Chapter 3
The Budget and the General Government[1]

Fiscal policy in 2002 had to contend with the repercussions of the expansionary budget submitted to the Knesset in October 2001, a modified version of which was approved in February, and with the effect of the deterioration in the security situation and the recession. Against this backdrop, with the budget deficit expanding rapidly in the first half of the year and the financial shocks intensifying, the government had to implement an economic emergency package in order to help restore economic stability. The package attained its main objective and checked the expansion of the deficit for the moment, although at a level that was well above the target set at the beginning of the year. Most of the deficit reduction was achieved by raising the tax rate, an approach which hinders current economic recovery and will hamper sustainable growth in the future, once the security situation and economic activity allow this. Moreover, basing the recovery on short-term measures, some of which will expire by the end of 2003 while others are based on accounting adjustments, confronts the government with the extremely difficult task of inspiring confidence in its commitment to reducing the deficit.

At the end of 2002 the deficit stood at 4.0 percent of GDP, in line with the target set in the middle of the year, but above the 3.0 percent target determined when the budget was approved. The deficit in 2002 was larger than it was in 1993, so that after a decade of deficit reduction targets there has been retreat in this sphere. The (gross and net) public debt/GDP ratio, which returned to the level of the mid-1990s, also attests to a lack of progress

[1] The general government comprises the government, the National Insurance Institute, the local authorities, the nonprofit associations (the health funds, universities, religious seminaries, etc.), most of whose income is from the general government, and the National Institutions (the Jewish Agency for Israel and the World Zionist Organization). Its activity is measured in accordance with National Accounts definitions, which differ from those used in the government budget.

in attaining the fiscal targets set by the last few governments. Although the special circumstances of 2001–2002 served to increase the deficit, a long-term comparison adjusted for the effect of the business cycle and security expenditure shows that there was no progress in this respect, and this is particularly prominent in view of the marked progress made by the developed countries. Since no fiscal adjustment was made in previous years, when economic activity expanded more quickly and the security situation was relatively stable, the government had to adopt fiscal restraint just at a time—the second half of 2002—when economic activity slowed and security needs rose.

The general government deficit, which is the generally accepted aggregate for the fiscal stance, was 5.2 percent of GDP in 2002—up by more than 2 percentage points over 2001. The general government expenditure/GDP ratio, which is larger than in any other developed country, continued to rise in 2002, because of the persistent rapid real rise in public consumption—both civilian and security—and not solely because of the decline in GDP. Nonetheless, the increase in public-services wages slowed in 2002, and per capita transfer payments even declined after years of very rapid expansion. In addition, investment in the transport infrastructure rose appreciably in 2002 (by NIS 1 billion), an appreciable development in view of the effort to check the rise in the deficit.

In 2002 the government made several decisions with long-term fiscal implications: to gradually reduce the deficit to 1 percent of GDP by 2007, to increase infrastructure investment, reform income tax rates, involving a marked reduction in net receipts by 2008, and at the end of 2003 to permit the expiry of part of the tax hikes and cuts in transfer payments implemented in 2002 as emergency regulations. However, an examination of the internal consistency of the various decisions shows that without large and ongoing cuts in current expenditure the government will not be able to adhere to them all, the deficit will be significantly greater in 2007 than in 2002, and the government debt/GDP ratio will continue to grow.

The ability of fiscal policy to help boost economic activity in 2002 by means of fiscal expansion, was extremely limited. This was because of the large public debt/GDP ratio and the lack of progress in the last decade in reducing the deficit, the public debt, the public expenditure/GDP ratio, and the tax burden.

1. THE CENTRAL GOVERNMENT BUDGET AND THE DEFICIT TARGET

Fiscal policy was confronted with two main challenges in 2002. First, it had to moderate the financial shocks, which intensified during the year, especially in the first half, and prevent a financial crisis which could have grave and far-reaching repercussions on economic activity. Second, it had to create the conditions for sustainable growth once the security situation and the global economic environment improved. With regard to a possible third objective—contributing directly to the acceleration of economic activity in the present via fiscal expansion—the ability of fiscal policy to attain this in 2002 was very limited. This was because of the high general government debt/GDP ratio

and the lack of progress in reducing the deficit in the last ten years. The reduction of the general government debt, the public-sector expenditure/GDP ratio, and the tax burden have all constituted targets announced by the governments of the last decade. This legacy from the past also limited the government's ability to temporarily increase defense expenditure without immediately cutting other items of expenditure, or raising the tax burden. Real and financial developments in 2002—especially in the first half of the year—indicate that in the present circumstances the risk of trying to boost economic activity by expanding the deficit outweighs the benefit. In this context, in the middle of 2002 the government adopted an economic emergency package which emphasized the aim of attaining stability at the expense of its other objectives (Box 3.1).

Financial and real developments in 2002—especially in the first half of the year—indicate that in the present circumstances the risk in attempting to boost activity by increasing the deficit outweighs the benefit.

Because of the economic emergency package there was a marked difference in budgetary performance between the two halves of the year. In the first half the deficit grew rapidly as a result of the marked expansion of expenditure, which was based on an overestimation of expected receipts; in the second half, on the other hand, after the implementation of the package, the deficit stabilized, and by the end of the year it was more or less in line with the higher target set by the government in June—3.9 percent of GDP. The deficit contracted from 4.6 percent of GDP in 2001 to 4.0 percent in 2002, and when adjusted for the effect of the delay in receiving the civilian aid from the US government, it rose slightly, from 4.0 percent of GDP in 2001 to 4.2 percent in 2002.[2] Although the government met the new deficit target, the 2002 deficit was much higher than the targets determined at the time the budget was passed by the Knesset in February 2002 (3.0 percent of GDP), when the budget was approved by the government in August 2001 and submitted to the Knesset in October (2.4 percent of GDP), and the target set for 2002 at the time the 2001 budget was approved in March that year (1.5 percent of GDP). Since the various shifts in deficit targets—and failure to meet them—could adversely affect the credibility attributed to them by the markets, it is extremely important for the government to attain the adjusted target. In order to make the targets more credible, it is also important that this success should not be ascribed to one-off measures—and certainly not to accounting adjustments[3]—but should be based on policy measures with an ongoing effect enabling the reduction of the deficit in the coming years.

In the first half of the year the deficit expanded rapidly due to the steep increase in expenditure, based on an over-optimistic forecast of receipts. In the second half, however, after the implementation of the economic emergency package, the deficit stabilized.

In order to reinforce the credibility of the government's targets, the attainment of the deficit target should not reflect one-off measures but should rather be based on policy steps with a long-term effect enabling the reduction of the deficit in the coming years.

Box 3.1
The Emergency Economic Package

Soon after the approval of the 2002 budget in February of that year, it became apparent that the budget performance was inconsistent with the targets, in particular the target deficit of 3 percent of GDP. Government income was well below the budget forecast, and the deterioration in the security situation

[2] Some $ 570 million which should have been received in 2001 was received in 2002, and some $ 431 million which should have been received in June according to the adjusted forecast of revenues, was not received by the end of the year.

[3] In 2002, for example, the government withdrew money that had accrued in the accounts of public entities such as the Ports Authority, the Postal Authority, Amidar, and the National Insurance Institute. Transfers of this kind may reduce the budget deficit but have very little economic effect.

necessitated increased defense expenditure, especially when the Israel Defense Forces launched the Defensive Shield campaign. Assessments drawn up in April, including those presented to the government by the Ministry of Finance, were that if no adjustments were made to the budget, the deficit would deviate from its target by more than NIS 10 billion, and would probably reach 5.5 percent of GDP in 2002, and even more than that in 2003. Against the background of accelerated depreciation in that period, and concern that a financial crisis might erupt, whose effect on economic activity would most likely persist, the government decided to adopt a package of economic measures to halt the rise in the deficit. It also decided that it could not attain the deficit target set in the 2002 budget, and increased it to 3.9 percent of GDP. This new target was based on a revised figure of the civilian aid from the US government that included the aid received for the year 2001 as well as the entire aid expected for 2002.

As it was necessary to calm the fears of loss of control over the budget deficit quickly, emphasis was given in the program to steps that would rapidly cut the deficit, although some of them might harm the economy's ability to attain sustainable growth. The need for immediate action derived from concern that a financial crisis could itself harm the economy's ability to get onto a path of sustainable growth. Such damage is part of the price paid by the economy for the delay in making adjustments at the beginning of the year.

The main measures introduced in the program are shown in Table 3.1.1. In addition, the Knesset passed a temporary provision restricting private members' legislation for a one-year period, following the enactment of several such laws that increased the deficit. The list of steps taken shows that most of the adjustment of the deficit resulted from an increase in income, particularly tax increases. This composition of measures is inappropriate to the needs of Israel's economy, in which the share of public expenditure in GDP is one of the highest in the world, and the tax burden is also relatively high. It is therefore essential that when the deficit has been stabilized the tax increases should be replaced by further cuts in expenditure. Such adjustments are needed urgently, as a significant part of the measures in the package—the increase in VAT, the abolition of the ceiling on National Insurance contributions, the 4 percent cut in most National Insurance allowances and the 15 percent cut in child allowances—will be in force only until the end of 2003.

The purpose of the program was to stop the deterioration in the deficit and to reduce the risk of a financial crisis that would seriously harm real activity. However, in the light of the persistent slowdown in activity the question arises as to the immediate effect of the program on economic activity. In the last few years the professional literature has discussed many cases of countries that made economic adjustments, including reduction of

Table 3.1.1
Estimated Effect of Main Elements of Economic Emergency Package for Reducing the Deficit in 2002

	NIS billion[a]
One percentage point increase in V.A.T.[b]	1.1
Tax hike on fuel and cigarettes	0.7
Cancellation of ceiling on health tax and national insurance payment[b]	0.6
Increase in payroll tax[c]	0.6
Cut in tax benefits to preferred regions	0.2
Increase in compulsory vehicle insurance	0.1
Total tax increases	**3.2**
Cuts in all national insurance benefits[b, d]	0.4
Cuts in child allowances[b, d, e]	0.4
Stricter criteria for unemployment benefit[f]	–
Across-the-board spending cuts	1.5
Cut in housing aid grants	0.1
Deferment of purchase of buses[g]	0.0
Total spending cuts	**2.4**
Withdrawal of surpluses from Ports Authority (accounting adjustment)	0.3
Total of all measures	**6.0**

[a] The total is not necessarily equal to the sum of the elements, due to rounding.
[b] In effect until end-2003 only.
[c] This item is recorded in the budget as a spending cut, as the government reduced its participation in the National Insurance Institute's collection of taxes, alongside the increase in the tax rate.
[d] Most of the effect of these items in the national budget is via an increase in income in the 'Loan from the National Insurance Institute' item (see section 2 below).
[e] Including NIS 0.3 billion from the cut in the benefit to persons whose military service does not entitle them to it. The implementation of this item is delayed due to a Supreme Court order.
[f] This measure is expected to affect benefit payments primarily in 2003.
[g] The expected saving is about NIS 20 million.

their deficits, that led to an immediate acceleration of growth. However, the adjustment implemented in Israel in 2002 is different in size and composition from those described in the literature as contributing to rapid acceleration of economic activity,[1] so that there is no reason to expect that the economic package will result in such a recovery. The main differences are:

1. The size of the cyclically adjusted deficit cuts in the cases discussed in the literature are at least 1.5 percent of potential GDP; in Israel the cyclically adjusted deficit has been left virtually unchanged.[2]
2. Most (75 percent) of the adjustment is achieved in other countries by cutting expenditure; Table 3.1.1 shows that most of the adjustment in Israel's economic emergency package reflects increased tax receipts.
3. In the cases discussed, the measures introduced are permanent; many of the steps in the program in Israel are limited to the end of 2003.

[1] A. Alessina, R. Perotti and J. Tavares (1998). "The Political Economy of Fiscal Adjustments," *Brookings Papers on Economic Activity*, 1, 197–266.

[2] The calculation of the cyclically adjusted deficit deducts the effect on the deficit of changes in economic activity. See Section 4 below for a detailed discussion and an explanation of the method of calculation.

Since the government's fiscal targets relate primarily to the budget of the central rather than to that of the general government, there is interest in analyzing developments regarding the budget separately from the general government. This applies even though there are advantages—particularly evident in 2002—to analyzing developments in the general government, and despite the fact that the general government is the accepted unit of analysis in the developed economies (see Box 3.2).

Box 3.2
General Government vis-à-vis Central Government: Choosing the Unit for Analysis

The fiscal targets of Israel's government, including the deficit target, are determined in budgetary terms, so that public debate often focuses on fiscal aggregates as referred to in the budget. However, measuring government activity in terms of budgetary definitions does not accurately reflect its macroeconomic effect, because unlike in the National Accounts, where income which derives from sale of assets (e.g., land sales) is not recorded as government revenue, it is recorded as such in the budget; interest payments on loans guaranteed by the US government are not included in the budget; and the budget does not reflect the full extent of government involvement in the other entities included in general government.[1] Furthermore, items of income and expenditure can be switched around between different components of the general government, and at least in the short term, deficits can also be moved around, especially as the budget deficit is calculated on a cash basis. For these reasons the accepted practice among industrialized countries is to base macroeconomic analysis on general government and not just the central government. The norm is to estimate general government activity according to the accepted international standards for national accounting, including measuring on an accrual basis and not according to budgetary definitions which differ from country to country.[2] In 2002 it was of special importance to use the internationally accepted definitions, as the government recorded transfers from various public-sector entities as budget revenue, and did not deduct tax refunds that were delayed at the end of the year (some of which were paid at the beginning of January 2003). In the case of Israel there is an additional advantage in the use of general government data, as they are available in detail shortly after the end of the year, whereas details of budget performance are not published till about half a year after the end of the budget year.

[1] The components of general government are shown in Table A.1.3.9.

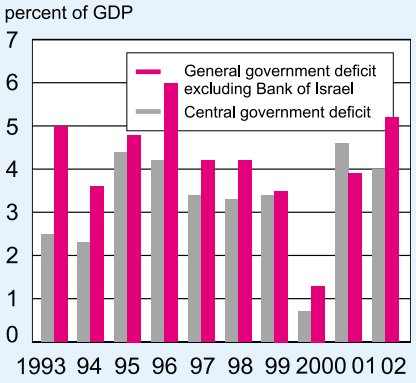
[2] In addition, definitions of the budget deficit in Israel have been changed several times in the last decade.

The central government deficit—adjusted for the effect of the timing of the US civilian aid[4]—was higher in 2002 than in any other year since 1997 (Table 3.1), and also than in 1993–94 (Figure 3.1), even though the government set declining deficit targets throughout this period. The slight increase in the deficit over 2001 stemmed from the rise in the share of both income and expenditure in GDP.[5] Nevertheless, the share of expenditure excluding interest payments and security expenditure declined in 2002 indicating that, as part of the problem of dealing with the growing defense burden, government spending on other items declined. The government's cyclically-adjusted deficit (calculated as explained in section 4 below) was 2.5 percent of potential GDP in 2002—slightly less than in 2001 (Table 3.2)—but far higher than in 1999 and 2000.

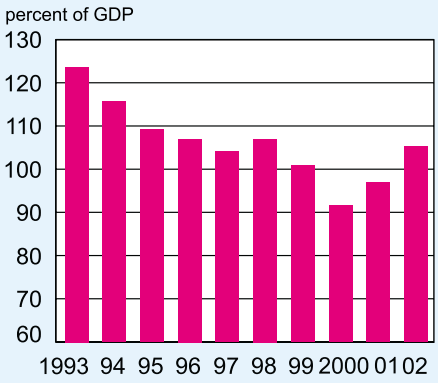
The budget deficit adjusted for the effect of the timing of US aid was higher in 2002 than in any year from 1997 to 2001, and also higher than in 1993–94. This was in spite of the fact that the government had set declining deficit targets throughout the period.

Figure 3.1

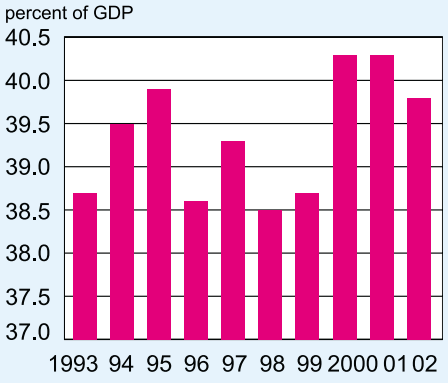
General Government Deficit and Central Government Deficit, 1993–2002



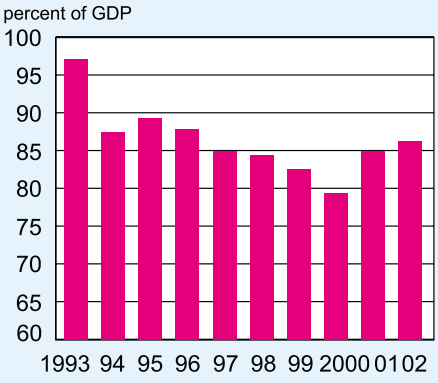
Gross Public Debt, 1993–2002



Tax Burden, 1993–2002



Net Public Debt, 1993–2002



SOURCE: Based on Central Bureau of Statistics data.

[4] The following discussion relates to the deficit adjusted for the effect of the timing of US aid.
[5] The share in income *less* the effect of the timing of US aid rose from 36.2 to 36.4 percent of GDP.

Table 3.1
Central Government Deficit,[a] Receipts and Expenditure, 1997–2002

(percent of GDP)

	1997	1998	1999	2000	2001	2002
Government domestic deficit[b] ceiling	2.3	2.2	2.6	2.8	0.5	4.1
Actual government domestic deficit	3.0	2.8	2.8	0.5	3.6	3.9
Overall government deficit ceiling including profits of the Bank of Israel	2.8	2.4	2.0	2.5	...	...
Actual overall government deficit including profits of the Bank of Israel	2.7	2.3	2.5	0.1	...	...
Overall government deficit ceiling[c]	3.0	2.8	3.1	3.6	1.8	3.9[d]
Actual overall government deficit	3.3	3.3	3.4	0.7	4.6[e]	4.0[e]
Total receipts[f]	38.0	37.8	36.7	37.3	35.6	36.6
Taxes and imposts	30.8	29.9	30.0	31.6	31.4	30.5
Interest, profits, royalties, revenue from land sales	1.7	2.2	1.9	1.7	1.3	1.3
Realized Bank of Israel profits	0.7	1.0	0.9	0.0	0.0	0.0
Loan from NII	1.6	1.4	1.4	1.5	0.9	1.6
US government grants	3.2	3.2	2.6	2.5	2.1	3.1
Total expenditure, net[f]	40.7	40.0	39.2	38.0	40.1	40.6
of which Interest, repayment of principal to NII and credit subsidy	7.4	7.4	7.0	7.0	7.1	6.8
Defense expenditure, net	9.5	9.4	8.8	8.6	9.1	10.5
Total primary expenditure excl. defense	23.8	23.3	23.3	22.4	23.9	23.2

[a] According to various definitions.
[b] The difference between the planned and the actual deficit includes 0.15 percent of GDP receipts which are recorded as domestic receipts when the budget is being prepared, but as foreign receipts in expenditure data.
[c] From 2001, the deficit ceiling specified by law.
[d] The target set in the middle of 2002. The target set when the budget was approved by the Knesset (parliament) was 3.0 percent of GDP.
[e] The designated economic aid had not been received by the end of 2001, and hence was not recorded as receipts in that year. If it had been received on time, the actual total government deficit would have fallen to 4.0 percent of GDP. The aid was recorded in 2002 and reduced the deficit by 0.6 percent of GDP. On the other hand, $ 431 million of aid expected in 2002 did not arrive, although the amended forecast in the middle of the year of receipts for the year included this amount. If it had arrived the deficit would have been 0.4 percent of GDP lower. Based on the aid figure of $ 600 million originally scheduled for 2002, the deficit for the year would have been 4.2 percent of GDP.
[f] Excluding expenditure contingent on receipts, and receipts used to finance contingent expenditure.
SOURCE: Based on the National Budget Summary and Central Bureau of Statistics data.

In the last eight years there has been retreat from convergence to a lower deficit, even after adjusting for the effect of the business cycle on the deficit.

The decline in 2002 was considerably smaller than the rate derived from the budget target and the growth assumption (1.5 percent of GDP)[6] underlying the budget approved at the beginning of 2002, so that most of the departure from the original deficit target in 2002 is not explained by the deviation of the macroeconomic variables from their long-term (potential) path. The cyclically-adjusted deficit was also appreciably higher in 2002 than in 1994 (Table 3.3), the year when most of the government's expenditure on absorbing the massive influx of immigrants of the early 1990s came to an end. This

[6] The deficit target of 3.0 percent of GDP was 1 percent of GDP less than the 2001 deficit (adjusted for the effect of the delay in US civilian aid). That target was based on a forecast growth rate of 2.0 percent, which was 1.5 percent below potential GDP growth in 2002, so that the forecast decline in the cyclically-adjusted deficit was greater than that expected in the deficit.

Table 3.2
The Cyclically Adjusted Deficit of Central and General Government, 1999–2002

(percent of potential output)

	1999	2000	2001	2002
Government[a]	–1.0	–0.1	–2.6	–2.5
General government excluding Bank of Israel[b]	–2.5	–1.6	–2.3	–2.4
General government excluding Bank of Israel: domestic deficit[a]	–2.7	–1.9	–2.5	–2.6

[a] The deficit is calculated as if the economic aid from the US government had been received as scheduled.
[b] Since the item "Surplus income of Bank of Israel," as calculated in the National Accounts, is extremely volatile, it is not included in the estimate of the cyclically-adjusted deficit.
SOURCE: Based on Central Bureau of Statistics data.

means that even adjusted for the effect of the business cycle on the deficit, there has been retreat in the last eight years from convergence to a lower deficit level.

Receipts, both from taxes and from other sources, fell far below the forecast level, but were not lower than in 2001.

The deviation from the deficit target set when the budget was approved (3 percent of GDP) derived from the fact that the level of revenues, from both taxes and other sources, was far below the budgeted amount (Table 3.4), even though, as stated, it was not lower than in 2001. Actual revenues were NIS 7.7 billion less than expected at the time the budget was submitted, despite the additional income of NIS 3.3 billion due to legislative changes during the year, and even though payment of large V.A.T. and income-tax rebates were deferred to the beginning of 2003.[7] This gap stemmed mainly from lower than predicted tax receipts—primarily due to the lower than forecast growth rate and stagnation in the nominal wage in the business sector, which has a marked effect on tax receipts.[8] There was also a severe shortfall in other domestic income items in 2002. The Loan from the National Insurance Institute item fell short by NIS 1.8 billion of the original budget forecast, even though the steps taken in the middle of the year increased income from this item by NIS 0.8 billion,[9] and even though the National Insurance Institute transferred NIS 0.8 billion beyond its current operating surplus to the government (see section 2 below). Domestic income from other sources also lagged considerably behind the original budget forecast, despite the decision to increase the transfers from the Ports Authority to the government in 2002.[10] By contrast, the grants from the US government were NIS 2.6 billion higher than originally budgeted, because the civilian aid was slightly above the amount originally planned due to the accelerated utilization of defense aid in 2002 (and alongside which defense imports rose).

[7] For example, V.A.T. rebates of NIS 487 million deferred from 2002 which were paid early in January 2003.

[8] See, e.g., the State Revenues Administration (2002), *Annual Report for 2001*, no. 51, Chapter 1 (Hebrew). Note that the rise in the nominal wage in 2001:IV—before the budget was approved—was only 2.1 percent, with a sharp downward trend.

[9] This estimate does not include the cuts in child allowance to persons whose military service did not make them eligible, as the implementation of these cuts was delayed under a Supreme Court order.

[10] Concurrently the share of receipts to be paid by the Authority to the government in the coming years was reduced.

Table 3.3
The Cyclically-Adjusted Deficit in Israel and OECD Countries, 1994 and 2002

(percent of potential output)

	1994	2002	Change
Israel: General government excl. Bank of Israel	–2.4	–2.4	0.0
Israel: Central government[a]	–0.3	–2.5	–2.2
OECD average[b]	–4.0	–0.5	3.5
EU average[b]	–4.3	–0.3	4.0
Average of countries with large deficit[b, c]	–5.1	–0.2	4.9

[a] The deficit in 2002 takes into account the US economic aid as actually received.
[b] Arithmetic mean of the 21 countries with data for the entire period.
[c] Average of countries whose deficit in 1993 was greater than Israel's.
SOURCE: Based on data from *OECD Economic Outlook*, 72, November 2002.

Although government expenditure was well below the budget, its share of GDP rose, indicating the extent of the increase in budgeted expenditure.

The level of domestic expenditure by the government was 3 percent lower than the amount budgeted—an unusual shortfall in recent years, when budgetary expenditure was implemented almost in full, and especially unusual in a year when price increases exceeded expectations.

The restraint of expenditure in the second half of the year was attained primarily by administrative curbs on spending, rather than by specific decisions of the government and the Knesset.

Concurrent with the marked shortfall in income, government expenditure[11] was significantly below the budgeted amount. Despite the significant under-performance in expenditure, however, its share in GDP rose (Table 3.1), indicating the notable increase in expenditure that was originally budgeted. The level of expenditure does reflect significant restraint, however, as it was achieved even though defense spending was NIS 5.5 billion above the amount originally budgeted (which included NIS 2.5 billion from the contingency reserve), and even though the rate of price increases in 2002 outstripped expectations at the time the budget was approved. The level of domestic expenditure by the government was 3 percent below the budgeted level—an under-utilization that is unusual in recent years, when almost the entire budget was spent, and especially in a year when price increases exceeded expectations. The under-utilization was concentrated in the second half of the year, as according to the expenditure path to May full implementation of the budget was expected. The civilian ministries, whose expenditure in nominal terms was 5.8 percent below their budget, contributed to the lower than expected expenditure. The government's interest payments were also lower than budgeted—by NIS 2 billion—*inter alia* because of the accelerated rate of price increases, which eroded the real *ex post* interest rate it paid on its debt.[12]

Cuts in expenditure were achieved in the second half of the year primarily by administrative restraint rather than by specific decisions made by the government or the Knesset, since even when the budgetary adjustment was made in the middle of the year the budget's expenditure ceiling was not changed. By shifting responsibility for maintaining the budgetary framework to the administrative echelon, the government and the Knesset effectively waived their ability to determine budgetary priorities. This approach is in line with the freeze in the composition of government expenditure in recent years (Table 3.5), despite pronouncements about the need to allocate resources

[11] Excluding 'expenditure contingent on income,' the extent of which has not yet been reported.

[12] In calculating interest payments in the budget, the actual interest rate paid by the government on its unindexed bonds issued before 2001 is adjusted by the inflation rate. This could give rise to deviations in the amount reported in budgetary spending even when the nominal interest payments are consistent with the budget.

Table 3.4
The Deviations of Budget Components from the Original Figures in the Budget for 2002

(annual rate of change, percent)

	Original budget	Performance	Effect on performance of change in legislation	Difference between budget and performance[a]
	(NIS billion, net, excl. credit)			
Deficit	14.7	19.3	...	–4.6
Revenue	185.5	177.8	3.3	–11.0
Taxes[b]	155.3	148.6	2.0	–8.7
Loan from National Insurance Institute[c]	9.7	7.9	0.8	–2.6
Other domestic income[d]	8.2	6.3	0.3	–2.2
Grants from the US government	12.3	14.9	...	2.6
Expenditure	200.1	197.1	...	–3.0
of which Domestic	184.7	179.6	...	–5.1
Defense	45.6	51.2	...	5.6
Interest, National Insurance Fund and credit subsidy	35.0	33.1	...	–1.9
Civilian ministries and transfer payments[e]	119.5	112.8	...	–6.7

[a] Excluding the effect of the change in legislation.
[b] Including VAT on defense imports.
[c] The effect of changes in legislation on the amounts that increase the item. 'Loan from the National Insurance Institute,' and not on the full cost of national insurance (for details see section 2).
[d] Income from interest, land sales, royalties, dividends and other income.
[e] NIS 2.5 billion which was included in the budget book in the budgetary reserve is shown here in the budget column as part of the defense budget.
SOURCE: Based on data of the Accountant General on the performance of the 2002 budget.

to education and the infrastructure, for example. Although, as stated, the spending cuts derived primarily from the administrative echelon, the government's decisions to reduce expenditure by NIS 2.5 billion in order to increase defense expenditure[13] made a significant contribution to reducing spending in the second half of the year.[14]

Total investment in the transport infrastructure rose by 25 percent in 2002, amounting to almost 1 percent of GDP, the highest rate for a decade.

Against the backdrop of the difficulties in attaining the adjusted deficit target, and in view of the notable adjustments to the budget, considerable budgetary effort was invested in 2002 in developing the transport infrastructure. Total budgetary investment in the transport infrastructure rose by 25 percent in 2002, accounting for almost 1 percent of GDP, the highest share for a decade (Figure 3.2).[15] This is an important achievement, especially in view of the tendency noted in the economic literature, and in Israel in the past, to cut investment at times of budgetary difficulties. However, the level of investment in the infrastructure in general, and in the transport infrastructure in particular, is still below the average in the developed countries, and is hence

[13] NIS 650 million of this was achieved by reducing the government's share in national insurance receipts, alongside an increase in the payroll tax.

[14] Most of the cut—NIS 1.5 billion—was made across the board in the various ministries. Although a reduction of this kind does not reflect systemic priorities, it enables cuts to be made in accordance with the internal priorities of each ministry.

[15] There are gaps between the data on investment submitted by the CBS and those reported in the government budget, partly reflecting different measurement and coverage methods. Nevertheless, the trend of investment in the transport infrastructure is similar in both sources.

Table 3.5
Government Expenditure Priorities, 1996–2002

(percent)

	1996	1997	1998	1999	2000	2001	2002
Total government expenditure[a]	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Education[b, c]	15.1	14.5	13.8	14.8	14.4	14.6	14.4
Health[c, d]	11.1	14.8	14.5	15.2	14.8	14.9	14.4
Defense	23.8	23.2	23.3	22.3	23.1	22.7	25.7
National Insurance benefits and disability pensions[e]	17.2	17.6	18.3	18.7	19.2	20.0	19.5
Infrastracture investments[f, c]	2.4	2.1	2.2	2.1	2.2	2.2	2.9
Other	30.4	27.7	27.9	26.9	26.3	25.6	23.0

[a] Excluding interest *plus* net National Insurance expenditure. This includes government hospitals, which have been removed from the budget since 1998, but excludes credit extended. National Insurance expenditure is included net of government payments to the National Insurance Institute, which are included in government expenditure.
[b] The budget of Ministry of Education and of the universities and colleges.
[c] Estimate based on budget data.
[d] The budget of the Ministry of Health, government hospitals, and transfers of Health Tax from the National Insurance Institute to the Health Funds.
[e] Excludes payment for reserve duty included in defense expenditure.
[f] Government investment in principal industries, excluding subsidies to government enterprises, and government participation in roads investment of local authorities.
SOURCE: Based on National Budget Summary, Ministry budgets, and Central Bureau of Statistics data.

insufficient to close the huge gaps in the quality of the infrastructure which are the legacy of previous decades.[16] Hence, it is important to continue increasing infrastructure investment in the years ahead, too.

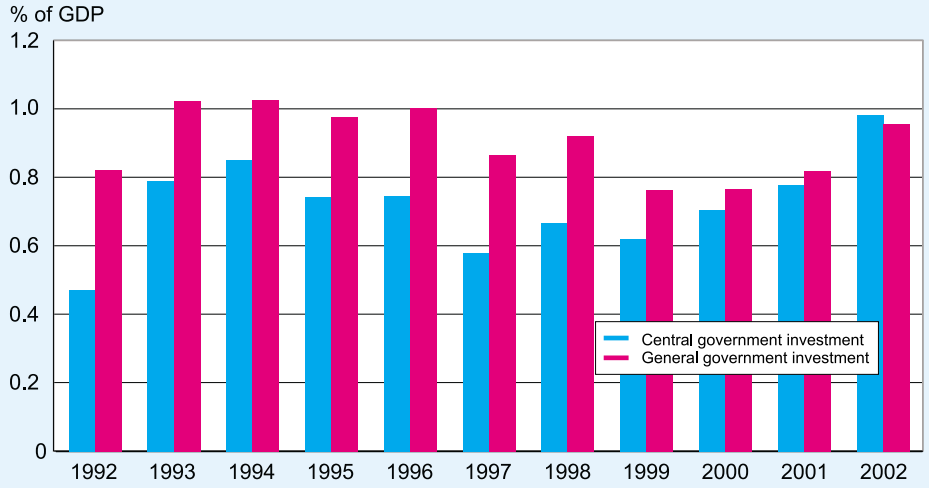
The level of expenditure budgeted for 2003 was 2.3 percent higher in real terms than actual expenditure in 2002. This will lead to a further increase in the public expenditure/GDP ratio even if the growth forecast on which the budget is based is fulfilled.

Unless the 2003 budget is adjusted, curbing the government's civilian expenditure in 2002 will be temporary.

The deficit target set for 2003 is 3.0 percent of GDP, a notable reduction from the actual deficit in 2002. However, the budget—even if implemented as approved—reflects a significant retreat from the progress made in 2002 in restraining government spending; the expectation of attaining the deficit target of 3.0 percent of GDP is based on forecast income that reflects a real 5 percent increase over actual income in 2002[17] (Table 3.6), and appears highly optimistic in view of the trend of the various income items. On the basis of this forecast, the level of expenditure (excluding credit) for 2003 has been budgeted at a high real level that is 2.3 percent above actual expenditure in 2002. This will lead to a further increase in the public expenditure/GDP ratio even if the assumption of growth on which the budget is based is realized. Moreover, since the defense budget has been significantly reduced relative to spending in 2002, the budget as a whole reflects a NIS 15 billion increase in civilian expenditure (a real 7 percent rise), 4.5 percent of which represents a real rise in civilian expenditure excluding interest. This means that unless the 2003 budget is amended, any reduction of the government's civilian expenditure in 2002 will be only temporary.

[16] See section on transport and communications in Chapter 1 for a more detailed discussion.
[17] On the basis of the assumption that the average rate of price increases will be 3.1 percent, a rate that is in line with a year-end inflation rate of 2.0 percent.

Figure 3.2
Central and General Government[a] Investment in the Transport Infrastructure, 1992–2002



[a] General government expenditure on the transport infrastructure includes investment in roads, railways, trains, seaports and airports. Central government expenditure includes investment in roads, trains, and railways. General government expenditure data are from the National Accounts, and central government expenditure data are taken from the National Budget (these two sources use different calculation methods). The data do not include the investment of the *Derekh Eretz Company,* which is a private company, in the Cross Israel Highway.

SOURCE: Based on National Budget Summary and Central Bureau of Statistics data.

The recurrent deviations from the deficit target in recent years raise the question whether it is possible to alter the process of approving the budget so as to minimize them. These deviations are partly explained by the fact that macroeconomic developments differ widely from the forecasts on which the budget is based. This difference is due to a great extent to the lengthy period that elapses between the macroeconomic forecast underlying the budget and the approval of the budget: the macroeconomic forecast is submitted to the government at the beginning of the summer, while the budget is approved by the Knesset at the end of December and implemented in the following year. During this time many changes may occur in the economic environment, so that the budget is based on a forecast that is out of date, and often differs widely from the reasonable estimates made at the time it is approved, and certainly at the time it is implemented.

The national budget is sometimes approved by the Knesset when it is already evident that it is not consistent with its targets.

The budget's expenditure framework is based on a forecast of income and the deficit target, and once the macroeconomic forecast is made, the various expenditure items are drawn up and approved. It is very difficult to amend the budget in accordance with changes in the macroeconomic forecast. Thus, it often happens that even when the budget is approved by the Knesset it is already clear that it is inconsistent with its targets. Hence, repeated budgetary adjustments have to be made, and the deficit target is not met. Moreover, the implementation of budgetary adjustments during the year has an adverse effect on ministries' work programs, which are based on the approved budget, and impair their ability to adapt their work to the priorities that have been determined.

Table 3.6
Net Income and Expenditure of the Government in 2002 and in the 2003 Budget

	2002 performance	2003 budget	Real change[a]
	(NIS billion)		(percent)
Income	182.6	197.6	5.0
Collection of principal repayment	4.7	4.9	1.1
Excl. credit	177.9	192.7	5.1
Expenditure	200.2	212.9	3.1
Credit extended	3.1	5.1	59.6
Excl. credit	197.1	207.8	2.3
Defense	51.2	46.8	–11.3
Civilian	145.9	161.0	7.0
Interest and principal repayment to NII	33.1	39.5	15.7
Excl. interest and principal repayment to NII	112.8	121.5	4.5

[a] Assuming that the CPI rises by 2 percent in 2003, and by an average of 3.1 percent over the 2002 average.
SOURCE: Accountant-General's Office, Ministry of Finance, www.mof.gov.il.

One way of overcoming the uncertainty regarding the size of the deficit is to decide that implementing some of the expenditure specified in the budget should be contingent on collecting receipts that are in line with the target.

One way of overcoming the uncertainty regarding the size of the deficit—in addition to allocating a contingency reserve that is sufficiently large to cope with unforeseen needs—is to decide that the implementation of part of budgeted expenditure will be contingent on actual revenue not falling below the projected level.[18] The decision that an amount equivalent to 1 percent of GDP, for example, will be disbursed only if the actual level of income is consistent with the amount forecast will provide better control over the development of the deficit without having to change work programs which have been constructed on the basis of the budget approved. Although a decision of this kind reinforces the pro-cyclical effect of the deficit targets, requiring spending cuts at a time when economic activity is anyway lower, until the credibility of the government's commitment to these targets is established and a stable downward path of the public debt/GDP ratio created there does not seem to be any alternative in the next few years to giving these objectives preference rather than dealing with the cyclical effects of the deficit. A decision of this kind will also enable the government to better reflect its priorities in the budget by transferring lower priority expenditure to the income-contingent item. In the second half of 2002 the budget appears to have been managed more or less along these lines, and ministries' expenditure was in line with income received. But this process of decision-making on an administrative basis, and without the adjustment components being brought before the government and the Knesset for debate, precludes the necessary cuts being made in such a way as to reflect policy decisions and based on priorities.

[18] In contrast with existing expenditure items which are contingent on specific income.

2. THE EFFECT OF THE ACTIVITY OF THE NATIONAL INSURANCE INSTITUTE ON THE NATIONAL BUDGET

Many changes were made in the National Insurance Institute's system of benefits and collection in 2002, in the wake of legislative changes introduced in the Finance Bill passed at the beginning of 2002 and in the economic emergency package.[19] The benefits disbursed by the National Insurance Institute were reduced during the year (Table 3.7), and its income was increased. Alongside the transfer of deposits to the government by the National Insurance Institute amounting to NIS 0.8 billion (over and above its current surplus),[20] the changes also contributed to an increase of NIS 4 billion in the national budget in the item 'Loan from the National Insurance Institute.'[21]

Despite the marked rise in the government's income from the National Insurance Institute in 2002, one of the major factors contributing to the deviation of the deficit from its target in 2002—as well as in 2001—was the fact that this income was in fact much less than expected (Table 3.8), because the budget assumed an even greater increase in revenues. The forecast income from the National Insurance Institute was NIS 9.7 billion, and the change in legislation during the year (in the framework of the economic emergency package) was supposed to enlarge it to NIS 10.6 billion.[22] In effect the income in this item in 2002 was only NIS 7.9 billion (including the transfer of the 'liquidity deposit'). In 2001, too, there was a difference of NIS 2.7 billion (0.6 percent of GDP), and on the whole forecast income has been higher than actual income in five of the last six years (in 2000 the deviation was in the opposite direction). These gaps have drawn attention to the complex way the activity of the National Insurance Institute is presented in the national budget (see Box 3.3), and also, as the analysis below shows, the overall cost of national insurance, which has grown significantly in the last few years.

Despite the marked rise in government receipts from the National Insurance Institute in 2002, one of the main reasons for the deviation of the budget deficit from its target in both 2002 and 2001 was the fact that this income fell far below the amount budgeted, because the budget was based on an even steeper rise in receipts.

Box 3.3
Recording Financial Transfers Between the National Insurance Institute and the Government in the Budget

The cost of the National Insurance Institute (NII) is a significant budget item, despite the fact that the budget also has a large revenue item based on the surplus in the Institute's budget. This is because in addition to the

[19] For the list of changes see, Bank of Israel, *Recent Economic Developments*, October 2002. Additional changes were included in the Finance Bill for 2003.

[20] The National Insurance Institute has a 'liquidity deposit' of $ 1 billion (one-fifth of its monthly expenditure), even though according to the government it should transfer all its deposits to the government. Irrespective of the technical argument, it is clear that transfering the deposit to the government does not constitute true budgetary income.

[21] The changes in benefits, and their economic and social effects, are discussed in Chapter 2.

[22] Excluding the effect of the reduction of benefits to persons whose military service did not make them eligible, which was not implemented in 2002 due to a Supreme Court order.

Institute's surplus, recorded in the budget as government revenue, there are four other items of budgetary transfers from the government to the NII:

Transfers from the government to the National Insurance Institute. This item (that appears in the economic classification of the budget in 'The Main Points of the Budget') consists of three main sub-sections that include payment for the NII's administrative expenses:

- Financing the allowances for which the government bears total financial responsibility (income support, nursing and invalidity, mobility, and special sectors of the population). The NII makes these payments, and checks applicants' eligibility, but does not finance the payments from its own funds.
- Participation in financing allowances contingent on collection: By law the government participates in financing the children and old-age branches of the NII. The government's participation is set at a given percentage (which varies from one allowance to another) of the money collected from the public by the NII for those branches.[1]
- Employers' indemnity. This is a percentage of the contributions collected paid by the government to the NII, to complement NII income following past reductions in NII contributions. In 2003 this item was abolished, and since then these payments have been included in the above category (participation in financing allowances).

Payments for reserve army duty. This item is included in the defense budget, and is not detailed in the published book of the budget, nor is it included under 'Transfers to the National Insurance Institute.' The NII merely makes the payments to reserve-duty soldiers, paid directly from the defense budget. Thus under normal circumstances this item should not affect the NII surplus.[2]

Interest payments to the National Insurance Institute. The NII must invest its surplus income in government bonds.[3] Interest payments on these bonds are included in the government's interest expenses.

Repayment of debt to the National Insurance Institute. Repayment of maturing bonds held by the NII is recorded as current expenditure of the government, although it would appear that it is a debt repayment. The significance of this practice, similar to that of recording the 'Loan from the

[1] Contributions to the NII, although collected from the employer and the employee as one sum, consist of several different items divided according to the relevant NII branches.

[2] Clearly if the Ministry of Defense does not transfer the payment for reserve duty, the NII is likely to run into deficits. The Knesset foresaw this possibility, and the law therefore allows the NII, in the event of delays in receipt of these payments, to draw them directly from the Ministry of Defense accounts.

[3] Bonds issued for the NII are nontradable, are indexed to the CPI, and are for periods of 17 to 20 years, with gradual repayments starting in the sixth year. Half of the bonds are issued at 5.5 percent interest, and half at an interest rate based on the cost of government borrowing on the open market at a time close to the date of issue.

Table 3.7
Trends in Social Security Benefits,[a] by Main Categories, 1996–2002

	Old-age and surviving relatives' pension	General disability	Work accidents	Maternity	Child allowance	Unemployment benefit	Income support	Other	Total
Share of total payments in 2002[b] (%)	35.1	14.8	6.7	5.5	15.3	8.2	8.4	5.9	100.0
Real increase[c] (%)									
1996	4.0	10.6	12.0	10.3	4.0	15.5	7.6	1.9	6.5
1997	4.7	9.5	–0.9	8.3	5.1	30.6	10.5	12.1	7.5
1998	7.8	12.4	6.4	9.3	2.1	15.8	20.2	13.9	8.8
1999	2.3	8.4	–4.3	1.5	5.7	2.1	12.9	10.5	4.2
2000	8.5	15.1	14.2	10.8	1.5	–0.7	18.9	18.8	8.8
2001	11.5	19.1	10.7	9.5	7.9	17.3	20.1	17.8	13.1
Average 1996–2001	**6.5**	**12.5**	**6.4**	**8.3**	**4.4**	**13.4**	**15.0**	**12.5**	**8.2**
2002	–3.8	8.5	3.2	–1.8	–15.9	–4.4	0.2	11.7	–2.6
2002: I[c]	0.0	5.4	7.3	1.2	–6.0	24.8	7.1	27.1	4.0
2002: II[c]	–3.0	1.9	3.6	5.9	–19.3	8.7	2.0	16.3	–2.1
2002: III[c]	–6.0	–0.5	–0.3	–4.4	–18.8	–17.9	–0.8	–8.2	–7.8
2002: IV[c, d]	–6.1	27.2	2.2	–8.3	–19.5	–28.8	–7.1	18.8	–4.2

[a] Not including payments for reserve duty.
[b] Deflated by the CPI.
[c] Over the equivalent quarter in 2001
[d] Including a retroactive payment of disability pensions.
SOURCE: Based on Central Bureau of Statistics data.

National Insurance Institute' as current income, is that the government does not relate to the NII as a separate entity but as part of the government.

Against these items there is the item 'Loan from the National Insurance Institute,' as mentioned. In order to ensure that the budget reflects the current surplus or deficit of the NII, the latter must invest its surplus income in government bonds. This investment, recorded as government current revenue, reflects the activity of the NII vis-à-vis the public (payment of allowances, administrative expenses and collection of the NII contributions), as well as payments transferred to the Institute from the budget.

The overall budgetary cost to the government of the National Insurance Institute has risen sharply in the last five years—from 4.3 percent of GDP in 1997 to 5.1 percent of GDP in 2002.

As the detailed account of the budgetary items in Box 3.3 shows, the overall cost to the government of the system of national insurance is equivalent to the difference between the sum of the three expenditure items listed in the box (excluding reservists' pay, which is part of defense expenditure) and the 'Loan from the National Insurance Institute.' This cost has risen appreciably in the last five years, from 4.3 percent of GDP in 1997 to 5.1 percent in 2002 (Table 3.8).

Beyond the question of the total budgetary cost of national insurance, in recent years the budget has also been influenced by the gap between forecast and actual income in the 'Loan from the National Insurance Institute' item. Suggested explanations for this are that these gaps stem from the accounting procedures of either the government, which does not transfer the full amount budgeted to the National Insurance Institute, or the National Insurance Institute, which does not transfer its entire surplus to the government. The first claim is unfounded; as the data in Table 3.8 show, in almost every one of the last few years the government has transferred to the National Insurance Institute an amount that is virtually identical to that budgeted.[23] The contention that the National Insurance Institute has not transferred its entire surplus to the government is also inaccurate, because although the annual transfers in the last few years differed slightly from the actual surpluses, this was because the Institute's transfer to the government in 2000 was higher and was offset in 2001. In 2002, as stated, the Institute again transferred to the government an amount in excess of its profit.

The gap in the last few years between actual and budgeted income in the 'Loan from the National Insurance Institute' item reflects an over-optimistic assessment, at least *ex post*, of the activity of the Institute vis-à-vis the public.

Hence, the gap between actual and budgeted income in the 'Loan from the National Insurance Institute' in recent years reflects an over-optimistic assessment, at least *ex post*, of the activity of the Institute vis-à-vis the public. This includes benefit payments, which amounted to NIS 44 billion in 2002, administrative costs of about NIS 1 billion, and national insurance taxes paid by the public of some NIS 20 billion.[24] The benefit payments have risen from 7.9 percent of GDP in 1997 to 9.4 percent in 2001 and 2002, even though most benefits are linked to the average wage (except for child allowances, which are linked to the CPI), so that in the long run the way they are updated is not expected to increase their share of GDP. This increase derives in part from changes in

[23] The lower than budgeted transfer in 2002 reflects a legislative change, which also altered certain items in the National Insurance Institute's budget accordingly, and should not affect the Institute's surpluses.

[24] In addition, the National Insurance Institute received health tax payments of NIS 11.5 billion (in 2002). This amount is transferred in full to the health funds, in accordance with a key determined by law.

Table 3.8

Budget Items Related to National Insurance and the Activity of the National Insurance Institute,[a] 1997–2002

(percentage)

	1997	1998	1999	2000	2001	2002
			(NIS billion, current prices)			
National Insurance surplus budgeted at the beginning of the year	7.3	6.8	6.3	5.5	6.8	9.7
Total National Insurance surplus transferred to the government	5.8	5.6	5.9	7.1	4.1	7.9
Total calculated National Insurance surplus	6.0	5.6	6.2	6.3	5.4	7.2
Transfers from the budget to the National Insurance Institute	**21.2**	**22.9**	**25.3**	**27.0**	**30.4**	**31.9**
Repayment of the National Insurance fund	3.8	4.3	4.7	4.9	5.2	6.0
Interest to National Insurance	3.2	3.4	3.7	3.8	3.9	4.2
Participation in payment of benefits and in collection of payments	14.3	15.2	16.9	18.2	21.2	21.6
Participation budgeted at the beginning of the year	14.2	15.3	16.6	18.2	21.1	22.6
Total budget cost of the National Insurance system	**15.4**	**17.3**	**19.5**	**19.9**	**26.3**	**24.0**
Activity of the National Insurance Institute						
Collection of National Insurance payments from the public	12.9	14.7	15.9	17.9	19.2	20.6
Payments of benefits and administrative expenditure	28.2	32.0	35.1	38.6	44.2	45.3
Surplus of expenditure on activity vis-à-vis the public	15.3	17.3	19.1	20.7	25.0	24.7
			(percent of GDP)			
Participation in payment of benefits and in collection of payments	4.0	3.9	4.0	3.9	4.5	4.5
Repayment of the fund and interest payments to the National Insurance Institute	2.0	2.0	2.0	1.9	1.9	2.1
Total National Insurance surplus from the budget book	1.6	1.4	1.4	1.5	0.9	1.6
Total budget cost of the National Insurance system	**4.3**	**4.4**	**4.6**	**4.3**	**5.6**	**4.9**
Collection of National Insurance payments from the public	3.6	3.8	3.7	3.8	4.1	4.2
Payments of benefits and administrative expenditure	7.9	8.2	8.2	8.3	9.4	9.3
Surplus of expenditure on activity	**4.3**	**4.4**	**4.5**	**4.5**	**5.3**	**5.1**
Total National Insurance surplus based on the Insitute's income and expenditure	**1.7**	**1.4**	**1.4**	**1.4**	**1.1**	**1.5**

[a] Excluding payments for reserve duty.

SOURCE: Based on data of the budget and the National Insurance budget.

the composition of the population, in which the share of persons eligible for the various benefits is growing—a component that can be predicted. However, an examination of the development of the benefits shows that the growth rate of both the number of eligible persons and the extent of benefits paid out has by far outstripped that of the relevant population in recent years, as well as the automatic growth rates determined by law.[25] This is the outcome of legislative changes and administrative decisions which have increased the size of the benefits and the effective number of recipients. Naturally, it is more difficult to predict increases on these grounds.

The forecast for 2002 which was incorporated in the adjusted national budget prepared at the beginning of 2002 was that the National Insurance Institute's surplus would be up by over NIS 4 billion over its level in 2001. But an analysis of the factors expected to influence the surplus shows that it should have been expected to rise by far less.

Nevertheless, using the data available when the budget is approved could help to reduce the systematic deviation evident in the last few years in forecasts of the National Insurance Institute's surplus given in the national budget. Thus, for example, the forecast for 2002—included in the adjusted national budget prepared at the beginning of 2002—was that the surplus would exceed that of 2001 by over NIS 4 billion. However, an analysis of the factors expected to affect the extent of the surplus (Table 3.9) shows that it should have been foreseen that it would rise by far less. In particular, at the time the budget was approved it was known that the National Insurance Institute's receipts in 2001:IV were up by only 3.5 percent in nominal terms from 2000:IV, with an ongoing month-on-month decline in their growth rate, while benefit payments had risen markedly in this period and showed no sign of slowing. Hence, at the end of 2001 it could be estimated that the National Insurance Institute's surplus in 2002 would not be more than NIS 6.5 billion, despite the forecast of NIS 9.7 billion before the legislative changes made in June could have an effect.

3. A LONG-TERM ANALYSIS OF THE NATIONAL BUDGET

In 2002 the government made several decisions with far-reaching implications for the path of the budget in the coming years.

In 2002 the government made several decisions with far-reaching implications for the deficit path in the coming years. 1. The Budget Deficit Reduction Law determined that the deficit in the national budget in 2003 should be 3.0 percent of GDP, declining gradually to reach 1 percent of GDP in 2007 and subsequently. 2. The income tax reform, whose cost (in terms of net loss of income) is expected to rise gradually to NIS 6.5 billion (at 2002 prices) by 2008. 3. A one-off NIS 1 billion increase in infrastructure investment and maintenance of the higher level in each of the next five years. The government also decided on several measures which were put into effect in 2002 as temporary provisions: V.A.T. was raised by 1 percentage point, national insurance benefits were cut by 4 percent and child allowances by 15 percent, and the ceiling on national insurance payments was canceled. All these will cease to be effective at the end of 2003. In view of the many long-term decisions, the question arises whether these measures are mutually consistent, given the macroeconomic environment,

[25] See Chapter 5 in Bank of Israel, *Annual Report, 1998*; A. Brender, A. Peled-Levi, and N. Kasir (Kaliner) (2002), "Government Policy and Participation Rates in the Labor Force of the Prime Age Population: Israel and the OECD Countries in the 1990s," Bank of Israel, *Economic Review*, 74, November (Hebrew); O. Leviatan (2000), "The Development of National Insurance Institute Benefits," Bank of Israel, Research Department, internal memorandum (Hebrew); D. Gottlieb (2002), "From Welfare to Work: Income Support at the Working Age in Israel," *Economic Quarterly*, 49, March (Hebrew).

Table 3.9
Components of the Forecast Income for 2002 in the Item 'Loan from the National Insurance Institute'

	NIS billion
Surplus in 2001[a]	5.4
Change in legislation at beginning of 2002[b]	1.1
Increase in interest payments and repayments of government bonds	1.0
Repayment of government debt	0.8
Effect of wage path and payments of benefits[c]	–2.0
Forecast of income for 2002	6.3
(Budget forecast for 2002)	(9.7)
Change in legislation mid-2002[d]	0.8
Transfer of liquidity deposit of the NII to the government	0.8
Loan from the NII at the end of the year	7.9

[a] Only NIS 4.1 billion was transferred to the government in 2001, as the transfer of the balance of the surplus from 2000 was offset against it.
[b] This estimate is consistent with the difference between the original budget proposal for 2002, submitted to the Knesset (parliament) in October 2001, and the revised proposal submitted at the beginning of 2002.
[c] The forecast range was between NIS 1.7 billion and NIS 2.2 billion.
[d] A 4 percent cut in benefits and the cancellation of the income ceiling on the collection of National Insurance payments. This figure relates only to the effect of these items on the National Insurance surplus, and not to their effect in reducing government transfers to the National Insurance Institute.
SOURCE: Bank of Israel.

expected demographic developments, and the trends of the budgetary aggregates of the last few years.

In order to examine this question we analyzed the expected trends of the main budgetary aggregates, and the interaction between them.[26] This was done on the basis of the forecast of budgetary performance for 2003. Within this framework—using fairly optimistic assumptions and the behavior patterns of the government in recent years—we also examined whether it will be possible to attain the various targets set by the government by 2008, and if not, what extent of adjustment will be required in order to do so. The main assumptions on which the analysis is based are presented in Box 3.4.

The policy path that incorporates the government's existing decisions contains internal inconsistencies, and considerable fiscal adjustments will be required in order to attain the targets set by the government for the next few years.

Box 3.4
The Main Assumptions Underlying the Long-Term Budget Forecast

- GDP will grow by one percent in 2003 (budget assumption), and by 4 percent a year in 2004–08. This rate will be based on employment rising faster than the labor force as unemployment converges to its natural level, and an annual increase of 1.34 percent in output per employee, similar to the average rise

[26] See K. Broide and A. Brender (2003), "A Long-Term Analysis of the National Budget: Findings and Policy Conclusions," internal memorandum, Research Department, Bank of Israel, January (Hebrew).

over the last 30 years.[1] It was also assumed that growth would accelerate due to the reduction of the tax burden with the income-tax reform and changes in other legislation, and due to increased infrastructure investment, according to coefficients shown in Israeli research.[2] All this after allowing for the negative effect of the rise in the deficit.

- The real wage will rise at the same rate as the rise in output per employee.
- The real yield on government bonds issued in 2003 will be 5.4 percent, declining gradually to reach 4 percent in 2006, similar to the average over the last decade. This is an optimistic assumption, because if there is no significant reduction in the deficit the interest rate is not expected to fall.
- Prices of public consumption (except for education and health) will rise at the same rate as GDP prices. This is also an optimistic assumption, as over the last decades prices of public consumption in Israel have risen faster than GDP prices (as happened in the industrialized economies).[3] Taking this trend into account would increase government expenditure even further, after allowing for some of the rise being offset by increased tax revenues.
- The implementation—which was postponed—of various privately initiated laws, which are due to become effective in the next few years, will be further postponed.
- The civilian aid from the US government will be cut by $ 120 million every year, in accordance with the long-term agreement, while the defense grant will increase by $ 60 million.
- Tax receipts after allowing for the changes in legislation (the tax reform and the end of the higher rate of VAT at the end of 2003) will rise with an elasticity of 1.1 relative to the rise in GDP. This is in accordance with elasticity calculated during the last decade.[4]
- The defense budget will be maintained at the authorized level in 2003 if no supplementary grant is received from the US government. In the next few years the defense budget will rise at a real rate of 1 percent a year. More than half this increase reflects the increase in the defense grant referred to above as part of the agreement regarding the cut in civilian aid from the US.
- The tax reform will be implemented in accordance with the law passed by the Knesset.

[1] Population and labor-force growth rates are based on Central Bureau of Statistics forecasts for 2000–20. For details see K. Broide (2002), "The Long-Term Effect of Demography on Public Expenditure," a paper presented at the Sapir Forum in December (in Hebrew).

[2] See M. Strawczynski and Y. Lavi (2001), "The Effect of Policy Variables and Immigration on Business Sector Product and Its Components (Factor Inputs and Total Factor Productivity); Israel, 1960–95, *Bank of Israel Economic Review*, 73, 97.

[3] Public consumption prices over the last 30 years rose by 1.5 percentage points faster per year, on average, than GDP prices (the same applies over the last 20 years).

[4] See A. Brender (2001), "Estimates of the Tax-Receipts Function in Israel," *Bank of Israel Discussion Paper* 2001.02 (January) (in Hebrew).

- Direct budget investment in the transport, water and sewage infrastructures will be NIS 1 billion higher than in 2002.
- Expenditure on education and health will rise in proportion to the increase in the size and composition of the relevant populations. The quantitative rise in these services per recipient of the service[5] will match the rise in output per employee, and total factor productivity will not change, while the rise in the wage per employee in education and health will correspond with the rise in the average wage.[6]
- The budget cuts and tax increases introduced under the temporary provision until the end of 2003 will actually end then. The fiscal cost of abolishing them is about NIS 5 billion a year.
- Interest payments on bonds issued by the government since 2001 and to be issued in the next few years will be entered in the budget according to the new method in use since 2001.

[5] For example, a student in elementary school. This assumption is made to incorporate a rise in the number of recipients of a service due to a change in legislation such as the extension of the Compulsory Free Education Law to pre-kindergarten children.

[6] This assumption is compatible with the increase in expenditure per student in elementary and secondary education in 1976–97.

The analysis shows that the overall policy path of existing current decisions lacks internal consistency, and extensive fiscal adjustments will be needed in order to attain the targets set by the government (Table 3.10). The budget deficit in 2003 is expected to be about 4.3 percent of GDP (assuming that the US civilian aid for 2003 is received in full before the end of the year, and that GDP growth is indeed 1 percent). In 2004 the deficit is expected to soar to 5.5 percent of GDP because the measures introduced in 2002 as temporary provisions will cease to be effective at the end of 2003, and the US civilian aid will revert to one installment. From 2005 onwards the deficit is expected to rise gradually because of the decline in revenues in the wake of the implementation of the various stages of the tax reform and the contraction of the surplus of the National Insurance Institute. Concurrently, the government expenditure/GDP ratio is expected to decline slightly, mainly due to the reduction in the share of defense expenditure.

The extent of the adjustment required in order to attain the government's targets while implementing the tax reform and the other measures decided upon is very large—about 5 percent of GDP.

The analysis shows that the deficit is expected to be 6 percent of GDP in 2007 and 2008, so that the adjustment required in order to attain the government's targets, alongside the implementation of the tax reform and the other measures decided on, will be very large—about 5 percent of GDP. This scenario also leads to the continued rise of the public debt/GDP ratio—up to 112 percent in 2008—and in this context a reduction of the interest rate on government bonds in accordance with the scenario would not be reasonable.[27] Note, too, that the scenario is based on the assumption that

[27] See H. Ber, A. Brender, and S. Ribon (2002), "Is Fiscal and Monetary Policy Reflected in Yields in the Money Market: Evidence from Israel in the 1990s," Bank of Israel Research Department, working paper (Hebrew).

Table 3.10
The Long-Term Budget Framework According to the Basic Scenario, 2000–2008

			2002	2003						
	2000	2001	performance	Budget	Forecast	2004	2005	2006	2007	2008
Total income (excluding credit)	**39.6**	**37.8**	**38.9**	**40.7**	**39.3**	**38.0**	**37.6**	**37.3**	**36.9**	**36.5**
Grants from abroad	2.5	2.1	3.1	2.7	3.1	2.5	2.3	2.2	2.1	2.0
Taxes *minus* the effect of the tax reform	...	...	...	31.6	30.6	30.3	30.1	30.1	30.0	29.9
Taxes[a]	31.6	31.4	30.6	31.8	30.8	30.5	30.6	30.7	30.8	30.9
Effect of tax reform	...	...	...	–0.2	–0.2	–0.2	–0.5	–0.6	–0.8	–1.1
Other income	5.6	4.4	5.2	6.5	5.6	5.2	5.1	5.0	4.8	4.6
of which Income used for contingent expenditure	2.3	2.2	2.2	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Loan from National Insurance Institute	1.5	0.9	1.6	2.5	1.8	1.5	1.4	1.3	1.2	1.0
Other (royalties, interest, land sales)	1.8	1.3	1.3	1.4	1.2	1.1	1.1	1.1	1.0	1.0
Total expenditure (excluding credit)	**40.3**	**42.3**	**42.8**	**43.7**	**43.5**	**43.3**	**43.0**	**42.8**	**42.6**	**42.3**
Defense, gross	9.5	9.9	11.3	9.5	10.1	9.8	9.5	9.2	8.9	8.7
Interest and repayment of loans from the NII	7.0	7.1	6.8	7.8	7.6	7.8	7.8	7.7	7.7	7.6
Interest	6.0	5.9	5.6	6.6	6.4	6.6	6.5	6.6	6.6	6.5
of which Interest to the NII	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.8
Other interest	5.2	5.1	4.7	5.7	5.5	5.7	5.7	5.7	5.8	5.8
Expenditure contingent on income[b]	0.9	0.9	...	1.0	1.0	1.0	1.0	1.1	1.1	1.2
Repayment of principal to the NII	1.1	1.1	1.2	1.2	1.2	1.3	1.2	1.2	1.1	1.1
Expenditure excl. interest, repayment of principal, and contingent expenditure[b]	22.8	24.4	...	25.5	24.9	24.8	24.7	24.7	24.8	24.8
of which Transfers to the NII and pensions	5.1	5.8	...	5.6	5.6	5.5	5.5	5.4	5.5	5.5
Transfers to the NII	3.9	4.5	4.5	4.2	4.2	4.2	4.1	4.1	4.0	4.0
Education and health (including the demographic effect)[c]	9.1	9.7	...	9.5	9.5	9.4	9.4	9.5	9.5	9.5
Transport and water infrastructures (including transfer to local authorities)	0.8	0.9	...	1.1	1.1	1.2	1.2	1.2	1.2	1.2
Unfunded pensions *plus* subsidy of pension funds	1.2	1.3	1.3	1.4	1.4	1.4	1.4	1.4	1.4	1.5
Other	7.9	8.1	...	9.3	8.7	8.7	8.7	8.7	8.7	8.7
(Net expenditure excl. payment of interest and principal to the NII)	*31.0*	*33.0*	*33.8*	*33.3*	*33.3*	*32.9*	*32.7*	*32.4*	*32.3*	*32.1*
Deficit (excluding credit) (-)	**–0.7**	**–4.5**	**–4.0**	**–3.0**	**–4.2**	**–5.3**	**–5.4**	**–5.5**	**–5.7**	**–5.8**
Deficit target (from 2007, 1 percent of GDP)	**...**	**...**	**–3.9**	**–3.0**	**–3.0**	**–2.5**	**–2.0**	**–1.5**	**–1.0**	**–1.0**
Cut required to meet target	**...**	**...**	**0.1**	**0.0**	**1.2**	**2.8**	**3.4**	**4.0**	**4.7**	**4.8**
Gross public debt	**91.4**	**96.8**	**107.0**	**107.5**	**108.7**	**109.5**	**110.3**	**110.9**	**111.1**	**112.1**
Real percentage change in expenditure	5.8	5.0	–0.9	3.0	3.3	3.6	3.3	3.4	3.6	3.3
of which Net expenditure excl. interest payments and repayment of principal to the NII	3.7	5.7	0.0	–0.4	0.3	2.8	3.2	3.3	3.5	3.4

[a] After 2004, with no legislative change other than implementation of the tax reform.
[b] Excluding defense, health, and education.
[c] Budgets of the Ministry of Education, institutions of higher education, and the Ministry of Health. Including budget investment in health and education.
SOURCE: Bank of Israel.

the decline in defense expenditure, which was decided on in the 2003 budget, will be maintained, i.e., that the security situation will improve in the next few years. This is apparently an important condition for attaining the relatively high growth rate underlying the scenario. Nonetheless, it is unreasonable to expect the economy to grow so quickly

with the budget deficits derived from this scenario, so that it cannot be assumed to be sustainable and might lead the economy to a financial crisis.

We also examined the effect on the expected deficit of changing some of the assumptions. Since the results indicate that the basic scenario leads to an unstable economic path, we examined only scenarios in which a change in assumptions serves to reduce the deficit. This shows that even if GDP growth accelerates by an annual 5 percent in 2004 and 2005, and by an annual 4 percent in 2006–08, the deficit will expand to 5.2 percent of GDP in 2004 and 5.4 percent in 2008. Moreover, after a slight decline in 2005, the deficit is expected to rise gradually every year—largely because of the implementation of the tax reform. Another scenario assumes a significantly slower rise in government expenditure on health, education, and child allowances than in the past, and no change in domestic defense procurements. Even on the basis of all these assumptions the deficit is expected to reach 5.3 percent of GDP in 2004, and to decline gradually to 4.9 percent of GDP in 2008. Thus, the deficit in 2007 and 2008 is expected to be almost 4 percent above the target set by the government. In another scenario we examined the effect of a change in the estimated elasticity of tax receipts as a share of GDP in the years of emergence from the recession, so that it rises to 1.5 in 2004 and to 1.3 in 2005. According to this scenario, the deficit will be 5.0 percent of GDP in 2004, and will increase to 5.2 percent of GDP in 2008.

The analysis shows clearly that attaining the targets set by the government for the next few years requires policy measures that will substantially reduce expenditure and will be of an ongoing character—in contrast with a large part of the measures introduced in 2002. Because of the large extent of the budgetary adjustment required in order to meet the government's targets—which are anchored in law[28]—and in order to make them credible, it is important at this stage to present a detailed plan of the steps the government intends to take in order to attain them and, where necessary, to introduce the appropriate legislation.

In order to meet the targets set by the government for the years ahead it is necessary to adopt policy measures which will reduce expenditure appreciably and be of an enduring nature, in contrast with many of the measures introduced in 2002.

4. MAIN DEVELOPMENTS IN THE ACTIVITY OF THE GENERAL GOVERNMENT

In 2002 the general government deficit continued to expand, to stand at 5.2 percent of GDP (Table 3.11), some 1.3 percentage points above its level in 2001. When the calculation is extended to incorporate the volatile item of 'Bank of Israel profit,' which mainly reflects unexpected changes in the inflation rate, the exchange rate, and world interest rates, the deficit went up by 0.4 percent of GDP in 2002 and reached 4.4 percent.[29] Public expenditure, whose share of GDP in Israel is the highest among the

The general government deficit continued to rise in 2002, and reached 5.2 percent of GDP, about 1.3 percentage points above its 2001 level.

[28] With the exception of the decision to increase infrastructure investment.

[29] In effect, the Bank of Israel does not transfer the 'profit' as calculated by the CBS to the government (see Comptroller's Office, Bank of Israel, *Financial Statement* 2001). In most developed countries, including those of the EU, it is customary to record only profit actually transferred by the central bank as income of the government.

Table 3.11
The Main Components of General Government Receipts and Expenditure, 1994–2002

(percent of GDP)

	Average 1994–1997[a]	1998	1999	2000	2001	2002
Total receipts	**49.9**	**49.3**	**48.0**	**49.1**	**49.7**	**50.7**
of which From property	1.6	1.9	0.9	0.9	1.3	2.1
Total taxes	39.3	38.5	38.7	40.3	40.3	39.8
Indirect taxes on domestic production	14.6	14.3	14.3	13.6	13.8	14.6
Indirect taxes on civilian imports	5.2	4.3	4.5	4.6	4.3	4.3
Direct taxes, fees, and levies	14.2	14.2	14.1	16.1	15.9	14.4
National Insurance income	5.3	5.8	5.8	6.0	6.3	6.4
Grants	4.1	4.0	4.0	3.7	3.7	4.1
Other[b]	4.8	4.9	4.5	4.3	4.4	4.7
Total expenditure	54.3	53.1	52.3	51.5	53.7	55.1
of which Current expenditure	48.2	48.1	47.7	47.2	49.7	50.9
Domestic civilian consumption	19.4	19.4	19.3	19.1	20.2	20.8
Domestic defense consumption	7.4	6.8	6.7	6.6	6.7	7.4
Defense imports	1.7	1.8	2.0	1.7	1.9	2.4
Direct subsidies	1.2	0.8	0.8	0.8	0.8	0.7
Transfer payments on the current account	11.8	12.7	12.7	12.8	14.0	13.9
Interest payments	6.5	6.4	6.0	6.1	6.0	5.7
Transfer payments on the capital account	2.5	1.6	1.7	1.5	1.5	1.6[c]
General government investments	3.5	3.3	2.8	2.5	2.6	2.6
Total general government deficit	**4.4**	**3.7**	**4.2**	**2.0**	**4.0**	**4.4**
Total general government deficit excl. Bank of Israel	**4.6**	**4.1**	**3.8**	**1.7**	**3.9**	**5.2**
Total surplus excluding interest and receipts from property	**0.4**	**0.7**	**0.9**	**3.2**	**0.7**	**–0.8**
Net public debt[d]	**87.4**	**84.4**	**82.6**	**79.4**	**85.0**	**86.3**
Gross public debt excl. Bank of Israel[e]	**109.0**	**107.1**	**101.0**	**91.7**	**97.0**	**105.3**

[a] From 1995, including receipts and expenditure due to the National Health Law.
[b] Including transfer payments from the public on the current and capital accounts.
[c] Including capital transfers of NIS 1,523 million to China, in compensation for the cancellation of the Falcon deal.
[d] Divided by GDP at end-of-year prices.
[e] After deducting local authorities' debts to the central government.
SOURCE: Based on Central Bureau of Statistics data.

Public expenditure, whose share of GDP is higher than in any other developed country, rose by 1.4 percent of GDP in 2002, and in 2001–2002 its cumulative increase has been 4.0 percentage points.

developed countries, rose by 1.4 percent in 2002, and by 4.0 percent in 2001–2002. These developments attest to the continued rapid expansion of public expenditure, whereas the growth rate of receipts, whose share of GDP (*less* the Bank of Israel profit) remained unchanged in 2002, varies and is influenced by changes in the pace of economic activity. Notwithstanding, there were several changes in the development of the components of public expenditure in 2002, primarily the deceleration of the rise in transfer payments and wages, increased expansion of defense expenditure, and higher investment in the transport infrastructure.

Fiscal and economic developments in 2002 also led to a marked rise in the public debt/GDP ratio. The gross debt rose by 8 percentage points, because of the effect of the deficit, real depreciation, and the slower rise in the GDP deflator than in the CPI, to

Table 3.12
Components of the Increase in Gross Public Debt from 2001 to 2002

	(percent of GDP)
Debt at end of 2001	97.0
Reduction in GDP	1.0
Budget deficit, cash basis	4.0
Revaluation of foreign-currency debt	1.4
Revaluation of local-currency debt[a]	1.2
Increase in debt beyond the deficit	0.7
Total	105.3

[a] The difference between the rise in the CPI during the year and the rise in the GDP deflator.
SOURCE: Bank of Israel.

which most of the debt is indexed[30] (Table 3.12). The debt/GDP ratio has thus reverted to its level in 1995. Although the net debt/GDP ratio—which incorporates the Bank of Israel—rose by only 1.3 percent, this was because of the decline in the Bank of Israel's debt to the public, and because this ratio is not sensitive to exchange-rate shifts.[31] But even the net debt is at a similar level to that in 1994. Hence, in the last eight years no progress has been made in reducing Israel's debt/GDP ratio (Figure 3.1), and in 2001–2002 it has been rising. Because of the high debt/GDP ratio by international standards (Table 3.13), the longstanding failure to make progress in this sphere, and the upward path that has emerged in 2001–2002—and is expected to persist in 2003, too (Table 3.10)—the risk ascribed by investors to Israel's economy could rise. The size of the debt has a particularly great effect on the government's ability to smooth the effect of external and security shocks without risking a financial crisis. The budgetary burden of Israel's expected demographic developments in the coming decades is less than that in the developed countries,[32] enabling the country to maintain a higher debt/GDP ratio than those countries without risking achieving an unsustainable debt/GDP ratio. In 2001–2002, however, it has become clear that security risks in Israel—and their economic impact—require extra caution, i.e., the reduction of the debt/GDP ratio to a lower level than in other countries.

A comparison of Israel's deficit with those of the OECD countries illustrates the extent to which the size of Israel's deficit is deviant. Whereas according to accepted international definitions Israel's general government deficit was about 9 percent of GDP in 2002 (Table 3.14)—and if Israel's inflation rate had resembled that of those countries (2 percent) its deficit would have been 6.5 percent of GDP—the average deficit in the OECD countries was only 0.3 percent of GDP.[33] A long-term comparison

In 2002 there were several changes in the development of items of public expenditure, primarily curbing the rise in transfer and wage payments, accelerated rise in defense expenditure, and rise in investment in the transport infrastructure.

In the last eight years no progress was made in reducing Israel's debt/GDP ratio, and it has been rising in 2001–2002.

The size of the debt reduces the government's ability to smooth the effect of external and security shocks without risking a financial crisis.

Israel's security risks—and their economic effect—require special caution, i.e., the reduction of the debt/GDP ratio to a level below that of other countries.

A comparison between the deficit in Israel and in the OECD countries illustrates the exceptional size of Israel's deficit

[30] The composition and development of the debt are discussed in the *Annual Report* of the Monetary Department, published together with this report.

[31] The size of the net external debt (the external debt *less* the Bank of Israel's foreign exchange reserves) is less than 3 percent of GDP, while the gross external debt is 27 percent of GDP.

[32] For a discussion of the effect of expected demographic developments in Israel until 2020 on government expenditure, see K. Broide (2002), "The Effect of Demography on Public Expenditure in the Long Run," Sapir Forum paper, December (Hebrew).

[33] In shifting from the definition of the general government deficit in Israel to that accepted internationally, it is necessary to add the indexation differentials on the general government's local-currency debt, which amounted to 3.9 percent of GDP in 2001. If the inflation rate is 2.0 percent, the increment is 1.3 percent of GDP.

Table 3.13
The Overall Deficit, the Primary Deficit, and the General Government Debt Burden in Israel and OECD Countries, 1994–2002

	General government deficit (–) (% of GDP)			Reduction of expenditure as share of change 1994–2002	Primary general government deficit (–) (% of GDP)			Total general government debt (gross) (% of GDP)			Real increase in per capita public consumption 1994–2002
	1994	2002	Change	(percent)	1994	2002	Change	1995	2002	Change	(percent)
Israel[a]	–3.6	–5.2	–1.6	...	3.1	0.5	–2.6	109.2	105.3	–3.9	1.9
Greece	–9.9	–1.1	8.8	31.1	4.0	4.5	0.5	108.7	106.4	–2.3	2.1
Sweden	–10.8	1.7	12.5	94.6	–8.9	3.4	12.3	84.9	62.8	–22.1	0.5
Italy	–9.3	–2.3	7.0	81.0	1.7	3.2	1.5	123.2	109.6	–13.6	0.3
Britain	–6.7	–1.4	5.3	62.7	–4.1	0.5	4.6	60.6	50.8	–9.8	1.8
Canada	–6.7	0.6	7.3	115.6	–1.7	3.3	5.0	99.9	81.2	–18.7	–0.1
Belgium	–5.0	0.0	5.0	92.0	4.2	5.7	1.5	133.9	105.4	–28.5	1.6
Finland	–5.7	3.2	8.9	142.7	–6.8	2.6	9.4	66.0	47.6	–18.4	1.5
Spain	–6.1	0.0	6.1	129.3	–1.9	2.8	4.7	73.8	66.4	–7.4	2.2
Portugal	–5.9	–3.4	2.5	34.3	0.2	–0.3	–0.5	64.3	59.8	–4.5	3.0
France	–5.5	–2.7	2.8	62.9	–2.4	0.1	2.5	62.9	66.7	3.8	1.3
Australia	–4.6	0.1	4.7	63.8	–0.6	1.8	2.4	43.2	21.8	–21.4	2.1
Austria	–5.0	–1.6	3.4	44.7	–1.6	0.7	2.3	69.2	63.3	–5.9	1.0
US	–3.6	–3.1	0.5	46.2	–0.1	–1.1	–1.0	74.5	60.7	–13.8	0.7
The Netherlands	–4.2	–0.8	3.4	109.3	0.2	1.8	1.6	77.2	51.7	–25.5	1.3
Germany	–2.4	–3.7	–1.3	...	0.4	–0.6	–1.0	57.1	62.4	5.3	1.2
Denmark	–2.4	2.2	4.6	156.5	0.9	3.5	2.6	73.9	43.2	–30.7	1.6
Ireland	–2.0	–0.5	1.5	476.2	2.5	–0.8	–3.3	82.6	34.1	–48.5	4.3
Japan	–2.8	–7.9	–5.1	...	–2.6	–6.7	–4.1	80.4	142.7	62.3	2.8
Norway	0.3	12.4	12.7	45.6	1.5	15.2	13.7	33.7	24.7	–9.0	1.5
New Zealand	3.1	1.6	–1.5	...	4.4	1.3	–3.1	...	...	...	1.3
OECD average[b]	–4.8	–0.3	4.5	105.2	–0.5	2.0	2.6	77.4	66.4	–11.0	1.6
EU average[b]	–5.8	–0.7	5.0	116.7	–0.8	1.9	2.8	81.3	66.4	–14.9	1.7
Average of countries with 1993 deficit larger than Israel's[b, c]	6.8	–0.6	6.2	79.6	–1.5	2.4	3.9	82.6	70.2	–12.4	1.4

[a] Deficit data for Israel do not include the Bank of Israel or indexation differentials on the public debt.
[b] Arithmetic mean of all countries in the group.
[c] Average of countries whose deficit in 1993 was larger than Israel's.
SOURCE: Based on *OECD Economic Outlook*, 70, December 2001, and CBS data.

Table 3.14
Principal Fiscal Aggregates by Common International Accepted Definitions; Israel,[a] OECD and EU Countries, 1999–2002

(NIS billion, current prices)

	1999	2000	2001	2002
General government deficit (–)				
Israel	–4.6	–1.7	–4.7	–9.1
OECD average[b]	0.0	1.4	0.9	–0.3
EU average[b]	–0.2	1.1	0.6	–0.7
General government expenditure				
Israel	53.2	51.1	54.7	59.6
OECD average[b]	42.5	41.4	41.7	42.0
EU average[b]	44.9	43.8	44.2	44.4

[a] The data for Israel were brought into line with the accepted international definition: indexation differentials (accrual basis) on the NIS debt (indexed to the CPI and unindexed) were added to the general government's deficit and expenditure as defined in the National Accounts, and indexation differentials on the public's debt to the government were deducted from the deficit.
[b] Arithmetic mean of member countries.
SOURCE: Based on *OECD Economic Outlook*, 72, November 2002 and Central Bureau of Statistics data.

also shows that Israel is deviant, because between 1994 and 2002 the general government deficit grew by 1.6 percent of GDP, while in the OECD countries it declined by an average of 4.5 percent of GDP (Table 3.13). This gap is not explained by Israel's being at a different point in the business cycle than the OECD countries, as Israel's cyclically-adjusted deficit did not decline during this period, while in the OECD countries it fell by 3.5 percent of GDP (Table 3.3). The reason for the difference is evident from the comparison itself: a large part of the deficit reduction in the OECD countries derives from the lowering of the public expenditure/GDP ratio, and in some countries the decline was sufficiently great to enable the tax burden to be eased. In Israel, on the other hand, the public expenditure/GDP ratio rose in that period.

A long-term comparison shows that Israel is deviant because from 1994 to 2002 the deficit of the general government rose by 1.6 percent of GDP, while the OECD countries reduced their deficits by an average of 4.5 percent of GDP.

The tax burden, defined as the share of tax payments in GDP, declined slightly in 2002 (Figure 3.1), after rising steeply in 2000 and stabilizing at a high level in 2001. Nonetheless, it was still higher than in the late 1990s. The decline in the tax burden in 2002 focused on direct taxes and stemmed from the development of economic activity—mainly the reduction of the real wage and social welfare. On the other hand, statutory tax rates rose in 2002, mainly because of the legislative changes implemented in the second half of 2002. Thus, the composition of the change in the tax burden was the reverse of what it was in 2000, when the rise in wages and profitability served to increase it and statutory tax rates were reduced, a trend which persisted in 2001, too.

The reduction of the tax burden in 2002 concentrated on direct taxes and derived from the development of economic activity. Statutory tax rates rose, however, mainly because of legislative changes introduced in the second half of the year.

The incremental income resulting from higher statutory tax rates in 2002 (in annual terms) was similar to the reduction in income deriving from the change in legislation in the previous two years: the statutory tax rates changed in a pro-cyclical manner, and very rapidly. The drawback of these changes is that they cause instability, which hampers business activity, although they also enable structural changes to be made in the tax

In recent years Israel has lagged significantly in easing the burden of statutory taxes, especially on labor income. In the last four years almost all the OECD countries have reduced the statutory tax rates on wages, whereas in Israel they have risen.

system. These included replacing purchase taxes, which were reduced in August 2000, and distortionary real-estate taxes, which were lowered in 2002, with a V.A.T. rate hike, a tax which is less distortionary. Given the rapid growth rates of public expenditure and the difficulties in approving balanced tax reforms, the adjustment of the tax system may be the lesser evil. Note, however, that in addition to the need to amend distortions in the tax system, as described above, it is necessary to lower tax rates in a fiscally balanced manner in order to stimulate business-sector activity and sustainable growth. In recent years Israel has lagged significantly in reducing the statutory tax burden—especially on labor income: in 1998–2002 almost all the OECD countries have eased their statutory taxes on wages, while in Israel they have risen.[34] Although the income tax reform approved in 2002 could be an important step towards easing the tax burden on labor income in the future, in view of the findings in section 3 above it would seem that a huge fiscal effort is needed in order to enable its implementation.

The share of the general government's cyclically-adjusted deficit in potential GDP remained unchanged in 2002, and in 2001–2002 it has risen by 0.8 percentage points.

As stated, in 2002 the general government deficit/GDP ratio rose considerably, but this might be due to the recession. Since the size of the general government deficit is affected directly by the development of GDP, primarily via tax receipts, it is customary to also examine the development of the general government's cyclically-adjusted deficit, which is calculated on the basis of the assumption that the economy functions at the level of potential GDP.[35] In Israel it is also necessary to adjust the calculation to inflation, because of the unique way interest payments are recorded in the national accounts and the budget, as adjusting the rate of price increases for nominal interest leads to fluctuations in the interest rate calculated when the rate of price increases changes.[36]

Even adjusting for the effect of the slowdown in activity, the deficit has risen in 2001–2002, rather than declining in accordance with the targets set by the government.

According to this calculation, the general government's cyclically-adjusted deficit remained unchanged as a share of potential GDP, and has risen by 0.8 percentage points in 2001–2002 (Table 3.2). Thus, most of the rise in the deficit in this period can be explained by the widening of the gap between actual and potential GDP (the output gap). The comparison also shows, however, that even after adjusting for this effect, the deficit rose rather than declined in accordance with the government's targets. The cyclically-adjusted domestic deficit of the general government grew by 0.1 percent of GDP in 2002. According to this calculation, approximately reflecting the direct effect

[34] A. Brender, "Tax Rates on Labor Income: Israel in an International Perspective," Research Department, Bank of Israel, July 2002 (Hebrew), on Bank of Israel website: Bankisrael.gov.il, and Table 1.A.3.13.

[35] The calculation of potential GDP is based on the average rise in per capita GDP since 1973, which is 1.5 percent a year. According to this calculation, in 2002 the gap between the growth rates of actual and potential GDP was 4.4 percent, with a cumulative 7.7 percent deviation in the level of actual GDP from its potential. This is based on the assumption that actual and potential GDP were equal in 1996. The calculation of the cyclically-adjusted deficit is based on the assumption that tax receipts rise in step with GDP, and that total non-tax income and expenditure is not sensitive to changes in GDP. For a detailed discussion of the method of calculation, see section 2, Chapter 5, Bank of Israel *Annual Report, 1999*.

[36] In the calculation of the interest expenditure of the general government made by the CBS, the interest rate paid on the unindexed local-currency debt is adjusted for the actual price rise. In the calculation of the interest expenditure of the general government made in the national budget, only the interest paid on unindexed local-currency bonds issued until the end of 2000 is adjusted for the rise in prices. In the calculation of the cyclically-adjusted deficit, we assumed an inflation rate of 2.0 percent.

of the activity of the general government on demand in 2002, this was almost neutral.[37] Nevertheless, calculations of this kind are very sensitive to the estimate of potential GDP and to assumptions regarding the intensity of the response of tax receipts and public expenditure to a rise in GDP. Moreover, in a year with many shocks, as 2002 was, it is impossible to ignore the possibility that a rise in the deficit will in fact impact on demand, increasing the risk of a financial crisis—especially in view of the lack of progress in reducing the deficit in the last decade, which has undermined the credibility of fiscal policy, and against the backdrop of the expansionary monetary policy at the beginning of the year. The continuation and depth of the current recession also raise the possibility that that part of the production potential that was not utilized in 2001–2002 has been permanently lost. Hence, the output gap, which is measured on the basis of past trends, may be an overestimation of the economy's ability to increase production once the recession ends.

The persistence and depth of the current recession heighten the possibility that part of the unutilized production potential of 2001–2002 has been permanently lost to the economy.

5. THE COMPOSITION OF GENERAL GOVERNMENT EXPENDITURE

The general government expenditure/GDP ratio rose by 1.4 percentage points in 2002, continuing its 2.6 percentage-point growth in 2001, and reached 55.1 percent of GDP (Table 3.11). Total public expenditure thus returned to its level in the early 1990s. Public expenditure adjusted for immigration absorption spending, which was—temporarily—very high in the early 1990s, was even higher in 2002 than it was at that period (Figure 3.3).[38] The marked rise in the public expenditure/GDP ratio in 2001 and 2002 did not stem solely from the increase in defense expenditure, which contributed about one third of the total increase, but was also due to the growth of civilian consumption, which accounted for about 42 percent, and current transfer payments, which contributed about 25 percent (Table 3.15). On the other hand, the share of interest payments in GDP fell.[39] The share of public capital expenditure in GDP has not changed in 2001–2002, but the component in it of infrastructure investment has risen by 0.2 percent of GDP (Figure 3.2).

The general government expenditure/GDP ratio was 55.1 percent in 2002, indicating that overall public expenditure has reverted to its level in the early 1990s.

The marked rise in the public expenditure/GDP ratio in 2001 and 2002 does not stem solely from the rise in defense expenditure, but rather—and primarily—from the increase in civilian consumption and current transfer payments.

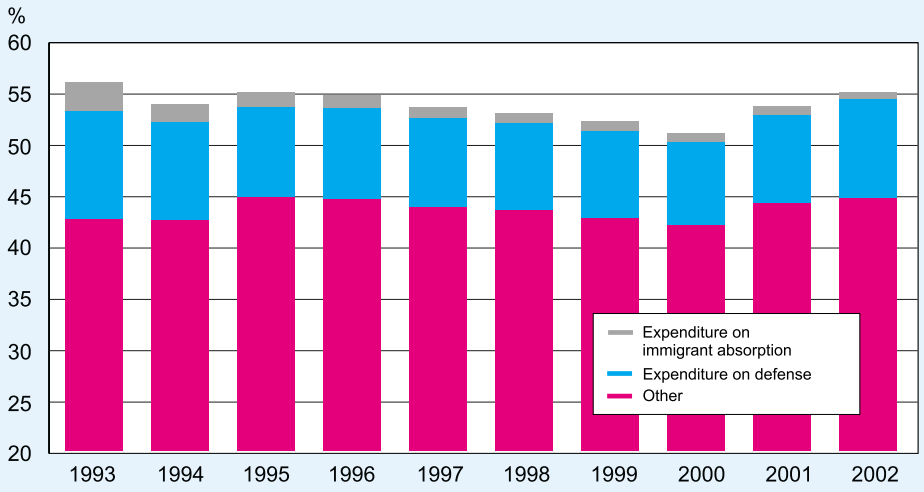
Israel's public expenditure/GDP ratio is higher than that of any other developed country, and in the wake of its increase in 2002 the gap between Israel and these countries widened further. In the last few years awareness has grown in the developed countries that the size of the public sector hampers economic growth; this is because most of those countries have a heavy tax burden, and their deficits have enlarged the public debt. Many countries have consequently reduced their general government expenditure/

[37] Research has shown that a rise in the deficit, even after offsetting the contractionary effect of private expenditure, increases demand in the short run (see Y. Lavi and M. Strawczynski (2002), "Does Fiscal Expansion Increase Aggregate Demand and Activity in Israel? An Empirical Examination for 1960–2000," Sapir Forum paper, December (Hebrew).

[38] Deducting defense expenditure, which has risen in the last two years, increases the gap between the level of expenditure in 2002 and that in the early 1990s, as the share of defense expenditure in GDP was lower in 2002 than in that period.

[39] The decline in interest payments in 2002 reflects primarily the acceleration of inflation in that year.

Figure 3.3
The Share of General Government Expenditure in GDP, 1993–2002



SOURCE: Based on Central Bureau of Statistics data.

The public expenditure/GDP ratio is higher in Israel than in any other developed country, and in the wake of its rise in 2002 the gap between Israel and those countries widened further.

GDP ratio. A comparison of the rates of progress made in this respect by Israel and the nine developed countries with the highest levels of public expenditure in 1994–2002 is shown in Figure 3.4. All these countries, with the exception of Germany, have made notable progress in reducing the general government, while in Israel the reverse has occurred.[40] The comparison also shows that the lack of progress in reducing the public expenditure/GDP ratio in Israel—especially in comparison with the OECD countries—is an ongoing process, and does not reflect only the difficulties of 2001–2002. A comparison of total public expenditure, as generally defined, in Israel and the OECD countries is given in Table 3.14, and shows that even after neutralizing the effect of inflation differentials on interest payments, the gap in 2002 was almost 15 percent of

Table 3.15
Components of Increase in Share of Public Expenditure in GDP, 2000–2002

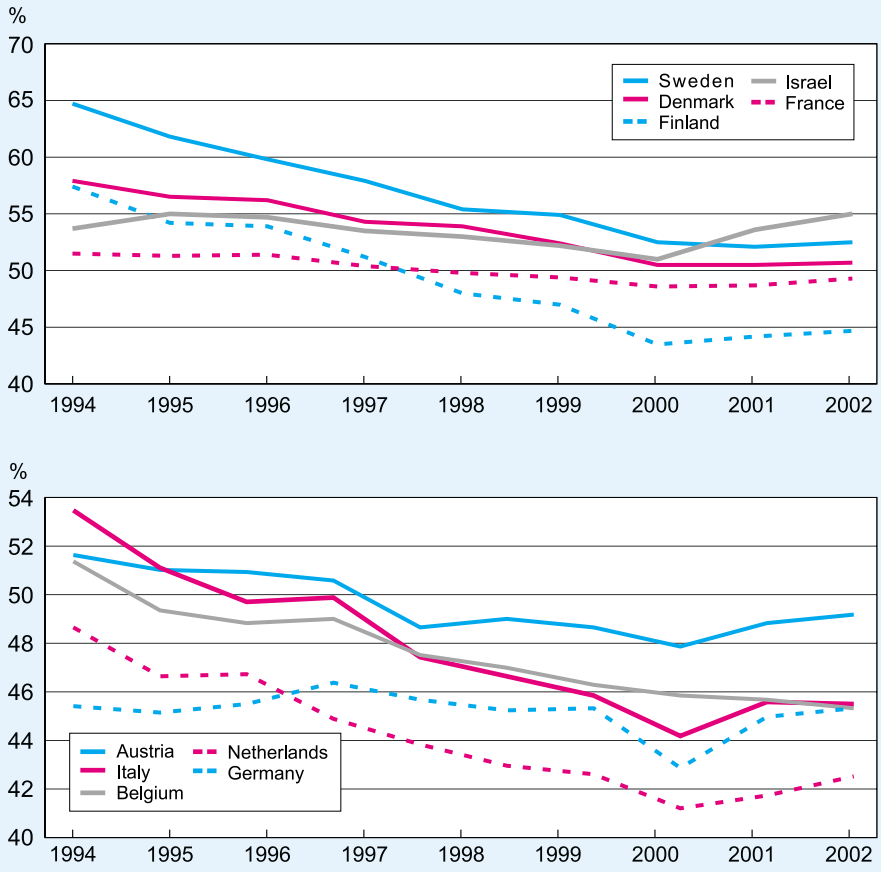
(percent)

	Share of GDP	Share of total income
Total increase in public expenditure	4.0	100.0
Domestic civilian consumption	1.7	42.4
Defense consumption	1.4	36.1
Direct subsidies	–0.1	–2.6
Current transfer payments	1.1	27.2
Interest payments	–0.4	–9.2
Investment and transfer payments on capital account	0.1	2.1

SOURCE: Based on Central Burea of Statistics data.

[40] Similar results are obtained when the development of non-interest expenditure is compared.

Figure 3.4
The Share of Public Expenditure in Israel and in the OECD Countries with the Largest General Government Sector, 1994–2002



SOURCE: OECD Economic Outlook, No. 70.

GDP.[41] Although half of the gap derives from Israel's higher defense expenditure, this explanation—however justified—does not diminish the fact that the large size of the public sector impairs Israel's competitiveness, because Israel's defense expenditure buys a product—security—from which its competitors benefit at a much lower price.

As generally defined, the public expenditure/GDP ratio is almost 15 percent higher in Israel than in the OECD countries, even adjusting for the effect of inflation differentials on interest payments.

The change in the share of the various expenditure items in GDP can also be attributed in part to the decline in GDP in 2001–2002. It is therefore also important to examine the real growth rate of the various expenditure items. The real growth rate is calculated by deducting the change in the business-sector product deflator from the change in nominal expenditure in order to reflect the burden imposed by the rise in public expenditure on this sector. The analysis shows that although the growth rate of current public expenditure excluding interest slowed in 2002, it was still rapid—2.7 percent (Table 3.16)—and close to the estimated growth rate of potential GDP, reflecting a per

[41] Assuming an inflation rate of 2.0 percent in Israel in 2002, the total expenditure of the general government as generally defined was 56.5 percent of GDP.

Table 3.16
Growth Rates of Public Expenditure in Israel, 1994–2002
(percent, deflated by implicit price index of business-sector product)

	Average 1994–99[a]	2000	2001	2002
Total public expenditure	**4.4**	**6.0**	**5.1**	**2.0**
of which Interest payments[b]	2.5	9.3	–0.8	–5.7
Total primary public expenditure	4.7	5.5	5.9	2.9
of which Current primary expenditure	6.1	6.8	6.5	2.7
Current primary expenditure excl. defense	7.4	7.6	7.2	0.4
Public consumption	5.9	5.7	5.2	5.6
Public consumption excl. defense imports	6.9	6.8	4.5	4.2
Civilian consumption	8.7	7.0	5.5	2.5
Per capita civilian consumption	6.0	4.2	3.1	0.4
Wage expenditure	7.0	6.8	6.4	0.1
Purchases	15.5	8.5	3.6	7.4
Domestic defense consumption	2.7	7.4	1.5	9.4
Wage expenditure	3.6	5.6	3.8	6.6
Transfer payments on current account	7.4	9.4	9.2	–1.2
Per capita transfer payments on current account	4.7	6.6	6.7	–3.2
General government investment	0.8	–3.9	3.2	–0.3
of which Infrastructure and transport	0.6	8.8	7.2	16.0
Transfer payments on capital account	–9.8	–9.0	1.4	8.7

[a] From 1995, including expenditure due to National Health Law.
[b] Part of the reduction in interest payments in 2001 and 2002 reflects a change in the Central Bureau of Statistics method of calculating interest payments abroad.
SOURCE: Based on Central Bureau of Statistics data.

Although the real growth rate of current public expenditure excluding interest slowed in 2002, it was still rapid, reflecting per capita growth of 0.7 percent.

capita increase of 0.7 percent. In addition to this deceleration, the composition of the growth rates of expenditure items also changed: the growth rate of domestic defense consumption accelerated greatly due to the deterioration in the security situation and extensive mobilization of the reserves. Current expenditure *less* security expenditure and interest rose by only 0.4 percent, however—less than the population growth rate. The intensity of the deceleration also varied between the components of current civilian expenditure. While the growth rate of civilian consumption declined to 2.5 percent in 2002, compared with an annual average of over 6 percent in 2001–2002, it still reflected a per capita increase of 0.4 percent. There was a marked slowing of the rise in wage expenditure, a development that reflects mainly the sharp fall in the real wage—which rose rapidly in the two preceding years—alongside the continued rapid rise in labor input. The nominal wage per hour worked in the general government rose by 2.2 percent in 2002—the lowest rise for several decades,[42] and a significant decline compared with an annual average increase of 5 percent in the previous two years. Whether this development represents an improvement in the control exercised by the government and public entities over their wage systems will be evident from the ability to maintain this restraint in the coming years.

The nominal wage per hour worked in the general government rose by only 2.2 percent in 2002—the lowest rate of increase for several decades.

[42] The cost of civilian labor input rose by 1.5 percent, and of defense labor input by 4.5 percent.

After seven years in which real per capita transfer payments rose by an annual rate of over 5 percent, they declined in 2002.

The most prominent change in the development of public expenditure in 2002 was the slower rise of transfer payments, which reflected the many legislative changes made in national insurance benefits and the government's decision to curb the expansion of other transfer payments. Per capita transfer payments also declined in 2002, after an annual real rise of over 5 percent in the last seven years. Halting the rise in transfer payments is important for reducing the public expenditure/GDP ratio, but a concerted effort must still be made for the slowdown in 2002 to become permanent: because many of the measures introduced in 2002 in the area of benefits were temporary—most of them remaining in effect only until the end of 2003—in order to sustain the slower rise of benefits it will be necessary to extend the measures or replace them with others. For this purpose, it may be necessary to prepare a reporting infrastructure for households' income, connecting the databases of the tax and national insurance systems in such a way as to expand the policy options regarding payment of benefits.

The slower rise of civilian expenditure in 2002 reflects the response of policy to the shortage of resources, because of the recession, and the need to increase security expenditure, which obliged policymakers to curb the increase in expenditure, which has expanded rapidly in the last few years. This development is in line with the narrow range within which the deficit and the expenditure/GDP ratio have moved in the last decade, being restrained between a ceiling dictated by the markets and a floor dictated by policymakers' unwillingness to reduce expenditure. Consequently, the ability of policy to reduce the overall public expenditure/GDP ratio will be assessed once economic growth resumes and defense expenditure is checked. The rapid rise in civilian expenditure budgeted for 2003—relative to actual expenditure in 2002—when the defense budget will plummet (as determined in the national budget) is not consistent with convergence to a declining path of the public expenditure/GDP ratio.

In the local authorities, whose budgetary management was overhauled in the mid-1990s, the trend of increasing budgetary responsibility has been maintained despite the marked slowing of economic activity and reduction in their income. The debt of the local authorities to the banks hardly rose in 2002 (Table 3.17), even though the government's transfers to the authorities, and especially the general transfer, contracted in real terms. The local authorities thus more or less adhered to a balanced budget for another year. The balanced budget is not limited to only a few well-managed local authorities, but applies to a large number of them, so that despite the economic slump, more than half the local authorities reduced their debts, i.e., had a budget surplus, in 2002, too.

Box 3.5
Sources of Financing National Expenditure on Education

The total sum of national expenditure on education is clearly of great importance; the shares of the different sectors in financing this expenditure is however of no lesser significance. In analyzing the sources of financing

Table 3.17

Indicators of Financial Activity of Local Authorities, 1986, 1990, 1995–2002

(percent)

	Total debt of local authorities to banks[a]		Government transfers to local authorities		Total expenditure[b]
	(percent of GDP)	NIS billion (at Sept 2002 prices)	(percent of GDP)	*of which* General grant	excluding debt repayment
1986	3.60	8.23	1.45	0.35	6.17
1990	3.61	10.36	2.03	0.73	7.37
1995	3.72	14.61	2.40	0.91	8.01
1996	3.61	15.04	2.52	0.94	7.95
1997	3.52	15.39	2.42	0.79	7.85
1998	3.43	15.37	2.37	0.81	7.90
1999	3.16	15.36	2.45	0.79	7.47
2000	2.99	15.16	2.31	0.75	7.30
2001	3.06	15.14	2.45	0.74	7.66
2002[c]	3.08	15.39	...	0.77	...

	(percent of all local authorities)	
Change in debt to banks[a]	Increase	Decrease
1990–1996	85.20	14.80
1997–2002[c]	48.12	51.88
2000–2002[d]	44.49	55.51

[a] According to data from Banking Supervision Department.
[b] Until 1997, according to CBS data, From 1998, according to Local Authority Monitoring Department at the Ministry of Interior.
[c] Debt data are to end-September 2002. Data regarding the general grant are as in the budget proposal.
[d] To end-September 2002.
SOURCE: Based on data from Central Bureau of Statistics, Local Authority Monitoring Department of Ministry of Interior, and Supervisor of Banks.

education, two separate distinctions are relevant: one is the distinction between private and public financing, and the other, within the public share of financing, is the distinction between the government and the local authorities. Each of these sources of financing education has advantages and disadvantages.

In Israel, as in most other countries, the public sector plays a major role in financing education (up to a certain age), for the following reasons: education offers positive external benefits—the total utility of education is greater than that derived by the individual, as society also benefits. The individual does not take this into account in deciding on what level of education to acquire, so that private expenditure on education will fall short of the amount that the society would want. Public financing also fulfills an important purpose in spreading equality of opportunity offered by education. This is specially important from the aspect of increasing mobility and reducing the risks of inequality being perpetuated from generation to generation: in the absence of public financing of education the probability increases that children of low-income parents will receive low-level education and therefore remain low down on the income scale. Public financing also enables society to exercise greater sway over the contents of the education system, and thus to use it to achieve additional objectives such as integration.

Private financing of education has several advantages. It would more accurately reflect individuals' priorities regarding the extent of resources they wish to allocate to it, giving them more control over the content and quality of education. It would also offer greater pluralism than does publicly-financed education, although it should be stated that the mix between uniformity and pluralism in education is itself a subject for debate. The most apparent drawback of too high a share of privately financed education is clearly the danger of increasing and perpetuating inequality. To illustrate: a calculation based on the Household Expenditure Survey for 2000 shows that private expenditure on education per child (aged up to 18 years) in the upper quintile is ten times higher than that in the lowest quintile—a difference of some NIS 10,000 per year per child. [1]

[1] The calculation relates to private expenditure on education, excluding payments to academic institutions. Most of the difference between the two quintiles is not in payments to schools but in payments to private day nurseries and kindergartens, for extracurricular activities and for extra private tuition, etc. The calculation may overstate the difference between the two groups, as part of the expenditure relates to adults, and some low-income families may be entitled to reduced payments for day nurseries or to schools. On the other hand the calculation does not include differences in expenditure that is not defined as for education services, such as cultural events, computers, internet, children's summer camps, books etc.

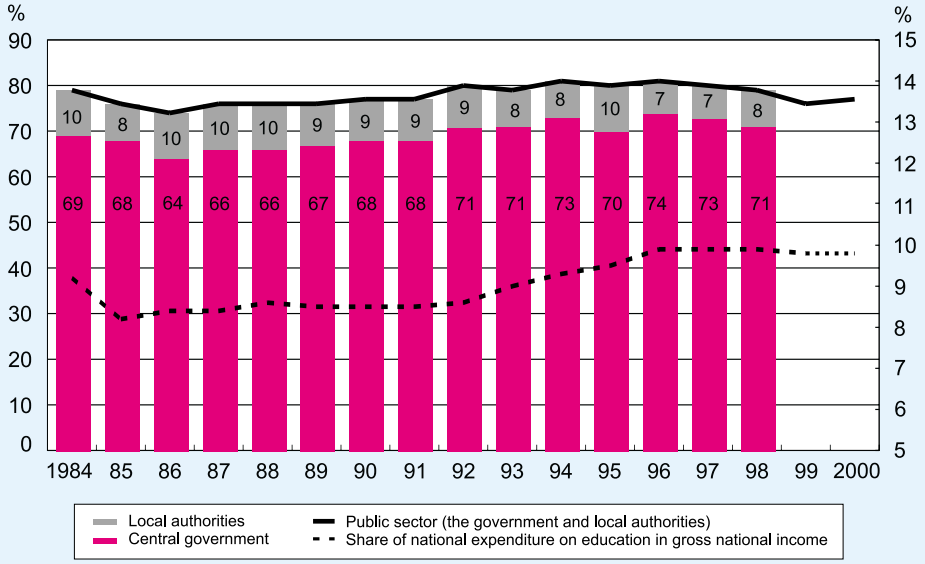
With regard to the division of public financing into that by the government and that by the local authorities, a rise in the share of the latter is likely to increase educational inequality between well established areas and weak ones. It might also have an adverse effect on children living in areas with a high proportion of elderly citizens if these are less willing to pay local authority taxes to finance education.[2] Such differences between educational standards in different locations are themselves apt to perpetuate the situation over time: those with well-to-do or young populations will offer better education, financed by higher municipal taxes, so that affluent and young families, willing and able to pay towards this financing, will be attracted there. Less prosperous families will have to settle for the education provided by local authorities that impose lower taxes. These developments may be related to the process of suburbanization taking place in Israel, with young well-established families leaving the older towns for suburban communities, and they may even encourage the process. Suburbanization may therefore be contributing to greater educational inequality. In the US, where the share of local financing is very high, its significance for inequality in education is currently the subject of a lively public debate. Several studies have shown that the higher the proportion of elderly residents in an area, the smaller the expenditure per student.[3] Local financing has some possible advantages: education is usually provided by the local authority, and the fact that it is also responsible for financing it is likely to improve its managerial ability and to provide an incentive to make it more efficient. Control over financing also makes it easier to shape the education system so that it is in accord with local priorities.

The distinction drawn here between the different sectors relates to their share in the financing of education, and not to their share in its implementation. Frequently the executor is not the financing party: the government finances about 70 percent of education, but its share of implementation is only 30 percent. In contrast, the share of local authorities in actual education performance is much higher than their share in its financing, as a significant part of the education services they provide is financed by government transfers. Part of private expenditure on education also finances services provided by the public sector, for example parents' payments to schools.

[2] The willingness of the elderly to finance public education in their localities is subject to opposing considerations. On the one hand, if they do not have grandchildren learning in the same area, they may have no interest in financing the education of other children. On the other, a good education system in the area may increase the value of their property.

[3] J. Poterba (1998), "Demographic Change, Intergenerational Linkages, and Public Education," *American Economic Review* 88(2), 315–20.

Figure 3.5.1
General Government Share of National Expenditure on Education (left-hand scale), and Share of National Expenditure on Education in Gross National Income (right-hand scale), 1984–2000



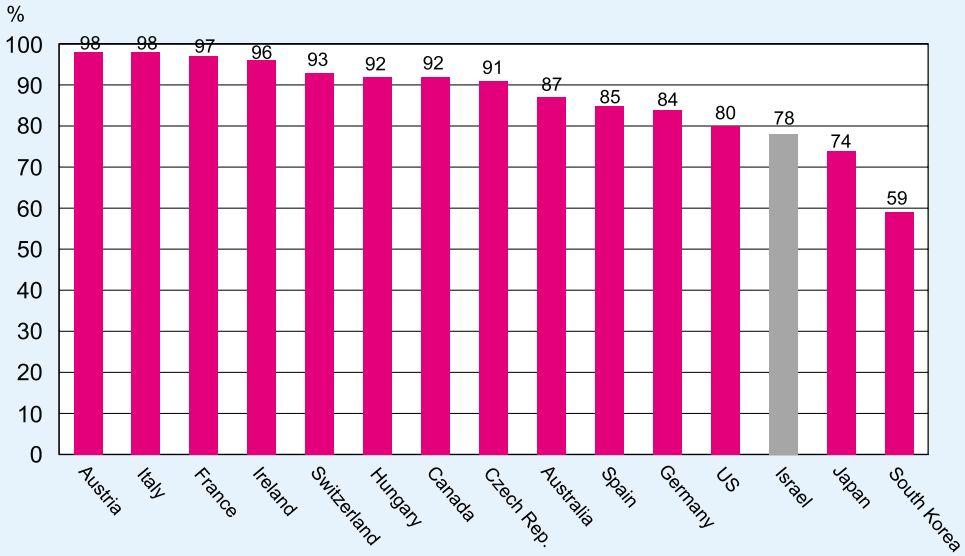
SOURCE: Central Bureau of Statistics.

Figure 3.5.1 shows the changes in expenditure on education and its sources of finance from 1984 to 2000.[4] The share in national income of national expenditure on education rose from the mid-1980s to the end of the 1990s by 1.5 percentage points. Most of the increase occurred in the first half of the 1990s, and to a great extent it reflected pay increases granted in those years. In the last few years the share has remained stable. In this period there were moderate changes in the shares of the different sectors in financing education.

The marked rise in national expenditure on education at the beginning of the 1990s was spearheaded by the increase in government expenditure (the local authorities' share of financing was very low). Since 1997 the opposite trend has been evident. The rise in private expenditure has offset the reduction in public expenditure, and prevented a fall in national expenditure in the last few years (all in terms of percent of GDP). Some individuals may compensate themselves for the fall in public financing by increasing private expenditure. However, viewed over a longer period (from 1985), there has been no significant increase in the share of private financing, so that the aggregate data do not indicate a trend towards privatization of education.

[4] For technical reasons (i.e., changes in definitions used in the data series), comparisons with data prior to 1984 are problematic. The sharp decline in government expenditure in 1985–86 was related to the Economic Stabilization Program.

Figure 3.5.2
Share of Public Financing in National Expenditure on Education, International Comparison, 1998



SOURCE: Based on Central Bureau of Statistics data.

The rise in the share of private expenditure since 1997 may just be a necessary adjustment following the steep wage rise in the 1990s that was naturally financed by the government. However, the aggregate data may disguise some of the true expansion of the role of private expenditure: the rise in the number of Arab and ultra-orthodox Jewish students, who come from families with relatively low income, far outstripped the rise in other students.[5] Private expenditure on education per student in a poor family is far lower than that in an affluent family, as stated. Hence, a faster increase in the number of students in the weaker economic strata acts to raise the share of public expenditure, a structural bias that does not reflect greater equality in national expenditure.

The distribution of financing varies at the different levels of education. Thus, the share of private financing in higher education is far greater than at the elementary and secondary school level. One of the implications of this is that changes in the share of private expenditure in national expenditure on education may occur due to demographic changes, for instance an increase

[5] The number of students in Jewish elementary and secondary education in the 2000-01 school year was 36 percent higher than in 1984–85, whereas the number in the Arab education sector rose by 54 percent (Central Bureau of Statistics data).

in the number of students in higher education relative to the number in elementary schools as a result of a decline in the birth rate. This must also be taken into consideration in making international comparisons.

Figure 3.5.2 compares the share of public expenditure on education in total national education expenditure in Israel with that in other countries. The share in Israel is one of the lowest. This does not necessarily imply a low level of public expenditure on education: in 1998 this stood at 7.2 percent of GDP, compared with an average of 5.3 percent in the OECD countries, although the difference was due in part to the low-age composition in Israel. Total expenditure on education per student as a percent of per capita GDP was higher in Israel than the average in the OECD countries at nearly all levels of education.[6] The fact that Israelis choose to allocate significant resources to education over and above public expenditure may reflect differences in priorities or dissatisfaction with the output of the public expenditure.

[6] See "Education in Israel—An International Comparison, 1999," Central Bureau of Statistics (S.P. 1178).