

COMMONWEALTH TREASURY
OF
AUSTRALIA

Economic Roundup

AUTUMN
2002

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ISBN 0642 74072 0

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Annual Subscriptions (including postage and GST) \$47.00

Single Issue \$11.75

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NMM — The Treasury

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Printed by Canprint Communications Pty Limited

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This issue includes data up to 22 May 2002

SPREADING THE BENEFITS OF GLOBALISATION: 'SELLING' THE COMPOUNDING BENEFITS OF REFORMS

Dinner address by Dr Ken Henry
Secretary to the Treasury
to the
Sydney G-20 Workshop on
Globalisation, Living Standards and Inequality: Recent Progress and
Continuing Challenges

Jointly hosted by the Reserve Bank of Australia and
the Treasury

Sydney, 27 May 2002

Welcome to the official dinner of the G-20 workshop on *Globalisation, Living Standards and Inequality: Recent progress and continuing challenges*.

GLOBALISATION AT DINNER

Some might think that the only appropriate dinner for a globalisation meeting would be a McDonald's with Coke, followed later by a coffee from Starbucks.

Economic globalisation, we are told frequently, means a narrowing of cultural diversity, including culinary diversity. McDonald's, MTV, and CNN stand among the pet hates of the anti-globalisation movement.

Illustrative of those worries is the fear that the globalising trends symbolised by McDonald's will enervate or overwhelm local cuisines.

That fear seems to me to underestimate the robust diversity of human tastes, and the potential for rising incomes to enable fuller expression of those tastes. We hope tonight's exposure to an example of 'modern Australian' cuisine provides you with an enjoyable illustration of other possibilities for tomorrow's world.

Contemporary Australian cuisine is often Asian influenced, but usually founded in classical French cuisine. It uses distinctive local produce and is created by chefs who often have either worked abroad and learnt from the world's great cuisines, or are themselves among the almost 1 in 4 Australians born overseas, or more than 1 in 10 born in other G-20 economies. In 2000, prominent G-20 sources of emigration to Australia were (in descending order of migrant numbers) the UK, Italy, China, Germany, India, South Africa, Indonesia and the US.

Australians enjoy considerable culinary diversity: we have just over 700 McDonald's outlets, but over 4000 Chinese restaurants, over 2000 other Asian restaurants, and over 2500 Italian restaurants.¹ Surprisingly, only about six hundred Australian restaurants identify themselves as French, but I suspect that is simply because so many restaurants with preponderantly French culinary foundations are among the more than 10,600 who today style themselves 'modern Australian'.

Are these culinary examples an economically trivial case of diversity in the face of globalisation? Well, you may be surprised to hear that the accommodation, café and restaurant industries employ more people in Australia than our agriculture, forestry and fishing industries; more than transport and storage; more than finance and insurance; more than government administration and defence; and many, many more than the mining industry.²

Over a broader canvass than just cuisine, I suspect that wealth creation and international integration will support the widening of cultural choices, as Bollywood prospers alongside Hollywood, as Tokyo's fashions turn heads as well as Paris's fashions, as Korean industrial design in whitegoods and electronics begins to rival Japan's and Europe's, and Al-Jazeera is as readily available as CNN.³ The citizens of all our countries enjoy more options and greater freedom to shape their own cultures as a result.

Dynamic, confident and prosperous people seem more likely to integrate wider choices from all other cultures, than to narrow their choices to a single dominant culture. The contribution good economic policy can make to cultural diversity is to defeat impoverishment, and thereby increase the means, and the self-confidence, by which our peoples can express their diversity of tastes.

WELCOME TO INDIA AS G-20 CHAIR

This Workshop is the first G-20 event for 2002, and the first under India's Chairmanship of the G-20.

By way of welcoming India to that role, let me say a little about international economic governance, which can be pictured in part as a quest for balance between representativeness, and workable size.

1 These estimates apply a BIS Shrapnel categorisation of restaurants by style of cuisine to an Australian Taxation Office count of the total number of restaurants registered for the purposes of the Goods and Services Tax. See <http://www.restaurantcater.asn.au/facts.asp>. On McDonald's numbers, see <http://www.mcdonalds.com.au>.

2 Australian Bureau of Statistics data Wage and Salary Earners December 1999, 6248.0.

3 See, for example, Vijay Mishra, *Bollywood Cinema: Temples of Desire*, Routledge 2002; Douglas McGray, 'Japan's Gross National Cool', *Foreign Policy*, May-June 2002; and broadcast details of Al-Jazeera at <http://www.almajaz.com/qatar/aljazeera/>.

Since the United Nations was founded in 1945, its membership has expanded from 51 to 189 countries. It and all other universal organisations grapple with a total membership far too large for informal discussion or prompt responses to rapid change. But on the other hand, smaller groupings generally lose the representation of the range of global experience as they gain the practicality of smaller size.

The G-20 arose from a 1999 decision by the G-7 Finance ministers to create a remarkably different and uniquely representative informal economic grouping.

The G-20's members account for almost 65 per cent of the world's population, around 70 per cent of the world's poor, and over 75 per cent of the world's economy at purchasing power parities.⁴ But perhaps as interesting as these levels of representativeness are the trends:⁵

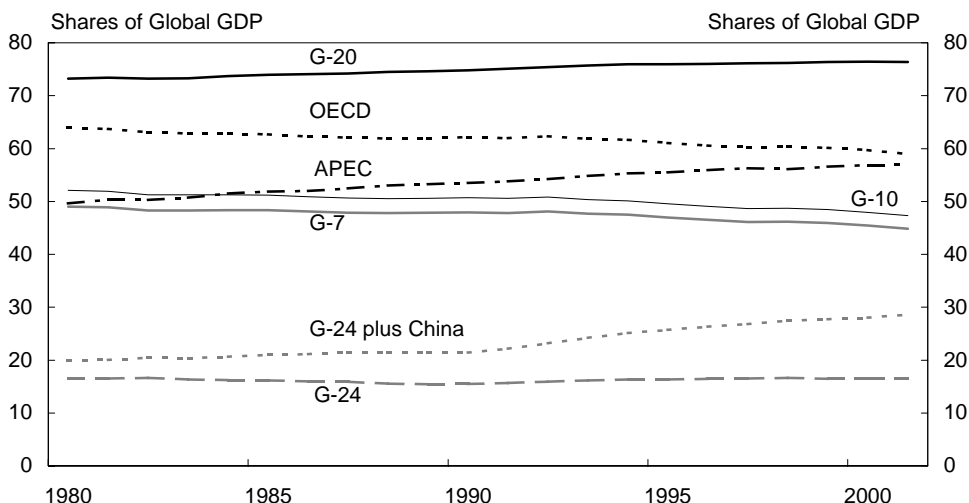
- From 1980 to 2001, the G-7's share of world GDP fell by about 4 percentage points, to just under 45 per cent.
- In the developing world, the G-24's share of world GDP has been constant over the last 20 years at almost 17 per cent, while adding China's GDP to the G-24's produces a 2001 share of world GDP of around 29 per cent.⁶
- In contrast, the G-20's share of world GDP rose about 3 percentage points from 1980 to over 75 per cent today.

4 Population figures from World Bank Atlas 2001 (data for 1999); GDP share from IMF's World Economic Outlook database, 2002; poverty headcount of those currently living on less than US\$2 per day, from the World Bank Atlas 2001 and the World Development Report 2002.

5 IMF's World Economic Outlook database, 2002, data for China do not include Hong Kong SAR.

6 The Intergovernmental Group of Twenty-Four on International Monetary Affairs is a twice-yearly meeting of Finance Ministers and Central Bank Governors on the eve of the Annual and Spring meetings of the IMF and the World Bank. Its members are Algeria, Cote d'Ivoire, Egypt, Ethiopia, Gabon, Ghana, Nigeria, South Africa, Democratic Republic of Congo, Argentina, Brazil, Colombia, Guatemala, Mexico, Peru, Trinidad and Tobago, Venezuela, India, Iran, Lebanon, Pakistan, Philippines, Sri Lanka, and Syria. China is a special invitee that can address plenary sessions.

Chart 1: International groupings' shares of world income



Source: World Economic Outlook (WEO) Database April 2002; IMF.

Note: Data for China do not include Hong Kong SAR.

The G-20's close relationships with the IMF and World Bank help inject an influential mix of developed and emerging market experience into the operations of the international financial institutions, and ensure that finance ministers, central bank governors and their senior officials have informal opportunities to reflect on developments between the twice-yearly meetings of the Fund and Bank.

The hand-over from March 2002 of G-20 chairmanship from Canada, the inaugural Chair, to India is a step of great practical and symbolic importance for the G-20, and for the evolution of global economic governance.

For the first time, one of the world's great emerging economies is leading a globally representative grouping of significant economies, transcending traditional 'North-South' boundaries of the developed and developing world, and linking Eastern and Western hemispheres, and all the continents bar Antarctica.

The Australian government welcomes India's chairmanship and I am sure I speak for us all tonight when I say that as officials, we look forward to working with India to develop further the role of the G-20.

'SELLING' THE POVERTY-REDUCING BENEFITS OF APPARENTLY SMALL REFORMS

In the remainder of my time tonight, I would like to examine the changing economic outlines of the world we might be able to achieve with continued policy reforms and closer international economic integration, and explore some of the challenges that we, as policy advisers and researchers, confront in explaining the case for those changes.

Our fundamental challenge is a very simple one, at least in concept — little more than a bit of basic arithmetic. It is to show that economic and policy reforms which lift productivity and income growth by apparently rather small amounts quickly compound to produce significant change in real income levels, and much wider human opportunities.

As the evidence mounts of the last few decades' remarkable progress against poverty, and the associated narrowing of the inter-country and global income distributions, it is interesting to note two qualifying or dissenting observations that I suspect we will hear more of in years to come.

- First, many observe that the progress against poverty has not been uniform. While some formerly poor countries have made great strides, others have not, or have even suffered absolute declines in per capita GDP. In an extreme form, this observation is sometimes expressed as if progress has been essentially confined to China and, more recently, India.
- Second, it is often claimed that inequality is really still widening, because the absolute (dollar) income increases in rich countries (or at the top of a national income distribution, for that matter) are still larger than the increases accruing to the poor. Related to this claim, it is sometimes argued that progress is too slow, even if relative income convergence across many countries is now under way. (By relative income convergence, I mean a situation in which poorer countries have faster GDP per capita growth rates than richer countries.) Incomes in successful developing countries would not converge to rich country levels for over a century.⁷ On this view, growth alone cannot be the answer to poverty, and significant redistribution is required.⁸

Progress against poverty is patchy: the Africanisation of poverty

Clearly, progress has been patchy.

We are witnessing, in effect, the 'Africanisation' of extreme poverty. Xavier Sala-i-Martin, in some recent work, estimates that while the global numbers living below a US 1 dollar-a-day poverty line have fallen by over 200 million between 1970 and 1998, the numbers in Africa have risen by over 175 million. Africa was home to only about one in ten of the world's extremely poor in 1960, but two in three of them in

7 The Australian Treasury illustrated this arithmetic in *Global Poverty and Inequality in the 20th Century: Turning the Corner?*, Economic Roundup Centenary Edition, 2001, pp 42-44.

8 For one example of this view, see Michael Haynes and Romy Husan, *National Inequality and the Catch-up Period: Some 'Growth Alone' Scenarios*, *Journal of Economic Issues*, Vol XXXIV No 3 September 2000, pp 693-705.

1998, such has been the progress against poverty outside of Africa, and such the lack of progress in Africa.⁹

Since China is home to about 20 per cent of the world's population, and India another 16 per cent, it is inescapable that the poverty-busting successes of those two countries will statistically dominate the world's progress.¹⁰

But progress against poverty has been much broader than just China and India. The World Bank has identified 22 other success stories (subsequent to the original globalisation successes of Korea, Taiwan, Hong Kong (SAR) and the like) that have enjoyed strong real income gains in the post-1980 wave of globalisation, mainly through successfully entering the booming global trade in manufactures.

Unlike China and India, many of them are not sufficiently populous for their success to make a notable statistical impact on the global measures.

Sala-i-Martin singles out Indonesia's performance for special mention, noting that in 1970 almost half the population fell below the US 1 dollar-a-day poverty line. But by 1998, less than 1 per cent fell below that line, while the income distribution had narrowed as well.¹¹

Sala-i-Martin also stresses an interesting characteristic of recent and prospective changes in the global income distribution. The narrowing of the inter-country and world income distributions over the last 20 to 30 years is essentially because of 'convergence to the rich' by formerly poor but now rapidly globalising economies — most notably (because of their population size) China and India.

But if those formerly poor countries continue to grow over the next 50 years at recent rates, while African economic growth remains weak, recent 'convergence to the rich' will be followed by future 'divergence from the poor'. Rather than the middle catching up with the top of the income distribution, both middle and top would leave the poor

9 Xavier Sala-i-Martin, *The World Distribution of Income (Estimated from Individual Country Distributions)*, 21 April 2002 (unpublished) see: <http://www.columbia.edu/~xs23/home.html>

10 This is especially true for statistical measures such as global Lorenz curves or Gini coefficients, which are moved most by countries with large populations, or initially at the low or high extremes of the distribution. These statistical issues are well treated in A. Melchior, K. Telle and H. Wiig, *Globalisation and Inequality: World Income Distribution and Living Standards*, Royal Norwegian Ministry of Foreign Affairs, Studies on Foreign Policy Issues, Report 6B, 2000. Available at http://odin.dep.no/archive/udvedlegg/01/01/rev__016.pdf

11 Xavier Sala-i-Martin, *The World Distribution of Income (Estimated From Individual Country Distributions)*, op. cit., p 10.

behind, and global income inequality measures would, under these assumptions, start to rise again from about 2010 or 2020¹².

Relative and absolute convergence

Turning now to the second claim, I think we ought dispute the argument that whatever the statistics say, real inequality is still widening because absolute income increases for the poor remain smaller than the absolute increases for the rich. That claim fails to understand the feasible economic growth paths that link initial relative catch-up to ultimate absolute catch-up from widely diverse starting points.

Since the early 20th century, economists who have studied inequality and devised the analytical tools we now use to measure it, have argued that any desirable measure of inequality should be independent of the scale with which income is measured. For example, if all incomes in a distribution double, the measure of inequality should stay the same, even though the absolute income increase of the rich will have been larger than that of the poor.¹³

In accord with this principle, if poorer people in an income distribution enjoy faster income growth than richer people, standard measures of inequality such as the Gini coefficient, the Atkinson index and the Theil index would all diminish. The income distribution would correctly be shown to be narrowing, even though it is quite conceivable that poorer people enjoying faster (percentage) rates of income growth might initially receive smaller absolute income increases than the rich.

The claim that relative catch-up can only be counted a success if, from the outset, there is also absolute catch-up, implicitly sets a test for narrowing inequality that is practically impossible to meet. Given that the inter-country income distribution has grown so wide over the last 200 years, there is no feasible rate of growth in poor countries that would give them annual absolute (dollar) per capita income increases that were larger from the outset than annual increases in those countries that are already rich.

Consider, for example, the US, with per capita GDP in 1998 of about USD 27,300 in PPP terms, growing (on average in the decade to 1998) at 2.0 per cent per annum; and China, with per capita GDP in 1998 of USD 3,117 at PPP, growing (on average in the decade to 1998) at 5.6 per cent per annum.

12 Xavier Sala-i-Martin, The Disturbing 'Rise' of Global Income Inequality, NBER Working Paper No 8904, April 2002.

13 That is why researchers do not use the variance of income as a summary indicator of inequality. If all incomes double, the variance of the distribution quadruples.

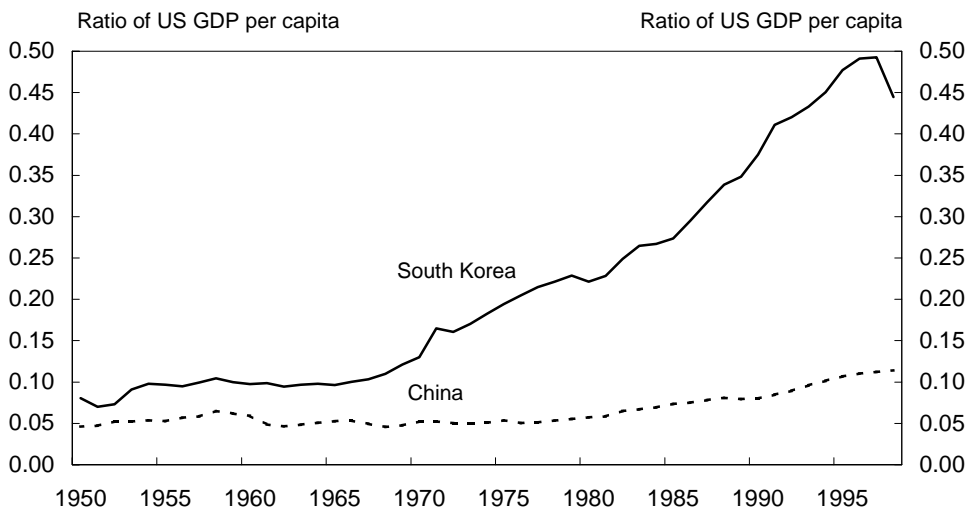
Chinese growth performance since the late 1970s is unprecedented in history. Never before have so many people been lifted out of poverty so quickly by such sustained high growth.¹⁴

But using these average numbers for illustration, the increase in Chinese per capita GDP in 1998 would have been only about \$174, while the increase in US per capita GDP in 1998 was \$546. For the Chinese growth rate to generate a larger per capita increment than in America, would require an annual growth rate in Chinese per capita GDP of over 17 per cent — eight and a half times the US growth rate!

The practical conclusion is simply that relative catch-up — that is, faster per capita income growth in poor countries than in rich — is the most that will be observed for many years to come. Yet even relative catch up means striking real improvements in living standards along the way, which quickly compound to phenomenal progress.

For example, South Korea has converged over fifty years from under 10 per cent of US per capita GDP levels at purchasing power parities to about 45 per cent, and China has converged from about one-twentieth to about one-tenth US levels.

Chart 2: GDP per capita (PPP) relative to the United States 1950-1998

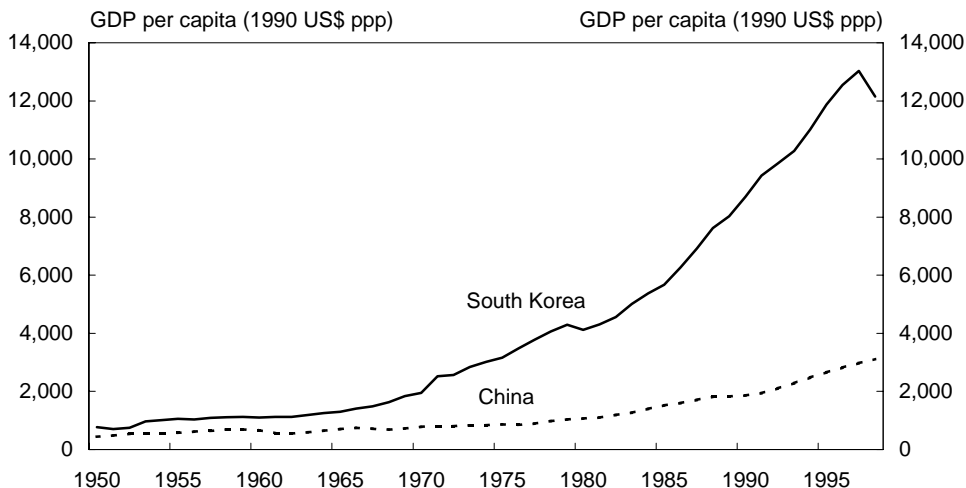


Data source: estimates published by Angus Maddison; *The World Economy: A Millennial Perspective*, OECD Development Centre Studies, Paris 2001.

14 These comparisons use real per capita GDP levels at PPPs estimated by Angus Maddison in *The World Economy: A Millennial Perspective*, OECD Development Centre Studies, Paris 2001. In order to gain the advantage of longer periods of PPP comparisons (back to the dawn of the 20th century and indeed earlier), Maddison uses an approach which produces slightly different PPP estimates over the last 30 years than those compiled by the IMF for the World Economic Outlook Database, and cited earlier in Chart 1.

But over those fifty years, South Koreans have become over 15 times richer, and over six times richer than they were in 1970. Chinese are over seven times richer than fifty years ago, and over four times richer than in 1970.

Chart 3: GDP per capita 1950-1998



Data source: estimates published by Angus Maddison; *The World Economy: A Millennial Perspective*, OECD Development Centre Studies, Paris 2001.

THE INDIAN EXAMPLE

The experience of the current chair of the G-20 teaches how powerfully policy reforms can compound to huge advances in living standards from apparently small starting point productivity increases, while along the way making some illustrious critics look very silly.

Just thirty-five years ago, in an article in *New Scientist*, Stanford University biologist Paul Ehrlich argued that the United States should ‘... announce that it will no longer ship food to countries such as India where dispassionate analysis indicates that the imbalance between food and population is hopeless. ... our insufficient aid should be reserved for those whom it may save.’ Ehrlich argued that it was a ‘fantasy’ to believe India would be able to feed the additional 120 million people that it was then estimated would be born by 1975.¹⁵

15 Ehrlich, P.R., 1967, *Paying the Piper*, *New Scientist*, 14 December 1967, p 655.

In fact, India's actual population growth over that period turned out to be 104 million rather than 120 million, and India had produced enough additional food for 144 million, so nutrition improved.¹⁶

India's formerly highly controlled and closed economy has been progressively opened to the world, in fits and starts, since 1985. Notwithstanding severe fiscal and balance of payments problems in the early 1990s, reforms have broadened and accelerated in the last decade. Trade as a percentage of GDP has risen from under 10 per cent in the 1960s to almost 20 per cent in the 1990s, which I note is still less than half China's exploitation of trade as an engine of specialisation, productivity enhancement and growth.

From 1950 to 1979, India's GDP per capita was growing at about 1.3 per cent. By the 1990s, per capita income growth had risen to about 3.7 per cent — not such a big difference, one might think.¹⁷ But that growth has cut the Indian poverty rate from 55 per cent in 1974 to 26 per cent in 2000.¹⁸

Bradford DeLong has pointed out that at India's per capita GDP growth rates before the 1980s, today's per capita income would double every 50 years and India would reach current US per capita income levels around 2250. But the increased growth rate achieved in the 1990s through accelerated reforms means per capita income is now doubling every 16 years. If that growth can be sustained, India would reach current US income levels by 2066.¹⁹

SPREADING PROGRESS TO AFRICA

Regardless of how we read the evidence of recent progress against poverty, there can be no doubt that governments have much further to go, both in broadening progress to those countries that have not yet benefited from globalisation's opportunities for raising productivity, and deepening progress in countries that are already making headway.

Spreading progress to the 2 billion residents of countries not yet benefiting from closer international economic integration will require sustained peace, the enforcement of property rights, the rule of law, better national economic institutions, and better

16 FAOstat database numbers, cited in Bjorn Lomborg, *The Skeptical Environmentalist: Measuring the Real State of the World*, Cambridge University Press, p.60.

17 Maddison, op cit.

18 Stanley Fischer, *Breaking Out of the Third World: India's Economic Imperative*, India Today Conclave, New Delhi, 22 January 2002, available at <http://www.imf.org/external/np/speeches/2002/012202.htm> .

19 J. Bradford DeLong, *Preliminary Thoughts on India's Economic Growth*, April 2001, pp 4-5, available at <http://www.j-bradford-delong.net/TotW/India.html> . Using the 1990s growth rate calculated from the Maddison data, we calculate that GDP per capita would double in 21 years, with India reaching current US income levels by 2080. These conclusions are sufficiently consistent with DeLong's statement to further illustrate the point.

economic policies. And as the third wave of globalisation has shown, access to global markets in trade and investment is vital to rapid progress in raising productivity. When we better understand the successes of the last twenty years by China, India, Indonesia, Mexico and others, we will be better placed to spread those successes. But I think we can say already that the role of greater economic openness in driving productivity-enhancing structural change is a powerful beneficial force, though of course it also requires other necessary conditions for growth to be put in place.

Initiating progress in Africa will be a particular challenge, but it is clearly feasible with the right institutions and policies, such as articulated in the New Partnership for African Development.

Let me offer Burkina Faso as an example, which I choose simply because its circumstances have been so difficult. It is one of the poorest countries on earth, and one of only nine to have been continuously in the ranks of the poorest twenty countries on earth for all the last quarter-century.²⁰

It embodies all the difficulties that are likely to make strong future growth in sub-Saharan Africa more difficult than it has been for the earlier globalisers of the last 50 years.

Burkina Faso is tropical and landlocked;²¹ it has a high population density and a 2.7 per cent population growth rate (notwithstanding the recent scourge of AIDS, enumerated below); it is mostly dependent on agriculture, but has fragile soils and has suffered desertification; it endured over twenty years of civil unrest from the late 1960s to the early 1990s, with repeated coups; its neighbours are all similarly poor, and some have also been racked by unrest, further complicating effective transport links to local and world markets; adult male literacy is 28 per cent; adult female literacy only 9 per cent.

From a population of just under 11 million, about ¼ million had died of HIV/AIDS by mid-2001, and some ½ million live with the disease; life expectancy is only 44 years, having fallen by about 10 years because of AIDS. And finally, it is heavily indebted, with a peak net present value of debt-to-exports of over 300 per cent before recent decisions for relief through the Heavily Indebted Poor Countries initiative.

20 Australian Treasury, *Global Poverty and Inequality in the 20th Century: Turning the Corner?*, *ibid*, p 36 table 2.

21 Economic analysis suggests that tropical location carries particular development difficulties because of health and agricultural problems that are more severe than in temperate zones, and less well addressed by the stock of temperate zone technologies. See Jeffrey Sachs, *Tropical Underdevelopment*, NBER Working Paper 8119, February 2001. Moreover, being landlocked raises transport costs of trade, especially if neighbours are poor and political unstable. Burkina Faso's neighbours are Mali, Niger, Togo, Cote d'Ivoire, Ghana and Benin.

Yet in the face of all these disadvantages, Burkina Faso has enjoyed stable government for over a decade, and macroeconomic policy has been steadily improved over recent years. The Burkinabe Government has defined and implemented a Poverty Reduction Strategy with the World Bank and IMF, and has adhered to the terms of funding under the IMF Poverty Reduction and Growth Facility. It has initiated an anti-corruption strategy, and begun to reform the inefficient state enterprises that dominate much of the economy, including the marketing of cotton which constitutes almost 60 per cent of export receipts and provides income to more than 2 million people. Aided by these reforms and several good seasons, GDP growth has been over 5 per cent in each of the last two years.²²

But recent international developments have not been helpful. The recent US Farm Bill votes US farmers subsidies of US \$180 billion over 10 years. Such subsidies provide about 1/3 of the annual income of US cotton farmers. The IMF and World Bank estimate that without the depression of world cotton prices from this and similar production-distorting subsidies, the numbers of Burkinabe in extreme poverty could be halved in six years.²³

Unfortunately, the problem is more general than the US Farm Bill. The need to negotiate limits to domestic agricultural support in rich countries was recognised as long ago as the conclusion in 1967 of the Kennedy Round of GATT negotiations, but the Tokyo and Uruguay Rounds made little substantive progress.²⁴

Limiting agricultural subsidies remains a central priority for the Doha Round. For Burkina Faso and other small, poor countries, the only international instrument they have for limiting market-corrupting subsidies and lowering other barriers to their exports is the WTO and the Doha Round. The enemies of the WTO are no friends of Burkina Faso.

Developing countries will not enjoy higher productivity, a prerequisite to achieving catch-up, without structural change. That is the point of trade and investment liberalisation — it drives structural change. It is ironic, then, to observe rich countries being so resistant to structural adjustment in their own economies. But it is far more serious than irony: the very policy interventions that are preventing structural adjustment in the rich countries are simultaneously undermining the prospects of much needed structural change in the poor.

22 Information is from the Burkinabe Letter of Intent to the IMF of 14 March 2002, the IMF country report No 02/93 of April 2002, and the Enhanced HIPC Initiative Completion Point Document, all available on the IMF web site.

23 See IMF Issues Brief, Improving Market Access: Toward Greater Coherence Between Trade and Aid, March 2002, <http://www.imf.org/external/np/exr/ib/2002/032102.htm#iii>, and forthcoming World Bank & IMF report, cited in World Bank Press Clips of 6 May 2002.

24 See Corbett, Hugh; US not interested — Cairns has to lead. Australian Financial Review, 13 May 2002.

If the world's governments were prepared to lower trade barriers and production-distorting subsidies in agriculture, and broaden the application of the economic institutions and policies that have been shown to produce wealth, there is no doubt that we could complete the conquest of food scarcity for the first time in human history, and leave our children a much fairer world than we inherited.

The following is a reprint of Statement 3, Economic Outlook, from Budget Paper No. 1: Budget Strategy and Outlook 2002-03.

STATEMENT 3: ECONOMIC OUTLOOK

Australia is well positioned to be one of the world's top performing economies in 2002-03. Economic growth is expected to remain robust, driven by strong growth in business investment. Employment growth is forecast to strengthen, with the unemployment rate to decline to around 6 per cent by mid-2003. Inflation is expected to remain within the target band, with the current account deficit to remain moderate by historical standards. World growth is set to recover through 2002 and 2003, following the sharp slowdown in 2001.

Part I: Overview

In 2001-02, **economic growth** in Australia is forecast to be around 3¾ per cent in year-average terms, an upward revision to the 3 per cent growth forecast contained in the *Mid-Year Economic and Fiscal Outlook 2001-02*. In 2002-03, growth is forecast to again be 3¾ per cent in year-average terms and a strong 4 per cent through the year to the June quarter 2003. Business investment is expected to contribute strongly to growth in 2002-03 and, combined with robust growth in household consumption, should more than offset the impact of moderating dwelling investment. Domestic demand is expected to grow strongly and more rapidly than overall economic growth, with the difference reflecting a declining net export performance. Rapid growth in imports, reflecting strong plant and equipment investment, should outweigh a rebound in export growth in line with the recovery in world growth. The current account deficit (CAD) as a percentage of GDP is expected to widen but to remain moderate and be well below earlier peaks. Inflation is forecast to remain within the target band, while solid employment growth is expected to see the unemployment rate continue to decline over the coming year.

The Australian economy strengthened as 2001 progressed, in sharp contrast to the weakening seen in most of the rest of the world. Productivity growth in Australia was strong as GDP grew by 4.1 per cent through the year to the December quarter 2001 and employment growth was subdued. Both business and consumer confidence rebounded in the latter part of the year following the initial impact on confidence of the terrorist attacks of 11 September 2001, and business investment and household consumption grew solidly over the second half of 2001. Dwelling construction grew strongly through 2001, driven by historically low interest rates and the Government's enhanced First Home Owners Scheme (FHOS).

The outlook for **world growth** has improved since the start of 2002 with the international downturn bottoming and a moderate recovery now underway, underpinned by a recovery in the United States (US) and a modest pick up in Europe. While significant uncertainties remain, the sharp downside risks surrounding the outlook for the US following the events of 11 September 2001 appear to have

diminished. The recovery in the US will, in turn, assist the recovery of the non-Japan East Asian countries. The Japanese economy, however, remains weak and fragile and is likely to continue to underperform even as the rest of the world recovers. Overall, following growth of 2.5 per cent in 2001, world growth is expected to be around 2¾ per cent in 2002, rising to around 4 per cent in 2003. Australia's **major trading partner growth** is expected to be around 2¼ per cent in 2002 (mainly reflecting the weakness in Japan), rising to around 3¾ per cent in 2003.

Export growth is expected to rebound by a solid 6 per cent in 2002-03, underpinned by the recovery in world growth and increased commodity production. **Import** growth is expected to be above average at 11 per cent, driven by strong growth in the import-intensive sectors of the economy, particularly plant and equipment investment.

Net exports are expected to subtract around 1 percentage point from overall GDP growth in 2002-03, reflecting the strength of import growth. In turn, the **current account deficit** is expected to increase moderately to around 4 per cent of GDP. However, at these levels, the CAD would remain well below earlier peaks of around 6 per cent of GDP.

The **business investment** outlook has improved substantially, with strong business confidence starting to flow through to actual business investment. Initial data point to very strong investment intentions for 2002-03, particularly in the mining and transportation sectors. The outlook for investment in both plant and equipment and non-dwelling building and structures is for strong growth.

Forward indicators suggest that new dwelling construction has peaked and activity is expected to decline in 2002-03. However, alterations and additions should continue to grow, partly offsetting the forecast decline in new dwelling construction. Overall **dwelling investment** is forecast to decline by around 3 per cent in 2002-03.

The outlook for **household consumption** expenditure appears to be quite strong. Consumer confidence is at relatively high levels, assisted by strong wealth accumulation (particularly in housing), with low interest rates and better labour market conditions supporting disposable income.

The **inflation** outlook remains in check, with the CPI forecast to increase by around 2¾ per cent in 2002-03, and around 2½ per cent through the year to the June quarter 2003, the mid-point of the medium-term target band. Despite some temporary upward price pressures expected in the first half of 2002, subdued unit labour costs, reflecting moderate wage increases and strong productivity growth, point to inflation moderating over the forecast period.

Employment growth is expected to be a robust 1¾ per cent in 2002-03, largely reflecting the robust economic growth outlook, continued moderate wages growth and relatively strong business and consumer confidence. In turn, the **unemployment rate** is expected to decline to average around 6 per cent in the June quarter 2003.

The **uncertainties** surrounding both the international and domestic economic outlook have generally declined since late 2001 and seem to be relatively evenly balanced. Nevertheless, the recent increase in the oil price (which is being driven mainly by concerns about conflict in the Middle East), if sustained above the assumed price of \$US23 per barrel underlying the forecasts, could adversely affect confidence both domestically and internationally. Higher oil prices could reduce discretionary expenditures to below that forecast and higher petrol prices could also feed into ongoing inflation.

In addition to higher petrol prices, there are a number of other short-term price pressures evident in the period ahead, including higher insurance premiums. While these short-term price pressures are not expected to become a source of ongoing inflation, they represent some risk in relation to the outlook.

There is also some uncertainty surrounding the downturn in the dwelling sector, with the phasing out of the enhanced FHOS. The forecasts incorporate ongoing growth in alterations and additions, with a decline in new dwelling construction. If alterations and additions were also to significantly decline, then dwelling investment would fall by significantly more than currently forecast, detracting from the rate of employment growth and household consumption.

Table 1: Domestic economy forecasts^(a)

	Outcomes (b)		Estimates		Forecasts	
	2000-01 year average	2001-02 year average	2002-03 year average	Four quarters to June 2003		
Panel A - Demand and output(c)						
Household consumption	2.4	3 3/4	4	4		
Private investment						
Dwellings	-20.6	16	-3	-3		
Total business investment(d)	-3.1	4	12	12		
Other buildings and structures(d)	-20.1	6	14	10		
Machinery and equipment(d)	0.6	3	12	14		
Intangible fixed assets	18.2	4	9	9		
Private final demand(d)	-0.3	4 3/4	4 3/4	4 3/4		
Public final demand(d)	0.5	3 1/2	3 1/4	3 1/4		
Total final demand	-0.2	4 1/2	4 1/2	4 1/4		
Change in inventories(e)						
Private non-farm	0.1	- 1/4	1/4	0		
Farm and public authorities	-0.1	0	0	1/4		
Gross national expenditure	-0.2	4 1/4	4 3/4	4 1/2		
Exports of goods and services	7.0	-2	6	6		
Imports of goods and services	-1.4	2	11	8		
Net exports(e)	1.7	- 3/4	-1	- 1/2		
Gross domestic product	1.9	3 3/4	3 3/4	4		
Non-farm product	2.2	3 3/4	3 3/4	4		
Farm product(f)	-3.4	1 1/4	3 3/4	2 1/4		
Panel B - Other selected economic measures						
External accounts						
Terms of trade	3.1	2 1/4	2 3/4	1 1/4		
Current account balance						
\$billion	-18.9	-22 1/2	-29			
Percentage of GDP	-2.8	-3 1/4	-4			
Labour market						
Employment (labour force survey basis)	2.1	1	1 3/4	1 3/4		
Unemployment rate (per cent)(g)	6.4	6 3/4	6 1/4	6		
Participation rate (per cent)(g)	63.7	63 3/4	63 3/4	63 3/4		
Prices and wages						
Consumer Price Index	6.0	2 3/4	2 3/4	2 1/2		
Gross non-farm product deflator	4.3	1 3/4	2	1 1/2		
Average earnings(h)	3.9	3 1/4	4 1/4	4 1/4		

(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) Calculated at basic prices.

(g) The estimate in the final column represents the forecast level in the June quarter 2003.

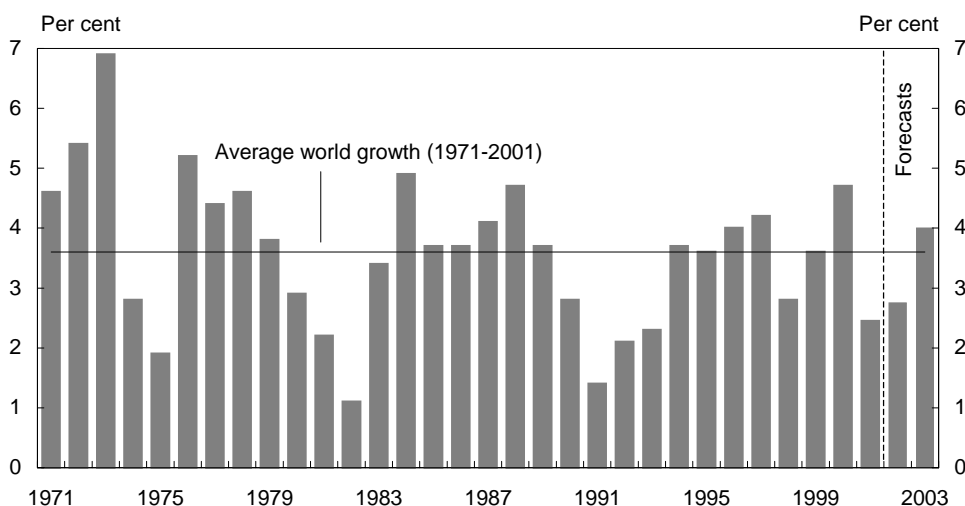
(h) Average non-farm compensation of employees (national accounts basis).

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

Part II: The outlook for the international economy

The world economy grew by 2.5 per cent in 2001 after recording strong growth of 4.7 per cent in 2000. The United States (US) economy deteriorated early in 2001 and conditions in other economies weakened as the year progressed. The weakness was particularly apparent in Australia's major trading partners (MTPs), where growth is estimated to have slowed to around 1.4 per cent in 2001, well below long-run average growth rates. The events of 11 September 2001 were expected to exacerbate the weakness of the world economy, raising the spectre of a sharper and deeper downturn. However, the downturn has been milder than many expected. More recently, a recovery appears to have commenced and the world economy is expected to slowly gather further momentum over the course of 2002. Against the backdrop of a more settled outlook, world growth is expected to be around 2¾ per cent in 2002, increasing to around 4 per cent in 2003 (Chart 1).

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.

The global recovery is expected to be broadly based, although Japan is likely to remain weak for some time, moderating the pace of global recovery. The US performed better in the early part of 2002 and is expected to grow moderately in 2002 with a sustained pick up becoming established in the second half of the year. The recovery follows an unwinding of some cyclical imbalances, such as excess inventories and capital investment, and is expected to be underpinned by supportive monetary and fiscal policies. Stronger growth in the US should support the economies of Europe and non-Japan East Asia. Meanwhile, Japan's continuing financial and other structural problems create a significant risk that the economy will continue to underperform even as the rest of the world recovers.

Recovery in East Asia may also be less rapid than in the past due to ongoing corporate and financial sector problems and the expected slow recovery in information and communication technology (ICT) demand in 2002. Faltering ICT demand has been an important factor behind the sharp slowdown in East Asia over the past year and prospects for recovery over the next year depend heavily on the extent of the pick up in ICT demand. With US investment expected to remain weak until the latter part of 2002, and industry groups pointing to a subdued recovery in global ICT demand until later in the year, the pace of recovery in this region may be a little slower than in the past. As a result, and with Japan remaining weak, Australia's MTP growth is expected to remain subdued in 2002 at around 2¼ per cent, rising to 3¾ per cent in 2003 (Table 2). World trade is set to grow more strongly in 2002, although the pace of recovery is expected to be gradual.

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

	1998	1999	2000	2001	2002	2003
	Actual	Actual	Actual	Actual	Forecasts	Projections
World	2.8	3.6	4.7	2.5	2 3/4	4
Total OECD(c)	2.9	3.4	4.0	1.2	1 3/4	3
United States	4.3	4.1	4.1	1.2	2 1/2	3 1/2
Japan	-1.0	0.7	2.2	-0.4	-1 1/4	1 1/4
European Union	2.9	2.6	3.4	1.7	1 1/2	3
Major Trading Partners	-0.2	4.0	5.1	1.4	2 1/4	3 3/4
Non-Japan East Asia(d)	-2.2	6.5	8.0	1.9	4 1/4	5 1/4

(a) Percentage change on previous year.

(b) Growth rates for World and the European Union 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.

Global inflation is expected to remain low despite the forecast pick up in activity. Significant excess capacity has emerged over the past year and a uniform and gradual return towards full capacity utilisation is unlikely to put pressure on global inflation, which is close to a 30 year low. Strong competitive pressures and ongoing productivity improvements should support low inflation even as world growth strengthens.

World oil prices are assumed to be around \$US23 per barrel for the remainder of the forecast period.¹ This is towards the bottom of the Organisation of the Petroleum Exporting Countries (OPEC) target band, with global demand for oil expected to

1 World oil prices are measured by the world trade weighted oil price. This price is the average of the contract price of different types of oil, weighted by their share of the world oil trade.

recover modestly over the forecast period, in line with the moderate nature of the global economic recovery. World oil prices are currently above this assumed level, with increased tensions in the Middle East significantly increasing prices over recent months. If oil prices are sustained above the assumed level, this would constitute a risk to the global economic activity and inflation outlook.

The **US** economy grew by 1.2 per cent in 2001, following four consecutive years when growth exceeded 4 per cent per year. Clear signs emerged in early 2001 that a cyclical adjustment was underway, with sharp reductions in business investment and large and sustained reductions in business inventories weighing against growth. The economy entered a mild recession in March 2001 with a broadly-based slowdown in economic activity.

The weakness became more pronounced in some sectors of the US economy following the 11 September 2001 terrorist attacks, when a heightened state of uncertainty and risk aversion led to falls in business and consumer confidence. Investment spending slowed further and the rate of inventory liquidation gathered pace. Consumer spending held up well, however, moderating the weakness, and by early 2002 signs had emerged that the economy had troughed and that a recovery had commenced.

Following the relatively shallow recession, the outlook for the US is for a moderate and uneven recovery in 2002, with further strengthening into 2003. Consumption should remain solid although the pace of growth may be muted in 2002 by weakness in the labour market and elevated debt levels. The absence of pent-up demand may mean consumption growth will be less robust during the recovery phase than would normally occur. Investment may also be a drag on recovery, with uncertainty over the prospects for a sustained recovery in profits, excess capacity and high levels of corporate debt likely to continue to inhibit spending during the first half of 2002. On the other hand, a modest pick up in demand is likely to see the rate of inventory liquidation taper off over the first half of 2002. Increased government expenditures and gathering export demand should also support recovery. More generally, the continuing strength of productivity growth, which occurred even during the slowdown, should underpin stronger profits and incomes growth once recovery takes hold.

Japan's economy contracted by 0.4 per cent in 2001, entering its third recession in a decade in the June quarter, after two years of weak economic growth. Japan was affected by weak domestic spending, the ICT sector slump and slowing external demand more generally over the course of 2001. These developments caused a further deterioration in the economy that was already languishing under the weight of persistent deflation and ongoing structural problems in the corporate and financial sectors. Despite an expected global recovery, including a modest pick up in ICT demand, the economy is expected to remain weak in 2002. Increasing unemployment, ongoing deflation and low levels of consumer confidence are expected to limit the prospects for a recovery in consumption spending, while corporate balance sheet problems and weak profitability are likely to limit any recovery in investment spending. While a muted cyclical rebound is in prospect, Japan's growth potential will

remain seriously constrained. Demographic changes are also likely to be a long-term constraint on growth in the absence of policy change.

Non-Japan East Asia economies slowed sharply in 2001, with several economies entering recession. Non-Japan East Asian output is highly dependent on the global manufacturing cycle and growth slowed dramatically as US activity and global demand for ICT products slowed. The region grew by around 1.9 per cent in 2001, well down on the growth rate of around 8 per cent in 2000. Growth prospects for Non-Japan East Asia in 2002 have picked up in recent months with evidence of stronger activity towards the end of 2001 and partial data underscoring the impetus of improved conditions in the US. The outlook for 2002, while still below trend, is for growth of around 4¼ per cent. Stronger growth in the US and Europe and a recovery, albeit subdued, in world ICT demand should see stronger growth in Non-Japan East Asia as 2002 progresses. Recovery should also be underpinned by supportive monetary and fiscal policies. In contrast to other countries in the region, which tend to be heavily dependent on external trade, the Chinese economy continued to grow at a solid pace through the current global slowdown and is expected to grow strongly over the coming year.

Economic growth across the **European Union** slowed during the course of 2001, with Germany entering recession from mid year and growth in the other major economies stalling. National fiscal policies remain constrained by the agreements reached in support of monetary union. However, monetary policy has been more responsive and should help underpin a modest recovery once external demand starts to recover. The United Kingdom held up better than most European economies throughout 2001, although growth slowed in line with other European economies towards the end of the year. With the US likely to strengthen through 2002, growth in the region is expected to pick up from mid year.

Part III: The outlook for the domestic economy

KEY ASSUMPTIONS

In line with usual practice, the exchange rate is assumed to remain unchanged from the average levels reached in recent months, at around US53c and around 52 against the trade weighted index (TWI). The assumed continued very competitive level of the exchange rate over the forecast period is expected to support solid export growth over 2002-03.

Similarly, interest rates are assumed to remain consistent with the existing monetary policy framework, and at levels which are supportive of domestic demand, especially business investment, residential investment and household consumption spending.

An assumption of average seasonal conditions is expected to drive a slight pick up in growth of farm production in 2002-03.

DEMAND AND OUTPUT

In 2002-03, economic growth in Australia is forecast to be around 3¾ per cent in year-average terms and a strong 4 per cent through the year to the June quarter 2003. The unemployment rate is forecast to decline slightly from recent levels to be around 6 per cent in the June quarter 2003. Inflation is expected to be around 2¾ per cent in year-average terms in 2002-03 and around 2½ per cent through the year to the June quarter 2003, within the medium-term target band of 2-3 per cent. The current account deficit is forecast to widen slightly to around 4 per cent of GDP, continuing below its average level of the 1990s.

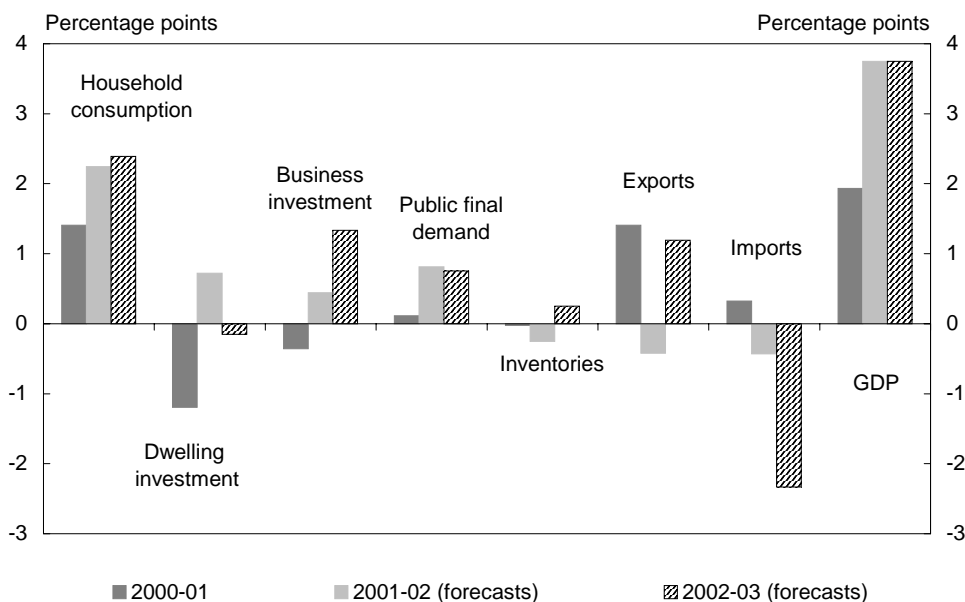
The Australian economy's resilience during the global slowdown has attracted considerable attention. In contrast to most of the rest of the world, economic growth in Australia strengthened over 2001. While weaker world growth did lead to a moderation in export growth, domestic activity has been supported by robust household consumption growth and a sharp rebound in investment in residential construction following the temporary slowdown in this sector during the second half of 2000. Economic growth is expected to be around 3¾ per cent in 2001-02, an upward revision to the 3 per cent growth forecast presented in the *Mid-Year Economic and Fiscal Outlook 2001-02*, which was prepared in the immediate aftermath of the events of 11 September 2001. The IMF and OECD both forecast Australian economic growth to be among the highest of developed economies in 2002 and 2003.

Domestic demand is expected to strengthen over 2002-03, with gross national expenditure forecast to grow by a very strong 4¾ per cent in year-average terms, following expected strong growth of 4¼ per cent in 2001-02. There is likely to be some change in the main drivers of domestic demand over 2002-03, with a strong pick up in

business investment and continued robust household consumption expected to more than offset subdued activity in residential construction (Chart 2).

Following relatively subdued activity over recent years, business investment is expected to rebound strongly in 2002-03, supported by low interest rates, solid profitability and high business confidence, while improving employment levels should support continued robust household consumption growth. Dwelling investment is expected to post a small decline in 2002-03, as the normal cyclical factors reassert after the bring forward of building related to the enhanced First Home Owners Scheme is completed. Not all of the increase in domestic demand will be met by domestic production (GDP), with net exports expected to be weaker. Despite a solid rebound in export growth, strong domestic demand, particularly in the more import-intensive sectors of the economy such as plant and equipment investment, will lead to even stronger growth in imports.

Chart 2: Contributions to GDP growth^(a)

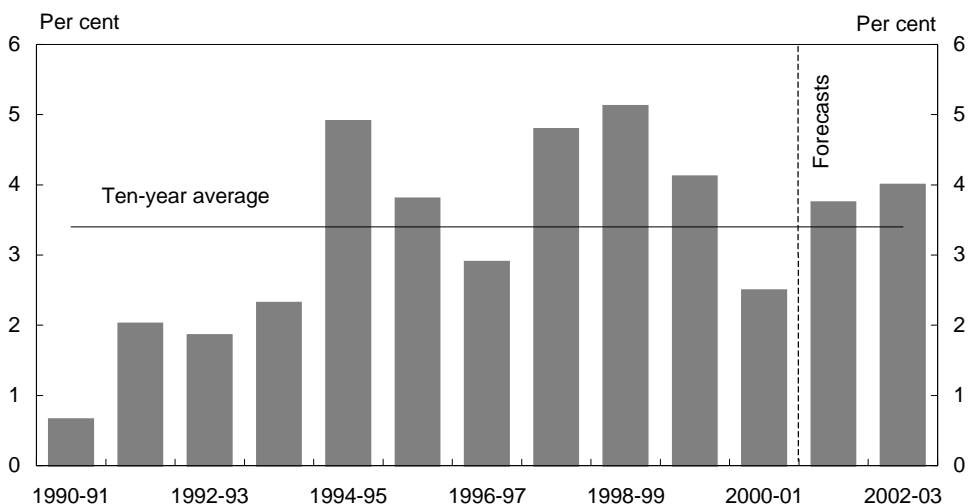


(a) Adjusted for second-hand asset sales as noted in Table 1.
Source: ABS Cat. No. 5206.0 and Treasury.

Household consumption

Household consumption is forecast to increase by around 3¾ per cent in 2001-02 and 4 per cent in 2002-03 (Chart 3). This is expected to return growth to a little above trend rates after very subdued growth in the first half of 2000-01.

Chart 3: Annual growth in real household consumption



Source: ABS Cat. No. 5206.0 and Treasury.

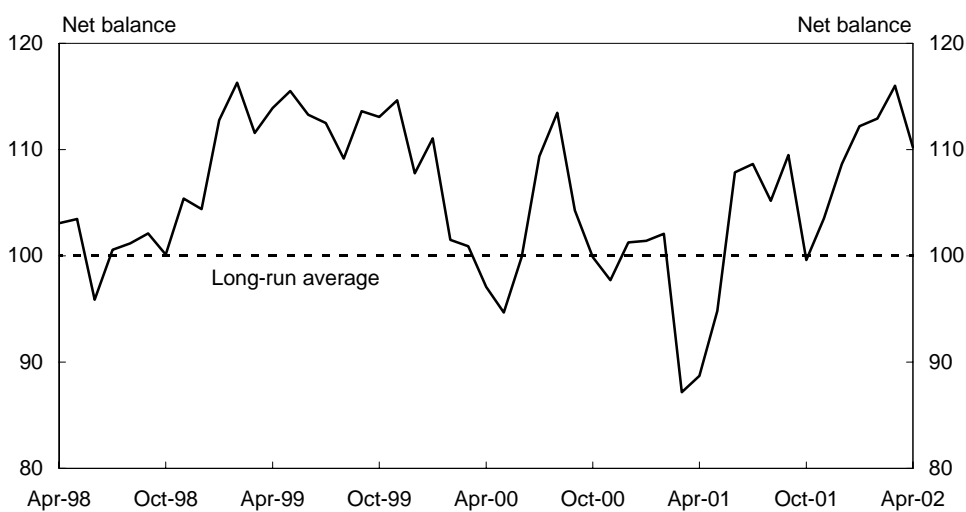
Consumer spending grew strongly in 2001 despite only modest growth in real household disposable income through this period. Consumption was assisted, in part, by the boost to household spending power generated by low interest rates, strong dwelling investment which boosted consumption of durable goods, declining petrol prices and strong growth in household wealth. Household interest expenses fell in 2001 as official interest rates were cut six times, by a cumulative 2 percentage points. Consumers also saved on petrol outlays as the automotive fuel component of the CPI fell by 12 per cent over the year to December 2001. Strong gains in household wealth — established house prices rose strongly by 16 per cent over the year to the December quarter 2001 and the local share market recovered to near record highs — also assisted in maintaining solid consumption spending.

Growth in real household disposable income is expected to increase to around trend rates in the forecast period, in line with improved labour market conditions. In contrast, higher world oil prices have seen petrol prices increase steadily in the first four months of 2002. There is a risk that petrol prices may have a moderating impact on household consumption if external developments lead to sustained higher oil prices. In addition, following the rapid increases in established house prices over recent years, it is assumed that gains in household wealth from this source will be closer to trend in the period ahead. On balance, overall growth in household spending

power, assisted by low interest rates and improved labour market conditions, is expected to be supportive of consumption growth over the forecast period.

Consumer confidence, as measured by the Westpac-Melbourne Institute index, is currently at a relatively high level, providing further support for the consumption outlook (Chart 4).

Chart 4: Westpac-Melbourne Institute consumer sentiment index

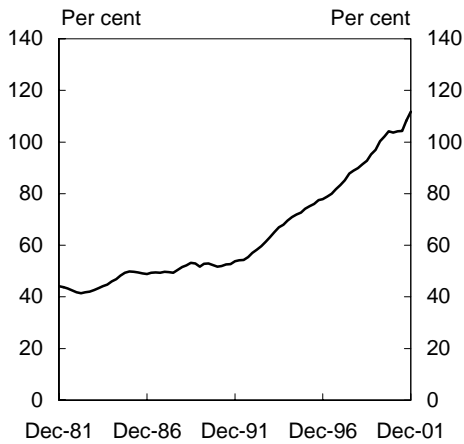


Source: Westpac-Melbourne Institute.

The household sector's financial position remains sound despite an expansion in household debt levels during the last decade.² The increase in household borrowing over recent years largely reflects an increase in affordability brought about by low interest rates and the continuing impact of financial deregulation on the availability of credit. The build-up in debt has led to a significant increase in the ratio of household debt to disposable income (Chart 5), bringing this ratio to levels more comparable to those in other developed countries (Chart 6). However, household assets have also grown strongly in recent years, with the household debt-to-asset ratio showing only a gradual increase (Chart 7). Further, households' current ability to service debt is high. Household interest payments are now around 6¼ per cent of disposable income, down from a peak of around 12 per cent in 1989-90 (Chart 8). Although the position of overall household balance sheets is sound, the expansion in household debt has left the sector more exposed to increases in interest rates and declines in asset prices. In addition, while household debt ratios are not a cause for concern in the near term, sustained further increases in debt-to-income ratios would increase sensitivity to interest rate and asset price movements.

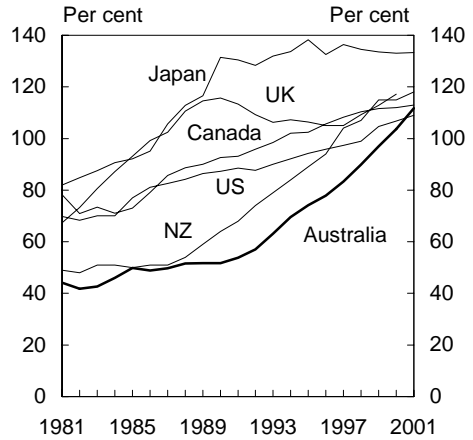
² See Economic Roundup Summer 2002, *Australian Net Private Wealth*, Department of Treasury, Canberra; and Tan, Alvin and Voss, Graham, 2000, 'Consumption and Wealth', Reserve Bank of Australia Research Discussion Paper 2000-09.

**Chart 5: Household debt
(per cent of disposable income)**



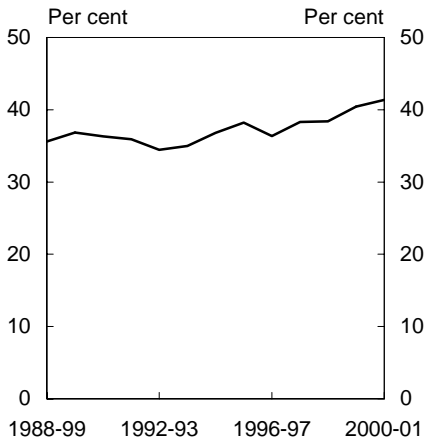
Source: Reserve Bank of Australia (RBA).

**Chart 6: Household debt,
international comparisons
(per cent of disposable income)**



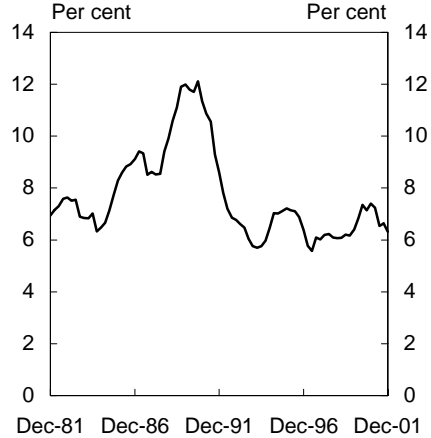
Source: RBA, OECD, Reserve Bank of New Zealand and Treasury.

**Chart 7: Household
debt-to-asset ratio**



Source: ABS Cat. No. 5204.0

**Chart 8: Interest payments
(per cent of disposable income)**



Source: ABS Cat. No. 5206.0

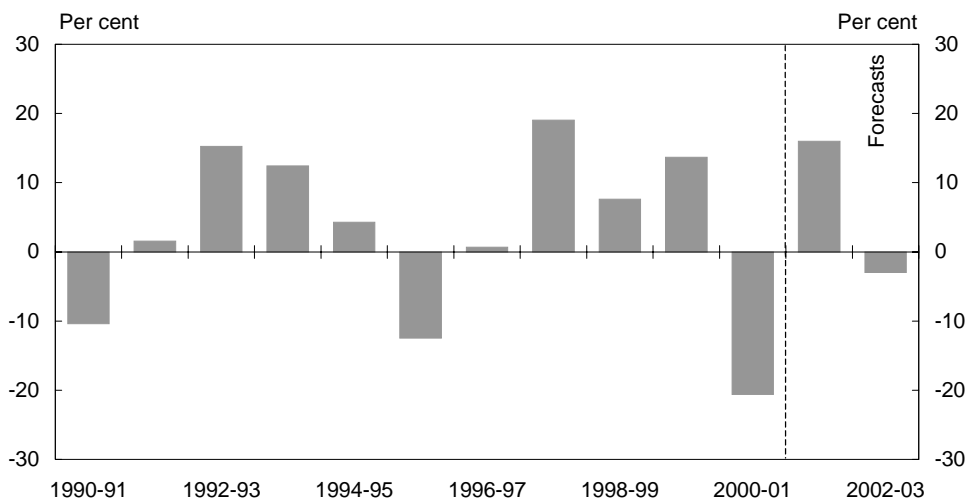
Dwelling investment

Following estimated very strong growth of around 16 per cent in 2001-02, dwelling investment is forecast to decline by 3 per cent in year-average terms in 2002-03 (Chart 9).

Dwelling investment rebounded sharply from the temporary slowdown in the second half of 2000 to be a key driver of GDP growth in 2001-02. The sharp turnaround in the residential construction sector was driven by historically low mortgage interest rates

and the Government's more generous First Home Owners Scheme (FHOS) for new (rather than established) dwellings. The more generous FHOS provided a targeted, short-term boost to building activity. It is now being phased out at a time of strength in the sector and the economy more generally.

Chart 9: Annual growth in dwelling investment



Source: ABS Cat. No. 5206.0 and Treasury.

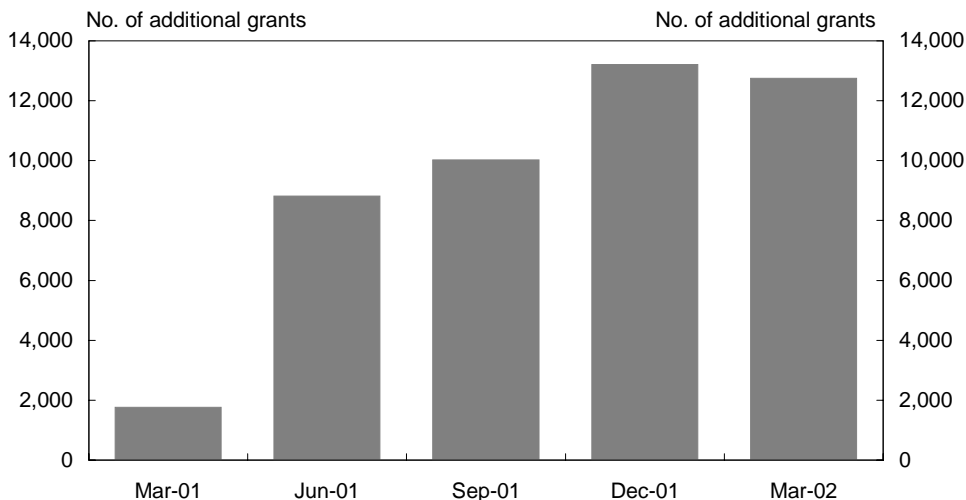
In 2002-03, dwelling investment is expected to decline moderately by around 3 per cent, driven by a significant fall in new dwelling investment, partly offset by ongoing growth in expenditure on alterations and additions. The forecast decline in new dwelling investment comes as FHOS-related bring forward of building is completed. FHOS data to March 2002 indicate that the take up of the additional (total grant of \$14,000) and phased-down (total grant of \$10,000) grants has been extremely strong (Chart 10). This suggests that a significant amount of residential building activity has been brought forward and will subsequently unwind over the course of 2002-03.

The 2002-03 forecasts also incorporate some reduction in the significant stock of excess supply that has developed in some segments of the dwelling market. Evidence of excess supply has emerged in the market with vacancy rates, particularly for medium/high density dwellings in Sydney and Melbourne, rising significantly through the year to December 2001 to around historically high levels.

Ongoing growth in expenditure on alterations and additions is expected to moderate the overall decline in dwelling activity in 2002-03, supported by low interest rates, solid employment growth and recent gains in household wealth. While past activity in alterations and additions moved broadly in line with new dwelling construction, there are grounds to believe that alterations and additions will continue to grow over the forecast period, notwithstanding a downturn in new dwelling construction. This is

because the downturn in new dwelling construction principally relates to the phasing out of the additional FHOS. Overall conditions remain supportive of the outlook for alterations and additions.

Chart 10: FHOS grants for new dwellings



Source: Treasury.

The forecast overall modest decline in dwelling investment in 2002-03 is likely to have flow-on effects for other areas of the economy. Specifically, employment is expected to fall in this labour intensive sector, while sales of durable goods typically associated with the purchase of a new dwelling are also likely to moderate.

Business investment

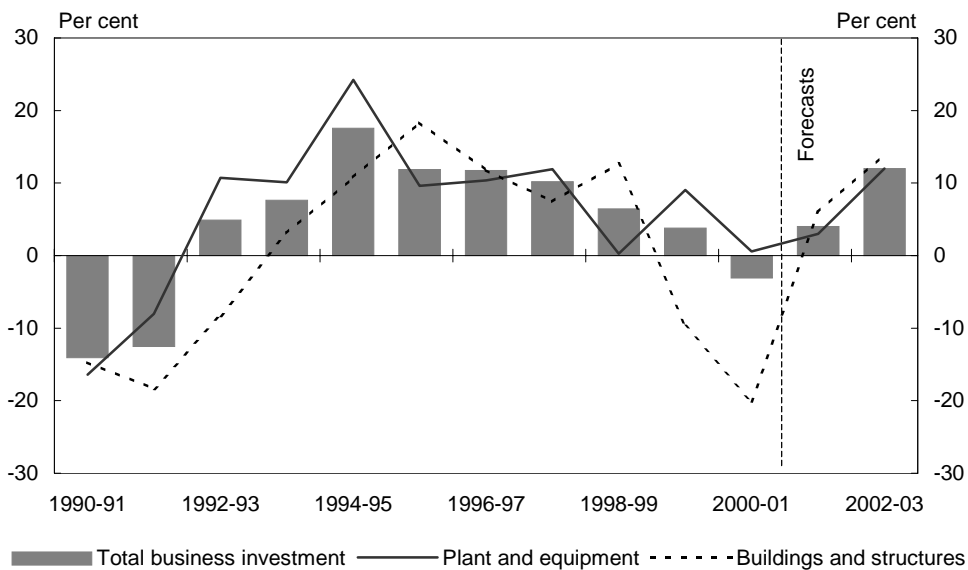
New business investment³ is forecast to grow by a very strong 12 per cent in 2002-03, following expected growth of around 4 per cent in 2001-02, and a fall of 3.1 per cent in 2000-01 (Chart 11). The very positive outlook for business investment reflects strong fundamentals: low interest rates; the competitive level of the exchange rate, which continues to support Australia’s export and import-competing sectors; the reduction in the company tax rate; and corporate profitability, which is above longer-run averages as a percentage of GDP and is particularly strong in the rural and mining sectors.

The subdued business investment levels of the last two years have resulted in above average capacity utilisation, particularly in the mining industry. Business sentiment

3 Private sector net purchases of second-hand public assets can have a significant impact on estimates of business investment and public final demand, despite the fact that these asset purchases have no impact on aggregate economic activity. Accordingly, the forecasts of new business investment abstract from these transactions.

has also strengthened significantly in recent months, rebounding from the impact of the 11 September 2001 terrorist attacks, and buoyed by an expected recovery in the world economy. Virtually all business surveys have shown a relatively strong improvement in business confidence and investment intentions.

Chart 11: Annual growth in new business investment^(a)



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

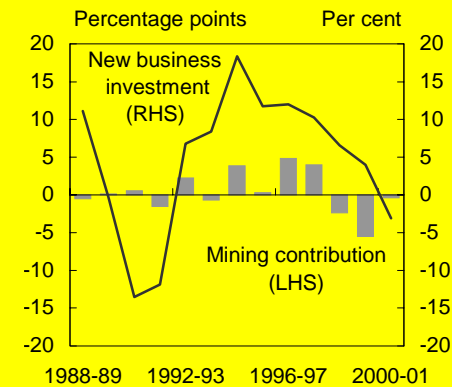
New investment in machinery and equipment is expected to grow by a very strong 12 per cent in 2002-03, following expected subdued growth of around 3 per cent in 2001-02, and essentially no growth in 2000-01. The outlook is partly driven by an expected substantial strengthening in mining investment (Box 1). After a couple of very weak years during and immediately following the Asian financial crisis, conditions in the mining sector are conducive for strong investment, with record levels of profitability boosted by the competitive level of the exchange rate and higher world prices for some key export commodities. Equipment expenditure intentions are also very strong in the transport and storage sector, which partly reflects scheduled new investment by the aviation industry.

The latest Australian Bureau of Statistics (ABS) capital expenditure survey showed that firms' first estimate of plant and equipment investment intentions for 2002-03 were very strong, although early estimates only provide a broad indication of likely outcomes. While investment intentions have picked up strongly across several sectors, intentions in other areas, especially some parts of manufacturing, remain subdued.

Box 1: Investment in the mining industry

The mining industry accounts for around 5 per cent of Australian GDP, but contributes around 35 per cent of total export earnings and around 12 per cent of new business investment expenditure. Mining is one of Australia’s most capital-intensive industries, with about \$1.4 million of capital stock per employee — around five times the average across industries.

Chart A: Mining contribution to new business investment



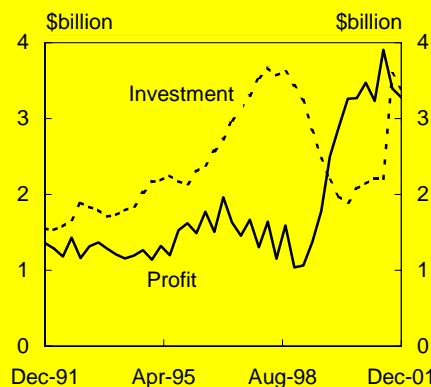
Source: ABS Cat. No. 1364.0.15.003.

Prior to the Asian financial crisis, Australian business investment was lifted by a surge in mining investment, which grew by around 81 per cent in the four years to 1997-98. The onset of the Asian financial crisis saw mining investment fall substantially in the ensuing three years, making a significant subtraction from growth in new business investment volumes (Chart A).

Mining investment is set to pick up markedly in the period ahead, particularly in the gas, coal and metals sectors. Work on a number of large projects is already underway, or about to commence.

The competitive Australian dollar, together with higher world prices for some key export commodities (Box 3), has helped boost profitability in the mining industry well beyond previous levels (Chart B). A competitive and profitable mining industry, assisted by an expected world recovery, is driving investment and employment within the sector.

Chart B: Mining industry profit and nominal investment

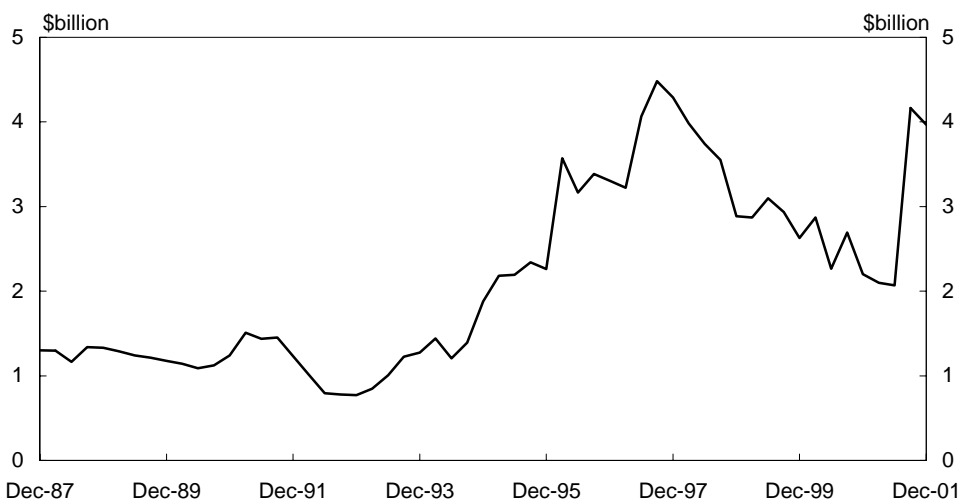


Source: ABS Cat. No. 5676.0 and Treasury.

This outlook is supported by the latest ABS capital expenditure survey, where firms indicate growth in mining investment of 25 per cent or more is in prospect in 2002-03.

New investment in non-residential buildings and structures is expected to grow by a very strong 14 per cent in 2002-03, following forecast moderate growth of around 6 per cent in 2001-02, and a substantial fall of around 20 per cent in 2000-01. Engineering construction is expected to drive overall growth in non-residential construction in 2002-03. The commencement of engineering construction work on the North West Shelf Expansion and the Alice Springs to Darwin railway increased the level of engineering construction work yet to be done by around \$2 billion in the September quarter 2001 (Chart 12). Further project commencements are expected in 2002-03 in the mining industry, including a number of coal and metals projects, and several road projects are also expected to commence in the transport and storage sector.

Chart 12: Work yet to be done — engineering construction



Source: ABS Cat. No. 8762.0.

Investment in new non-residential buildings (that is, offices, shops, hotels and other business premises) is also expected to pick up in 2002-03, albeit with less vigour than engineering construction investment. Growth in non-residential building is likely to be driven by increased building activity in retail, and finance and insurance, given the positive business conditions and strong profitability recently experienced in these sectors.

Investment in intangible fixed assets (that is, computer software, mineral exploration rights and artistic originals) is also expected to pick up in 2002-03, dominated by solid growth in software investment, although at a slower rate than seen in recent years. Software investment is expected to pick up following an easing in growth in 2001-02, after the completion of work relating to the introduction of *The New Tax System* in 2000, and Y2K-related work in 1999.

While investment intentions data in the mining industry and the transport and storage sector are very strong, investment intentions in some other sectors remain subdued, particularly in parts of the manufacturing industry. If investment intentions strengthen in these sectors over the coming year and current intentions in the mining industry and the transport and storage sector are fully realised, or exceeded, business investment could be stronger than forecast. On the other hand, the lumpy nature of major mining and other engineering construction projects means that potential delays or deferrals pose some downside risks to the forecasts.

Inventories

Private non-farm inventories are expected to subtract around $\frac{1}{4}$ of a percentage point from growth in 2001-02. In the second half of 2001 it appears that firms attempted to run-down inventory levels, possibly as a result of the global uncertainty following the events of 11 September 2001. This trend is expected to reverse in the first half of 2002, in response to a more certain global outlook.

Private non-farm inventories are expected to contribute around $\frac{1}{4}$ of a percentage point to GDP growth in 2002-03, as firms continue to rebuild inventories, in line with strong forecast growth in sales.

Public final demand

In 2002-03, public final demand⁴ is anticipated to grow by around $3\frac{1}{4}$ per cent in year-average terms, around the longer-term trend and a little below the expected $3\frac{1}{2}$ per cent growth in 2001-02, but well above the 0.5 per cent increase recorded in 2000-01. The expected increase in public final demand reflects additional spending at the Commonwealth, State and Local Government levels. At the Commonwealth level, the expected additional expenditure is linked to the war on terrorism, airport security and border protection. At the State and Local Government levels, the expected increase in expenditure is related to new initiatives on transport, education, health and community services, with a number of infrastructure projects expected to continue into 2002-03.

NET EXPORTS AND THE CURRENT ACCOUNT DEFICIT

The current account deficit (CAD) is forecast to widen modestly to around $3\frac{1}{4}$ per cent of GDP in 2001-02 and to around 4 per cent of GDP in 2002-03. At these levels, the CAD would remain below its average share of GDP during the 1990s, despite strong domestic growth and the recent global slowdown.

4 The forecasts of public final demand abstract from private sector net purchases of second-hand public sector assets — see footnote 3.

Net exports

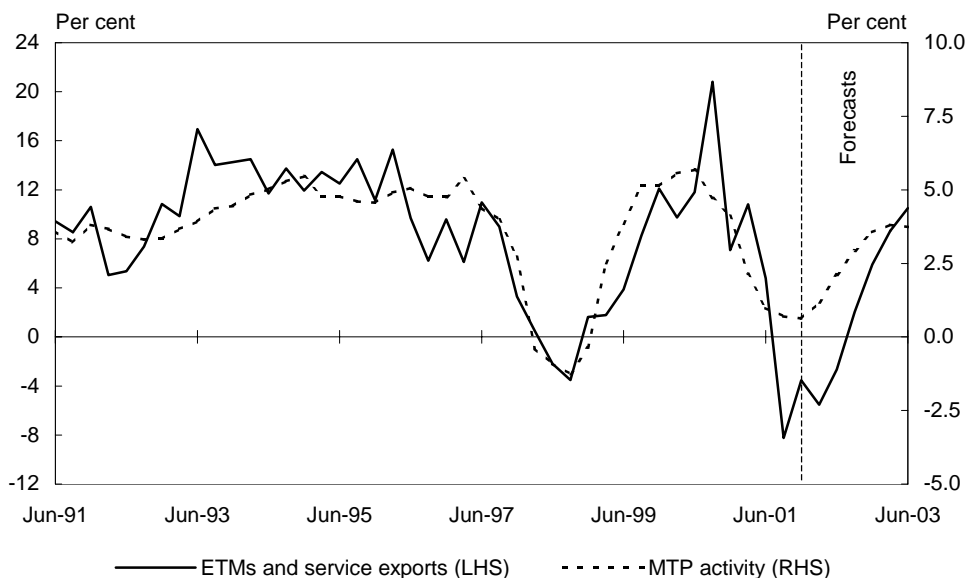
Net exports are expected to subtract around $\frac{3}{4}$ of a percentage point from GDP growth in 2001-02, largely reflecting the impact of lower world growth on demand for exports. In 2002-03, net exports are expected to subtract 1 percentage point from GDP growth. While export growth is expected to resume solidly over the course of 2002-03, this is expected to be more than offset by strong import growth.

Export volumes are estimated to decline by 2 per cent in 2001-02, and then grow in 2002-03 by a solid 6 per cent. Even with this rebound, growth will remain slightly below the longer-term trend, reflecting the moderate nature of the recovery in world growth. Export growth in 2002-03 is expected to be underpinned by a rebound in exports of elaborately transformed manufactures (ETMs) and services as demand for these exports increases in response to the moderate pick up in major trading partner (MTP) growth. Exports of non-rural commodities are also expected to record solid growth as domestic capacity increases in 2002-03, while growth in exports of rural commodities should be supported by increases in farm production.

The recovery in world economic growth in 2002-03 — in particular in Australia's MTPs — should have a significant impact on Australia's exports of ETMs and services. These two export categories are very sensitive to economic conditions in the destination country and so have come under considerable downward pressure in 2001-02. Exports of tourism-related services came under additional downward pressure as international air travel declined in response to heightened international tensions arising from the events of 11 September 2001. The recovery in MTP growth, together with the supportive level of the exchange rate, should see ETM and service exports rebound over the course of 2002-03 (Chart 13).

In contrast to ETM and service exports, commodity export volumes tend to be affected more by domestic supply conditions than by international demand in the short term. Following expected modest growth in 2001-02, non-rural commodity exports are forecast to increase solidly over 2002-03 as a number of new mining projects commence production. The strong profitability in Australia's resources sector over recent times, which has been supported by the very high level of Australian dollar non-rural commodity prices, has boosted investment in the capacity of domestic mines. While the timing of the start up of new mining projects can be subject to some uncertainty, a step up in local production, particularly in coal and iron-ore, is expected to support an increase in export volumes from around mid 2002.

Chart 13: Through-the-year growth in ETM and service exports and MTP activity



Source: ABS Cat. No. 5302.0 and 1364.0.15.003 and Treasury.

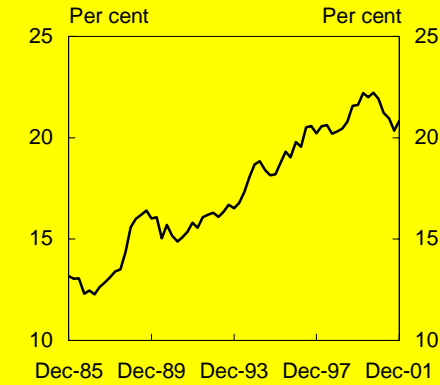
Farm production is expected to grow by around 1¼ per cent in 2001-02, with a near record grain crop partly offset by more subdued production of fibres, particularly wool. In 2002-03, farm production is expected to grow by around 3¾ per cent, reflecting the assumed return to average seasonal conditions. Exports of rural commodities are expected to grow more strongly than farm production in 2002-03 as stocks — particularly wheat and meat — are drawn down to meet demand.

Import volumes have been very subdued over the last two years, with a decline of 1.4 per cent in 2000-01, the lowest growth rate in 10 years. In 2001-02, imports are forecast to turn around, rising by 2 per cent, underpinned by solid growth in most components of merchandise imports, including in several large 'lumpy' import components such as military equipment and civil aircraft. In 2002-03, import volumes are expected to grow by a strong 11 per cent, mainly driven by a large expected pick up in the very import-intensive sectors of the economy, particularly in plant and equipment investment and ETM exports, while less import-intensive sectors of the economy, such as dwelling investment, are forecast to moderate (see Box 2).

Box 2: The drivers of import demand

Import volumes fell for the first time since the early 1990s in 2000-01, and are expected to be subdued in 2001-02, before picking up strongly in 2002-03. The profile of activity can only partly explain the profile of imports. For example, the import penetration ratio — the ratio of imports to domestic final demand — fell sharply below trend levels in early 2001 (Chart A).

Chart A: Import penetration ratio



Source: ABS Cat. No. 5206.0.

The recent weakness in imports partly reflects the significant fall in the Australian dollar which, by increasing the relative price of imports, would

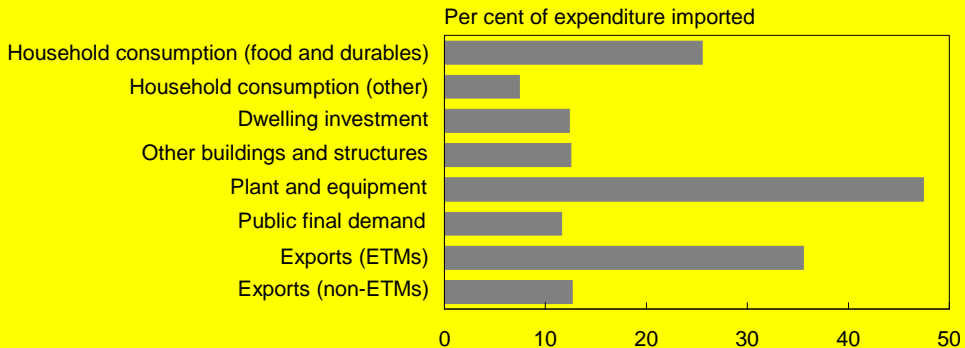
have led to the substitution of domestically produced for imported goods and services.

Another part of the explanation relates to the composition of demand. Import intensity varies between components of demand. For example, plant and equipment investment and ETM exports are import-intensive, while dwelling investment tends to be produced locally (Chart B).

While economic growth is expected to be broadly similar in 2001-02 and 2002-03, the composition of growth is expected to change. In 2001-02, economic growth is expected to be largely driven by dwelling investment, while investment in plant and equipment and ETM exports should remain weak. As a result, the composition of demand should see relatively subdued growth in imports.

In 2002-03, plant and equipment investment and ETM exports are forecast to pick up strongly, while dwelling investment is expected to fall slightly. As a consequence, relatively strong growth in imports is expected.

Chart B: Import intensity by category of final demand



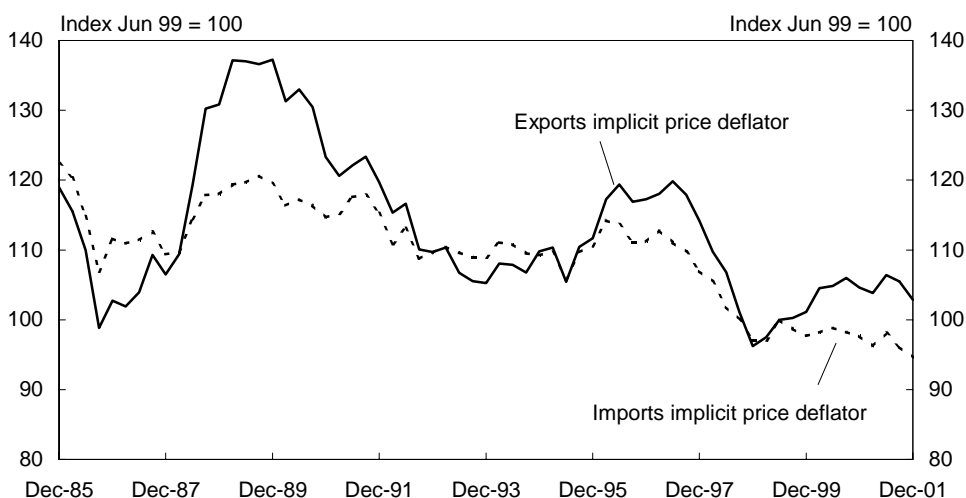
Source: ABS Cat. No. 5209.0 and Treasury.

The terms of trade

In currency neutral (Special Drawing Rights (SDR)) terms, Australia's non-rural commodity export prices — as measured by the Reserve Bank of Australia's commodity price index — are expected to increase moderately in 2002-03, following solid growth in 2001-02. The recovery in world growth is expected to underpin increases in the price of many commodities, particularly base metals and mineral fuels. However, while tight supply is expected to support a moderate rise in the negotiated contract price for coking coal, the negotiated contract prices for the other bulk commodities are expected to be more subdued after strong increases in 2000-01.

Following strong growth in 2001-02, aggregate rural prices, in SDR terms, are expected to maintain their current high levels in 2002-03, with increased world agricultural production over the period ahead expected to be broadly matched by the recovery in global demand. Moderately lower export prices for beef and veal are expected to be offset by higher world prices for wool as world production falls against a pick up in consumption in apparel markets. These high prices, combined with the expected rise in farm production in 2002-03, should see farm incomes rise further after reaching well above previous historically high levels in 2001-02 (see Box 3).

Chart 14: Export and import prices in SDR terms



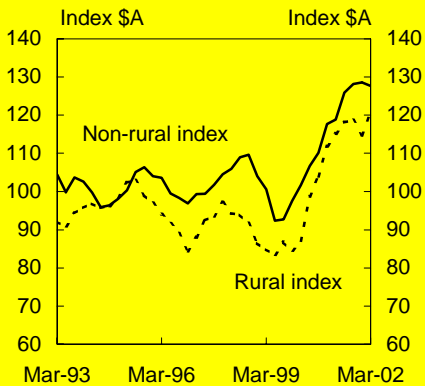
Source: ABS Cat. No. 5302.0 and 5206.0.

Australia's import prices are expected to decline slightly in 2002-03. In SDR terms, Australian import prices have fallen over the last decade at a rate of around 2 per cent per year (Chart 14). A large part of the fall in import prices can be explained by substantial falls of around 16 per cent per annum in the SDR prices of ICT goods. The trend decline of import prices is expected to continue in 2002-03.

Box 3: Booming conditions in Australia's rural and resource sectors

The Australian dollar prices of rural and non-rural commodities have risen very strongly over the past two years to reach record high levels (Chart A). This has reflected higher world prices for many commodities which, together with the lower Australian dollar, has increased the returns on Australian commodity exports.

Chart A: Commodity price index



Source: RBA.

Australian miners and farmers have reacted to these price rises by increasing production and sales. Between 1999 and 2001 the volume of rural and resource commodity production has increased by 7 per cent and the volume of commodity exports has increased by 10 per cent.

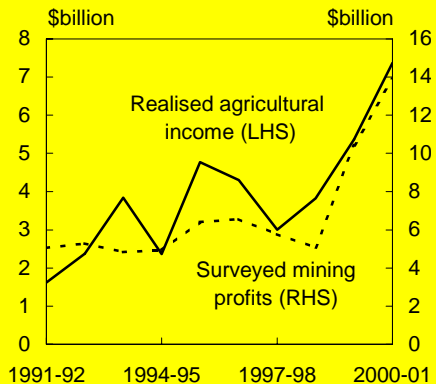
Higher prices and production have seen incomes rise to record high levels. Agricultural income has almost doubled over the past two years, while mining profits have almost tripled (Chart B).

High levels of production have also stimulated growth in employment in these sectors. In the year to the March

Quarter 2002, mining employment grew by 10 per cent and agricultural employment grew by 5 per cent. These employment outcomes were markedly stronger than the 1.8 per cent growth for Australia as a whole over this period.

Profitable rural and resource conditions have also underpinned strong investment growth. Investment in agricultural machinery picked up by around 30 per cent in the year to the December quarter 2001, while mining investment increased by around 50 per cent over this period.

Chart B: Farm and mining income



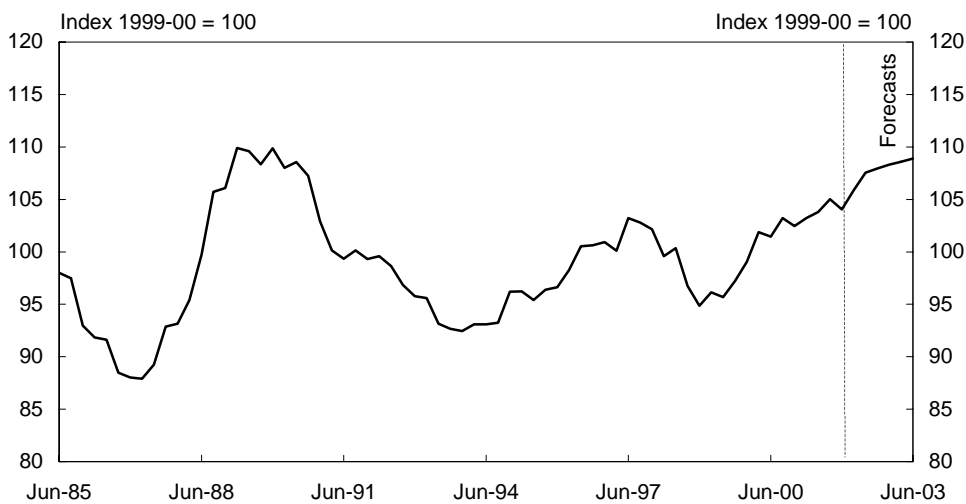
Source: ABS Cat. No. 5206.0 and 5676.0.

Further strong investment growth is expected in these sectors over the coming period, especially in the mining sector (Box 1).

Strong investment growth will lead to higher production in Australia's rural and resource sectors, strengthening exports and employment over the forecast period. This will provide further support to rural and regional incomes.

Reflecting these forecast trends in export and import prices, the terms of trade is expected to increase by 2¼ per cent in 2001-02, to be around the highest level in a decade. A further increase in the terms of trade of 2¾ per cent is expected in 2002-03 (Chart 15). An increase in Australia’s terms of trade during a period of slow global growth is very unusual by historical experience and this issue is discussed in more detail in *Budget Statement 4*.

Chart 15: Terms of trade



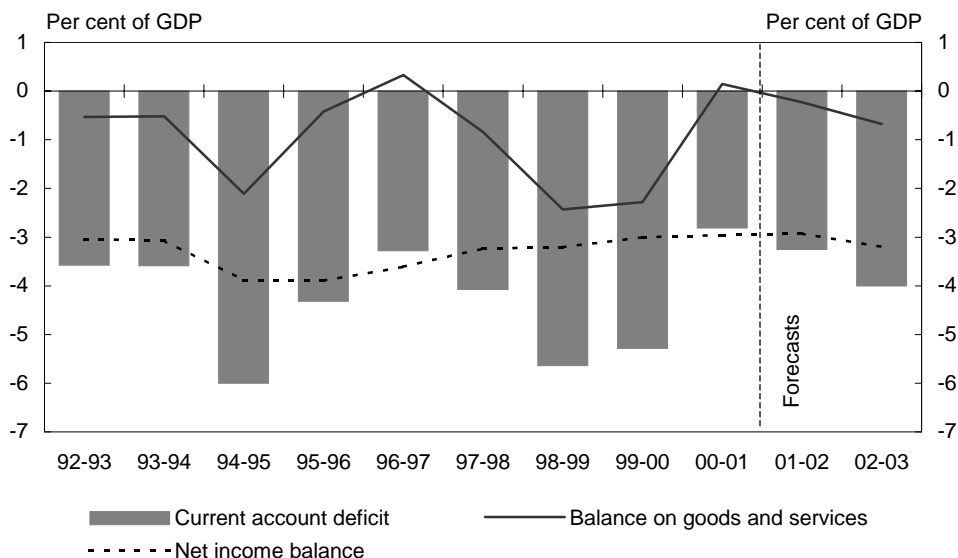
Source: ABS Cat. No. 5206.0 and Treasury.

The current account deficit

The CAD is forecast to widen slightly in 2001-02 to 3¼ per cent of GDP, up from 2.8 per cent of GDP in 2000-01, the lowest annual level in 20 years. The increase in the CAD is expected to be driven mainly by the return to a trade deficit in volume terms, only partially offset by a rise in the terms of trade. In 2002-03, the CAD is expected to widen further, to around 4 per cent of GDP, driven by an increase in the trade deficit in volume terms and a slight increase in the net income deficit (NID), more than offsetting the impact of a further rise in the terms of trade (Chart 16). However, at these forecast levels, the CAD would remain moderate, below its average level as a share of GDP during the 1990s and well below earlier peaks of around 6 per cent of GDP.

Growth in the NID has continued to be modest in recent years, reflecting both the generally low level of world and Australian interest rates, and the sharp narrowing of the differential between Australian and world interest rates. This has seen the NID decline gradually to slightly less than 3 per cent of GDP in 2001-02. With the recent modest increase in world interest rates, the net income balance is expected to widen marginally, increasing to around 3¼ per cent of GDP in 2002-03.

Chart 16: Contributions to the current account deficit



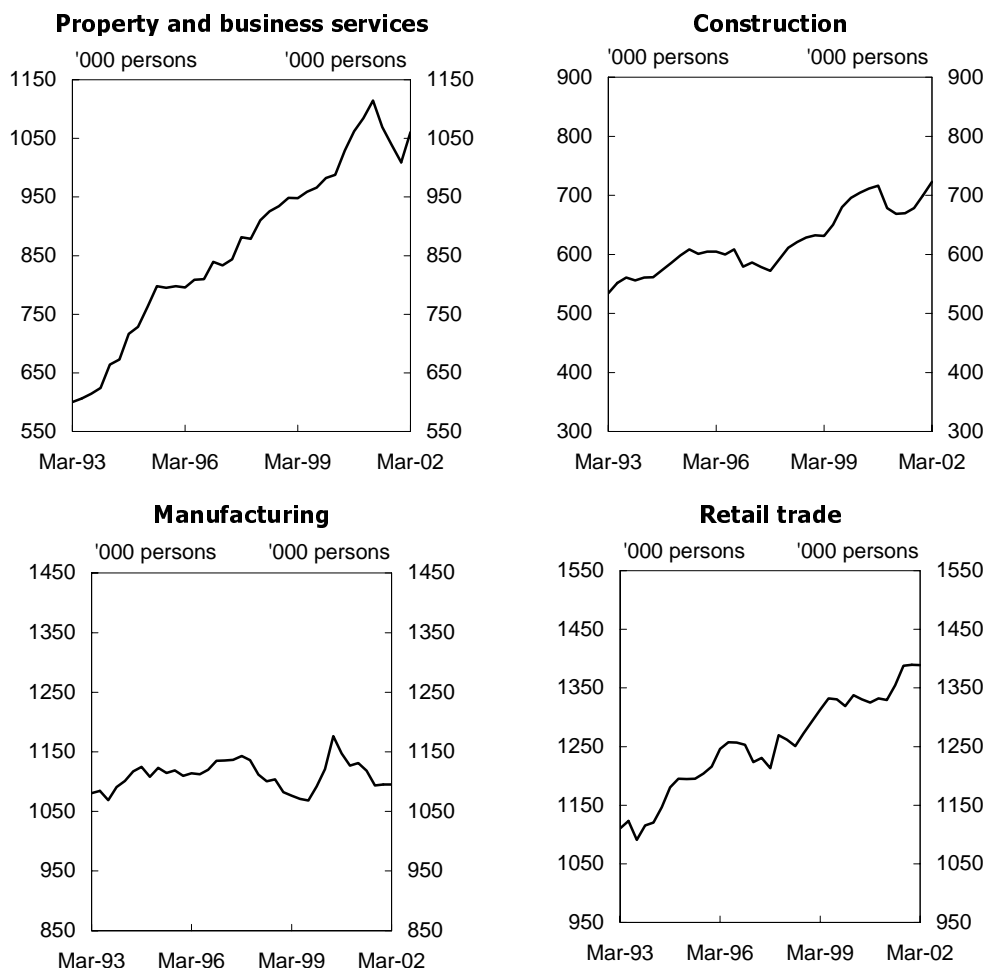
Source: ABS Cat. No. 5302.0 and 5206.0 and Treasury.

LABOUR MARKET, WAGES AND PRICES

Labour market

Conditions in the labour market are expected to strengthen over 2002-03, with employment growth forecast to be around 1¼ per cent in both year-average and through-the-year terms. The outlook for strengthening employment growth in 2002-03 reflects ongoing robust GDP growth and continued moderate wages growth. The moderation in the labour market following the completion of Y2K-related expenditure, the Olympics and the development of new systems associated with the introduction of *The New Tax System* has now run its course. This has seen a rebound in employment in property and business services in the March quarter 2002 (Chart 17), which augurs well for the employment outlook. However, in line with the expected moderation in the labour-intensive construction sector, some softness in labour market outcomes from mid 2002 is expected in the construction sector and the construction-related part of the manufacturing sector.

Chart 17: Employment for selected sectors



Source: ABS Cat. No. 6291.0.40.001.

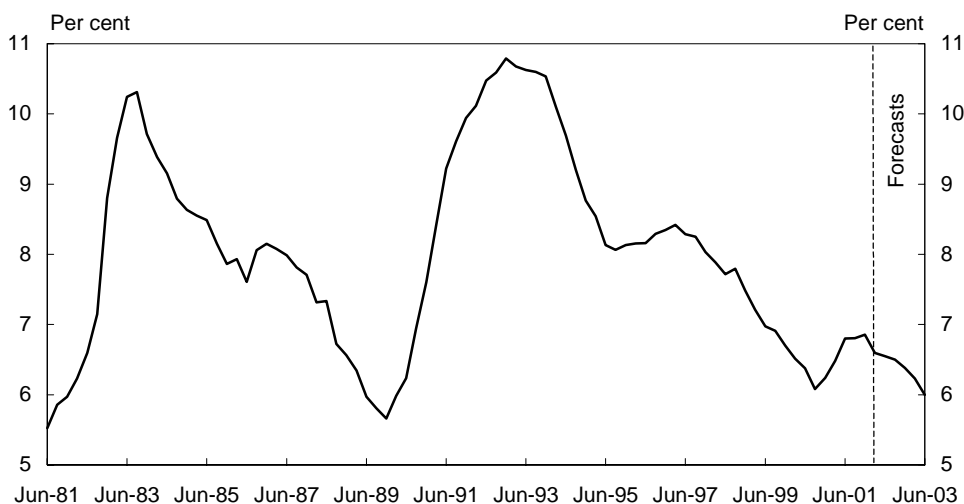
The improved labour market outlook follows likely employment growth of around 1 per cent in 2001-02. The lagged effects of the recent strong GDP growth began to flow into employment growth toward the end of 2001 and early 2002. Total employment grew by 1.1 per cent in the year to April 2002. This growth was concentrated in part-time employment, which grew by 4.9 per cent over this period, while full-time employment fell slightly. The strong growth in part-time employment reflected, in part, strong growth in those industries that typically employ a relatively large proportion of part-time employees, in particular retail and the other service sectors.

The major job advertisement series, vacancy series and business surveys all point to employment growth continuing at a solid rate in the months ahead, with higher employment growth anticipated across a range of sectors. Nevertheless, labour market

data have been particularly volatile over the last year or so, making it difficult to assess the strength of the labour market.

In line with this improved outlook for employment, the unemployment rate (Chart 18) is expected to decline slightly over the forecast period, and to average around 6¼ per cent in 2002-03 as a whole and to be 6 per cent in the June quarter of 2003. However, monthly labour market data may vary significantly around these averages. Provided that economic growth remains robust, an unemployment rate below 6 per cent is achievable over the medium term, although outcomes will be influenced by the pace and extent of future labour market and welfare reforms. Ongoing employment growth and further reductions in the unemployment rate are likely to encourage higher labour force participation over the period ahead, with the participation rate expected to average around 63¼ per cent over the forecast period, up from 63.4 per cent in April 2002. However, given the volatility in estimates of labour force participation over recent months, some uncertainty remains around this forecast and hence the forecast for the unemployment rate.

Chart 18: The unemployment rate



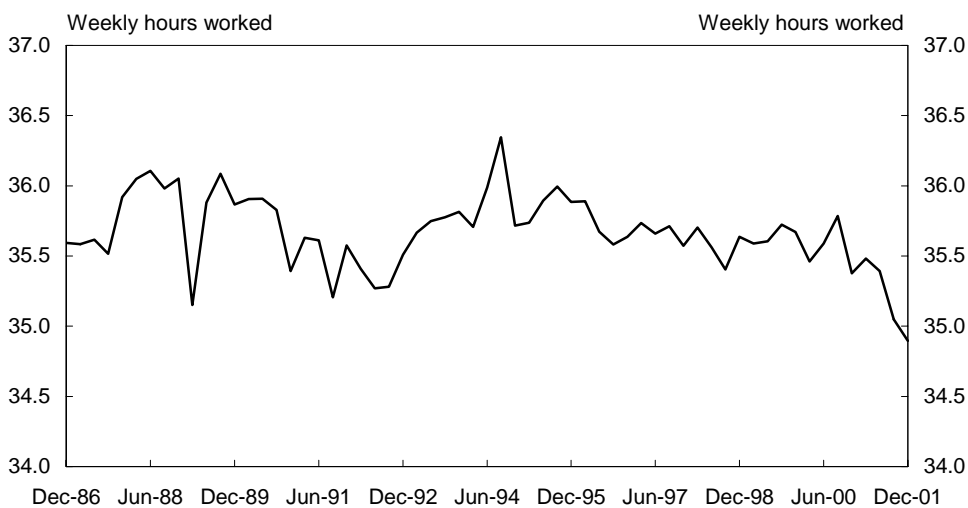
Source: ABS Cat. No. 6202.0 and Treasury

After reaching a cyclical low in 2000-01, labour productivity growth (on a heads basis) is set to rebound strongly in 2001-02, before moderating to rise by around 1¼ per cent in 2002-03, in line with longer run average growth rates. Measured labour productivity growth in 2002-03 is expected to be supported by the forecast very strong growth in business investment, which will tend to lift the potential output of the existing labour force.

Wages

Wages growth in 2001-02 has been very moderate to date, consistent with the relatively soft labour market conditions experienced during 2001. A sharp decline over the course of 2001 in average weekly hours worked also put downward pressure on aggregate wages during this period (Chart 19).

Chart 19: Average weekly hours worked



Source: ABS Cat. No. 1364.0.15.003.

Average earnings on a national accounts basis (AENA) is expected to grow by 3¼ per cent in 2001-02, with growth in the second half of the financial year picking up as labour market conditions improve and as the decline in average weekly hours worked over the course of 2001 is unwound in 2002.

Growth in AENA is expected to increase to 4¼ per cent in 2002-03. Abstracting from the increase in the superannuation guarantee charge on 1 July 2002, AENA is expected to grow by 3¾ per cent in 2002-03. This increase in wages growth reflects the improvement in employment growth and unemployment levels and an expected increase in average weekly hours worked to around trend levels. The Australian Industrial Relation Commission's (AIRC) Safety Net Review of Wages (the 'Living Wage Case') decision to increase all award rates by \$18 per week will also put upward pressure on wages growth.

The pace of the pick up in economic activity and the timing of its impact on the labour market represents a key uncertainty to the wages outlook. In addition, the extent to which the AIRC's decision flows through to workers on non-award wages could also represent a further pressure on wages growth.

Prices

In 2001-02, the CPI is expected to increase by around 2¾ per cent in year-average terms. However, several temporary and seasonal factors have played an important role in the CPI outcomes for the year to date. On the upside these include: a large increase in fruit and vegetable prices in the December quarter 2001 (up 10.2 per cent); and seasonal influences in the March quarter 2002 relating to a number of items including pharmaceuticals (up 11.4 per cent) and education (up 4.7 per cent). In addition, airline levies arising from the collapse of Ansett and the events of 11 September 2001 have also had an upward impact on the CPI. Insurance premiums have also risen, partly attributable to the collapse of HIH. Partly offsetting these increases was a large decline in the price of petrol in the September quarter 2001 (down 8.3 per cent).

Looking ahead, a range of near term upward price pressures are evident, such as higher petrol prices and insurance premiums. One insurance component not directly captured by the CPI is business insurance — the magnitude and timing of these increases and their indirect effect on the CPI is uncertain. Nevertheless, increases in wage costs remain well contained. In addition, various core measures of inflation showed a more moderate increase in the March quarter 2002 than over recent quarters, and recent measures of upstream price pressures have also been very subdued.

The headline CPI is forecast to increase by around 2¾ per cent in 2002-03 in year-average terms and around 2½ per cent through the year, within the medium-term target band of 2-3 per cent. Although economic growth is forecast to be robust in both 2001-02 and 2002-03, this follows very subdued growth of 1.9 per cent in 2000-01, with some build up in excess capacity in the economy at that time most evident in a rising unemployment rate. The robust growth forecast in 2001-02 and 2002-03 will allow this spare capacity to be taken up gradually, rather than necessarily resulting in a build up of inflationary pressures. This seems to be consistent with the current relatively moderate underlying inflationary pressures in the economy. Labour productivity, which grew by a strong 2.3 per cent in year-average terms in 2001 (on an hours basis), is expected to increase solidly over the forecast period. Moderate wages growth, combined with solid expected increases in productivity, should see nominal unit labour cost increases — the key driver of inflation over the medium term — remain subdued. In addition, import prices should be subdued as world prices are expected to remain steady, and the exchange rate has appreciated somewhat over recent months — both of these factors should assist to ease inflationary pressures.

There are some key uncertainties surrounding the inflation outlook. The ongoing effect of reduced competition in some markets, particularly in air travel and insurance, is difficult to quantify. The stronger economic environment could also create an opportunity to re-build margins following the decline in the exchange rate over the last two years. Should this occur, and/or other short-term price pressures feed into inflationary expectations (and then wages), it could have an impact on underlying inflationary pressures. The extent to which the recent strong rise in world oil prices is sustained and leads to higher petrol prices is also a risk to the inflation outlook.

Part IV: Uncertainties

The uncertainties surrounding both the international and domestic economic outlooks have generally declined since late 2001 and are now more evenly balanced, although there is still uncertainty about the pace of the world recovery.

On the international front, the recovery in the US is expected to be moderate because of the absence of pent up demand, over capacity in some sectors, various financial constraints and lingering global weakness, particularly in Japan. It is possible, however, that these factors will be less of a drag on growth than currently anticipated. Still high prospective returns on technology investments and process innovations may see stronger investment than currently expected with positive flow on effects to other parts of the economy. The current accommodative monetary and fiscal settings may also provide a stronger stimulus to the economy than currently anticipated if current uncertainties were to dissipate quickly.

There are also some downside risks to the US economy. Ongoing weakness in corporate profitability and heightened uncertainty surrounding corporate governance issues in the wake of the Enron collapse could delay the expected recovery in investment. In addition, an increase in uncertainty, due for example to the impact on employment security of adverse labour market developments or a resurgence of international tensions, could see spending falter and a weaker recovery than currently anticipated. Higher than expected oil prices could also slow recovery. There is also a risk that some of the imbalances built up in the 1990s, including household and corporate sector debt and highly-valued equity prices may need to be unwound, slowing the pace of recovery. There also remains an ongoing issue of the sustainability of the US current account and, by extension, the stability of G-3 (US, Japan and Euro area) exchange rates.

Economic conditions in Japan have worsened over the past year and a further period of weakness is anticipated in the forecasts. However, continuing deflation, writedowns of bank capital and uncertainties about the extent of non-performing loans have added to the risk that the financial system will be unable to adequately cope with further weakness in the economy. Monetary and fiscal policy options are limited. While the most likely outcome for Japan is that it will slowly work through its current problems without a major financial crisis, there is a risk that a further deterioration in economic and financial conditions will put additional pressure on fragile banking and corporate sectors, increasing financial system instability.

The possibility of a weaker recovery in the US and/or financial instability in Japan poses a substantial risk to the East Asian region. Strong trade and investment linkages would transmit the weakness to the East Asian economies, and increase the possibility of financial instability in the region.

Turning to domestic economic activity, there is some uncertainty around the expected depth of the downturn in the dwelling sector. While a sharp decline in new dwelling construction is expected in 2002-03, as the additional FHOS is phased out and the stock

of excess supply in some segments of the market is reduced, overall conditions remain supportive of solid growth in alterations and additions. Nevertheless, there is a risk that activity in alterations and additions could moderate as new dwelling construction declines, leading to a larger decline in dwelling investment than presently forecast. This in turn would have negative implications for employment growth and household consumption, particularly for the consumption of durable goods.

On the other hand, the business investment intentions data reported by the ABS in the latest capital expenditure survey point to some upside risks to the forecasts for business investment and in turn import growth in 2002-03.

The stronger domestic economic environment, combined with reduced competition in some markets (such as insurance, telecommunications and airlines), could also create an opportunity for firms to re-build margins following the decline in the exchange rate over the last two years. Should this occur, particularly in conjunction with other short-term price pressures, it could have an impact on underlying inflationary pressures.

In addition, the recent increase in oil prices to well over the assumed price of \$US23 per barrel underlying the forecasts, which is being driven mainly by concerns about the conflict in the Middle East, also presents risks to both the international and domestic forecasts. If the oil price remains well above the assumed level for an extended period of time, then confidence both domestically and internationally could decline, and other more discretionary expenditures may be lower than forecast. In addition, there is a risk that if higher petrol prices were sustained, it could feed into ongoing inflation.

The following is a reprint of Statement 4, Australia's Terms of Trade — Stronger and Less Volatile, from Budget Paper No. 1: Budget Strategy and Outlook 2002-03.

STATEMENT 4: AUSTRALIA'S TERMS OF TRADE — STRONGER AND LESS VOLATILE

In recent years, Australia has enjoyed both stronger and less volatile terms of trade, which has raised real incomes, contributed to macroeconomic stability and reduced inflationary pressures. This favourable conjunction has been supported by a more dynamic and efficient private sector in an environment of increased internationalisation, sound macroeconomic policy and sustained microeconomic reform.

Part I: Introduction

The terms of trade — the ratio of export prices to import prices — is an important economic measure. It reflects the capacity of any given amount of exports to pay for a quantity of imports. A rise in the terms of trade enables Australia to buy more imports for a given quantity of exports and thereby increases domestic real income. However, terms of trade volatility tends to induce volatility in consumer spending, investment, economic growth and inflation, and has traditionally made macroeconomic management more difficult.

Through much of its history, Australia has faced declining and highly volatile terms of trade. However, since the trough reached in 1986, the terms of trade has exhibited markedly less volatility, and perhaps a slight upward trend.

Historically, Australia's terms of trade was positively correlated with world economic growth: when world economic growth was strong, the terms of trade rose; when world growth was weak, the terms of trade fell. In contrast, since 2000 Australia's terms of trade has increased despite the slowing of the world economy.

Further, in the past terms of trade increases usually added to inflationary pressures. While still too early to be definitive, recent evidence suggests that this relationship may have changed. The rising terms of trade has more recently reflected import price declines and therefore has tended to put downward pressure on inflation, with consequent benefits for macroeconomic management.

There are a number of factors that have led to a more stable and relatively strong terms of trade. One factor is the diversification of Australia's exports, across both products and markets. A second factor, contributing to Australia's strengthening terms of trade, is significant falls in the prices of Australia's imports, especially for information and communications technology (ICT) goods.

A third factor, contributing to terms of trade stability, is a more stable global economy relative to earlier times. This probably reflects, at least in part, policy improvements adopted by many industrial countries, and could well be an outcome of globalisation, which has promoted international competition, productivity and policy discipline.

While future movements in the terms of trade are uncertain, there are good prospects that terms of trade volatility will remain subdued with the possibility of an upward trend, as long as macroeconomic policy remains sound and microeconomic reform advances.¹

The remainder of this Statement examines aspects of the terms of trade in more detail. Part II examines the major causes and effects of terms of trade movements. Part III looks at the history of Australia's terms of trade. Part IV investigates the key drivers of the terms of trade, including the diversification of exports and imports across products and markets, and the principal price trends. Finally, Part V concludes with some policy messages.

1 Sound *domestic* macroeconomic and microeconomic policies are crucial for reduced terms of trade volatility and increased relative strength. Sound *international* macroeconomic and microeconomic policies may provide additional stability benefits for Australia's terms of trade, but it is unclear what impact this has on the level of the terms of trade.

Part II: Terms of trade movements — causes and effects

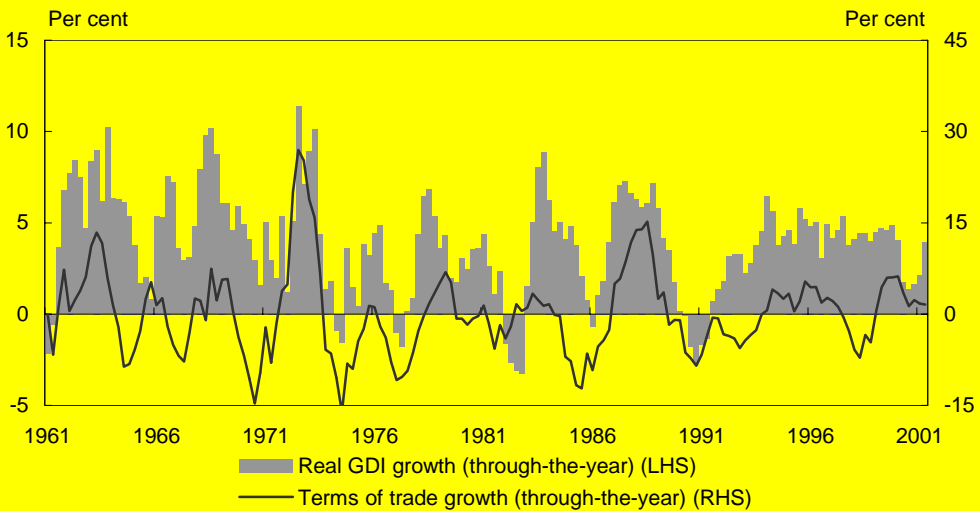
There are two key components of Australia's terms of trade: world prices of Australia's exports and imports, and the composition of the export and import baskets. While Australia has little ability to affect the world relative prices of its imports and exports, developments within Australia can influence the terms of trade to the extent that such developments affect the composition of the export and import baskets. For example, an increase in the world price of coal relative to ICT goods will increase the terms of trade because Australia is a net exporter of coal and a net importer of ICT goods. Similarly, an increase in the relative weighting of a more expensive export (with relative prices held constant) will also increase the terms of trade.

Increases (falls) in the level of the terms of trade raise (reduce) domestic real income by increasing (reducing) the purchasing power of Australia's exports (Box 1). This, in turn, can have flow on effects through the economy to the extent that it results in changes in household spending, business profits, business investment, production and employment.

Box 1: Real gross domestic income and the terms of trade

GDP measures the volumes of goods and services *produced* in Australia, not the volumes *consumed* in Australia. If the terms of trade change significantly over any period, then the measure of GDP will not accurately reflect the changes in real purchasing power of the income generated by domestic production. One measure that attempts to capture the terms of trade effects, or changes in real purchasing power of the income generated by domestic production, is real gross domestic income (real GDI). Chart A illustrates that there has been a broad relationship between the terms of trade and the growth rates of real GDI.

Chart A: The terms of trade and real gross domestic income



Source: ABS Cat. No. 5206.0.

Before the floating of the Australian dollar, sharp increases in the terms of trade often provoked significant outbreaks of inflation. For example, when wool prices soared during the Korean War, inflation increased dramatically, reaching 22.4 per cent in 1951-52. Notwithstanding difficulties with the policy response, inflation subsequently returned to lower levels, falling to 0.9 per cent in 1954-55.²

More recently, however, evidence is mounting that — with a floating exchange rate — terms of trade increases are having less impact on domestic inflationary pressures, and may well reduce and stabilise those pressures under some circumstances. There are

2 In an environment of fixed exchange rates, in order to mute inflationary pressures following a rise in the terms of trade, the exchange rate needed to be revalued. In practice this was difficult, as it directly affected exporters and those in import-competing industries. During the 1950s, this tension resulted in a slow response to movements in the terms of trade, thereby contributing to sharp volatility in inflation.

likely to be several factors at work. First, while increased real income flowing from a stronger terms of trade tends to result in additional domestic expenditure and hence inflationary pressures, this is likely to be at least partly offset by lower import prices in response to a rising exchange rate.³ Second, a floating exchange rate provides a level of insulation against abrupt changes in the terms of trade and therefore tends to reduce inflation volatility. Third, if terms of trade increases are driven principally by falls in import prices on world markets (as in Australia over recent years), rather than rises in export prices, there will tend to be a reduction in inflationary pressures flowing through from lower input costs to production and lower prices to consumers. The historical relationship between the terms of trade and the nominal and real exchange rates is discussed in more detail in Box 2.⁴

While movements in the level of the terms of trade affect real income, significant terms of trade volatility can be destabilising and can affect economic efficiency. For example, where consumers and producers misdiagnose the extent and duration of a change in the terms of trade, efficient resource movements are likely to be impeded as price signals are misread. This tends to inhibit both productivity growth and economic growth because the free flow of resources to their most efficient use is likely to be impeded.

Firms may also experience significant costs associated with high terms of trade volatility. Borrowing costs can increase as lenders charge higher premiums to account for risk, while the volatility may reduce the incentive for firms to invest.

High levels of volatility in the terms of trade can therefore seriously disrupt an economy, increasing the volatility of its growth rate and making macroeconomic policy relatively more difficult to implement. Monetary authorities are more at risk of over- or under-estimating the stimulus/contraction required to maintain low and stable inflation. This tends to increase the volatility of inflation, thus adding to general economic instability. The operation and control of fiscal policy can be similarly more difficult under such circumstances.

3 See Gruen, D. and J. Dwyer, *Are terms of trade rises inflationary?*, Research Discussion Paper 9508, Reserve Bank of Australia, 1995.

4 More detail may also be found in MacDonald, Ronald and Luca Ricci, 'Purchasing Power Parity and New Trade Theory', *International Monetary Fund Working Paper* WP/02/32, 2002.

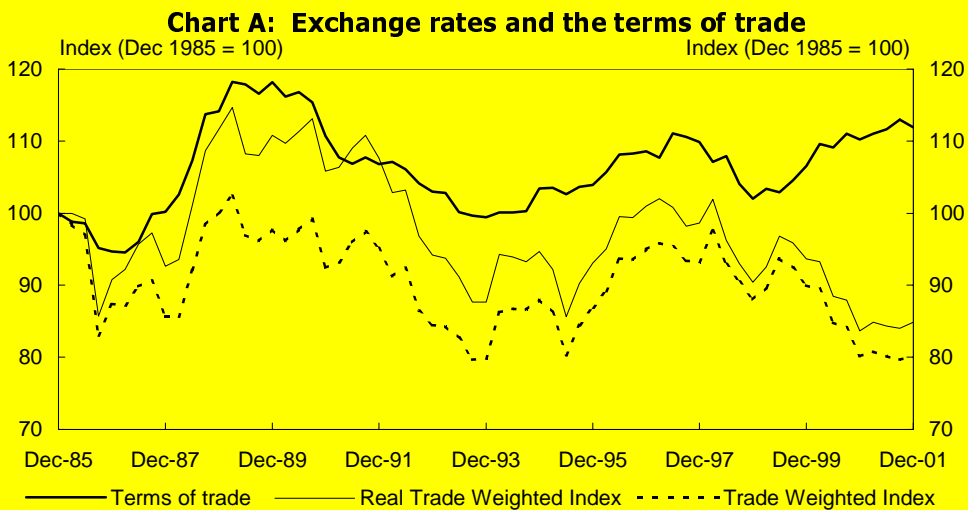
Box 2: Nominal and real exchange rates and the terms of trade

Chart A compares the terms of trade to the nominal and real exchange rates since the mid-1980s. There has been a broad positive correlation between the terms of trade and the exchange rate over most of this period. More recently, while the terms of trade has increased since the worst of the Asian financial crisis in mid-1998, the nominal and real exchange rates have fallen.

One factor that has assisted to boost the terms of trade following the Asian financial crisis was that Australia’s import prices tend to be affected by regional influences, while its export prices tend to be set on the world market. Therefore, in the short-term, the world prices of Australia’s imports fell more rapidly than the prices of its exports.

This would normally tend to boost Australia’s exchange rates. However, there are at least two factors that may help explain the recently observed divergence in movements in the real exchange rate and the terms of trade. One factor is the uneven productivity growth in the tradeable and non-tradeable sectors. If productivity in the non-tradeable sector grows relatively more rapidly than the tradeable sector, the real exchange rate will tend to depreciate, other factors unchanged. Over the 1990s, there has been relatively rapid productivity growth in Australia’s non-tradeable sector, particularly in industries such as wholesale trade, finance and insurance, utilities and construction, as a result of increased domestic competition.

A second factor for recent falls in the nominal and real exchange rates may be the strength of the US dollar, driven in part by capital flows, which may lead to the Australian nominal and real exchange rates being below their fundamental levels in the short-term.



Source: ABS Cat. No. 5206.0 and 5302.0, Reserve Bank of Australia.

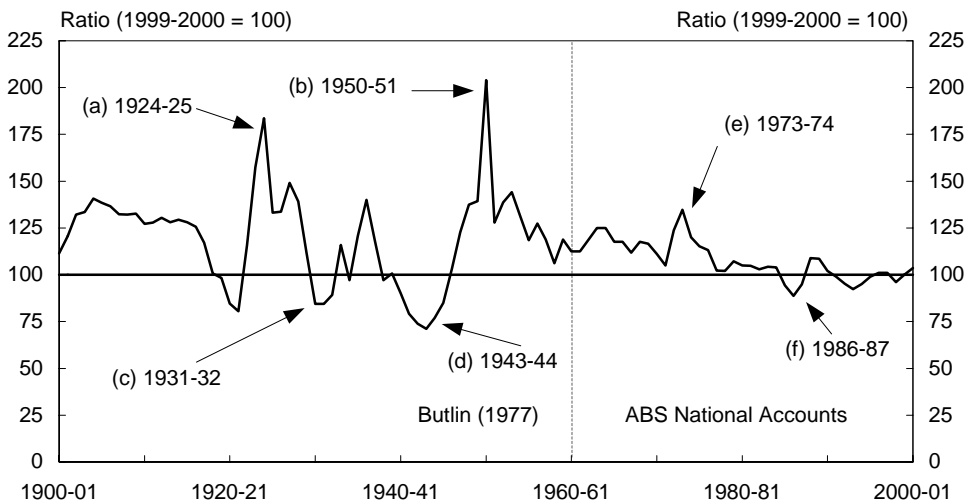
Part III: History of the terms of trade

The level of Australia's terms of trade has been in broad decline over the past century. The comparatively stronger level of the terms of trade in the first half of the twentieth century reflected the fortunate combination of Australia's natural resource endowments and relatively high prices for those commodities on international markets. It also reflected the relative stage of world economic development.

The trend decline in the terms of trade has been accompanied by considerable volatility, with the most prominent movements relating to dramatic changes in commodity prices and slowdowns in the global economy.

The most dramatic increases in the terms of trade were due to the impact of sharply rising commodity export prices in the early 1920s (Chart 1, point a) and the Korean War at the beginning of the 1950s (Chart 1, point b), with both episodes reflecting the boom in (and in the 1950s, the subsequent collapse of) wool prices. Further, the Great Depression (Chart 1, point c) and the Second World War (Chart 1, point d) coincided with periods of sustained declines in the terms of trade.⁵

Chart 1: The terms of trade, 1900-01 to 2000-01



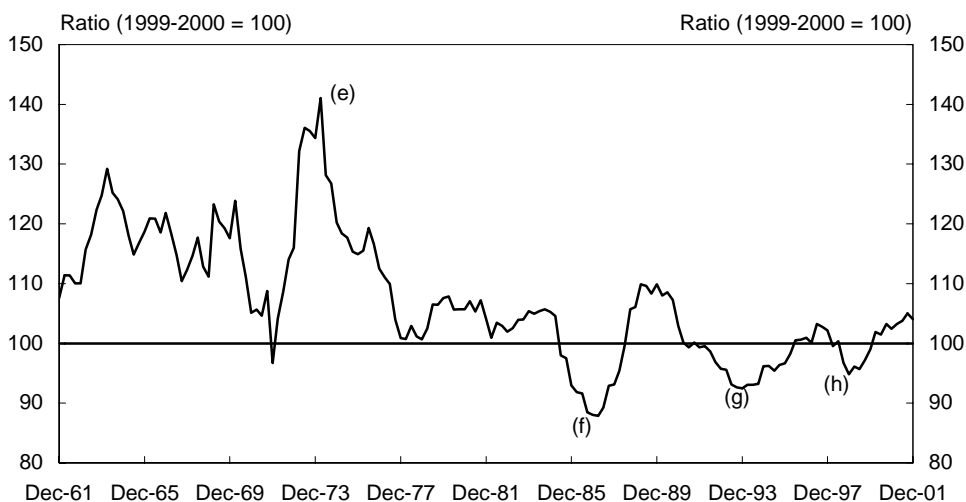
Source: Butlin (1977) and ABS Cat. No. 5206.0 (annual data).

5 The volatility of the historical series has been artificially reduced in parts, with the estimates from 1900 to 1913 recalculated from calendar year to financial year using a two-year moving average. Further, there is a conceptual inconsistency in the series with the inclusion of 'invisible' exports and imports in the deflator from 1948-49 onwards (Butlin M.W., *A Preliminary Annual Database 1900-01 to 1973-74*, Reserve Bank of Australia, Research Discussion Paper 7701, May 1977).

Chart 2 focuses on the terms of trade since 1960-61. The effect of the oil price spike in the mid-1970s can be seen in the decline in the terms of trade from point (e), which followed a commodity price boom. A period of weaker commodity prices in 1986 can be seen at point (f), the early 1990s world recession at (g)⁶ and the Asian financial crisis at (h).

In fact, since 1986 the impact of international developments on the terms of trade has fallen progressively — the terms of trade has exhibited markedly less volatility and perhaps a slight upward trend.

Chart 2: The terms of trade, December 1961 to December 2001

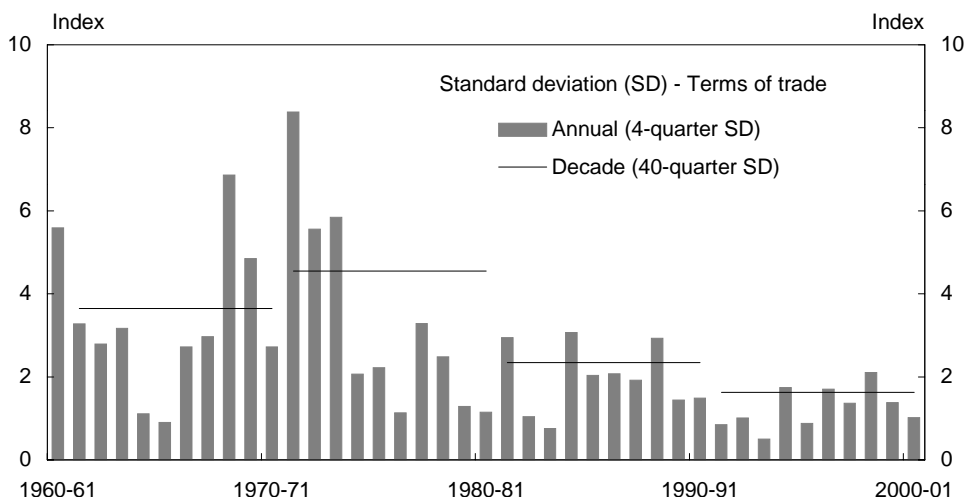


Source: ABS Cat. No. 5302.0. (quarterly data).

Another way to examine the changing volatility of the terms of trade over the past four decades is presented in Chart 3, which shows the standard deviation of movements in the terms of trade (over annual and decade periods) from 1960-61 to 2000-01. Again, the volatility of the terms of trade has been lower over the 1990s than any of the three previous decades.

6 While the recession commenced in Australia in 1990, in global terms it commenced in 1991; the decline in the terms of trade reflects lagged effects.

Chart 3: Volatility in the terms of trade, 1960-61 to 2000-01



Source: ABS Cat. No. 5302.0 and Treasury.

This lower terms of trade volatility in the 1990s is also likely to have assisted in both reducing the volatility of economic growth and in lowering inflation by assisting macroeconomic management. Table 1 shows that volatility in both GDP growth and inflation was lower in the 1990s compared with the three previous decades. The second half of the 1990s, in particular, was notable for rising terms of trade, high GDP growth rates (with minimal volatility) and low inflation. Since 2000, the terms of trade has continued to rise.

Table 1: Trends and volatility in major economic indicators

Decade	Terms of trade		GDP		Inflation	
	Average level	Standard deviation	Annual growth	Standard deviation	Annual growth	Standard deviation
1960s	116.5	3.6	5.2	1.9	2.5	0.5
1970s	113.8	4.5	3.3	1.6	10.1	1.3
1980s	101.4	2.3	3.2	1.1	8.3	0.8
1990s	98.5	1.6	3.4	0.7	2.3	0.6
1990's (1st half)	98.3	1.5	2.4	0.8	2.6	0.7
1990's (2nd half)	98.6	1.7	4.4	0.5	1.9	0.5

Source: ABS Cat. No. 5206.0, 6401.0 and Treasury (quarterly data).⁷

⁷ The 1960s are often seen as the 'golden years', but when Australia is compared with the average of the OECD in terms of relative performance, the 1960s were Australia's worst years. See Henry, K.R., *Australia's Economic Development*, Address to the Committee for the Economic Development of Australia, 40th Anniversary Dinner, November 2001.

Part IV: Drivers of the terms of trade

Major world economic events have been one of the most important drivers of both the level and the volatility of Australia's terms of trade. Swings in the growth rates of the major world economies and Australia's major trading partners (MTP) have been traditionally associated with even larger swings in the terms of trade. More recently, however, this effect seems to have become much more muted, with the international downturns in the late 1990s and in 2001 having a much smaller impact on the terms of trade.

The product diversification of Australia's export base is likely to be one factor behind the declining volatility of the terms of trade. Further, the level of the terms of trade has been supported by the diversification of the imports base, particularly the increasing importance of ICT imports in the trade basket, given the rapid and sustained decline in world ICT prices.

The geographic diversification of exports and imports across different markets is an important extra dimension, reducing the exposure of exporters and importers to developments in individual countries or regions.

This diversification notwithstanding, the prices of Australia's exports (particularly commodities) and imports have generally trended down over the past decade (in foreign currency terms). However, the trend decline in import prices has been more rapid, reflecting particularly rapid price falls for ICT goods.

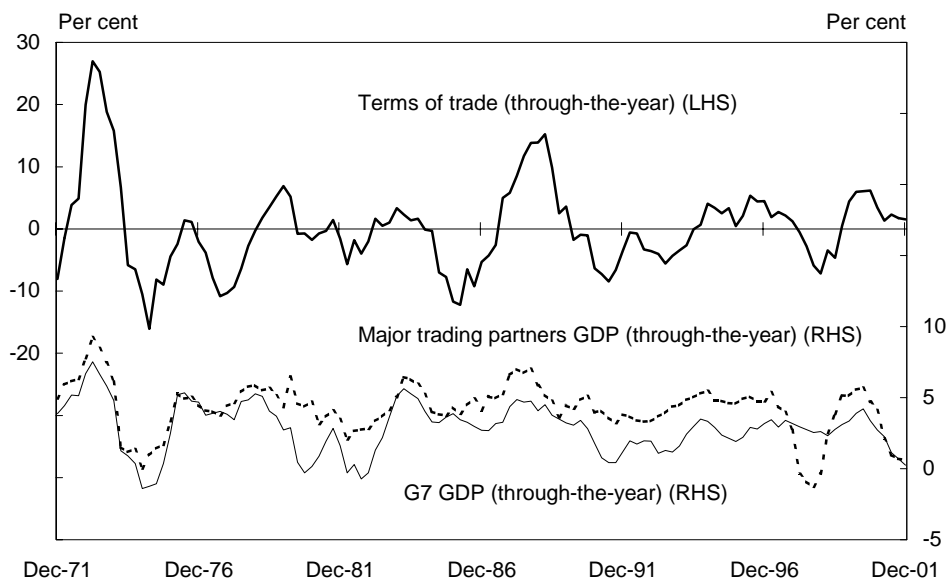
The major influences on Australia's terms of trade are considered in more detail below.

Effect of major world economic events on the terms of trade

International economic conditions have been one of the major drivers of the terms of trade in Australia over the past three decades. Specifically, previous cycles in the economic growth of Australia's MTP and the seven major countries of the OECD (G7) have often prompted large swings in the terms of trade. This link was particularly evident through the global economic cycles in the early 1970s and the mid-1980s; and more recently through the Asian financial crisis in 1997-98 (Chart 4).

It is also apparent from Chart 4 that the volatility of international economic growth rates seems to have declined somewhat since the start of the 1990s. However, the volatility of Australia's MTP economic growth was higher in the 1990s than the 1980s. The Asian financial crisis of the late 1990s resulted in a sharp downturn and subsequent recovery in MTP growth, following a period of considerable stability.

Chart 4: Changes in the terms of trade and world growth



Source: ABS Cat. No. 5302.0 and 1364.0.15.003 and OECD Quarterly National Accounts.

Over the 1980s and 1990s, inflation declined in many countries. Among other things, this reflected the success of structural policies to improve market flexibility and more disciplined fiscal and monetary policies. Lower inflation was accompanied by lower inflation volatility.⁸ Swings in commodity prices and industrial prices became less pronounced, reducing volatility in the terms of trade for many countries.

As noted in the recent IMF *World Economic Outlook*, 'a virtuous circle was created in which as central banks became more concerned about inflation and, therefore, more predictable and credible, this led to more forward-looking behaviour by the private sector, which in turn made monetary policy effects through the expectations channel faster and more effective.'⁹

While the *World Economic Outlook* posits a virtuous circle *within* a country from sound macroeconomic policy, it seems likely that there may also be a virtuous circle *across* countries. Where a significant number of countries pursue sound and consistent policies and provide a strong environment for their private sector to be productive, dynamic and efficient, there may be an added synergy across countries that promotes

8 This relationship was noted in Milton Friedman's Nobel Lecture, published in the *Journal of Political Economy*, Vol. 85, June 1977. Martin Parkinson, *Inflation and Uncertainty*, Treasury Research Paper No. 3, 1999, found that the higher the permanent or trend component of inflation, the greater is the likelihood that the trend and actual rate will change.

9 *World Economic Outlook*, International Monetary Fund, April 2002, page 91.

further stability. That is, if countries tend to instability, world prices will tend to be unstable. If countries tend to stability, world prices will tend to be more stable.¹⁰

While a more stable international macroeconomy is likely to have contributed to the reduced volatility in Australia’s terms of trade in recent years, this is unlikely to provide a complete explanation. In particular, the nature of the relationship between world or MTP growth and the terms of trade also seems to have changed.

Historically, the magnitude of the changes to the terms of trade had been substantially larger than the changes in MTP growth. For example, MTP growth fluctuated by more than 9 percentage points in 1972-73 from peak to trough, which corresponded with a swing of 43 percentage points in the terms of trade. Subsequent cycles in MTP growth (until the 1990s) also corresponded with large movements in the terms of trade (Table 2).

This is in dramatic contrast to more recent episodes, where the substantial slowdowns in MTP growth during the Asian financial crisis and the fall in high-technology stock prices in 2000 have had a relatively modest impact on the terms of trade. More remarkably, the terms of trade has, thus far, actually increased modestly during the most recent international slowdown (since 2000).

Table 2: Cycles in MTP growth and the terms of trade

MTP GDP growth (per cent, peak to trough)		Changes to the terms of trade (per cent, peak to trough)	
Mar 73 – Dec 74	-9.2	-43.0	Mar 73 – Mar 75
Mar 76 – Sep 77	-1.5	-12.2	Jun 76 – Sep 77
Dec 78 – Mar 81	-2.7	-12.6	Dec 79 – Mar 82
Mar 84 – Sep 85	-2.7	-15.6	Dec 83 – Mar 86
Sep 88 – Sep 89	-3.4	-23.7	Mar 89 – Jun 91
Mar 97 – Sep 98	-6.6	-12.5	Jun 96 – Dec 98
Jun-00 – Dec 01	-5.1	-4.6	Sep 00 – Dec 01

Source: ABS Cat. No. 5302.0.

This apparent change in the relationship between world (or MTP) growth and the terms of trade suggests that other factors are also at work. Important amongst these are the greater diversification of Australia’s export and import baskets, and price trends for export and import items on world markets.

10 While not drawing strong conclusions on the interrelationships, the recent *World Economic Outlook* (*ibidem*, pages 104-136) concluded that global recessions and recoveries tend to be contemporaneous, raising interesting questions about cross-country linkages.

Greater diversification in Australia's exports

On the exports side, Australia's experience over the past decade and a half was characterised by a gradual move away from relatively price volatile commodities towards a more diversified, and less volatile, export base (Chart 5).

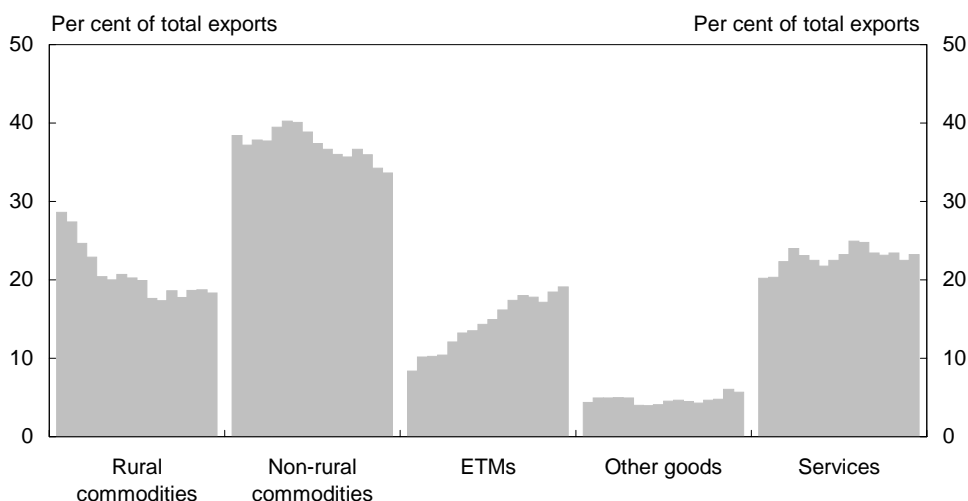
The prices of rural commodity exports have been particularly volatile in history, often reflecting the dramatic fluctuations in the world price of commodities such as wool, wheat, sugar and cotton (see discussion on commodity prices). In this context, the substantial decline in the volume of rural commodity exports — from around 29 per cent of total export volumes in 1985-86 to around 18 per cent in 2000-01 — has been important in ensuring that the flow through from rural commodity price volatility to the terms of trade has been milder than in previous decades.

While non-rural commodities remain the largest export category for Australia, their share in Australia's exports has also declined modestly over the past 15 years, down from just over 38 per cent in 1985-86 to around 34 per cent in 2000-01. The modest decline in the non-rural commodity share of exports has been partly driven by the relatively slower growth in metal ores and minerals.

In addition, Australia now exports a much broader range of rural goods, and related products. In the rural sector, for example, while meat, cereals and wool remain key exports, other products such as dairy, fruit and vegetables have increased significantly since the 1980s.

The export share of elaborately transformed manufactures (ETMs) increased substantially over the past 15 years, rising from 8 per cent of total exports in 1985-86 to 19 per cent in 2000-01. The rapid growth in ETM exports reflected the increase in the exports of such items as passenger motor vehicles, ICT equipment and pharmaceuticals, although ICT exports are significantly lower than ICT imports.

Chart 5: Share of total export volumes, 1985-86 to 2000-01



Source: ABS Cat. No. 5302.0.

Diversification of imports, with a rising share of Information and Communications Technology

On the imports side, there has been a gradual shift from services to consumption and capital good imports, particularly ICT imports (reflecting the rapid adoption of ICT technologies in Australia¹¹), (Chart 6).

The share of consumption goods in overall imports has risen, up from around 20 per cent in 1985-86 to 24 per cent in 2000-01, reflecting a sustained and broad-based increase in most components of consumption goods.

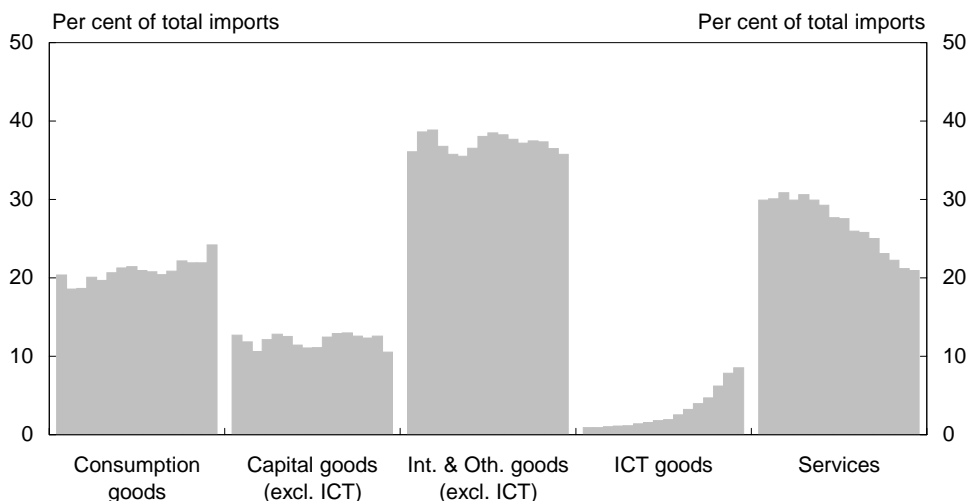
The share of capital and intermediate imports has also increased, mainly reflecting the substantial shift towards imports of ICT goods. Abstracting from ICT goods, the share of capital and intermediate goods imports has remained broadly stable.

The share of ICT goods in the import basket recorded the most dramatic change, increasing from less than 1 per cent of total imports in 1985-86 to be around 9 per cent in 2000-01.

The relatively more rapid growth in imported goods to total imports has lowered the share of imported services, which declined from 30 per cent in 1985-86 to 21 per cent in 2000-01. Broadly, this reflects the slower growth in the freight and other services component of imports, despite solid growth in travel service imports.

11 The OECD found that Australia has amongst the fastest take up of ICT in the industrial world (OECD, *The New Economy: Beyond the Hype*, Final report on the OECD Growth Project, 2001).

Chart 6: Share of total import volumes, 1985-86 to 2000-01



Source: ABS Cat. No. 5302.0.

An illustration of the impact of the changing export and import baskets

One way of illustrating the effect of the changing composition of Australia’s export and import baskets is to project forward the terms of trade holding the composition of the export and import baskets constant. This is illustrated in Box 3, where the relative composition of Australia’s import and export baskets is assumed to remain at that of 1985.

Box 3 shows that since 1985, the constant basket terms of trade would have been lower than the actual terms of trade. In addition, the constant basket terms of trade would have been significantly more volatile than the actual terms of trade.

Box 3: Compositional effects of the terms of trade

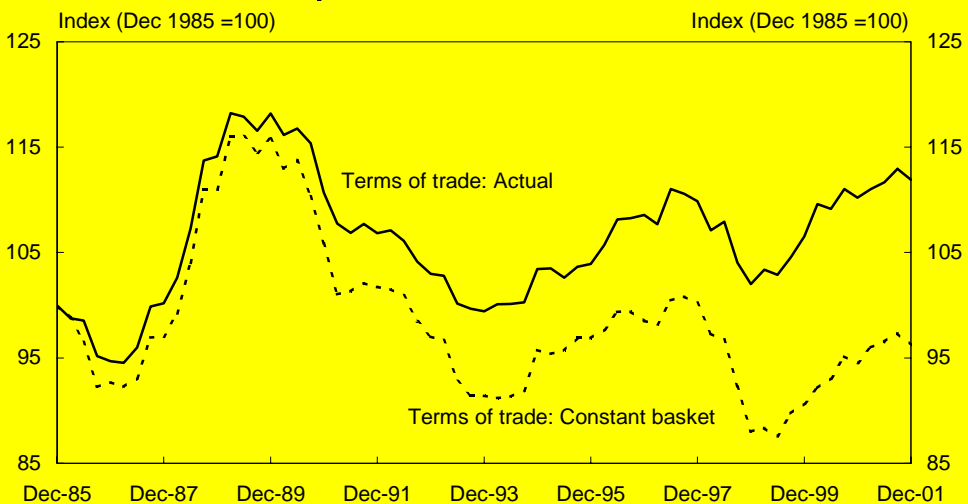
Australia's improved and more stable terms of trade performance can be partly explained by the changing composition of its trade basket.

In broad terms, the volatility in Australia's terms of trade has been reduced by the decreasing reliance on trade of a few export commodities that have relatively high price volatility. Further, the level of the terms of trade has been supported by the continued decline in import prices in foreign currency terms, most evident in the sharply falling prices for ICT components.

By way of illustration, if the relative composition of Australia's trade had remained unchanged from 1985 onwards, the terms of trade would have been considerably lower (and significantly more volatile) than actually observed over recent years (Chart A). In fact, the changing composition of Australia's trade over that time has, in itself, lifted the level of the terms of trade by more than 16 per cent, and contributed to a reduction in its volatility.

The lift in the level of the terms of trade was mainly due to changes in the mix of imports, specifically the exponentially increasing share of ICT goods. The reduction in the volatility of the terms of trade was mostly driven by changes in the mix of exports.

Chart A: Compositional effects on the terms of trade



Source: ABS Cat. No. 5302.0 and unpublished data.

Diversification of exports and imports across different markets

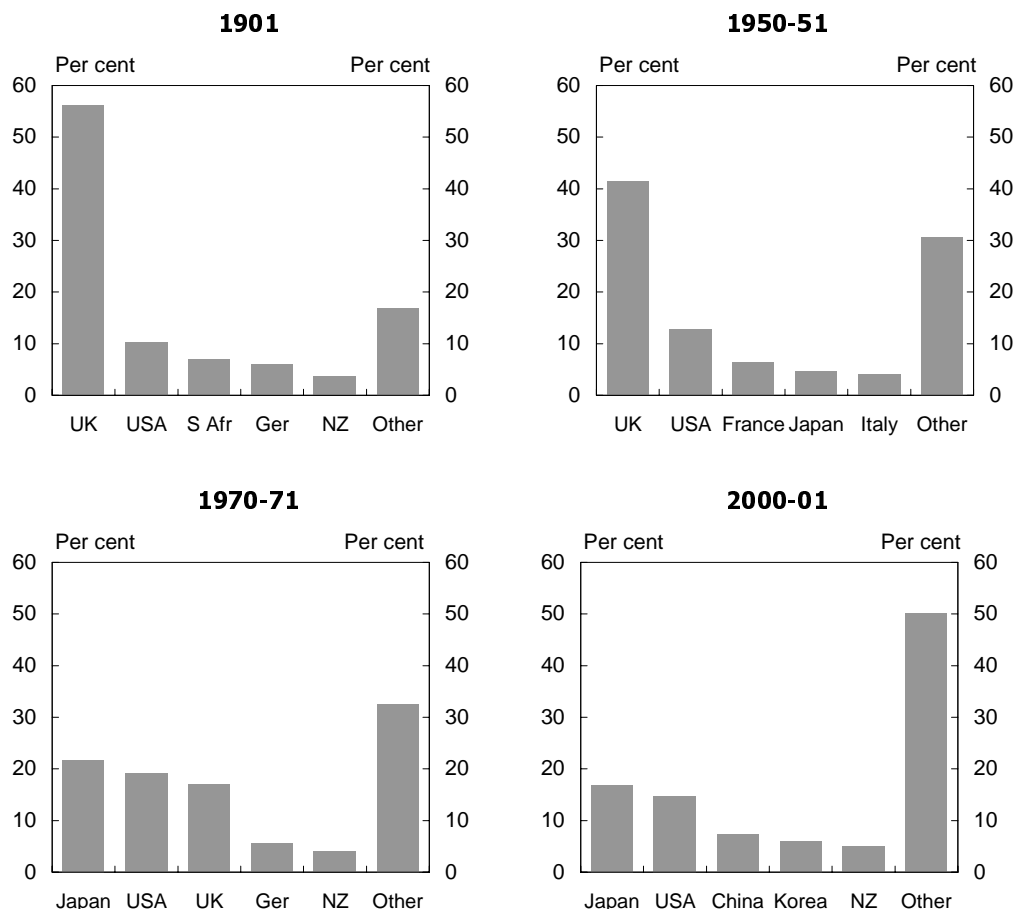
Aside from the diversification of items in the trade basket, Australia has also broadened its range of trading partners. This is particularly evident when changes in Australia's direction and concentration of merchandise trade are considered over the course of the twentieth century, (Chart 7).¹² The trend towards a broader range of markets has been apparent for both merchandise exports and imports. The diversification in Australia's trading partners serves to reduce Australia's trade exposure to any one particular country and highlights the increased flexibility in Australia's tradeable sector.

The proportion of Australia's merchandise trade conducted with the top five trading partners has declined from 83 per cent in 1901, to 67 per cent in 1970-71, to less than 50 per cent in 2000-01. Alternatively, the number of trading partners that account for 95 per cent of Australia's merchandise trade has risen from 9 countries in 1901, to 27 countries in 1970-71, to 30 countries in 2000-01.

One other important aspect is the flexibility with which Australian importers and exporters can move between sources and destinations. This significantly reduces the exposure to a single country and was very important during the Asian financial crisis when, for example, Australia's ETM exporters were able to divert exports to non-crisis countries.

12 Department of Foreign Affairs and Trade, *Direction of Trade Time Series 2000-01, One Hundred Years of Trade*, 2001.

Chart 7: Major trading partners, merchandise trade

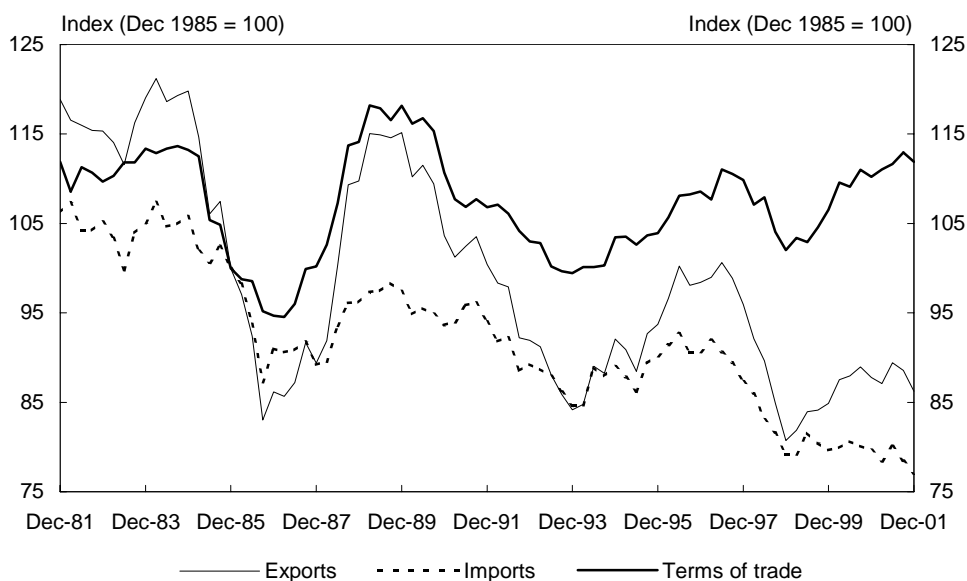


Source: Department of Foreign Affairs and Trade.

Trends in export and import prices

Substantial international competition in conjunction with relatively low and stable inflation in many industrial countries has put downward pressure on many prices in foreign currency terms (defined in terms of special drawing rights (SDR)). Australia's export prices have been more volatile than import prices, but both have been in trend decline (Chart 8). However, the fall in import prices has been more rapid in recent years. While commodity prices have fallen, prices for manufactured products have also been in decline.

Chart 8: Terms of trade, export prices and import prices (SDR)



Source: ABS Cat. No. 5302.0.

Over the past 15 years, the price of ETM exports has declined modestly in foreign currency terms, partly reflecting the falling price for ICT exports.

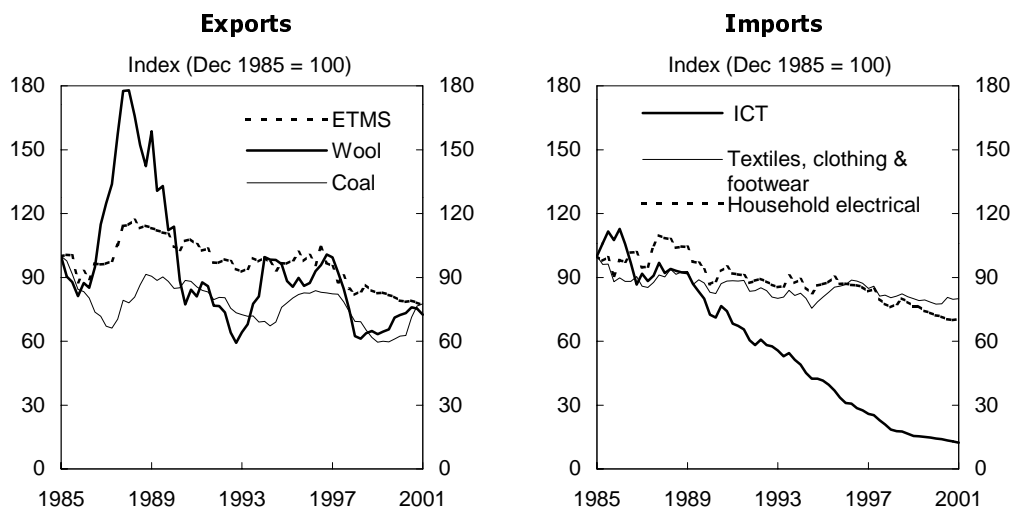
Products such as textiles, clothing and footwear, motor vehicle and electrical equipment have also experienced consistent downward price trends. But the most rapid downward price trend has been for ICT, which has grown substantially as a net import to Australia (Chart 9).

There has been a similar broad-based decline in the foreign currency price of imported goods. The decline in import prices has been reflected in all the broad merchandise components — consumption goods, capital goods and intermediate and other goods, which contrasts with the modest increase in the price of services imports.

The prices for capital and intermediate imports (excluding ICT goods) have fallen steadily over the past 15 years. In particular, capital goods (excluding ICT) averaged a decline of close to 3 per cent per year in foreign currency price terms over this period (reflecting the trend decline in the Australian dollar, the prices were broadly unchanged).

These price falls reflect a mixture of lower global production costs (resulting from technological advances); strong productivity growth in a number of countries; and a more competitive global trading environment. Under such an environment, firms have limited ability to grow margins: prices tend to follow costs downward.

Chart 9: Relative price comparisons in special drawing rights



Source: ABS Cat. No. 5302.0 and unpublished data.

Trends in prices of primary commodities

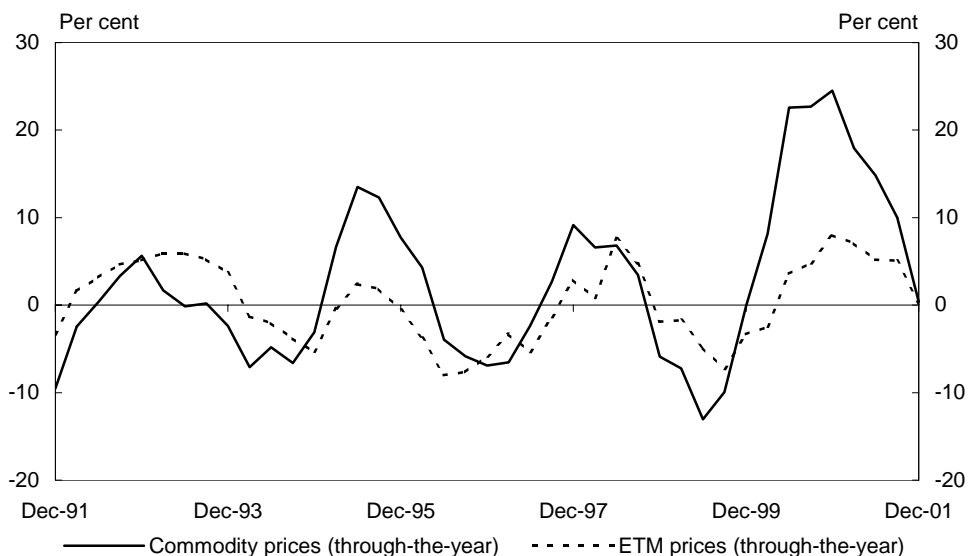
The definition of a ‘commodity’ is essentially arbitrary. Some properties that may be used to classify an item as a ‘commodity’ include that it is a relatively homogenous product (thus limiting the scope for product differentiation), with a low response to income changes and with short-run capacity constraints on production. While most commodities are perceived to be primary products, some manufactured products such as aluminium and steel are also considered to be commodities.

In practice most commodities are not perfectly homogenous. Many commodities have different quality grades — for example, there are 19 published price types/cuts of beef and veal quoted in the Kanto Japanese wholesale market. Further, many commodity producers seek to differentiate their products, using brands such as Australian fine wool (the Woolmark). Overall, though, individual commodity producers have little or no pricing power.

Notwithstanding these subtleties, the data clearly show that commodity prices have been relatively volatile when compared with the prices of ETMs over the past decade (Chart 10). A principal driver of commodity price volatility is world economic growth: commodity prices tend to increase during periods of strong world growth and fall during world slowdowns. Another major driver of commodity price volatility is supply volatility.¹³

13 Agricultural products, in particular, have very high supply volatility due to the seasonal and climatic nature of production. This tends to lead to periods of bumper harvests (and hence relatively low prices) and other periods of poor harvests (and hence relatively high prices).

Chart 10: Changes in Australian commodity and ETM prices (AUD)



Source: ABS Cat. No. 5302.0.

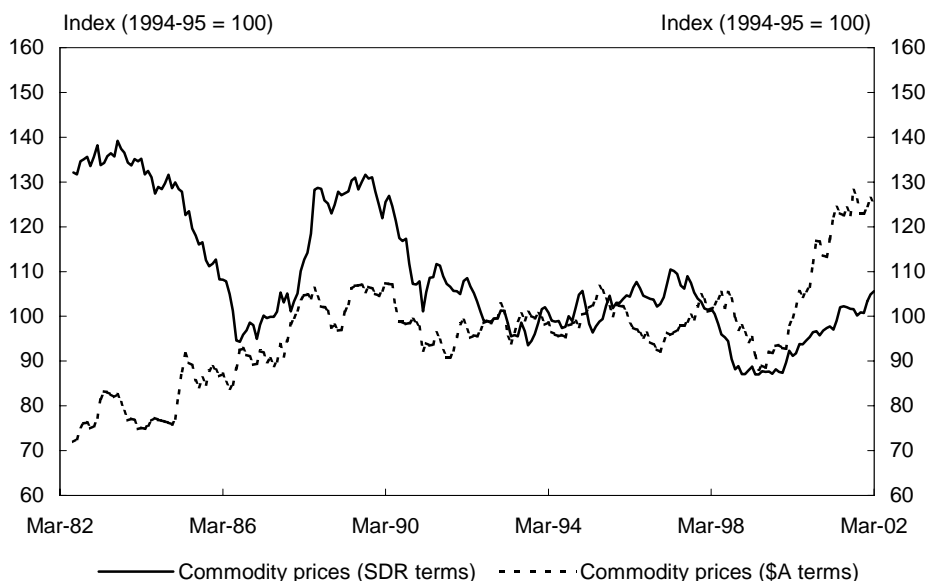
Over the past 140 years real world commodity prices have declined by about 1 per cent each year on average, although prices can change by as much as 50 per cent in a single year — volatility tends to swamp the trend.¹⁴

The Economist's commodity price index dates back to 1845. In an article published in April 1999, *The Economist* noted that the index was 80 per cent below the level attained in 1845.¹⁵ In Australia, the Reserve Bank's commodity price index dates back to July 1982. In SDR terms, the Reserve Bank index has declined by around 20 per cent over its history. However, in Australian dollar terms, there has been considerable recent strength. Offsetting movements in the nominal exchange rate have insulated Australia from a significant portion of the volatility of the SDR commodity price index (Chart 11).

14 See Cashin, Paul and C. John McDermott, 'The Long-Run Behavior of Commodity Prices, Small Trends and Big Variability', IMF Working Paper WP/01/68, May 2001.

15 'Raw deal for commodities', *The Economist*, April 1999.

Chart 11: Reserve Bank commodity price index



Source: Reserve Bank of Australia Commodity Price Index.

Cashin and McDermott¹⁶ found that commodity price volatility increased following the abandonment of the gold standard in 1913, with a further increase in volatility following the breakdown of Bretton-Woods in 1971. The increased post-1971 volatility was experienced as a reduction in the duration of large price cycles and therefore an increase in the frequency of commodity price movements.

As incomes rise, it is likely that a smaller percentage of income will be spent on commodities. Technological advances have increased the supply of commodities, while demand has been tempered through the replacement of products by newer and more effective alternatives.¹⁷ With strong productivity gains and changing demand, it is not surprising to find commodity prices trending downwards.¹⁸

Commodity prices also tend to be volatile partly because of the supply cycle. When prices are relatively high, it encourages additional investment resulting in jumps in capacity which can result in excess supply and price falls. This subsequently leads to a decline in investment and eventual falls in supply, thus fuelling the next round of price rises.

¹⁶ *Ibidem*, page 24.

¹⁷ In a speech to the Dallas Ambassadors Forum in April 1999, Chairman Alan Greenspan of the US Federal Reserve said: 'the physical weight of our gross domestic product is evidently only modestly higher today than it was fifty or a hundred years ago'.

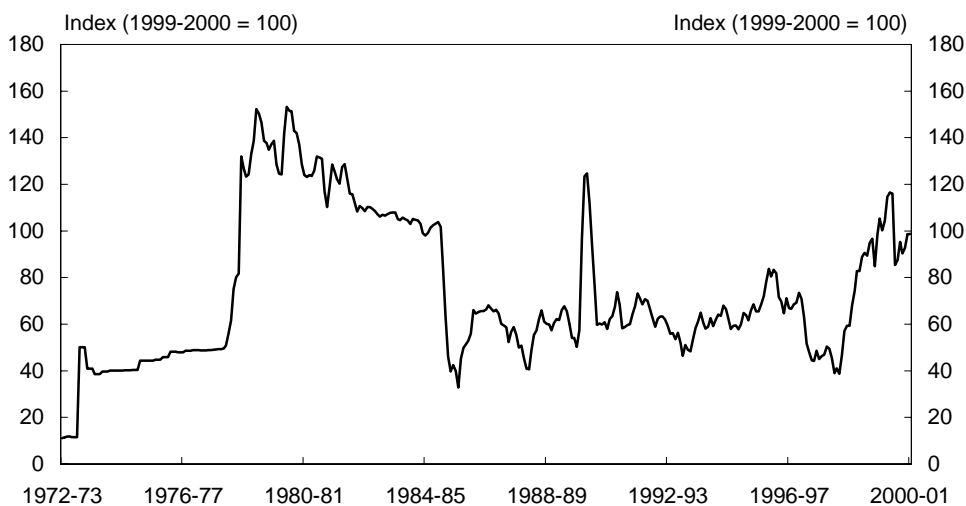
¹⁸ However, with a series that has high volatility and a modest overall trend, the choice of period can have a fundamental effect on the trend calculated.

Technology may lead to lower volatility in commodity prices. For example, there have been significant improvements in capital productivity in the mining sector, with companies now able to use their investment dollars more efficiently and raise output incrementally rather than in large jumps. Similarly, in the agriculture sector, improvements in crop technology offer the prospect of drought resistant crops that could lessen the effect of weather conditions on yields.

Crude oil prices

Crude oil prices are among the most volatile of all components in Australia’s trade basket (Chart 12). In the past, dramatic increases in oil prices have had a significant and negative impact on Australia’s terms of trade. Indeed, the sharp increase in oil prices following the beginning of the oil embargo in late 1973 coincided with the largest swing in the terms of trade since the 1950s.

Chart 12: Price of crude oil (Dubai)



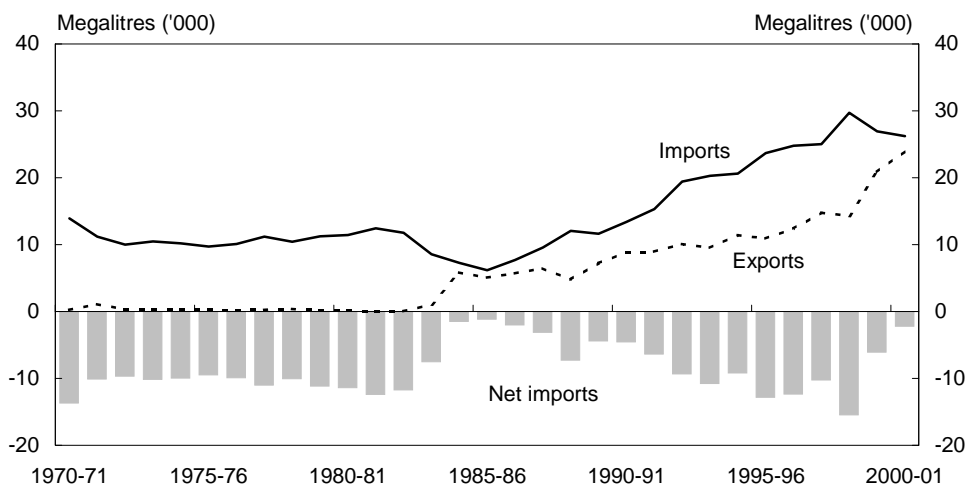
Source: Datastream.

The direct transmission of oil price movements to the terms of trade reflected Australia’s historical position as a net importer of crude oil (Chart 13). However, the trade deficit in crude oil has narrowed somewhat with the increase in crude oil exports in the mid-1980s. In recent years, with the development of several new oil fields on the North-West Shelf, Australia has moved towards a relatively neutral position in the crude oil trade. This is providing a natural hedge against the impact of higher oil prices on the terms of trade.

Consequently, sharp increases in oil prices no longer have a direct negative impact on the terms of trade. Further, Australia remains a significant net exporter of other energy products, particularly coal. As a result, the broader increases in energy prices typically

associated with an increase in oil prices may actually result in a rise in the terms of trade.

Chart 13: Trade in crude oil



Source: ABARE Commodity Statistics.

Prices for information and communications technology

As was noted in last year’s *Budget Statement 4*, Australian firms have actively applied new technology in the pursuit of productivity gains. ICT investment in Australia has been growing rapidly, with ICT a key enabling technology for productivity improvements.¹⁹ Australian businesses are using technology intensively and innovatively to drive productivity growth, aided by a dramatic fall in the price of ICT goods.

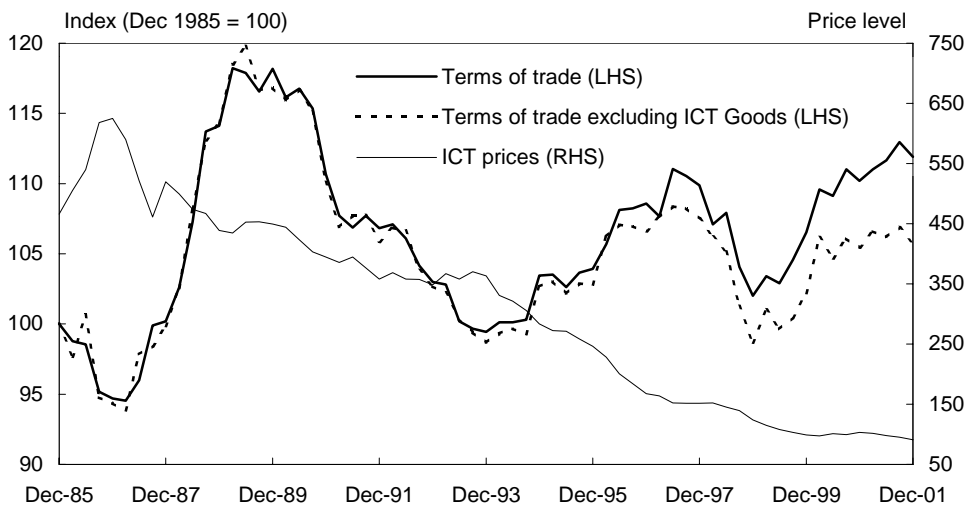
Between 1985 and 2001, the price of imported ICT goods has fallen (Chart 14) by an average rate of 12 per cent per annum in foreign currency terms (or a fall of 9.5 per cent per annum in Australian dollar terms). The pace of this decline has been more rapid over the past six years, with prices falling by an average of almost 15 per cent per annum since 1995 in Australian dollar terms.

The rapid fall in ICT prices, combined with Australia’s status as a net importer of ICT goods, has had favourable implications for Australia’s terms of trade. The net impact of falling ICT prices increased the Australian terms of trade by an average of around 0.3 per cent per annum between September 1985 and December 2001. The impact has been even greater since 1995 where, other things equal, the net impact of falling ICT

19 The OECD found that Australia’s rapid takeup of ICT had made a significant contribution to its productivity gains. (OECD, *The New Economy: Beyond the Hype*, Final report on the OECD Growth Project, 2001).

prices increased Australia's terms of trade by 0.75 per cent per annum. It is also important to note that the fall in ICT prices may be understated due to the problems associated with measuring pure price changes, where there are large and ongoing improvements in quality (Box 4).

Chart 14: Terms of trade excluding ICT



Source: ABS Cat. No. 5302.0 and Treasury.

The production of ICT hardware is extremely competitive. The price of ICT goods is being driven down rapidly as costs fall, so margins for ICT producers remain tight. The trend decline in the price of ICT has been evident over its history, and the ability of technology continues to rapidly escalate. In 1965 — just four years after the first integrated circuit was invented — Gordon Moore (co-founder of Intel Corporation) predicted that the number of transistors per integrated circuit would double every 18 months until 1975. In fact, this exponential growth has continued to the present day, with some suggestion that it has accelerated more recently.²⁰ In 1971, a typical integrated circuit boasted 2,250 transistors. By 2000, this rose to close to 50 million transistors.

Effectively, ICT is now a commodity. It is characterised by a relatively homogenous product — the integrated circuit and memory chips — with hardware manufacturers behaving as price takers. The market is subject to gluts and shortages, thus producing a substantial amount of volatility around the downward trend in prices.

²⁰ See <http://intel.com>. The time horizon for Moore's Law may have fallen to 12 months. See Parham, Dean, Paul Roberts and Haishun Sun, *Information Technology and Australia's Productivity Surge*, Productivity Commission Staff Research Paper, 2001.

Box 4: Hedonic price index

Ideally, price indices should reflect the pure price change and abstract from variations due to changes in quality. An index that does not account for significant quality changes would tend to overstate prices as quality increases. The ABS attempts to price to constant quality, but this is not a simple matter when dealing with some high technology goods, particularly ICT,²¹ which are technically complex and rapidly changing items. The ABS uses a hedonic model (based on that of the US Bureau of Labor Statistics) to adjust for quality changes in computers, and to avoid an upward bias to ICT prices.

Hedonic regression modelling involves dividing a good into its component characteristics and using these characteristics as explanatory variables for its price. The model is updated every three months due to the rapid pace of change in the ICT market. The parameter estimates, which measure the dollar value per unit of the component (for example, dollar per megabyte of hard drive space, or dollar per megahertz of computing speed), are determined through price observations and are regularly updated.

The hedonic model is a significant improvement over earlier approaches but an inability to account precisely for the rapid introduction of new products and quality changes will lead to some level of bias in the price measures. The model is focussed on component characteristics rather than performance variables that may be more important to the user. The measurement issue is further complicated by the rapidly growing list of performance variables and their relative importance. The hedonic price estimates vary from the pure price of computers to the extent that the price structure of components does not reflect the marginal contribution of different components to computer performance. There is a lack of evidence regarding the biases but it seems reasonable to suggest that prices may continue to be overstated.

Australia is a large net importer of high technology, such as computers, that require quality adjustment to a constant price. Despite the resurgence of manufacturing, the bulk of Australian exports are in homogenous commodity groups that do not require significant quality adjustment. The asymmetry between the composition of exports and imports, the respective quality adjustment requirements, and the possible overstatement of prices from the hedonic adjustment process, may result in an understatement of the terms of trade.

21 There are other areas of the index that are difficult to price to constant quality, such as large and irregular imports of (customised) capital goods. Further, as Australia's export basket tends to consist of products for which quality is relatively stable and its import basket consists of products that have rapid quality improvements, the measured terms of trade are likely to be lower than the 'real' terms of trade.

Part V: Conclusions and policy implications

A strong and stable terms of trade assists in promoting efficient resource allocation and has a stabilising influence on the domestic economy. It also assists macroeconomic management by reducing inflationary pressures. Increases to the terms of trade raise domestic real income, the purchasing power of exports and domestic welfare.

The world relative price of tradeables is exogenous to Australia, fluctuating according to world demand and supply in an unpredictable fashion. But the composition of the export and import bundles — and hence the terms of trade — is reflective of history, comparative advantage, domestic economic efficiency and demand and supply of Australia's consumers and producers.

Ultimately the private sector determines the composition of exports and imports. While Governments can provide incentives and disincentives to particular production, history shows that the ability to pick products that have a high (and sustained) relative price is limited.

Microeconomic reform has promoted a large change in the dynamics of Australia's market economy, enhancing competition and productivity. Over the last decade, an increasing number of firms have been exposed to international competition. This provides incentives for those firms to operate efficiently, flexibly and to price competitively. In conjunction with enhanced technology — Australia being a relatively heavy exploiter of high technology — this has led to extraordinary productivity growth and rapid growth in per capita real income. This dynamic environment has led to changes in the composition of Australia's export and import baskets and in the range of countries with which Australia trades. The ability to switch between countries — sourcing imports and dispatching exports — is an important additional feature providing some protection from exposure to adverse developments in particular overseas markets.

Sound fiscal and monetary policies have also assisted in providing low and stable inflation, the management of which is aided by more stable terms of trade.

This combination of a more competitive, dynamic and flexible market economy with sound fiscal and monetary policy has assisted in reducing the volatility of the terms of trade. This, in turn, has led to a more stable economic growth path, with the volatility in Australia's GDP growth being much less in the past decade compared with previous decades.

The terms of trade is likely to be more stable in the future because of the diversification of Australia's trade baskets (across products and destinations), the improved insulation of the Australian economy from foreign economic events, and the generally more stable global economy. The increasing importance of ICT and other related products in Australia's imports basket is likely to provide continued strength to the level of Australia's terms of trade.

A key requirement for increased internationalisation is for Australia to maintain sound macroeconomic policies and to continue the pursuit of microeconomic reform. The promotion of research and development (through for example the Government's *Backing Australia's Ability – An Innovation Action Plan for the Future*), improving human capital through quality education, tax reform to reduce export costs, and further labour market reform are examples of sound policies. In addition to measures that reduce Australia's own business costs, the sponsorship of sound economic policies throughout the world adds a further dimension to terms of trade stability, and ultimately higher economic growth within and outside of Australia.

STATISTICAL APPENDIX

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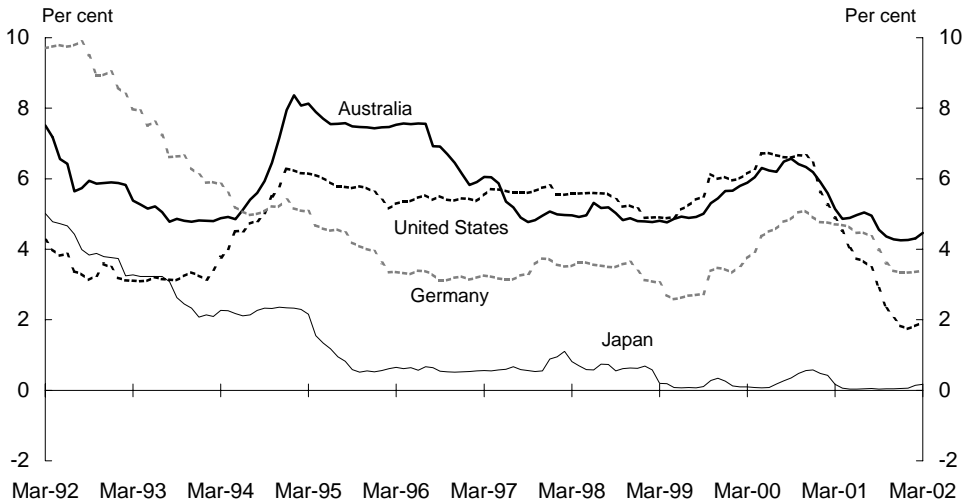
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Key to tables

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

Chart 1: Selected international indicators

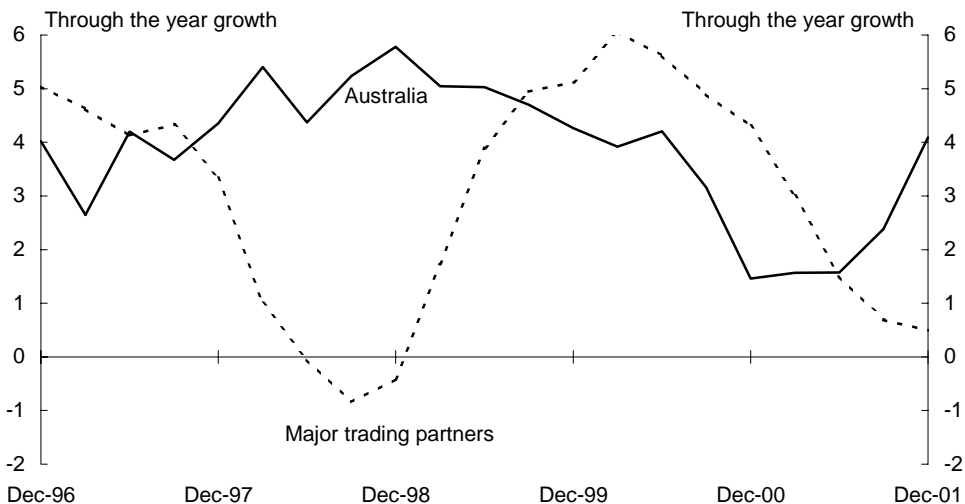
Panel A: Short-term interest rates^(a)



(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.

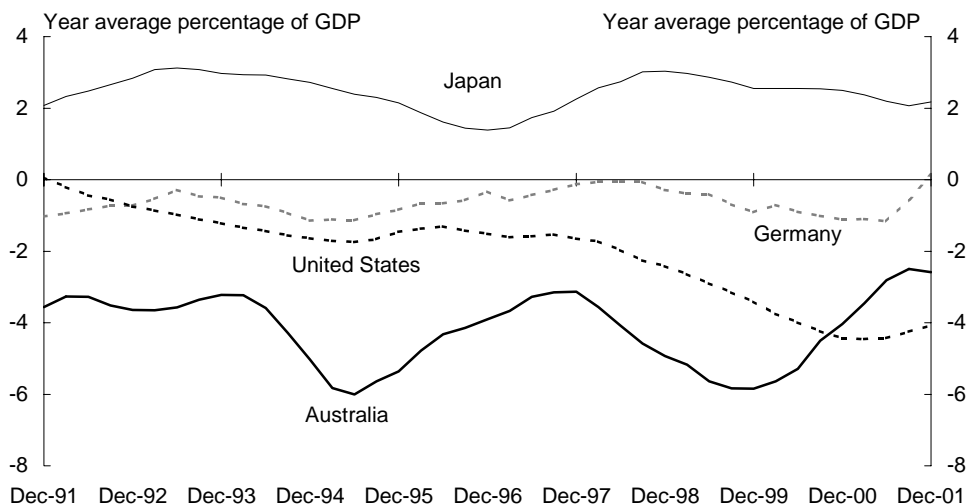
Source: OECD Main Economic Indicators.

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. The major trading partners are composed of the OECD and Asian major trading partners. Major trading partners from the OECD comprise the G7 (US, Japan, Germany, France, UK, Italy and Canada) and New Zealand. Asian major trading partners consist of South Korea, Taiwan, Hong Kong, Singapore, China, Malaysia, Indonesia, Thailand, India and the Philippines.

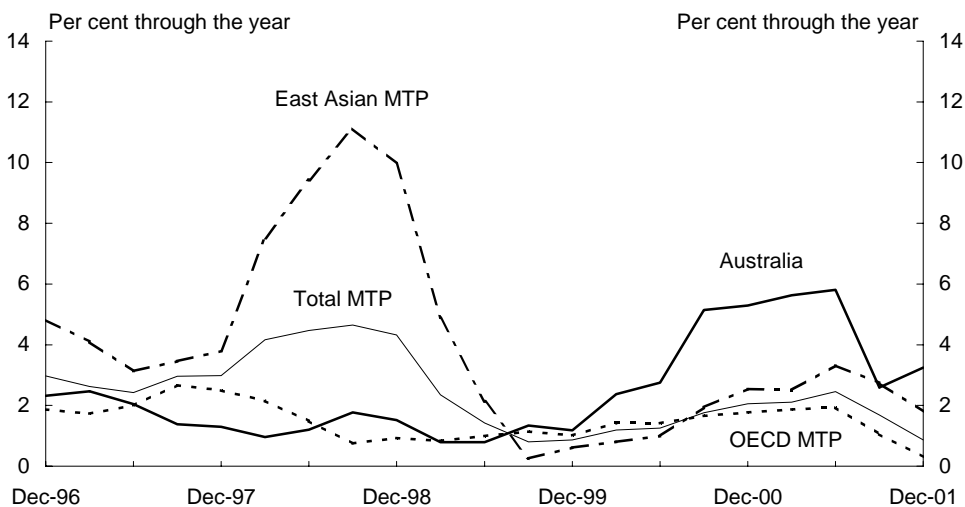
Panel C: Current account balances ^(a)



(a) Data are seasonally adjusted. Germany refers to Western Germany until June 1990, and unified Germany thereafter.

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

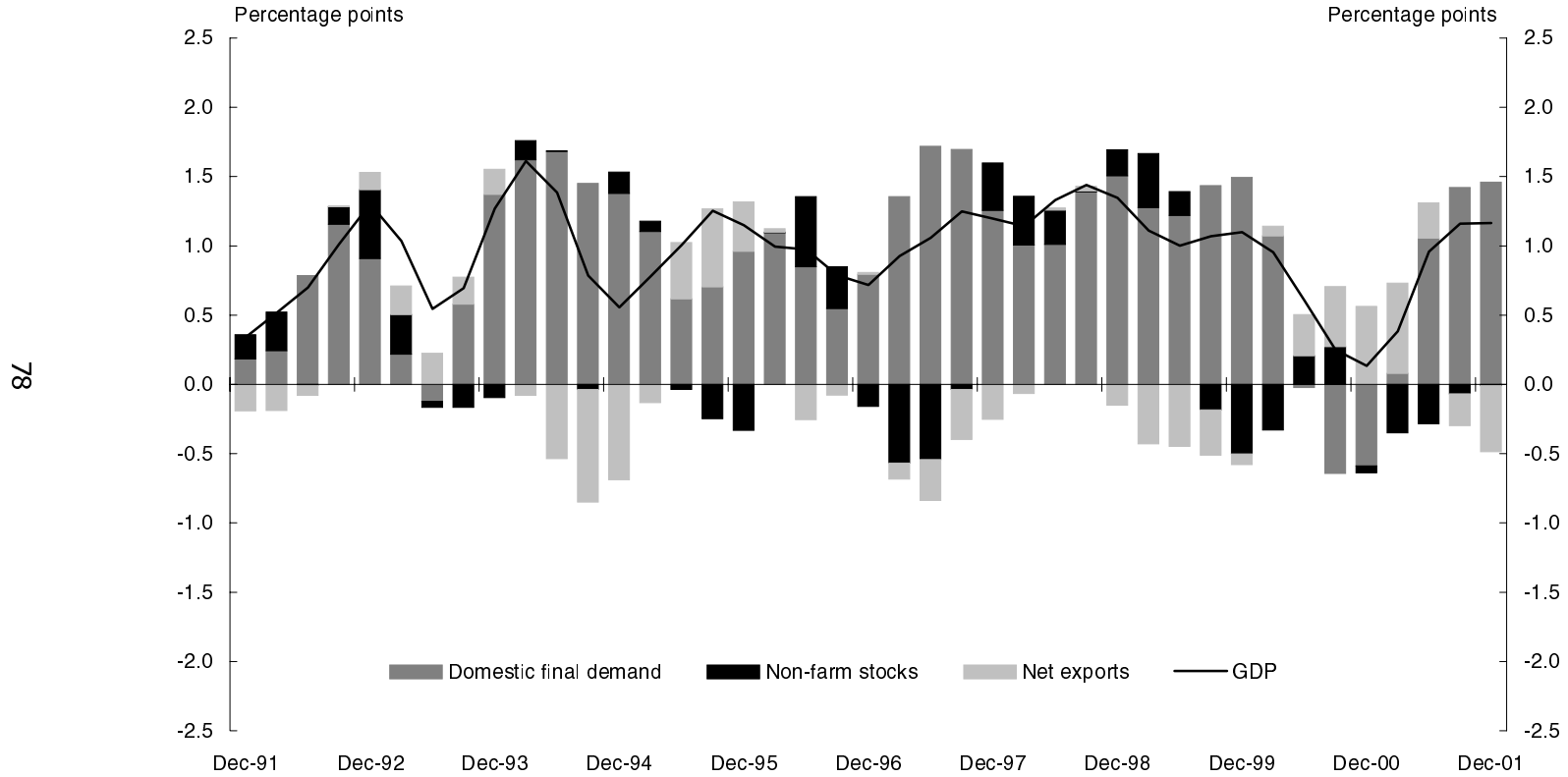
Panel D: Consumer price inflation ^(a)



(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.

Source: Major trading partners consist of US, Japan, Germany, UK, New Zealand, Canada, South Korea, Singapore, Indonesia, Taiwan, Hong Kong, France, Italy, India, China, Malaysia, Thailand and the Philippines. Data for US, Japan, Germany, UK, New Zealand, Canada, South Korea, Singapore, Indonesia, Taiwan and Hong Kong are sourced from the ABS All Groups CPI (excluding housing) measure. For the rest of Australia's MTP (France, Italy, China, Malaysia, Thailand and the Philippines), the CPI are sourced 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)

	Final domestic demand						Exports	Imports	GDP
	Household consumption	Private investment in dwellings	Private business fixed investment	Private final demand	Public final demand	Domestic final demand			
Year	(Percentage change on preceding year)								
1998-99	5.1	7.6	1.6	4.6	6.7	5.1	2.0	4.8	5.3
1999-00	4.1	13.7	6.8	5.3	4.7	5.2	9.3	12.5	4.3
2000-01	2.4	-20.6	-5.8	-0.8	2.1	-0.2	7.0	-1.4	1.9
Quarter	(Percentage change on preceding quarter - Trend)								
2000 Dec	0.6	-13.1	-1.7	-0.7	-0.1	-0.6	0.7	-1.9	0.1
2001 Mar	0.8	-5.5	-1.9	0.1	0.0	0.1	0.8	-2.2	0.4
Jun	0.9	6.6	-0.2	1.2	0.6	1.1	0.1	-1.1	1.0
Sep	0.9	8.0	1.2	1.5	1.2	1.4	-0.8	0.3	1.2
Dec	0.9	7.2	1.8	1.5	0.9	1.5	-1.3	1.1	1.2
Quarter	(Percentage change on preceding quarter - Seasonally adjusted)								
2000 Dec	0.1	-13.3	-9.0	-2.2	2.1	-1.2	-2.2	-2.6	-0.4
2001 Mar	1.5	-0.1	1.2	1.4	0.2	1.1	0.3	-2.2	0.6
Jun	0.8	2.3	-3.2	0.3	0.2	0.3	1.1	-0.9	1.1
Sep	0.6	14.1	4.3	2.1	0.0	1.7	-1.6	-1.2	1.1
Dec	1.3	4.1	2.9	1.7	3.3	2.1	-3.2	4.4	1.3
Quarter	(Percentage change on a year earlier - Trend)								
2000 Dec	2.1	-18.8	-2.8	-0.4	0.5	-0.2	6.9	-0.1	2.0
2001 Mar	2.2	-27.7	-5.0	-1.4	-0.3	-1.2	4.8	-4.4	1.4
Jun	2.8	-21.4	-4.7	-0.2	0.3	-0.1	2.8	-5.9	1.7
Sep	3.3	-5.5	-2.6	2.1	1.7	2.0	0.8	-4.8	2.7
Dec	3.6	16.7	0.9	4.3	2.8	4.1	-1.1	-1.9	3.7

Source: ABS Cat. No. 5206.0.

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

	Final domestic demand						Change in inventories			GDP	
	Household consumption	Private investment in dwellings	Private business fixed investment	Private final demand	Public final demand	Total final demand	Private non-farm	Farm & public authority	Net exports		
Year	(Contribution to change in GDP)										
1998-99	3.1	0.4	0.2	3.7	1.5	5.2	0.9	-0.1	-0.6	5.3	
1999-00	2.5	0.7	0.8	4.2	1.1	5.2	-0.4	0.0	-0.8	4.3	
2000-01	1.4	-1.2	-0.7	-0.6	0.5	-0.2	0.1	-0.1	1.7	1.9	
Quarter	(Contribution to change in GDP - Trend)										
2000 Sep	0.2	-0.6	-0.1	-0.6	0.0	-0.6	0.3	0.1	0.4	0.3	
Dec	0.4	-0.7	-0.2	-0.6	0.0	-0.6	0.0	0.1	0.6	0.1	
2001 Mar	0.5	-0.2	-0.2	0.1	0.0	0.1	-0.3	-0.1	0.7	0.4	
Jun	0.6	0.3	0.0	0.9	0.1	1.1	-0.3	-0.1	0.3	1.0	
Sep	0.5	0.4	0.1	1.1	0.3	1.4	-0.1	0.0	-0.2	1.2	
Dec	0.5	0.3	0.2	1.1	0.2	1.5	0.0	0.1	-0.5	1.2	
Quarter	(Contribution to change in GDP - Seasonally adjusted)										
2000 Sep	0.3	-1.3	0.3	-0.9	-0.1	-0.9	1.2	-0.9	0.9	0.3	
Dec	0.1	-0.7	-1.1	-1.7	0.5	-1.2	-0.2	1.1	0.1	-0.4	
2001 Mar	0.9	0.0	0.1	1.1	0.0	1.1	-1.2	-0.4	0.5	0.6	
Jun	0.5	0.1	-0.4	0.2	0.0	0.3	0.5	0.0	0.4	1.1	
Sep	0.4	0.6	0.5	1.6	0.0	1.6	-0.3	-0.2	-0.1	1.1	
Dec	0.8	0.2	0.3	1.3	0.7	2.1	-0.1	0.7	-1.5	1.3	

Source: ABS Cat. No. 5206.0.

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

	Agriculture, & forestry & fishing	Mining	Manu- fact- uring	Electr- icity, gas & water	Whole- sale Con- struction	Wholesale trade	Retail trade	Accomm- odation, cafes & restaurants & storage	Transport	Commun- ication services	Finance & insurance services	Property & business services	Gov. administ- ration & defence	Edu- cation	Health & community services	Cultural & recre- ational services	Personal & other services	
Year	(Percentage change on preceding year)																	
1998-99	4.8	0.5	3.9	1.4	7.2	4.2	5.3	7.8	1.8	10.4	12.7	10.0	4.5	2.0	2.6	2.4	4.0	
1999-00	6.9	10.4	2.8	2.8	6.2	6.2	4.4	6.6	3.9	10.5	2.8	4.8	0.2	1.6	2.4	3.8	9.6	
2000-01	-3.0	5.4	0.2	2.9	-17.4	0.2	0.8	2.9	1.4	9.0	4.6	9.7	2.9	1.8	7.2	12.3	3.1	
Quarter	(Change on previous quarter - Trend)																	
2000 Sep	-1.3	1.1	-0.7	0.9	-8.3	-0.7	-0.2	0.2	-0.2	2.7	1.4	2.9	1.0	0.5	1.5	3.7	0.4	
Dec	-0.5	0.8	-1.5	0.2	-8.5	-0.8	0.4	0.9	0.2	1.8	1.5	2.6	0.8	0.5	3.5	0.1	1.6	
2001 Mar	1.4	0.5	-0.7	-0.6	-2.4	-0.4	0.9	1.9	0.9	0.9	1.3	1.7	0.5	0.4	3.7	-1.6	1.7	
Jun	0.6	-0.2	0.9	-0.6	4.4	0.5	1.3	1.8	1.0	-0.4	1.3	1.6	0.2	0.4	2.3	0.3	1.3	
Sep	-0.7	-0.4	1.4	0.1	4.3	1.0	1.2	1.1	0.2	-1.1	1.2	1.8	0.0	0.4	1.3	2.6	1.5	
Dec	-0.8	-0.2	1.4	0.5	3.1	1.1	1.0	0.3	-0.4	-1.6	1.0	1.7	-0.2	0.4	0.9	2.1	1.8	
Quarter	(Change on previous quarter - Seasonally adjusted)																	
Sep	-5.2	-0.1	-0.8	1.3	-14.6	-0.2	-1.9	0.9	-1.0	2.6	2.5	4.4	1.1	0.5	0.7	16.5	-0.2	
Dec	1.1	0.9	-1.6	-0.5	-9.7	-2.3	1.0	-0.1	-0.7	2.1	0.5	1.6	0.2	0.5	3.5	-10.1	3.9	
2001 Mar	3.3	2.2	-2.1	0.8	0.6	1.0	1.4	2.6	1.5	1.7	1.9	1.4	1.9	0.4	5.7	1.0	0.3	
Jun	0.5	-1.5	3.1	-2.2	5.3	0.4	0.7	1.6	2.2	-2.6	0.6	2.3	-1.5	0.4	1.7	1.2	1.9	
Sep	-2.8	-1.2	0.3	-0.2	4.4	-0.4	1.5	2.7	-0.7	2.0	2.0	1.0	1.6	0.4	-0.5	2.6	0.3	
Dec	0.4	1.4	1.8	2.7	1.9	3.3	1.1	-2.3	-1.0	-4.4	0.5	2.6	-1.4	0.4	2.9	2.5	3.5	
Quarter	(Change on year earlier - Trend)																	
2000 Jun	0.5	11.0	5.0	4.6	1.8	6.1	2.0	3.4	3.4	10.5	1.4	5.1	1.0	1.6	1.7	10.8	5.3	
Sep	-1.7	9.3	4.2	5.1	-8.3	3.4	0.8	1.7	1.8	11.3	2.5	7.5	2.5	1.7	2.4	14.3	2.2	
Dec	-3.6	7.0	1.0	4.2	-18.3	0.5	0.3	1.7	0.8	10.8	4.2	9.7	3.3	1.8	5.5	13.8	1.8	
2001 Mar	-1.9	4.2	-1.8	1.8	-21.1	-1.6	0.8	3.1	1.1	8.7	5.2	10.1	3.3	1.8	9.1	7.9	3.4	
Jun	0.2	2.2	-2.0	-0.2	-14.5	-1.4	2.5	4.9	1.9	5.1	5.6	9.1	2.7	1.8	11.4	2.5	5.1	
Sep	0.9	0.7	0.1	-1.0	-2.8	0.3	3.9	5.8	2.3	1.2	5.4	7.9	1.6	1.8	11.2	1.4	6.2	
Dec	0.5	-0.4	3.0	-0.6	9.6	2.2	4.5	5.2	1.8	-2.2	5.0	7.0	0.5	1.6	8.4	3.3	6.4	

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)					
1998-99	2.7	3.2	5.9	4.4	5.5	5.4
1999-00	2.2	1.7	3.9	6.1	4.5	4.0
2000-01	2.7	-0.7	2.0	1.4	3.1	5.1
Quarter	(Percentage change on preceding quarter - Seasonally adjusted)					
2000 Dec	0.4	-0.2	0.2	-3.2	0.1	-0.1
2001 Mar	0.1	0.8	0.9	1.4	0.3	-0.4
Jun	-0.4	0.4	0.0	2.4	1.0	2.2
Sep	0.7	0.4	1.1	3.9	0.1	-0.8
Dec	-0.2	0.0	-0.2	-0.1	0.3	1.7
Quarter	(Percentage change on year earlier - Seasonally adjusted)					
2000 Dec	3.4	-1.7	1.6	0.9	3.0	4.9
2001 Mar	2.4	-0.7	1.7	-1.3	2.2	3.4
Jun	0.8	0.1	0.9	0.1	2.0	4.9
Sep	0.8	1.3	2.2	4.4	1.5	0.8
Dec	0.2	1.5	1.7	7.7	1.8	2.7

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

Source: ABS Cat. No. 5206.0.

Table 5: Wages, labour costs and company income

	Average weekly earnings (survey basis)			Unit labour costs		Factor shares	
	Full-time adult ordinary time earnings ^(a)	All persons total earnings ^(a)	Non-farm average earnings (national accounts basis) ^(a)	Nominal ^(b)	Real ^(c)	Wage share ^(d)	Profit share ^(e)
Year	(Percentage change on preceding year)						
1998-99	3.7	2.4	4.0	0.5	96.5	55.0	22.8
1999-00	3.3	2.2	3.1	1.2	95.7	54.4	23.4
2000-01	5.3	5.5	3.9	3.9	96.0	54.6	23.2
Quarter	(Percentage change on preceding quarter - Seasonally adjusted)						
2001 Mar	1.0	1.9	1.7	1.3	96.2	54.7	23.3
Jun	1.8	1.0	1.1	-0.2	96.5	54.8	22.8
Sep	1.6	1.3	0.3	-0.9	95.9	54.6	22.7
Dec	1.1	0.7	0.4	-1.0	94.5	53.9	23.7
2002 Mar	1.5	1.1	nya	nya	nya	nya	nya
Quarter	(Percentage change on year earlier - Seasonally adjusted)						
2001 Mar	4.6	5.6	4.2	4.3			
Jun	5.3	4.4	5.1	4.3			
Sep	5.1	4.0	3.6	1.5			
Dec	5.7	4.9	3.6	-0.8			
2002 Mar	6.2	4.1	nya	nya			

(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. 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)			
1997-98	0.0	1.2	1.5	1.7
1998-99	1.2	1.2	0.3	0.8
1999-00	2.4	2.0	2.0	1.4
2000-01	6.0	5.4	4.3	4.6
Quarter	(Percentage change on preceding quarter)			
1999 Dec	0.6	0.2	0.4	0.3
2000 Mar	0.9	0.9	1.5	0.7
Jun	0.8	0.8	0.6	0.7
Sep	3.7	3.1	2.0	2.6
Dec	0.3	0.4	0.1	0.6
2001 Mar	1.1	1.2	1.5	0.9
Jun	0.8	1.0	0.3	0.7
Sep	0.3	0.0	-0.3	0.0
Dec	0.9	1.0	0.4	0.5
2002 Mar	0.9	0.9	n/a	n/a
Quarter	(Percentage change on a year earlier)			
1999 Dec	1.8	1.2	0.9	0.9
2000 Mar	2.8	2.4	2.1	1.3
Jun	3.2	2.7	0.0	1.9
Sep	6.1	5.1	4.6	0.0
Dec	5.8	5.3	4.4	4.8
2001 Mar	6.0	5.6	4.3	4.9
Jun	6.0	5.8	4.0	5.0
Sep	2.5	2.6	1.6	2.3
Dec	3.1	3.2	1.8	2.1
2002 Mar	2.9	3.0	n/a	n/a

(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)						
1997-98	13.2	0.8	2.9	1.4	8.0	737.8	63.1
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
Quarter^(a)	(Percentage change on preceding quarter - Seasonally adjusted)						
2001 Jun	-11.3	-0.5	2.6	0.4	6.8	668.2	63.8
Sep	-0.1	-0.6	1.8	0.1	6.8	669.2	63.7
Dec	-1.9	0.2	0.5	0.3	6.9	676.6	63.7
2002 Mar	6.3	0.8	1.6	1.0	6.6	655.8	63.9
Quarter^(a)	(Percentage change on a year earlier - Seasonally adjusted)						
2001 Jun	-34.8	-0.3	5.1	1.1			
Sep	-25.1	-1.5	5.3	0.3			
Dec	-20.1	-1.1	6.2	0.9			
2002 Mar	-7.6	0.0	6.8	1.8			
Month	(Percentage change on preceding month - Seasonally adjusted)						
2001 Apr	-3.0	-0.7	3.1	0.3	6.7	660.5	63.9
May	0.3	0.1	-0.4	0.0	6.8	668.3	63.8
Jun	-1.8	-0.6	1.3	-0.1	6.9	675.8	63.8
Jul	1.0	-1.1	2.4	-0.2	6.9	673.8	63.6
Aug	0.5	1.0	-0.2	0.7	6.8	671.3	63.9
Sep	-1.1	0.7	-3.3	-0.4	6.7	662.6	63.5
Oct	-1.9	-0.8	2.9	0.2	7.0	693.6	63.8
Nov	0.0	0.2	-0.1	0.1	6.8	670.9	63.6
Dec	1.4	0.0	0.3	0.1	6.7	665.3	63.6
2002 Jan	12.5	0.8	0.5	0.7	7.0	692.5	64.1
Feb	-5.4	-0.3	1.7	0.2	6.6	652.5	63.9
Mar	-8.8	0.5	-0.6	0.2	6.3	622.3	63.8
Apr	23.6	-0.8	0.4	-0.5	6.3	621.6	63.4

(a) All figures refer to period averages.

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

Table 8: Current account

	Balance on merchandise trade	Balance on goods & services	Net income balance	Net current transfers	Current account balance		Net income balance		Volume of		Terms of trade ^(a)
					Percentage of GDP	Percentage of current account balance	Percentage of GDP	Exports of goods & services	Imports of goods & services		
Year	(\$ million)				(\$ million)	(per cent)	(per cent)	(per cent)	(\$ million)		
1998-99	-12644	-14428	-18189	-749	-33366	-5.6	54.5	-3.1	115258	-124752	95.9
1999-00	-12955	-14351	-19346	218	-33479	-5.3	57.8	-3.1	125972	-140323	100.0
2000-01	102	774	-19750	32	-18944	-2.8	104.3	-2.9	134824	-138290	103.1
Quarter	(Seasonally adjusted)										
2000 Sep	-1824	-522	-4513	6	-5029	-3.0	89.7	-2.7	34124	-35717	103.2
Dec	-654	-667	-4943	-77	-5687	-3.4	86.9	-3.0	33376	-34795	102.5
2001 Mar	947	561	-5240	73	-4606	-2.7	113.8	-3.1	33475	-34047	103.2
Jun	1784	1600	-5203	28	-3575	-2.1	145.5	-3.0	33850	-33731	103.8
Sep	1997	1879	-4992	25	-3088	-1.8	161.7	-2.9	33317	-33310	105.0
Dec	-835	-1336	-5173	-85	-6594	-3.7	78.5	-2.9	32267	-34780	104.0
Month	(Seasonally adjusted)										
2001 Apr	200	72									
May	546	543									
Jun	612	558									
Jul	939	1011									
Aug	136	23									
Sep	493	369									
Oct	389	221									
Nov	-124	-296									
Dec	-260	-317									
2002 Jan	-188	-228									
Feb	-528	-567									
Mar	-25	-79									

(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, 1998-99 = 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)					
(\$A million)					
As at end					
1999 Jun	75279	277335	352615	225577	325371
2000 Jun	63445	346468	409913	272071	342144
2001 Jun	72012	418989	491001	319983	397752
2000 Sep	68689	379466	448155	299382	357408
Dec	67460	397322	464783	303037	379210
2001 Mar	71746	447893	519638	335361	397326
Jun	72012	418989	491001	319983	397752
Sep	74584	439498	514082	328416	412137
Dec	n.y.a.	n.y.a.	n.y.a.	326115	412570
(Percentage of GDP)					
As at end					
1999 Jun	12.7	46.9	59.6	38.1	55.0
2000 Jun	10.1	55.1	65.1	43.2	54.4
2001 Jun	10.7	62.3	73.1	47.6	59.2
2000 Sep	10.7	59.1	69.8	46.6	55.7
Dec	10.3	60.8	71.1	46.4	58.0
2001 Mar	10.8	67.6	78.4	50.6	59.9
Jun	10.7	62.3	73.1	47.6	59.2
Sep	11.0	64.7	75.7	48.3	60.7
Dec	n.y.a.	n.y.a.	n.y.a.	47.2	59.7

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					
1999 Jun	3513	9956	13469	10347	18132
2000 Jun	3434	12921	16355	12841	19209
2001 Jun	3117	15566	18683	14478	19581
Quarter ended					
2000 Sep	809	3619	4428	3472	4991
Dec	829	3718	4547	3468	4454
2001 Mar	695	4275	4970	3842	5100
Jun	784	3954	4738	3696	5036
Sep	782	3853	4635	3639	5494
Dec	n.y.a.	n.y.a.	n.y.a.	3409	4878
Year ended	(Percentage of exports of goods and services)				
1999 Jun	3.1	8.9	12.0	9.2	16.2
2000 Jun	2.7	10.3	13.0	10.2	15.2
2001 Jun	2.0	10.2	12.2	9.5	12.8
Quarter ended					
2000 Sep	2.2	9.7	11.8	9.3	13.3
Dec	2.1	9.4	11.5	8.8	11.3
2001 Mar	1.9	11.5	13.3	10.3	13.7
Jun	2.0	10.1	12.2	9.5	12.9
Sep	2.0	9.7	11.7	9.2	13.9
Dec	n.y.a.	n.y.a.	n.y.a.	8.8	12.7

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)
1998-99	0.874	0.362	2.6	0.6276	56.0	100.5
1999-00	0.884	0.386	2.4	0.6290	55.2	100.0
2000-01	0.882	0.416	4.8	0.5379	50.3	95.0
Quarter						
2000 Sep	0.875	0.412	5.7	0.5748	52.1	97.4
Dec	0.896	0.431	5.4	0.5320	49.6	92.8
2001 Mar	0.882	0.406	3.4	0.5321	50.0	95.2
Jun	0.873	0.415	4.8	0.5127	49.6	94.7
Sep	0.859	0.393	3.2	0.5138	49.3	93.9
Dec	0.839	0.395	3.6	0.5123	49.6	93.8

(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. Trade weighted index based on May 1970 = 100.

(d) Treasury estimate using GDP deflators.

Sources: ABS Cat. Nos. 5206.0, 5302.0.

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