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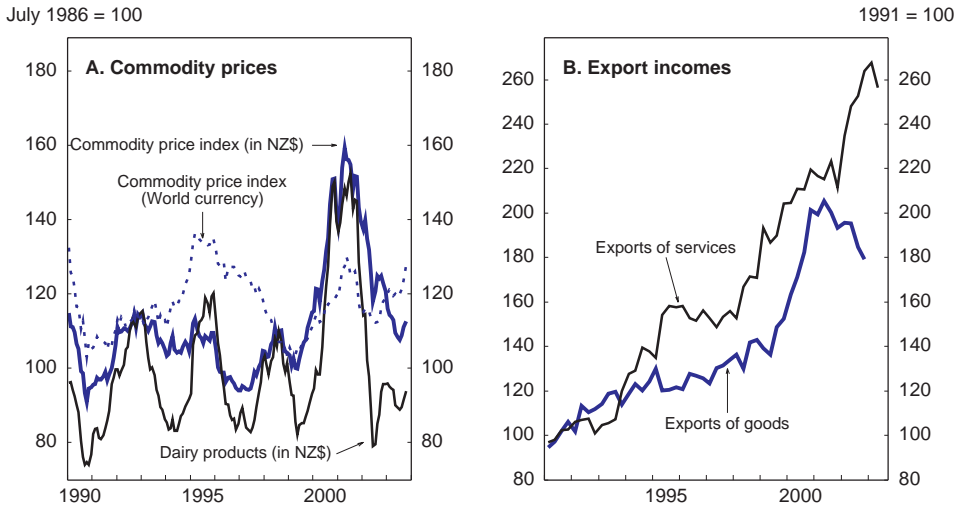
V. Macroeconomic developments and policies

Macroeconomic developments

Economic activity has remained buoyant over the past two years despite the global economic slowdown. GDP growth⁹⁸ has averaged 3½ per cent per annum since the first quarter of 2001 and has been around or above 4 per cent in seven of the past ten years. The economy has also proved much more resilient to climatic and external economic shocks than in the past. This performance can be partly attributed to the improvement in potential output growth that became evident in the mid-1990s and was described in more detail in Chapter I. But it also reflects some temporary and cyclical factors, the most notable being a spike in export earnings early in the millennium and a recent surge in inward migration.

That export boom was driven by a rare coincidence of high prices on world markets of New Zealand's main exports, strong primary production, considerable services exports growth and a significantly but temporarily under-valued currency (Figure 37, Panel A). In a period in which most global commodity prices have been weak, a few special factors kept prices for New Zealand's primary products relatively strong. Dairy prices in particular benefited for a time from strong demand and a reduction in agricultural subsidies in Europe, while the BSE scare and Britain's foot-and-mouth outbreak boosted prices of NZ-produced lamb and beef. With these world prices being converted back at what was, until early 2002, a very weak currency, export earnings in local currency terms were very high. Although prices have now fallen back from their peaks, they remain close to their long-run average whether measured in local or foreign currencies. The exchange rate has also bounced back, rising by nearly 40 per cent in real effective terms since its trough in 2001, and in November was 12 per cent above its long-term (post-float) average. However, this will not make a significant dent in firms' export income until foreign-exchange hedges expire. The dollar value of exports remains high, with continued growth in services exports – especially tourism – plugging the gap created by a slight softening in goods exports (Figure 37, Panel B). Overall, export incomes by mid-year were down 5 per cent from their peak (but still 45 per cent above their level in 1997), although some sectors have witnessed more significant falls.

Figure 37. Commodity prices and export incomes



Source: ANZ Bank and Statistics New Zealand.

Migration has been the second driving factor. As noted in Chapter III, sharply increased immigration flows combined with fewer people leaving have helped lift the population by $1\frac{1}{4}$ per cent in each of the past two years, adding an estimated $1\frac{1}{2}$ -2 per cent per annum to the growth rate (RBNZ, 2003). This has been most visible in the demand for housing and consumer durables. Household consumption has made a large contribution to GDP growth and has not yet shown any signs of slowing: it grew by 4 per cent in the year to June 2003, with spending on durables rising by more than $7\frac{1}{2}$ per cent.

The housing market has been boosted by this migration surge. Residential construction over the past year (6.3 per cent of GDP) has hit its highest level for three decades, although the rate of house-building is in line with the pace of population increase. However, strength in the market for new houses has spilled over to the market for existing homes. The median house price rose 17 per cent in the year to September 2003, and the average sale time (24 days) is the shortest on record. Borrowing for housing has lifted household indebtedness to a record high of 120 per cent of disposable income. Perhaps surprisingly, the run-up in house prices has not been confined to Auckland, where most of the migrants have settled. Average prices in the rest of the country have almost kept pace with Auckland's. New Zealanders returning home, presumably with a good deal of savings, look to have been a factor in several markets, pushing up demand for waterfront and lifestyle

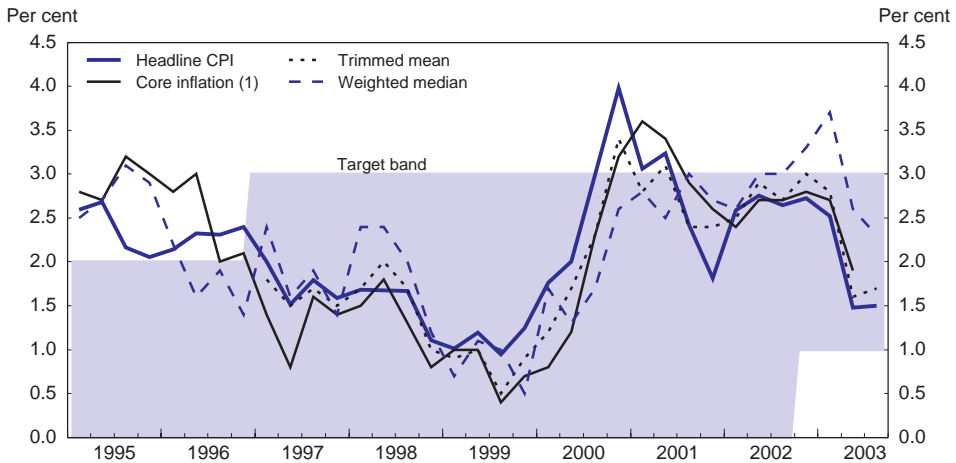
property in particular. The increase in house prices is partly justified by the improving economy, but it is hard to know whether they have overshoot their “equilibrium” level. The ratio of house prices to disposable income is now a little on the high side, but not excessively so, and the increase since 1999 has been markedly less than in many other countries. However, indirect indicators such as a pick-up in the purchase of properties for investment purposes may indicate an element of speculative froth.

Whether excessive or not, the housing market strength is one factor that has stretched economic resources. Strong growth has put pressure on the labour market, which by most measures has been tight for a couple of years. Employment increased by 3.3 per cent in the year to September 2003, contributing to a fall in the unemployment rate to 4.4 per cent, the lowest level since 1987. Reported labour shortages are at high levels, as are participation rates. Capital resources are also stretched. Capacity utilisation in the manufacturing and building sectors has remained high since early 2000, particularly in the construction sector. Despite that, business sector investment has remained soft. Although investment growth is picking up (12 per cent in the year to the second quarter), the investment rate (as a proportion of GDP) is only around its historical average. Putting the pieces together, output is estimated to have been around 1 per cent above the OECD’s estimate of potential at mid-year. However, this may be an underestimate because the method of calculating potential output implicitly assumes that migrants are ready for work as soon as they arrive. Under the more realistic assumption that they take time to add to productive capacity, their initial impact on demand will outstrip their effect on potential by more than a conventional output gap calculation would imply.

The positive output gap has fed through to inflation. The headline CPI inflation rate was above 2.5 per cent from March 2002 to March 2003, before dipping to 1.5 per cent in the year to September 2003 (Figure 38), pulled down by falling import prices and by the impact of SARS and greater competition on international airfares. Most measures of core inflation have been near the top of the central bank’s 1-3 per cent inflation target, although they have eased recently. The trend of strong domestically generated inflation and falling import prices is clear from the gulf between tradeables (−0.9 per cent) and non-tradeables inflation (4.1 per cent in the year to September 2003). There is no sign yet that non-tradeables inflation is slowing, having been above 3 per cent on an annual basis since the middle of last year, but nor are there indications of weak tradeables inflation reversing. Moreover, wage inflation has begun to pick up after a long delay (average private sector hourly earnings rose 3 per cent in the year to September 2003).

The balance of these forces – a decline in export earnings, a stronger currency, and continued strength in domestic demand – has led to a widening in the current account deficit. A reduction in the merchandise trade surplus pushed the current account deficit in the year to June 2003 to 4½ per cent of GDP, on par with

Figure 38. **Inflation indicators**
Annual percentage change



1. CPI excluding food, petrol and government-set charges.

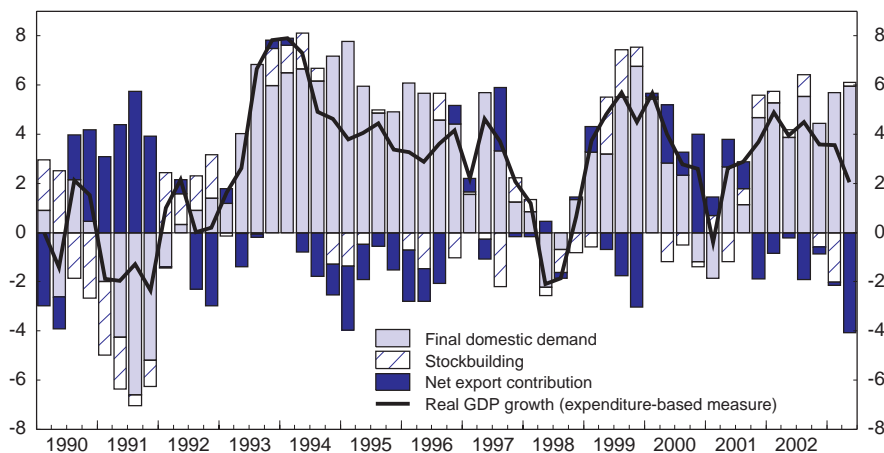
Source: Statistics New Zealand and Reserve Bank of New Zealand.

its 10-year average. With net external liabilities currently around 77 per cent of GDP, a deficit of this size would imply an approximately constant ratio of net debt to GDP under the reasonable assumption that nominal output will grow by around 5 per cent per year in the long term. This scenario would imply an ongoing vulnerability to external shocks. However, the risks should not be exaggerated. Although it is true that about 60 per cent of external debt is denominated in foreign currency, almost all of that is hedged either naturally or with financial instruments. Moreover, the banking system is in good shape and the financial positions of firms and households are relatively sound. However, the high level of indebtedness may be adding to the cost of capital, thereby contributing to the previously-discussed low rate of business investment.

Where is the domestic slowdown?

This year, domestic demand has held up better than most forecasters had been expecting (Figure 39). Trends in the first half of the year have been difficult to interpret because the economy has been hit by several large shocks. A dry summer led to falling primary production and early culling and caused a mini “power crisis” until rainfall restored reservoirs to normal levels. The electricity shortage led to cutbacks in the manufacturing sector in particular. A further shock

Figure 39. **Contributions to GDP growth**
Year-on-year percentage change



Source: OECD.

came from the SARS virus, which caused a large but temporary fall in tourist arrivals, but luckily that occurred in the low season. Consequently, GDP grew by just 0.8 per cent in the second quarter (measured at an annual rate), with the year-on-year growth rate dipping to 2.7 per cent. Looking through the temporary factors, “underlying” GDP growth is probably still above 3 per cent, and domestic demand growth has risen to 6 per cent on an annual basis. The expected flow-through of the weakening export sector to domestic demand has not yet occurred. Moreover, the majority of short-term indicators point to unrelenting strength.

Nevertheless, a slowdown in domestic demand growth to more sustainable rates must come (Table 21). A reduction in employment growth in the primary sector has eased some of the labour-market pressure, although that has been offset by strong employment growth in other sectors. Exporters will also face reduced incomes as their foreign-exchange hedges expire. The impetus from migration has also begun to slow fractionally. Balancing these forces is likely to be continued strength in the housing market and in household consumption, the latter reflecting higher wealth and disposable incomes along with continued job security. A further offset should come from business investment. Capital spending has remained surprisingly modest in recent years, despite high rates of capacity utilisation. This does not seem to be related to the world-wide downturn in investment in ICT, as even non-ICT investment rates have been relatively flat in New Zealand. Instead, it

Table 21. **Medium-term economic projections**
Annual percentage change

	2002	2003	2004	2005	2006-09
Private consumption	3.8	4.2	3.5	3.2	3.1
Government consumption	4.7	3.8	3.3	2.6	2.7
Gross fixed investment	8.1	12.7	6.0	2.4	3.5
Business investment	5.2	11.1	15.0	6.3	3.9
Private residential	20.4	20.0	-4.8	-5.1	2.6
Government	1.0	7.6	2.2	3.7	3.4
Total domestic demand	5.0	4.9	4.2	3.0	3.1
Exports	5.8	1.2	3.5	6.7	6.7
Imports	8.8	9.1	7.1	6.7	6.5
Real GDP (expenditure measure)	4.2	2.7	3.1	2.9	3.1
Real GDP (production measure)²	4.4	3.3	3.2	2.9	3.1
Output gap (per cent of GDP)	1.1	0.6	0.4	0.0	0.0 ³
GDP deflator	0.2	1.2	2.5	2.8	2.5
Consumer Price Index	2.7	1.7	1.9	2.3	2.3
Private compensation per employee	3.4	3.9	4.1	4.2	4.6
Employment	2.9	1.8	0.9	0.8	0.9
Unemployment rate (per cent of labour force)	5.2	4.8	5.0	5.1	5.4 ³
Short-term interest rate (per cent)	5.7	5.4	5.4	5.8	5.8
Long-term interest rate (per cent)	6.5	5.8	5.9	6.4	6.4
Current account balance ⁴	-3.7	-5.2	-5.2	-5.0	-5.0 ³
General government net lending ⁴	2.7	2.6	2.2	2.0	2.0 ³
General government gross debt ⁴	40.5	38.4	36.6	35.1	36.6 ³
General government net debt ⁴	18.1	14.8	11.8	9.1	-0.1 ³

1. Per cent of GDP in the previous period.

2. The production measure is regarded as more reliable than the expenditure measure.

3. Value in 2009.

4. Per cent of GDP.

Source: OECD Secretariat.

probably reflects a series of negative confidence shocks. These include the delay in the world economic recovery by at least a year relative to what many people expected in the first part of 2002, uncertainty surrounding the war in Iraq and the temporary factors such as SARS and the electricity shortage that hit the economy earlier this year. Those uncertainties have now passed, and business investment is showing the first signs of taking off. If the timing works out nicely, rising business investment and a pick-up in export growth could plug the gap created by a gentle slowdown in consumption and residential investment. On the other hand, if the latter continues to grow strongly, a recovery in business investment may add poorly timed fuel to the economic fire.

Box 3. The Reserve Bank's new inflation target

In September 2002, the Minister of Finance and the new Governor of the Reserve Bank agreed to make two key changes to the Bank's inflation target. *First*, the floor was lifted so the target is now 1-3 per cent per annum. *Second*, it now targets trend rather than annual inflation, *i.e.* "future CPI inflation outcomes ... *on average over the medium term*". The changes partly reflect an evolution in the way policy is implemented since the first target was set in 1990. The Bank has been able to progressively lengthen the policy horizon as inflation expectations have become more anchored. But they are also intended to provide a little more flexibility for monetary policy, and therefore allow more gradual policy responses in certain circumstances. By doing so, it is hoped that output, interest rates and the exchange rate will be less volatile. The Bank interprets "the medium term" as being the next three or so years, and intends to set policy so that projected inflation will be comfortably within the target in the latter half of the three year period.

Thus, as it did in the mid-1990s, the central bank faces an awkward juggling act between the strongly growing housing sector and subdued export earnings. When activity was strong but the currency was still relatively weak in the first half of 2002, the Reserve Bank raised short-term interest rates by 100 basis points. In April 2003 it reversed course in anticipation of a slowdown to more normal rates of growth and in reaction to the quickly-rising exchange rate. Rates have been cut three times this year and now stand at 5 per cent. At this level, the Bank regards interest rates as mildly stimulatory. However, the exchange rate is clearly on the tight side, so overall monetary conditions are probably fairly neutral. The Bank's current stance, appropriately enough, is to wait and see whether the predicted slowdown materialises. In any case, it has a little more room for manoeuvre now that the inflation target has been made more flexible (see Box 3).

Recent fiscal outcomes and concerns for the future

The latest year has shown another large surplus, but rapid increases in spending too

Recent fiscal outcomes have generally continued to meet or surpass expectations. At NZ\$ 5.6 billion (4.4 per cent of GDP) in the year ended 30 June 2003, the "underlying" operating surplus (as measured by the so-called OBERAC *i.e.* operating balance excluding revaluations and accounting changes⁹⁹) of the central government rose from the previous year (when it was only half that amount) for the fourth time in succession and exceeded the previous year's budget prediction for the third straight year (Table 22). Although no official figures are available,¹⁰⁰ it would appear that

Table 22. **Recent fiscal outcomes**
NZ\$ billions

	Actual FY 2001-02	(Per cent of GDP)	Actual FY 2002-03	(Per cent of GDP)	Percentage change (actual over actual)	Budget 2002-03	Excess of actual over budget (Per cent)
A. Total Crown – GAAP basis							
Total revenue	50.0	(40.5)	57.0	(44.7)	14.1	52.7	8.2
of which: Taxation	36.2	(29.4)	39.8	(31.2)	9.9	37.9	5.0
Total expenses	47.7	(38.6)	55.2	(43.2)	15.9	50.5	9.4
of which:							
Functional expenses	45.0	(36.5)	49.3	(38.6)	9.6	47.7	3.4
Finance costs	2.2	(1.8)	2.6	(2.0)	15.1	2.3	9.8
Operating balance ¹	2.4	(1.9)	2.0	(1.5)	-17.8	2.3	-14.1
Excluding revaluations and accounting changes (OBERAC)	2.8	(2.2)	5.6	(4.4)	..	2.3	..
B. Core Crown – GAAP basis							
Revenue	39.9	(32.4)	43.6	(34.2)	9.3	41.3	5.6
Expenses	38.0	(30.8)	41.7	(32.7)	10.0	39.6	5.5
of which:							
Social security and welfare	13.5	(10.9)	13.9	(10.9)	3.1	14.0	-0.5
Government employee pensions	1.4	(1.1)	2.6	(2.1)	86.3	0.9	196.6
Health	7.0	(5.7)	7.5	(5.9)	6.7	7.6	-1.2
Education	6.5	(5.2)	7.0	(5.5)	8.4	6.8	2.9
Core government services	1.5	(1.2)	1.8	(1.4)	15.6	1.6	11.5
Finance costs	2.1	(1.7)	2.4	(1.8)	11.4	2.3	1.8
Operating balance	1.9	(1.6)	1.9	(1.5)	..	1.9	..
C. Core Crown-SNA basis							
Current revenue	40.0	(32.4)	43.7	(34.3)	9.2	..	..
Current expenses	37.2	(30.2)	39.1	(30.7)	5.1	..	..
of which:							
Social security and welfare	14.5	(11.8)	14.9	(11.7)	2.8	..	..
Health	7.0	(5.7)	7.5	(5.9)	7.8	..	..
Education	6.2	(5.0)	6.7	(5.3)	8.6	..	..
Economic services	4.4	(3.6)	4.8	(3.8)	8.6	..	..
Administration and defence	3.2	(2.6)	3.1	(2.4)	-3.1	..	..
Saving	2.8	(2.3)	4.5	(3.6)	..	..	..

Table 22. Recent fiscal outcomes (cont.)
NZ\$ billions

	Actual FY 2001-02	(Per cent of GDP)	Actual FY 2002-03	(Per cent of GDP)	Percentage change (actual over actual)	Budget 2002-03	Excess of actual over budget (Per cent)
Net capital expenditure	0.5	(0.4)	0.2	(0.2)	-50.6	..	..
Net lending	2.3	(1.8)	4.3	(3.4)	..	..	..
D. General government²							
Revenue	50.6	(41.0)	54.2	(42.6)	7.1	..	..
Expenditures	48.2	(39.1)	50.1	(39.4)	3.9	..	..
<i>of which:</i>							
Current expenditures	47.2	(38.3)	49.0	(38.5)	3.8	..	..
Net capital expenditures	1.0	(0.8)	1.0	(0.8)	5.4	..	..
Net lending	2.5	(2.0)	4.1	(3.2)	..	..	..

1. Equals revenue less expenses plus net surplus of tertiary education institutions and minority interest.

2. Figures for general government are OECD estimates based on a variety of sources and differ from the total Crown (for example, general government excludes SOEs and includes local government). They should be treated as indicative only.

Source: New Zealand Treasury and OECD.

the general government is still in surplus (of some 3 per cent of GDP), as it has been in uninterrupted fashion since 1994, a record surpassed only by Luxembourg and Korea among OECD Member nations. The difference between the two measures consists primarily of the government's deficit on capital account, as the small non-central government sector has recorded a small operating surplus in recent years. In cyclically adjusted terms, net lending has also improved between 2001 and 2003, with an estimated cyclically adjusted general government surplus of 2½ per cent of GDP in 2002-03. Spending increases have nonetheless been substantial – about 10 per cent at the core Crown (central government) level – and were well above levels that had been in the original budget for the year. While subsidies and transfers rose only modestly, personnel, finance and operating expenses combined surged. Higher tertiary student numbers have pushed up education outlays. Health care spending also rose significantly, as it has done in most OECD countries in recent years. But the sharpest rise was on government employee pensions due to a revaluation of its unfunded liability (accounting for around 3 of the 10 percentage points of increase). Excluding these movements, expenses have increased by an average of 4.5 per cent per annum over the last four years, and 6 per cent in 2002-03. Fortunately, the strong economy helped to boost total core Crown tax revenues by over 9 per cent, holding the deterioration in the actual operating balance to a modest amount. The favourable revenue surprise was across the board, with greater-than-budgeted increases in personal tax (due to higher wage and employment levels), corporate tax (reflecting the strength in company profits) and indirect tax (resulting from higher household spending on consumption – especially on heavily-taxed tobacco and fuel – and residential investment).

The healthy flow of public finances has allowed a steady improvement in the government's balance sheet (Table 23), and the government took advantage of

Table 23. **The government's balance sheet**

Central government (including Crown entities and state-owned enterprises) as at 30 June 2003 NZ\$ billions			
Assets:		Liabilities:	
Financial assets in hand	30.4	Gross debt	38.3
Property, plant and equipment	52.7	Provision for government employee pensions	13.9
Other	16.8	Provision for ACC outstanding claims	9.2
		Other	14.8
Total	99.9	Total	76.1
Net worth	23.8		
As per cent of GDP	18.6		

Source: Financial Statements 2003 and OECD, *Economic Outlook* 74.

this to move to full funding of the new Superannuation Fund (NZS) a year earlier than had been planned.¹⁰¹ Gross debt has fallen by some 30 percentage points of GDP to 38 per cent (at the general government level) over the past decade. The decline for central government has been more moderate, though the level is now 28 per cent of GDP – below the government’s long-term objective of 30 per cent – and the lowest since 1971. In net terms the Crown’s debt is down to around 11.5 per cent of GDP,¹⁰² while including the rest of the general government adds another 3 percentage points or so. The overwhelming majority of this debt is held by domestic agents (mostly trustee and nominee companies, banks and the Reserve Bank), though the non-resident share (11.3 per cent at end-June) has been on a gently rising trend in recent years. The government also wisely considers its entire balance sheet: with tangible assets of some NZ\$ 53 billion easily exceeding provisions for unfunded government employee pensions and outstanding claims for the publicly-owned Accident Insurance Corporation, the government had a net worth of 18.6 per cent of GDP at mid-year.

The latest budget calls for further spending rises in priority areas

In its latest budget the government hiked spending by a cumulative NZ\$ 9 billion over the coming four years (of which NZ\$ 1.6 billion is for the current year). Nearly half of that was in health – including a questionable decision to phase out asset testing for long-stay geriatric care as from July 2005 – and more than a quarter in education, with most of the rest in support of the *Growth and Innovation Framework* (see Chapter II), other social services, justice, security, the environment and culture. For the current year health-care outlays are budgeted to rise by 8¾ per cent and education by 5 per cent, most of which is at the tertiary level, as there has been a sharp rise in the number of tertiary students (+11.3 per cent in 2002) and there is to be a new maximum tuition fee. Extra funding has been provided to finance sectoral training organisations and to ensure that all teenagers are either in education, training or work by 2007 (currently 10 to 17 per cent are not engaged in any such activity). It is acknowledged that there will have to be significant growth in capital spending, especially on transport, although details of how that is to be allocated have not yet been decided, pending the finalisation of a land transport strategy. As discussed in Chapter II, more money will also have to be spent to recapitalise the public electricity producers, who face a clear need for capacity increases in coming years. Finally, on the tax side, the only change was to reduce the personal tax rate on employer contributions to pension funds from 33 to 21 per cent for those earning less than NZ\$ 38 000.

The government believes it has further fiscal headroom

In the 2003-04 budget the government also signalled its intention to take several other important initiatives in its next three budgets if the economic and

fiscal situation turns out as projected. In particular, with the OBERAC projected to rise to NZ\$ 6.2 billion (4.0 per cent of GDP) by 2006-07, the government judges that it has sufficient “fiscal headroom” for initiatives costing up to around NZ\$ 0.6 billion per budget without impinging on its intended operating surplus of around 3 per cent of GDP. Its ten-year projections (“progress outlooks”) support the view that there is room for new initiatives, since by mid-2013 gross Crown debt could be below 12 per cent of GDP and net worth around 50 per cent of GDP. The government’s hope is to raise benefits for low- and middle-income families and provide better incentives for getting the unemployed back into work. The merits of these goals are discussed more fully in Chapter IV, but the fiscal impact risks being costly if the reform is not well thought out or is inefficiently implemented. There is also a danger that these initiatives might overlap with the extra outlays from likely transportation infrastructure projects, say in 2005 or 2006, resulting in inappropriate stimulus and pressure on both capacity and the budget balance.

But the longer-term outlook points to the need for caution

The case for the existence of such room for manoeuvre on planned public spending is weaker if the risk of spending pressures – especially in health – is recognised, if tax rates are forced down by international competition or if the projection horizon is extended much beyond the decade required by New Zealand law. In comparative terms New Zealand will be a late-comer to the effects of ageing populations and the increase in the old-age dependency ratio will be smaller than most OECD countries (OECD, 2001e). By 2050 ageing-related spending could rise by 8.4 percentage points of GDP from the current share of 18.7 per cent, while the average Member country is projected to experience an increase of only 5.5 percentage points on top of a current figure of 16.9 per cent.

The Treasury has made available on the Internet a detailed long-term spreadsheet model of the public finances and has used it to make long-term fiscal projections. Analysis based on this model (Janssen, 2002) shows that the baseline operating balance is unlikely to suffer any ageing-related deterioration for about a decade. It would take about a further decade until the balance would turn negative, and it would continue to deteriorate throughout the simulation horizon (to 2051), reaching a deficit of 16 per cent of GDP by the endpoint. The bottom line is a “fiscal gap” (the amount by which revenues would have to increase to allow the projected gross debt to stay unchanged over a defined horizon, assumed in this case to be 2051)¹⁰³ of 1.57 per cent of GDP if the revenue increase is implemented in 2006 (Table 24). The paper shows that this estimate is very sensitive to the assumptions used: the gap almost doubles, for example, if health and education spending rise faster than productivity, as they have done in most recent years, and is also dependent on net immigration and low unemployment. OECD experiments with the model show that lowering the wage floor used in pension calculations from

Table 24. **Fiscal gap estimates**
Per cent of GDP

A. Baseline case ¹ under alternative terminal dates ²		
	2011	-1.61
	2016	-1.15
	2021	-0.80
	2026	-0.37
	2031	0.14
	2036	0.60
	2041	1.01
	2046	1.33
	2051	1.57
B. Alternative scenarios, terminal year = 2051		
1.	Higher education and health spending (2 per cent growth, rather than 1.5 per cent)	2.88
2.	Higher terminal debt target (60 per cent of GDP, rather than 30 per cent)	1.31
3.	Lower real interest rate (3 per cent, rather than 5 per cent)	1.96
4.	Lower net migration rate (zero, rather than 5 000 per year)	1.96
5.	Lower unemployment rate (5 per cent, rather than 6 per cent)	1.03
6.	Delayed adjustment (implementation in 2026, rather than 2006)	4.24
1. Initial years are from Budget Economic and Fiscal Update 2001. Labour productivity growth: 1.5 per cent per year; health and education spending growth: 1.5 per cent per year in real per capita terms; real interest rate: 5 per cent; gross debt in terminal year: 30 per cent of GDP; net migration of 5 000 per year; unemployment rate of 6 per cent.		
2. Excluding the effects of the NZ Superannuation Fund. The paper points out that its existence shifts all fiscal gap calculations by -0.31 per cent of GDP because the rate of return on its assets is assumed to exceed the real interest rate.		
Source: Janssen (2002, Tables 5 and 6).		

65 to 60 per cent of average wages over a six-year period or gradually raising the retirement age from 65 to 67 starting in 2007 would each have powerful effects, boosting mid-century net worth by 37 and 59 percentage points of GDP, respectively. It can also be shown that higher productivity growth is extremely helpful, but only so long as real spending does not follow (in which case the impact is much more moderate). Finally, it might be argued that since the public finances are expected to be in good shape for another two decades or so, there is plenty of time to worry about the projected longer-term problems later and that current priority spending needs should be accommodated. However, delaying adjustment until the problem is upon the nation would make it an order of magnitude more severe.

Changes to the fiscal framework strengthen the medium-term focus but run the risk of loosening short-term control

Earlier this year the government decided to modify the previous fiscal management approach. That approach had been in place since 1996 and was adopted in order to gain fiscal credibility at a time of political uncertainty surrounding the

initial experience with coalition government following the move to proportional representation in the mid-1990s. It had succeeded in ensuring an uninterrupted string of surpluses through the restraint it imposed on government spending. Essentially, it was based on a system of “provisions”, comprising three-year (the length of the Parliamentary term) operating and capital spending limits and a set of rules for “counting” controllable items against that limit. It resulted in an effective cap on new spending initiatives in net terms. The government argues that it led to too much attention being paid to the short term, a neglect of medium-term issues, and too little attention given to baseline expenditures (which were outside the provisions). It also led to a modest tendency to engage in accounting games. There were also technical problems such as first-year changes counting more than those implemented later in the period, even if the long-run effects were identical. It also meant that the implications for spending outside the window were neglected. Henceforth, the government will focus on desired five- and ten-year tracks for the operating balance and government debt “consistent with overall fiscal policy” (Treasury, 2003, p. 2) and concentrate on what spending those tracks could accommodate. The implication is that virtually all spending¹⁰⁴ will receive equal consideration (rather than just what was considered new spending and thus countable against the provision), with greater certainty for closer time horizons. But what the government is seeking is most importantly greater discretion to change its policies if a reassessment seems appropriate and, in any case, at the beginning and the end of each Budget process.¹⁰⁵ This extra flexibility might come at low cost if policymakers can retain a firm hand, but the reduced discipline might prove detrimental over the longer term.

The government has decided to revise the fiscal framework by means of new legislation that was made public in August. It not only embodies measures to enhance the reporting requirements of the Fiscal Responsibility Act 1994, but also contains the legislative changes arising out of the *Review of the Centre 2001* (see Chapter III of the previous *Survey*).¹⁰⁶ The legislation will remove the requirement that every *Budget Policy Statement* (BPS) set out the high-level fiscal strategy. Currently, the BPS is published about six months before each budget, setting the broad parameters for the forthcoming budget debate. This mechanism is intended to promote more informed trade-offs among strategic fiscal objectives by separating debate about them from the rush of detailed fiscal compromises and decisions in the run-up to the budget (Scott, 1996). Henceforth, unless there are changes to the high-level fiscal strategy, the BPS will focus more on detailed priorities for the upcoming budget. The annual Fiscal Strategy Report (FSR) will cover the high-level fiscal strategy and longer term fiscal scenarios.

Legislative changes arising out of the *Review of the Centre 2001* would, in brief:

- allow spending Ministers more flexibility (such as permission to shift spending between output classes without Parliamentary approval);

- mandate some current practices that increase transparency, such as analysis of the sensitivity of the fiscal aggregates to different economic and demographic scenarios;
- enhance Parliamentary scrutiny of spending by allowing the Auditor General to require Ministers to report to Parliament for “serious breaches of appropriations”;
- create a new Crown Entities Act in order to improve their governance and accountability and better integrate them in the rest of the state sector by directing them to adopt a whole-of-government approach; and
- enhance departmental and Crown Entity¹⁰⁷ reporting to require more non-financial information to be disclosed regarding areas such as outcomes and organisational capability so as to allow Parliamentary Select Committees to judge performance more broadly than short-term financial results.

These are all worthy objectives. Finally, in order to avoid a significant reduction in spending discipline the bill would also require the Treasury to do an assessment of the long-term outlook and risks to the public finances every four years.¹⁰⁸ This will be helpful in attracting the attention of policymakers and the public alike to issues such as population ageing.

Notes

1. Unless otherwise noted, “average” in this *Survey* refers to unweighted averages of the relevant countries.
2. In 1991, output is estimated to have been 6 per cent below potential. Hence, at least 6 percentage points of the growth since then can be attributed to a cyclical bounce-back. However, if potential output fell more sharply than current estimates suggest, perhaps because a significant portion of the capital stock became obsolete, then more of the growth since 1991 could be attributable to a recovery in the sustainable growth rate rather than being cyclical.
3. Several studies using a variety of approaches also confirm that a pickup in the trend rate of productivity growth occurred around the middle of the 1990s. See Razzak (2002), Black *et al.* (2003a) and Buckle *et al.* (2002). Downing *et al.* (2002) provide a range of estimates of potential output growth that are broadly consistent with the Secretariat’s estimates.
4. This projection assumes that the participation rate of each age group remains unchanged at its 2002 level, and implicitly also assumes either zero migration or that migrants have the same participation rates and age composition as the New Zealand-born.
5. In the OECD there are 18 agglomerations in 11 countries that are bigger than Sydney (population 4 million), and 30 that are larger than Melbourne (3.2 million) (www.xist.org/charts/city_million.php).
6. For example, see McCallum (1995).
7. For most of the 1990s, around one-third of school leavers left with no qualifications or with School Certificate only (Ministry of Education Briefing to the OECD, December 2001).
8. For example, the reading performance of 10 year-olds in the PIRLS (2001) study was equal to the average of the 17 OECD countries that took part, but had the largest variance.
9. For every ten new entrants to high-decile (most advantaged) schools who are competent or expert in maths, seven new entrants to low-decile schools meet the same standards. By senior secondary school, for every ten students from high-decile schools who qualify to enter university, only three from low-decile schools have comparable grades (Ministry of Education, 1999).
10. The inter-quartile range of PISA’s school mean index of economic, social and cultural status is below the mean and median of the OECD. See Table 8.4 of OECD (2001a).
11. Children from the top 5 per cent of Maori and Pacific families as measured by the PISA *International Socio-economic Index of Occupational Status* scored around 500 on the PISA combined literacy scale. That is approximately the same score as children from the bottom 5 per cent of Pakeha families. See Figure 6.1B of Sturrock and May (2002).
12. In terms of gross flows, 1.35 million New Zealanders have left since 1970 with the intention of staying away for at least a year, while 0.7 million have returned (although a

small number of these would have been people who left before 1970). Around 1.1 million foreigners arrived over that period, and 0.5 million left. Note that these figures refer to NZ citizens rather than the New Zealand-born population. Therefore, some of the NZ citizens who emigrated over that period were people born overseas but who later gained NZ citizenship while they were there.

13. Fabling and Grimes (2003) use NZ firm-level questionnaire-based data and find that business performance is strongly correlated with the purchase of external technology and having fully up-to-date core equipment. IT-related factors were found to be considerably more important for small and medium-sized firms than for their larger counterparts.
14. As a rough approximation, road use expands at the same rate as income, so investment levels need to keep pace with GDP (Ingram and Zhi, 1997). In New Zealand, annual investment levels are currently insufficient to cover depreciation and growth in demand. Over the next ten years, expenditure on road building is budgeted to grow by an average 3.3 per cent per annum, well short of the forecast 5 per cent nominal GDP growth (NBNZ, 2003). That projected level of investment could be sufficient to reduce congestion only if those funds get channelled primarily to bottleneck areas by not fully maintaining the under-utilised parts of the road network.
15. The FDI β can be measured by regressing the (log) change of New Zealand's FDI on the (log) change of world FDI. The resulting β coefficient is 0.51 (with a t-value of 1.1) over the period 1980-2001.
16. See, for example, "Red tape worry as firms cut investment", INL Newspapers, 5 May 2003, and "New Zealand rules forcing investors overseas, say fish farmers", INL Newspapers, 30 June 2003.
17. This refers to the OBERAC, or operating balance of the Core Crown (central government) excluding revaluation effects and accounting changes.
18. By contrast, New Zealand has the highest proportion of graduates in life sciences among OECD countries.
19. A Design Industry Taskforce was also set up and has produced its report (2003), which however makes it clear that rather than an industry *per se*, design represents a capability, and design-led firms are present in a variety of different sectors.
20. The tax break resulted from a tax loophole that the government closed in 1998, but which could still be exploited by films which began production before that date. The film producers were allowed to claim an up-front tax deduction for the entire cost of the film trilogy.
21. The average bound tariff (simple average across all lines) is 13.8 per cent, compared with an average of 4.2 per cent in the Quad countries (United States, the European Union and Canada). However, the average applied MFN tariff is much lower, 4.1 per cent (WTO, 2003).
22. Thus, indicators of FDI restrictions that disregard screening requirements put New Zealand's FDI regime among the least restrictive in the OECD. On the other hand, given the difficulty of taking into account the way a screening system is actually implemented, if the very presence of a screening requirement is considered as a restrictive element, New Zealand's regime would be regarded as more restrictive than the OECD average (Golub, 2003).
23. For example, even though Ireland had a corporate tax rate of 10 per cent (12.5 per cent since 2003) against New Zealand's 33 per cent, in 2001 the average effective tax rate on an investment from the United States to Ireland was only 1 percentage point lower

than that of a comparable investment to New Zealand (Yoo, 2003).

24. It has even been suggested (Simmons, 2002) that New Zealand may be functioning as a “nursery economy”, nurturing innovative ideas and small businesses that, however, can only be fully exploited by offshore firms.
25. For residential consumers, one additional factor is that the price of access to low-speed Internet access is maintained artificially low, because under its “kiwi share” agreement with the government, Telecom is obliged to provide a free (unmetered) local calling option, which includes both voice traffic and normal (low-speed) Internet access. Moreover, given that Telecom was offering only metered broadband access, many consumers were probably reluctant to move from unmetered to metered access.
26. There is no general capital gains taxation in New Zealand. Capital gains from equity participations arising in the context of certain arrangements are taxed, while others are not. The key factor is whether holding and trading securities are normal part of an entity’s business: for example, a mutual fund is considered to hold its security portfolio on revenue account and is taxed on any resulting capital gains, while a small investor is not. However, this criterion leaves significant room for interpretation, particularly when new financial arrangements emerge.
27. A survey by the Auckland Chamber of Commerce found that the smallest firms (those with 1-5 employees) devote up to 30 times as much of their resources per employee to compliance as those with 100 employees or more.
28. The Environment Court already has the power to award costs against frivolous objectors.
29. In addition to financing for research projects on a contestable basis, each CRI receives from the FRST a “non-specific” funding top-up equal to 10 per cent of the previous year’s total allocation, whose purpose is to support longer-term capability enhancement. In some cases, CRIs can also bid for government funding for large capital expenditures that they cannot finance out of their own budget.
30. The CRI Act states that each CRI “shall, in fulfilling its purpose, operate in a financially responsible manner so that it maintains financial viability”. This is interpreted to mean that it should recover the full cost of the research performed, including the cost of capital employed (see CCMAU, 2002).
31. Comparable data on tertiary education expenditure exist only for 2001, and for New Zealand they refer only to the public sector component, which is 0.9 per cent of GDP, against an OECD average of 1 per cent of GDP (OECD, 2003d). However, public spending on tertiary education has risen by over 30 per cent between 2001 and 2003, and is probably now above the OECD average.
32. In order to have access to public funding a tertiary education organisation must submit a charter and an annual profile indicating strategic plans, proposed activities and performance targets, which are then assessed by the TEC and have to be found consistent with the objectives of the TES.
33. A review of the course classification system used to set funding categories has been recently undertaken to address some distortions in funding rates that may affect the behaviour of providers and students. However, the government has not taken up the suggestion made by the Tertiary Education Advisory Commission in its fourth report (TEAC, 2001) to differentiate the proportion of public funding across courses and disciplines according to national strategic goals.

34. In addition to this financing managed by the TEC universities, as already mentioned earlier in this chapter, are also eligible for funding allocated by the FRST for specific research projects on a contestable basis.
35. In 2001, foreign students represented 6.2 per cent of all tertiary students enrolled in New Zealand, a proportion above the OECD average, with students from Asia and Oceania representing 80 per cent of the total. The number of NZ tertiary students enrolled abroad was equivalent to 3.5 per cent of domestic enrolment, below the OECD average of 4 per cent; three-fourths of them were studying in Australia and most of the remainder in the United States and the United Kingdom (OECD, 2003d).
36. Another dry weather episode occurred in 1992.
37. In a recent study (Energy Link, 2002), the elasticity of demand for electricity was found to be virtually nil at relatively low prices, and to start rising (in absolute terms) gradually only above a price of 10 cents/kWh (which is about twice the historical average price). Even then, demand would fall by only 2 per cent at 20 cents/kWh and by 6 per cent at 40 cents/kWh.
38. The net cost of contracting for and operating the reserve has been estimated at about NZ\$ 60 million a year, which represents a little over 2 per cent of what New Zealanders spend annually on electricity (at retail prices). Thus, the amount of the levy would not need to be very large.
39. According to the government's recently released *Energy Outlook to 2025* (Ministry of Economic Development, 2003b), new generating capacity for a total of 3 350 MW (relative to a present capacity of 8 700 MW) will be needed by 2025, partly to replace old plants (especially in the years 2006-10) and partly to meet increasing demand. The latter is projected to grow at an annual rate of 1.2 per cent, assuming GDP growth of 2.5 per cent (rather modest relative to both recent experience and official objectives) and gains in energy efficiency exceeding those realised in the recent past. Thus, investment needs could be significantly larger if economic growth is higher and/or the government's National Energy and Conservation Strategy is less successful than projected.
40. Passenger transport was discontinued in the 1990s, except for commuter train services in Wellington and Auckland.
41. Some of this fall is likely to be explained by the change in Australia's welfare policies for NZ citizens in early 2001. Another factor may have been the increased insecurity worldwide following the terrorist attacks of September 2001.
42. The main data on net migration flows concern so-called "Permanent and long-term" migrants. These are people who, on arrival in or departure from New Zealand, declare their intention to remain in their country of destination for more than one year. Such inflows thus include many people with temporary work permits and returning New Zealanders, in addition to those who have obtained a settlement visa, while it is only the latter who are included in the planning totals. Outflows include people emigrating definitively or for "overseas experience" as well as people who have been in New Zealand temporarily.
43. Resident spouses of NZ citizens can apply for citizenship after two years of residence.
44. About 30 000 intended to stay longer than one year, but not permanently (this distinction – that between "permanent" and "long-term temporary" – can be made in the Australian statistics, but not in New Zealand's) and around 17 per cent of these were not NZ-born. In this three-year period, China, Hong Kong, Taiwan and South Korea together provided one in four of the non-NZ-born settlers, one in six of the long-term

- temporary; Pacific Islanders constituted about 20 per cent of the non-NZ-born total flow, and the United Kingdom some 13 per cent.
45. Furthermore, since the changes in Australian welfare arrangements for NZ citizens, arrivals in Australia of NZ citizens born in Asia have fallen much more than those of NZ-born. But no obvious fall in applications to enter New Zealand from Asia has occurred, as would be expected if this were a significant factor.
 46. See L.E.K. Consulting (2001). Although the sample was quite large (1 500 people), it may not be representative of New Zealanders abroad. Little other concrete information is available, however.
 47. International English Language Testing System. This rates English language ability on a scale of 1 to 9 with 1 being a non-user and 9 being an expert user. Principal applicants under the General Skills or business categories are required to take the test if they cannot demonstrate that they have an English-speaking background (*e.g.* by coming from an English-speaking country or having an academic or professional qualification from an English-speaking country); since November 2002 General Skills applicants are required to score a minimum of 6.5 (between “competent” and “good” user), whereas 5 (“modest” user) is required of Business skills applicants, increased from 5 and 4, respectively. Average scores in 2001-02 for successful applicants from various countries were: South Africa 7.0; Philippines 6.6; India 6.4; Romania 6.2; Russia 5.8; China 5.7; Japan 5.6; South Korea 5.5.
 48. Parents, children and adult siblings are admitted subject to various additional conditions. These include requiring the “centre of gravity” of the family to be in New Zealand or, for adult children and siblings, a suitable job offer. NZ residents can also “sponsor” family members not otherwise eligible for entry, guaranteeing them accommodation and financial support for the first two years; this is subject to an annual quota, currently set at 250.
 49. The Pacific Access Category (PAC) includes a quota of 1 100 Samoans a year, allowed entry if they have a job offer and are aged 18-45. Smaller quotas exist for Tonga (250 people), Tuvalu (75) and Kiribati (50, increased to 75 in July 2003); in July 2003, a quota of 250 was introduced for Fiji nationals, not previously eligible under the PAC. Apart from asylum seekers decided on a case-by-case basis, there is a quota of up to 750 people per year for refugees nominated by the United Nations High Commission for Refugees.
 50. This total is the sum of the three streams, but the government intends to treat each stream independently and not compensate for over- or under-runs in one stream by varying admittances under other streams.
 51. The NZ government fears that moves to restrict entry to well-qualified applicants will have an adverse effect on the quality of future applicants, though it is not clear whether empirical evidence supports this. Some research shows that rapid processing times for applications can have an impact on choice of destination country for some migrants. Oliver (2000) finds that Chinese emigrants tend to be indifferent *ex ante* between Canada, Australia and New Zealand, looking basically for physically and politically congenial destinations. New Zealand’s rapidity in processing applications was taken by many as meaning that the country was keen to admit people because it needed them; hence, potential migrants assumed, jobs would be easy to get.
 52. Onshore applicants already working in New Zealand may be exempted from this requirement if they pre-pay for English language tuition, on a scale that varies inversely with their IELTS test score. The partners and adult children of skilled and

- business migrants must also meet English language requirement, a little less strict than for the principal applicant, or else pre-purchase English language tuition.
53. According to Stuart (2000), (Asian) business migrants found that the business plan they submit to the New Zealand Immigration Service is irrelevant and is ignored in New Zealand.
 54. A thorough investigation of applicants' qualifications and work experience will be undertaken only when they apply from the pool.
 55. Larsen and Vincent-Laurin (2002) estimate that revenues due to foreign students were around US\$ 200 million in the year 2000, 4.7 per cent of total NZ services exports. Australia earned ten times as much, almost 12 per cent of services exports, and the United Kingdom and the United States were even bigger earners in absolute terms, but in terms of the importance of such revenue in exports of services, New Zealand was thought to be second only to Australia.
 56. One of the growing areas in education exports is distance learning, the modern version of correspondence courses, where students do not actually leave their home country; direct familiarity with the exporting country is obviously not a by-product in this case.
 57. Seven per cent of all foreign tertiary students in OECD countries in 1999 were from China, and 5 per cent were from Korea. Concerning China, the latest "wave" of student movement from there, and inflows of business oriented migration, contrast with a previous significant movement in the late 19th century, when inflows of unskilled Chinese labour were important in a number of countries – this was the origin of a long-established community of Chinese in New Zealand whose ancestors were involved in New Zealand's gold rush.
 58. In the past, students would often have had to return to their home country and apply from there; this restriction now applies only to students benefiting from scholarships offered under New Zealand's development aid programme.
 59. This instruction may not have been sufficiently clear. There are suggestions that in some cases schools took account only of current operating costs in calculating fees to be charged overseas students and may therefore have overburdened their investment budgets. This practice does not seem to be widespread, however.
 60. One might also compare immigrant arrivals with turnover in the labour force, but it is hard to know what measure is appropriate. For example, in 2001, an average of about 85 000 people obtained jobs in each quarter who had not been working in the previous quarter, compared with an average of 10 to 15 000 immigrants arriving each quarter. This still takes no account of those who change jobs or of higher frequency movements into and out of employment.
 61. A pilot project has been undertaken to set up a longitudinal survey of immigrants ("LisNZ") similar to that which already exists in Australia. Useful results will not be available for several years, although some preliminary results are discussed below. For research purposes it would be helpful to have a parallel longitudinal survey of the NZ-born – one of the limitations of the otherwise extremely valuable Longitudinal Survey of Immigrants in Australia is the lack of directly comparable information on the Australian-born.
 62. As indicators of how well New Zealand integrates its immigrants, these figures do not take into account variations in the characteristics of successive cohorts of immigrants and natives, nor of how each cohort changes through time (notably, it gets older and gains experience on the job relative to the population average), however.

63. Note that these data concern employed people. Since the Pacific Islanders also have relatively high unemployment early on, as discussed in later sections, the relative income of the average recent Pacific Island immigrant will be even lower.
64. In 1991, only 28 per cent of Pacific Island origin people had an upper secondary qualification (62 per cent overall), and the Household Labour Force Survey was not able to report a figure for tertiary education since it was too small compared with the sampling error (see Ministry of Social Policy, 2001).
65. This is consistent with the finding (discussed in Chapter I) that differences in proficiency at school are related to a large extent to ethnic background. Pacific Island immigrants and their NZ-born descendents, who with Maori are the most disadvantaged groups, probably represent a larger percentage of the non-English speaking children than of total immigrant children of NZ-born children of immigrant parents.
66. This survey interviewed a sample of immigrants who arrived or whose application was approved in late 2000 or early 2001; they were interviewed 6 and 18 months after arrival (or after approval in the case of on-shore applications).
67. Information from the Australian longitudinal survey shows that while 63 per cent of immigrants arriving in 1993-95 (principal applicants only) were unemployed or out of the labour force 4-5 months after arrival, this figure falls to 48 and 42 per cent after 1½ and 3½ years, respectively. These figures for Australia varied enormously according to the immigrant category. For skilled migrants the figures were 33, 15 and 11 per cent, respectively, for preferential family migrants (which would include many spouses) they were 69, 56 and 51 per cent.
68. These data have been produced from a LisNZ pilot test and are restricted to a small sample of migrants settling in specific areas, speaking a given set of languages and arriving in New Zealand over a particular two month period (December 2000 and January 2001). Wave 1 of the pilot consisted of 690 migrants and Wave 2 of 540 migrants. Data from this test are indicative only, as they are derived from a sample designed to evaluate the LisNZ methodology, not to produce reliable statistics. The data should therefore be treated with caution.
69. Again, as these are not longitudinal data, the improvements with length of stay are a function of time but also of other possible differences in the characteristics of the different cohorts of immigrants.
70. BERL (2003) uses data from the 2001 census to look at fiscal receipts and public expenditures accounted for by immigrants, distinguishing them principally by length of residence and region of origin, and compares their contribution with that of the NZ-born. Being based on census data, it is not able to look at immigrants according to the programme under which they were admitted, unlike recent work for Australia (Access Economics, 2002). It cannot take direct account of how the contribution varies through time, notably as immigrants age and become likely recipients of greater amounts of pension and health expenditure, and some expenditure estimates for migrants are based on the assumption that they have similar behaviour to NZ-born with similar age and incomes. The authors further note that the results cannot necessarily be seen as the fiscal *impact* of immigrants, since some of these impacts would show up through the effects on revenues and expenditures accounted for by enterprises and by NZ-born people whose position had been affected by migration. Other aspects of the methodology include the assumption that expenditure items not mentioned in Table 14 are invariant with respect to population size. Many items are calculated by applying, for example, statutory tax rates applicable to people as a function of their incomes, in the absence of census data on actual tax payments. For each kind of tax and expenditure item, the

amounts calculated in this way for each population group identified are grossed up in equal proportions so that the overall totals match actual budgetary expenditures and revenues.

71. This view is shared in other traditional “settlement” countries – Australia and Canada, for example – and is based partly on the fact that these populations and societies would not exist in anything like their current form without the substantial and consistent (albeit fluctuating) immigration flows that have continued for more than a century. It is also partly based on the observation that certain “agglomerations” tend to have higher productivity growth rates, with this growth appearing to be associated with high research and development activity. If successful research and development activity itself depends on geographical concentrations – or “critical masses” – of researchers in particular fields, then larger populations are likely to generate higher per capita income growth.
72. For example, a recent empirical study on economies of scale at the whole economy level (Ades and Glaeser, 1999) restricted itself “to the poorer economies where increasing returns seem to operate”.
73. Eaton and Eckstein (1997) suggest little relation between city size and growth in a study of France and Japan. Wheeler (2002) showed a similar result for city data in the United States, but found a U-shaped relationship between population and growth using data on counties.
74. Many immigrants – recent policy measures are likely to make this an increasing proportion – arrive with jobs already set up for them, and thus add to supply almost immediately; the share with jobs of course increases with time since arrival. Once people have jobs, however, they become more creditworthy. If they were credit-constrained before finding employment, they could potentially do even more dis-saving than before, and add more to demand than to supply, even as output rises as immigrants move into employment.
75. The study does not specify precisely what is meant by the short term, though it is less than one year.
76. Some of these inflows were probably accounted for by business immigrants who subsequently placed their “investment” funds on deposit, rather than adding directly to demand. These inflows may also contribute to a rise in the exchange rate, which occurred in the mid-1990s and signs of which have recurred of late. The close link between the fluctuations in these inflows and in migration flows is partly artificial, since the data are estimated on the basis of a link between migration flows and transfers; the transfers are not observed directly. Estimates of current account transfers due to migrants (“workers’ remittances”) are not separately available in the balance of payments data, as the methodology is thought insufficiently reliable to allow their separation from other current flows. They seem to be much less important than the capital flows, however.
77. The differences in share between the two populations are negligible except for construction and agriculture. A survey by NZIS of migrants who arrived in 2000-01 shows larger, but still small, differences for nearly all industries, with the same exceptions of construction and agriculture.
78. See, for example, the 2003 OECD Economic Surveys of Spain and Luxembourg. NZ agriculture employs a number of working holiday makers for seasonal jobs, however. These would not show up in the labour force survey data quoted in the text.

79. New Zealanders abroad are well-known for their use of networks for information; it is unlikely that many of them who move abroad and remain there did not have fairly good information about what to expect when they left. They can therefore be expected to have made a “rational” decision.
80. Or at least their welfare is increased. Many abroad may choose low-skilled or part-time work to benefit from greater leisure but perhaps lower incomes, for part of their stay.
81. This was a non-representative sample of some 1 600 expatriates, contacted, for example, through university alumni associations, employers organisations or New Zealand consulates.
82. The research covered a group of people who graduated from Irish universities in 1992 and were resident in Ireland in 1998. Males who had worked abroad between the two dates had incomes some 10 per cent higher than those who had not. No difference was found for females.
83. The study by Winkelmann and Winkelmann (1998) was commissioned by the government in 1997 to investigate this issue.
84. This includes the planned longitudinal survey of immigrants mentioned earlier.
85. See *e.g.* Chiswick *et al.* (2002), and, for similar results for the United Kingdom, Shields and Wheatley Price (2001).
86. Since this survey did not cover employers who had the ability to take on immigrants but did not, it will be biased towards favourable outcomes if employers select successfully. It was based on a study of 387 employers in 2000-01.
87. See www.newkiwis.co.nz and www.hi-q.org.nz/main/index.html
88. The Auckland Chamber of Commerce believes that as many of 70 per cent of vacancies are not normally advertised but filled through word of mouth, an obvious disadvantage for newly arrived immigrants.
89. Of those who received the unemployment benefit continuously for the two years from October 1997 to September 1999, half stayed on the benefit for the following 12 months, while a little over a quarter left and remained independent. Gobbi and Rea (2002) looked at a cohort of both short-term and long-term unemployed who left the unemployment register in 1993. Half were back on the benefit within a year and 70 per cent were back within four years.
90. In 2003, 83 per cent of long-term (more than one year) unemployment benefit recipients had no dependent children. The proportion is roughly the same for the sickness benefit.
91. See Tables 3.2 and 3.5 of OECD (2002f). The paragraph refers to net (after tax) replacement rates relative to a job paying two-thirds of the average wage (as the majority of beneficiaries who are able to find work are likely to be in a low-paying job).
92. See OECD (2003f) and Blundell (2002) for a more thorough discussion.
93. See OECD (2001d) and Fredriksson and Holmlund (2003) for reviews of the theory and evidence.
94. In June 2003, 4.1 per cent of the population aged 15-64 receiving either a Sickness or an Invalids benefit. This is similar to levels in Germany and Canada, but is well below the OECD average of 5.8 per cent (in 1999). Some countries, such as Poland, Norway, the Netherlands and Sweden have disability rates above 8 per cent of the working-age population. See OECD (2003h).
95. This is based on a University of Auckland Business School survey released in June 2003.

96. In a sample of around 1000 collective agreements struck under the ERA, the Department of Labour (2003) reports that three-quarters of agreements covering two-thirds of employees contained clauses dealing with the sale or transfer of all or part of the business (by law it should be 100 per cent, but there are no penalties for non-compliance). The vast majority of these say that workers that remain employed with the new owner on the same terms and conditions will have no entitlement to redundancy compensation.
97. Germany is the only OECD country where a worker who voluntarily quits in such circumstances would be entitled to redundancy compensation. An EU Directive specifies that staff will continue to be employed on the same terms and conditions, but leaves it up to member states to decide what should happen when someone voluntarily decides not to work for the new owner. In Denmark, severance payments can be received if a worker quits because the change in ownership results in a serious deterioration of his position. See Blanpain and Engels (1998), IPD (1995) and Watson Wyatt (1997) for details on labour law at the EU level and in its member states. The EU Directive referred to is number 77/187 as amended by Directive 98/50. Practice in Australia varies across states, with some providing neither continuity of employment nor the automatic transfer of accrued benefits.
98. Unless otherwise noted, GDP refers to the production-based measure which is regarded as more reliable than the expenditure-based measure.
99. In raw form the surplus was only NZ\$ 2.0 billion (1.5 per cent of GDP), which was slightly below both the previous year's outcome and the Budget forecast, despite much higher revenue growth than expected: a reduction in the assumed discount rate led to a large reduction in the balance because of its effect on the valuation of the government's unfunded pension liability for its employees (NZ\$ 10.7 billion) and of outstanding accident insurance claims (NZ\$ 9.2 billion in gross terms and NZ\$ 4.3 billion in net terms). Higher estimates of long-term labour-cost increases also contributed to the rise in estimated accident insurance claims, as did investment losses and asset devaluations in defence and electricity. Full funding of the accident claims liability is targeted for 2014.
100. Statistics New Zealand has not published any accounts for general government since those for 1997. All such statistics in the text below are OECD estimates.
101. The full government contribution is nearly NZ\$ 1½ billion per year. The Fund is expected to start investing in the final quarter of this calendar year. At mid-year it had assets of NZ\$ 1.9 billion.
102. This figure differs from the government's published net debt estimate as it subtracts off the financial assets of the NZ Superannuation fund.
103. Indeed, if the analysis went further out into the 21st century, the estimated gap would get much larger as the operating balance would deteriorate at an accelerating rate and net debt would rise explosively. Some other countries (such as Denmark) are trying to ensure that their public finances are balanced over a much longer horizon than 50 years.
104. This would go so far as including demographically driven changes, settlements of legal claims and estimated student loan losses. Some pre-specified volatile items will be excluded and covered only in end-of-year assessments. While capital spending will of course be included, it is to be hoped that the revised approach will allow a clearer trade-off between current and capital initiatives.
105. The impact of the latter will need to be limited and largely net out over time, or else the credibility of the process will be at risk.

106. The priority areas for change identified by that review were: "i) Achieving better integrated, people focused, service delivery;... ii) Addressing fragmentation and improving alignment;... [and] iii) Enhancing the people and culture of the state sector..." (Briefing for Parliament, Public Finance (State Sector Management, Bill, p. 4).
107. Crown entities number around 2 780 of which some 2 600 are School Boards of Trustees. The remainder have various forms: some are statutory bodies (the ACC, for example), others are companies (such as the nine Crown Research Institutes) and a few are single-member entities, like the Commissioner for Children.
108. Such a proposal was also made by the State Services Commission (2003).
109. On current prices, without the emission charge, coal-fired plants have a slight economic advantage and would make up 31 per cent of the new 2 200MW to be installed, against 14 per cent for combined cycle gas turbines (Ministry of Commerce, 2000). Even at low levels, the emissions charge could substantially change that balance, as a tax of NZ\$ 13 per tonne (about US\$ 8) of CO₂ would lift the price of coal relative to gas by 9 per cent. This could encourage further exploration efforts as gas fields run out.
110. Leaving the farm sector aside indeed means less emission reductions than what a first-best tax would bring. New Zealand will hence have fewer permits to sell on the international market, which generates negative effects on the terms of trade and on national income. The estimated economic loss is very small, however, at 0.1 per cent of household consumption, because the forecast for the price of permits (NZ\$ 13 per tonne of CO₂) is very low, in line with the current consensus (see IEA, 2002 and NZIER, 2001a).
111. OECD calculation based on data reported in NZIER (2001b). The NZ\$ 40 figure is drawn from the equalisation of net present values at a discount rate of 10 per cent as indicated in NZIER (2001b). Though NZIER (2001b) mentions a 10 per cent discount rate, it finds a different figure for the threshold because it equalises the respective internal rates of return, a methodology which is not appropriate.
112. Recent national data are not comparable with the previous report on the subject (Ministry of the Environment, 1997). A national update on water quality, which should identify trends over time, is due for public release in early 2004. Such a long interval since 1997 hinders the public from being able to follow the evolution of water quality nationwide. Regional councils, however, issue public reports with comparable data more regularly, which allow some trends to be identified.
113. Having increased by 51 per cent to 3.9 million cows between 1990 and 2002, the dairy herd generates effluent equivalent to that from 52 million people (Poore, 2003).
114. An average of 7 839 such bacteria per litre was found in surface water samples taken at 465 stations in the period 1995-2001, a level suitable for livestock watering but well above the swimmability threshold of 2 000 per litre.
115. *Campylobacter* was found in 60 per cent of water samples taken at 25 sites in a study carried out for the Ministry of Health (2002).
116. Under the RMA of 1991, all discharges of contaminants must have a resource consent from the relevant regional council or be authorised by a rule in a regional plan.
117. This remark is based on conclusions in Statistics New Zealand (2002b), but no data have been reported to the OECD to substantiate it.
118. This estimate includes capital expenditure on sewage collection and treatment but also on drinking water supply and stormwater collection.
119. At the 6-digit Harmonised System level.

120. The Quad countries comprise the United States, the European Union, Japan and Canada.
121. Tariff rates now in the range 17-19 per cent, such as those on textile, footwear and clothing, will decrease to 10 per cent by July 2009. Other rates will fall to 5 per cent by July 2008.
122. New Zealand imports no fresh eggs or poultry and bans all non-pasteurised cheese apart from a closed list of specific cheeses made in Switzerland. Some WTO members have officially expressed their criticism of the requirements that New Zealand imposes on the import of dairy products (WTO, 2003).

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BASIC STATISTICS OF NEW ZEALAND

THE LAND

Area (1 000 sq. km)	268.0	Urban population, ¹ percentage of total (June 2003)	78.6
Percentage of total pasture and arable land, 1996	49.5	Population of major urban areas (June 2003, 1 000 persons):	
		Auckland	1 199.3
		Wellington	363.4
		Christchurch	358.0

THE PEOPLE

Resident population, June 2003 (1 000)	4 009.5	Civilian employment, 2002 (1 000)	1 876.8
Inhabitant per sq. km	15.0	<i>of which:</i>	
		Agriculture, forestry and fishing	159.8
		Manufacturing	289.9
		Trade (wholesale and retail)	420.5
		Education, health and community services	310.5

PARLIAMENT AND GOVERNMENT

Present composition of Parliament:			
Labour Party	52	Present Government : Labour Party	
National Party	27	Next general election: July 2005	
New Zealand First	13		
ACT New Zealand	9		
Green Party	9		
United Future	8		
Progressive Coalition	2		

PRODUCTION (2002)

Gross Domestic Product (NZ\$ millions)	125 428	GDP per capita (NZ\$)	31 842
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FOREIGN TRADE (2002)

Main exports (percentage of total):		Main imports (percentage of total):	
Fish and seafood	22.1	Machinery and transport equipment	40.6
Manufactures	20.0	Manufactures	18.7
Dairy produce	16.7	Mineral, chemicals, plastic materials	25.6
Meat	13.8	<i>of which:</i>	
Wood and wood products	11.5	Mineral fuels, lubricants, etc.	9.3

THE CURRENCY

Monetary unit: New Zealand dollar		Currency unit per US dollar, average of daily figures:	
		Year 2002	2.1633
		November 2003	1.5915

1. Defined as the population in the 30 main and secondary urban areas.

This Survey is published on the responsibility of the Economic and Development Review Committee of the OECD, which is charged with the examination of the economic situation of member countries.

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The economic situation and policies of New Zealand were reviewed by the Committee on 17 November 2003. The draft report was then revised in the light of the discussions and given final approval as the agreed report of the whole Committee on 26 November 2003.

•

The Secretariat's draft report was prepared for the Committee by Pietro Catte, David Rae, Paul O'Brien and Boris Cournede under the supervision of Peter Jarrett.

•

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