1.MAIN DEVELOPMENTS

Economic activity expanded in 2004, continuing the recovery trend that began in mid-2003. Per capita GDP rose after declining for three years.

Israel's economic activity expanded in 2004, continuing the trend that had begun in the second half of 2003. GDP rose by 4.3 percent, and per capita GDP was up by 2.5 percent, after declining for three consecutive years (Table 1.1). The recovery was led by the business sector, which grew by 6.1 percent, while the product of the public services declined. The expansion of the business sector is the result of the increase in demand, especially for exports, and to a lesser extent in domestic demand (Table 1.2). The growth process in 2004, led by the business sector, and by exports in particular, alongside price and financial stability, is consistent with sustainable growth.

The marked rise in TFP indicates that the supply side expanded considerably through more efficient factor utilization (capital and labor). The return on net capital, which increased to 13.6 percent, similar to the average in the first half of the 1990s, and the sharp drop in unit labor costs by 4.7 percent also attest to this (Table 1.5). The cumulative decline in unit labor costs in 2003 and 2004 and the current level of the real exchange rate indicate that the competitiveness of Israeli firms has improved, enabling exports to expand by a steep 14.9 percent.

Table 1.1
Indicators of Economic Activity, 1986–2004

(rate of change, percent)

	1986–89	1990–95	1996–99	2000	2001	2002	2003	2004	Jan–Jun[a]	Jul–Dec[a]
Per capita GDP	2.0	2.6	1.2	5.2	–3.2	–2.7	–0.5	2.5	1.3	2.2
Per capita GDP in OECD countries[c]		1.0	2.5	3.2	–0.3	0.9	1.5	2.9	–	–
GDP	3.7	6.2	3.7	8.0	–0.9	–0.7	1.3	4.3	3.0	4.0
Excluding start-ups			3.6	6.5	–0.4	–0.0	1.6	4.1	3.0	3.4
Business-sector product	4.6	7.6	4.2	10.2	–2.4	–2.6	1.7	6.1	4.1	5.7
Excluding start-ups			4.0	8.1	–1.7	–1.7	2.1	5.9	4.2	4.9
Index of manufacturing output[a]	0.9	7.3	2.8	10.0	–5.0	–1.9	–0.3	6.6	9.2	6.3
Unemployment rate[b]	7.1	9.8	8.0	8.8	9.3	10.3	10.7	10.4	10.6	10.1

[a] Annual rates of change, seasonally adjusted, compared with preceding six months.
[b] These figures refer to levels, not rates of change.
[c] From 1991.
SOURCE: Based on Central Bureau of Statistics data.

The rise in activity was expressed in the labor market, and was evident in all the goods and services industries.

The expansion of economic activity affected the labor market, where wages and employment increased during the year and the unemployment rate dipped (Table 1.4). Nonetheless, the response of the labor market was only partial, as is indicated by the decline in the labor share (the share of the return to labor in GDP) and its low level (Table 1.5).

The recovery was evident in most goods and service industries: manufacturing product was up by 6.3 percent, and manufactured exports (excluding diamonds) soared by 15.5 percent. The services industries grew by 6.3 percent, expressing the rapid growth of all the two-digit industries (commerce, transport, business and other services), and the exports of these services increased by 16.5 percent. The exception

was the construction industry, whose product fell by 7.1 percent, but because of this industry's low share in business-sector product its influence was negligible (Table 1.7).

In spite of the trend of improvement, the effect of the protracted recession was still in evidence: per capita GDP was lower in 2004 than in 2000; the unemployment rate, which stood at an annual average of 10.4 percent, was higher than Israel's long-term average and than its level in developed countries.

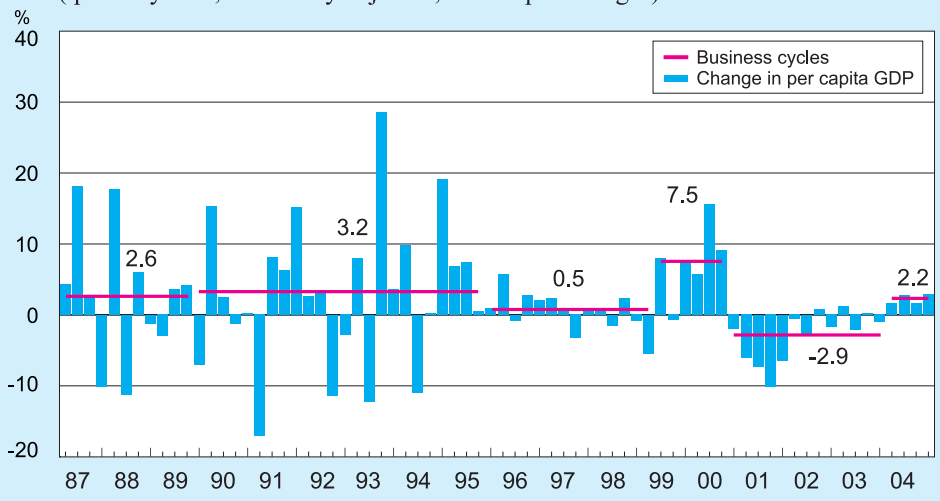
Despite the trend of improvement, the effects of the protracted recession were still in evidence.

The expansion of economic activity is the outcome of a combination of external forces, both global and domestic. Economic policy, which was characterized by fiscal restraint, tax reductions, and monetary expansion, bolstered these forces and enabled them to find expression by contributing to the decline in interest rates for all terms and the attainment of the price-stability and deficit targets while maintaining financial stability.

The expansion of economic activity was the result of the combination of external forces, both domestic and global; economic policy supported these forces.

These factors, which began to operate in the second half of 2003, led to an increase in economic activity, which even accelerated in the course of the year; the growth rates of business-sector product in the first and second halves of 2004 stood at 4.1 and 5.7 percent respectively.

Figure 1.1
Change in Per Capita GDP, 1987–2004
(quarterly data, seasonally adjusted, annual percentages)



SOURCE: Based on Central Bureau of Statistics data.

The two main external factors influencing developments in 2004 were the global economic recovery, expressed in the rapid 2.9 percent rise in per capita GDP in the OECD countries, and the improvement in Israel's security situation. The high global growth rate led to the rise in demand for Israel's exports, contributing directly to their expansion and indirectly to the growth of national income and domestic demand.

The global economic recovery and the improvement in Israel's security situation were the main causes of the recovery.

Global trade, whose growth rate averaged 3 percent in 2001–03, expanded by a notable 8.8 percent in 2004, and an analysis of the import composition data for the US shows that the industries in which Israel specializes grew (see section on manufacturing). This factor, alongside the improvement in the security situation and the real local-currency depreciation, served to greatly increase exports (excluding diamonds), by 16.2 percent. This increase is biased towards the high-tech industry, in both goods and other services, which include a large high-tech component, such as software services, and R&D. The recovery of these industries is also indicated by the steep rise in investment in start-ups, which is recorded as an increase in the inventory of these firms. The expansion of the exports of the high-tech industry persisted throughout the year, while the exports of the other industries were characterized by a large increase at the beginning of the year and a moderate growth trend or stability later on.

The improvement in the security situation was expressed in a steep rise in exports of tourism services.

As stated, in 2004 there was a significant improvement in the security situation, with a 47 percent decline in the number of terrorist incidents, and a 54 percent drop in the number of persons killed or wounded as a result of them. This had a marked effect on economic developments, particularly on domestic demand. The improvement in the security situation resulted in a steep increase in exports of tourist services, which were up by 40 percent, indicating that the improvement was internalized abroad, as well as in a decline in domestic defense expenditure, for the second successive year. This development, together with tight fiscal policy, led to the reduction of Israel's risk premium and made it possible to implement expansionary monetary policy while adhering to price and financial stability. The fact that the two targets of economic policy—the deficit and inflation targets—were attained in 2004, together with the coordination of economic policy, led to the reduction of the real interest rate for all terms, alongside the increased stability of the financial markets. This occurred despite the absence of political stability, expressed in frequent changes in the composition of the coalition and the failure to pass the 2005 Budget Law in accordance with the planned timetable.

These developments in the externalities confronting the economy, alongside political factors which operated in a positive way, gave rise to a considerable improvement in individuals' expectations. This may be inferred from the sharp increases in domestic share prices, beyond those in stock markets abroad, as well as from consumer surveys and the Bank of Israel's Companies Survey.

Domestic demand rose by 3.9 percent, as a result of the 5.7 percent increase in private consumption and the 6.4 percent expansion of gross domestic investment—two uses that display considerable sensitivity to changes in the security situation.[1] These increases were partly offset by the 1.3 percent decline in domestic public consumption.

[1] See Z. Eckstein and D. Zidon (2003), "The Macroeconomic Consequences of Terror: Theory and Practice in Israel" (Hebrew), and S. Haj-Yehia (2003), "Terrorizing the Consumers and Investors" (mimeo).

The rise in GDP in 2004 was primarily the result of the rise in exports, and to a lesser extent of the expansion of domestic uses (Table 1.3). The contribution of exports would appear to have been even greater, because their expansion contributed to the rise in both consumption and investment via the income channel. The contribution of the improvement in the security situation to the rise in exports is only secondary (with the exception of tourism, whose effect on total exports is slight).

The rise in GDP in 2004 was due mainly to the expansion of exports

To date the recovery process has not been accompanied by significant pressure for higher prices, real local-currency appreciation, or the creation of a deficit in the current account of the balance of payments, all features that have been in evidence in the past when Israel experienced rapid economic growth. This situation, in which the offsetting price mechanisms have not yet kicked in, enabled the recovery process to persist at a high rate throughout the year. This was possible because the economic rally was primarily export-led, due to the very low starting-point from which the resurgence began—expressed in excess capacity—and the reduction of public expenditure.

The recovery process has not yet been accompanied by significant pressure to raise prices, create real appreciation, or generate a deficit in the current account of the balance of payments.

In contrast to the positive external changes described above, Israel's terms of trade deteriorated in 2004, among other things because of the steep rise in the price of crude oil. A deterioration of this kind can have a direct negative impact on GDP as it pushes up production costs, depresses domestic demand due to the effect on national income, and indirectly causes export demand to drop by harming the global economy. It seems, however, that the real direct and indirect impact of this change on Israel's economy was slight, for reasons that will be given below. Because of the deterioration in the terms of trade, real gross domestic income in 2004, expressed in Israel's purchasing power abroad, rose by only 3.2 percent.

Fiscal policy had a mixed effect on economic activity in 2004, and it is difficult to ascertain whether its overall impact was expansionary or contractionary. On the expenditure side, policy was restrictive, expressed in the decline in government spending and transfer payments for the second year in succession. Most of the budget deficit this year is explained by the business cycle (Chapter 3, especially Table 3.14). On the other hand, the attainment of the fiscal target also had several expansionary effects on both supply and demand. The deficit target was met solely by reducing the current public expenditure component, without harming the capital account.[2] The number of public-service employees fell, and the attainment of the target was accompanied by the reduction of direct and indirect tax rates in the framework of a long-term plan which signals reliable, not temporary, reductions.

Fiscal policy had a mixed effect on activity in 2004.

Several factors were at work on the demand side. The policy of reducing direct taxes acted to increase private consumption in the short term,[3] as did the decline in indirect taxes. Fiscal restraint made it possible to implement expansionary monetary policy, thereby stimulating consumption and investment, while creating direct pressure

[2] Including public-sector investment in the infrastructure and the public services.

[3] See: Y. Lavi and M. Strawczynski (2003), "An Empirical Examination of the Effect of Fiscal Policy on Private Consumption in Israel, Emphasizing Fiscal Expectations" Economic Quarterly (4) December (Hebrew).

for real local-currency depreciation by means of the fall in aggregate demand for nontradables. Expansionary monetary policy also served to generate real depreciation in the short term, via its effect on the nominal exchange rate. In general, macroeconomic policy gave rise to real depreciation in the short term, thereby stimulating exports and offsetting the effect of the fundamentals, which served to create real appreciation.

The contraction of current transfer payments acted to reduce private consumption, especially by the weaker socio-economic groups, as is attested by the decline in consumption by the lower deciles in 2003[4] and the high elasticity of private consumption to transfer payments.[5] Fiscal policy such as that adopted in 2004 has been found to have an expansionary effect on GDP,[6] though this channel was secondary this time, because of Israel's large output gap.

Fiscal policy on the expenditure side was regressive in terms of income distribution this year.

Fiscal policy on the expenditure side was regressive in terms of income distribution in 2004, because a large part of the cuts in public spending were made in the current transfer payments item, both in order to attain the deficit target and in an effort to increase the labor-force participation rate. The current transfer payments item accounts for a considerable part of the income of lower socio-economic groups, so that their reduction had an effect on private consumption and its composition, as will be described below.[7]

Government policy led the process of declining per capita public expenditure, and this policy will continue in the future, with the adoption of a new fiscal target which limits the increase in public expenditure to a rate that is lower than that of population increase. This could serve to exacerbate inequality by reducing the public services to which the weaker segments of the population have recourse, being unable to purchase these services privately. In order to prevent this, it will be necessary to adapt the rate at which public expenditure rises, especially in items directly connected with population size, such as health and education, to the rate of population increase, and to direct the cuts to expenditure items which are less closely connected with population size, such as security, or to make the supply of services more efficient, so that their level is not affected. Alternatively, the provision of public services could be made more progressive, alongside their reduction in general. In the absence of such measures, access to such services as health and education by the weaker segments of society could be impaired, and in the long run this will have an adverse effect on economic growth.[8]

[4] In 2003, when transfer payments were cut, private consumption by the second, third, and fourth deciles fell, while that by the first (lowest) decile rose (source: CBS Survey of Household Expenditure, 2003).

[5] See: Y. Lavi and M. Strawczynski (2003), op cit.

[6] See: Y. Lavi and M. Strawczynski (2003), "The Effect of Policy Variables and the Rise in Business-Sector Product and its Components in Israel, 1960—1995," Bank of Israel, Economic Review 73.

[7] Inequality data for 2004, based on the survey of incomes, will be available only at the end of 2005. The increase in (net) inequality in 2004 stemmed from the contraction in national insurance payments of income assurance benefits and child allowances, the reduction of direct taxation at the higher income levels, and the economic developments which serve to increase gross inequality, such as higher wages in industries in which wages are higher vis-à-vis the absence of change in wages in industries in which wages are low.

[8] J. Temple (1999), "The New Growth Evidence," Journal of Economic Literature (March), 112–156.

Table 1.2
Sources and Uses, 1986–2004

(volume rates of change, percent)

	1986–89	1990–95	1996–99	2000	2001	2002	2003	2004
GDP	3.7	6.2	3.7	8.0	–0.9	–0.7	1.3	4.3
Imports	4.8	11.0	6.8	12.3	–4.7	–2.1	–1.8	12.0
of which Excl. diamonds, oil, ships and aircraft	4.1	11.7	6.6	14.5	–3.7	–5.5	–3.5	12.9
Total sources	4.0	7.7	4.6	9.3	–2.1	–1.1	0.3	6.7
Exports	4.5	7.4	8.3	23.1	–11.2	–2.4	6.2	14.9
of which Excl. diamonds	3.4	8.3	9.9	25.2	–10.4	–6.4	6.4	16.2
Goods exports excl. diamonds	4.5	9.3	10.1	26.6	–6.5	–6.7	4.7	16.3
of which High-tech	–	–	15.9	52.8	–8.3	–12.0	–1.0	17.0
Exports to Palestinian Autonomy	–	–	3.1	–11.5	–26.7	–8.3	13.8	32.3
Tourism exports[b]	–3.2	7.8	–6.4	–16.8	–57.2	–29.9	4.0	39.0
Gross domestic investment	3.2	15.4	2.4	0.9	–5.1	–13.7	–10.7	6.4
of which Nonresidential	2.1	15.6	2.6	6.3	–2.8	–9.3	–5.1	–0.2
Private consumption	7.1	7.5	4.1	7.7	2.7	1.1	1.3	5.7
Public consumption[a]	0.8	2.9	2.8	2.3	2.7	4.4	–0.7	–1.3
Domestic uses[a]	4.8	8.0	3.4	4.8	1.1	–1.0	–1.4	4.0
Total uses	4.0	7.7	4.6	9.3	–2.1	–1.1	0.3	6.7

[a] Excluding defense imports.
[b] From 1996 tourism exports do not include foreign workers.
SOURCE: Based on Central Bureau of Statistics data.

2. AGGREGATE SUPPLY AND DEMAND AND THEIR COMPONENTS

a. Demand

Domestic demand grew after declining for two years, as a result of increases in private consumption and gross domestic investment.

Domestic demand expanded by 3.9 percent in 2004, after declining for two years in succession. The factors leading to this rise were private consumption and gross domestic investment, while expenditure on public consumption fell, for the second consecutive year. Despite the admirable increase in domestic demand, the CPI remained stable. This was the result of the output gap and the composition of domestic uses: durable goods consumption and inventory investment rose markedly in 2004, as did uses in which the import element is high, so that imports soared.

Private consumption rose steeply in 2004, thereby contributing to the increase in disposable income and improvement in consumers' expectations.

Private consumption rose by a notable 5.7 percent in 2004, contributing 2 percent to GDP growth. Current consumption grew by 4.5 percent, while consumption of durable goods went up by a steep 19.8 percent, mainly as a result of the sharp rise in purchases of passenger cars.

The expansion of private consumption was due to several factors, foremost among them the 5.2 percent increase in wage income due to the rise in both employment and the average wage, and the 6.4 percent increase in the real value of the public's financial assets portfolio, resulting mainly from the rise in share prices. These changes were partly offset by the decline in total transfer payments (Table A.1.9). All in all, current disposable income from wages and transfer payments increased by 3.1 percent, and income from all sources (including capital income and transfers from abroad, which rose sharply in 2004) grew by 4.7 percent. The main reason for the rise in disposable income was the expansion of economic activity, bolstered by the lowering of direct tax rates.

There was a marked improvement in 2004 in consumers' expectations regarding their situation in the future, as is indicated by consumer surveys (see the accompanying Research Department volume, *The Economy: Developments and Policies*). Nevertheless, it cannot be stated unequivocally that this served to increase private consumption beyond its effect on net financial wealth. Whereas the private saving rate from all sources fell to 26.8 percent, a development which is in line with the improvement in expectations for the future, this is the outcome of the sharp increase in consumption of durable goods, and hence the adjusted saving rate[9] rose by 0.2 percentage points, apparently due to consumption smoothing. Although the saving rate, which reached its nadir in 2002, began to rise in 2003 (whichever way it is defined), it has remained lower than in the past (Figure 1.8), and this development is consistent with an improvement in individuals' expectations.

Additional developments which served to increase private consumption were the reduction of VAT during the year and the lower interest rate, which had both a direct and an indirect effect on the value of wealth. The composition of the expansion of private consumption indicates that it was not uniform: there was a sharp 19.8 percent rise in purchases of durable goods, an 8.7 percent increase in purchases abroad by

[9] In the adjusted calculation private consumption was replaced by the standard of living, which is defined as private consumption less durable goods consumption plus an estimate of imputed services derived from the stock of durable goods.

residents, and a 7.5 percent rise in services consumption—all items which primarily characterize the more established socioeconomic groups.

Current transfer payments, which constitute a significant part of the income of the weaker segments of the population, were reduced considerably in 2004. Since the marginal propensity to consume of these population groups is high, this change served to reduce private consumption by half a percentage point.

Gross domestic investment soared, but fixed investment declined.

Gross domestic investment was up by 6.4 percent in 2004, with considerable variance in the development of its components. Fixed investment dipped by 1.7 percent despite the growth of GDP, the reduction of the risk premium, and the lower cost of raising capital, both from bank credit and from nonbank sources such as the capital market, a development which seems to be out of step with the economic recovery. However, an examination of the composition of this investment shows that investment in machinery and equipment went up by 6.3 percent, so that the decline was the result of the 15.3 percent fall in investment in nonresidential structures because of marked excess supply and the 5.9 percent contraction of investment in housing. The decline in fixed investment in 2004 may be explained inter alia by the capital stock/GDP ratio, which rose steeply during the recession relative to its long-term level (Table A.1.10), as well as by the low utilization of capital stock, which fell continuously in 2002 and 2003.[10] The rate of investment in structures returned in effect to its long-term level, while the rate of investment in machinery and equipment was higher than in the past (Figure 1.5).

Most of the increase in investment is explained by the change in inventory, and particularly by the high level of investment in start-ups, which is recorded as investment in the inventory of these firms. The increase in this item relative to 2003 attests to the continued recovery trend of the high-tech industry, and since this industry is human-capital-intensive, and much of the investment in it is directed to wage payments, this item made a significant contribution to GDP.

The increase in manufacturing inventories, after declining for three years, may be explained by the expansion of manufacturing activity, as well as by the relatively low cost of maintaining inventory, due to the lower interest rate. Nonetheless, investment in inventory made only a slight contribution to GDP growth, because of its high import component.

Investment in the infrastructure (transport, communications, water, and electricity) by both the private and the public sectors went down by 14.4 percent in 2004 because of the sharp drop in investment in roads and the electricity infrastructure. Investment in transport and communications without roads rose by 7.3 percent as a result of the continued high growth rate of railroad investment (see section on the infrastructure).

Fiscal policy was contractionary in 2004, and was expressed in a decline in both public domestic consumption and public-services employment.

Domestic public consumption: in 2004 fiscal policy was tight, and was expressed in the 1.3 percent decline in domestic public consumption, and the 0.6 percent dip in the number of public-service employees. The reduction in public consumption was comprised of a decline in civilian consumption and a sharp drop for the second year

[10] In manufacturing, transport, and communications; source: Bank of Israel, Companies Survey, 2004: IV.

in succession in defense consumption, also made possible by the improvement in the security situation. Most of the 2004 budget deficit, which was 3.9 percent of GDP, is explained by the business cycle (see Chapter 3).

This reduction would appear to have acted in the short run to depress economic activity, but it seems also to have had expansionary effects on both the supply and the demand sides, via its impact on Israel's risk premium, on the real interest rate, and on individuals' expectations regarding their future disposable income. Hence, it is difficult to determine what was the overall effect of policy on economic activity.[11] Expenditure cuts were implemented while reducing tax rates and the number of employees in the public sector, changes which serve to boost the supply side and the rise in potential GDP, making it possible to pursue expansionary monetary policy, which supports private consumption, investment, and exports via its effect on the real exchange rate.

The decline in the share of public consumption just when economic activity expanded, as well as the attainment of the deficit target, served to enhance the credibility of fiscal policy. Furthermore, in and after 2005 the fiscal target is also defined by means of limiting the rise in government expenditure, not merely via the deficit target (at the planning stage). This change facilitates the preservation of the cuts and tax-reductions, as increasing taxes will not help to meet the expenditure target,[12] and it will not be possible to cancel the cuts without deviating from the target. This bolsters the expansionary effect of policy in the short term, by creating optimistic expectations regarding future income, and these in turn stimulate private consumption.

The debt/GDP ratio remained at a high level of over 100 percent of GDP, which could have had an adverse effect—both direct and indirect—on investment. However, this was not reflected in the interest rates, because of the decline in the risk premium and expectations of a reduction in the debt/GDP ratio in the near future, derived from the long-term implications of the changes in the public expenditure policy. The contraction of the deficit and the way it was financed in 2004 enabled the government to reduce the extent of borrowing from the public, serving to lower the real interest rate and free up capital sources for the business sector.

Exports were affected primarily by developments in the global economy and by the relatively favorable level of the real exchange rate.

Exports were affected primarily by developments in the global economy, which expanded by a notable 5 percent, as a result of high growth rates in the US, Japan, China, and the UK, and a lower rate in continental Europe. The high growth rate was accompanied by a marked increase in global trade, which rose by 9 percent. Although this rally was concentrated in the high-tech industries of the developed countries, all the components of exports expanded. One of the factors which had a beneficial effect on the exports of the traditional industries was the relatively favorable level of the real exchange rate.

The most rapid growth rate was recorded in tourism services exports. Although the level of activity in the industry in 2004 was lower than in the past, so that the contribution to GDP of a rise of this kind is small, its expansion indicates more than

[11] For a more detailed analysis of the effect of fiscal policy on the supply side see, Bank of Israel, Annual Report, 1998 (Box 2.2) and 1999 (Box 5.1).

[12] For a more detailed explanation of the new fiscal target, see Box 3.14 in Chapter 3.

anything else that the security situation has improved, and this may have had an indirect effect on the other components of exports. Alongside the rapid expansion of the exports of the high-tech industry, 17 percent, their market share in the US also rose (see section on manufacturing), attesting to their improved competitiveness.

Table 1.3
Contribution of Changes in Uses to Change in GDP, 2001–2004

(percent of GDP)

	2001	2002	2003	2004
GDP	–0.9	–0.7	1.3	4.3
Derived GDP[a]	–1.3	–0.9	0.6	5.4
Total domestic uses	1.3	0.4	–0.5	2.2
Private consumption	1.2	0.6	0.6	2.4
of which Excl. durables	1.5	0.8	0.6	1.8
Public consumption	0.6	1.1	–0.2	–0.3
of which Public civilian consumption	0.6	0.4	0.1	–0.3
Gross domestic investment	–0.6	–1.3	–0.9	0.1
of which Nonresidential investment excl. ships and aircraft	–0.2	–0.8	–0.4	–0.0
Residential investment	–0.2	–0.0	–0.2	–0.2
Exports	–2.6	–1.3	1.1	3.2
of which Goods exports	–1.0	–0.8	0.6	2.2
of which Manufactured exports excl. diamonds	–0.9	–0.9	0.6	2.2
Service exports	–1.6	–0.4	0.5	1.0
of which Tourism	–1.3	–0.3	0.0	0.3

[a] The total contributions of domestic uses minus imports, according to input-output coefficients of 1995. Discrepancies may arise due to rounding from the coefficients. The difference between GDP and derived GDP arises because of the deviation of the actual added value.

SOURCE: Based on Central Bureau of Statistics data.

b. Business-sector product

Business-sector product rose faster than factor inputs this year, so that labor productivity and TFP grew markedly.

Business-sector product rose by a steep 6.1 percent in 2004, after a cumulative 5 percent decline in 2001 and 2002 and a 1.7 percent increase in 2003. The increase in business-sector product exceeded that in factor inputs, so that labor productivity and TFP rose considerably in 2004, completely offsetting the decline of the previous years. Most of the increase in productivity is explained by cyclical factors, including the greater utilization of capital and labor due to changes in demand. This is indicated by the sharp rise in the net return on capital, which went up from 5.9 percent in 2003 to 13.6 percent in 2004, and a sharp 4.7 percent drop in unit labor cost (Table 1.5). In addition, the share in GDP of the return to labor declined in 2004, and the share of capital rose for the third year in succession.[13]

An examination of the development of TFP over time indicates that the state of the economy has deteriorated.

An examination of the development of TFP over time reveals that the state of the economy has deteriorated. In the 1990s productivity rose at an annual average of

[13] The rate of return to labor in GDP is relatively stable, and the changes in it are solely cyclical, supporting the calculation of TFP based on the production function with constant coefficients.

Table 1.4
Developments During the Year, 2002–2004

(seasonally adjusted, quarterly rates of change, in annual terms)

	During year			2002				2003				2004			
	2002	2003	2004	I	II	III	IV	I	II	III	IV	I	II	III	IV
Sources and uses															
GDP	0.8	1.4	4.0	1.4	–1.3	2.8	0.4	3.0	–0.6	2.1	1.0	3.4	4.4	3.4	4.8
Business-sector product	0.0	2.0	5.6	0.1	–3.1	3.0	0.1	4.3	–0.1	2.2	1.9	4.5	5.7	4.8	7.5
Private consumption	0.5	3.6	6.5	1.5	2.4	–4.7	3.1	–7.2	12.9	8.6	1.1	6.1	3.3	3.2	14.0
of which: Excl. durables	1.2	2.9	5.0	1.4	1.4	–0.5	2.4	–6.0	10.9	4.7	2.7	4.7	2.3	3.4	9.8
Public consumption	2.8	–4.4	–1.3	4.8	0.5	3.3	2.6	–2.2	–11.6	3.1	–6.3	2.0	0.6	–2.7	–4.9
Fixed investment	–2.2	–5.7	3.0	–3.1	10.8	–11.6	–3.7	–3.1	–2.8	–11.6	–5.2	6.8	–8.8	0.6	14.7
of which: Nonresidential	–2.4	–6.4	7.3	–2.8	14.8	–16.7	–2.3	–2.3	0.0	–14.7	–7.7	12.6	–7.5	0.1	27.3
Residential	–1.5	–3.0	–9.2	–0.5	2.3	–2.5	–5.2	–1.1	–10.8	–9.8	11.1	–5.6	–13.9	–8.1	–9.0
Exports[a]	4.2	7.9	13.0	–2.7	10.2	2.2	7.8	3.1	–3.0	31.7	2.8	34.7	12.2	2.3	5.7
of which: Excl. diamonds	2.2	7.5	13.7	–9.8	2.0	6.2	11.8	3.0	–8.9	37.4	3.7	35.0	17.0	3.9	1.9
Tourism exports	–12.0	44.0	1.4	–9.0	–27.7	3.6	–12.0	–12.9	–19.7	147.1	148.9	12.3	29.0	–3.5	–24.4
Goods exports	3.8	7.1	13.0	2.3	8.0	–0.3	5.4	1.3	0.1	19.6	8.5	34.6	7.8	1.2	11.1
Uses	0.8	1.2	6.9	0.6	1.9	–0.3	0.9	–3.8	0.3	11.6	–2.6	9.8	5.9	5.8	6.1
Imports	1.2	1.3	12.7	4.4	7.5	–5.0	–1.8	–14.9	3.3	21.3	–1.3	27.6	7.7	12.3	4.7
of which Defense imports, ships and aircraft	–5.0	3.4	14.4	0.3	–6.2	–5.7	–8.2	–9.3	8.9	19.3	–3.0	31.9	14.6	–0.6	14.0
Domestic uses	–0.1	–0.8	4.6	3.7	–2.7	1.3	–2.6	–4.3	1.5	5.9	–6.0	3.7	2.8	7.6	4.5
Unemployment rate[b]	–	–	–	10.5	10.2	10.4	10.3	10.7	10.5	10.9	10.9	10.7	10.5	10.2	10.0
Average hours worked by Israelis in business sector[c]	–	–	–	9.5	–0.6	–0.3	5.2	–6.4	–1.2	5.7	–7.1	3.1	–4.1	–3.1	–1.1
Manufacturing production index	0.9	1.8	5.3	1.7	5.8	–4.3	–0.9	–1.7	–2.1	1.1	11.5	10.5	4.3	6.3	8.3
State-of-economy index	–3.0	1.5	5.2	–1.7	–3.6	–3.3	–3.2	–2.7	–1.3	2.2	4.4	7.1	5.9	4.2	5.0

[a] Excluding receipts from factors of production abroad and public-sector interest receipts from abroad.
[b] These data refer to levels, not to rates of change.
[c] Quarterly data based on National Accounts data and Labor Force Survey of Central Bureau of Statistics.
SOURCE: Based on Central Bureau of Statistics data.

only 0.6 percent (Table 1.5). A comparison of per capita GDP in Israel with that in the OECD countries and the US shows that it has been declining for eight years in succession (Figure 1.10). Since Israel is characterized by a high rate of exports, the tradable industries do not appear to be suffering from low TFP, so that the source of the problem must lie in stagnation in the production technology of the nontradable industries.[14]

The labor supply expanded by 2.3 percent and was influenced by several opposing forces. The policy of reducing the number of foreign workers continued, and this went down by 10 percent. The working-age population rose by a relatively low rate in 2004, less than 2 percent, but the labor supply grew by more as a result of the increase in the labor-force participation rate. This stemmed from the greater probability of finding work, the long-term upward trend in women's participation rate, and policy factors, primarily the cuts in unemployment benefits. Policy also acted to replace foreign workers with Israelis by reducing the number of foreign workers, and to a lesser extent by raising the cost of employing them. In addition to the changes in the labor supply in general, the supply of labor to the business sector was also affected positively by the cessation of the employment of additional workers in the public sector, as well as by the reduction of the number of persons employed in it. Because of the expanded labor supply, alongside the rise in the demand for labor, the high unemployment rate, and erosion of the minimum wage in real terms (relative to the average wage), the increase in the average wage was lower than that in labor productivity, and unit labor cost fell sharply, by 4.7 percent.

In spite of the low investment rate in 2003, gross capital stock in the business sector rose by 2.9 percent in 2004, but more importantly, utilization of existing capital stock increased markedly, as is indicated by the continuous rise in the rate of utilization of machinery and equipment during the year.[15] The capital/worker ratio rose, but by a very low rate (Figure 1.2). The infrastructure capital stock/GDP ratio has risen in recent years, and this has had a positive effect on TFP. Infrastructure capital stock at the beginning of 2004 was up by 4.8 percent over its level at the beginning of 2003.

Firms' financing costs declined in 2004: weighted ex post interest on loans, whether CPI-indexed, unindexed, or foreign-currency-indexed, fell markedly, as did the cost of raising capital on the stock exchange. These changes contributed to the improvement in profitability (Table 1.5).

Despite the reduction of the interest rate, total bank credit to firms did not increase. This may attest to firms' supply-side difficulties, such as regulatory restrictions, or to a rise in the price of bank credit relative to the cost of raising capital on the stock market. The extent of capital raised in the capital market by means of bonds and shares rose sharply in 2004. Capital raised by hedge funds, which serves as another source, and sometimes the main one, of finance for the activity of the high-tech industry, also grew

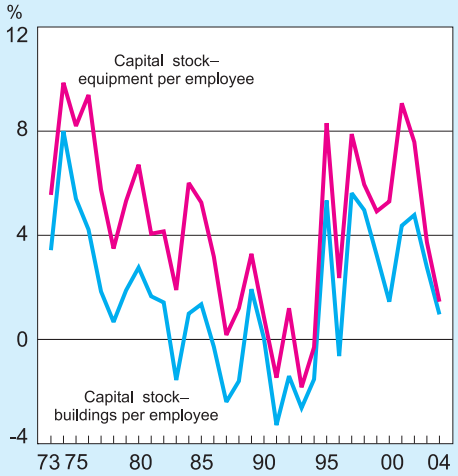
[14] Construction is an example of industry which is lagging behind technologically (see Bank of Israel, Annual Report 2003).

[15] In manufacturing, transport, and communications. Source: Bank of Israel, Companies Survey, 2004:IV.

sharply,[16] The financing constraint reported in the Bank of Israel's Companies Survey declined in the course of the year.

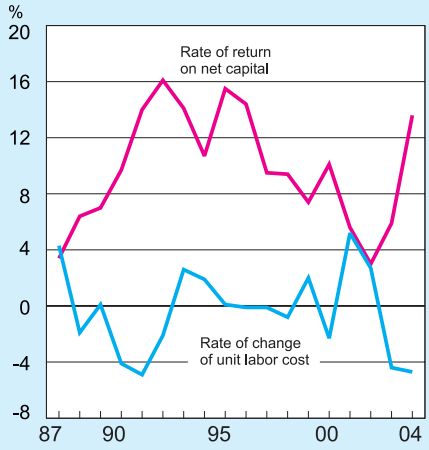
The direct tax rate was reduced in 2004; corporation tax went down to 35 percent, and is expected to continue to decline gradually until it reaches 30 percent in 2007; income tax rates also went down, and here, too, further reductions are planned for the future (see Chapter 3). Empirical studies have found that the reduction of tax rates has an expansionary effect on the supply side by increasing labor inputs, both indirectly and via a rise in TFP.

Figure 1.2
Capital per Employee in the Business Sector, 1973–2004
(volume change)



SOURCE: Based on Central Bureau of Statistics data.

Figure 1.3
Business Sector: Rate of Return on Net Capital,[a] and Rate of Change of Unit Labor Cost, 1987–2004



[a] Excluding roads.

SOURCE: Based on Central Bureau of Statistics data.

Israel's terms of trade worsened in 2004, partly because of the steep rise in the price of crude oil, although its impact on real economic activity appears to have been slight.

The effect of the terms of trade on economic activity: Israel's terms of trade worsened in 2004, in part because of the steep rise in crude oil prices, although the effect of this on real economic activity appears to have been slight. On the supply side, the principal direct impact was on manufacturing, where energy requirements are higher than in the services (except for transport). However, manufacturing industry accounts for only 25 percent of business-sector product, and the share of industries with a high rate of energy consumption (e.g., iron, paper, and cement) in total manufacturing is lower than it was in the past.

Thanks to changes in the structure of the economy, greater efficiency in electricity generation, and technological improvements which have reduced cars' fuel consumption, the share of energy imports in national income fell from 5 percent in 1975 to 2 percent in 1999. In contrast with the second energy crisis in 1980, when the share of imports almost doubled and reached 9 percent (Figure 1.9), in 2004 the price

[16] In 2004 these funds invested $ 1.4 billion in the high-tech industry, up by 40 percent over 2003. Investment in the inventory of start-ups in 2004 amounted to $ 2 billion.

Table 1.5
Supply of Business-Sector Product, 1986–2004

(volume rate of change, percent)

	1986–89	1990–95	1996–99	2000	2001	2002	2003	2004
Gross capital stock	2.4	4.7	9.7	7.8	7.1	5.6	3.9	2.9
Labor input[a]	2.0	7.0	4.4	4.6	–2.0	0.1	0.4	1.1
Civilian labor force plus foreign workers[b]	2.2	5.0	4.8	3.5	0.7	0.2	1.8	2.3
Total factor productivity[c]	2.4	1.3	–1.9	4.4	–3.3	–4.4	0.2	4.3
Rate of return on net capital (%)	5.4	13.3	10.1	10.1	5.6	3.0	5.9	13.6
Road capital stock per factor input unit[d]	1.0	–0.3	0.9	–0.6	4.6	4.9	4.7	3.4
Share of tax on non-wage income (%)[e]	31.8	25.5	21.9	24.2	24.0	21.3	19.9	20.9
Real yield on 10-year bonds (%)[f]	4.1	3.0	4.7	5.5	4.9	5.2	4.9	4.2
Average real ex post interest (%)[g,h]		6.1	10.7	10.1	7.1	8.8	11.9	6.6
Real ex post interest on unindexed credit (%)[h]		7.3	11.7	13.2	7.0	4.9	14.1	6.5
of which Real ex post overdraft interest (%)[h]		8.3	13.5	16.1	8.6	0.6	8.9	6.2
Real ex post interest on CPI-indexed credit (%)[h]		4.2	2.3	7.0	6.1	5.6	6.4	5.5
Real ex post interest on foreign-currency- indexed credit (%)[h]		2.0	8.8	1.5	7.1	15.5	7.4	4.8
Unit labor cost	3.1	–1.1	0.3	–2.3	5.2	2.7	–4.4	–4.7
Return to labor in the business sector[i]			70.5	70.0	72.4	71.6	68.5	66.1

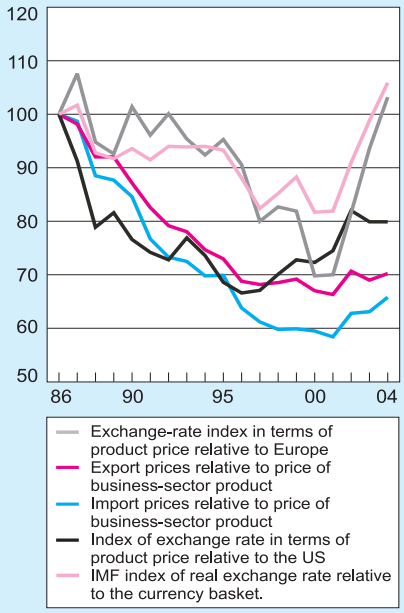
	1970–1961	1980–1970	1990–1980	2000–1990	2004–2000
Total factor productivity	4.8	2.5	2.1	0.5	0.2

[a] See notes to table 1.A.1.15.
[b] The labor force plus the labor inputs of Palestinian and foreign workers, in accordance with their share in the business sector.
[c] Productivity level is calculated as the residual by deducting the rise in inputs (labor and capital) from business-sector product weighted by the production function (see note d).
[d] A factor input unit is weighted at 68 percent labor and 32 percent capital.
[e] Taxes on non-wage income as share of non-wage income in business sector (including executives pay).
[f] From 1987.
[g] Weighted cost of unindexed credit, CPI-indexed credit, and foreign-currency-indexed credit; from 1993.
[h] Deflated by actual inflation.
[i] From 1997.
SOURCE: Based on Central Bureau of Statistics data.

increase was expressed in only a negligible increase in the share of imports, which went up from 3.1 percent in 2003 to 3.6 percent.

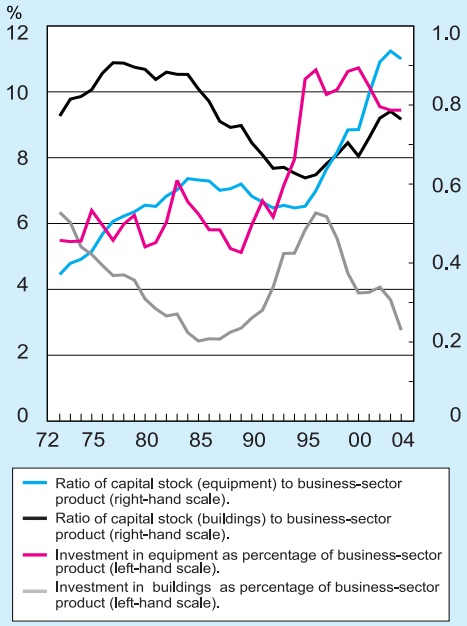
There was another reason for the moderate impact in 2004. In 2004:II Israel began to extract natural gas for the production of energy, and in the first half of the year natural gas accounted for 6.5 percent of total electricity-generation inputs,[17] compared with an insignificant rate (less than 1 percent) in previous years; this input served to produce 9 percent of the total electricity generated in the first half of the year, also attesting to the high level of efficiency of generating electricity from natural gas. As a result of the domestic production of gas, imports of crude oil for generating electricity

Figure 1.4
Price of Imports and Exports Relative to Price of Business-Sector Product, and the Dollar Exchange Rate Adjusted for Price of Business-Sector Product, 1986–2004 (1986=100)



SOURCE: Based on Central Bureau of Statistics and IMF data.

Figure 1.5
Composition of Ratio of Gross Capital Stock to Business-Sector Product, and Investment as Percentage of Business-Sector Product, 1972–2004



SOURCE: Based on Central Bureau of Statistics data.

plummeted in 2004, further reducing the impact of the rise in oil prices on national income.

For similar reasons the effect of the rise in oil prices on the global economy has been relatively small, so that the direct economic impact on Israel via the decline in global demand has also been limited.[18] Thus, for example, Europe's dependence on oil,

[17] In crude oil tonnes equivalent units.

[18] See: Bank of Israel, Inflation Report for the Second Half of 2004, Box 2, where the effect on prices of the rise in the price of oil is analyzed.

which is measured by the share of oil imports in national income, is half what it was in the 1970s. Today the rise in oil prices does not create uncertainty regarding inflation and apprehensions that this may cause a global price rise, as occurred in the 1970s and 1980s, because of many countries' commitment to price-stability targets. Additional explanations for the relatively low impact of oil prices on global economic activity are that these prices are largely the result of an increase in demand, so that the current price of oil is not perceived as lasting, and hence does not affect investment.[19]

Nevertheless, the deterioration in Israel's terms of trade may have a detrimental effect on demand due to the negative impact on national income, so that if oil prices had not risen private consumption and investment might have increased more.

3. DEMAND, SUPPLY, AND THE REAL EXCHANGE RATE

The level of the real exchange rate, measured by the ratio of export prices to the GDP deflator, does not appear to have deviated significantly from its long-term equilibrium level.

According to most indices, the changes in the real exchange rate in the last two years have been relatively small, so that its level is similar to what it was in 2002, when there was significant real local-currency depreciation (Figure 1.4). This level of the real exchange rate, measured from the price of exports relative to that of GDP, was not markedly different in 2004 from its long-term equilibrium level (Box 1.2), which is helpful for the tradable industries, and especially for the traditional ones, which are more sensitive to the exchange rate and to competition in the international markets. The real depreciation of 2004 was created without significant nominal depreciation against the currency basket (Table 1.6), and hence did not affect price stability.

The rise in domestic and global demand caused considerable supply-side expansion, with increased utilization of capital and labor, expressed in sharp rises in labor productivity in TFP. Although the rate of expansion of business-sector product was lower than that of demand for it, not only was there no excess demand, which generates pressure for appreciation, there was even slight depreciation, as is indicated by various indices of the real exchange rate (Figure 1.4). The main reason for the depreciation was the composition of demand, most of the increase in demand, about 10.6 percent, being directed to the tradable sector, and only 1.1 percent to the nontradable (Table A.1.8 in the statistical Appendix, available on the internet).[20]

The moderate increase in the demand for nontradables product at a time when the output gap was significant accounts for the decline in its relative price, as is reflected by indices of the real exchange rate. In addition, the depreciation may have expressed the response with a lag of business-sector product prices to the decline in the demand for nontradables product in 2003.

The rise in the relative price of exports was the outcome of the combination of higher export prices, which are determined primarily in world markets, and the decline

[19] In this context it is customary to note the sharp rise in China's demand for oil.

[20] The division of product into tradables and nontradables is somewhat outdated, and does not reflect the fact that industries such as the services became far more tradable in the 1990s than they were in the past.

Table 1.6
The Real Exchange Rate and World Trade, 1986–2004

(rate of change, percent)

	1986–89	1990–95	1996	1997	1998	1999	2000	2001	2002	2003	2004
Real exchange rate (export terms)[a]	–5.1	–3.8	–5.7	–2.8	0.5	1.0	–3.1	–1.1	6.6	–2.4	1.8
Real exchange rate (import terms)[b]	–6.8	–3.7	–8.8	–6.6	–2.4	0.3	–0.8	–1.8	7.5	0.5	4.7
Exchange rate in terms of imports excluding fuel, ships and aircraft	–5.4	–3.5	–9.7	–6.4	–0.7	–0.8	–3.5	–1.1	7.5	–0.1	2.9
Exchange rate adjusted by GDP deflator vis-à-vis US	–8.5	–2.9	–3.0	0.7	4.6	3.8	–0.7	3.1	10.0	–2.6	0.0
Exchange rate in terms of GDP prices relative to Europe[c]	1.7	0.5	–4.9	–11.7	3.4	–1.0	–14.8	0.3	16.6	14.7	10.2
Nominal exchange rate vis-à-vis currency basket	16.9	9.6	3.5	4.3	9.6	8.3	–4.7	1.4	14.2	1.2	2.2
Real exchange rate relative to basket[d]	–1.5	0.3	–5.5	–6.5	3.4	3.6	–7.5	0.2	11.2	8.5	7.2
Terms of trade[e]	1.8	–0.1	3.3	4.1	3.0	0.6	–2.4	0.7	–0.9	–2.9	–2.7
World trade, volume growth	6.4	5.9	7.1	10.5	4.4	5.9	12.5	0.2	3.3	5.1	8.8
World export prices	5.8	2.3	–1.8	–6.3	–5.6	–1.6	–3.9	–3.6	0.3	10.0	–
World import prices	2.7	2.2	–1.2	–5.4	–6.4	–2.0	0.2	–3.6	–0.7	9.1	–

[a] Ratio of export prices (excluding diamonds) to business-sector product prices (including housing services).
[b] Ratio of import prices (excluding diamonds) to business-sector product prices (including housing services).
[c] Members of the European Monetary Union.
[d] Calculated by the IMF by weighting the CPIs of the different countries according to the extent of their trade with Israel.
[e] Ratio of export prices (excluding diamonds) to import prices (excluding diamonds).
SOURCE: IMF, IFS, US Dept. of Commerce, Bureau of Economic Analysis, and based on Central Bureau of Statistics data.

in the price of business-sector product. Several short-term factors contributed to this: the output gap, which served to reduce prices; the deterioration in the terms of trade, which had an adverse effect on national income at the margin; the decline in demand for the product of the construction industry, which is particularly nontradable; and policy factors—the contraction of domestic public consumption and the lower interest rate—which also acted to generate real depreciation (see Box 1.2).

The rise in the relative price of exports was the result of the combination of an increase in export prices, which are determined primarily in the global market, and a decline in the price of business-sector product.

The real exchange rate against the dollar, i.e., the nominal exchange rate multiplied by the GDP deflator in the US and divided by the GDP deflator in Israel, remained unchanged despite the appreciation of the dollar. This is the result of the flexibility of the GDP deflator, so that nominal rigidities are not necessarily activated by economic forces, even in the short term. As a result of the change in cross rates between the euro and the dollar, real depreciation vis-à-vis the euro was very high (Table 1.6), and this may have been behind the increase in goods exports to Europe in 2004, especially in the second half of the year, when it outstripped the rise in exports to the US.

The slight real depreciation of 2004 slightly offset the real appreciation of 2003, so that the average level of the exchange rate in 2004 was similar to that in 2002, when there was significant real depreciation. As a result of the existence of long-term equilibrium ties between the levels of imports, exports, and the exchange rate, the level of the exchange rate has marked implications for both exports and imports. In fact, in 2004 exports expanded handsomely, and the fact that this encompassed all industries, including traditional technology ones, provides further evidence of the rise in global demand, explaining most of the rise in exports, even to a level where the real exchange rate has a positive effect on their development.

Due to the existence of long-term equilibrium relations between the levels of imports, exports, and the exchange rate, the level of the exchange rate has significant implications for both exports and imports.

The effect of the exchange rate on imports, which soared in 2004, appears to have been slighter, for several reasons. First, about half of total imports are of raw materials, which are also used to manufacture exports, so that an immediate positive relation is established between imports and exports. Second, several import-intensive uses which do not compete with domestic production rose in 2004; these include investment in machinery, equipment, and transport vehicles, and consumption of durable goods. Civilian imports expanded by a steep 13.1 percent in 2004, approaching the rate of increase of exports. In the long term the elasticity of imports and exports to exchange-rate movements are similar in absolute terms (see Box 1.2). The steep rise in imports was also affected by several short-term factors, such as inventory adjustment, which had plummeted in the last few years.

In spite of the similar growth rates of imports and exports in 2004, the level of the exchange rate created forces for equilibrium in the balance of trade, as is evinced by the fact that the civilian import surplus as a percentage of total income continued to decline in 2004, too, and its level, which was 2 percent, was the lowest in the last forty years. These forces made Israel's exports more competitive, and this was also expressed in the sharp decline in unit labor cost.

4. SAVING, INVESTMENT, AND THE CURRENT ACCOUNT

The expansion of gross domestic investment was fully financed by the rise in the national saving rate, so that the current account remained slightly in surplus for the second successive year.

The rise in gross domestic investment in 2004 was financed in full by the increase in national saving, so that the current account was slightly in surplus for the second year in succession. This development was the continuation of the trend that had begun in 1998, with saving and investment moving in tandem, and the difference between them continually narrowing until it was completely cancelled out in the last two years (Figure 1.6). The similar paths of saving and investment (a situation that generally characterizes closed economies) raises questions about the relative importance of capital flows. Below we will discuss their decisive effect on the present and future development of the current account.

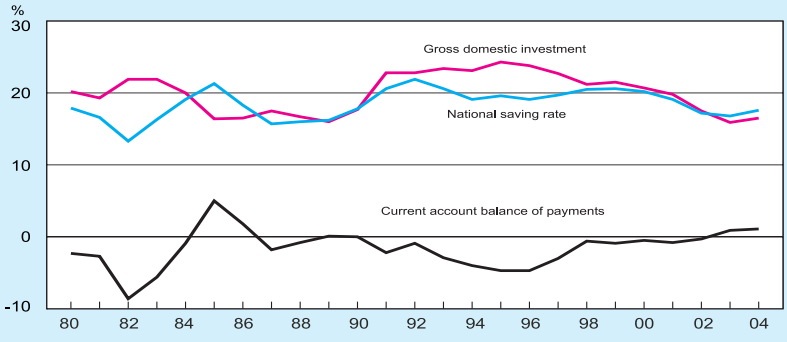
The forces which operated in 2004 on developments in the current account were GDP growth and the improvement in economic expectations, which served to create a deficit, as well as the output gap and tight fiscal policy, which acted to moderate these forces. The rise in demand did not generate excess import demand, and the contraction of the budget deficit eased the pressure to create a deficit in the current account at the margin.

The national saving rate rose by 0.8 percentage points in 2004 to stand at 17.6 percent of total income, alongside the characteristic substitution between private and public saving.

The national saving rate rose by 0.8 percentage points in 2004 to stand at 17.6 percent of total income, with the characteristic substitution between private and public saving (Figure 1.7). The private saving rate dipped by 0.7 percentage points, and the public saving rate rose by 1.5 percentage points.

The decline in the private saving rate was due to the improvement in consumer expectations, which may be observed directly from consumer surveys,[21] and to the rise in public saving, despite the reduction in direct and indirect taxation, as a result of the contraction in expenditure since mid-2003. Because of the absence of complete coordination between the private saving rate and the increase in public saving, the national saving rate rose during the year when expectations were that the economic recovery would persist.

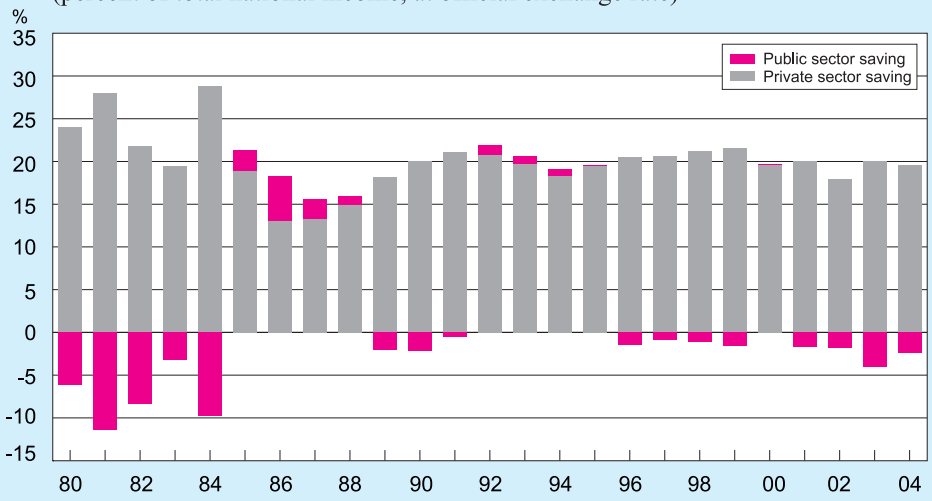
Figure 1.6
National Saving Rate, Gross Domestic Investment, and Current Account Balance of Payments, 1980–2004
(percent of total national income, at official exchange rate)



SOURCE: Based on Central Bureau of Statistics data.

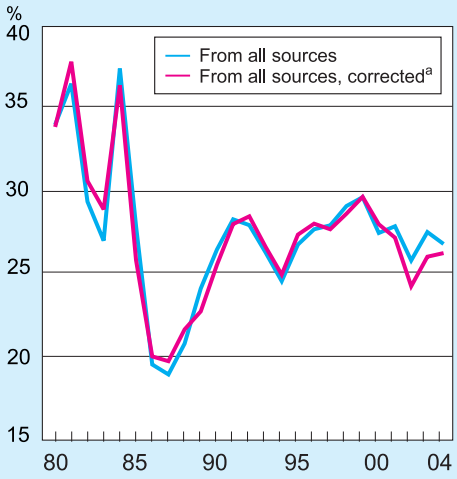
[21] In 2004 there was an improvement of 15 percent on average in three indices of consumer expectations, those of Yedioth Aharonoth, Ma'ariv, and Globes.

Figure 1.7
Gross National Saving Rate, by Sector, 1980–2004
(percent of total national income, at official exchange rate)



SOURCE: Based on Central Bureau of Statistics data.

Figure 1.8
Saving Rate of Private Disposable Income, 1980–2004



[a] In calculating the corrected saving rate, private consumption is replaced by the standard of living. The standard of living is defined as private consumption *minus* purchases of durables *plus* the estimated value of services deriving from the stock of durables.

SOURCE: Based on Central Bureau of Statistics data.

The investment rate in the principal industries continued to fall, and its level was lower than in the past.

The gross investment rate rose in 2004, but this was mainly the result of inventory renewal. The rate of investment in the principal industries continued to decline, and stood at less than 12 percent of GDP in 2004—a very low rate relative to the long-term trend, and similar to the rates in 1966 and 1967, the years of acute recession, and in the period between the ESP (Economic Stabilization Program) and the start of the influx of immigrants, 1985–90. One of the reasons for this was the significant decline in investment in structures, especially nonresidential ones which, according to the decline in the area of building starts, is even expected to continue. The downward trend of investment in housing, which began in 1995, has persisted, and is currently below the rate of population increase. Total infrastructure investment by both the private and the public sectors was down by 14.4 percent, as a result of the fall in investment in the roads and electricity infrastructure. Total transport infrastructure investment rose due to extensive railroad

investment, and investment in machinery and transport equipment increased by 9.1 percent (see section on the infrastructure).

Long-term trends in the current account and the financial account

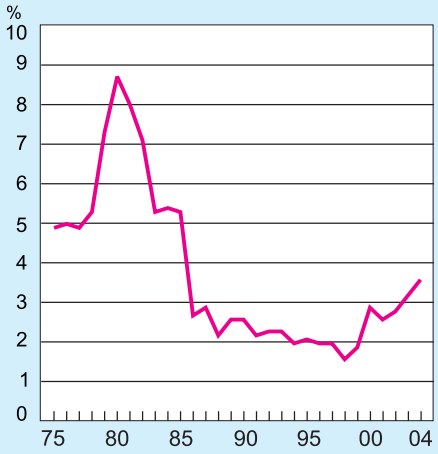
In the last two years a small surplus has been created in the current account of the balance of payments, but the deficit may increase again in the future.

In the last two years there has been a slight surplus in the current account of the balance of payments, in contrast with most of the years since Israel came into existence, when there has been a large deficit. Concurrently, Israel's (net) external debt has displayed a steadily declining trend since 1996, and reached zero in 2001, since when the debt has been negative (meaning that Israel's assets in foreign debt instruments exceeded its gross external debt); the negative debt at the end of 2004:III is estimated at $ 10 billion.

These developments would appear to indicate that the process of convergence of the current account deficit has come to an end, but the deficit may grow again in the future, for several reasons.

First, the balance in the current account is still achieved by means of extensive unilateral transfers, comprising over $ 6 billion. Some of the transfers, such as US civilian aid and restitution payments from Germany, are expected to shrink in the next few years. The latter still constitute a significant component, and amounted to about 12 percent of total current transfers in 2003.

Figure 1.9
Imported Intermediates, Fuel and Lubricants, 1975–2004
(percent of all income from all sources)



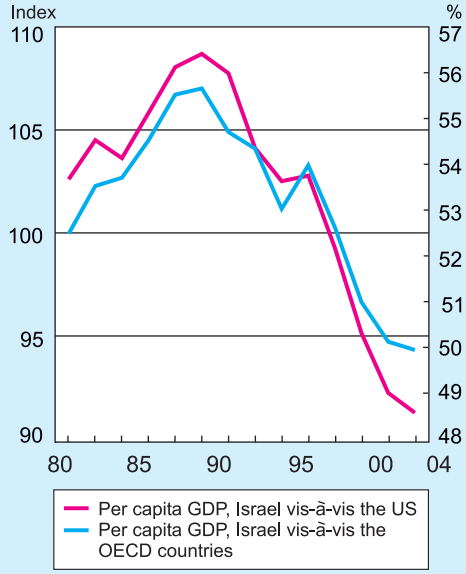
SOURCE: Based on Central Bureau of Statistics data.

Second, the balance in the current account in the last two years was, as stated, the result of the very low rate of investment in the principal industries, and does not reflect the optimum long-term investment rate. This is indicated by the continuous rise since 2000 in the average age of equipment in the business sector (Table A.1.10), and the low increase, only 1.3 percent, in net capital stock for 2005 (Table A.1.13), which will apparently lead to a decline in the capital/labor ratio next year.

Third, in order to finance the deficit in the current account in most years until 2002, domestic assets were sold on an ongoing basis, requiring a higher payments for factor ownership, and this will exert perpetual pressure for the creation of a future deficit in the current account. In the second half of the 1990s, when the globalization process accelerated, foreign investment in Israel rose incessantly,[22] and this trend is

[22] From $ 2.9 billion in 1995 to $ 7.3 billion in 2000; these sums do not include payments for foreign workers, which rose from $ 1.4 billion to $ 3.3 billion in that period.

Figure 1.10
Per Capita GDP, Israel, the OECD Countries, and the US, 1980–2004[a]



[a]Per capita GDP, Israel vis-à-vis the US: 2000, the data are from the Penn World Tables PWT 6.1; thereafter calculated on the basis of the real rate of change.

SOURCE: Based on Central Bureau of Statistics data.

expected to persist.[23] The sale of domestic assets was expressed in Israel's NIIP (net international investment position), which amounted to $ 30 billion.

In the last two years the current account has been in balance, so that the sale of domestic assets expresses their full substitution by assets abroad and does not serve to finance consumption or domestic investment. The reason for the rise in the debt of the rest of the world vis-à-vis Israel is that the sale of Israel's domestic assets creates liabilities but not debt, e.g., shares, and replaces them with debt instruments, such as bonds and deposits. This process of replacing domestic assets with foreign ones enables Israel to better disperse risk by partially insuring against two kinds of real shock—domestic shocks, which are not connected with shocks in the global economy, e.g., the Intifada, and global shocks in industries in which Israel specializes, such as the drop in demand for high-tech products in 2000. The importance of risk dispersal of this kind increases as the economy becomes more specialized.

The replacement of liabilities by debt instruments immunizes the economy to some extent against financial crises deriving from difficulties in financing the debt in the short run, by getting foreign investors to share the losses incurred as a result of a crisis of this kind, should it occur. This process appears also to be affected by the changes in the government's policy regarding the capital market, which included the gradual lowering of restrictions on investment abroad by institutional entities (mutual, provident, and pension funds). The termination of the issuance of earmarked bonds, so that their share in the asset portfolio declines to the proportion set by the government,[24] will also act to continue this trend.

[23] Since 2000 the payments have declined because of the recession. The cyclical volatility of this component is very strong, because it incorporates components whose elasticity to the business cycle is great, such as dividends.

[24] In March 2003 the government decided to cease issuing earmarked bonds for pension funds in deficit, for which a special administrator was appointed, and for the new pension funds, until they accounted for only 30 percent of their holdings. They accounted for 90 and 68 percent of the holdings of the veteran and new funds respectively. See also Ministry of Finance, Capital Market Department, Annual Report of the Commissioner of the Capital Market, Insurance, and Savings, 2003.

As a result of this process Israel's net external debt does not reflect the extent of domestic factor inputs which are foreign-owned or the extent of current and future payments resulting from this ownership: payments against foreign investments[25] amounted to $ 4 billion in 2004, while income from factor inputs was only $ 2 billion.[26] The difference derived from Israel's net foreign liabilities, and the resulting pressure on the current account in the next few years will be significant.

The three reasons given above indicate that Israel is still a long way away from sustainable equilibrium in the current account of the balance of payments, and the deficits in it may recur in the near future. However, this does not represent a dangerous situation as long as the deficits are sustainable.

5. THE PRINCIPAL INDUSTRIES

1. Main developments

The recovery trend was evident in most of the principal industries—manufacturing, commerce and services, business services, transport and communications.

The trend of economic recovery was evident in most of the principal industries—manufacturing, commerce, and services, business services, transport and communications—and was expressed in 2004 in the rise in product and employment in them. Since the recovery was led by the rise in demand for exports, the principal beneficiaries from it were the tradable industries. Economic activity in construction fell despite the general trend of recovery.

The product of manufacturing industry, which accounts for one quarter of business-sector product, rose by a steep 6.3 percent in 2004. Most of this increase stemmed from the sharp15.5 percent rise in manufacturing exports, while domestic sales expanded by far less, only 1.4 percent. The recovery of world trade led to a marked rise in electronics exports, the leading export industry, as well as to increases in the exports of many other industries. The expansion of Israel's exports encompassed those to both developed countries (the European Union and the US) and developing countries, mainly China, India, and Turkey. The ability of Israel's exports to respond to the expansion of world trade rapidly and forcefully derived primarily from the excess capacity which had accumulated in the industry in the previous three years, when domestic and global demand for manufacturing product plummeted, and utilization of labor and capital fell considerably. As a result of the surge in global demand, utilization of labor and capital rose in 2004, and this was reflected in a steep increase in labor productivity and TFP. The rise in productivity made it possible to increase wages and entrench the profitability of manufacturers, but this was not enough to lead to a genuine increase in labor input and investment in most principal industries, with the exception of electronics.

[25] Total payments for factor inputs less the return to labor (of foreign workers); these payments include profits from direct investments, dividends, and capital gains on investments in shares.

[26] In addition to payments against foreign investments, Israel pays for labor (foreign workers); total payments were $ 2 billion in 2004, so that the overall deficit on the income account was $ 4 billion.

Table 1.7
The Principal Industries, 1996–2004

(rate of change, annual terms, constant prices)

	Industry (weights)[a]	Product	Labor input	Capital[b]	Labor productivity	Total productivity	Capital productivity[c]	Capital/labor ratio	Monthly wage per employee post[d]
					1996–2000				
Manufacturing	25.5	5.8	1.0	8.0	4.7	2.2	–2.1	7.0	4.2
Agriculture[e]	3.2	4.2	2.3	–0.2	1.9	2.9	4.4	–2.4	3.5
Transport & communications	12.9	5.0	5.2	9.1	–0.2	–1.9	–3.7	3.7	1.0
Construction	10.0	–1.2	0.7	11.9	–1.9	–3.6	–11.7	11.1	2.1
Commerce & services[f]	45.6	7.0	7.6	18.4	–0.5	–4.2	–9.6	10.1	4.1
Electricity & water	2.8	5.2	0.2	5.5	5.0	2.7	–0.2	5.2	3.7
Total business sector	100.0	5.1	4.5	9.3	0.6	–0.8	–3.8	4.6	3.6
Goods	38.7	3.9	1.0	7.2	2.8	0.9	–3.1	6.1	3.5
Services	61.3	6.5	7.1	10.6	–0.6	–1.8	–3.7	3.2	3.3
					2001–2003				
Manufacturing	24.3	–0.3	–2.7	5.2	–1.1	–0.3	–8.5	8.1	–0.4
Agriculture[e]	3.5	–1.4	–3.4	0.2	4.6	0.5	0.9	3.7	2.2
Transport & communications	13.3	2.4	–0.5	6.9	3.0	–0.5	–4.2	7.5	–2.2
Construction	7.9	–1.3	–4.9	5.1	2.3	2.0	–7.4	10.5	–0.8
Commerce & services[f]	48.0	–1.0	1.7	6.1	–3.0	–4.3	–7.0	4.4	–2.5
Electricity & water	2.9	2.1	–0.9	3.0	2.9	1.3	–0.9	3.9	–1.4
Total business sector	100.0	–0.3	–0.5	5.5	–0.6	–1.7	–6.3	6.0	–2.1
Goods	35.7	–0.6	–3.5	4.7	0.4	0.3	–7.5	8.5	–0.2
Services	64.3	–0.2	1.4	5.9	–1.7	–3.3	–6.0	4.5	–2.5
					2004				
Manufacturing	24.4	6.3	2.5	3.3	3.7	3.4	2.9	0.8	2.5
Agriculture[e]	3.5	11.6	5.9	–0.1	5.4	7.9	11.7	–5.6	–0.0
Transport & communications	14.4	8.8	1.0	2.4	7.7	7.0	6.2	1.4	–0.8
Construction	6.8	–7.1	–6.4	0.2	–0.7	–1.9	–7.3	7.1	–0.9
Commerce & services[f]	48.0	6.3	1.7	3.0	4.5	4.0	3.1	1.3	2.9
Electricity & water	2.9	0.9	6.0	4.5	–4.8	–4.2	–3.4	–1.4	0.4
Total business sector	100.0	6.1	1.1	2.9	4.9	4.3	3.1	1.8	1.9
Goods	34.7	3.9	0.1	2.9	3.7	2.8	0.9	2.8	1.9
Services	65.3	6.6	1.7	3.0	4.8	4.3	3.5	1.2	2.4

[a] Excluding imputed banking services, errors and omissions.
[b] Intangible assets are included in commerce and services; this accounts for the difference from capital in the section on commerce and services.
[c] Annual flow to stock at beginning of year (both in NIS).
[d] Not including Palestinian workers, and from 2003 not including foreign workers.
[e] Gardening is not included, and hence this figure differs from the one in the section on agriculture.
[f] Including commerce, catering and hotel services, and financial, business, and personal services.

SOURCE: Based on Central Bureau of Statistics data.

Activity in the commerce and services industries soared, continuing the recovery trend evident since mid-2003, against the backdrop of the improvement in the security situation, which caused domestic demand to expand, and the rally in global demand. The product of the industry grew by 6.3 percent, so that its share of business-sector product rose to 51.7 percent, at current prices. Exports of the industry expanded notably, after rising moderately in 2003, and employment in it increased by 2.8 percent, compared with a 2.5 increase in the business sector, although investment in this industry continued to decline moderately. The industry's product grew markedly in 2004:I, and rose gradually in the subsequent quarters.

The product of the transport industry increased by 3 percent in 2004, after declining in 2001 and 2003. Investment in the industry was up by about 11 percent, expressing a marked increase in investment in passenger cars, and its labor input grew by 1 percent. The product of the communications industry went up by some 6 percent in 2004.

The product of the construction industry declined for the seventh consecutive year.

The dip in activity in the construction industry persisted in 2004, too. The product of the industry declined for the seventh consecutive year, by 7.1 percent. All the components of the industry's output contracted: nonresidential construction output plummeted by 15.3 percent, and residential construction output fell by 5.9 percent. Alongside the contraction of activity, there was a 5.1 percent drop in employment, encompassing both Israeli and foreign workers. The slump in the industry was particularly prominent in view of the growth of the rest of the economy and the improvement in the demand fundamentals. In residential construction there were signs of a rise in demand in the Tel-Aviv conurbation, but there was stagnation in the peripheral areas, a process which was expressed in the number of housing transactions and reflected in the real prices of apartments in those areas. As regards nonresidential construction, it may be assumed that the creation of excess supply caused investment in it to decline.

Box 1.1
Israel's Output Gap: A Comparative Report

One of the major factors explaining economic developments in Israel in 2004 was the gap between actual and potential GDP (as variously defined, see below). It would seem that largely because of this the high GDP growth rate of 2004 did not create upward pressure on prices and wages, the real exchange rate, and a significant balance of payments deficit. The output gap also made it possible to implement an expansionary monetary policy without generating inflationary pressures.

What is Israel's output gap today? The difficulty in answering this question stems to a great extent from a conceptual problem: the output gap and potential GDP are latent variables, and are definable only in theory. Consequently, they can be estimated only in an imprecise way, and this underlies the critical approach which claims that it is not advisable to attach undue importance to these variables, or even to relate to them at all.[1] Another problem is that

the ex- post updating of these variables is significant, so that the uncertainty surrounding the output gap, especially the present one, is particularly great.

The conceptual difficulty associated with the output gap may be partly overcome by using various estimation methods. Because of the considerable importance of the subject for understanding economic development, in recent years the Research Department has undertaken a number of studies aimed at getting to grips with the subject. The accumulation of knowledge about the output gap, based on differing and independent methods, makes it possible to ascribe a weight to the gap in analyzing developments, despite the reservations. Below we describe in brief three methods used for estimating the output gap, and the results of using them for 2004.

In the first method[2] the output gap is identified indirectly, via its effect on inflation, simultaneously with the natural unemployment rate, employing the assumption that a positive output gap causes inflation to rise. According to this approach, potential GDP is that which does not exert pressure on prices, and a positive output gap expresses excess demand. In this method the total output gap is calculated, and it is not possible to estimate the gap for the business-sector, because the labor market—and hence the unemployment rate—is common.

In the second method[3] the potential output of the business sector is estimated directly, by means of the production function. This is derived from incremental factor inputs—labor and capital, from the rate of utilization of factor inputs, and from an assumption regarding the development of TFP, based on its average development in the past, expressing the trend of technological change. The output gap is derived from the difference between the calculation of potential GDP and that actually measured. According to this approach, potential GDP is that which would have been created if factor utilization and TFP had been equal to their average long-term values.

In the third method[4] the output gap is calculated directly by integrating the deviations of labor productivity, the number of persons employed, and capital utilization from their long-term trends.

There are two substantial differences between the approaches. First, the first method estimates the output gap indirectly as a variable that represents excess demand, while the second and third methods estimate it directly by using the development of factor inputs—capital and labor—and productivity. Second, the methods are based on various assumptions regarding the nature of the

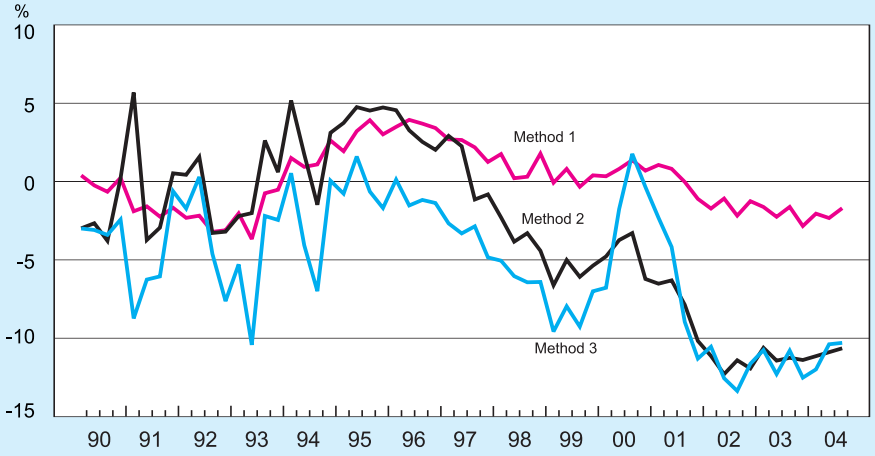
[1] J.K.Galbraith (1997), "Time to Ditch the NAIRU," Journal of Economic Perspectives, 11 (1).

[2] A. Friedman and T. Suchoy (2004), "The NAIRU in Israel: an Unobserved Components Approach," Israel Economic Review, Vol. 2 (2).

[3] A. Barnea and J. Djivre (2004), "Changes in Monetary and Exchange Rate Policies and the Transmission Mechanism in Israel: 1989:IV to 2002:I," Discussion Paper, Research Department, Bank of Israel.

[4] Y. Menashe and Y. Yachin (2003), "Mind the Gap," Israel Economic Review, Vol. 2 (2).

The Output Gap, Using Different Methods of Calculation, 1990–2004



development of potential GDP: in the first method the natural unemployment rate changes over time, while in the other two methods the assumption is that this rate remains constant over time. In conceptual terms, since the first method measures the output gap via its effect on inflation, it is particularly suited to the needs of managing monetary policy.

The quarterly output gaps from 1990 to today are presented in Figure 1. According to these indices, the output gap trend has been negative since the beginning of 1996, meaning that the economy grew at a rate that was below

The Levels of the Output Gap and its Development in the Last Recession

	Output gap 1996:I	Output gap 2004:II	Cumulative change in output gap in last recession (2000:IV–2003:III)
Method 1 (total output gap)	+3.0	–2.3	-3.5
Method 2 (business-sector product gap)	+4.7	-10.9	-5.2
Method 3 (business-sector product gap)	+0.0	-10.4	-12.1

its potential. The indices show that the high growth rate between 1999:II and 2000:II was purely a temporary deviation from the trend. Nonetheless, there are significant differences between the methods, so that the level of the output gap varies within a range of 2 percent (according to the first method) and 11 percent (according to the second method).

The first and second methods present similar levels of the output gap in 1990–96, after which they diverge significantly. The reason for this is that even though the calculation according to factor inputs attests to a high output gap, a deflationary process, which would be consistent with a gap of this kind, did not develop.

The second and third methods yield similar results regarding the present output gap, namely, that it is currently more than 10 percent of GDP, far greater than that yielded by the calculation under the first method. However, an examination of the behavior of the output gap during the recession shows that the changes in it in the first and second methods are similar, and most of the difference between them today stems from historical reasons—the level of the gap on the eve of the recession, at the end of 2000.

It is interesting to compare the output gaps that accumulated during the last recession with direct estimates of GDP lost due to the three years of the Intifada, which were in the region of a cumulative 10 percent by the end of 2003.[5] According to the first and second methods, it is possible to conclude that most of the damage attributed to the Intifada is permanent, and that part of the output gaps probably accumulated as a result of another independent shock—the global economic crisis which was caused by the fall in demand for the product of the high-tech industry. According to the third method, however, Israel's potential GDP continued to grow rapidly even during the years of the Intifada, so that most of the loss of GDP attributed to it was temporary.

The fact that three different and independent methods indicate similar trends—a negative output gap and its significant accumulation in the last recession (7 percent on average)—supports the hypothesis that the present output gap has a seminal impact on economic developments, and hence also plays a central role in understanding them.

As far as the significant differences between the methods regarding the present output gap are concerned, the first method appears to yield a gap that is too low, because it does not fully adjust for the expansionary effect of monetary policy, whereas the other two methods do not take into account the fact that as a result of structural changes in Israel's economy, including trade liberalization, parts of its physical capital stock, as well as of the labor force, are no longer effective, so that the gap that is obtained using these methods is too high. For these reasons it seems reasonable to assume that the output gap is somewhere in between.

An indirect indication of the output gap is the development of per capita GDP in Israel relative to other countries. This index shows that in 2004, too, the output gap continued to grow, because per capita GDP rose more rapidly in the US and the OECD countries than in Israel (Figure 1.10).

[5] See Bank of Israel, Annual Reports for 2001 to 2003, and also Z. Eckstein and D. Zidon (2003), "The Macroeconomic Implications of Terror: Theory and Practice in Israel" (Hebrew).

Box 1.2
The Level of the Real Exchange Rate Today

The real exchange rate, the current account, and the balance of payments are important indicators for examining a country's economic performance, especially in a small open economy such as Israel.

The level of the real exchange rate, defined as the ratio of export prices to the GDP deflator, was relatively high in 2004, in the wake of the sharp depreciation of 2002 which has been maintained to date (Figure 1.4). Although there was slight appreciation in 2003, there was depreciation in 2004, and according to some indices this was even greater than that of 2002.

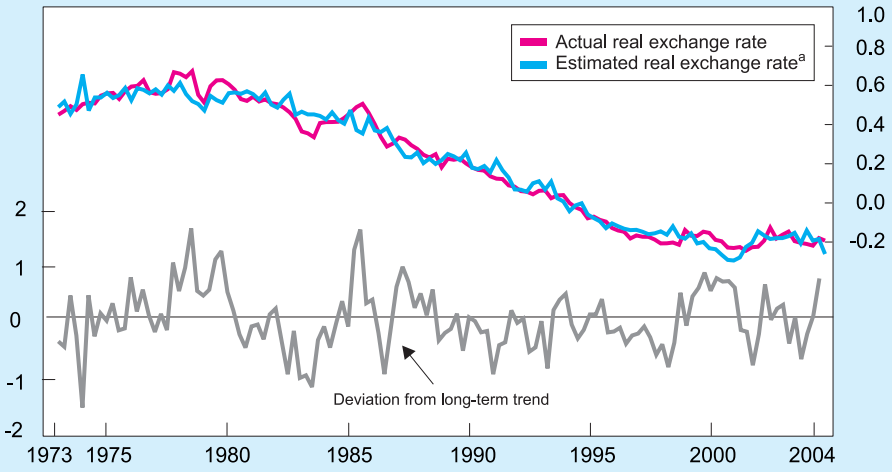
Several short-term factors—the output gap, contractionary fiscal policy, expansionary monetary policy, and the deterioration in Israel's terms of trade—as well as the asymmetric development of domestic demand, most of which was directed to tradables, served to create this depreciation (for an account of how these factors exerted an effect, see Section 3 below). However, a recent study[1] has shown that the level of the real exchange rate in the long run, measured by means of the ratio of export prices to the GDP deflator, is connected with the development of several variables, and the significance of this finding is that there is a level to which the exchange rate converges in the long run, irrespective of the effects of the short-term factors mentioned.

The study, which examined the development of the real exchange rate since the 1960s, showed that its level is associated with the technological development of the tradable industries, the rate of investment in GDP and, since the mid-1970s, the level of per capita GDP. Technological improvements in the tradable industries give rise to a trend of appreciation by having a positive impact on income and the resulting rise in demand for nontradables. It was found that the best measure of these improvements was manufacturing productivity in the US, indicating Israel's considerable openness to new technologies. The rate of GDP investment represents excess domestic demand, which tends to generate appreciation, indicating the range within which a young economy builds its capital stock. Per capita GDP represents the rise in the standard of living, most of which is directed to consumption of nontradable goods and services after a certain level. These variables explain the historical development of the real exchange rate—an inverted U shape (∩): until 1978 it was characterized by a depreciation trend, and since then by appreciation, until 2002 (see figure below).

[1] A. Friedman and Y. Lavi (2005), "The Real Exchange Rate and Israel's Foreign Trade: the Factors Determining Trends," (Hebrew, not yet published).

The fact that real depreciation was caused, as stated, by several cyclical factors, raises the question whether the real exchange rate today is in line with the factors that affect it in the long run, or whether depreciation has been excessive and is inconsistent with the underlying determinants of the exchange rate.

The Real Exchange Rate (the Relative Price of Exports), 1973–2004



[a] Using the fundamental variables.

SOURCE: Based on Central Bureau of Statistics data.

The figure shows the actual real exchange rate, as measured by the ratio of export prices to the GDP deflator, and the real exchange rate derived from the underlying factors determining its development. It can be seen that on average in 2004 the exchange rate did not deviate significantly from the long-term equilibrium level, and its slightly lower level is fully explained by the low investment rate and the current level of per capita GDP. This situation boosts the ability of Israeli exporters to compete in world markets, in contrast with the latter half of the 1990s, when there was a protracted deviation of the exchange rate (appreciation), which had a negative impact on them.