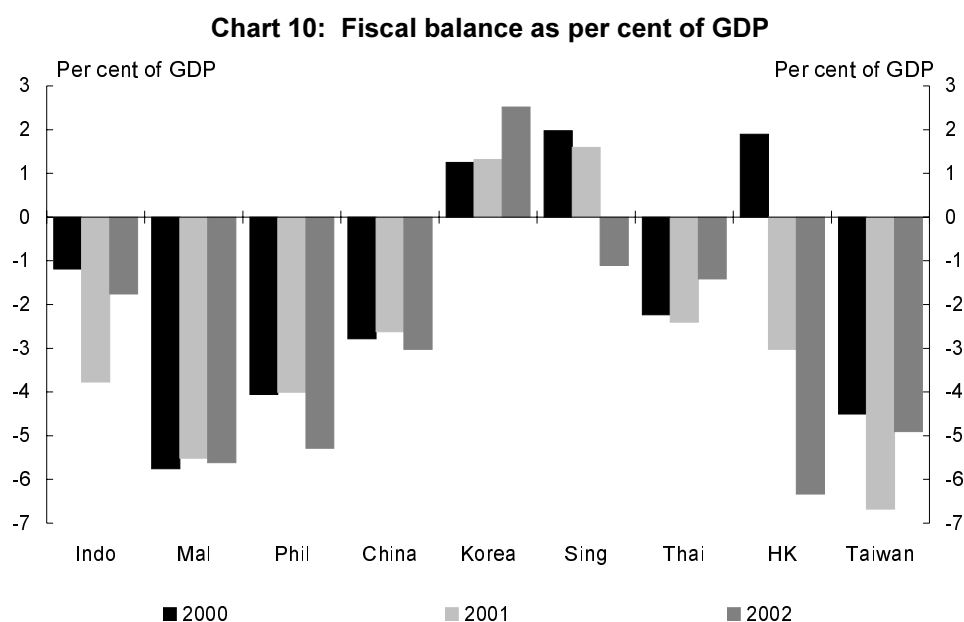
Australia's tourism industry, which accounts for 4.5 per cent of the economy, has seen a substantial decline in the number of inbound tourists. The preliminary short-term arrival data reported a month-on-month fall of 2.6 per cent for May 2003, following an 8.5 per cent fall in April. There is little doubt that the war in Iraq and related geo-political tensions were major factors contributing to the overall decline in inbound tourists, but a large proportion may be attributed to SARS. Short-term arrivals from SARS affected East Asian countries fell sharply in the year to May (see Chart A). These trends are expected to reverse gradually over coming months. The downturn in tourist arrivals has been offset somewhat as Australians have deferred or cancelled their overseas travel in favour of Australian destinations. Short-term month-on-month departures of Australian residents fell 5.9 per cent in April, following an 11.9 per cent decline in March.

Aside from travel, SARS is expected to have a broader economic effect through its impact on Australia's major trading partner growth in Asia, which may depress Australia's overall export performance. However, as outlined, the SARS-induced economic shock to Asia should be relatively short lived.

Fiscal responses

Most governments in the region responded to the outbreak of SARS with fiscal measures to support economic activity and to fund containment and treatment policies. However, these measures have been relatively modest due to most countries' budget positions already being in significant deficit. In the longer term, additional government expenditures on health across the region will create budgetary pressures that will be funded by increasing the fiscal deficit or by a reallocation of government spending away from other public expenditure.

The severely SARS affected economies of China, Hong Kong and Taiwan already have significant budget deficits, limiting flexibility in combating further outbreaks of SARS and/or supporting economic activity (Chart 10). In contrast, Singapore has more scope to respond to any long-term fiscal pressure due to SARS.



Source: Asian Development Bank-Asia Recovery Information Centre database (aric.adb.org) and CEIC.

- China's budget deficit for 2003 is estimated to rise by around $\frac{1}{2}$ per cent of GDP due to SARS, which could make current fiscal targets for the year difficult to achieve.
- Hong Kong's anti-SARS measures (of around 1 per cent of GDP) are likely to bring the 2003-04 budget deficit to around 7 per cent of GDP, raising

concerns about the HK\$ peg and its longer-term fiscal position. However, Hong Kong remains in a strong net asset position.

- Taiwan's anti-SARS package worth over US\$3.0 billion (around 1 per cent of GDP) will further deteriorate Taiwan's fiscal position, which has been in deficit for over a decade.
- Singapore's anti-SARS measures are equivalent to less than ¼ of a per cent of GDP. Moreover, Singapore only has a small budget deficit and the government is in a strong net asset position.

The less directly SARS affected economies of Thailand and Korea have also announced budgetary measures in response to SARS. Both economies have fiscal flexibility to respond to the pressures being caused by SARS, as Korea has a budget surplus and the Thai government expects to be in a budget surplus position this fiscal year.

The other less directly SARS affected economies of Malaysia, Indonesia, the Philippines and other low-income Southeast Asian countries may have less capacity to respond to any long-term fiscal pressures due to SARS, given their current budget deficit positions.

Long-term implications

The severe economic impact of SARS struck at the epicentre of growth in East Asia. The spillover effects on the rest of the region emphasised the high degree of regional integration, with countries such as China, Hong Kong, Taiwan and Singapore being highly interlinked with the rest of East Asia in terms of travel, production and trade. This has highlighted how a SARS-induced or similar type of economic shock in one country is readily transmitted to other countries in the region. Any further SARS or similar outbreaks could have long-term implications for regional growth and could potentially hamper moves toward greater integration in the region.

The eventual economic impact of SARS on East Asia's economic growth hinges on how long the outbreak lasts, how widely the disease spreads, and whether any future outbreaks are preventable or manageable. In order to model the economic impact of SARS, the approach taken in a recent paper by Lee and McKibbin (2003) has been modified to take account of more recent information on the spread of SARS. Using a multi-country general equilibrium macroeconomic model, temporary and persistent SARS shocks have been simulated to assess the potential economic impact. In both simulations, the

SARS shock causes a major slowdown in GDP growth (from baseline) in the most affected economies of China, Hong Kong and Taiwan in 2003. If the SARS shock persists in the greater China area, the model shows that economic growth could weaken significantly in Australia's major trading partners (MTP) as a whole (see Attachment A for more details).

The SARS outbreak also may have long-term implication in terms of investors' perceptions. Investors could be influenced to place more weight on government responsiveness, governance and transparency rather than direct production costs in their investment decisions. In this regard, China's initial fragmented response and capacity to manage the crisis may have caused some market concerns, although later moves towards greater transparency may have gone some way to mitigate these concerns.

The long term economic impact of SARS will depend largely on whether governments can quickly implement effective public health policies. This will require increased investment in public health and will have implications in terms of increased fiscal outlays. The provision of accurate, timely and transparent information on the nature and extent of any further SARS outbreak will also be important in assisting to contain and reduce public fears and uncertainty.

Attachment A: Modelling the economic impact of SARS

Using the APG cubed model², the potential economic impact of SARS is modelled under two different scenarios. In both scenarios, it is assumed that both demand and supply shocks originate in China and Hong Kong, which are then transmitted to other countries. It is further assumed that it is only in China, Hong Kong and Taiwan that the country risk premium rises. The magnitude and transmission of SARS shocks to other economies are estimated using the methodology presented in Lee and McKibbin (2003)³ which we have modified in light of recent SARS developments. The initial shocks to China and Hong Kong are assumed to be represented by:

- a demand shock — a 15 per cent reduction of demand for the exposed industries in the services sector;
- a supply shock — a 5 per cent cost increase in the vulnerable industries within the services sector; and
- a confidence shock — a 200 basis points (bps) rise in the country risk premia.

Scenario 1 — Temporary SARS shock

In the first scenario, it is assumed that the SARS shocks last for a year. The SARS outbreak dissipates and a subsequent outbreak of a significant magnitude is assumed to be unlikely or preventable.

2 The Asia-Pacific-G-cubed multi-country model developed by McKibbin and Wilcoxon is a sophisticated general equilibrium macroeconomic model that recognises the important trade and financial linkages that exist between countries. The model has a detailed country coverage (18 economies) and links between countries through goods and asset markets. Each economy consists of several economic agents, covering households, the government, the financial sector and 6 production sectors. The behaviour of each type of agent is modelled, includes inter-temporal budget constraints and forward-looking behaviour in investment and consumption.

3 Lee and McKibbin (2003) assumed the transmission of the SARS shocks to be influenced by the country's 'intensity of exposure to SARS (IES)' and 'sectoral exposure to SARS (SES)'. The IES is based on the number of cumulated cases for each country and information on (amongst others) tourist flows, geographical distance to China and sanitary conditions. The SES is assumed to be proportional to the share of retail sales and the travel sector in the country's service sector relative to China. (Lee and McKibbin, *Globalisation and Disease: The Case of SARS*, paper presented to the Asian Economic Panel held in Tokyo, May 11-12, 2003.)

The simulation results⁴ show that the economic loss from temporary SARS shocks is largely confined to 2003. Table 1 summarises the results for the percentage change in GDP from baseline for 2003 and provides a breakdown of the impact from each shock.

As expected, the results show that the temporary shocks have the largest impact on China, Hong Kong and Taiwan. However, the loss in Hong Kong (5.3 per cent of GDP) is greater than China (2.2 per cent of GDP) and Taiwan (1.3 per cent of GDP). This arises because of the larger share of the service sector in Hong Kong, the higher share of affected industries within the service sector and Hong Kong's greater reliance on trade. In Hong Kong and Taiwan, the supply shock which leads to higher costs in the services sector contributes most to the loss in GDP, while in China the three shocks contribute evenly to the GDP loss.

Table 1: Percentage change in GDP from baseline in 2003 due to SARS

	Total Impact	Demand shock(a)	Supply shock(b)	Confidence shock(c)
Australia	-0.13	-0.01	-0.12	0.00
China	-2.17	-0.75	-0.69	-0.73
Hong Kong	-5.30	-0.13	-4.74	-0.43
India	-0.09	0.00	-0.09	0.00
Indonesia	-0.16	0.02	-0.18	0.00
Japan	-0.15	-0.03	-0.12	0.00
Korea	-0.20	-0.04	-0.16	0.00
Malaysia	-0.30	0.02	-0.32	0.00
New Zealand	-0.15	0.02	-0.17	0.00
Philippines	-0.20	0.07	-0.27	0.00
Singapore	-0.94	-0.05	-0.89	0.00
Taiwan	-1.30	-0.20	-1.08	-0.02
Thailand	-0.31	0.00	-0.31	0.00
United States	-0.14	-0.03	-0.11	0.00

(a) 15 per cent reduction of demand for the exposed industries in the service sector.

(b) 5 per cent rise of costs in the exposed industries in the service sector.

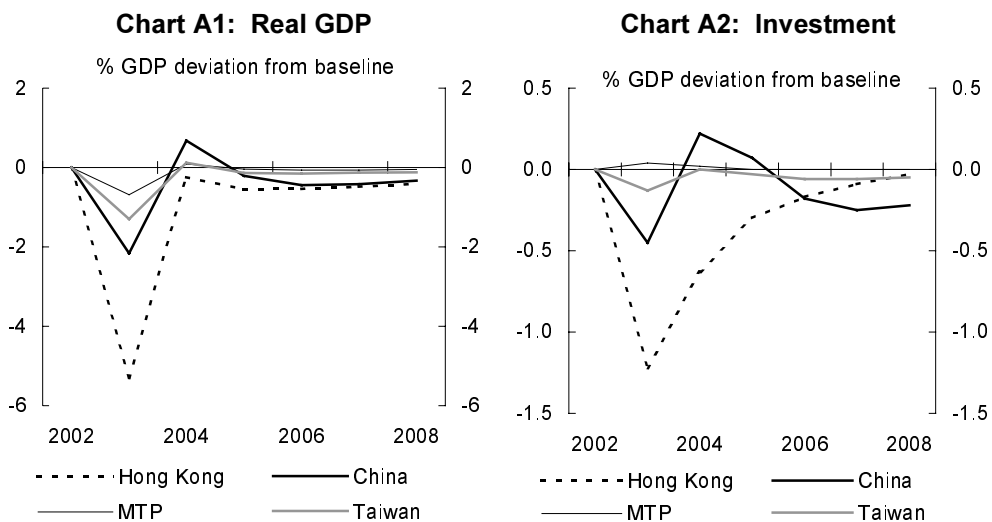
(c) 200 bps rise in the country risk premia for China and Hong Kong.

In the model, the impact on GDP (Chart A1) for the three most affected economies of China, Hong Kong and Taiwan are caused by sharp falls in consumption and investment. The initial reduction in demand for the exposed

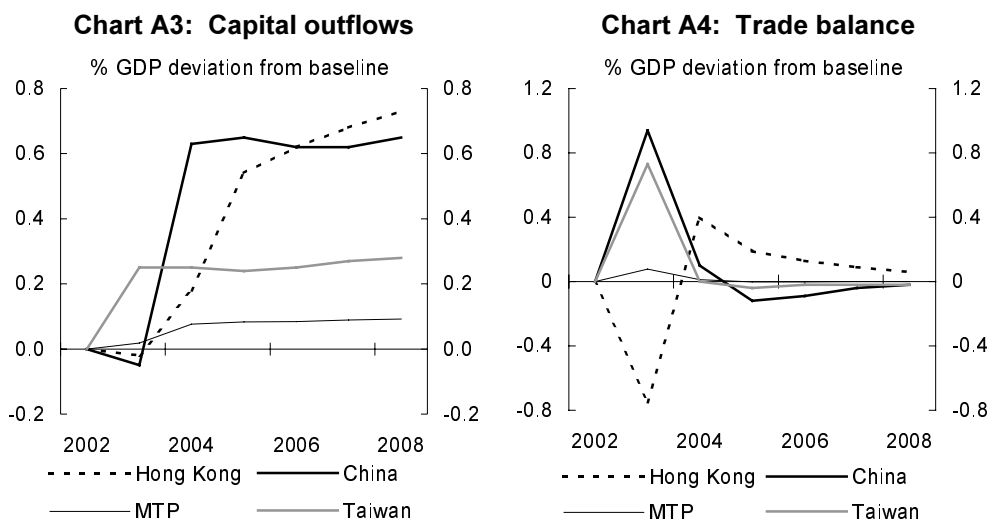
4 It should be stressed that the results generated by the Asia-Pacific G-cubed model should not be interpreted as a definitive prediction of the outcome following a shock to the system. This model, as with all models, is a simplification of a very complex set of relationships. It provides a particular theoretical path of adjustment that reflects the model structure. Models that are structured differently will give different results. The model results therefore only provide a broad indicative guide to possible outcomes.

service industries leads to an overall decline in consumption expenditure. Due to the negative spillovers from the exposed sectors, the total reduction in consumption is greater than the initial decline in demand for the exposed industries.

The increase in production costs associated with SARS leads to a reduction in investment (Chart A2). This occurs as increased production costs reduce the expected return from each additional dollar of investment. As marginal returns on investment fall, the level of investment declines, reducing overall GDP growth. In addition, higher production costs reduce expected future profits, lowering equity prices and increasing the cost of raising capital.



The increase in the country risk premium implies that assets in the affected country require a rate of return 200 bps above baseline over less risky foreign assets. This causes a capital outflow into less risky assets in other economies (Chart A3).



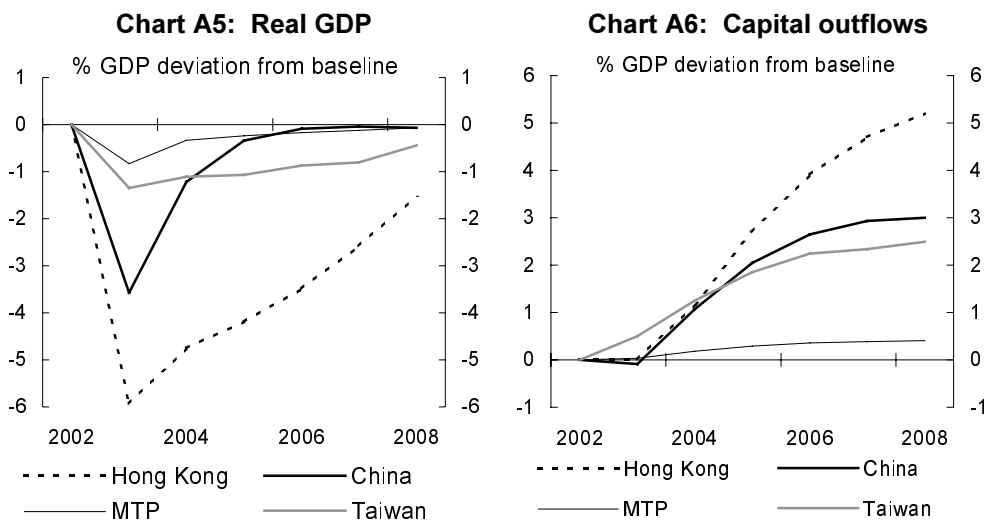
A net capital outflow creates downward pressure on the currency of the affected country. If the affected country has a floating exchange rate regime, this leads to a depreciation of the country's nominal exchange rate. However, in the case of China and Hong Kong, where the currencies are linked to the US dollar, the nominal exchange rate is inflexible. In order to maintain the peg, the central bank is forced to purchase the home currency. In doing so, money supply falls, causing prices to fall and nominal and real interest rates to rise, leading to an additional reduction in investment expenditure.

In China and Hong Kong where the nominal exchange rate is linked to the US dollar, the fall in prices improves competitiveness, leading to a depreciation of the real effective exchange rate (REER) and an increase in net exports. In the case of Hong Kong, the capital outflow is not large enough to lower the REER until 2004, leading to an initial decline in net exports (Chart A4). In contrast, the improvement in the trade balance in the other affected economies partly offsets the fall in domestic demand in 2003.

Scenario 2 — Persistent SARS shocks in China, Hong Kong and Taiwan

The second scenario assumes that the SARS shocks to China, Hong Kong and Taiwan persist for 5 years, albeit at a diminishing rate, while the SARS shocks to the other countries only last for a year. The transmission of the SARS shocks in the persistent scenario is similar to those in the temporary scenario, in that GDP is adversely affected through lower consumption and investment.

However, the economic decline in China, Hong Kong and Taiwan is more serious (Chart A5).



Notably, the persistence of the shock causes a much larger capital outflow from the affected economies (Chart A6), leading to a sharper reduction in investment, and a longer-term loss in production capacity. As such, GDP remains below baseline for a much longer period than under the temporary scenario.

Overall, the adverse impact of SARS on the GDP of Australia's MTP in both scenarios is relatively small, as the impact on the US and Japan, Australia's largest trading partners, is limited. However, if the shocks persist in the severely affected economies of China, Hong Kong and Taiwan, real GDP in Australia's MTP would remain below baseline for some time.

Both the outbreak of SARS and the associated fear of the virus appear to be waning. If this trend continues, it is likely that the adverse economic impact in East Asia will be relatively short lived and mainly felt in the June quarter 2003. As the APG-cubed model only simulates shocks on an annual basis, the results in this study, even under the temporary shock scenario, are likely to overstate both the size of the shocks and the potential economic impacts.

The following is a reprint of Statement 3, Economic Outlook, from Budget Paper No 1: Budget Strategy and Outlook 2003-04.

Economic outlook

The Australian economy has remained resilient over the past year despite a weak world economy and the most extensive drought in Australian meteorological records. While the economy should continue to grow in 2003-04, the pace is likely to be a little below trend. Non-farm economic growth is expected to slow, although a rebound in farm production is likely to boost overall economic growth if the drought breaks. Solid employment growth should see the unemployment rate remain around current levels and inflation is forecast to decline to around the middle of the 2-3 per cent target band. World economic growth is likely to remain weak in the near term, although a subdued recovery is in prospect in 2004. Nonetheless, there is still a substantial possibility of a further deterioration in global conditions, which poses a significant downside risk to the domestic outlook.

Overview

In 2002-03, economic growth in Australia is forecast to be 3 per cent in year-average terms, unchanged from the forecast presented in the *Mid-Year Economic and Fiscal Outlook 2002-03 (MYEFO)*. Despite the drought, the Australian economy has been one of the developed world's top-performing economies over the past year.

In 2003-04, economic growth is forecast to be 3¼ per cent in year-average terms, with slower growth in non-farm production likely to be more than offset by a rebound in farm production. Employment growth is likely to slow, after very strong growth in 2002-03, with the unemployment rate remaining around 6 per cent over the coming year. Inflation is forecast to decline to around the middle of the target band. The current account deficit (CAD) as a share of GDP should narrow a little as the pace of domestic demand eases and global conditions gradually improve through the year.

The forecast slowdown in non-farm production growth in 2003-04 follows a period of robust growth. Despite weakness elsewhere in the world, non-farm GDP grew by nearly 4 per cent through the year to the December quarter 2002, with strong growth in domestic demand, particularly investment spending, offsetting weak external demand. Growth in consumption and business investment is likely to ease a little over the next year while dwelling investment is expected to contract. Nevertheless, still-solid growth in domestic

demand and a gradual recovery in external demand should underpin solid growth in the non-farm economy.

The expected rebound in farm production should provide a boost to overall economic growth in 2003-04. Although the farm sector typically produces around 3 per cent of the economy's output, production should increase substantially if the drought breaks. The drought is estimated to have directly reduced economic growth by nearly 1 percentage point in 2002-03. If rural conditions improve, the recovery in farm production should contribute around $\frac{1}{2}$ to $\frac{3}{4}$ of a percentage point to economic growth in 2003-04.

Despite the positive domestic outlook, the performance of the Australian economy over the next year will be heavily influenced by international developments. After a protracted period of weakness, and despite substantial policy stimulus, a sustained global recovery has not yet taken hold. The most likely outcome is a gradual improvement in the global economy with world growth expected to be around 3 per cent in 2003, rising to around $3\frac{1}{2}$ per cent in 2004. Trading partner growth is expected to be around $2\frac{1}{2}$ per cent in 2003 and 3 per cent in 2004.

Tempering this outlook, however, is a confluence of pre-existing, and some new, downside risks to the international economic outlook. There are economic risks around growth prospects for the major economies, and financial risks around financial systems in Japan and Europe and financial markets more generally. On top of this there are geopolitical risks around the situation in the Middle East and North Asia and, more recently, risks associated with the spread of Severe Acute Respiratory Syndrome (SARS). While conditions may improve quickly once some of the current uncertainty dissipates, many of the pre-existing international risks will remain. Many of these risks are due to deep-seated structural problems in the major economies, so it is likely that it will take some time before they abate. Until then, they cloud an otherwise healthy outlook for the Australian economy.

Domestically, the outlook continues to be underpinned by solid, albeit moderating, domestic demand. Household consumption looks set to grow solidly, although slower than over the past year. Solid employment growth and real wage increases should continue to support household income growth. Incomes in rural areas, which declined sharply in 2002-03, should rebound in the coming year. Strong increases in wealth in recent years, easier access to finance and low interest rates should provide additional support for household spending. However, the pace of wealth accumulation and household borrowing, which has supported strong consumption growth, is expected to slow after the rapid expansion during the past few years.

Dwelling investment is expected to weaken in 2003-04 following a period of strong growth. While the low interest rate environment remains supportive of dwelling construction, oversupply in some markets and easing expectations of capital gains from housing investment should see a return to more sustainable levels of dwelling construction activity over the coming year. Spending on alterations and additions should partially offset some of the decline. An expected easing in capacity constraints in the building industry should allow pent-up demand for renovations to be met.

The outlook for business investment remains positive, although ongoing global uncertainty has tempered the outlook. Balance sheets are generally sound, profitability and cash flows are solid, interest rates are low and, despite recent falls, confidence has held up well against the unsettled global backdrop. Investment has been subdued over the past few years and relatively high levels of capacity utilisation now point to the need for further investment to meet increased demand. Business costs have increased in recent months with the run-up in oil prices. However, other cost pressures, including wages, generally remain contained, underpinning healthy rates of return.

Although investment intentions have eased a little in recent months, businesses still plan a solid increase in plant and equipment investment in 2003-04. The outlook for non-dwelling buildings and structures investment is very strong with several large investment projects now underway or ready to commence. Notwithstanding this, business investment is likely to be sensitive to global economic developments and the level of uncertainty surrounding the outlook. Further deterioration in the international environment could see investment plans downgraded.

Export growth should pick up in 2003-04, underpinned by continued, albeit weak, economic growth in Australia's major trading partners and a rebound in rural exports in line with the expected recovery in rural conditions. Import growth is likely to remain solid next year, but should slow as domestic demand growth moderates. Net exports are forecast to subtract $\frac{1}{4}$ of a percentage point from growth in 2003-04, after subtracting around $2\frac{3}{4}$ percentage points in 2002-03. Despite weak export prices, the terms of trade is likely to continue to rise, benefiting from falling prices of imported manufactured goods, including information and communication technology goods.

The current account deficit as a share of GDP is forecast to narrow marginally in 2003-04, following substantial widening in 2002-03. Stronger export growth, slightly slower import growth and an expected increase in the terms of trade should underpin the narrowing. Nevertheless, with the Australian economy

expected to continue to grow solidly in the face of weak global conditions, the current account deficit is likely to remain at relatively high levels for another year.

The outlook for inflation remains moderate, with the CPI forecast to increase by 2¼ per cent through the year to the June quarter 2004. With wage increases expected to remain steady and productivity growth solid, labour costs should remain subdued. Global weakness also should help contain inflation pressures. With temporary price pressures from the run-up in oil prices and the drought, headline inflation is expected to remain at around the top of the target band in the near-term. However, domestic demand growth is slowing and underlying price pressures are subdued. Together with the recent appreciation of the exchange rate and expected lower oil prices in coming months, this should see inflation decline to around the middle of the medium-term target band by the end of 2003-04.

Employment growth is expected to slow in 2003-04, following very strong growth in 2002-03. Slower employment growth is expected in the retail sector and in the labour-intensive construction industries, where employment growth has surged over the past year. Rural employment should slowly recover if the drought breaks. The unemployment rate is forecast to average around 6 per cent in the June quarter 2003 and remain around that level over the next year.

Uncertainties surrounding the outlook have increased since MYEFO, particularly on the international front. Increased uncertainty and risk aversion have exacerbated underlying structural risks around an already weak and fragile global economy and financial markets. This has increased their vulnerability to further shocks. It is possible that global uncertainty will quickly dissipate and that the substantial policy stimulus in place in the US and elsewhere will see a substantial global recovery sooner than currently expected, providing a fillip for the Australian economy. On balance, though, the bulk of the international risk is on the downside.

Domestically, the risks are more balanced, although the possibility of adverse external developments coming on top of a slowing non-farm domestic economy provides a sombre backdrop to the outlook. Consumption remains robust, but any sustained deterioration in sentiment or a protracted period of slower growth in income or wealth could cause spending growth to slow as households move to consolidate their financial position. Dwelling investment also could decline more sharply than expected if the economic climate deteriorates and investors adopt a more conservative investment position. Business investment and employment are particularly sensitive to global and

domestic economic developments and to the level of uncertainty surrounding the outlook.

Export growth could be weaker than expected if global growth falters, the exchange rate appreciates further, or other factors, such as health and security concerns, adversely affect global trade. It is also possible that the drought will not break evenly. Large parts of the country are still experiencing severe drought conditions and the timing, extent and pattern of the rainfall may not allow the expected recovery in farm production this year.

On the upside, the economy has already successfully weathered a protracted global slowdown, the drought and war in Iraq. Income growth is solid and wealth has continued to rise, despite the long downward adjustment in equity markets. Households and businesses have looked through some of the current uncertainties and have continued to consume and invest solidly. If a solid cyclical global recovery takes hold, structural problems notwithstanding, and the drought breaks as appears likely, the economy could grow strongly next year. In addition low interest rates could moderate the downturn in dwelling investment. If low inflation and low interest rates are further capitalised into house prices, wealth accumulation could provide further support for consumption. Petrol prices, which have been a drag on the economy this year, could fall significantly, also boosting economic growth. Together, these factors provide some upside possibility to the otherwise predominantly downside risk.

On balance, with solid fundamentals and supportive policy settings, the most likely outcome is that Australia's economy will continue to grow solidly despite the weak international backdrop, particularly if a gradual world recovery proceeds as expected. Nevertheless, the real and significant risks to Australia's growth prospects should not be discounted.

Table 1: Domestic economy forecasts^(a)

	Outcomes(b)		Estimates		Forecasts	
	2001-02	2002-03	2003-04	Four		
	year	year	year	quarters to		
	average	average	average	June 2004		
Panel A - Demand and output(c)						
Household consumption	3.4	3 3/4	3 1/4	3 1/4		
Private investment						
Dwellings	19.5	18	-5	-7		
Total business investment(d)	4.6	15	7	9		
Other buildings and structures(d)	9.7	28	14	11		
Machinery and equipment(d)	2.1	12	4	8		
Intangible fixed assets	0.7	9	9	9		
Private final demand(d)	4.9	6 1/4	3	3 1/4		
Public final demand(d)	4.3	3 3/4	3 1/4	4		
Total final demand	4.8	5 3/4	3	3 1/4		
Change in inventories(e)						
Private non-farm	-0.1	1/4	0	1/4		
Farm and public authorities(f)	0.1	- 1/4	1/2	0		
Gross national expenditure	4.8	5 3/4	3 1/2	3 1/2		
Exports of goods and services	-1.5	0	6	8		
Imports of goods and services	2.3	13	6	6		
Net exports(e)	-0.9	-2 3/4	- 1/4	1/4		
Gross domestic product	4.0	3	3 1/4	3 3/4		
Non-farm product	3.9	4	2 3/4	2 3/4		
Farm product	6.1	-27	25	59		
Panel B - Other selected economic measures						
External accounts						
Terms of trade	2.2	2 1/4	1 3/4	1/2		
Current account balance						
\$billion	-21.6	-42 1/2	-42 3/4			
Percentage of GDP	-3.0	-5 3/4	-5 1/4			
Labour market						
Employment (labour force survey basis)	1.1	2 1/2	1 3/4	1 1/2		
Unemployment rate (per cent)(g)	6.6	6	6	6		
Participation rate (per cent)(g)	63.7	64	64	64		
Prices and wages						
Consumer Price Index	2.9	3 1/4	2 3/4	2 1/4		
Gross non-farm product deflator	2.0	3	2 1/4	1 3/4		
Average earnings(h)	4.3	3 1/4	4	3 3/4		

(a) Percentage change on previous year unless otherwise indicated.

(b) Calculated using original data.

(c) Chain volume measure.

(d) Excluding transfers of second-hand asset sales from the public sector to the private sector.

(e) Percentage point contribution to growth in GDP.

(f) For presentational purposes, forecast changes in inventories held by privatised marketing authorities are included with the inventories of the farm sector and public marketing authorities.

(g) The estimate in the final column is the forecast level in the June quarter 2004.

(h) Average non-farm compensation of employees (national accounts basis).

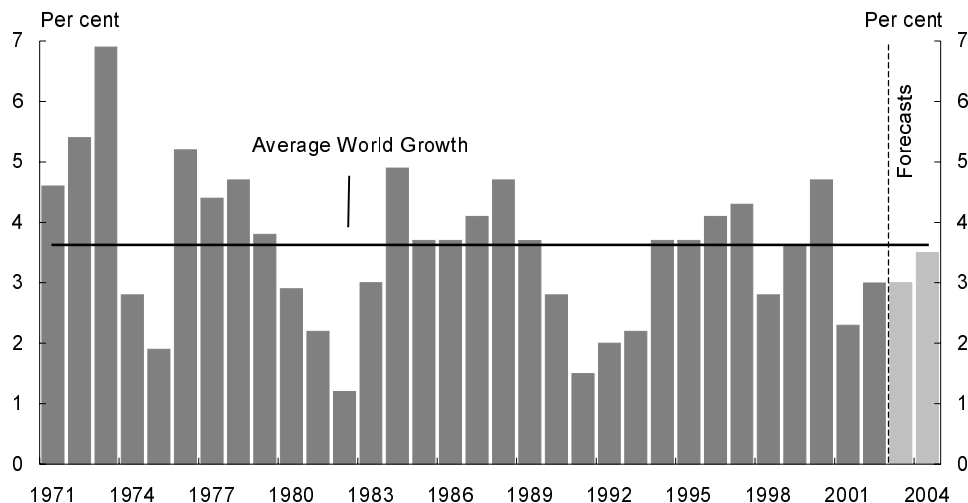
Source: Australian Bureau of Statistics (ABS) Cat. No. 5206.0, 5302.0, 6202.0, 6401.0, unpublished ABS data & Treasury.

The outlook for the international economy

Global economic growth is expected to continue to be subdued in a highly uncertain environment, with risks being predominantly on the downside. Despite tentative signs in early 2002 that recovery had commenced, growth slowed markedly later in the year and the outlook has been pared back. This occurred as many of the previously identified risks materialised, such as heightened geopolitical tensions and associated higher oil prices, and continued volatility in equity markets. These developments have slowed global growth and exacerbated other ongoing risks and vulnerabilities, such as weak economies, equity markets and financial systems. In addition, new risks have emerged, with the spread of SARS and tensions on the Korean Peninsula. The combination of these factors has created a weak and uncertain international economic environment.

Overall, the world economy grew by 3 per cent in 2002 in year-average terms. Against a backdrop of continued structural weakness and heightened uncertainties, world GDP growth is expected to remain around 3 per cent in 2003, increasing to around 3½ per cent in 2004.

Chart 1: World GDP growth^(a)



(a) World GDP growth rates are calculated using GDP weights based on purchasing power parity.
Source: National statistical publications, International Monetary Fund (IMF) and Treasury.

Many of the risks identified in the last Budget and at MYEFO have come to pass, including high oil prices and continued volatility in equity markets. Oil prices rose to very high levels in late 2002 and the first quarter of 2003 due to concerns about the war in Iraq, oil supply disruptions in Venezuela and

Nigeria, low private sector oil stocks, strong demand for oil and low investment in the oil industry. While the price of oil fell as the uncertainty surrounding Iraq abated, it remains at relatively high levels. Notwithstanding recent falls, the full impact of the high price of oil over recent months has not yet been seen. Oil prices continue to present a downside risk to global economic growth prospects.

While the unfolding of events in Iraq resulted in a rally in equity markets, markets remain very volatile and have been in a long decline. Ongoing equity market weakness and volatility could impact on consumer and business expenditure via wealth and confidence effects.

These realised risks have been overlayed on some other major pre-existing risks.

- Global growth continues to rely excessively on developments in the United States (US), as domestic demand in Japan and the Euro area remains hampered by corporate and financial weakness and the slow pace of product and labour market reforms.
- The high US current account deficit and offsetting current account surpluses elsewhere risk a possible disorderly unwinding, which would result in a sharp adjustment to exchange rates and a disruption to growth.
- Concerns exist over the stability of the global financial system due to the vulnerability of the financial sectors in both Japan and the Euro area, and the significant vulnerabilities remaining in a number of emerging markets.
- Other risks include concerns surrounding the sustainability of house price growth in some developed countries, and deflationary pressures in a number of East Asian economies, both of which could impact on business and consumer activity.

Add to these tensions in the Korean Peninsula and the outbreak of SARS, and the picture is one of weak global prospects.

Set against the combined impact of all of these international risks are the very supportive fiscal and monetary policy settings in many economies. For example, in the US, official interest rates are at around 40-year lows, and the fiscal situation has moved from a surplus to a deficit, with a turn around of about 5 per cent of GDP over the last two years. As uncertainties abate, these very supportive macroeconomic policy settings should see the global economy continue to recover in the second half of 2003, before gathering more

momentum in 2004. However, in the medium term, ongoing structural problems will continue to hamper sustained and balanced global growth unless decisive policy actions are taken.

Global inflation is expected to remain low in 2003, allowing macroeconomic policies to remain accommodative, although the effects of the run up in oil prices may temporarily raise inflationary pressures. Most advanced economies are experiencing low inflation, while deflation persists in Japan and some other East Asian economies.

Table 2: International GDP growth forecasts^{(a)(b)}

	1999	2000	2001	2002	2003	2004
	Actual	Actual	Actual	Actual	Forecast	Forecast
World	3.6	4.7	2.3	3.0	3	3 1/2
Total OECD(c)	3.1	3.8	0.8	1.8	1 3/4	2 1/2
United States	4.1	3.8	0.3	2.4	2 1/4	3 1/4
Japan	0.2	2.8	0.4	0.3	3/4	3/4
Euro area	2.8	3.5	1.4	0.8	1	2
Major Trading Partners	4.1	5.3	1.4	3.0	2 1/2	3
Non-Japan East Asia(d)	6.5	7.9	1.9	4.8	3 3/4	4 1/2

(a) Percentage change on previous year.

(b) Growth rates for World and the Euro area are calculated using GDP weights based on purchasing power parity, while growth rates for Major Trading Partners and Non-Japan East Asia are calculated using export trade weights.

(c) Total OECD comprises the United States, Japan, Germany, France, Italy, the United Kingdom, Canada, Australia, Austria, Belgium, the Czech Republic, Denmark, Finland, Greece, Hungary, Iceland, Ireland, Korea, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Spain, Sweden, Switzerland and Turkey.

(d) Non-Japan East Asia comprises Korea, Singapore, Taiwan, Hong Kong, China, Indonesia, Malaysia, Thailand and the Philippines.

Source: National statistical publications, IMF and Treasury.

After the US economy emerged from the 2001 recession with some promising strength in early 2002, the economy hit a soft patch in the second half of the year, with falling equity prices and a very sharp fall in consumer confidence. This fed through to weak industrial production and retail sales, and consequently lower GDP growth. Overall, the US economy grew by 2.4 per cent in 2002.

The near-term outlook for the US economy is for continued recovery, albeit at a slower pace than earlier expected. However, there are increasing concerns over budgetary difficulties facing the US and the sustainability of its current account deficit, which increased to a record 5.2 per cent of GDP at the end of 2002. With the US economy performing poorly and world demand weak, and with the fiscal position deteriorating, it may become increasingly difficult to attract the capital inflows needed to fund the current account deficit. In this

case, the burden of any unwinding of the current account deficit in the US would fall on the private sector, requiring higher saving and reduced expenditures.

Based on early estimates, the US economy grew by a sluggish 0.4 per cent (1.6 per cent annualised) in the March quarter of 2003. Consumption, residential fixed investment, and government expenditure contributed to growth, more than offsetting declines in inventories, investment in non-residential structures and equipment and software, and exports. Higher investment spending in the US is unlikely to occur until at least the second half of 2003, provided that uncertainties abate and sentiment improves. Should this occur, the very stimulatory policies already in place, together with strong productivity growth, advanced adjustment and a low inflation environment, should support investment and overall economic growth in the US. GDP growth in the US is expected to pick up moderately in 2004.

Japan's economy surprised on the upside in 2002 although trade and production data present a much weaker picture. Growth was entirely export driven, and this is expected to be the case in 2003, as domestic demand remains subdued. The recovery in household consumption in Japan evident during 2002 now appears to be fading, consistent with declining real incomes and employment. Investment has been showing some signs of bottoming, but is far from staging a full recovery as deflation continues. Overall, domestic demand in Japan remains seriously hampered by structural weaknesses and economic growth is expected to remain weak over the forecast period.

Specific risks to the Japanese outlook include the vulnerability of the financial sector, which is struggling with a large share of non-performing loans, very weak share prices and inadequate capital-asset ratios. Investors in Japan are also very sensitive to heightened instability in the Korean Peninsula.

GDP growth in Non-Japan East Asia was robust in 2002, driven by continued strong growth in China and a robust pick-up in Korea, although growth remained well below that achieved prior to the Asian financial crisis. Exports and consumption spending, stimulated by expansionary macroeconomic policies, supported growth, while investment remained restrained by risks surrounding the global economic outlook.

Looking forward, exports and domestic demand in Non-Japan East Asia are both expected to contribute to growth, but overall growth is expected to weaken across the region. Exports could falter in light of weaker global growth prospects and SARS is weakening domestic demand. While governments will seek to support economic activity, this is likely to be limited as interest rates in

the region are already low and most governments (except Korea) are already running budget deficits.

The unexpected outbreak of SARS is disrupting life in many East Asian countries. Governments across East Asia and the international community more generally, have responded to limit the outbreak. The impact on the countries affected has been heavy, with both loss of life and major disruptions to economic activity. In particular, retail travel and other service industries have been hard hit. The impact on the travel industry already suffering from the fallout of the Bali bombings and the threat of further terrorist attacks could be particularly significant. Unless the spread of SARS is contained quickly, the overall economic consequences for the region could be substantial.

In addition to the general global risks, the outlook for the Asian region remains particularly vulnerable to stalling prospects in the information and communication technology sector and tensions in the Korean Peninsula.

The Euro area recorded weak GDP growth of less than 1 per cent in 2002 as the recovery that was expected in the second half of the year failed to materialise. Growth prospects in the near term remain weak. The area's weakness remains centred on Germany, which accounts for nearly a third of the output of the single currency zone. The German economy was stagnant in the December quarter 2002 and recent surveys suggest further weakening in early 2003. The prospects for Germany remain bleak, with industrial production, business confidence, and retail sales continuing to be weak, and the jobless rate at a three-year high.

Overall, domestic demand in the Euro area is likely to remain subdued. Additional fiscal stimulus in Germany and France is already at the limit prescribed by the Stability and Growth Pact, while rising unemployment and heightened uncertainties are likely to restrain consumption and investment over the short term. In addition, the recent appreciation of the euro has dampened exports, which have been the primary source of growth across the Euro area.

Investment in the Euro area is being hampered by financial sector weakness, with the faltering economy putting additional stress on the vulnerable financial system. In particular, severe weakness of the German banking and insurance sectors has already seen financial sector share prices plummet and threaten the stability of the Euro area's financial system. Moreover, structural rigidities in product and labour markets are hampering any sustainable recovery in consumption and investment.

In light of continued weakness and receding inflationary pressures in the Euro area, monetary policy has become more stimulatory. In addition, France and Germany have also called for a more relaxed interpretation of the Stability and Growth Pact to allow large deficit spending.

GDP in the United Kingdom (UK) grew by 1.8 per cent in 2002, somewhat better than in the Euro area. While growth prospects in the UK remain slightly better than in the Euro area, confidence in the UK declined in the March quarter of 2003 and the economy grew by a weak 0.2 per cent. Consumption spending, which has been supported by rising house prices, is expected to moderate, with household debt rising to record levels and weak equity markets reducing wealth.

The balance of risks to the global economic outlook remains predominantly on the downside. However, this needs to be set against monetary and fiscal policies that have been eased substantially around the globe. A quick resolution or abatement of some of the major uncertainties currently facing the world economy could easily see the recovery gather momentum more quickly than is currently expected. However, any cyclical pick up in growth is likely to be constrained in the medium term unless policy actions are taken to address ongoing structural problems.

The outlook for the domestic economy

Key assumptions

The forecasts for the domestic economy are underpinned by several technical assumptions. The exchange rate is assumed to remain around the average level of recent months (a trade weighted index (TWI) of around 55 and a \$US exchange rate of a little above 60c). Interest rates are assumed to remain around current levels. World oil prices (\$US per barrel — West Texas Intermediate) are assumed to remain in the \$US25-30 range over the next few months and then fall to around \$US25 per barrel by June 2004, broadly in line with market expectations. The farm sector forecasts are based on an assumption of a return to average seasonal conditions in 2003-04.

Demand and output

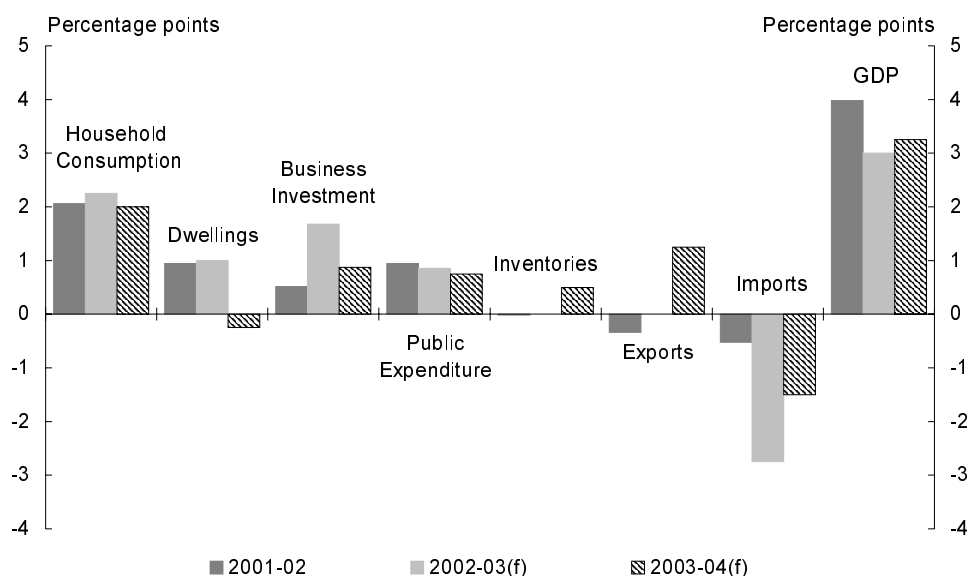
In 2003-04, the Australian economy is forecast to grow by 3¼ per cent in year-average terms. Slower growth in non-farm production is expected to be more than offset by a rebound in farm production. Employment growth is likely to slow, after very strong growth in 2002-03, with the unemployment

rate remaining around 6 per cent over the coming year. Inflation is forecast to decline to around the middle of the target band. The current account deficit as a percentage of GDP should narrow to around 5¼ per cent as the pace of growth of domestic demand slows and global conditions gradually improve.

The solid outlook comes after another year in which the extraordinary resilience of the Australian economy has been demonstrated. This resilience — a consequence of sustained economic reforms — helped deliver solid growth despite a weak global economy and a very severe drought. GDP growth is forecast to be 3 per cent in 2002-03, unchanged from the forecast presented in MYEFO. The drought is forecast to directly subtract nearly 1 percentage point from GDP growth in 2002-03, with non-farm GDP growth forecast to be 4 per cent.

The solid GDP growth outcome expected for 2002-03 reflects very strong domestic demand. Gross national expenditure is forecast to grow by 5¾ per cent in 2002-03 in year-average terms, with net exports expected to subtract 2¾ percentage points from GDP growth. Growth in final domestic demand is forecast to slow to around 3 per cent in 2003-04, with slower growth in consumption and business investment and a fall in housing investment. A recovery in farm inventories will add to growth, while the net export subtraction is forecast to be around ¼ of a percentage point, with stronger exports and slower import growth supporting the turnaround (Chart 2).

Chart 2: Contributions to GDP growth^(a)

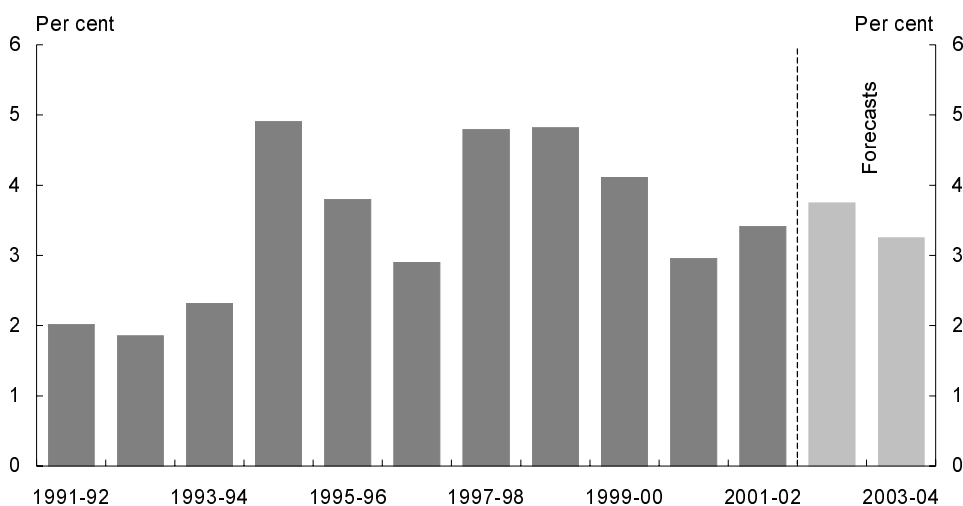


(a) Adjusted for second-hand asset sales.
Source: ABS Cat. No. 5206.0 and Treasury.

Household consumption

Household consumption growth is forecast to slow a little in 2003-04 to 3¼ per cent, following solid growth of 3¾ per cent in 2002-03 (Chart 3). This expected moderation reflects slower growth in employment and in wealth accumulation, and slower growth in household borrowing.

Chart 3: Growth in household consumption



Source: ABS Cat. No. 5206.0 and Treasury.

Consumer spending has grown solidly during 2002-03, underpinned by sustained income growth, rapid accumulation of wealth and low interest rates. Some slowing has been apparent through the year but this has likely been due to the combined effects of a number of temporary factors: the run-up in oil and petrol prices; drought-related food price increases; and lower farm incomes.

Household consumption growth in 2003-04 should continue to be supported by low interest rates and solid, albeit moderating, growth in household income. Some of the short-term factors that were a drag on consumption in 2002-03 may also start to abate. Oil prices have already fallen from pre-war highs and there are tentative signs that the drought may break in coming months. Offsetting this, however, the anticipated downturn in dwelling investment should reduce consumption growth in 2003-04, as some of the bring-forward of spending on housing-related durables in the last two years is unwound.

More importantly, some of the powerful underlying forces driving consumption growth may start to ease over the next year. After very strong

growth in 2002-03, employment growth is forecast to slow through 2003-04, moderating the pace of household income growth, one of the main drivers of consumption spending.

The growth in wealth is also expected to slow. Over the past few years, household wealth has increased strongly, underpinning spending and household borrowing capacity. The increase in wealth, and new financial instruments that allowed improved access to unrealised wealth accumulation, supported and facilitated a substantial increase in household debt, as did historically low interest rates. These developments underpinned consumer spending, with consumption running ahead of disposable income for several years, and the household saving rate falling to current lows.

Going forward, a slower pace of wealth accumulation is likely to provide a moderating influence on consumer spending. House prices are unlikely to sustain the rapid pace of increase experienced over the past few years, and with equity prices subdued, the rate of increase in wealth is likely to slow. Against this backdrop, and with debt servicing costs around 6 per cent of disposable income, some consolidation of household balance sheets is in prospect over the next few years (Box 1).

Taken together, these influences should see the pace of consumption growth slow in 2003-04, to a little below that of household disposable income. There is a risk, however, that consumption could slow more than expected, particularly if overall economic conditions weaken. With households more heavily geared than in the past, they are likely to be more sensitive to changes in economic circumstances. For example, a deterioration in labour market conditions could increase debt-servicing burdens for some households with attendant effects on consumption. Adverse shifts in asset markets, such as a sharp correction in the housing market, could also see consumption weaken.

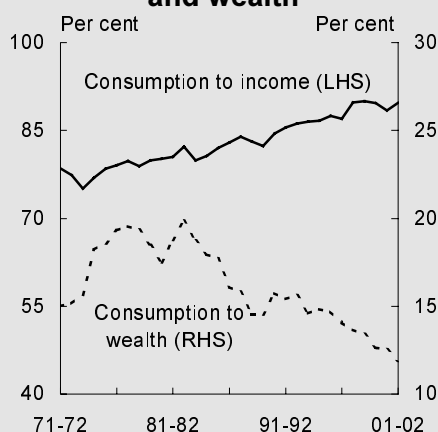
Box 1: Consumption and wealth

Household consumption has been a key driver of economic activity in recent years, growing at an annual rate of around 4 per cent over the past five years, well above its historical growth rate.

One of the important drivers of consumption has been strong gains in household wealth. Real wealth has increased by around 45 per cent over the past five years.

The sharp pick-up in wealth has funded higher spending and facilitated additional borrowing by households. Consumer spending has run ahead of income, although the increase in spending has not kept pace with the increase in wealth (Chart A).

Chart A: Consumption, income and wealth



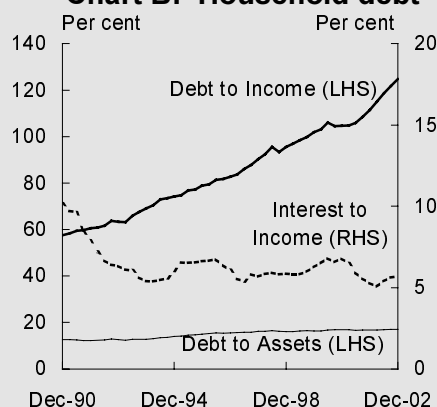
Source: ABS Cat. No. 5206.0 and Treasury.

Household debt levels have increased concomitant with the rise in wealth, with much of the increase going into

housing and, to a lesser extent, underpinning higher consumption spending. Total household debt has increased to 125 per cent of income, and 17 per cent of assets, and debt-servicing costs are around 6 per cent of income (Chart B).

Households are vulnerable to adverse shifts in economic conditions — particularly changes in labour market conditions, interest rates and house prices.

Chart B: Household debt



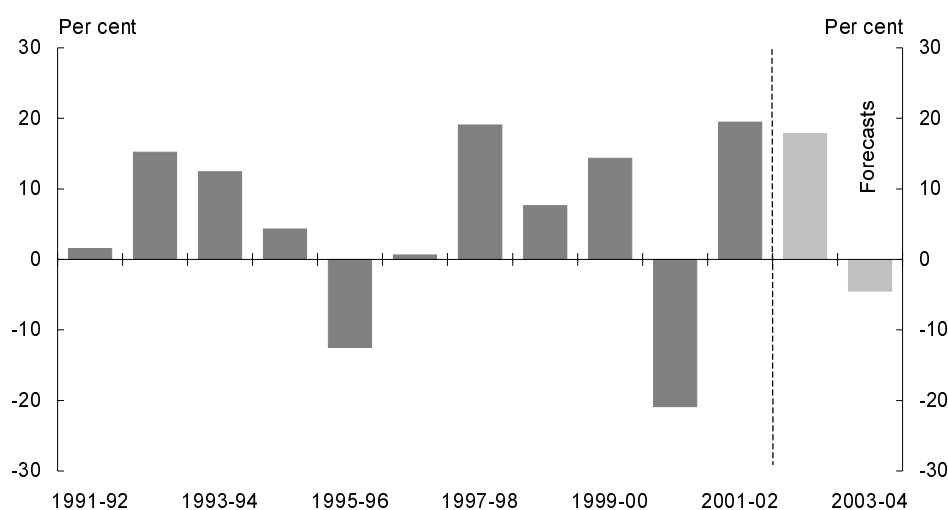
Source: ABS Cat. No. 5206.0, 5232.0 and Treasury.

The above-trend pace of wealth accumulation is unlikely to be sustained. Accordingly, with economic growth slowing a little, households are likely to consolidate their balance sheets by bringing back spending growth to around or below the pace of income growth. It is possible, however, that households may rein in consumption more sharply than expected.

Dwelling investment

Dwelling investment is forecast to decline by around 5 per cent in 2003-04, following growth of around 18 per cent in 2002-03 (Chart 4). The expected fall in dwelling investment comes after a period of very strong growth in the construction of new dwellings and a solid pick-up in spending on alterations and additions. The prospect of a longer-than-expected period of low interest rates, strongly rising house prices and subdued returns from alternative investments have extended the current cycle for longer than anticipated.

Chart 4: Growth in dwelling investment



Source: ABS Cat. No. 5206.0 and Treasury.

Much of the strength in dwelling investment has come from the investor segment of the market, which has increased rapidly in recent years. Moreover, despite the prospect of substantial oversupply in some segments of the market — particularly the multi-unit sector — there are few signs yet of a substantial easing (Box 2). Rental vacancy rates are at relatively high levels and rents have weakened a little in the major markets. However, with interest rates low and continuing increases in dwelling prices, investment demand has remained firm. Some planned major inner-city projects have been cancelled but, to date, much of the planned work still appears to be proceeding. Building approvals for multi-unit dwellings increased strongly over the past year, while loan approvals to investors remain at high levels.

There remains considerable work in the pipeline in the medium-density sector. Projects in this sector also tend to take up to 18 months to complete. As a result, the expected downturn in activity in this part of the market may still be

some time away. Nonetheless, there is now a substantial risk that the looming oversupply will see a sharp and protracted correction once sentiment turns. Heavily geared investors may come under increased financial pressure if yields fall further or prices decline. Any resulting distressed selling could exacerbate the price impact of the downturn.

In sharp contrast, growth in the owner-occupier segment of the housing market has been more muted as the bring-forward of activity associated with the additional grant available under the First Home Owners Scheme has been unwound through the year. Leading indicators suggest that owner-occupier housing activity is set to fall over the next year. The number of owner-occupier housing loan approvals for new construction has fallen by 17 per cent in the year to February 2003 and building approvals for new houses have fallen by 15 per cent in the year to March 2003.

Partially offsetting the expected decline in new dwelling investment, alterations and additions are forecast to continue to grow in 2003-04. Unlike the new dwelling segment of the market, there does not seem to have been the same bring-forward of renovation work. Indeed, there may be pent-up demand for alterations and additions, with the high levels of work on new houses and apartments crowding out renovation work in recent times. As capacity constraints in the building industry ease, some of the pent-up demand for renovation work is likely to be met. Work yet to be done on alterations and additions is currently at high levels. This should reduce the overall decline in dwelling investment. However, house price increases are likely to be more subdued next year and this may dampen demand for alterations and additions from investors seeking capital gains on renovated properties. A moderation in the pace of growth of income and wealth may also slow spending on alterations and additions.

Box 2: Investment in medium-density dwellings

Dwelling investment has continued to grow strongly over the past year, and is expected to directly contribute around 1 percentage point to GDP growth in 2002-03. The increase has been largely driven by the strength in the medium-density market, which is dominated by investors.

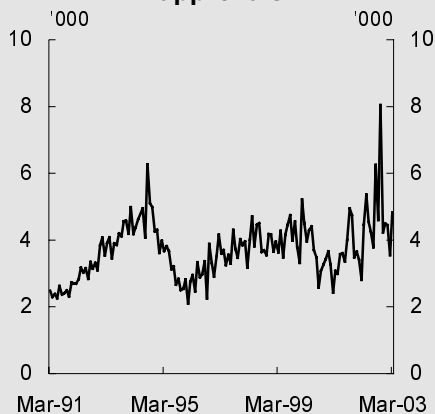
Investors have been motivated by the prospect of capital gains following substantial price rises in recent years, low interest rates and the potential negative gearing advantages of investment property. Poor short-term prospects for alternative investments are also likely to have seen increased investor interest in property. In addition, a range of new financial products has supported investor demand.

While the bulk of investor funds have been used to purchase existing dwellings, a growing amount has

gone towards the construction of new dwellings (Chart A).

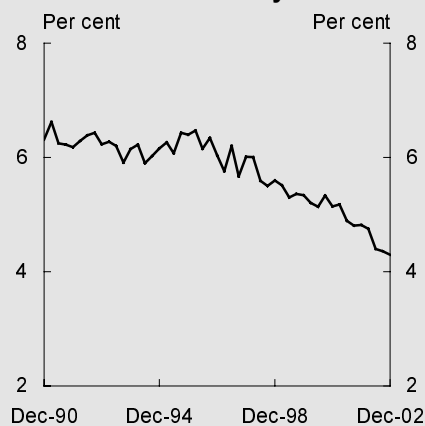
After a period of strong growth in medium-density construction, signs of oversupply in the market are becoming apparent. Vacancy rates have continued to rise and rental yields have declined (Chart B).

Chart A: Medium-density building approvals



Source: ABS Cat. No. 8731.0.

Chart B: Rental yields^(a)



(a) Ratio of median unit rents & median unit prices.

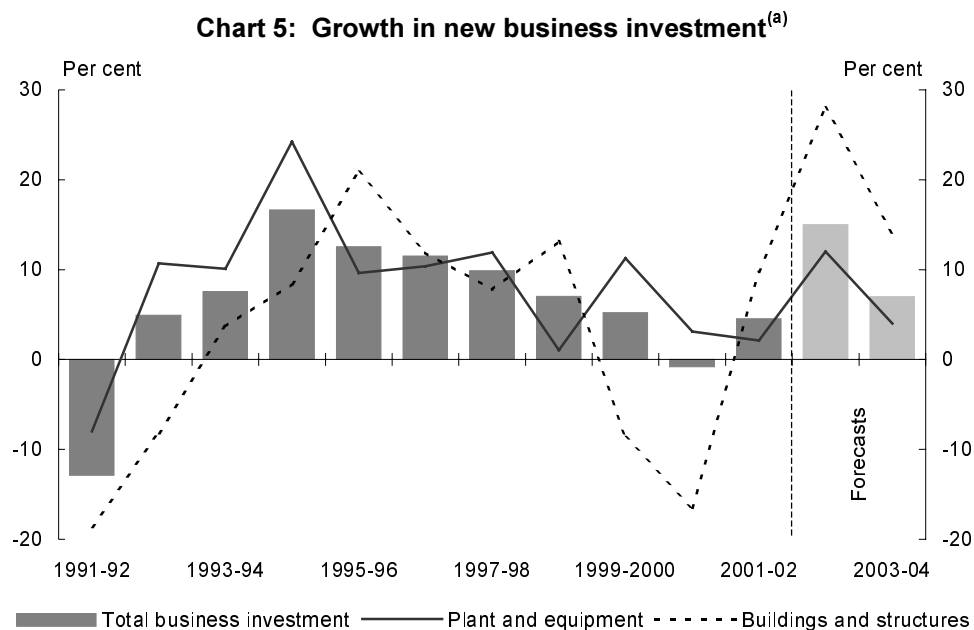
Source: Real Estate Institute of Australia and Treasury.

However, the construction of medium-density dwellings, particularly the high rise apartments of four or more storeys in which investor interest has been concentrated, tend to have long lead-times to completion, typically between six and eighteen months.

With a large number of apartments still to come onto the market, particularly in Sydney, Melbourne and Brisbane, there is a possibility of substantial oversupply and a sharp correction in prices and building activity.

Business investment

Business investment is forecast to increase by 7 per cent in 2003-04, following growth of around 15 per cent in 2002-03 (Chart 5). Overall, conditions are supportive of investment growth, but uncertainty clouds the near-term outlook.



(a) Excluding net purchases of second-hand public sector assets by the private sector.
Source: ABS Cat. No. 5206.0 and Treasury.

The fundamental drivers of business investment remain strong. Capacity utilisation is at high levels and the outlook for the non-farm economy, although moderating, remains solid. In addition, corporate profits have grown very strongly over the past year and interest rates are around historically low levels. Corporate balance sheets are generally sound.

There are also some special sectoral factors that should support business investment in 2003-04. These include ongoing strong growth in mining investment and the upgrade of the aviation industry's fleet of aircraft, which is expected to extend into 2003-04. A significant increase in infrastructure expenditure is also in train, especially in NSW, and much of this appears likely to be undertaken by the private sector.

Nevertheless, there is still considerable uncertainty around the outlook for business investment, with a number of downside risks. Heightened global

uncertainty is likely to see firms scale back discretionary investment plans in the near term, with growth in plant and equipment investment expected to slow from a forecast 12 per cent in 2002-03, to around 4 per cent in 2003-04, despite the strong underlying fundamentals.

The latest Australian Bureau of Statistics capital expenditure survey showed that firms' first estimate of plant and equipment intentions for 2003-04 was a little below their first estimate for 2002-03. However, early estimates provide only a broad indication of likely outcomes. It is possible that as the year progresses, firms will become more confident and upgrade their investment intentions significantly. However, firms did not upgrade investment intentions by as much as would usually be expected as 2002-03 progressed. It is possible that investment intentions for 2003-04 will follow a similar path unless the current uncertainty dissipates quickly. Business confidence has generally held up reasonably well considering the global backdrop, but has weakened a little in recent months.

Investment in buildings and structures is expected to grow by 14 per cent in 2003-04, following growth of 28 per cent in 2002-03. The increase is expected to be driven by very strong growth in engineering construction, which is underpinned by a number of large mining and infrastructure projects. Unlike plant and equipment investment, large mining engineering construction projects typically look through short-term fluctuations in global economic activity. Infrastructure projects are also relatively unaffected by global conditions. The commencement of engineering construction work on major projects has increased the level of engineering construction work yet to be done to around \$7 billion in December 2002. Several additional large projects, which are expected to commence in 2002-03 in the mining and transport and storage sectors, are also expected to support growth next year. Investment in new non-residential buildings is expected to moderate in 2003-04, with growth being driven by building activity in office and business-park construction.

Inventories

In 2003-04, investment in private non-farm inventories (excluding private marketing authorities) is expected to broadly keep pace with solid sales growth, with no net contribution to GDP growth. This follows an expected positive contribution to GDP growth of around $\frac{1}{4}$ of a percentage point in 2002-03 as the level of inventories is rebuilt. Nevertheless, the degree of uncertainty surrounding the international economic outlook is likely to influence decisions regarding investment in inventories, with businesses likely to hold off building up stocks until the outlook clears.

Farm and private marketing authority inventories are forecast to be rebuilt in 2003-04, assuming the drought breaks. This follows a sharp rundown in 2002-03, when existing stocks were used to augment drought-affected supplies. Investment in farm and private marketing authority stocks is forecast to contribute around ½ of a percentage point to GDP growth in 2003-04.

Public final demand

Public final demand (abstracting from second-hand asset sales) is expected to increase by around 3¼ per cent in year-average terms in 2003-04. This is a slight moderation in the pace of growth from 2002-03, reflecting slower growth in public investment at the Commonwealth, state and local levels.

The easing in public final demand in 2003-04 comes after an expected pick-up in 2002-03, in which growth is expected to be around 3¾ per cent in year-average terms. This above-average growth in public final demand partly reflects additional Commonwealth spending on the war in Iraq and national security. Increases in state and local government spending on insurance and superannuation expenses, along with additional expenditure on education, health, and public order and safety are also expected to contribute to growth in public final demand. Spending on infrastructure projects should also support demand.

Net exports and the current account

Net exports

Exports are forecast to increase by 6 per cent in 2003-04, a modest rebound from the flat outcome expected in 2002-03. The mild recovery is expected to be underpinned by subdued global growth and an assumed breaking of the drought.

Over the past year, weak trading partner demand and the effects of the drought have seen export growth stagnate. The exchange rate has also appreciated, with the Trade Weighted Index increasing by around 8 per cent over the past year, adding to the drag on export growth.

Although some pick-up in exports is in prospect over the next year, conditions are still far from ideal. Nevertheless, there are welcome signs that the El Niño pattern has ended and that there will be at least average levels of rainfall over much of Australia in the coming year. While this should result in a recovery in rural production and exports, the outcome will also depend on a number of other factors: the timing of the rain; the distribution of rainfall; and subsoil

moisture conditions. In the near term, further falls in farm production are in prospect.

In line with the assumed breaking of the drought, rural exports are expected to rise substantially in 2003-04. The rebound in rural exports is expected to be driven by a sharp rebound in broadacre crop production, reflecting both an increase in the area planted and a recovery in yields. However, irrigated crops are expected to show a more muted recovery in production, being constrained by ongoing low levels of water storage. In addition, the recovery in livestock production is also expected to be slower, with the herd rebuilding process taking a couple of years to complete (Box 3).

Box 3: Drought and farm production

Measured in terms of its impact on the rural economy, the drought in 2002-03 is forecast to be the worst on record. Farm production is expected to decline by a record 27 per cent, directly subtracting 0.9 of a percentage point from GDP growth in 2002-03 (Chart A).

The latest information from the Bureau of Meteorology suggests that the El Niño weather pattern has ended and more favourable seasonal conditions are likely in coming months. If the drought breaks, farm production is expected to rebound by around 25 per cent in 2003-04, contributing 0.6 of a percentage point to GDP growth.

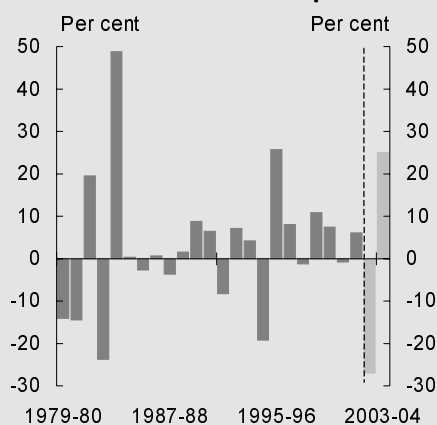
Economics (ABARE) forecasts cereal crop production to increase by over 50 per cent in 2003-04, contributing significantly to growth in farm production (Table A).

Table A: Farm production^(a)

	2002-03	2003-04
Farm Production	-0.9	0.6
Farm Outputs		
Cereals	-0.7	0.7
Non-cereal crops	-0.2	0.2
Livestock & other	0.0	-0.2
Wool	-0.1	0.0
Farm Inputs	0.1	-0.1

(a) Contribution to GDP growth.
Source: ABARE, ABS and Treasury.

Chart A: Growth in farm production



Source: ABARE, ABS and Treasury.

The rebound in farm production is likely to be led by a strong pick-up in crop production. The Australian Bureau of Agricultural and Research

However, a less positive outlook for livestock and wool production will slow the pace of rural recovery. The drought saw a large reduction in the size of the livestock herd in 2002-03 and herd rebuilding is likely to take some time. Similarly, relatively low sheep numbers will reduce the scope for a recovery in wool production in 2003-04.

In the past, droughts generally have been followed by periods of above-average production, so it is possible that the rebound will be greater than forecast. Tempering this optimism, though, is the fact that large parts of the country remain drought declared, there is limited availability of stored water and the timing and distribution of rainfall may be uneven.

Exports of elaborately transformed manufactures (ETMs) and services are highly sensitive to economic conditions in Australia's major trading partners. Following recent weak outcomes, ETM exports are forecast to pick up a little over the course of 2003-04, in line with the expectation of only modest growth in Australia's major trading partners, and against the mild drag from the appreciation of the exchange rate.

Services exports are expected to show a weak recovery in 2003-04. Services exports are yet to fully recover from recent shocks, including the collapse of Ansett and terrorist attacks (Box 4). More recently, security concerns surrounding travel during the war in Iraq, and the outbreak of SARS, are likely to weigh heavily on the outlook for services exports.

Exports of non-rural commodities, which account for the largest share of Australia's exports, are forecast to pick up in 2003-04, despite subdued trading partner growth. This reflects incremental increases in mining capacity and solid demand from key buyers, despite increasing competition. The mining sector has enjoyed very high levels of profitability in recent years which, combined with high commodity prices in Australian dollar terms, has seen a boom in mining investment. However, major increases in new capacity are not expected to flow through to export volumes until at least 2004-05.

Box 4: The outlook for tourism

Inbound tourism experienced strong growth in 1999-2000 and 2000-01 (Chart A), supported by solid economic growth in Australia's major trading partners, a competitive exchange rate and a boost from the Sydney Olympic Games.

Since then, conditions have deteriorated markedly, with a number of factors weighing on the sector, including an unwinding of the Olympics effect, the collapse of Ansett, a slowing in world growth, and terrorist attacks which have adversely affected traveller security and confidence.

More recently, the war in Iraq and the outbreak of SARS have again demonstrated the sensitivity of travellers to adverse developments.

economy and ongoing concerns about health and security. In addition, the recent appreciation of the exchange rate may also have a negative impact on inbound tourism.

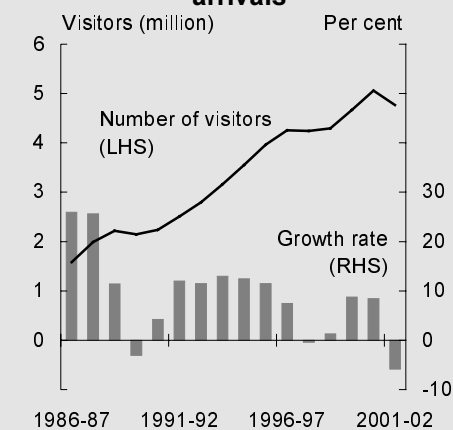
As a result, services exports, which account for around 4½ per cent of the economy, and particularly inbound tourism, are expected to be a drag on economic growth in 2002-03.

A modest recovery is expected in 2003-04, as global conditions gradually improve and the adverse effects of the war in Iraq and SARS subside. The staging of the Rugby World Cup in Australia in October and November 2003 should also provide a useful fillip.

However, a turnaround in confidence in international travel, and a more robust recovery in world growth, will be important for a stronger recovery in tourism activity. A further episode of global weakness, a prolonged period of international tensions or a significant spread of SARS, could undermine the outlook further.

Despite the poor prospects for inbound tourism, the outlook for domestic tourism, which accounts for around 76 per cent of the industry, remains sound. The domestic tourism sector is relatively less affected by international security issues and should benefit from an expected near-term switch from international to domestic destinations.

Chart A: Short-term overseas arrivals



Source: ABS Cat. No. 3401.0.

Near-term prospects for international travel remain poor, particularly with the weak world

Imports are forecast to increase by around 6 per cent in 2003-04, following growth of around 13 per cent in 2002-03. Slower growth of imports in 2003-04 largely reflects the expected slower growth of domestic demand. There is also likely to be a fall in aircraft imports. The aviation industry's upgrading of its fleet of civil aircraft is expected to continue into 2003-04, but expenditures are likely to be lower than in 2002-03. Imports of services, particularly tourism services, are likely to remain subdued over the forecast horizon because of health and security concerns. Working in the other direction, the appreciation of the exchange rate will tend to support import volumes in 2003-04.

Taken together, the trade forecasts imply that net exports will subtract around $\frac{1}{4}$ of a percentage point from economic growth in 2003-04, following an expected $2\frac{3}{4}$ percentage points subtraction from growth in 2002-03.

The key risks to the outlook for the external sector remain the uncertainty around prospects for Australia's major trading partners and the possibility of a continuation of the drought. A slower-than-expected recovery in world economic activity would see slower export growth and possibly weaker commodity prices. A higher exchange rate, a sharp fall in the terms of trade (which occurred in many past episodes of global weakness, although not recently), or reduced international travel could also see export growth falter. Over 20 per cent of domestic production is exported, so even a modest reduction in export growth rates would impact noticeably on aggregate GDP growth.

The other key risk relates to the possibility that below-average seasonal conditions will persist into 2003-04, extending the drought for another year. The National Climate Centre notes that the El Niño weather pattern has ended, although a continuation of the drought cannot be ruled out. In 2002-03, some of the effects of the drought on rural exports were buffered by a rundown of stocks, but with private marketing authorities' stocks being run down to support exports this year, this offset will not be available in 2003-04 if the drought persists.

The terms of trade

The terms of trade is expected to increase in 2003-04, supported by an ongoing decline in the price of imported goods. While export prices are likely to remain subdued, weak global economic conditions, competitive pressures and ongoing productivity improvements in information and communications technology goods (ICT) should continue to place downward pressure on international prices.

Commodity prices have remained firm over the past year with a small pick-up in the prices of some rural commodities offsetting the weakness in non-rural commodity prices, particularly base metal prices. Oil and gold prices have also increased, although prices have fallen somewhat in the past month. The prices of other exports have been subdued, in line with weak export demand. On the import side, prices have continued to decline (even abstracting from the effects of the appreciation of the currency) reflecting subdued world inflation and ongoing falls in ICT prices.

The good performance of the terms of trade during a period of global economic weakness has provided an important buffer for the economy. The cumulative increase in the terms of trade over the past four years has been over 10 per cent, with further increases expected in 2002-03 and 2003-04.

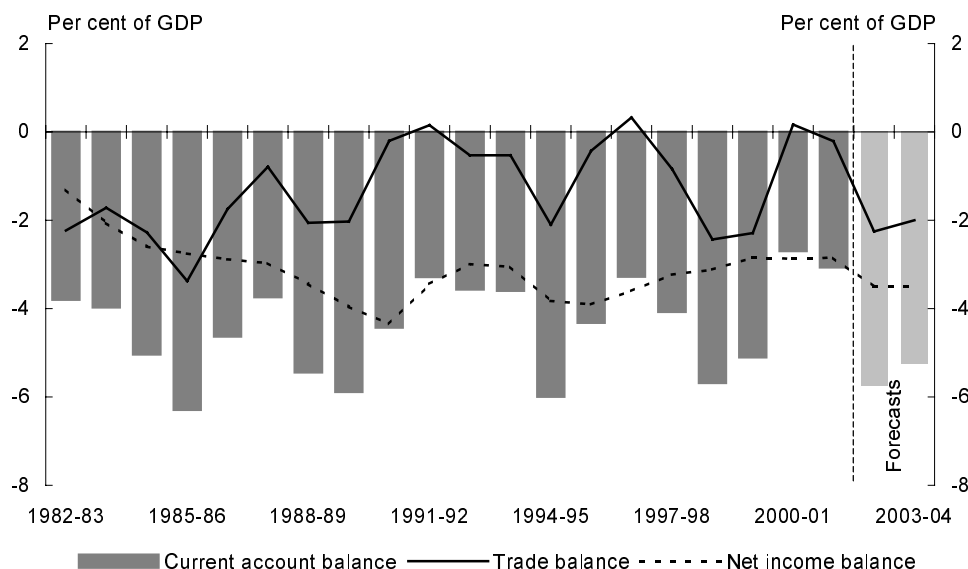
The current account

The current account deficit should narrow a little in 2003-04 to around 5¼ per cent of GDP, from around 5¾ per cent of GDP in 2002-03 (Chart 6). Most of the movement in the current account balance over the past year has been due to movements in the trade balance, which has widened sharply. The net income deficit is expected to widen a little this year, in line with the accumulation of net foreign liabilities associated with recent current account deficits. Interest rates remain low, however, helping to contain any increase in the net income deficit. The increase in the terms of trade has also slowed the increase in the current account deficit and should continue to do so over the next year.

The widening of the current account deficit reflects the desynchronised Australian and world economic cycles and the drought. The strong performance of the Australian economy has occurred at a time when many of Australia's trading partners are growing more slowly than usual. Strong imports, underpinned by high levels of investment and an appreciating exchange rate, are expected to contribute an amount equivalent to around 2 percentage points of GDP to the increase in the CAD in 2002-03. Of this, around ½ of a percentage point is expected to be due to aircraft imports. The drought is expected to contribute around ½ of a percentage point of GDP to the widening of the CAD in 2002-03 through lower rural commodity exports. Moreover, weak global demand is limiting the scope for manufactured and service exports.

In 2003-04, the CAD should narrow a little as a percentage of GDP. Import growth is expected to be lower and a gradual recovery in world demand and higher rural production should see a pick-up in exports.

Chart 6: Current account balance



Source: ABS Cat. No. 5302.0 and 5206.0 and Treasury.

Labour market, wages and prices

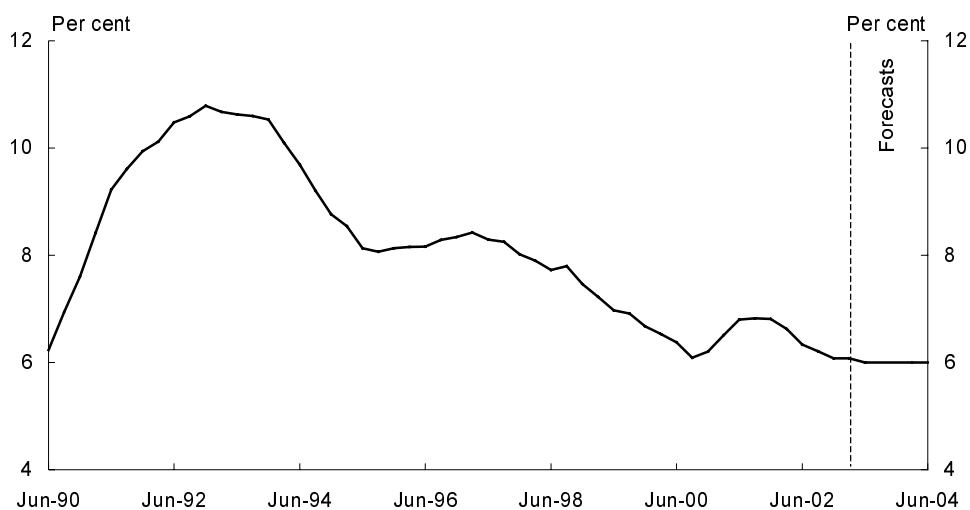
Labour market

Growth in employment is expected to slow through 2003-04, in line with slower growth in the non-farm economy. Rural employment is forecast to pick up if the drought breaks, but a full recovery may take some time. Employment growth is forecast to be 1¾ per cent in year-average terms and 1½ per cent through-the-year to the June quarter of 2004. The expected moderation in employment growth is likely to see the unemployment rate remain around 6 per cent over the next year (Chart 7).

The expected slowdown in employment growth comes after very strong growth in the first half of 2002-03. Much of the strength appears to have been concentrated in retail and housing-related employment (Box 5).

Labour market leading indicators and business surveys of hiring intentions are broadly consistent with an expected slowing in the labour market. The ANZ newspaper job vacancy series, for example, is now showing a declining trend, although the ABS measure of vacancies is still rising. The labour-intensive residential construction sector and construction-related parts of the manufacturing sector are expected to slow from around mid-2003. This is expected to provide more impetus to a generalised slowing in employment growth. The expected gradual recovery in rural and regional employment should provide a partial offset.

Chart 7: Unemployment rate



Source: ABS Cat. No. 6202.0 and Treasury.

Wages

Wages growth is expected to be well contained in 2003-04, gathering pace a little in coming months in line with the recent tightening in labour market conditions, but steady thereafter in line with the more subdued employment outlook and a steady unemployment rate. Average earnings on a national accounts basis are expected to grow by 4 per cent in 2003-04.

The slight pick-up in wage pressures in the early part of 2003 has been noted in recent business surveys, including the NAB and ACCI-Westpac surveys and in data on new enterprise agreements from the Department of Employment and Workplace Relations. Business liaison also points to some pick-up in wage pressures in the construction industry. However, overall labour market conditions do not appear to be overly tight and wage pressures are reported to be generally subdued. The increase in federal minimum award wages granted by the Australian Industrial Relations Commission following its Safety Net Review of wages may put upward pressure on wages growth, particularly if it flows through to increases in non-award wages.

Nevertheless, with inflation moderate, inflation expectations well in check, and labour market conditions unlikely to tighten much through the course of 2003-04, wage pressures generally should remain contained. With productivity growth expected to be solid, overall growth in labour costs should remain subdued.

Box 5: Industry employment growth

Australian employment increased by 3 per cent over the year to the March quarter 2003, compared with OECD employment growth of 0.3 per cent in the year to the December quarter 2002.

Solid consumption spending led to around 70,000 new retail jobs over the past year, mainly in the personal and household goods retail sector. Almost half of the retail jobs created were full-time positions.

Strong growth in dwelling and business investment drove large increases in employment in the labour-intensive construction industries. Almost 60,000 construction jobs were created in the year to the March quarter 2003, with over 42,000 additional full-time males employed. The strong jobs growth was centred in the construction trade services sector.

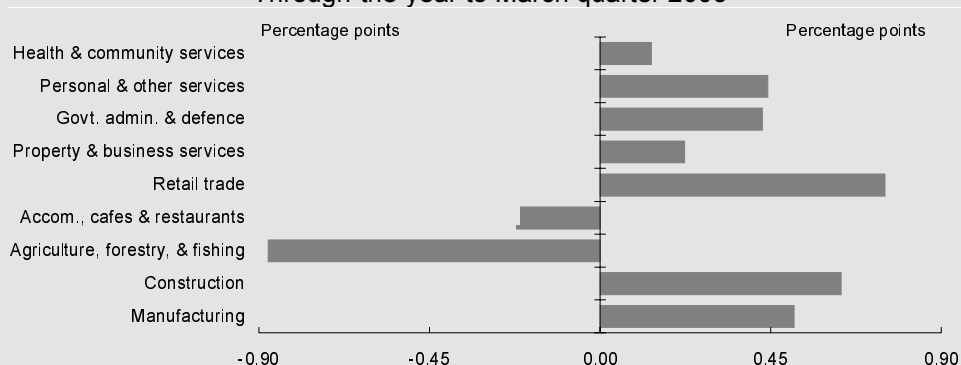
In contrast, the drought has seen job losses of around 80,000 in the farm sector over the past year.

Employment in tourism-related areas appears to have declined. Employment in accommodation, cafes and restaurants declined by around 20,000 over the year, most likely reflecting global weakness and uncertainty, and security concerns of international travellers. The recent outbreak of SARS has exacerbated tourism-related job losses.

Employment growth is likely to ease over the next year and the composition of growth is likely to shift away from the housing construction industry, manufacturing and housing-related services. These sectors are particularly labour intensive, so economy-wide employment outcomes will be sensitive to how the housing cycle evolves.

Employment outcomes will also be sensitive to the pace of recovery in rural and regional Australia, and to how adverse developments in the tourism industry play out.

Chart A: Contributions to employment growth
Through-the-year to March quarter 2003



Source: ABS Cat. No. 6203.0.

Prices

Inflation is forecast to slow to 2¼ per cent in the year to June 2004, down from around 3¼ per cent expected in the year to June 2003, and within the medium-term inflation target band.

Inflation has been boosted over the past year by a number of one-off factors, in particular higher fuel prices, reflecting the substantial run-up in global oil prices, and by drought-related increases in food prices. There have also been substantial increases in housing costs and higher insurance premiums. Services prices have increased solidly, reflecting the strength of domestic demand and tighter labour market conditions, which have underpinned a slight pick-up in wages growth. These increases have been partly offset by subdued growth in import prices, reflecting weak global conditions and recently the appreciation of the Australian dollar. Headline inflation was 3.4 per cent in the year to the March quarter 2003, with measures of underlying inflation pointing to inflation of between 2 and 3 per cent through the year.

Looking ahead, inflation should decline once some of the temporary influences start to abate. While wages are expected to pick up a little in the first half of 2003, inflation expectations remain subdued and the pace of wages growth should ease over the course of 2003-04, in line with the anticipated easing in labour market conditions. With productivity growth expected to be solid, labour costs should remain well contained. The anticipated slowing in non-farm GDP growth in 2003-04 suggests that significant capacity constraints are unlikely to emerge over the forecast period, leaving little scope for generalised margin building.

The moderate outlook for inflation is also likely to be supported by external factors. The weak international environment is likely to hold down global inflation over the next year. This should reinforce other factors such as increased competition, productivity improvements (particularly for ICT goods) and substantial excess capacity, all of which are helping to constrain medium-term international price pressures. Oil prices are assumed to fall a little over the next year, in line with market expectations. The recent appreciation of the Australian dollar, if sustained, should also help to limit any increases in import prices in the near term.

Despite the positive outlook there is still a risk that inflation may not decline as expected, particularly if the current temporarily higher inflation starts to be reflected in inflation expectations and is incorporated into future wage claims. That said, the economy is expected to slow a little over the next year and with downside risks to the outlook it is also possible that inflation may temporarily fall even lower over the coming year.

The following is a reprint of Statement 4, Sustaining Growth in Australia's Living Standards, from Budget Paper No. 1: Budget Strategy and Outlook 2003-04.

Sustaining growth in Australia's living standards

In the face of demographic changes in the decades to come, can changing community attitudes and policy reforms maintain growth in living standards?

International evidence helps identify how attention to a range of reinforcing policy reforms, in a sound macroeconomic environment, could raise participation in the labour force, lower unemployment, and sustain high productivity growth, giving faster innovation and growth in GDP per person than projected on present trends.

If policies support such reforms, the Australian economy would offer a fairer access to wider employment options, and be better able to meet the challenges of an ageing population.

Introduction

Australia has enjoyed exceptional growth in real incomes and rising living standards over the past decade. However, growth in living standards will slow in coming decades unless evolving policy reforms, designed to lift participation in the labour force and sustain productivity growth, can counteract the economic effects of demographic changes.

This potential slowdown is sharply at odds with the experience of the past decade, where growth in GDP per person averaged 2.4 per cent per year, driven by 2.5 per cent per year labour productivity growth. These growth rates were unusually high, both by Australia's historical standards and relative to other industrialised countries.

This exceptional productivity growth was a payoff from sustained macroeconomic and structural reforms. The OECD, in its 2003 Economic Survey of Australia, noted that:

'Dogged pursuit of structural reforms across a very broad front, and prudent macroeconomic policies firmly set in a medium-term framework, have combined to make Australia one of the best performers in the OECD, and also one notably resilient to shocks, both internal and external.' (OECD 2003c, p. 9)

This performance cannot be expected to continue indefinitely without further reform. In contrast to recent decades, demographic trends will result in an increasing proportion of the population moving into older age brackets. This means that a sharply declining proportion of the population will be in the traditional working age groups, particularly in the under 55 years age group where participation in the labour force historically has been highest. The inaugural *Intergenerational Report 2002-03* (IGR) released with last year's Budget highlighted this issue.

Various scenarios presented in the IGR showed population ageing would slow growth in real GDP per person to about 1½ per cent per annum in the 2010s, 2020s and 2030s if recent trends of lower labour force participation in older age brackets continued and if productivity growth fell back to the average of the last 30 years. Not only would the economy grow more slowly than currently, growing age-related public expenditures would raise budget pressures. On current projections, taxes would need to increase by around 5 per cent of GDP to pay for the same government services in 2041-42 that we enjoy today.

An alternative to significantly cutting government services, or increasing taxation as a proportion of national income, is to increase GDP growth above the rate projected in the IGR. Australia can pursue policies to achieve this. Building on the policy reforms of recent years, this would require sustained efforts to remove obstacles or disincentives to participate in the labour force and to maximise productivity growth rates. Pursuing such reforms should lift GDP per capita and living standards, thereby reducing the pressures to raise taxes or cut expenditure. While pursuit of these reforms will present challenges, Australia's performance over the last decade and international evidence highlights the benefits that successful policy outcomes can bring.

Indeed, the OECD has stated that 'like the United States, Australia, Canada and Ireland also experienced much higher growth over the past few years than continental Europe or Japan' (OECD 2003d, pp. 4-5). This divergent growth performance among OECD economies is in part due to demographics, but also to 'considerable progress in improving the working of labour and product markets with very positive consequences for innovation, technical progress and job creation' (OECD 2003d, p. 5).

The next section outlines how population, participation and productivity trends have interacted in Australia and other OECD countries to generate divergent performance in growth of GDP per person.

The third section examines influences on participation in the labour force, and how reducing unintended obstacles or disincentives could increase the labour

force participation rate and lower unemployment to benefit average incomes and widen access to employment opportunity.

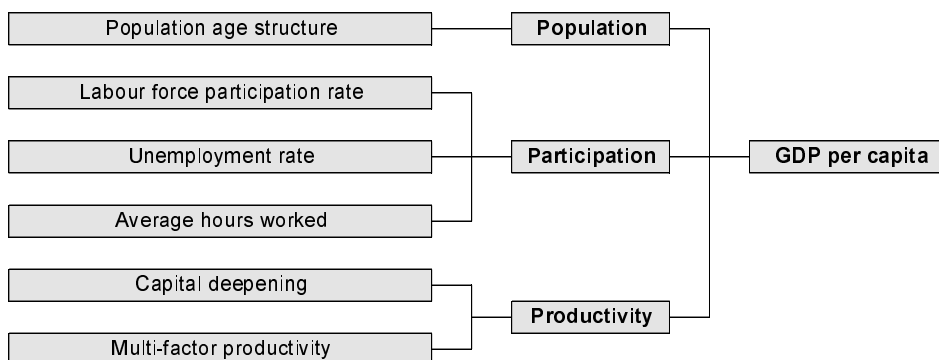
The fourth section presents the latest evidence on what drives high productivity growth.

The fifth section notes a number of policy areas that, working in conjunction with a sound macroeconomic environment, can produce better participation and productivity outcomes, faster innovation, higher growth of GDP per capita and lower unemployment. The conclusions outline broad policy choices for Australians if we wish to enjoy the same relatively high growth in living standards in the 2030s that we enjoyed in the 1990s.

How population, participation and productivity interact

In assessing longer-term trends in economic growth and growth in Australian living standards, it is useful to look behind these major aggregates and consider some fundamental influences on the economy. One approach considers trends in population, labour force participation and productivity that make up the productive capacity of the economy (Chart 1). Box 1 briefly defines the key terms in this approach, and flags some important conceptual and measurement issues.

Chart 1: The components of GDP per capita growth



In Australia's case, trends in population, participation and productivity have all pulled together to produce strong growth in GDP per person over the past decade or so.

Population trends over recent years have featured a rising proportion of the population in traditional working age groups (15 to 64 years). This has been the first part of a transition that started with the substantial decline in birth rates experienced in the 1960s and 1970s. The decline in the birth rate meant that the youth dependency ratio, that is the ratio of people below working age to those of working age, declined. The second part of the transition will see a rise in coming decades in the age dependency ratio, as the number of those above 65 rises relative to those aged 15 to 64. Among those of working age, there will be a rising proportion in the 55 to 64 years age group.

Box 1: Participation, productivity, GDP per person and wellbeing: some terminology

Participation is the total number of hours worked per person of working age. In Australia, **working age** is defined as 15 years and over; whereas, the OECD (and many of its members) define working age as 15 to 64 years.

- The **total participation rate** is the proportion of people of working age either in work or seeking it. Many specific **participation rates** can be defined by gender or age cohort.
- Not all who participate in the labour force can find work: the **unemployment rate** is the proportion of those of working age who participate in the labour force but are unable to find work.
- The total hours worked by those in work allow us to determine **average hours worked** per person in employment.

High **labour productivity** offers the means to produce more from given inputs of capital and labour. **Labour productivity growth** (assuming no improvement in the 'quality' of labour, such as from better training) can arise from one or both of two components: more capital per worker — **capital deepening**; or combining capital and labour more efficiently through better work practices, better management, or better allocation of resources across industries — **multi-factor productivity**. Measuring and analysing precisely how the components of labour productivity rise, however, is an inexact science.

The interaction of population demographics, participation factors and productivity generates **Gross Domestic Product**, the national accounts valuation of all goods and services produced in an economy. **GDP per person** is often used as an approximate indicator of the standard of living in a society. Whilst the standard of living of individuals does vary on distributional grounds and while factors such as the state of the environment which are not measured by GDP affect standards of living, the measure of GDP per person does permit researchers to make comparisons across countries using widely available data measuring standardised concepts.

Measurement issues are nevertheless important to this area of work. Differences in national statistical practices, or in whether variables are measured in national currencies or converted to a common currency (and if so, how) are therefore noted where relevant.

Policy can have little impact on these outcomes. Most of the choices that will influence the make-up of the working age population in the next 40 years have already been made. Conceivable changes in the level of immigration relative to recent outcomes would have only marginal impacts on the overall population growth rate and age structure of the population. Even if the birth rate were to increase in the future, it would be at least 25-30 years before the proportion of the population in the traditional working age group would start to rise in response. In the meantime, labour force participation rates amongst young adults could actually decline in response to increased parenting responsibilities, while the number of dependents would rise (Henry 2002).

The various components of *Participation* (Chart 1) determine the extent to which the population is willing and able to work. Over recent years, these components had a net positive effect on economic growth. The overall labour force participation rate (the proportion of the working age population that chooses to enter the labour force and seek work) has risen gradually as more women have entered the labour force, more than offsetting a declining participation rate among men. The unemployment rate has fallen since the early 1990s, while the average number of hours worked per employee has fallen only slightly. As a result, participation (the hours worked per head of the working age population) has risen.

Given that the nature and extent of labour force participation is largely a matter of individual choice, the wellbeing of society as a whole is likely to be enhanced if people have maximum scope to make choices, taking into account their own circumstances and preferences. However, it needs to be recognised that such choices may impose costs on society and can be distorted by disincentives or obstacles to participation that may exist. Policy choices can affect these distortions and obstacles. These issues are discussed in greater detail later in this statement.

Productivity growth has been by far the major source of growth in GDP per capita. Australia's productivity growth in the 1990s was stronger than in most other OECD countries, particularly in the second half of the 1990s. Policy can also have a major influence on the productivity growth rate.

Taking these three factors together, Australia's level of per capita income has been around three-quarters of the US level for most of the past half century (Table 1). Between 1950 and 1990, the level of Australia's per capita income relative to the United States fell, although it still grew strongly in absolute terms. The main causes of the widening gap between Australia and the United States were a relatively poor productivity performance through the 1950s and

1960s, indeed, one of the worst in the OECD, and a relatively poor participation performance in the 1970s and 1980s.

Australia's impressive productivity performance since the beginning of the 1990s has only now restored our relative productivity and GDP per person to the position we held in the 1950s. By contrast, for 'large continental European countries, GDP per capita stopped converging to US levels in the 1980s. And probably backtracked in the 1990s. The same conclusions also apply for Japan'. (Cotis 2003, p. 1) The OECD believes this diversity of performance stems primarily from costly policy failures in some member countries.

Table 1: GDP per person, participation and productivity, 1950-2001

	Relative level				Growth	Average growth rate		
	United States = 100					1950-2001	1950-1973	1973-1990
	1950	1973	1990	2001				
	Index	Index	Index	Index	%	%	%	%
GDP per person(a)								
United States	100	100	100	100	193	2.5	2.0	1.7
Canada	79	84	83	81	200	2.7	1.9	1.5
Australia	78	76	73	78	192	2.3	1.7	2.3
France	54	77	76	73	300	4.0	1.9	1.4
Japan	20	69	82	75	987	8.1	3.0	1.0
Population and participation(b)								
United States	100	100	100	100	1	-0.6	0.7	0.3
Canada	87	97	99	95	11	-0.1	0.8	-0.1
Australia	96	104	96	94	-1	-0.2	0.2	0.1
France	107	96	70	67	-36	-1.0	-1.2	-0.2
Japan	94	127	114	101	9	0.7	0.1	-0.9
Productivity(c)								
United States	100	100	100	100	189	3.0	1.3	1.4
Canada	91	87	84	85	170	2.9	1.0	1.6
Australia	81	73	76	82	194	2.6	1.5	2.2
France	50	80	108	110	527	5.1	3.1	1.6
Japan	22	55	71	75	897	7.3	2.9	1.9

(a) Measured at 1999 US dollars, at purchasing power parities.

(b) Hours worked per capita.

(c) GDP per hour worked.

Source: University of Groningen and The Conference Board (2003).

More generally, over the past decade, OECD countries with high GDP per capita growth rates have typically had population, participation and productivity trends working together to enhance living standards. Countries with the slowest growth had productivity growth insufficient to offset relatively slow growth in the population of traditional working age and/or relatively low participation growth (OECD 2003e pp. 35-37 and Figure 1.2).

Future productivity and participation trends are likely to develop interactively. For example, if Australia achieved very high rates of productivity growth, there may be less need to increase participation to generate growth and people might choose to exercise some of their potential income gains by reducing working hours.

Why participation is changing

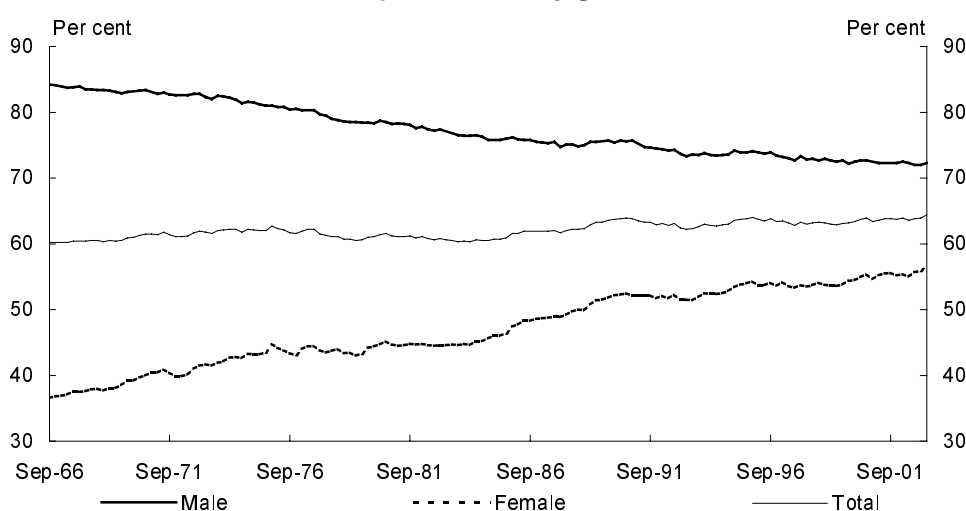
As noted above, trends in the various components of participation in Australia have resulted in solid overall growth in hours worked per head of the population aged over 15. This, in turn, has been supportive of economic growth and rising incomes per head. These trends are detailed below.

The labour force participation rate

The first component in participation is the labour force participation rate, which measures the proportion of the population over 15 who are either working, or available to work.

The labour force participation rate has risen modestly, from around 60 per cent in the mid 1960s to around 64 per cent at present. This gradual upward trend masks quite different trends among men and women. Female participation rose dramatically from below 40 per cent in 1966 to over 55 per cent in 2003. At the same time, male participation fell markedly from 84 per cent in 1966 to around 72 per cent in 2003 (Chart 2).

Chart 2: Participation rates by gender, Australia



Source: Australian Bureau of Statistics, *Labour Force, Australia, Preliminary* (Cat. No. 6202.0, March 2003).

Broadly similar trends in overall participation rates by gender are apparent across the OECD (Table 2). The breadth and strength of these trends suggests that they are mainly driven by economic opportunities and social factors. However, policy settings also can have an influence.

Table 2: International participation rate changes^(a)

	Female			Male			Total		
	1970	2000	Change	1970	2000	Change	1970	2000	Change
	%	%	% points	%	%	% points	%	%	% points
Australia	47	66	20	94	85	-9	71	75	5
Canada	43	70	27	86	82	-3	65	76	12
Switzerland	52	71	18	101	95	-6	77	83	6
Germany	48	64	16	93	80	-12	70	72	3
Denmark	58	76	18	92	84	-8	75	80	5
Spain	29	52	23	96	79	-16	62	66	4
Finland	61	72	11	83	78	-5	72	75	3
France	49	63	15	87	76	-11	68	69	2
United Kingdom	51	68	17	94	83	-12	72	75	3
Ireland	34	56	22	96	81	-15	66	69	3
Italy	34	47	13	87	76	-11	60	61	2
Japan	55	64	9	89	93	4	72	79	7
Korea	41	54	13	73	76	2	57	65	8
Mexico	22	42	21	87	90	4	54	65	12
Norway	39	76	38	89	85	-4	64	81	17
New Zealand	38	68	30	92	84	-8	65	76	11
United States	49	72	23	87	85	-2	68	78	11

(a) This table shows participation rates for the OECD definition — the population between the ages of 15 and 64. The participation rates for Australia in this table are therefore higher than other references to participation in this statement.

Source: OECD (2002c).

Consistent with the general trend, Australian participation rates for men aged between 55 and 59 (that is, the proportion of men in this age group who are working or available for work) fell over the last 20 years. But Australia's rates fell more than in other key economies. For example, from 1981 to 2002, the Australian participation rate for this group fell 9 percentage points; whereas, from a nearly identical starting point, the US participation rate fell only 5 percentage points.

While Australian participation rates for women aged between 55 and 59 increased significantly, these increases were consistent with the trend across most of the OECD countries. So, while the Australian female participation rate almost doubled for this age group, Australia's OECD ranking remained stable for the group.

Low and declining participation rates (by international standards) for Australian males aged between 55 and 59 suggest specific policies or

conditions in Australia over the last 20 years may have discouraged participation by older men more than in other countries. Accelerating structural adjustment in the 1980s may have displaced some workers with lower skill levels, as also happened in the United States. But to a greater degree than in the United States, displaced Australian workers may have had difficulty finding alternative employment due to a less flexible labour market, and a mismatch between their skills and those required for new jobs, with insufficient incentives to bridge the gap. Some of these workers may have become discouraged in the search for employment and hence left the labour market.

Related to this, the numbers of people in this age group receiving the Disability Support Pension, which is similar in value to the age pension, has grown markedly.¹ Some older workers may have effectively retired early on this pension (or other welfare payments) rather than continue to look unsuccessfully for work. With increasing numbers of people in these age groups and increasing proportions of them receiving welfare payments, the resultant falling rate of participation, if sustained, could have significant economic effects in the decades ahead.

OECD research shows that it is more difficult to reverse retirement decisions, once taken, than it is to encourage people still in employment to delay retirement (OECD 2003a). Those most weakly 'attached' to the labour force tend to be more likely to initiate early retirement before age 65. OECD evidence shows that workers who did not complete secondary education, sole parents and the moderately disabled are other groups similarly at risk of withdrawing from participation.

In Australia, there are 2.8 million people under the age of 65 on income support. This is over 20 per cent of all working-age Australians. Parenting Payments are paid to sole parents supporting a child or the partner of a person who is unemployed and supporting a child. Parenting Payments and the Disability Support Pension have more recipients than there are for the Newstart Allowance, which is the main unemployment payment. The Newstart allowance has an activity test, while the Disability Support Pension and Parenting Payments do not.

1 Between 1990 and 2000, the number of male Disability Support Pension recipients aged 50-59 increased by over 60 per cent. In the same period, the number of men in this age group grew by only around 40 per cent. Over the longer term, male Disability Support Pension recipients have increased by over 400 per cent since 1972, while the male population increased by only 45 per cent. (Department of Family and Community Services 2002; Department of Family and Community Services 2001).

Comparisons across the OECD countries show problems of underutilisation of labour resources through low participation are ubiquitous. In almost all countries, low participation detracts more from the potential labour force than excessive unemployment (OECD 2003a).²

European studies also indicate that, across all age groups, withdrawal from participation is seldom reversed and leads to a high risk of persistent low standards of living (OECD 2003a). So there are social as well as economic reasons for concern about falling participation rates among those of working age. It is also unlikely that withdrawees have made sufficient financial provision for permanent withdrawal from the labour force. In equity terms, the falling participation problem is similar to that of long-term unemployment.

The IGR noted that recent participation trends combined with an ageing population would reduce the overall participation rate markedly over time, from around 64 per cent in 2003-04 to slightly over 55 per cent in 2041-42. This decline could become significant from the latter part of this decade, other factors unchanged. The IGR emphasised, however, that such projections make little allowance for change over time in behaviour with respect to labour force participation.

For example, if participation rates for each age and gender cohort rose towards the top fifth of the OECD by 2020-21 and remained there, instead of at recent levels, then the overall participation rate in Australia would fall to around 60 per cent rather than 55 per cent. This would lead to a GDP per capita level by 2041-42 that was around 9 per cent higher than projected in the IGR.

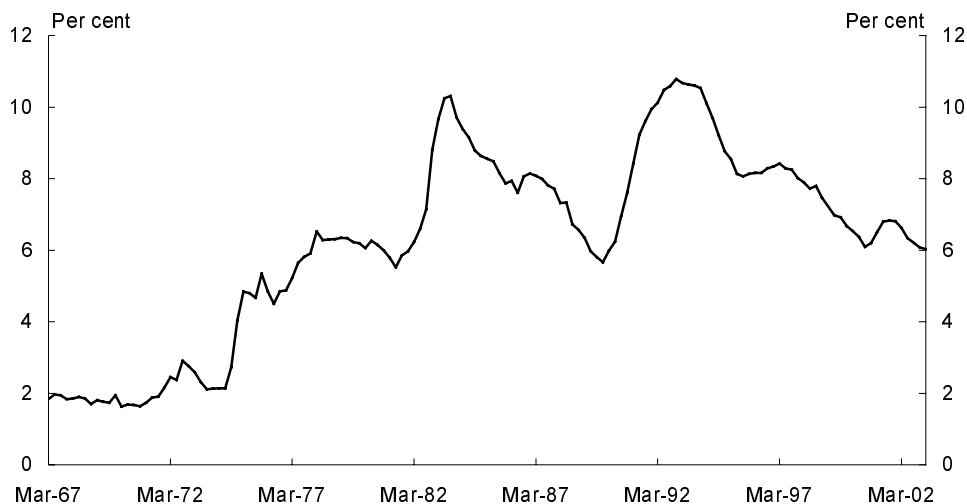
The unemployment rate

The second component of participation is the unemployment rate, the proportion of people participating in the labour force but unable to find work.

After exceeding 10 per cent during the early 1990s, the unemployment rate has fallen to around 6 per cent in 2003 (Chart 3).

2 The OECD illustrates the relative magnitudes by assuming any unemployment over 5 per cent is 'excessive', and that low participation countries could have participation rates (for each of three age brackets and both genders) as high as the third highest experienced in the OECD.

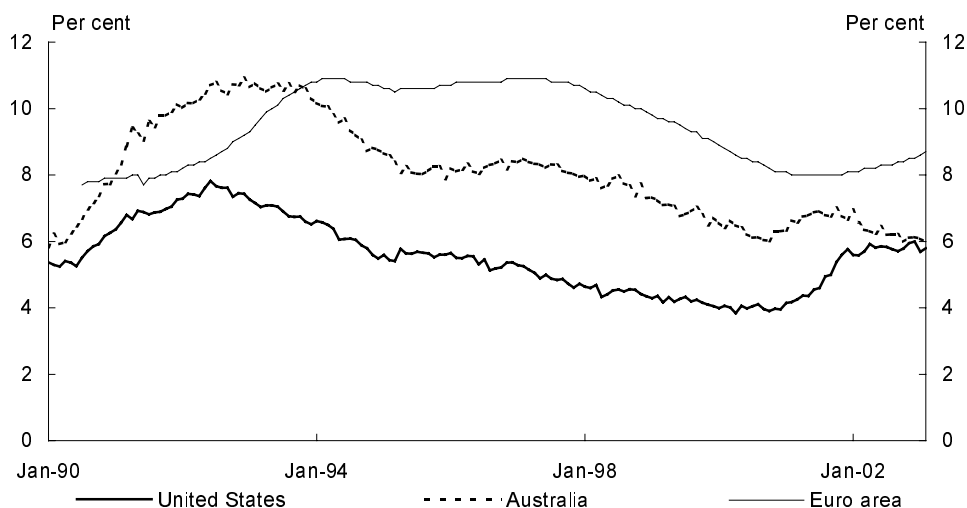
Chart 3: Unemployment rate, Australia



Source: Australian Bureau of Statistics, *Labour Force, Australia*, Preliminary (Cat. No. 6202.0, March 2003).

Australia's unemployment rate has generally been between the rates experienced in the United States and the Euro area over recent years (Chart 4). The Euro area is characterised by high unemployment, particularly compared to the more flexible labour markets of the United States, United Kingdom and New Zealand. The recent economic slowdown in the United States has raised US unemployment rates to Australian levels for the first time in 20 years.

Chart 4: Standardised unemployment rate, Australia, United States and Euro area



Source: OECD (2003b).

While the unemployment experience in Australia has, in general, been better than in many other developed countries, there have been other countries that have experienced lower levels of unemployment over a consistent period of time, most notably the United States.

Countries choose the level of unemployment they are willing to tolerate. Policy actions influence unemployment outcomes. For example, if minimum wages are high compared to the median wage, businesses will be less willing to employ some lower skilled workers.³ Employment protection legislation which makes it harder to dismiss employees also makes it riskier and more expensive for employers to hire new employees, and contributes to the existence of unemployment. Tax and welfare policies also can interact to increase unemployment if benefit payments are not work-tested or time-limited, or are generous compared to after-tax incomes from employment (OECD 1999). While these issues are seen as contentious by some in Australia, they are part of an increasing consensus about the causes of persistent unemployment. These issues are taken up in more detail later in this statement.

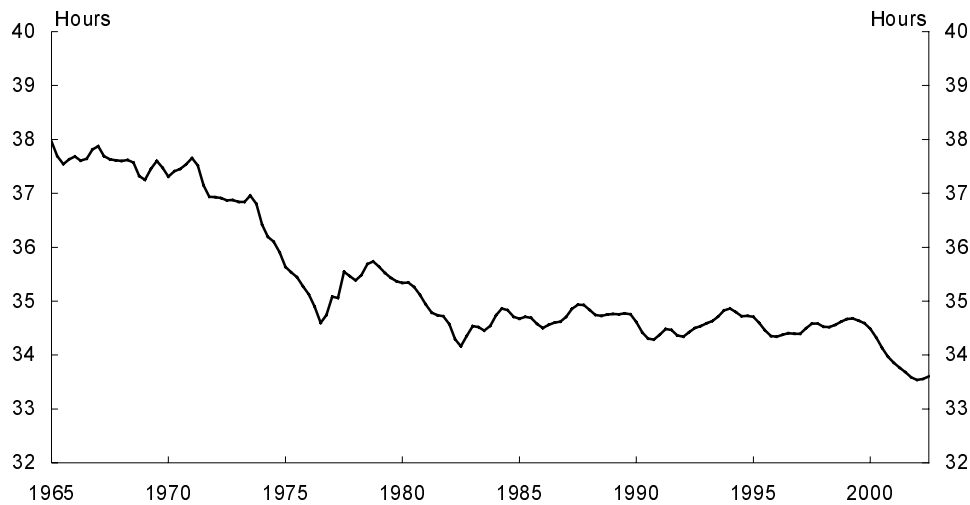
Average hours worked

The key remaining element that contributes to overall participation is the average number of hours which people work.

Average hours worked per employee in Australia has fallen only slightly over the past two decades, after falling sharply between the mid 1960s and early 1980s (Chart 5). Since mid 2001 average working hours have fallen further, apparently due to full-time employees working fewer average hours. In recent months, the average number of hours worked has begun to climb again.

3 Australia has the second highest minimum wage in the OECD, at 57.9 per cent of the median wage. Only France, at 60.8 per cent of the median wage, has a higher minimum wage. In contrast, the minimum wage in New Zealand is 46.3 per cent of the median wage, 41.7 per cent in the United Kingdom and 36.4 per cent in the United States. See Keese and Puyoyen (2001).

Chart 5: Average hours worked per employee, trend, Australia



Source: Australian Bureau of Statistics, *Modeller's Database* (Cat. No. 1364.0.15.003, December 2002), unpublished data, and *Labour Force Statistics, Australia* (Cat. No. 6203.0, March 2003).

While Australia's average hours of work fell by around 10 per cent over the last four decades, most other OECD countries have recorded larger falls. Average hours fell by over 30 per cent in Germany and Norway and by around 20 per cent in the United Kingdom and Japan. An important exception is the United States, which has around the same average hours of work today as four decades ago.

The fall in average hours worked in Australia almost entirely reflects the increase in the number of people in part-time employment, as average hours worked by part-time and full-time employees both increased over the past two decades. In the mid 1960s, around one in ten employees worked part time. By the start of 2003, over one in four worked part time. Australia's overall rate of part-time employment (27 per cent) is the second highest in the OECD, after the Netherlands (33 per cent). Japan (25 per cent), Switzerland (25 per cent), New Zealand (23 per cent), and the United Kingdom (23 per cent) also have high rates of part-time work.

The rise in part-time employment in Australia parallels rapidly increasing labour force participation by women. Availability of part-time work is likely to have facilitated higher participation by women, and by formerly non-working parents in both single-parent families and dual-income families. The tendency for young people to have longer periods in education, and for workers to have periods of further education and retraining over their working lives, are also assisted by the availability of part-time work.

While the strong growth of part-time employment might be taken as evidence of welcome improvement in labour market flexibility, it also bears another interpretation. It may, in part, be the means by which employers escape rigidities in the regulation of full-time employment. Surveys suggest significant proportions of part-time workers wish to work more hours, and there is some evidence that full-time workers performing both paid and unpaid overtime may wish to work fewer hours. These results suggest a labour market still too inflexible to allow part-time and full-time workers and employers to arrive at mutually advantageous arrangements.

Choice, or market malfunction and unintended policy consequences?

It is impossible to prescribe what tomorrow's participation performance ought be. Participation outcomes (that is, hours worked per head by the working-aged population) are a product of individual and family choices in the context of labour market options and policy influences.

It is worth reiterating, though, that European experience suggests falling participation rates, like long-term unemployment, bear mostly on the least affluent, are difficult to reverse, and can lead to persistent poverty and social disengagement.

Demographic projections show more of the labour force will be concentrated in the older age brackets within which participation in Australia has become relatively low by international standards. It could be that business, in response to changing demographic structures, might change its employment practices and make it more attractive for this group to actively participate. However, it would appear that these low participation rates are at least in part driven by insufficiently flexible and competitive markets and unintentional interactions among policies, rather than changing worker preferences.

Of the three contributors to participation outcomes, it is very difficult to predict the future trend in average working hours. Tomorrow's more productive workers might choose lower average working hours. But for the other two contributors to participation outcomes, it seems likely Australia would be a more fair society if participation rates were higher and the unemployment rate lower than today.

High productivity: getting the most from participation

Productivity growth determines the growth in living standards in the long run. At any point in time, the level of productivity will determine the standard of living society can enjoy from chosen levels of participation.

The participation rate will never reach 100 per cent. However, higher productivity growth can deliver compound growth in income from whatever participation level is achieved, year after year. Even if the growth rate of productivity slows in the future (as it has in periods in the past), higher productivity levels achieved by then would mean higher incomes, higher savings, higher investment and higher future growth.

Over the last decade, Australia was one of only a few OECD countries to experience a rise in productivity growth. Recent Australian and US analysis, and new multi-country comparisons, have helped to identify the reasons for this strong performance. In short, strong competition drove new work practices and encouraged rapid uptake of business-transforming information and communication technologies in a macroeconomic environment that supported steady growth and strong investment.

Australian productivity levels still trail the world's best in many sectors, notwithstanding this recent high productivity growth. One cause is that distances among regional markets in Australia, and between Australia and global markets, are large, and Australia has a history of high levels of protection. Together these have led to industries duplicating plants around Australia and persisting in producing goods or services to which Australia was, globally, not well suited. These features also resulted in more limited competition within Australia than otherwise would have occurred. Even though Asian economic growth, falling transport costs and widespread economic reforms of recent decades have gradually weakened the significance of these constraints on Australian productivity, they are likely to remain a substantial challenge to our future productivity growth.

Whether Australia can sustain the strong productivity growth of the 1990s will depend on two factors: the extent to which Australian industry can move to the productivity frontier in those areas where it now lags; and on whether that productivity frontier itself continues to move outwards with technological progress.

A decade of strong growth in productivity and income

Australia experienced extraordinarily strong productivity growth through the 1990s. This led the OECD in its report *Is There a New Economy?* to group Australia with five other economies that experienced a sustained jump in the trend growth of GDP per capita, associated with fast productivity growth and a strong uptake of information and communication technologies (OECD 2000, pp. 3-5).⁴

By the second half of the 1990s, Australia's average annual labour productivity growth was more than double that recorded in the late 1980s and had risen to rates last seen in the 1960s. (Moreover, in the 1990s Australia's productivity growth exceeded the OECD average; whereas in the 1960s, productivity growth was high everywhere and Australia's growth was below the OECD average.)

Australia's productivity surge started earlier than the United States' and accelerated to a higher rate. Recent estimates indicate that increased investment in the use of information and communication technologies made an important contribution to productivity growth in Australia, slightly more so than in the United States. The real story for Australia, however, has been in the growth of the residual part of labour productivity growth, so-called 'multi-factor productivity growth'. This growth was far more rapid in Australia than in the United States and captures the increased output from better combining labour and capital inputs. This reflects factors such as improving management and work practices within industries, and resource reallocation into more productive industries (Table 3).

4 The other five economies grouped with Australia were the United States, Denmark, Ireland, the Netherlands and Norway. The group's accelerated growth through the 1990s was remarkable because the OECD area's growth slowed overall. Moreover, the fastest-growing, 'new economies' were already richer than average, reversing the previous four decades' experience, when the fastest-growing economies had been poorer than average. The 'new economy' phenomenon reversed the tendency for living standards within the OECD to converge.

Table 3: Contributions to labour productivity accelerations — United States and Australia

	United States(a) %	Australia(b) %
Labour productivity growth acceleration	0.5	1.0
Capital deepening	0.2	-0.1
ICT capital	0.3	0.4
Other capital	-0.2	-0.5
Multi-factor productivity contribution(c)	0.3	1.1

(a) Growth in the 1992 to 2000 cycle minus growth in the 1986 to 1992 cycle.

(b) Growth in the 1993-94 to 1999-2000 cycle minus growth in the 1988-89 to 1993-94 cycle.

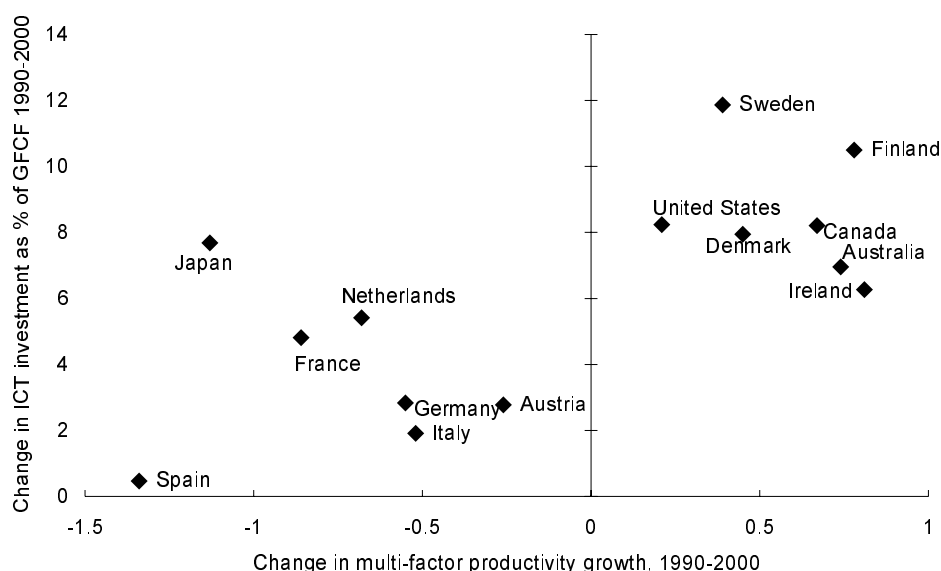
(c) Multi-factor productivity growth for the United States includes the contribution to labour productivity growth from labour quality.

Note: Figures may not add to totals due to rounding.

Source: Parham (2002).

Recent analysis suggests that Australian economic reform has been central to much of the increase in multi-factor productivity growth. Reform encouraged both a more efficient allocation of labour and capital, and a competitive environment which drove workplace change within industries. These changes were conducive to the uptake of information and communication technologies, in both new and established plants. These technologies, in turn, contributed to the ongoing re-design of existing business processes (Parham 2002, p. 58). Australia was one of the leading economies in the OECD in using these technologies to achieve multi-factor productivity gains (Chart 6).

Chart 6: Pick-up in multi-factor productivity growth and increase in information and communication technology investment



Source: OECD (2003e) and OECD (2002a), as updated.

Can US productivity growth keep expanding potential productivity?

Since the United States defines many of the sectoral productivity frontiers, understanding its productivity experience is important to understanding Australia's. This offers special insights into whether Australia can hope to keep catching up to global productivity frontiers that are themselves moving outwards over time.

Productivity growth in the United States jumped from a trend growth rate of about 1½ per cent to around 2¼ per cent through the late 1990s. Estimates of how information and communication technology use has lifted productivity in the United States still differ, with some stressing capital deepening in these technologies and others the possibly greater contribution of multi-factor productivity growth. But all agree information and communication technology contributed significantly to the improved productivity performance (Kahn and Rich 2003; Gordon 2003; Oliner and Sichel 2002).

Fears that the collapse in information and communication technology asset prices would stall investment by US computer users, and thereby punctuate the contribution of information and communication technologies to productivity growth, were misplaced. In fact, investment in computers and software has picked up again after the US recession of 2000 and 2001, with anecdotes suggesting the rapid technological obsolescence of much investment of this type meant firms were soon driven to replace ageing computers and software installed during the Y2K episode and the dot.com boom.

Recent sectoral analysis shows that, outside the information and communication technology producing sector itself, most US productivity growth since the 1990s was in the retail, wholesale and financial services sectors — all intensive information and communication technology users (Gordon 2003). In the retail sector, productivity growth seems to have arisen from competition, with new, more productive market entrants displacing older established players. In such cases, it was not just the use of these technologies, but the ability to invest in new, better-designed facilities that permitted a whole range of reorganisation.

Reflecting on the increasing evidence that competitive pressures are central in raising productivity, the President of the US National Bureau of Economic Research, Martin Feldstein, commented that:

'... even if the technical changes in information technology had not occurred, the pressures to raise profits and reduce costs would have led to a greater increase in productivity in the United States [than in Europe]. Information technology was just the means, a very powerful means, for translating the pressure for profit enhancement through cost reduction into practice.' (Feldstein 2003, p. 8)

Sectoral productivity comparisons: the United States and the European Union

The higher United States productivity growth performance compared to the European Union's is almost all due to productivity growth in the retailing, wholesaling and financial sectors. More than half the difference arises in retailing alone.

While both US and European retail sectors had similar access to information and communication technology advances, the divergent productivity performance arose principally through the relative ease with which new firms could enter the market in the United States, and the application of new investment and new modes of business by all firms.

By contrast, Europe's relatively burdensome restrictions on closure of large businesses, zoning regulations restricting start-up of new businesses, general regulatory burdens and onerous employment protection legislation are impediments to business start-ups, productivity growth and the uptake of new technologies (Gust and Marquez 2002; Gordon 2003).

Feldstein has generalised these insights from the retail sector to comparisons of US and European management motivation and work practices:

'The US-Europe difference is not just a matter of incentives. The organizational rules and constraints are also very different on the two sides of the Atlantic Ocean. European work rules, embodied in union agreements and legislation, make it much more difficult to change work assignments or discharge redundant workers. And to the extent that is true, it acts as a barrier and a disincentive. Why introduce a new technology that permits managing with fewer employees when you cannot discharge those who become redundant? And even when changing work assignments can eventually be achieved, the effort to do so is so great that in many cases European managers are discouraged from even starting.' (Feldstein 2003, p. 8)

Why does Australia lag in productivity and income levels?

Achieving high productivity depends in part on specialisation of skills and achieving economies of scale and scope across the economy, including in

service industries.⁵ While Australian productivity levels are now around the world's highest in industries such as transport, storage and communications, productivity levels more generally still trail the world's best (van Ark and Timmer 2002, pp. 103 and 107). This is notwithstanding particularly strong productivity growth in the 1990s in wholesaling, construction, finance, accommodation, cafes, restaurants, and retailing (Parham 2002).

Fully achieving economies of scale and scope in many industries requires large markets, either domestically or internationally through trade. Australia was a small domestic economy through the nineteenth century and much of the twentieth century, fragmented into even smaller regional economies. With the transport technologies of those days, regional Australian economies were at very costly distances both from each other and from the global economy, then centred on Western Europe and North America.

Australian policies from the 1930s exaggerated these natural disadvantages through high trade barriers. The effect of these barriers was to further reduce the force of international competition across a range of industries. From the 1970s, Australia also restricted international investment and entry of foreign firms into the domestic market, further reducing the potential for competition and improved productivity performance.

These structural policy failures were exacerbated by difficulties in managing the macroeconomy, particularly in the face of adverse external developments. Macroeconomic policy settings lacked clear frameworks to handle the instabilities of the 1970s and 1980s and contributed to the recession in 1990-1991. It was not until the mid 1990s that the Australian monetary policy framework was consolidated into a medium-term inflation-targeting regime. A *Statement on the Conduct of Monetary Policy* was agreed between the Treasurer and the Reserve Bank Governor in August 1996, which formalised the operational independence of the Reserve Bank in implementing monetary policy to achieve the Government's inflation goals. This *Statement* included a commitment by the Reserve Bank to hold inflation between 2 and 3 per cent on average, over the course of the economic cycle.

The Government announced legislation in 1996 to establish a new fiscal framework. The *Charter of Budget Honesty Act* 1998 states that fiscal policy should be directed at maintaining the ongoing economic prosperity and

5 'Economies of scale' refer to the frequent tendency for per-unit costs to fall as the number of units produced rises. 'Economies of scope' is the corresponding tendency for production or sale of distinct items or services to become cheaper through sharing costs of infrastructure or management.

welfare of the people of Australia, and therefore should be set in a sustainable medium-term framework. The primary objective of the fiscal strategy is to maintain budget balance, on average, over the course of the economic cycle.

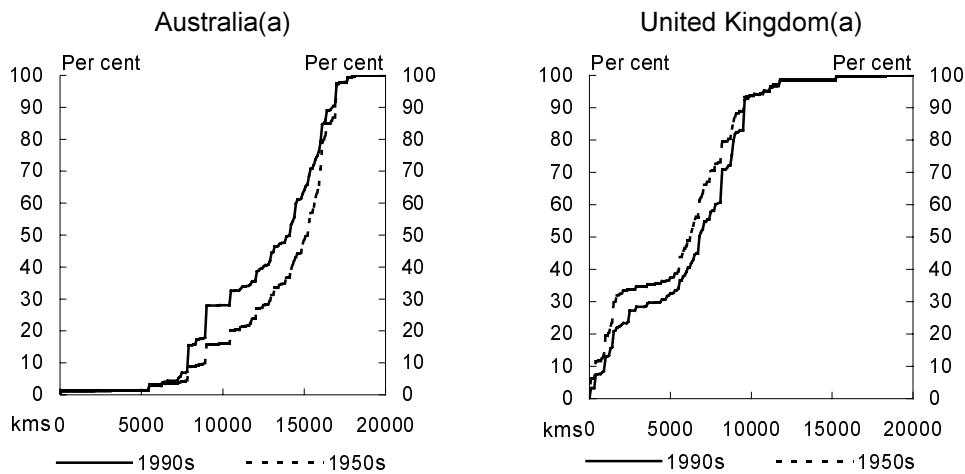
Fiscal policy and monetary policy were poorly coordinated prior to these developments, and generated considerable uncertainty. The exchange rate, before being floated in 1983, also transmitted adverse overseas developments (such as the oil price shocks) rather than providing a fully effective means to cushion the economy from their impact. With inflexible labour and product markets (and a centralised wage fixing system), the effects of these shocks were transmitted widely and rapidly into the broader economy. The result was a tendency towards higher inflation, lower growth, weaker investment, rising unemployment and poor productivity. Moving these macroeconomic policies onto a medium-term footing improved the climate for quality investment decisions and hence the potential for productivity growth.

The rapid economic growth of Asia over recent decades will help to ameliorate the disadvantage of long distances from Australia's international markets. Falling international transportation costs have also played a role by helping to lower the costs of Australia's trading with the rest of the world. Containerisation of shipping, widening use of bulk carriers, the growth of air freight and the fall in communication and data costs have all lowered costs of international trade.

Nevertheless, the costs of trading with major international markets remains a key barrier for Australia relative to other countries. For example, from the 1950s to the 1990s, the proportion of world GDP within a 10,000-kilometre circle from Sydney increased from some 16 per cent to 28 per cent. But for London, the same sized circle enclosed 94 per cent of world GDP in both the 1950s and the 1990s (Chart 7). By this measure, the only OECD country in the world more remote from the bulk of global GDP than Australia is New Zealand.

Distances among domestic markets continue to constitute an economic hurdle. Australia is the world's sixth largest country in area, yet has a relatively small population of around 20 million. No two cities in Australia with a population of over one million are closer than 600 kilometres, and Perth is 2,400 kilometres from its nearest Australian regional market. In contrast, California (which economic historians have noted was once very similar to the Australian economy in size and affluence), now has a population of around 34 million in an area around one-twentieth of Australia's, with its population concentrated between San Diego and Sacramento — a distance of some 800 kilometres (McLean and Taylor 2001).

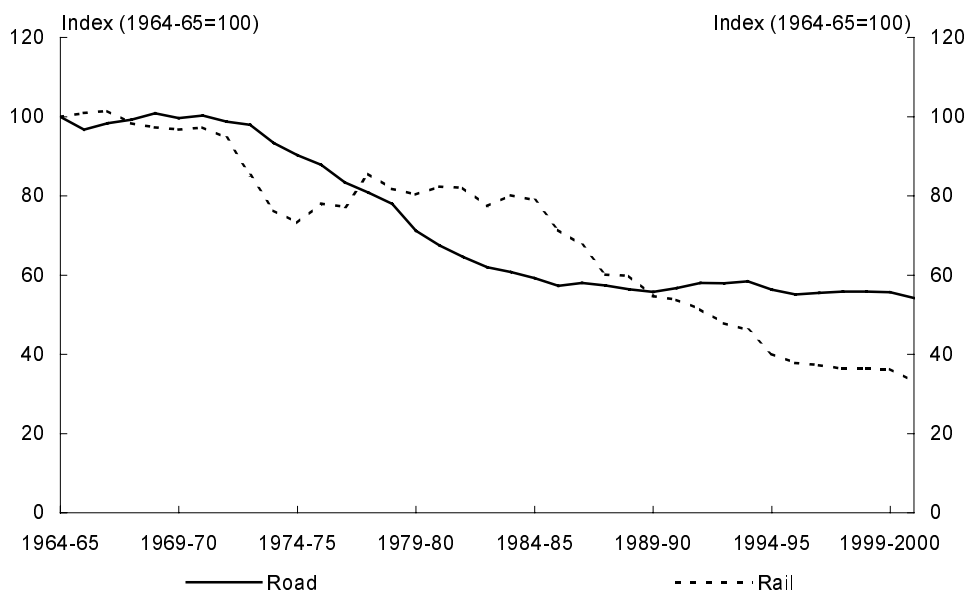
Chart 7: Distance to the world's GDP from Australia and the United Kingdom



(a) These charts show the percentage of world GDP (measured in purchasing power parity terms) falling within circles of different radii (from 0 to 20,000 kilometres) from either Sydney or London. Source: Treasury calculations based on data from Maddison (2001).

Technological change and economic reforms have made a difference domestically: the improvements in roads, the use of larger articulated trucks and reform of the railways have lowered the costs of national trade. Since 1965, road freight rates have almost halved in real terms while rail freight rates have fallen by two-thirds (Chart 8). Since 1990, real coastal shipping rates to and from Perth have fallen by 40 per cent and real air rates within Australia have fallen by 25 per cent.

Chart 8: Real road and rail transport costs, 1964-65 to 2000-01



Source: Bureau of Transport and Regional Economics (2002).

While neither international nor national distances among markets are as costly to Australia as they used to be, geographic remoteness is still a significant influence in the pursuit of world-class productivity performance and living standards.

Efficient resource allocation will lead to activities of the highest value being carried out. On the one hand, resources will be allocated to activities where distance is not a barrier or where Australia's advantages are clear. For example, in some areas of mining and agriculture, and potentially some areas of the international trade in services. On the other hand, it also means that, to a greater extent than for many other countries, resources will be allocated to activities where distance confers natural protection by decreasing the competitiveness of imported goods or services. As a consequence, Australia's relative levels of productivity may be behind global best practice in these areas.

These remaining economic costs of distance cannot be wholly erased, and constitute a challenge to the quality of all economic policies. Australia has to do better than other countries in the quality of policies to drive productivity if the remaining natural barriers of distance are to be overcome. For example, while Australia has relatively high productivity in the transport industry, still higher productivity may be needed to overcome Australia's geographical disadvantages.

Can Australian productivity keep rising at recent rates?

Continuing high Australian productivity growth will require an environment in which individual businesses strive for better products or better ways of doing things and where resources move quickly to the good ideas. Competition is central to this, through providing both an incentive for new ideas and effectively sorting the good from the bad. It has become clear that the level and acceleration of labour productivity growth in the 1990s in Australia came about through both the outward movement of the international productivity frontier and Australian convergence with that frontier. Looking forward, there continues to be scope for both of these factors to drive productivity growth.

In moving towards the productivity frontier, competition and flexibility in product and labour markets, supported by good education and training in a stable macroeconomic environment have been found to be centrally important. In general, Australia's policies have been found by the OECD to be relatively

good. Nonetheless, strong productivity growth is not automatic: it will require consistent striving for competitive, flexible markets and continuing policy reforms.

For future outward moves in the productivity frontier, there are several grounds for optimism. First, there is evidence of momentum in the recent high United States productivity growth that would keep US labour productivity growth around 2 per cent per year and perhaps as high as 2¾ per cent per year for several more years (Oliner and Sichel 2002).

Second, and beyond the short-term momentum from current uses of computers, the family of information and communication technologies could offer considerable medium-term contributions to productivity growth for a decade or more to come, as they gradually facilitate further organisational change and new business practices. In this respect, they resemble earlier 'general purpose technologies'. As with steam in the 18th and 19th centuries and electricity in the 19th and early 20th centuries, information and communication technology is now clearly a general-purpose technology with wide potential for further organisational change in many industries and in household life. But as experience with those earlier technologies has shown, applications take several decades to disperse through the economy. The railway and steam-related shipping booms occurred decades after the first application of steam power in factories and mines, and in turn the electrification of previously steam-powered factories took decades while new factories were constructed and new production line and management techniques were refined (Commonwealth Treasury 2001; DeLong 2002, p. 25).

Third, further technological innovation is likely in a range of areas, and should lead to productivity enhancements where competition and flexibility drive the application of new technology.

Policies to increase participation and sustain productivity growth

Recent analysis has helped to identify the key policy settings which have been important in encouraging productivity growth, and explaining differences in performance across a group of advanced economies. These same policy settings can also be very influential in widening the choices available to actively participate in the labour force, or in reducing or removing obstacles or disincentives to such participation.

The analysis uses databases that generally cover 21 OECD member countries, over the period from the early 1970s to the late 1990s. It permits generalisations based on the range of policies pursued by those countries over that time period, but the generalisations should not be projected beyond that range of experience. (For example, propositions about the size of government obviously could not be extrapolated to very small government, insufficient to maintain basic services).⁶

Lessons from multi-country comparisons

The central findings of recent research comparing policy consequences for performance in a wide group of OECD countries are that:

- faster innovation, productivity growth and income growth are driven by high competition and flexible, lightly regulated product and labour markets.
- for best effect, these policies need to be set in a stable, low-inflation macroeconomic environment, to facilitate investment and entrepreneurship.
- important, mutually reinforcing benefits come from 'cross-market effects' of reforms in labour and product markets. Product market competition helps produce good employment and productivity outcomes, and flexible labour markets contribute to strong innovation outcomes as well as low unemployment and high participation.

One important implication of these findings is that where long-term joblessness or inactivity are still problematic (as in Australia), mutually supporting product and labour market reforms that improve participation and productivity, and lower unemployment, may tend over time to make society not only richer in aggregate, but also fairer in terms of wider access to flexible employment options.

The research yielding these results uses recently-constructed indicators that estimate the effects on economic performance over the last 20 to 30 years of regulatory burdens, openness to trade, and openness to foreign direct

6 The experience spans governments whose outlays as a share of GDP range from 23 per cent (Korea) to over 50 per cent (Sweden and France). The share of total government spending on education, transport and communications and R&D ranges from about 13 per cent (Germany) to 30 per cent (Korea). To finance total outlays, tax mixes also vary widely. For example taxes on incomes and profits as a percentage of GDP range from under 8 per cent (Korea) to almost 30 per cent (Denmark). See OECD (2003e), p. 69 and OECD (2002d).

investment in product markets, as well as regulatory, tax and welfare distortions in labour markets.

Such indicators can only approximately capture the subtlety of different national practices. However, they permit examination of the complex way in which policy differences interact to cause performance differences.

The macroeconomic policies that have produced the fastest growth in real GDP per head of working age population in the sample of countries have been those that have delivered stable low inflation, and a relatively small government sector (as a share of GDP).⁷ At any chosen size of government, the way it is financed also matters as taxes on incomes are likely to be more directly distorting of work effort (for those in employment), innovation (for example, for those starting unincorporated businesses) and labour force participation (for those unemployed or exiting unemployment, and facing a discouraging interaction of the tax and benefit systems) (OECD 2003e, pp. 20-22, 66-67 and 81-83).

Regulations and foreign competition in product markets interact with regulations and other policies affecting labour markets (such as personal income taxation and welfare payments), and vice versa. The OECD's main conclusions from comparisons published in 2002 and 2003 of members' experience with labour market and product market reforms were: (OECD 2002c, Chapter 5; OECD 2002b)

- anti-competitive product market regulation (including lack of foreign competition through imports or foreign direct investment) worsens labour market performance. That is, weak competition lowers overall employment. In the worst performing economies with high regulation (including lack of foreign competition), weak competition causes almost 3 percentage points of the shortfall in their non-agricultural employment rate below the OECD average (Nicoletti et al 2001, Figure 8).
- labour market regulation affects product market performance. For example, where industrial relations systems are relatively decentralised, strict employment protection legislation reduces R&D intensity, and might

⁷ These findings emerge after controlling for differences in other policies (such as competition and labour market policies, further discussed below) and country-specific circumstances (such as the size of national markets and the distance-related costs of their trading with other economies). However, this finding needs to be interpreted with caution, as the quality of individual tax and spending decisions will determine the impact of government on the economy.

therefore slow innovation. And since new technologies typically require more flexible work arrangements and greater individual responsibilities, the OECD suggests that the deployment of new technologies is likely to occur fastest where working conditions and wages are most flexible.

- regulatory restrictions in product and labour markets may suppress apparently unrelated performance (such as R&D, or innovation and the uptake of new, productivity-enhancing technology). The main channel, further discussed below, may be through raising barriers to new entrants, who are very important in more competitive markets to the revision of work practices and the deployment of new technologies.
 - More generally, innovation is just another way of saying 'new work practices'. In countries or industries that are far from the global technology frontier, such new processes for organising work may have little to do with new technologies that need to be discovered by R&D, and which becomes embodied in patents and new capital equipment. It is in these cases that high competition is important in closing the gap in productivity levels by driving the rapid adoption of global best practice.⁸
- employees often share through higher wages some of the revenue extracted by higher prices from consumers in industries where product market competition is low. Such transfers occur not only at the expense of consumers, but also at the indirect cost of consequently reducing demand for other industries' output and hence other jobs.
- there are no clear links from anti-competitive product market regulation to job security. That is, as has been seen in Australia, protecting an industry does not result in protection of employment. Nor does product market de-regulation lead to permanent increases in earnings inequality.

The cross-country evidence also shows that a sophisticated, well regulated financial sector is an important contributor to growth. As the OECD notes:

'There is evidence that a well-developed financial system is an important aspect of a favourable environment for growth, especially in a period of the rapid spread of a new technology when they can promote new, innovative enterprises.' (OECD 2003e, p. 24)

⁸ Australian anecdotal evidence illustrates this point in the early and mid 1990s, when labour and product market reforms enabled firms to lift output without initially needing much, if any, new investment.

It is important not to 'over-interpret' the quantitative results from this analysis. It seems to capture realistically the reasons for the relatively good performance of the above average economies, and the relatively poor performance of the below average performers. It thereby offers a plausible prescription of the direction of policy reforms necessary to do better, whether the starting point performance is above average, or below. But it would be a mistake to interpret small differences in national rankings in the underlying indicators of policy settings as providing precise guidance as to where policy reforms are most needed, or the precise quantitative pay-off that might be achieved.

Lessons from firm-level data

A second body of OECD research uses new, firm-level data to compare productivity experience in the same sectors across 10 European and North American economies.⁹ Typically, higher than national average information and communication technology use arises in the same industries or sectors in different countries (for example, retailing, wholesaling and financial services), but North American high users are also heavier users than European high users (van Ark, Inklaar and McGuckin 2002). Early results of analysis across countries using firm-level data also show that firm turnover is very important to innovation (OECD 2003e, pp. 127-158).

- About 20 per cent of firms enter and exit most markets every year, affecting some 5-10 per cent of employment (that is, exiting and entering firms, especially the latter, are typically smaller than average employers).
- Some 20 to 40 per cent of entering firms fail within 2 years, and only 40-50 per cent survive beyond the seventh year.
- Entry and exit rates are highly correlated within industries — for example, large numbers of new entrants tend to be correlated with large numbers of exits of failing firms.
- The industries with high entry and exit are not constant over time. High change industries in one period can be low change industries 5 to 10 years later, presumably with the ebb and flow of cycles in products or technology.

The important role of entry of small new firms in innovation helps explain how excessive product and labour market regulations suppress innovation and

⁹ Data limitations have not permitted inclusion of Australia in this work. See Bartelsman, Scarpetta and Schivardi (2003).

retard productivity growth. They make it harder to start new firms that often deploy new work practices, superior technology or merely a more appropriate capital stock, and to close failing firms that embody old work practices or less appropriate capital stock.

The role of firm entry and exit also underlines the importance of good corporate governance, which allows investors to differentiate between good and bad corporate performance early, and apply timely shareholder pressure to underperforming companies to improve their performance. Good corporate governance improves productivity and the efficiency of resource allocation by facilitating speedy growth of strong performers, and quickly detecting firms that will fail. At this point, good bankruptcy administration and resolution structures can help reallocate the resources of a failed firm to other uses, while minimising disruption.

Applying the lessons in Australia

The OECD noted in its 2003 Economic Survey of Australia that:

'In order to meet the longer-term objective of raising living standards towards the highest in the OECD, further reforms to labour, product and financial markets and to social policies will be needed, that will encourage more people to join the labour force, remain in it, and steadily raise their productivity.'
(OECD 2003c, p. 9)

The central messages from research across countries over the last decade emphasises that policy reforms on a wide front are more likely to yield significant dividends than reforms focused in just one set of markets.

The mutually reinforcing benefits of reforms in both product and labour markets for higher participation, lower unemployment, faster innovation and higher productivity growth often could not have been foreseen in detail.

That said, further reforms in areas likely to boost productivity and participation hold distinct promise to offset at least part of the economic challenges posed by demographic change.

In this regard, the Government is taking active steps to address these issues, and has commissioned an interdepartmental task force reporting to the Treasurer. The task force will take a whole-of-government approach to demographic change, focussing on labour force participation, including by older Australians who wish to work; superannuation and retirement incomes policy; and managing expected increased government spending in areas affected by demographic change.

Macroeconomic policies

Stable and supportive macroeconomic policies are a necessary backdrop to efforts to lift Australia's productivity and participation levels. Australia's medium-term fiscal framework and its monetary policy framework produce stable low inflation and contribute to stabilising the business cycle. The certainty and credibility of these policies contribute to an environment conducive to investment and innovation.

A range of microeconomic policies can also play a more targeted role in responding to economic pressures from Australia's ageing population.

Education and training policy

Investment in education and skills is critical to improving productivity and participation levels throughout the economy.

Improving education and training outcomes can increase productivity directly by increasing the skills and abilities of individual workers and indirectly by raising the flexibility of workplace teams. It also allows more rapid utilisation and transmission of new skills and production technologies, having a dynamic effect in increasing productivity. Literacy and numeracy skills obtained during schooling form the foundation for the capacity of individuals to participate productively in the labour force and adapt to its changing nature.

An ageing population, with an older labour force, will need to engage increasingly in lifelong learning to improve labour force participation choices. The education and training system will need to be flexible and responsive enough to adapt to changes in the age of its key clients, as well as to continual change in the skills required as the economy evolves.

Similarly, it is essential to have a strong higher education sector. The higher education reforms announced in this Budget will establish a more efficient and responsive higher education sector, which should improve flexibility in responding to changing patterns of demand in higher education and deliver better higher education outcomes. As part of this, individuals will have greater incentives and capacity to invest in their education, as well as having greater choices among educational institutions.

Labour market policy

As discussed above, OECD research has highlighted the central role of labour market flexibility in improving economic performance.

A flexible workplace relations system allows employers and employees to tailor wages and conditions to the specific skills and needs of particular individuals and jobs. Increased flexibility will be crucial in achieving higher participation. For example, it would allow older workers to choose whether to remain attached to the labour force for longer by working part time as they approach retirement. Enhanced flexibility in the workplace relations system should also increase incentives for workers to upgrade their skills to increase their attractiveness to employers.

By making it easier for workers to change between jobs and occupations, a flexible labour market can assist workers in avoiding periods of involuntary unemployment. The more flexible the labour market, the easier firms (particularly small businesses) can employ workers in areas of growth in the economy, enhancing job creation, innovation, deployment of new technologies and productivity growth.

Workplace relations are now focused on agreement making, with awards performing a safety net role. The wages and conditions for most federal workers are now determined at the workplace or enterprise level through either formal or informal agreement making. Increased flexibility in wage negotiations has enabled employers and employees to jointly pursue improvements in productivity, wages and conditions taking into account the specific circumstances of the individual firm and workers involved.

While there has been significant reform, there is scope to do more. Proposed amendments to the Workplace Relations Act simplify procedures and increase labour market flexibility in areas such as unfair dismissal cases. Under the current arrangements, industrial disputes have fallen significantly, suggesting that past reforms have not proven contentious. Enacting further reform would provide substantial dividends.

Taxation policy

Productivity and participation are affected by the level of taxation and the design of the taxation system.

When determining the overall level of taxation, the government's role of providing public goods and services and redistributing income needs to be weighed against the distorting impacts of taxation on work effort, risk taking and relative prices. The design of the taxation system is also important. Tax on the returns to capital can affect savings and investment behaviour, while tax on the returns to labour can affect participation decisions.

Taxes on labour income can discourage participation by reducing the returns from additional hours of work. With high taxes on labour income, some workers may substitute into other activities outside the paid labour force, or may restrict their hours of work more than they would choose with a lower tax rate. Skilled workers such as teachers, nurses, lawyers and accountants are increasingly aware of the different personal income tax treatments that apply to work in different jurisdictions. Maintaining internationally competitive personal income tax arrangements will be an important ongoing factor in sustaining participation and productivity in Australia.

Welfare and health policy

Australia has a unique welfare system, providing flat rate (rather than earnings-related) benefits financed from general revenue. It is highly targeted, providing a reliable safety net for those in need.

However, different rates of assistance and means testing arrangements for various social security benefits for people of working age may discourage labour force participation and job search, especially if individuals are able to access more generous payments and less restricted means testing. For example, the Disability Support Pension and the Parenting Payment (single) are more generous than unemployment payments.

The eligibility criteria for, and the obligations that are placed on recipients of, social security payments can also have an important impact on participation decisions. For example, Newstart (unemployment benefit) recipients who are capable of working (including part time work) are required to regularly look for work in return for their taxpayer-funded assistance. However, overall only around 15 per cent of social security recipients of labour force age are currently required to look for work as a condition of receiving their benefit.

The interaction between income tests for social security payments and the personal taxation system can also directly influence participation decisions of those receiving payments. An individual's return from working can depend on a complex mixture of interactions, including the rate at which income support is withdrawn, eligibility for other concessions such as rent assistance, and the marginal tax rate. If effective marginal tax rates are too high, they can affect work incentives.

Incentives to participate for some social security recipients have been improved through *The New Tax System* and the *Australians Working Together* packages. In addition, a review of working age income support payments is currently under way. A key objective is to ensure that the welfare system

actively promotes participation in the labour force where that is an achievable goal for the individual. Retirement income policies should also not operate as a disincentive to participation.

The health of older workers is also an important factor in their labour force participation. Ill health plays a significant role in early retirement decisions. Maintaining and improving health will therefore become more important as the population ages.

Reducing the occurrence of avoidable diseases or injuries will mean that a higher proportion of the ageing population will be able to remain fully engaged in society, including maintaining some form of participation in the labour market if they so choose. Proper management of chronic diseases will be critical to ensuring this full and active participation in all aspects of society.

Product market reforms

Australian product market reforms over the past decade are internationally recognised as contributing to the improved performance of the Australian economy since the mid 1990s (OECD 2003c, pp. 75-84). These reforms intensified competition among both domestic and international suppliers. Intense competition has been shown to be particularly important in raising productivity in sectors where it trails the global frontier.

However, the starting point for these reforms was an economy that had comparatively restrictive product market regulation. Reforms have been implemented in the communications, energy and transport sectors, and by commercialising government businesses, removing anti-competitive regulation, and broadening the scope of competition. Broadly speaking, these reforms received bipartisan political support, and Australia now has a comparatively pro-competitive regulatory stance, as measured by a new OECD index of product market regulation.¹⁰

Many of these reforms were incorporated into National Competition Policy that was agreed by the Commonwealth and all States and Territories. The implementation of this agenda is now largely completed. However, Australia still lags behind world best practice in a number of areas. This includes acknowledged parts of an ongoing reform agenda encompassing energy, water

¹⁰ The OECD index measures product market regulation for 21 of the 30 OECD members (including Australia) scaled from 0 (least restrictive) to 6 (most restrictive). The index shows the US, the UK, NZ, Australia and Ireland to be the least regulated group of economies. See Nicoletti and Scarpetta (2003).

and transport. There is also considerable scope for further reform in the communications sector.

It also will be helpful to participation and productivity outcomes to continue to lower barriers to trade.

A further helpful contributor to Australian productivity will come from foreign direct investment underpinned by the shift over the last two decades to a more liberal policy regime. Even in the United States and the United Kingdom, both often closer in many industry sectors to the global productivity frontier than Australia, foreign direct investment has clearly generated higher productivity levels and faster productivity growth in the sectors where it is prevalent through intensifying competition (Keller and Yeaple 2003; Griffith and Simpson 2003).

Concluding comments

Continued ageing of the population, persistence of low participation rates among the increasing proportion of older people, and a possible fall-back to historical rates of productivity growth would imply lower growth rates in Australian standards of living in decades to come.

Continuous adaptation, and changes to policies and attitudes, can offset these factors and make possible sustained high levels of growth. To illustrate the gains to Australia's standard of living that could be possible, it is worth considering the increase in GDP per capita that could be achieved through plausible policies to lift participation and sustain productivity growth.

Improving participation has the greatest scope for gains up front. If participation rates for each age and gender cohort were to rise towards the top of the OECD countries' current experience over the next 20 years, then the level of GDP per capita could be over 9 per cent higher by 2041-42 than the projections contained in the IGR. Most of the long-term gain would be in place by the early 2020s.

On top of this, further reforms might be able to drive faster productivity growth than projected in the IGR. Productivity growth of 2 per cent per annum (halfway between the 30 year average of 1¾ per cent used in the IGR, and the 2¼ per cent recorded over the past decade or so) would add a further 4 per cent or so to the level of per capita income by 2021-22. Further, because higher productivity growth compounds through time, by the year 2041 the

higher level of productivity growth could potentially boost incomes a further 9 per cent compared to the scenario with participation alone improving.

If these levels of participation and productivity can both be achieved, the total level of GDP per capita would be almost 20 per cent higher than the base case used for the IGR projections. This would greatly improve Australia's capacity to respond to the pressures that will come from an ageing population and continued higher cost of health care.

Medical, lifestyle and economic improvements mean Australians are living longer, healthier lives. They might generally want more flexibility as to how to spend their additional productive years. If the community supports timely policy choices over the balance of this decade, increasing competition and flexibility in product and labour markets could produce higher participation rates and productivity growth rates than currently projected. Towards 2040, the resultant society would be both richer and fairer in terms of access to employment, with Australians enjoying lower unemployment, better education and training, continuing rapid innovation and productivity growth, and greater choice among more flexible employment options over their life spans.

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External sector

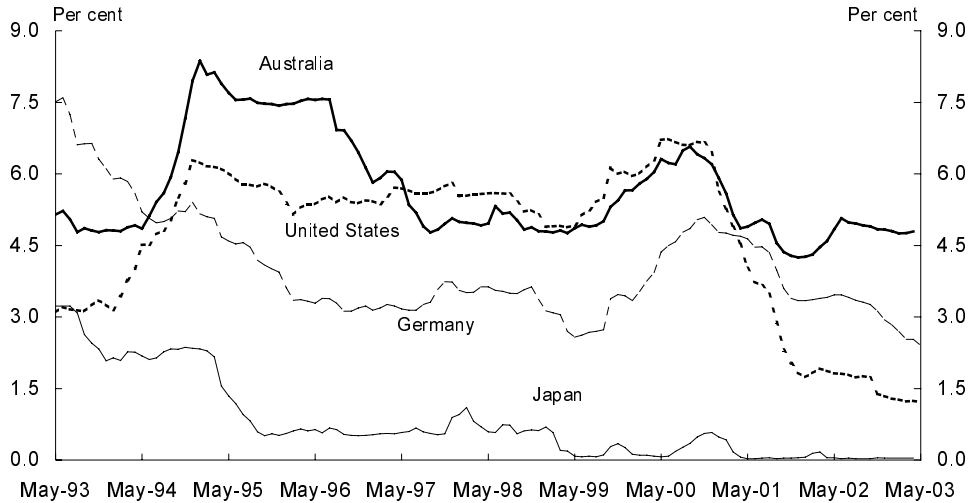
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Key to tables

- | | |
|--------|--------------------------------|
| n.a. | not available |
| n.y.a. | not yet available |
| .. | change less than 0.05 per cent |

Chart 1: Selected international indicators

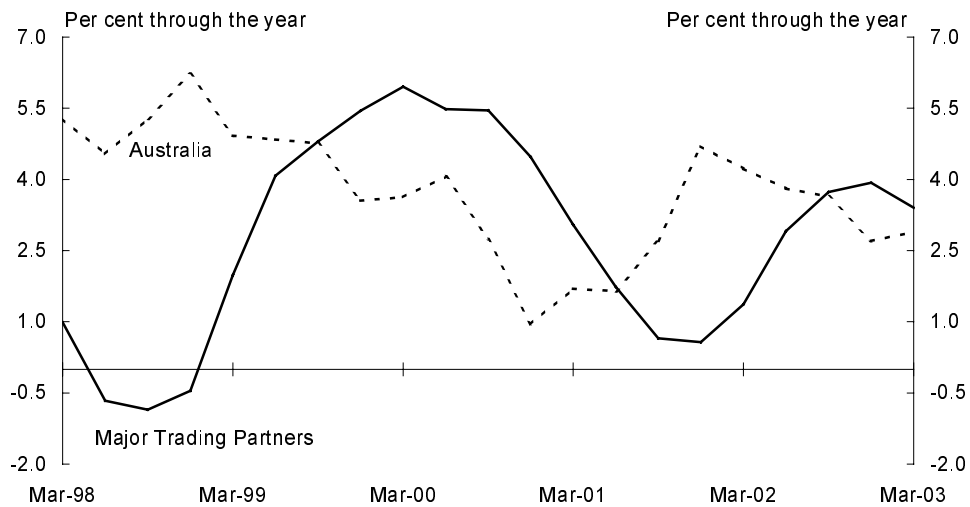
Panel A: Short-term interest rates^(a)



(a) Short-term interest rates are monthly averages and are defined as follows: US — 3-month certificates of deposits, Japan — 3-month certificates of deposit, Australia — 90-day bank accepted bills and Germany — 3-month FIBOR.

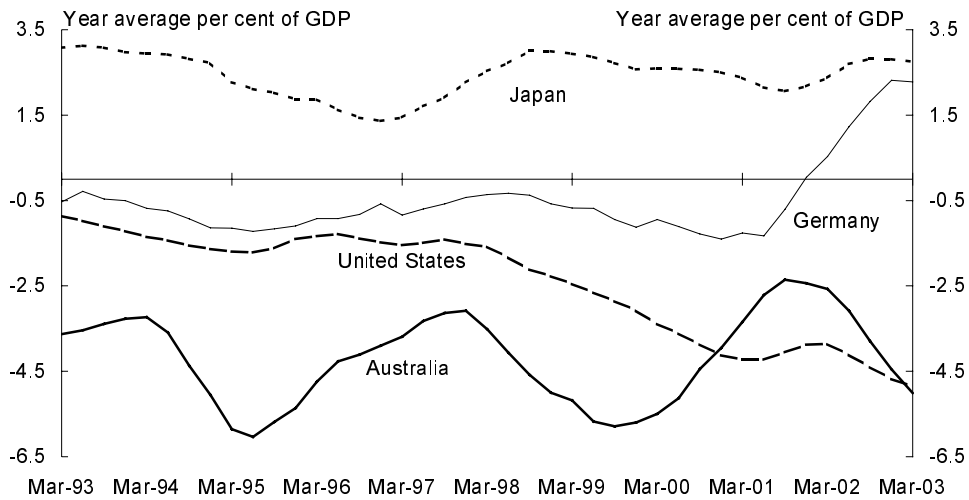
Source: OECD Main Economic Indicators.

Panel B: Real output^(a)



(a) Seasonally adjusted real GDP growth for each major trading partner is weighted by their respective shares of total Australian merchandise exports averaging from 1998-99 to 2000-01. Major trading partners are Japan, US, South Korea, New Zealand, China, Taiwan, Singapore, UK, Hong Kong, Indonesia, Malaysia, Italy, Thailand, Canada, Germany, the Philippines and France.

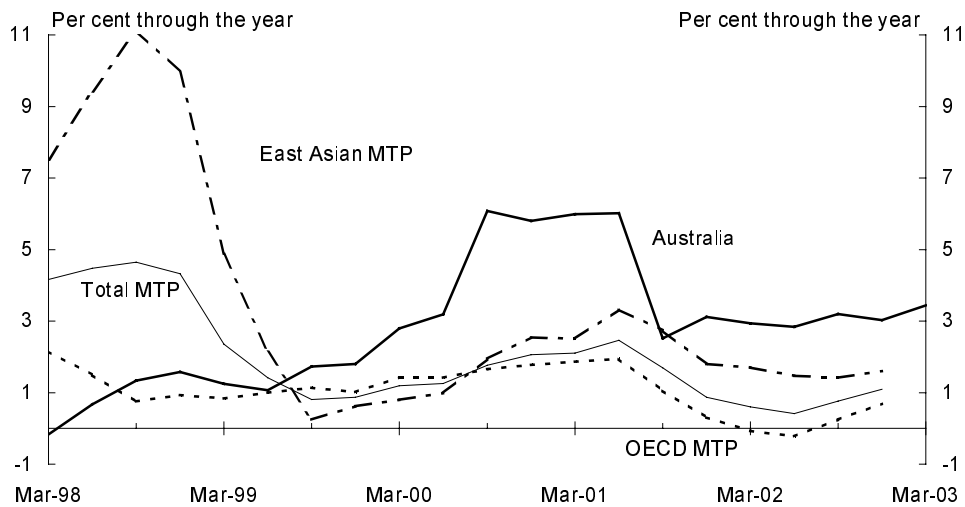
Panel C: Current account balances



Data are seasonally adjusted.

Source: Data are from statistical agencies of respective countries, except for Germany which is from the OECD Main Economic Indicators.

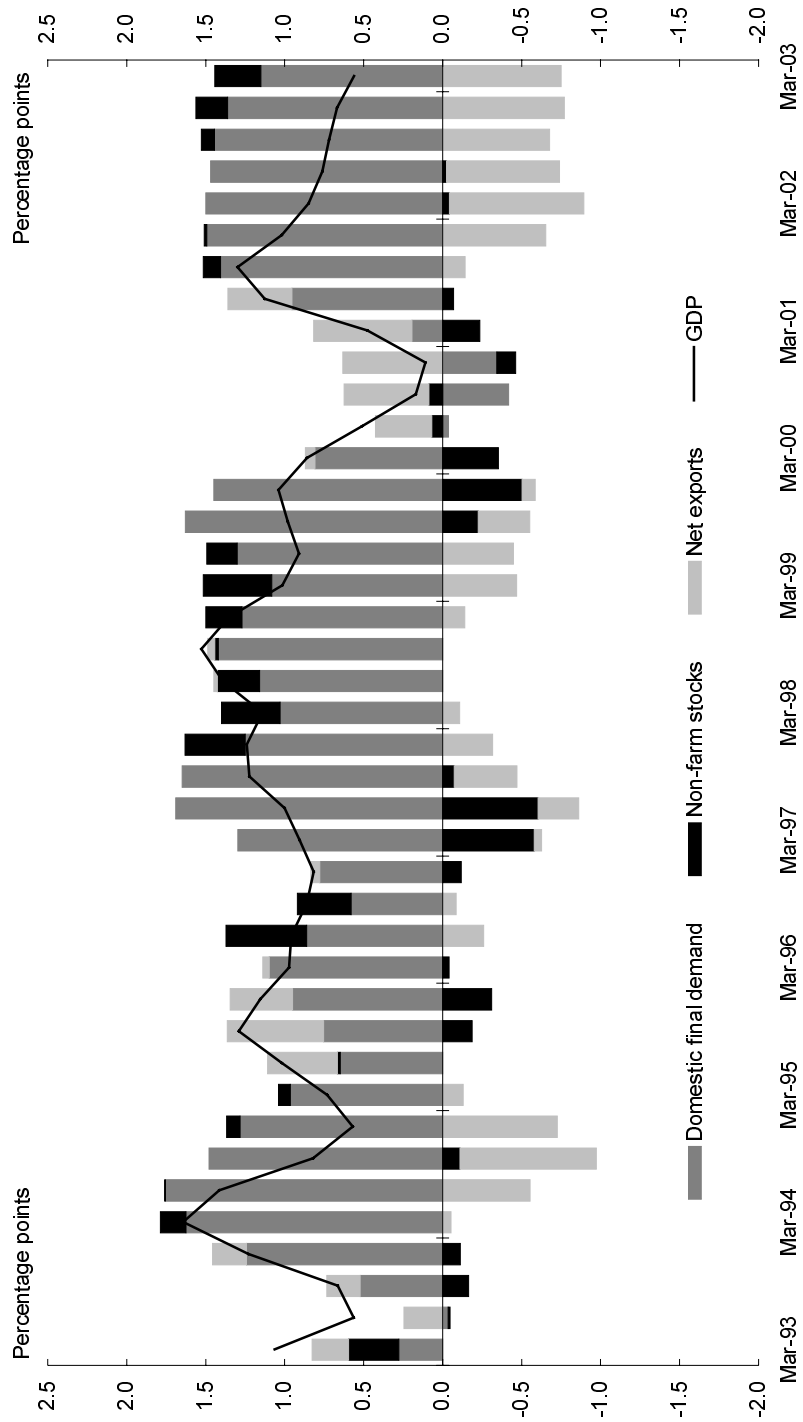
Panel D: Consumer price inflation^(a)



(a) The aggregate inflation rates are derived from the weighted average of inflation rates of individual trading partners, with the weights being their respective shares of Australian total merchandise trade from 1998-99 to 2000-01. Major trading partners are Japan, US, South Korea, New Zealand, China, Taiwan, Singapore, UK, Hong Kong, Indonesia, Malaysia, Italy, Thailand, Canada, Germany, the Philippines and France.

Source: Data for Japan, US, South Korea, New Zealand, Taiwan, Singapore, UK, Hong Kong, Indonesia, Canada and Germany are from the ABS All Groups CPI (excluding housing) measure. For the rest of Australia's MTPs (China, Malaysia, Italy, Thailand, the Philippines and France), the CPI are from each country's respective all groups CPI series which exclude the effects of mortgage interest rate changes.

Chart 2: Contributions to trend quarterly GDP growth
(Chain volume measures)



Source: ABS Cat. No. 5206.0.

Table 1: Components of Gross Domestic Product (chain volume measures)

Year	Final domestic demand										Imports	Exports	GDP
	Household consumption	Private investment in dwellings	Private business investment	Private final demand	Public final demand	Domestic final demand	(Percentage change on preceding year)						
1999-00	4.1	14.3	7.8	5.6	3.8	5.2	9.4	12.5	4.0				
2000-01	3.0	-20.9	-4.6	-0.1	1.7	0.3	7.3	-1.3	1.8				
2001-02	3.3	19.5	4.1	4.7	4.0	4.6	-1.4	2.2	3.9				
Quarter													
2002 Mar	1.2	5.6	3.2	1.8	0.3	1.5	-0.2	3.7	0.8				
Jun	1.2	5.5	3.4	1.8	0.2	1.5	0.3	3.5	0.8				
Sep	0.8	5.1	3.8	1.6	0.8	1.4	0.1	3.0	0.7				
Dec	0.7	3.9	3.8	1.5	0.9	1.3	-0.2	3.1	0.7				
2003 Mar	0.7	2.5	2.7	1.2	0.6	1.1	-0.1	3.0	0.6				
Quarter													
2002 Mar	1.5	2.3	0.1	1.4	0.1	1.1	2.0	3.8	0.5				
Jun	1.2	7.9	5.2	2.2	0.6	1.9	0.8	4.2	0.8				
Sep	0.8	4.2	3.2	1.3	-0.4	1.0	-1.0	0.8	1.0				
Dec	0.5	6.2	8.0	2.2	2.8	2.4	0.5	7.1	0.3				
2003 mar	1.0	-0.7	-0.4	0.5	-1.4	0.1	-0.4	0.6	0.7				
Quarter													
2002 Mar	3.6	29.5	6.6	5.9	3.9	5.5	-0.7	5.0	4.4				
Jun	4.1	28.6	9.6	6.7	3.7	6.0	-0.7	10.2	4.0				
Sep	4.2	25.2	12.7	7.0	2.7	6.0	-0.3	13.2	3.4				
Dec	4.0	21.7	15.0	6.9	2.2	5.8	0.0	13.9	3.0				
2003 Mar	3.5	18.1	14.5	6.2	2.4	5.4	0.1	13.1	2.7				

Source: ABS Cat. No. 5206.0.

Table 2: Contributions to change in Gross Domestic Product (chain volume measures)

Year	Final domestic demand					Change in inventories				GDP
	Household consumption	Private investment in dwellings	Private business investment	Private final demand	Public final demand	Total final demand	Private non-farm	Farm & public authority	Net exports	
1999-00	2.5	0.8	0.0	4.4	0.8	5.2	-0.4	0.0	-0.8	4.0
2000-01	1.8	-1.3	-0.9	-0.1	0.4	0.3	-0.3	-0.1	1.9	1.8
2001-02	2.0	0.9	0.3	3.7	0.9	4.6	-0.1	0.1	-0.8	3.9
Quarter	(Contribution to change in GDP - Trend)									
Sep	0.4	0.4	0.1	1.0	0.4	1.4	0.1	0.0	-0.1	1.3
Dec	0.6	0.4	0.2	1.2	0.3	1.5	0.0	0.0	-0.7	1.0
2002 Mar	0.7	0.3	0.4	1.4	0.1	1.5	0.0	0.0	-0.9	0.8
Jun	0.7	0.3	0.4	1.4	0.1	1.5	0.0	-0.1	-0.7	0.8
Sep	0.5	0.3	0.5	1.3	0.2	1.4	0.1	-0.1	-0.7	0.7
Dec	0.4	0.2	0.5	1.2	0.2	1.4	0.2	0.0	-0.8	0.7
2003 Mar	0.4	0.2	0.3	1.0	0.1	1.2	0.3	0.1	-0.7	0.6
Quarter	(Contribution to change in GDP - Seasonally adjusted)									
Sep	0.2	0.5	0.3	1.1	0.2	1.4	0.0	-0.1	0.1	1.2
Dec	0.6	0.4	0.3	1.3	0.6	1.9	0.0	0.3	-1.5	1.3
2002 Mar	0.9	0.1	0.0	1.1	0.0	1.1	-0.1	-0.2	-0.4	0.5
Jun	0.7	0.4	0.6	1.8	0.1	1.9	0.0	-0.1	-0.8	0.8
Sep	0.5	0.2	0.4	1.1	-0.1	1.0	0.4	-0.2	-0.4	1.0
Dec	0.3	0.4	1.0	1.8	0.6	2.4	-0.4	0.2	-1.6	0.3
2003 Mar	0.6	0.0	-0.1	0.4	-0.3	0.1	1.0	0.1	-0.2	0.7

Source: ABS Cat. No. 5206.0.

Table 3: Gross value-added by industry (chain volume measures)

Year	Electr-			Accomm-			Gov.			Cultural					
	Agriculture, forestry & fishing	Manu- facturing	Electricity, gas & water	Wholesale trade	Retail trade	Accommodation, cafes & restaurants	Transport & storage	Communication services	Finance & insurance services		Property & business services	Administration & defence	Health & community services	Personal & other services	
1999-00	7.6	5.7	1.0	2.1	5.7	5.0	4.0	7.0	6.3	5.9	0.7	1.3	4.5	2.7	3.7
2000-01	-0.5	8.3	2.7	1.3	-15.6	2.9	5.2	0.8	1.0	6.7	2.6	1.9	4.4	6.9	2.5
2001-02	5.3	-0.6	4.0	-0.4	12.0	3.4	5.0	3.3	3.1	5.5	1.1	1.5	4.9	1.3	5.7
Quarter	(Percentage change on preceding year)														
2001 Sep	3.5	-0.4	1.6	-0.1	4.8	0.6	1.2	0.9	0.9	2.0	-0.2	0.4	0.6	2.4	1.8
Dec	3.2	-0.4	1.7	0.3	3.2	-0.4	0.9	1.1	0.8	1.2	0.1	0.3	0.0	0.9	0.6
2002 Mar	-1.5	-0.4	1.2	0.6	3.5	0.1	1.2	1.9	1.0	0.0	0.6	0.3	0.7	0.2	-0.2
Jun	-8.0	-0.1	0.6	0.7	5.0	1.3	1.9	1.6	1.1	-0.5	0.9	0.4	1.2	1.1	0.3
Sep	-11.2	0.2	-0.1	0.5	5.9	1.9	1.6	0.6	1.1	-0.6	0.9	0.4	1.0	1.9	1.1
Dec	-9.3	0.4	0.0	0.1	5.1	1.3	0.9	0.0	0.9	-0.5	0.5	0.4	0.7	1.6	1.5
2003 Mar	-4.9	0.1	0.2	-0.5	3.5	0.8	0.3	0.0	0.7	-0.6	0.2	0.3	0.3	0.9	1.2
Quarter	(Change on previous quarter - Trend)														
2001 Sep	2.8	-1.8	0.4	-0.5	4.6	1.3	1.5	0.4	1.1	1.8	1.5	0.3	-1.1	3.3	-0.2
Dec	7.1	1.4	2.0	2.1	4.9	3.7	-0.1	0.7	0.8	1.4	-1.0	0.3	1.6	-0.3	2.6
2002 Mar	-1.7	-0.2	1.5	-0.5	-0.4	0.5	2.0	2.6	0.5	0.2	0.9	0.3	-0.6	0.4	-0.3
Jun	-9.0	-2.3	0.4	0.1	6.8	0.1	1.7	1.3	1.6	-1.3	1.4	0.4	2.0	0.3	-2.3
Sep	-14.0	1.9	-0.1	1.9	7.5	4.1	1.1	1.7	1.2	0.0	0.3	0.4	1.2	2.5	3.3
Dec	-7.9	1.5	-0.7	0.3	4.1	-2.2	0.0	-0.3	0.4	-0.1	1.1	0.4	0.4	3.4	2.6
2003 Mar	-3.8	-2.3	1.3	-2.4	3.1	2.6	0.8	-0.7	1.6	-1.4	-0.6	0.4	0.2	-1.9	-1.5
Quarter	(Change on year earlier - Trend)														
2001 Sep	4.7	2.3	1.7	-1.6	-0.7	1.0	4.4	5.6	2.2	7.4	1.1	1.7	8.9	-0.9	10.0
Dec	8.8	-0.1	4.0	-1.2	11.0	3.5	5.0	3.9	2.8	6.9	0.4	1.6	6.2	1.1	8.0
2002 Mar	7.1	-1.4	5.4	0.2	17.1	5.7	5.6	2.0	4.6	5.3	0.6	1.4	3.6	3.5	4.7
Jun	-3.3	-1.3	5.2	1.6	17.6	6.2	5.8	1.6	5.6	2.8	1.4	1.4	2.5	4.7	2.5
Sep	-17.0	-0.7	3.4	2.2	18.8	5.5	5.7	2.9	5.2	4.0	0.1	1.4	3.0	4.2	1.9
Dec	-27.0	0.1	1.7	1.9	21.0	5.0	4.8	4.6	4.1	-1.5	2.9	1.4	3.7	4.9	2.7
2003 Mar	-29.5	0.6	0.6	0.8	20.9	4.1	3.4	5.4	2.1	-2.1	2.4	1.4	3.3	5.6	4.2

Source: ABS Cat. No. 5206.0.

Table 4: Real household income^(a)

	Non-farm employees	Non-farm average earnings	Non-farm compensation employees	Gross mixed income	Household income	Household disposable income
Year	(Percentage change on preceding year)					
1999-00	2.2	1.7	3.9	4.3	4.7	4.2
2000-01	2.7	-0.9	1.7	2.4	2.4	4.6
2001-02	0.9	2.0	2.9	11.7	2.1	2.3
Quarter	(Percentage change on preceding quarter - Seasonally adjusted)					
2002 Mar	0.6	0.3	0.9	2.4	0.7	1.1
Jun	0.5	0.8	1.4	-0.7	0.8	0.0
Sep	0.8	0.1	1.0	-4.5	0.4	-0.2
Dec	0.9	-0.1	0.8	-2.8	0.4	-0.2
2003 Mar	1.7	-0.7	1.1	1.4	1.2	1.2
Quarter	(Percentage change on year earlier - Seasonally adjusted)					
2002 Mar	1.2	1.9	3.1	13.3	2.6	4.0
Jun	1.4	1.9	3.4	12.2	2.0	1.6
Sep	2.3	1.2	3.5	-2.7	2.4	2.0
Dec	2.9	1.2	4.1	-5.6	2.2	0.8
2003 Mar	4.1	0.2	4.2	-6.5	2.8	0.9

(a) Deflated by the implicit price deflator for private final consumption expenditure.

Source: ABS Cat. Nos. 5204.0 and 5206.0.

Table 5: Wages, labour costs and company income

Year	Average weekly earnings (survey basis)			Unit labour costs			Factor shares	
	Full-time adult ordinary time earnings ^(e)	All persons total earnings ^(a)	Non-farm average earnings (national accounts basis) ^(e)	Nominal ^(b)	Real ^(c) (Index)	Wage share ^(d) (per cent)	Profit share ^(e) (per cent)	
1999-00	3.4	2.2	3.4	1.8	95.7	54.5	23.6	
2000-01	5.3	5.5	3.5	4.0	96.4	54.8	23.3	
2001-02	5.5	4.2	4.4	1.2	95.9	54.2	23.5	
Quarter			(Percentage change on preceding year)					
2002 Mar	1.4	1.0	1.1	1.6	0.5	54.0	23.7	
Jun	0.9	0.6	1.0	0.6	0.3	54.2	23.7	
Sep	1.2	1.2	1.1	-0.4	-1.3	54.2	24.2	
Dec	1.2	1.0	0.5	1.4	0.3	54.4	24.4	
2003 Mar	1.3	1.5	0.2	0.9	-0.3	54.3	24.6	
Quarter			(Percentage change on preceding quarter - Seasonally adjusted)					
2002 Mar	6.2	4.1	4.1	1.3				
Jun	5.2	3.7	3.6	1.2				
Sep	4.9	3.6	3.6	1.6				
Dec	4.8	3.9	3.7	3.2				
2003 Mar	4.6	4.3	2.8	2.4				
Quarter			(Percentage change on year earlier - Seasonally adjusted)					
2002 Mar	6.2	4.1	4.1	1.3				
Jun	5.2	3.7	3.6	1.2				
Sep	4.9	3.6	3.6	1.6				
Dec	4.8	3.9	3.7	3.2				
2003 Mar	4.6	4.3	2.8	2.4				

(a) All numbers derived from seasonally adjusted data.

(b) Ratio of nominal hourly labour costs (non-farm compensation of employees, plus payroll tax and fringe benefits tax less employment subsidies, per hour worked by non-farm wage and salary earners) to average hourly productivity (real gross non-farm product per hour worked by all employed persons).

(c) Nominal unit labour costs as defined in footnote (a) deflated by the derived implicit price deflator for gross non-farm product. (Base for index: 1998-99 = 100.0).

Compensation of employees as a share of total factor income.

Gross operating surplus of corporations as a share of total factor income.

Sources: ABS Cat. Nos. 5204.0, 5206.0 and 6302.0.

Table 6: Prices

	Consumer Price Index ^(a)		Implicit price deflators ^(b)	
	All groups	All groups excl housing	Gross non-farm product	Household final consumption expenditure
Year	(Percentage change on preceding year)			
1998-99	1.2	1.2	0.5	0.9
1999-00	2.4	2.0	2.3	1.6
2000-01	6.0	5.4	4.1	4.6
2001-02	2.9	2.9	2.0	2.2
Quarter	(Percentage change on preceding quarter)			
2001 Mar	1.1	1.2	1.4	0.9
Jun	0.8	1.0	0.7	0.8
Sep	0.3	0.0	-0.6	0.2
Dec	0.9	1.0	0.7	0.6
2002 Mar	0.9	0.9	1.1	0.7
Jun	0.7	0.7	0.2	0.2
Sep	0.7	0.5	0.8	0.9
Dec	0.7	0.8	0.9	0.6
2003 Mar	1.3	1.3	1.0	0.8
Quarter	(Percentage change on a year earlier)			
2001 Mar	6.0	5.6	3.9	5.0
Jun	6.0	5.8	3.7	5.0
Sep	2.5	2.6	1.7	2.6
Dec	3.1	3.2	2.1	2.4
2002 Mar	2.9	3.0	1.9	2.2
Jun	2.8	2.7	1.4	1.7
Sep	3.2	3.2	2.9	2.4
Dec	3.0	2.9	3.1	2.5
2003 Mar	3.4	3.3	3.0	2.6

(a) Based on the weighted average of eight capital cities consumer price index.

(b) Quarterly figures are derived from seasonally adjusted data.

Sources: ABS Cat. Nos. 6401.0 and 5206.0.

Table 7: Labour market

	ANZ Bank job advertisements series	Employed persons			Unemployment		Participation rate (per cent)
		Full-time	Part-time	Total	Rate (per cent)	Persons ('000)	
Year^(a)	(Percentage change on preceding year)						
1998-99	15.2	1.6	3.7	2.2	7.4	691.7	63.1
1999-00	15.7	2.5	3.4	2.7	6.6	634.5	63.4
2000-01	-22.5	1.5	3.8	2.1	6.4	625.5	63.7
2001-02	-12.1	-0.6	5.8	1.1	6.6	656.8	63.7
Quarter^(a)	(Percentage change on preceding quarter - Seasonally adjusted)						
2002 Jun	4.0	0.0	0.9	0.3	6.3	628.7	63.6
Sep	-1.3	0.4	0.6	0.4	6.2	617.9	63.5
Dec	1.0	0.5	2.1	0.9	6.1	610.1	63.8
Mar	-3.1	1.4	1.2	1.3	6.1	618.4	64.4
Quarter^(a)	(Percentage change on a year earlier - Seasonally adjusted)						
2002 Jun	9.9	0.3	5.0	1.5			
Sep	7.7	1.2	3.8	1.9			
Dec	10.0	1.5	5.3	2.5			
Mar	0.4	2.3	4.9	3.0			
Month	(Percentage change on preceding month - Seasonally adjusted)						
2002 Jun	-0.4	-0.8	2.8	0.2	6.5	642.8	63.8
Jul	-0.5	0.0	-1.0	-0.3	6.2	614.1	63.3
Aug	0.5	1.0	0.3	0.8	6.2	620.2	63.8
Sep	3.0	-0.1	-0.5	-0.2	6.2	619.6	63.6
Oct	4.2	-0.5	1.9	0.2	6.0	596.9	63.5
Nov	-1.4	0.7	0.4	0.6	6.1	614.1	63.9
Dec	-12.5	0.7	0.3	0.6	6.1	619.2	64.1
Jan	4.3	0.9	1.2	1.0	6.1	619.7	64.7
Feb	3.2	0.1	-0.8	-0.1	6.0	609.7	64.4
Mar	0.4	-0.9	0.8	-0.4	6.2	625.6	64.1
Apr	-12.1	-0.2	-0.1	-0.1	6.1	622.7	64.0
2003 May	8.1	0.5	-0.3	0.3	6.0	612.5	64.0

(a) All figures refer to period averages.

Sources: ANZ Bank and ABS Cat. No. 6202.0.

Table 8: Current account

	Current account balance		Net income balance		Volume of					
	Balance on merchandise trade	Balance on goods & services (\$ million)	Net income balance	Net current transfers	Exports of goods & services	Imports of goods & services	Terms of trade ^(a)			
Year										
1999-00	-12945	-14289	-18150	218	-32221	-5.1	56.3	143133	-154607	97.0
2000-01	-30	875	-19077	32	-18170	-2.7	105.0	153511	-152636	100.0
2001-02	-792	-1648	-20251	-17	-21916	-3.1	92.4	151315	-156019	102.2
Quarter										
Dec	-476	-781	-4965	-64	(Seasonally adjusted)					
2002 Mar	-277	-494	-5148	25	-6810	-3.3	85.5	37117	-38227	100.9
Jun	-1870	-2177	-5273	5	-5617	-3.1	91.7	37860	-39666	103.4
Sep	-2358	-2784	-5395	-29	-7445	-4.1	70.8	38158	-41327	102.4
Dec	-5024	-5263	-5800	-117	-8208	-4.5	65.7	37772	-41675	102.7
2003 Mar	-4431	-4801	-5282	-25	-11180	-6.0	51.9	37974	-44641	103.2
					-10108	-5.3	52.3	37816	-44912	105.4
Month										
2002 May	-547	-622			(Seasonally adjusted)					
Jun	-775	-896								
Jul	-642	-834								
Aug	-793	-908								
Sep	-908	-950								
Oct	-1038	-1095								
Nov	-1003	-1067								
Dec	-2925	-2974								
2003 Jan	-1172	-1331								
Feb	-1740	-1897								
Mar	-1338	-1475								
Apr	-2792	-3128								

(a) The ratio of the implicit price deflator for exports of goods and services to the implicit price deflator for imports of goods and services, 2000-01 = 100, calculated on a National Accounts basis.

Sources: ABS Cat. Nos. 5368.0, 5302.0 and 5206.0.

Table 9: Australia's external liabilities

	Public sector gross debt	Private sector gross debt	Total gross debt	Net debt	Net external liabilities
(Levels of Australian foreign liabilities)					
As at end	(\$A million)				
2000 Jun	63445	358326	421771	277804	326505
2001 Jun	68950	429825	498775	313472	361034
2002 Jun	68236	456474	524710	329131	386539
2001 Dec	67827	439889	507717	322242	370041
2002 Mar	70219	438903	509122	327612	375276
Jun	68236	456474	524710	329131	386539
Sep	71106	474798	545904	346880	406792
Dec	71918	490228	562146	357739	416690
2003 Mar	n.y.a	n.y.a	n.y.a	362108	427871
As at end	(Percentage of GDP)				
2000 Jun	10.1	57.0	67.1	44.2	51.9
2001 Jun	10.3	64.2	74.5	46.8	53.9
2002 Jun	9.6	64.1	73.7	46.2	54.3
2001 Dec	9.8	63.7	73.6	46.7	53.6
2002 Mar	10.0	62.6	72.6	46.7	53.5
Jun	9.6	64.1	73.7	46.2	54.3
Sep	9.8	65.6	75.4	47.9	56.2
Dec	9.8	66.9	76.7	48.8	56.9
2003 Mar	n.y.a	n.y.a	n.y.a	48.8	57.6

Source: ABS Cat. Nos. 5302.0 and 5206.0.

Table 10: Australia's income flows

	Public sector gross debt	Private sector gross debt	Total gross debt	Net debt	Net external liabilities
(Gross and net interest payable, and net investment income)					
(\$A million)					
Year ended					
2000 Jun	3455	13756	17210	13300	18013
2001 Jun	3105	16290	19395	14770	18908
2002 Jun	3107	15160	18267	14005	20075
Quarter ended					
2001 Dec	742	3708	4450	3396	4455
2002 Mar	808	3763	4571	3517	5039
Jun	806	3735	4541	3452	5277
Sep	719	3546	4265	3156	6006
Dec	704	3373	4077	2978	5115
2003 Mar	n.y.a.	n.y.a.	n.y.a.	2893	5431
Year ended	(Percentage of exports of goods and services)				
2000 Jun	2.7	10.9	13.7	10.6	14.3
2001 Jun	2.0	10.6	12.6	9.6	12.3
2002 Jun	2.0	10.0	12.0	9.2	13.2
Quarter ended					
Dec	1.9	9.6	11.5	8.8	11.6
2002 Mar	2.2	10.1	12.3	9.4	13.5
Jun	2.2	10.2	12.4	9.4	14.4
Sep	1.9	9.3	11.2	8.3	15.7
Dec	1.8	8.6	10.4	7.6	13.1
2003 Mar	n.y.a.	n.y.a.	n.y.a.	7.9	14.8

Source: ABS Cat. No. 5302.0.

Table 11: Selected economic indicators

Year	Inventories to total sales ^(a)	Imports to domestic sales ^(a)	Saving ratio ^(b)	Nominal exchange rates		Real exchange rate
				USD / AUD ^(c)	Trade weighted index ^(c)	Export weighted index ^(d)
1999-00	0.877	0.384	2.1	0.6290	55.2	105.1
2000-01	0.865	0.412	3.8	0.5379	50.3	100.1
2001-02	0.821	0.389	2.4	0.5239	50.7	102.7
Quarter						
2001 Dec	0.829	0.39	2.9	0.5123	49.6	100.3
2002 Mar	0.81	0.387	2.6	0.5181	51.0	103.7
Jun	0.795	0.389	1.2	0.5515	53.4	107.3
Sep	0.788	0.387	0.1	0.5478	50.9	103.7
Dec	0.768	0.401	-0.8	0.5579	52.0	105.1
2003 Mar	0.779	0.392	-0.5	0.5932	53.8	110.5

(a) ABS National Accounts measure. All numbers derived from seasonally adjusted data.

(b) Ratio of household saving to household disposable income derived from seasonally adjusted data.

(c) Exchange rates refer to the period average.

(d) Treasury estimate using GDP deflators.

Sources: ABS Cat. Nos. 5206.0, 5302.0.

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