Recent Economic Developments

129

September - December 2010

Bank of Israel
Research
Department

Jerusalem, February 2011

Catalogue # 3077510129/5
http://www.bankisrael.gov.il
Printed in Israel by Ayalon Press, Jerusalem

Part 1: Review of Recent Economic Developments, September to December 2010*

Main developments

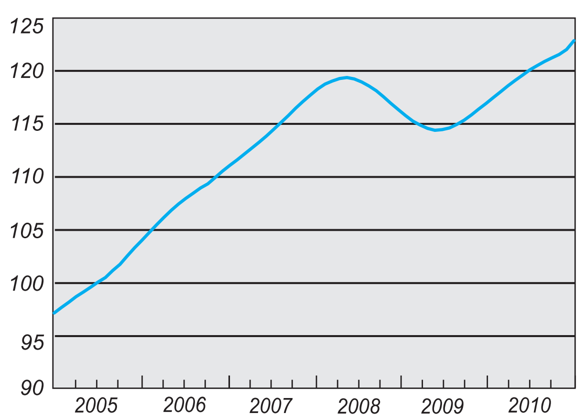
In the period reviewed, the four months September–December 2010, Israel's economy continued to grow. The output gap almost closed, the labor market approached a full employment situation, and investment, which had declined during the crisis, increased at an impressive rate. The recovery in some of the leading economies around the world—the US and many European countries—was slower than that in Israel.

The improved economic situation was reflected in the 7.8 percent annualized GDP growth rate in the fourth quarter of 2010 (and the 8.9 percent growth of business sector product), a faster rate than the annual 2010 growth rate of 4.5 percent in the initial National Accounts estimates. The improvement could also be seen in the composite state-of-the-economy index, which rose by 4.2 percent, annual rate, in the months September to December (Figure 1.1).

The resources and use of resources items indicate that the output gap is closing. Investment continued to rise, and passed its pre-crisis level. The economy recovered what it had lost during the crisis, and the rate of increase in investment may be expected to converge to its normal level. The large fourth quarter increase in private consumption and other economic indicators, such as the high level of the consumer confidence index, the increase in credit purchases, the continued growth of sales in food chain stores and in general retail sales point to consumer optimism.

Figure 1.1

The level of economic activity,* 2005-2010
(index: 2005 average=100)



* The Bank of Israel composite index, including the change in economic activity trend growth.

In the period reviewed most industries recovered from the effects of the crisis, but the manufacturing sector increased more slowly than did the others. Construction activity remained high, and housing credit continued to expand rapidly. Employment in most industries reached or even surpassed the pre-crisis levels. The rate of participation in the labor market and the rate of employment reached unprecedentedly high levels, the unemployment rate remained low, and the depth of unemployment moderated. These indicate an expansion in the labor market, improvement in employment, and the convergence of the economy to full employment. Concurrent with this expansion, labor productivity increased and unit labor costs declined. Labor cost per hour also fell, but the real wage increased. Thus the employment situation improved to the benefit of both the employers and the employed.

In the fourth quarter imports and exports of goods and services increased, with imports growing significantly faster than exports. In September–December 2010 goods imports grew and goods exports fell in dollar terms, partly due to the appreciation reflected by the nominal effective exchange rate. At the same time, the widening interest rate differential between Israel and the advanced economies caused a decline in Israelis' investments abroad and an increase in nonresidents' investment in Israel, resulting in a narrowing of the deficit on the financial account. In addition to these changes in investments, the investment mix also altered. Israelis tended more towards direct investments abroad, whereas nonresidents made more short-term investments in Israel, with the latter taking the form mainly of deposits in banks.

Tax revenues increased considerably in September–December 2010 compared with the previous four months. Moreover, they significantly exceeded the forecast in the budget. Both direct and indirect tax revenues increased, with indirect tax revenues increasing faster than direct. Higher tax revenues are yet another indication of the recovery of the economy in the period reviewed. Expenditure in this period also exceeded the budget forecast. The outcome of these developments was that the domestic deficit in September to December was below the seasonal path consistent with the deficit ceiling set in the budget, so that the total deficit in 2010 was significantly lower than forecast. The low deficit will restrain the increase in the public debt and thus strengthen Israel's international economic standing.

The seasonal pattern of government expenditure did not change in 2010. Most of the expenditure is made in the second half of the year, and specifically, expenditure in December accounts for about one-eighth of the annual total. Defense expenditure exceeded the defense budget again this year, as it has in the past several years.

Prices increased steeply in the period reviewed, mainly due to the increase in housing prices and seasonal factors. The seasonally adjusted price index also rose rapidly, and inflation over the previous twelve months was in the upper part of the target inflation range. Prices of financial assets surged, partly because of the discovery of gas deposits off Israel's shores, and made a significant contribution to the public's assets portfolio. Prices of owner-occupied houses continued upwards, but at the slowest rate since the beginning of 2009. Persistent expectations of high inflation also contributed to the increase in prices.

The Bank of Israel continued to increase the rate of interest gradually. The September interest rate was 1.75 percent, and for October it was raised to 2 percent, where it stayed till the end of the period reviewed. The Bank also continued to intervene heavily in the foreign currency market by purchasing foreign currency.

The debt crisis in Europe intensified in the period reviewed, due to Ireland's fiscal difficulties that derived from the nationalization of Irish banks on the verge of collapse and the rescue of investors in the banks. The pressures on Ireland to ask for aid from the European aid fund and its agreeing to do so did not reduce the market risks. At the end of the period reviewed the debt crisis still impeded European countries' continued recovery from the economic crisis. Renewed deterioration is still a possibility, and were it to occur, it would have a negative impact on Israel's economy.

Aggregate real activity[1]

Aggregate real activity in the Israeli economy during the period being surveyed indicates a continuation of economic growth. Early estimates of the national account figures for 2010 show that total GDP grew by 4.5 percent while business sector GDP grew by 5.3 percent. This is the result of expansion in all components of sources and uses, of which only exports and imports are still lower than their pre-crisis levels. Total GDP and business sector GDP grew by 7.8 percent and 8.9 percent respectively during the fourth quarter, significantly faster than in previous quarters (see Table 1.1).

Private consumption started rising rapidly again in the fourth quarter (with a 9.8 percent increase)—purchases of non-durables increased by 6.5 percent, and consumer durables surged by 42.8 percent, due mainly to the 72 increase in household car purchases. These developments, together with the improved employment situation and the stability of the Consumer Confidence Index at a high level in the period reviewed, indicate that the output gap is closing. Public consumption increased by 5.7 percent in the fourth quarter.

Investment in fixed assets continued to grow during the fourth quarter though at a lower rate than in previous quarters (15.9 percent, compared with 19.3 in the third quarter and 20.9 percent in the second). This was led by increases in investment in the principal industries (19.7 percent), investment in intangible assets (56.3 percent), and investment in machinery and equipment (29.7 percent). In contrast, investment in buildings and construction projects fell (by 3.4 percent). The rate of growth in investment in residential construction (8.3 percent) was also lower than in the previous quarter but was still higher than in 2009.

The export of goods and services (not including diamonds) grew by 2.2 percent in the fourth quarter and the import of goods and services (not including diamonds) grew by 20.7 percent. This can be attributed to a stabilization of global demand (see the Triple Trade Index in Figure 1.9) and a narrowing of the output gap in Israel. The growth in exports was the result of a 3.7 percent decline in the export of goods and an 18.5 percent increase in the export of services. In contrast, both components of imports grew: the import of goods by 13.2 percent and the import of services by 16.6 percent.

The prices of private consumption increased in the fourth quarter, an indication of the economy's growth trend. The Terms of Trade Index (export prices divided by import prices not including diamonds) fell slightly during the fourth quarter as export prices fell by more than did import prices, but still showed improvement relative to the pre-crisis terms of trade.

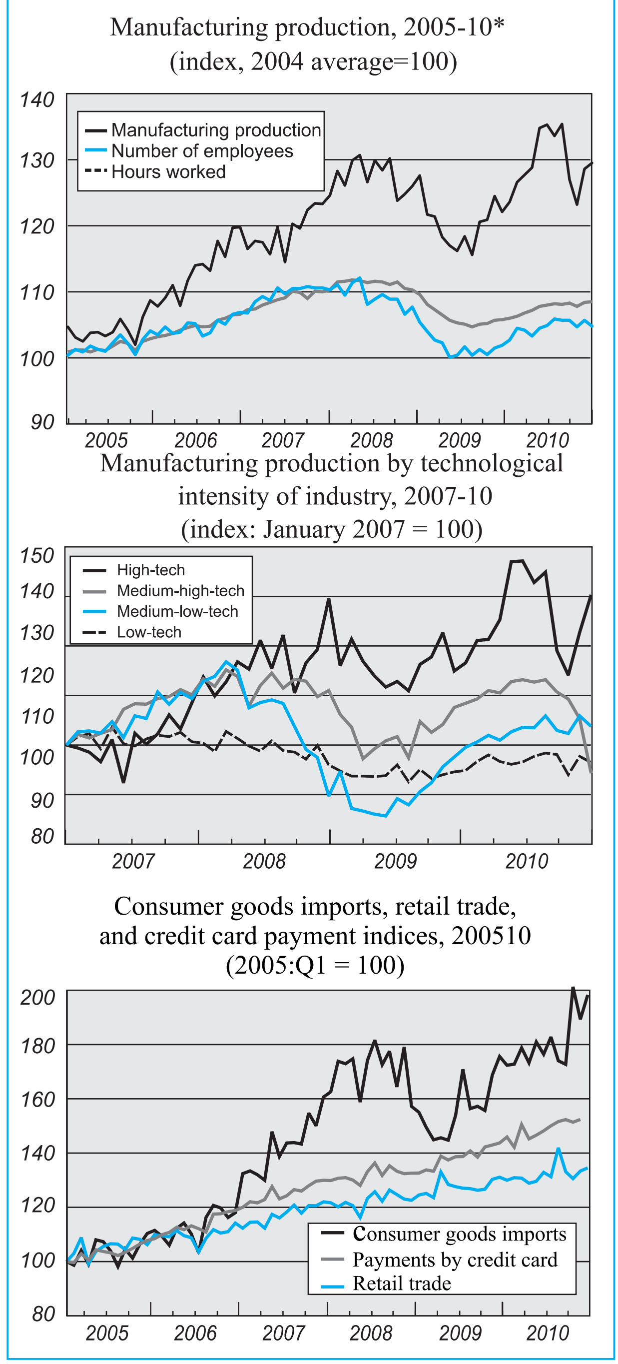
[1] The national accounts data in this survey are expressed in annual seasonally adjusted terms. The export and import figures relate to the export of goods and services not including diamonds and to the import of goods and services not including defense imports, ships, planes and diamonds.

Real industrial activity[2]

Most industries have recovered from the crisis. Employment in all of them, apart from the construction industry, has either returned to its pre-crisis level or even exceeded it (as of the third quarter). Indexes of productivity (in the commerce industries) and investment (in the construction industry) have exceeded their pre-crisis levels (Table 1.2). Manufacturing output (not including diamonds) dropped in September–November by 14 percent relative to the previous period. Its level during these months was higher by 15.9 percent than in the same period in the previous year but lower than prior to the crisis. Employment in the manufacturing industry during the third quarter continued to be lower (by 1.2 percent[3]) than its pre-crisis level. According to the Survey of Companies, output in the manufacturing industry grew in the fourth quarter, which can be seen in the high net balance of the Survey. This expansion included all levels of technology, with the highest rate of growth recorded by mixed-technology firms. This despite a drop in production at all levels of technology in September–November (see Figure 1.2). The large manufacturing firms (that employ over 100 workers) grew at the highest rates.[4]

There were mixed results in the construction industry. Some indexes indicated a slowdown: investment in non-residential construction fell by 20.3 percent during the fourth quarter relative to the third; the prices of owner-occupied housing rose relatively slowly during this quarter; the number of housing completions fell by 32.2 percent in September–October relative to the previous period;[5] and according to the Survey of Companies for the fourth quarter, construction of buildings is taking longer and supply constraints are becoming more serious.[6] In contrast, other indexes are indicating rapid growth: employment in the construction industry rose by 5.8 percent in the third quarter;[7] investment in residential construction rose during the fourth quarter by 8.2 percent; the number of residential housing starts rose by 25.7 percent in September–October (Figure 1.3);[8] the average spread between the bonds of real estate companies and government bonds narrowed by 1.2 percent during the

Figure 1.2



period being surveyed relative to the previous period and by 50 percent relative to the same period in the previous year (4.4 percent and 9.0 percent, respectively; Figure 1.13). In general, it appears that activity in residential construction is continuing to expand while the slowdown in non-residential construction is continuing. During 2010, a number of policy measures were adopted in order to restrain activity in the housing market. During the period being surveyed, additional capital adequacy requirements were imposed on mortgages

[2] Figures for real industrial activity are expressed in annual seasonally adjusted terms.

[3] Unadjusted data in quarterly terms.

[4] The contradictions between the Survey of Companies and the data on manufacturing production and employment are apparently the result of the different periods they relate to.

[5] Unadjusted data in quarterly terms.

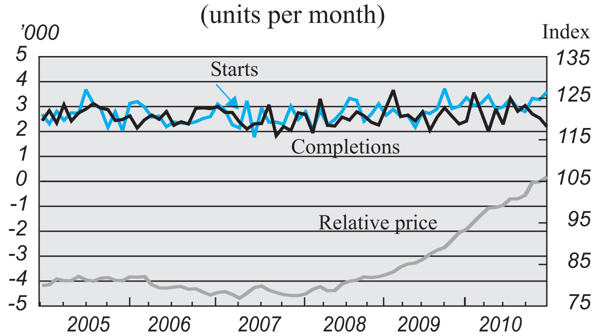
[6] According to the Survey, the most serious supply constraints are the lack of skilled workers and the price of land.

[7] Unadjusted data in quarterly terms.

[8] Unadjusted data in quarterly terms.

Figure 1.3

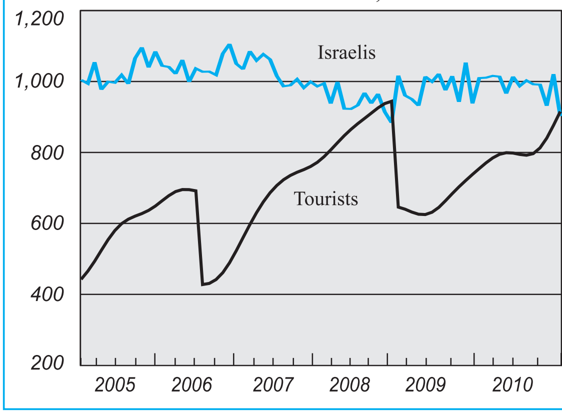
Housing starts and completions,* and relative price,** 2005-10 (units per month)



* Original data, to October 2010.
** Prices of owner-occupied dwellings relative to CPI (index, January 1998=100). To October 2010.

Figure 1.4

The hotel industry: monthly bed nights of tourists and Israelis, 2005-10



with a high financing ratio and the government decided on steps to increase the supply of housing and to constrain demand, including discounts on the improvement tax and an increase in the purchase tax on investment apartments.[9] Average total mortgages for September–November grew by 2.7 percent as compared to an increase of 4.4 percent[10] during the previous three months, although this rate was still higher than during most of 2009–10, and therefore the contractionary measures in the housing market are still having only minor effects so far.

During September–December 2010, growth continued in the activity of the retail and wholesale commerce industries relative to the previous period. Total credit card purchases increased (by 6.1 percent), as did the revenues of the marketing chains (4.8 percent), the sales of the supermarket chains (2.3 percent) and the index of revenues in the commerce sector (8.0 percent during September–October). Organized retail commerce fell relative to the previous period by 2.3 percent since in August it rose at a particularly high rate (156 percent in annual terms). Despite its decline in the period being surveyed, its level was still higher by 3.4 percent than during the same period in the previous year (Figure 1.2). The number of nights stayed by Israelis in hotels fell by 10.8 percent relative to the previous period but the number stayed by foreigners rose by 26.7 percent, thus returning to its pre-crisis level (Figure 1.4). These trends, in addition to the positive net balance in the Survey of Companies of companies in the commerce sector and their positive expectations for sales in the next quarter, the stability in the Index of Consumer Confidence and the figures on private consumption in the fourth quarter, indicate that the public has positive expectations of the future and that there are no concrete fears of a return to the crisis.

The labor market

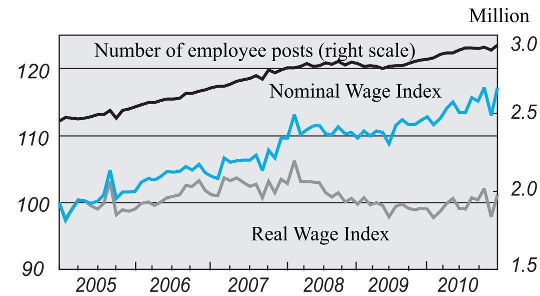
Recovery in the labor market continued during the period being surveyed (Figure 1.5 and Table 1.3). Thus, the rate of growth in the number of participants in the labor force grew by 1.7 percent; however, since the growth in the number of employed was less rapid (1.5 percent), the rate of unemployment rose (to 6.6 percent as compared to 6.4 percent in the previous quarter) for the first time since mid-2009. The growth in the number of employed brought the rate of employed in the total working age population to a record level (54 percent as compared to 53.4 percent in the previous quarter). The number of workers in public services fell (by 2.0 percent) and the number of workers in the business sector rose (by 1.6 percent), which is an indicator of a shift between the sectors. The continued growth of employment was expressed primarily in the increased number of fulltime posts (1.2 percent), while the number of part-time posts rose by the lowest rate since the beginning of 2010 (4.1 percent). The number of employed involuntarily in part-time jobs fell significantly (8.7 percent) and the number of weekly hours per employee remained unchanged (at 35.9). The real wage per salaried post rose in October and November and also rose in the third quarter relative to the previous quarter (by 0.3 percent; Figure 1.6).

These figures indicate an improvement in the employment situation. The labor market has become more attractive to

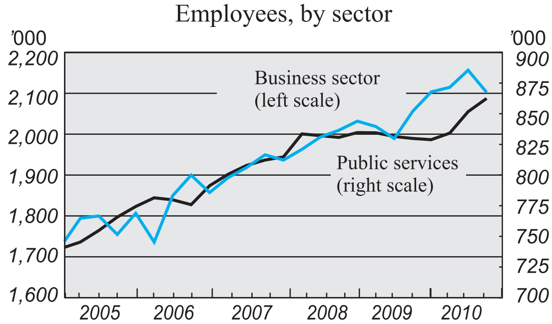
[9] For further details, see the Table of Events at the end of this Survey.
[10] Unadjusted data in quarterly terms.

Figure 1.5

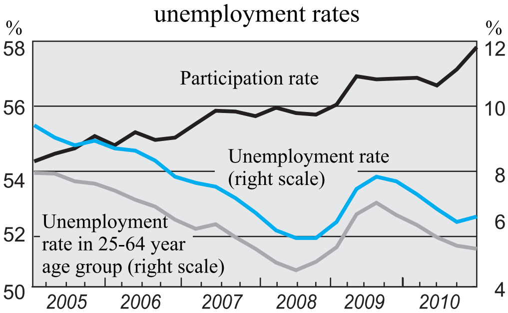
Indices of the real and nominal wage, and the number of employee posts, 2005-10



Employees, by sector



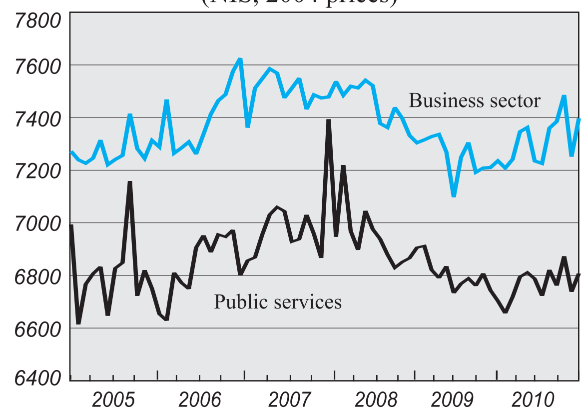
Labor force participation and unemployment rates



* Quarterly data. Seasonally adjusted.

Figure 1.6

Real wage per employee post*, 2005-10
(NIS, 2004 prices)

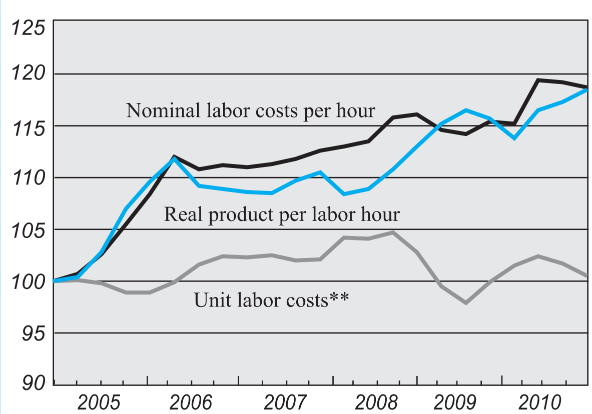


* Seasonally adjusted.

broad segments of the population, which have started to enter the labor force. The economy produced enough jobs in order to absorb most of the new participants and therefore unemployment rose by only 0.2 percent. For purposes of comparison, if the number of jobs had not grown, the above-mentioned growth in the participation rate would have resulted in an increase of 1.2 percentage points in the unemployment rate. The reduced depth of unemployment (i.e. the number of jobseekers looking for work for six months or longer) from 36.0 percent in the previous quarter to 32.1 percent in the current one may also be an indicator of the improvement in the economy.[11] The real output per hour of work increased (by one percent) and the nominal cost per hour of work declined (by 0.4 percent). As a result, the unit labor cost in the business sector grew by 1.4 percent (Figure 1.7). A drop in the unit labor cost shows that productivity in the economy is increasing. That increase, along with the drop in the cost of labor per hour indicates that, despite the rise in the real wage, there is no significant wage pressure.

Figure 1.7

Index of nominal unit labor costs (gross) in the business sector, 2005-10*
(January 2005=100)



* To September 2010. Quartely data. Seasonally adjusted.

** Total labor costs *divided* by GDP.

[11] The reduced depth of unemployment may also be the result of the exit from the labor force of individuals unemployed for an extended period.

In November, a wage agreement was signed in the public sector which provides a wage increase of 6.25 percent in three stages, to be paid in January of each of the years 2011–13 and a one-time grant of NIS 2,000 in December. New wage agreements were also signed with high school teachers, port workers and attorneys in the civil service during the period being surveyed.

The government[12]

Tax revenues rose during the period being surveyed by 5.7 percent as compared to 4.0 percent during the previous period, which is evidence of the continuing economic recovery. The increase was entirely concentrated in indirect taxes (8.3 percent as compared to 3.4 percent in the previous period) while the rate of growth in direct taxes slowed from 4.8 percent in the previous period to 3.2 percent in this one. The increase in indirect tax revenues was concentrated in taxes on imports: purchase taxes on imports rose by 19 percent in comparison to the previous period while there was no growth in VAT payments on local production. Total tax revenues during the period being surveyed were higher by NIS 6.2 billion than the forecast in the State Budget and local expenditure not including credit was higher than the seasonally adjusted path of the budget by NIS 1.1 billion, which was the result of a high level of expenditure in December (beyond the normal seasonality). In total, the local deficit during the period being surveyed was lower by NIS 5.2 billion than the seasonally adjusted path that is consistent with the budget deficit ceiling.

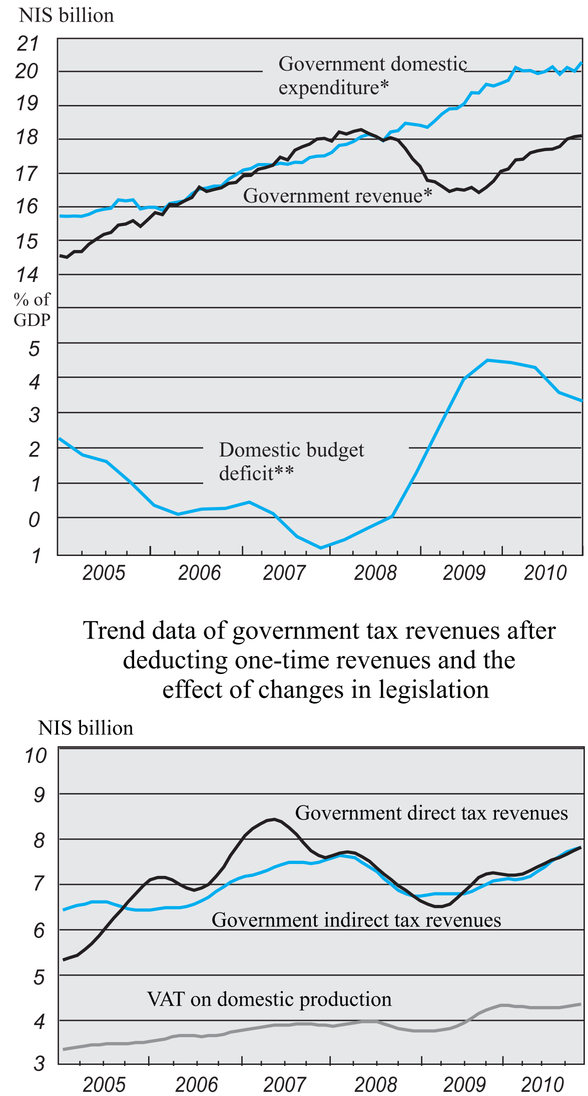
The budget deficit not including credit for September–December stood at NIS 13.5 billion, which was lower than during the same period in the previous year and similar to its level in the same period in 2008 (Table 1.4 and Figure 1.8). The total deficit not including credit for 2010 was significantly lower than the budget ceiling and totaled 3.7 percent of GDP.

The expenditures of most government ministries show under- or full utilization of the original budget. In contrast, the Ministry of Defense's[13] expenditures significantly exceeded the original budget (including items in the defense budget that are included in the budget reserve). In recent years, we have been witness to recurring budget overruns in defense expenditure (as can be seen from Table 1). Some of these can be explained by major unexpected security events (such as the Defense Wall operation in 2002, the Second Lebanon War in 2006 and the Cast Lead operation in 2008). The reason for the overruns in 2010 and 2009 are less clear since the budget for 2009 was approved after the completion of the Cast Lead operation and there were no out-of-the-ordinary security events during these years.

The seasonal pattern in government expenditure remained unchanged this year and was characterized by the implementation of the majority of government expenditures

Figure 1.8

Government revenue and expenditure and the deficit 2005-10
(12-month moving monthly average)



[12] The government data is for September-December 2010. The tax revenue data are those of the Tax Authority in constant prices and adjusted for seasonality, changes in legislation and one-time revenues.

[13] Expenditure of the Ministry itself, emergency civilian expenditure, and expenditure of the Coordinator of Activities in the Territories, the Atomic Energy Commission, and related to the Discharged Soldiers Law.

Table 1. The Defense Budget and its Implementation
(NIS million, current prices)

	Original defense budget[a]	Actual defense expenditure	Difference
2002	46,078	51,267	5,189
2003	46,998	46,946	-52
2004	47,967	46,971	-996
2005	47,457	50,284	2,827
2006	47,206	53,486	6,280
2007	53,291	55,080	1,789
2008	53,791	57,265	3,474
2009	52,223	57,079	4,856
2010	55,376	60,918	5,542

[a] Including transfer from the general reserve earmarked for defense.

Figure 1.9

Expenditure in December as percent of annual Expenditure, domestic budget excluding credit, 2000-10

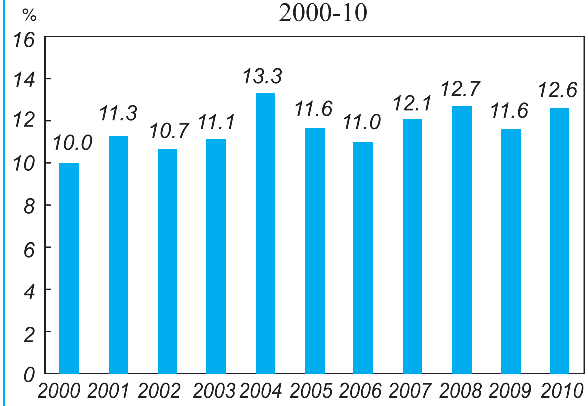


Table 2. Government Expenditure
(Unadjusted, half-yearly rates of change, percent, after deducting changes in the CPI)

	2007	2008		2009		2010	
	2nd half	1st half	2nd half	1st half	2nd half	1st half	2nd half
Government expenditure excl. credit	7.8	-6.8	5.8	-4.7	7.5	-6.2	7.9
Domestic expenditure excl. credit	8.1	-5.8	5.9	-3.8	7.0	-5.9	7.7
Expenditure abroad	3.9	-17.4	3.7	-17.1	14.8	-10.1	11.6

(52 percent in 2010) during the second half of the year as compared to a lower level of implementation (48 percent in 2010) in the first half (as can be seen from Table 2).

This seasonality is primarily seen in the high concentration of public expenditure in December, a recurring occurrence that has become more pronounced in recent years (Figure 1.9). This is primarily the result of the civilian ministries, which implemented 15.1 percent of their annual expenditures in December, while only 10 percent of the Ministry of Defense's 2010 expenditures were carried out in December. This seasonality was meant to diminish with the adoption of the two-year budget for 2009 and 2010, which should have led to a smoother distribution of expenditure over the year. The new budget arrangement was meant to enable the government ministries to schedule their expenses ahead of time with the full knowledge of the size of their budget for the subsequent year and without having to deal with its approval by December. These expectations have not been met so far.

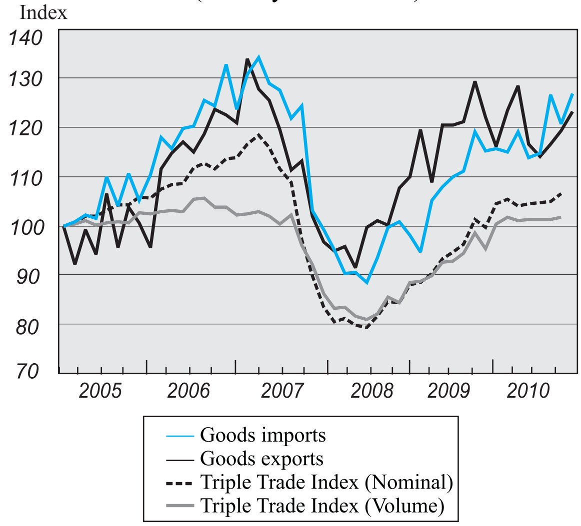
The balance of payments[14]

The current account surplus totaled $2.3 billion in the third quarter, an increase of $0.25 billion compared to the previous quarter. This was the result of the improvement in the goods, services and revenue accounts and the decrease in the surplus in current transfers. The current account surplus was one billion dollars larger than in the same quarter in the previous year despite the appreciation in the exchange rate and the increase in commodity prices. The surplus in the goods and services account grew by $1.8 billion as a result of imports dropping more than exports (4.3 percent as opposed

[14] The balance of payments data (Table 1.5) and the foreign trade data (Figure 1.10) are stated in current dollar terms and relate to the third quarter of 2010 and September–December 2010, respectively. The current account figures are expressed in quarterly terms and are seasonally adjusted and the financial account figures are expressed in quarterly terms and are unadjusted.

Figure 1.10

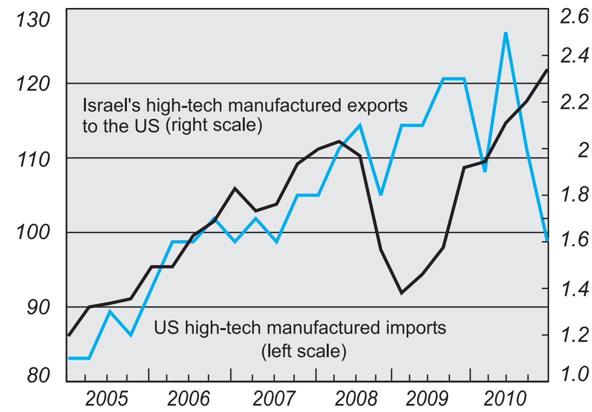
Foreign trade and the Triple Trade Index[a]
(January 2007 = 100)



[a] The Triple Trade Index is the weighted index of trade data of Germany, Japan and the US.

Figure 1.11

Israel's high-tech manufactured exports to the US and US high-tech manufactured imports, 2005-10
($ billion per quarter)



* Seasonally adjusted

to 0.8 percent). The services account rose by $120 million, which primarily reflected the decease in the import of tourist and transportation services (9.5 percent and 3.4 percent, respectively). The goods account was in surplus for the first time since the first quarter of 2009. This was the result of the fall in the dollar value of imports by 2.2 percent as compared to a drop of only 1.2 percent in the dollar value of exports. The decline in the deficit in the revenues account primarily reflected an increase in income from direct investment abroad (18.3 percent) alongside a drop in income of foreign residents from investments in shares in Israel (62.0 percent). During September–December 2010, the import of goods increased (by 5.5 percent) and the export of goods decreased (2.3 percent) in dollar terms as compared to the previous period (Figure 1.10). This was due in part to the effect of the appreciation of the effective exchange rate (Figure 1.15).

The capital export surplus in the financial account (not including the Bank of Israel's foreign reserves) fell from $5.9 billion in the second quarter to $1.2 billion in the third quarter. This was the result of the decrease in Israeli investments abroad by 47 percent (from $5.1 billion to $2.7 billion) and the increase in investment by foreign residents in Israel by 27.2 percent (from $1.7 billion to $2.2 billion). The mix of investments of Israelis and foreign residents also changed: Israelis reduced bank deposits and other investments abroad by a total of $3.2 billion and made direct investments of $4.1 abroad, which is high relative to pre-crisis levels. In contrast, foreign residents sold government bonds and other investments in Israel in the amount of $0.9 billion and deposited $2.1 billion in banks in Israel. These changes highlight the relative resilience of the banks in Israel and the growing lack of synchronization between the duration of Israeli investments abroad and that of foreign residents in Israel, which is a result of, among other things, the interest rate gap between Israel and the developed countries.

Inflation and monetary policy

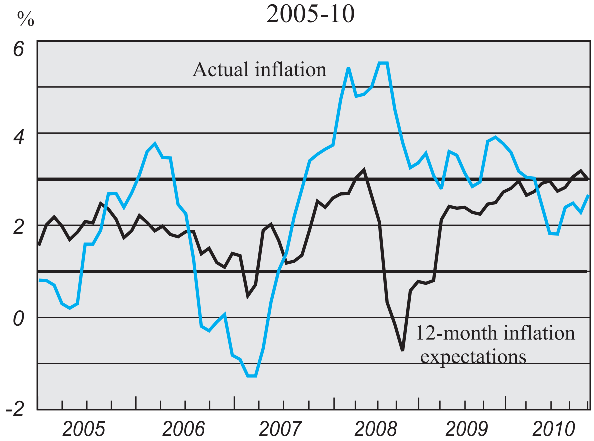
During the period being surveyed, the CPI rose by one percent (Table 1.7) and by 1.7 percent in seasonally adjusted terms. The main factors behind the increase in the CPI were the increase in the prices of energy, food and clothing and shoes (whose influence is seasonal), which rose by 2.4 percent, 1.3 percent and 16.5 percent, respectively. The increases in food and energy prices were the result of the continuing upward trend in their prices around the world during the period being surveyed.

In 2010, the CPI rose by 2.7 percent, which was within the target range of 1-3 percent (Figure 1.12).[15] The rate of inflation during the past 12 months (Figure 1.12) was primarily the result of the rise in the prices of housing (4.9

[15] Since the beginning of 2005, the inflation rate during the previous 12 months was above the inflation target range for 44 percent of the time and under it for 22 percent of the time.

Figure 1.12

Inflation in previous 12 months, inflation expectations, and the inflation target, 2005-10

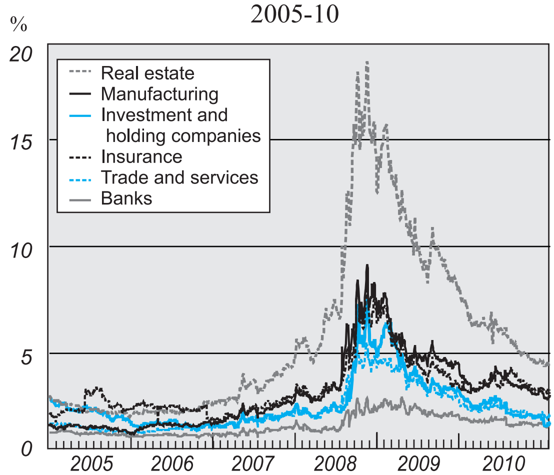


* 12-month inflation expectations as calculated by the Bank of Israel Research Department. To August 2010.

═ Inflation target range.

Figure 1.13

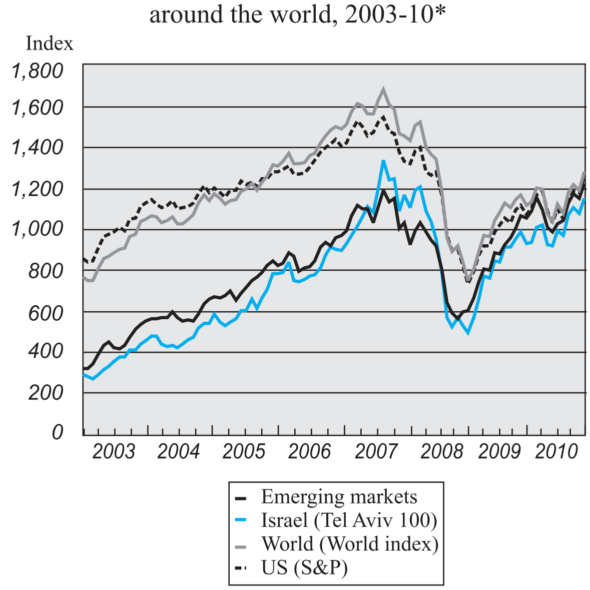
The gap between the weighted average yield of CPI-indexed corporate bonds and *Galil* government bonds, by industry, 2005-10



percent), transportation and communication (2.0 percent) and fruits and vegetables (16.0 percent). The expectations of inflation for the coming year were high during most of 2010. The forecasts of analysts and those derived from the capital market continued to be high. These forecasts even rose during the period being surveyed and crossed the upper boundary of the target range. Housing prices, according to the Survey of Housing Prices, rose by 1.9 percent in September–October, which was among the lowest rates since the beginning of 2009, and by 17.3 percent in comparison to the same period in the previous year. In contrast, the Housing Index, which measures the price of rentals, fell by 0.1 percent during the period being surveyed and rose by only 4.9 percent relative to the same period in the previous year. Asset prices rose significantly during the period being surveyed despite the global developments. Thus, share indexes in Israel and worldwide rose by high rates (15-20 percent) during the period being surveyed (Figure 1.14) and the risk premiums in the business sector fell during that same period (Figure 1.13). In November, share indexes fell and the decline in risk premiums moderated, as fears renewed of a debt crisis in Europe. In December, share indexes again rose worldwide. At the same time, the Tel Aviv 100 Index rose and risk premiums in Israel again began to decline, due in part to the announcement of the estimated amounts of natural gas in the Leviathan reserve. The rise in the share indexes was the main factor in the significant increase in value of the public's asset portfolio, which rose by 5.8 percent during the period being surveyed in comparison to the previous period (unadjusted figures). The trend in prices and the continued high level of expectations during the period being surveyed led the Bank of Israel to continue its policy of gradually raising the interest rate. Thus, the rate of interest in September was 1.75 percent and was raised to 2.0 percent in October and left

Figure 1.14

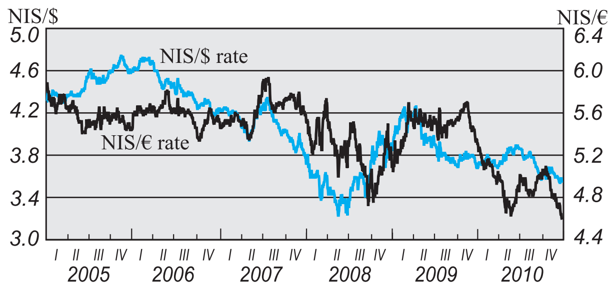
Leading share indices, Israel and around the world, 2003-10*



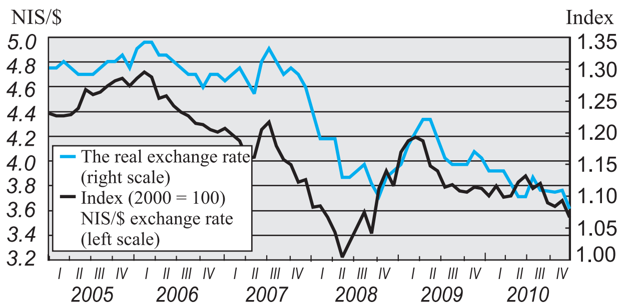
* Base years: Emerging markets1988; Israel1992; World1988; Us1957.

Figure 1.15

The nominal NIS/$ and NIS/€ exchange rates, 2005-10



The nominal NIS/$ exchange rate and the real effective exchange rate,[a] 2005-10



[a] The real effective exchange rate is the trade-weighted geometrical average exchange rate of the shekel against the 28 currencies of Israel's 38 main trading partners *minus* the difference between inflation in Israel and in those countries.

there until the end of the period being surveyed. In February 2011, it was raised to 2.25 percent.

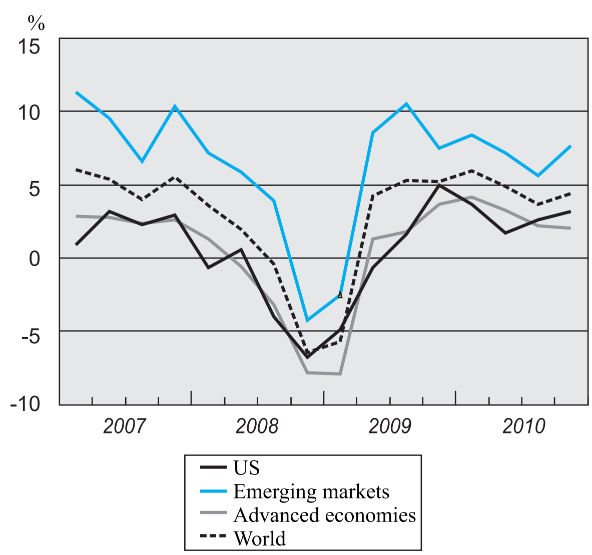
The average effective nominal exchange rate during September–December appreciated by 0.5 percent relative to the average for the previous period (Table 1.7). At the beginning of this period, the shekel strengthened against the dollar and weakened against the euro (Figure 1.15). In mid-November, when the debt crisis reignited in Europe, there was an appreciation in the nominal exchange rate against the euro, which continued until the end of the period. From mid-November until the end of the period, the effective nominal exchange rate appreciated sharply by a rate of 4.5 percent. The Bank of Israel intervened in the foreign currency market and purchased $5.9 billion during the period being surveyed. The purchases were concentrated in October ($3.4 billion) and December ($1.82 billion).

The global economy

The global rate of growth rose during the fourth quarter (to 4.4 percent as compared to 3.6 percent in the previous quarter). The increase was primarily due to growth in the developing countries (7.6 percent as compared to 5.7 percent in the previous quarter). In contrast, the rate of growth in the developed countries slowed (to 2.0 percent as compared to 2.2 percent and 3.3 percent in previous quarters; Figure 1.16). This decrease was due primarily to the slowing of growth in the European countries; the rate of growth in the US in fact increased during this quarter (3.2 percent as compared to 2.6 percent in the previous quarter). Economic indicators for the fourth quarter, including the OECD Composite Leading Indicators and global purchasing manager indexes (Figure 1.17), signaled a continuation of growth in the developing countries during this quarter but that growth was not uniform across countries and is still not having a significant effect on the high unemployment rates in Europe. The rate of unemployment in the US fell in December by 0.4 percent but its level is still high (9.4 percent). European growth was led by the German economy, in which unemployment reached a record low level during the period being surveyed. As a result of this slow growth and the still fragile situation of the financial systems in the developed countries, the policy of

Figure 1.16

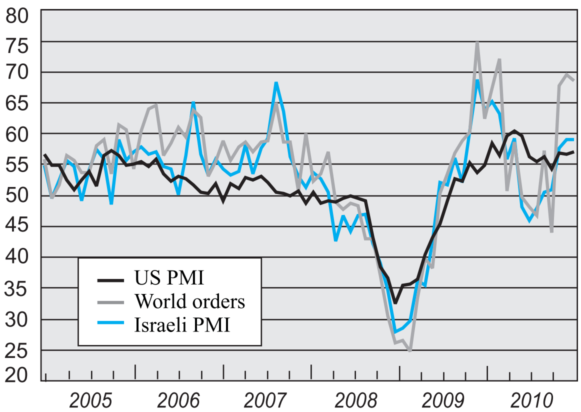
Growth of the gross world product, 2007-10
(quarterly rate of change in annual terms)



SOURCE: IMF.

Figure 1.17

Purchasing Managers Index, 2005-10



maintaining low interest rates continued during the period being surveyed. In addition, the Fed began an additional quantitative easing program in November, which involved the purchase of US government bonds in the amount of $600 billion.

The prices of commodities, energy and food rose sharply during the period being surveyed and are significantly higher than during the last two years. This is in spite of the fact that during those two years, prices rose from the low levels caused by the economic crisis. These increases were a result of seasonal and environmental factors, such as weather conditions and natural disasters, and increasing demand as a result of growth in the developing countries.

During the period being surveyed, the debt crisis in the euro bloc was the focus of global economic discourse. The fears of a collapse of economies in Europe increased and were concentrated on countries that had adopted contractionary economic measures – Ireland, Portugal and Spain –, which later proved to be insufficient, and whose banking systems were exposed as a result of the crisis not only to liquidity issues but also to solvency issues. Due to the interconnected structure of investment between the countries in the euro bloc, a threat to the repayment ability of a bank in one country exposes banks in other countries—and as a result their investors and depositors as well—to increased risk. This structure encourages countries to pressure their neighbors into rescuing banks at risk without taking into consideration the cost that falls on the rescuing country. These fears raised the CDS spreads and the yields on bonds of countries at risk (Figure 1.18). In November, Ireland requested assistance from the European Financial Stability Facility and from the IMF as a result of market pressures and pressures from Europe. The pressure was the result of the high levels of the deficit and debt in Ireland, which were the result of the costs involved in nationalizing the failing Irish banking system and rescuing its investors. Until the end of the period being surveyed, there were no additional requests for assistance from countries at risk, though continued increases in the CDS spreads and in the yields of those countries' bonds were an indication of the continuing contagion of the debt crisis and the growing market pressures. The countries at risk are continuing to implement additional fiscal austerity programs with the goal of cutting their budget deficits and convincing financial markets of their ability to meet their obligations. Discussions in Europe of future debt restructuring added to pressures in the markets.

Figure 1.18a

CDS spreads in selected countries, 2008-10

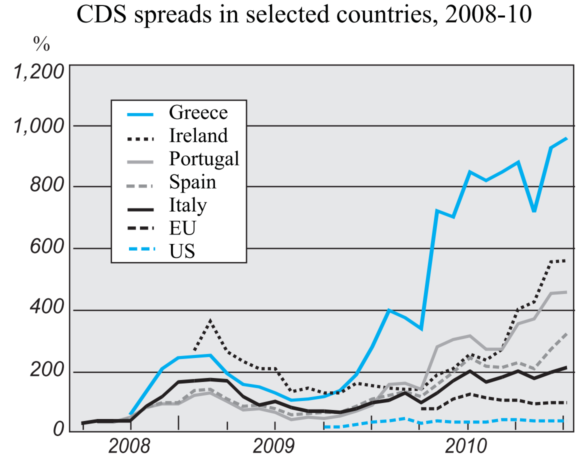


Figure 1.18b

Yield gaps between government bonds in selected European countries and German government bonds, 2010

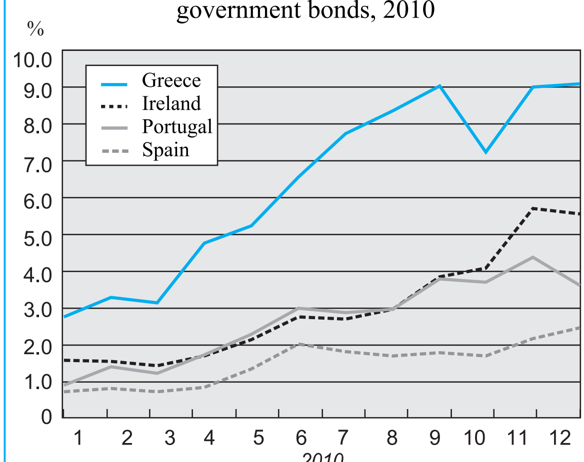


Table 1.1 National Accounts, 2009-10
(percentage change in annual terms, at constant prices, seasonally adjusted)

			Change from previous quarter						2010/IV	
			2009		2010					
	2009[a,b]	2010[a,b]	III	IV	I	II	III	IV	Year-on-year change[a]	Last month for which data available
GDP	0.8	4.5	3.6	4.9	4.9	5.2	4.4	7.8	6.0	12
Business-sector product	0.1	5.1	3.5	5.0	6.6	6.2	4.6	8.9	7.0	12
Private consumption	1.7	5.2	6.2	7.7	1.3	6.3	1.1	9.8	5.0	12
Gross domestic investment	-8.9	3.5	-3.5	-41.3	117.0	-19.3	7.1	25.4	36.1	12
Fixed investment	-5.8	11.6	3.0	-7.3	18.3	20.9	19.3	15.9	21.7	12
Goods and services exports excl. diamonds	-10.0	10.1	10.3	34.6	1.5	19.0	-0.9	2.2	5.0	12
Goods exports[c]	-12.7	16.6	43.0	38.2	19.4	22.1	-5.1	-3.7	6.4	12
Services exports[c]	-11.9	5.1	-34.5	42.4	-14.4	5.9	13.5	18.5	7.5	12
Goods and services imports excl. diamonds[d]	-12.3	10.5	13.0	5.7	11.9	15.3	-0.2	20.7	14.3	12
Goods imports[e]	-14.4	19.8	30.8	11.6	38.1	6.3	12.0	13.2	21.8	12
Services imports[e]	-11.9	-2.3	-10.4	7.0	-11.5	1.3	-0.2	16.6	3.1	12
Public sector consumption	2.5	3.4	-2.3	1.3	2.8	0.8	10.0	5.7	4.2	12
Public consumption excluding defense imports	4.0	3.3	-0.5	-0.2	-0.3	1.8	9.8	8.3	5.3	12
Domestic use of resources	0.2	4.4	3.9	-4.1	15.0	-1.1	4.0	12.0	9.4	12

[a] Unadjusted data.
[b] Compared with previous year.
[c] New calculation - excluding subsidies.
[d] Excluding defense imports, ships and aircraft.
[e] New calculation - excluding taxes.
SOURCE: Central Bureau of Statistics and Bank of Israel.

Table 1.2. Indicators of Business Activity, 2009-10
(percentage change, in annual terms, seasonally adjusted)

			Change from previous quarter						September - December 2010		
			2009		2010				Change from previous period	Year-on-year change[a]	Last month for which data available*
	2009[a,b]	2009[a,b]	III	IV	I	II	III	IV			
Composite state-of-the-economy index	-2.6	4.2	1.7	5.0	5.8	5.4	4.3	4.2	4.1	5.0	12
Unit labor cost	-4.9		4.4	4.5	2.2	-1.1	-4.7		-4.7	0.2	9
Large-scale retail trade	4.2	3.4	-8.8	8.5	3.7	-0.3	16.2	-7.5	-2.3	3.4	12
Manufacturing production (excl. diamonds)	-6.0	7.8	6.4	15.5	14.7	23.3	-16.8	1.6	-14.0	3.8	11
Index of trade revenue	-1.6	7.8	8.0	12.0	15.7	-1.0	4.7	8.1	8.0	8.3	11
Index of trade and services revenue	-2.6	7.8	4.3	12.6	18.5	-0.4	4.8	7.4	8.4	8.3	11
Index of services exports	-15.0	10.3	14.6	25.9	-11.7	13.1	4.1	33.0	36.6	9.7	12
Tourist arrivals	-9.7	25.7	89.4	19.7	14.1	15.4	-3.2	63.8	37.4	17.9	12
	period average, year-on-year change										
Residential construction[a]											
Starts	6.4		6.2	11.4	16.3	20.2	-1.4			16.1	10
Completions	7.2		3.5	9.1	-13.9	15.7	1.6			-3.9	10
ILA land permits (units)[c]	17,230	24,412	3,807	5,422	9,670	2,878	5,093	6,771		3.4	12
Nonresidential construction[a]											
Area of starts	-8.1		-27.0	32.1	-13.5	-0.9	11.2			11.2	9
Survey of companies (net balance, percent)[d]											
Weighted balance of the business sector	-7.8	22.5	-1.0	17.0	25.5	17.1	20.1	27.9			12
Output of manufacturing firms	-4.2	22.8	**3.9	23.7	30.4	21.1	10.3	30.7			12
Sales by trading firms	-7.9	22.2	**-3.0	26.2	27.2	17.5	22.5	21.8			12

* When the last month is December, the period of comparison is four months; when the last month is November, the comparison is quarterly; when the last month is October, the period compared is two months.
** Not significant at 10% level.
[a] Unadjusted data.
[b] Year-on-year.
[c] Land transactions authorized by the Israel Lands Administration in the relevant period.
[d] The net balance is defined as the difference between the number of firms reporting a rise and those reporting a decline, as a proportion of all reporting firms.
SOURCE: Based on Central Bureau of Statistics and Ministry of Construction and Housing data.

Table 1.3. Indicators of Labor Market Developments, 2009-10
(percentage change, seasonally adjusted)

	2010/III	Percent change from previous quarter						September - December 2010		
		2009		2010				Change from previous period	Year-on-year change[a]	Last month for which data available*
	('ooo)	III	IV	I	II	III	IV			
Civilian labor force	3,180.6	0.5	0.4	-0.1	1.4	1.6		1.6	3.3	9
Israeli employees	2,970.2	0.6	0.9	0.3	1.9	1.5		1.5	4.0	9
of which: in general government	867.4	2.7	1.8	0.4	1.6	-2.0		-2.0	1.7	9
in business sector	2,087.4	-0.2	-0.2	0.8	2.6	1.6		1.6	5.0	9
Foreign workers and Palestinians (unadjusted)[b]	279.1	1.8	-0.6	2.0	-2.9	1.0		1.0	-0.6	9
Average hours worked weekly per Israeli employee	35.9	1.1	1.1	-1.4	-1.1	0.0		0.0	-2.2	9
Weekly Labor input in business sector (incl. foreign workers and Palestinians)	100,097.0	1.4	1.8	-0.9	0.3	1.6		1.6	1.5	9
of which: Israelis	87,743.5	1.4	2.2	-1.3	0.7	1.7		1.7	1.9	9
Weekly labor input in general government (Israelis)	18,704.7	5.1	3.1	-1.9	0.5	-0.5		-0.5	-0.2	9
Unemployed	210.4	-1.4	-4.8	-6.0	-4.6	4.3		4.3	-5.4	9
Work seekers	189.6	-1.3	-1.9	-6.7	-1.2	0.0		-6.2		9
Claims for unemployment benefit	72.5	2.5	-5.5	-9.8	-4.9	-4.6	3.2	-2.3	-18.7	12
Balance of employment[c]		-0.3	1.7	2.3	1.2	0.6				9
Vacancies[a]	57.5	9.9	-10.7	4.1	27.5	6.8	5.8	4.4	39.0	12
	NIS, unadjusted									
Real wage per employee post[d,e]		0.3	-0.8	1.1	0.0	0.3	1.3	-0.9	1.4	11
In general government		0.1	-1.4	1.2	0.1	0.3	1.9	0.7	1.7	11
In business sector		0.4	-0.2	1.3	-0.6	1.0	0.2	-1.1	1.2	11
Nominal wage per employee post[e]	8,238.0	1.5	0.1	1.6	0.3	0.6	2.3	0.1	3.8	11
In general government	7,844.7	1.1	-0.6	1.7	0.6	0.4	3.0	1.8	4.1	11
In business sector	8,473.3	1.6	0.6	1.8	-0.2	1.4	1.1	-0.1	3.6	11
	Percent, seasonally adjusted									
Participation rate		56.8	56.9	56.6	57.1	57.8				9
Employment rate		52.5	52.7	52.7	53.4	54.0				9
Unemployment rate		7.7	7.3	6.9	6.4	6.6				9
Depth of unemployment[f]		34.8	34.2	36.3	36.0	32.1				9

* When the last month is December, the period of comparison is four months; when the last month is November, the comparison is quarterly; when the last month is October, the period compared is two months.
[a] Unadjusted data.
[b] Due to an error in the method of calculation, the data from January 2008 have been recalculated.
[c] Posts filled minus terminations of employment as a percentage of the total number of employees in businesses in the Employers Survey Sample.
[d] At 2004 prices.
[e] Including foreign workers and Palestinians. seasonally adjusted data.
[f] Percent of unemployed seeking work for more than six months (unadjusted).
SOURCE: Central Bureau of Statistics, Labor Force Survey, except for data on Israelis, non-Israelis, and labor input in the business sector, and total Israelis employed, which are the Central Bureau of Statistics (CBS) National Accounts estimates, and vacancies, which are derievd from the CBS Survey of Vacancies.

Table 1.4. Government Budget Performance, 2009-2010

			2009		2010				September - December 2010		
	2009	2010	III	IV	I	II	III	IV	Change from previous period	Year-on-year change	Last month for which data available*
Domestic deficit, as percent of GDP	-3.7	-2.5	-1.3	-7.0	-0.8	-2.3	-0.4	-6.4			12
Total deficit excluding credit, as percent of GDP	-5.1	-3.7	-2.3	-8.4	-1.9	-3.3	-1.8	-7.8			12
Deviation from domestic budget path, excl. credit extended[b]					(NIS billion)[c]						
Revenue	3.0		2.9	3.4	2.0	3.8	2.2	10.5	9.9	7.8	12
Expenditure	-2.5		-1.3	1.3	0.0	-2.1	-2.8	3.7	7.2	4.0	12
Deficit	5.6		4.1	2.1	2.0	3.9	5.0	1.3	-4.9	-1.8	12
Total deficit excluding credit	-39.3	-30.2	-4.5	-16.1	-3.6	-6.7	-3.7	-16.2			12
	Real change year-on-year (percent)										
Government domestic revenues excluding credit	-9.0	5.5	-1.2	0.3	12.3	3.3	1.5	5.3		5.0	12
Government tax revenue	-5.2		-1.4	7.0	9.5	8.7	5.7	7.5		7.5	11
of which: income tax, net	-12.1	4.0	-12.0	-0.7	2.2	2.0	6.5	5.4		5.0	12
VAT, gross	-5.7	9.2	1.0	3.7	14.5	14.5	3.8	5.0		5.8	12
Government expenditure	2.4	1.0	7.0	-0.4	9.3	-6.7	-2.0	4.2		0.0	12
National Insurance allowances	7.2	4.0	8.0	7.0	4.3	4.1	3.6	3.8		2.7	12
of which: Unemployment benefit	59.2	-18.5	69.4	48.3	2.3	-26.4	-24.6	-21.7		-22.2	12
Income support[d]	0.4	-1.0	0.7	3.3	2.0	-2.2	-0.9	-2.8		-2.6	12
Payments to the National Insurance Institute by the public	-1.5		-1.7	2.6	5.0	10.5	8.8	1.5		6.2	11

* When the last month is December, the period of comparison is four months; when the last month is November, the comparison is quarterly; when the last month is October, the period compared is two months.
[a] Compared with previous year.
[b] The path is determined in accordance with the deficit ceiling.
[c] The year on year change does not refer to the budget path.
[d] Not including income support in old-age and survivors' pensions.
SOURCE: Based on Ministry of Finance and National Insurance Institute data.

Table 1.5. Foreign Trade, Balance of Payments, and the Reserves, 2009-10
(Seasonally adjusted)

		2009		2010				September - December 2010		
	2009[a,b]	II	III	I	II	III	IV	Change from previous period	Year-on-year change[a]	Last month for which data available*
	(rate of change, percent)[c]									
Trade in goods[d]										
Goods imports	-21.3	10.0	3.6	9.0	2.1	1.0	8.6	6.5	17.1	12
of which: Consumer goods	-7.8	9.9	3.3	3.3	1.8	0.8	11.3	7.2	10.9	12
Capital goods	-25.5	11.7	-2.4	5.7	3.0	3.9	13.1	11.7	22.9	12
Intermediates	-24.3	9.3	6.1	12.8	1.9	0.0	5.7	4.2	17.3	12
Goods exports	-13.4	8.8	10.1	5.9	-2.4	-0.9	1.0	-1.8	2.0	12
of which: Manufacturing	-13.9	9.5	9.7	5.8	-2.2	-0.4	0.6	-1.8	1.9	12
of which: High-tech	4.5	4.6	7.1	-1.0	5.8	-0.2	-0.2	-5.3	0.1	12
Balance of payments	$ million									
Goods and services exports	68,111	16,737	18,938	19,600	19,946	19,751				9
Goods and services imports	63,373	15,869	17,722	18,748	18,636	17,961				9
Balance of trade in goods and services account	4,738	868	1,215	852	1,310	1,791				9
Balance of trade in current account	7,595	1,322	2,769	1,582	2,040	2,308				9
Surplus/deficit in financial account (excl. foreign exchange reserves)[a]	5,729	6,120	-2,369	1,049	-3,365	-491				9
of which: Nonresidents' direct investment[a]	3,894	1,415	591	306	-525	674				9
Nonresidents' portfolio investment[a]	2,389	1,074	469	3,784	632	307				9
Residents' direct and portfolio investment[a]	8,686	3,246	3,114	5,409	4,315	5,698				9
Bank of Israel reserves, end-period[a]	60,612	59,964	60,612	62,476	63,096	66,271	70,913	10.6	17.0	12
Net foreign debt (percent of GDP)[a,e]	-27.1	-26.0	-27.3	-24.2	-23.6	-21.8				9

* When the last month is December, the period of comparison is four months; when the last month is November, the comparison is quarterly; when the last month is October, the period compared is two months.
[a] Unadjusted data.
[b] Compared with previous year.
[c] The change relates to the dollar values of imports and exports.
[d] Not including ships, aircraft, diamonds, and fuel.
[e] GDP is calculated at the end-of-period NIS/$ exchange rate.
SOURCE: Based on Central Bureau of Statistics.

Table 1.6 Indicators of Economic Development in Advanced and Developing Countries[a]
(annual change, percent)[b]

			2009	2010	2011 Projection	2012 Projection
World GDP			-0.6	5.0	4.4	4.5
	Advanced countries		-3.4	3.0	2.5	2.5
	Developing countries		2.6	7.1	6.5	6.5
World trade			-10.7	12.0	7.1	6.8
	Advanced countries	Imports	-12.4	11.1	5.5	5.2
		Exports	-11.9	11.4	6.2	5.8
	Developing countries	Imports	-8.0	13.8	9.3	9.2
		Exports	-7.5	12.8	9.2	8.8
Commodity prices (US$)	Oil[c]		-36.3	27.8	13.4	0.3
	Nonfuel		-18.7	23.0	11.0	-5.6
Inflation (CPI) in advanced countries	Developing countries		0.1	1.5	1.6	1.6
Short-term interest[d] (%)	Dollar deposits		1.1	0.6	0.7	0.9
	Euro deposits		1.2	0.8	1.2	1.7
Unemployment rate in advanced countries	Advanced countries		8.0	8.3	8.2	

[a] According to World Economic Outlook, Israel is classified as an advanced country. The advanced countries include the industrialized countries and some emerging markets.
[b] Except for unemployment and interest rates (percent).
[c] The average price of a barrel of Brent crude oil in 2010 was $78.93, excluding freight costs. Estimated price for 20110 is $86.50, and for 2012, $89.75.
[d] Six-month Libor rate for US dollar deposits, and three-month Libor rate on euro deposits.
SOURCE: World Economic Outlook (IMF), October 2010.

Table 1.7 Selected Price Indices, the Effective Exchange Rate, Nondirected Bank Credit, Interest Rates, Yields, and the Share Price Index, 2009–10
(rates of change, percent)

			(Change from previous quarter)						September - December 2010		
			2009		2010				Change from previous period	Year-on-year change	Last month for which data available*
	2009[a]	2010[a]	III	IV	I	II	III	IV			
CPI[b]	3.9	1.9	1.3	0.5	-0.9	1.5	1.2	1.2	1.0	2.7	12
Consumer price index, seasonally adjusted[b]	4.0	1.3	0.8	1.0	-0.1	0.6	0.8	0.8	1.9	2.6	12
Price index of owner-occupied homes[b,c]	19.9		5.1	5.3	2.8	3.7	5.3	5.3	1.9	17.3	11
General share-price index[b]	78.7	12.6	10.3	13.9	10.4	-13.8	10.8	6.8	13.7	15.7	12
	Change in period average[d]										
Real effective exchange rate[e]	1.8	-5.0	1.5	3.3	-3.4	-8.1	-3.2	-3.2	-0.9	-4.9	12
Nominal effective exchange rate	4.3	-4.8	4.7	5.5	-2.4	-7.8	-3.5	-3.5	-0.5	-5.0	12
Nondirected bank credit	4.3	4.1	0.3	1.1	0.5	1.8	1.8	2.0	2.7	6.0	12
Effective interest rate in daily deposit auction[f]	0.8	1.6	0.6	0.8	1.3	1.5	1.7	2.0	1.9	0.8	12
Yield on 5-year bonds[g]	1.5		1.5	1.1	1.3	1.1	0.7		0.6	1.3	10
Risk premium[h]	52.2	-38.2	-54.3	10.7	-1.0	-4.2	4.8	-2.6	-0.5	1.8	12
	Change during previous 12 months[i]										
CPI	3.3	2.7	3.2	3.6	3.5	2.8	2.0	2.0	2.5	12	

* When the last month is August the period of comparison is four months; when the last month is October the period compared is two months.
[a] Compared with previous year.
[b] Last month in period compared with last month of previous period.
[c] Not part of the CPI.
[d] Quarterly average compared with average of previous quarter.
[e] The real effective exchange rate is the weighted geometric average of the exchange rate of the shekel against 28 currencies, representing 38 of Israel's main trading partners (weighted by the extent of Israel's trade with those countries), adjusted for the difference between the rate of inflation in Israel and the rates of inflation in those countries.
[f] Period average interest rate.
[g] Period average yield.
[h] As measured by the 5-year credit-default-swap (CDS). Calculated as the difference between the monthly average in the quarter and the monthly average of the previous quarter.
[i] Year-on-year change in period average.
SOURCE: Central Bureau of Statistics and Bank of Israel.

Part 2: Broader Review of Selected Issues

Nowcasting of GDP based on monthly data

Gross Domestic Product (GDP) is an estimate both of the amount of final goods produced in the economy and of overall income (from labor and capital), and hence its vital importance to the Bank of Israel as an input for determining monetary policy. This figure is published approximately six weeks after the end of the quarter, with the result that when policy decisions such as decisions on the interest rate are made, the policymakers are not equipped with real-time information pertaining to the state of the economy. Israel is not unique in this respect; GDP data are highly complex and are based on large amounts of information from the different sectors of the economy and from various surveys, and the protracted processing of the data leads to a delay in publishing this figure in most countries (Table 1).

While GDP data are published about six weeks after the end of the quarter, data of considerable importance are published monthly, and assist policymakers in analyzing the state of the economy—including imports and exports, the Consumers Confidence Index, the Purchasing Managers Index, and production and employment indices in various industrial sectors.

In order to estimate GDP a database has been constructed that includes series of monthly data from many sectors in Israel and world wide. The data encompass a broad range of economic issues, allowing the information contained therein to be used to estimate the expected GDP prior to its publication. Note that this is not a **future** forecast of GDP on the basis of past data, but rather a forecast of GDP for a specific quarter that has just ended, and before the quarterly data have been obtained from the monthly data. This method is therefore known as nowcasting, i.e., forecasting the present.

The question underlying this method is: What is the most effective way of using the information contained in the available monthly data for assessing GDP for the present quarter?

Over the past year the Research Department of the Bank of Israel has constructed two models that answer this question in two different ways—directly and indirectly. We present both these models below and the methodology on which they are based, and examine their forecasting ability.

Table 1: International Comparison of Times of Publication of Quarterly GDP

Country	First Publication (Number of Days From the End of the Quarter)
England	23
United States	30
Europe	43
Israel	45
Japan	46
Canada	60

THE DIRECT MODEL[1]

Description of the model

The existence of a large database (we have at our disposal more than 150 monthly series) presents the researcher with a problem: it is logical to assume that not all the variables in the initial database have the same explanatory power in real time; some are very important and others (possibly most) are redundant. We have to choose the most informative variables for the current quarter, and use only them.

The issue of reducing a large database to a limited number of variables is known in the statistical literature as the problem of "dimension reduction", and is one of the most basic and longstanding issues in statistical science.[2] We use a new method that was developed, among other things, for this purpose, namely the Elastic Net.[3]

The Elastic-Net method solves the regression problem, while choosing the most important variables and rejecting others by means of the addition of two constraints on the values of the regression coefficients—one on the amount of the absolute values and the other on the amount of the

[1] G. Dafnai and J. Sidi (2010). Nowcasting Israel GDP Using High Frequency Macroeconomic Disaggregates. Bank of Israel, Discussion Paper No. 2010.16.

[2] R. A. Fisher (1922). On the mathematical foundations of theoretical statistics. Philos. Trans. Roy. Soc. London Ser. A 222 309368.

[3] H. Zou, and T. Hastie (2003). Regularization and Variable Selection via the Elastic Net. JRSSB (2005) 67(2) 301-320.

squares.[4] The addition of the constraints improves the quality of the forecast by exploiting the bias variance trade-off of the coefficients. In other words, the coefficients are rescaled from their "real values," and in this way we obtain greater stability and a precise forecast.

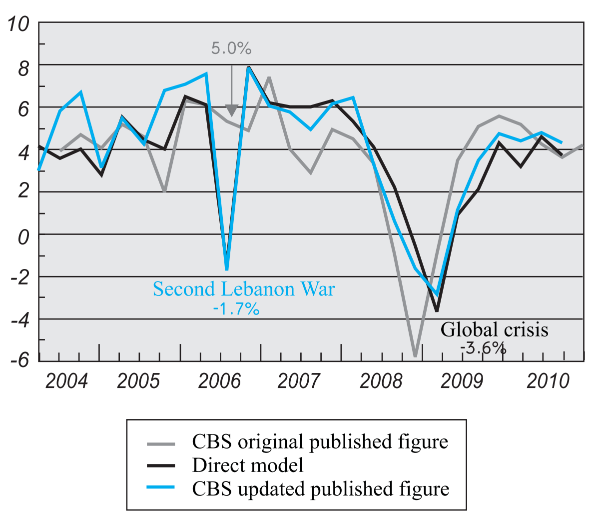
The advantage in applying the Elastic-Net method in forecasting GDP data is highlighted by allowing for dynamic model selection: the variables chosen and the weight given to each of them in the forecast are re-estimated every quarter, ensuring that the model reacts to structural changes in the economy in real time.

Results and conclusions

In the sampling period (I/1998 to III/2010) Israel's GDP grew on average by 3.6 percent per quarter (in annualized terms). During this period Israel experienced two recessionary periods—the bursting of the hi-tech bubble (IV/2000 to I/2002) and the global crisis (III/2008 to II/2009)—and one period of particularly rapid growth (IV/1999 to III/2000).

Figure 2.1

Actual GDP, and out-of-sample forecast of the direct model, 2004-10
(real percentage change, seasonally adjusted, annualized)



In order to estimate the quality of the forecast we conducted an out-of-sample forecast, i.e., we examined what the forecast GDP was, given the data up to that period; starting from II/2004. As can be seen, the forecast succeeds in capturing the general trend of the rate of GDP change, and the mean absolute forecast error in this period is only 1.62 percentage points in annualized terms.

One of the major advantages of the Elastic-Net method is being able to indicate which variables have the greatest explanatory ability. And indeed, the research found that the following series are characterized by high predictive ability over time:

The number of employees in the electric motors and components industry: This industry is an aggregate of three hi-tech industries, and includes companies manufacturing semiconductors, optical equipment and sophisticated medical equipment. Despite their relatively low weight of employees (20 percent of all employees in the industry), these companies are the source of a third of all salary payments, and of all added value of Israeli industrial production.[5] Hi-tech companies are also characterized in the main by high personnel flexibility that facilitates a rapid response to changes in the economic situation. For this reason it is logical that this variable is the most capable of explaining the rate of GDP change in Israel throughout the sample period.

US goods exports and Europe's Purchasing Managers Index: These two variables reflect the level of world trade. Israeli exports constitute about 37 percent of GDP (in 2010), so that GDP is very much affected by both current and expected world trade. The level of US exports reflects the level of current world trade, while Europe's Purchasing Managers Index reflects its expected level.

Number of tourists' bed nights: This variable serves as an estimate of the security situation in Israel.[6] The model shows that up to the Second Lebanon War the security situation was not a crucial variable in explaining Israel's economic activity, which explains the model's inability to predict the sharp decline in GDP in III/2006. Following the war the explanatory capability of this variable increased and has been selection in the model with greater persistence.

[4] Formally, the elastic net is the solution to the following problem:

$$\min_{\beta}\left[\frac{1}{2N}\sum_{i=1}^{N}(y_i - x_i'\beta)^2 + \lambda P_\alpha\right]$$

$$P_\alpha = (1-\alpha)\frac{1}{2}\|\beta\|_{l_2}^2 + \alpha\|\beta\|_{l_1} = \sum_{j=1}^{p}\left[\frac{1}{2}(1-\alpha)\beta_j^2 + \alpha|\beta_j|\right]$$

[5] Central Bureau of Statistics—Industrial Survey (2006), Table 6 (Enterprises, Employee Positions, and Employee Payrolls, by Industry).

[6] According to internal research conducted in the Bank of Israel by Ran Shahrabani and Yigal Menashe (2010).

Other selected variables: The price of oil, the employers' survey, and the industrial production index in the electronics industries.

THE INDIRECT MODEL[7]

The direct model, as indicated, seeks to provide the best forecast with the help of dimension reduction of the database; the indirect model does this by identifying sources and uses (Y+IM=C+G+I+X). According to this identity the amount of GDP (all the products and services produced) plus imports (all the imported products and services) is equal to all the products and services that the economy uses for various purposes at a given time. The GDP in Israel, as in many countries, is calculated on the basis of this identity, and hence it exists in practice in the national accounting data.

The advantage of the indirect model lies in forecasting the specific uses of resources, which facilitates the economic analysis of the change in GDP.

Description of the model

GDP is estimated in two stages. The first is that of estimating major aspects of the national accounting—consumption, investment,[8] exports and imports—by means of bridge equations in monthly data that include information on these components, but are published earlier.

The model does not estimate public consumption, because indicative variables were not found that produce better real-time estimates that those obtained using only the long-term trend of public consumption.. The sensitivity of the GDP

Table 2.2 The Weight of Each Variable in the Forecaste

The Explained Component	Private Consumption		Investment in Fixed Assets		Investment in Inventory		Export of Goods and Services		Import of Goods and Services		Gross Domestic Product	
	Imports of durables	0.09***	Import of investment products	0.14***	Inventory of start-up companies	Export of goods+	0.66***	***0.66	Import of goods	0.77***	Derived GDP	0.46***
	VAT receipts	0.04**	Delayed investment in inventory	0.03	Export of goods	US Purchasing Managers Index	0.2***	0.2***	Import of services	0.1***	Indirect tax receipts	0.06**
	Consumers Confidence Index	0.28***	Purchasing Managers Index	0.1***	Delayed level of inventory	Inventory of start-up companies	-0.02***	***0.02			Direct tax receipts	0.03**
The Explanatory Variables	General stock index	0.03***	Capital utilization rate	0.08***	Average revenue and production indices	40313***						
	Index of revenue in health, welfare, and nursing services	0.14***	The delayed explained variable	-0.42***								
	Imports of manufacturing inputs	0.03*										
	The delayed explained variable	-0.2**										

[a] The weight is actually the regression coefficient. The degree of statistical significance is indicated by the asterisks:
*Significant at 10% level; ** significant at 5% level; *** significant at 1% level..

[7] T. Kriaf, (2011). A Nowcasting Model for GDP and Its Components. Bank of Israel. Discussion Paper No. 2011.01.

[8] Because of the special characteristics of investment in inventory, this series is estimated separately from the other investment (the investment in fixed assets).

forecast to errors in the public consumption forecast is low, because of the low weight of changes in public consumption on the overall change in GDP.

An aggregate of GDP (the derived GDP) is constructed through the summation of the estimated components, according to the identity of the sources and the uses of resources (total uses less imports). In order to achieve maximum precision in forecasting GDP, we included in the estimate, in addition to the derived GDP, additional variables, which, for theoretical or empirical reasons, should be included in direct estimation of GDP, but not any specific component of the uses. While this approach deviates from the accounting identity, we should bear in mind that the use of identity is a means of achieving the most precise forecast and not a goal in itself.

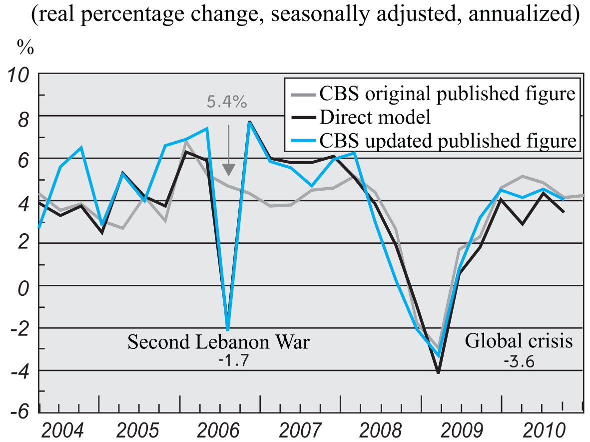
Results and conclusions

Figure 2 presents the current publication of the GDP, the original vintage of the published GDP, and the out-of-sample forecast GDP for the period I/2004 to II/2010. This period included a long period of stable growth, as well as the recent crisis and the exit from it. The figure shows that the model captures the growth environment and most of the changes in the business cycle in the review period, even though not always at the correct intensity. Thus, for example, the model functions well in forecasting the recent crisis that began in the second half of 2008, both in terms of timing as well as the intensity of the change in the trend relative to the years that preceded it, but the forecast rate of the decline in activity at the height of the crisis is considerably higher than the actual rate. The moderate decrease of GDP during the crisis was indeed surprising, and is difficult to explain, even in retrospect—particularly in view of the sharp decline in all the uses (particularly exports).

In the period I/2004 to II/2010 the mean absolute forecast error was 1.8 percentage points in annualized terms.

Figure 2.2

Actual GDP, and out-of-sample forecast of the indirect model, 200410
(real percentage change, seasonally adjusted, annualized)



An estimate of the value added in exports

- In the last few years the share of value added in exports was approximately 60 percent.
- The share of value added in goods exports was approximately 52 percent.
- The share of value added in services exports was approximately 70 percent.
- The share of value added in services exports increased in the years from 1995 to 2006, mainly because of the increase in the weight of the "other services" item in total services exports.[9]
- Between 1995 and 2006 the share of value added in goods exports declined as a result of the change in the composition of exports and also due to the deterioration in the terms of trade.

Exports constitute an important element in Israel's economic activity. Exports (excluding diamonds) account for 33 percent of Israel's GDP, but the share of value added in exports is lower, 20 percent, because exports contain imported inputs. In calculating the value added in exports, imported inputs have to be deducted, and the indirect contribution of exports to GDP—deriving from the purchase of domestically produced inputs—has to be added. As an example, knowledge-intensive services exports (computer and R&D services) have a high value added because they do not use imported inputs. In contrast, diamond exports have a very low value added because imported inputs constitute the major part of the value of the product. This discussion seeks to examine how the value added in exports is affected by the changes in value added in each industry, and whether changes in the industrial composition of exports affect their value added.

In order to calculate the value added of exports, we used input-output tables for 1995 and updated the estimates up to 2006 by means of manufacturing surveys and commerce and services surveys. From the input-output tables, we took the rate of value added in exports of the principal industries

[9] A considerable part of exports of "other services" from Israel (about 65 percent) consist of computer services and R&D (Research and Development) services, which are classified as knowledge-intensive services. The "other services" category also includes such services as construction services, architecture, legal and accounting.

for 1995. This rate of value added includes the direct value added from exports—output minus input—as well as the indirect value added deriving from the export industries' purchases of domestically produced inputs. We used manufacturing surveys and commerce and services surveys in order to update the value added of the principal industries for the following years. These surveys contain input-output data for every sub-industry from which we derived the direct value added for each sub-industry in each year. The **overall** rate of value added of each sub-industry between 1995 and 2006 was assessed in accordance with the rate of change in that industry's rate of direct value added.

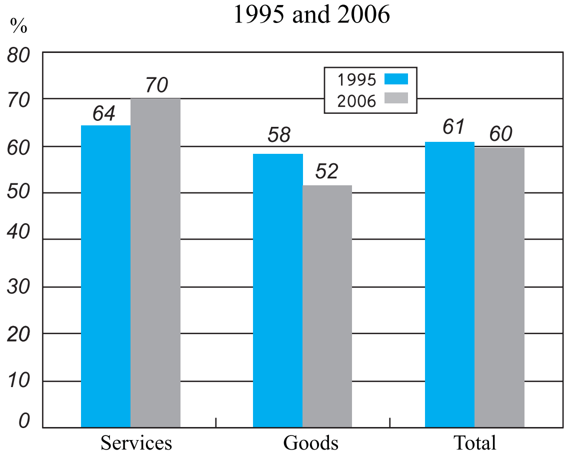
Figure 2.3 presents the rate of change in total exports, goods exports and services exports, in the years 1995 and 2006. According to this estimate, the rate of value added in exports amounted to 60 percent in 2006, the same as in 1995. This stability derives from contrasting developments in the rate of value added in services exports—which rose from 64 percent to 70 percent— and in the rate of value added in goods exports—which fell from 58 percent to 52 percent.

The increase in the rate of value added in services exports derived from a change in the composition of the services. Figure 2.4 presents the rate of value added in services exports by type of service. The diagram shows that the rate of value added in services exports remained largely unchanged in the majority of services between 1995 and 2006 with the exception of the transportation services industry, whose value added fell by 10 percentage points. The increase in the rate of value added in services exports resulted from a change in their composition as stated. Figure 2.4a presents the distribution of services exports by the type of service, and shows that the weight of "other services" in these exports increased until 2001 compared with the weight of tourism services, which decreased. Since the rate of value added in "other services" exports is higher than that the parallel rate in the tourism industry (81 compared with 71 percent respectively), the rate of value added in total services exports increased. Even though the weight of transportation services in services exports also fell slightly and despite the low value added in that industry, the rate of value added in total services exports increased.

A similar examination of goods exports shows that the rate of value added in these exports fell as the result of the decrease in the value added in sub-industries, and not because of a change in industry composition. Figure 2.5 presents the rate of value added in goods exports by technological intensity, and shows that the rate of value added in good exports fell at all levels of technological intensity. Figure 2.5a presents a more detailed examination of the rate of value added in the manufacturing industries, showing that the decrease was apparent in all the industries except for the chemicals, pharmaceutical, quarrying and mining industries. The distribution of goods exports by technological intensity is presented in Figure 2.5b. Evident from this diagram is the

Figure 2.3

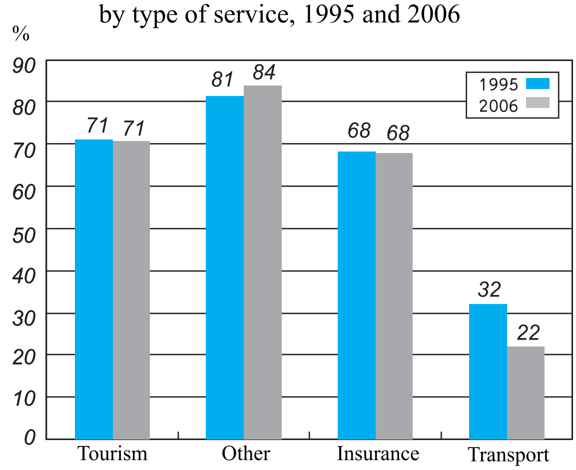
Share of value added in Israel's exports, 1995 and 2006



[a] The data for 1995 are based on the share of added value in different industries according to the data in the input-output tables for that year. The change in 2006 is based on the change in the industry composition of exports and on the change in the share of added value in exports of every industry.
The changes in the share of added value in the goods industries are based on surveys of manufacturing. The changes in the share of added value in the services industries are based on surveys of trade and services.
SOURCE: Based on Central Bureau of Statistics data.

Figure 2.4

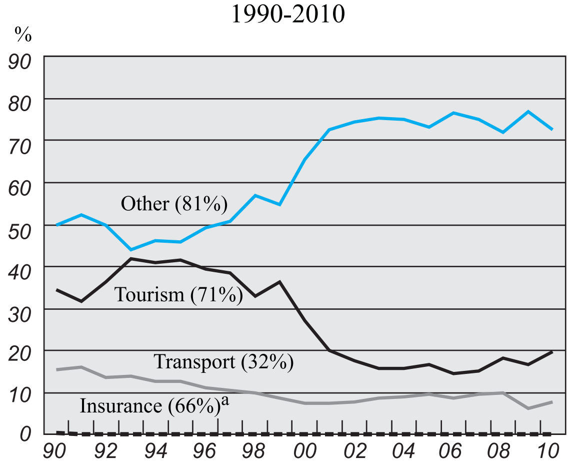
The share of value added in services exports by type of service, 1995 and 2006



SOURCE: Based on Central Bureau of Statistics data.

Figure 2.4a

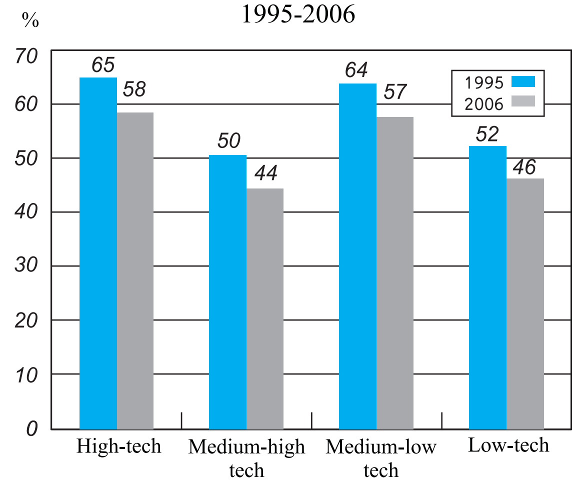
Composition of services exports by type of service,[a] 1990-2010



[a] The figure in parentheses after each type of service is the share of added value in exports of that service according to the 1995 input-output tables.
SOURCE: Based on Central Bureau of Statistics data.

Figure 2.5

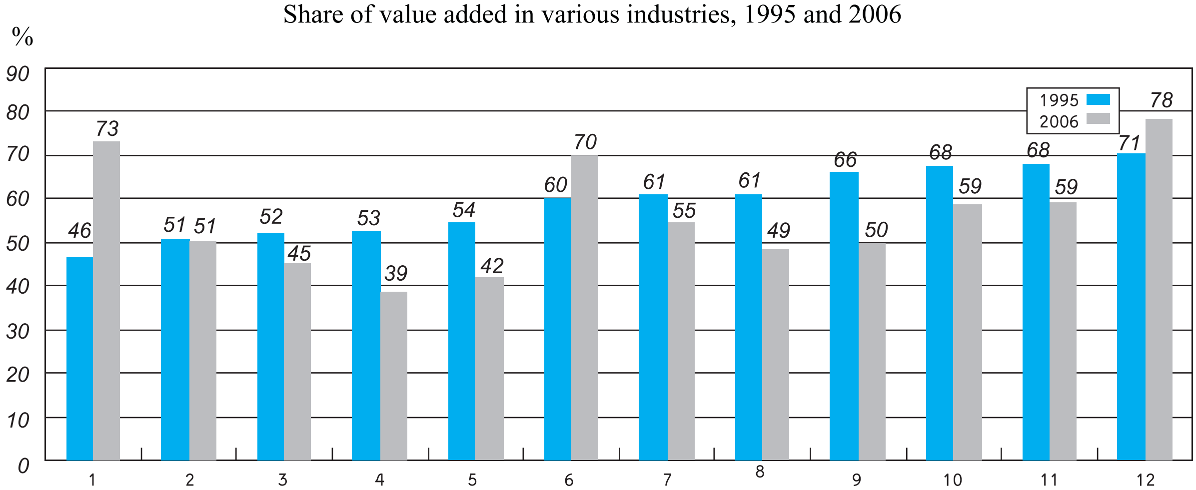
Share of value added in goods exports by technological intensity, 1995-2006



SOURCE: Based on Central Bureau of Statistics data.

Figure 2.5a

Share of value added in various industries, 1995 and 2006



1 Chemicals
2 Motor vehicles, bodies and parts
3 Electrical machinery and apparatus
4 Domestic appliances and office machinery
5 Food, textiles and wood products
6 Pharmaceutical products
7 Telecommunication equipment
8 Plastic, rubber and metal products
9 General purpose machinery and equipment
10 Electronic components and semiconductors
11 Industrial equipment for control and supervision
12 Mining and quarrying

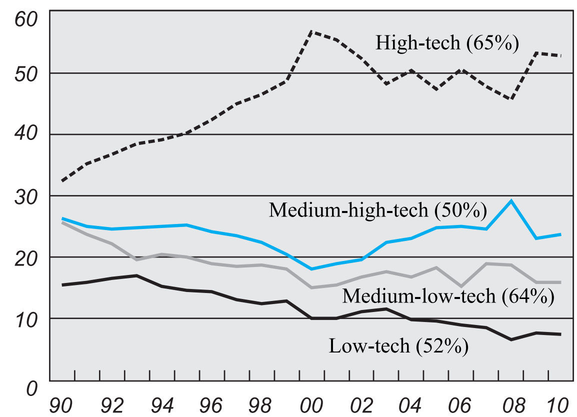
SOURCE: Based on Central Bureau of Statistics data.

increase in the weight of high technology in exports compared with the decrease in the weight of low technology. The high rate of value added in high technology exports compared with the low weight in low technology exports offset slightly the decrease in the rate of value added in exports at every level of technological intensity.

The findings presented in this box indicate that the rate of value added in goods exports and transport services exports fell, while the rate in tourism services, insurance services and "other services" exports remained largely unchanged. One possible reason for these differences is the development of the terms of trade. The terms of trade are defined as the ratio between export prices and import prices. A deterioration in the terms of trade will occur for example if import prices rise more than export prices. In value added terms, a deterioration in the terms of trade implies that prices of Israeli companies' imported imports are rising more rapidly that the prices of exports, which reduces the value added in exports. Israel's terms of trade have deteriorated continually and considerably since 1995, mainly due to the rise in fuel prices. This deterioration appears to have led to a decrease in the rate of value added in exports of goods and transportation services. Goods and transportation services are more sensitive to the terms of trade than other services, because their production process makes greater user of imported inputs. This is apparent from the high rate of value added of "other services" compared with the lower rate of added value in goods and transportation services exports.

Figure 2.5b

Goods exports by technological intensity,[a]
1990-2010
%



[a] The numbers in parentheses is the share of value added in exports of that category of technological intensity according to the 1995 input-output tables.
SOURCE: Based on Central Bureau of Statistics data.

Diary of Events: September to December 2010

Month	Date	Event	Details
September 2010	**1**	Unemployment in Israel fell to its lowest level in two years	Only 6.2 percent in the second quarter of 2010 as against 8 percent in the parallel quarter last year.
	2	The Ministry of Construction and Housing and the Israel Lands Administration will market land for 3,000 housing units throughout the country.	Most of the land will be marketed in Netivot, Modi'in, and Be'er Sheva. The ministry intends to subsidize 50 percent of the development costs of the land marketed in the periphery.
	3	Connectivity fees to be reduced by 78 percent by 2014.	Starting on January 1, 2011, connectivity fees will be reduced to 6.87 agurot, before VAT. In the following three years the fees will be reduced each year on January 1, up to a tariff of 5.55 agurot in 2014.
	6	Exit fines of the cellular telephone companies to be reduced.	The Ministerial Committee for Legislation approved a reform to limit the exit fines that cellular telephone companies can charge customers who leave before the end of the contract period.
	8	A new pension agreement is signed between the Histadrut labor federation and the employers.	Starting in 2014, the minimal allocation to pension from the salary of each employee will be increased from 15 percent to 17.5 percent; the employer will add 2 percent and the employee 0.5 percent.
	12	Improvement in Israel's competitiveness rating worldwide.	Israel improved its ranking in the Global Competitiveness Index of the World Economic Forum. According to the report for the years 2010-2011, Israel advanced three places from the previous year, and is now in 24th place.
	13	The second-hand-car market will be opened to exports.	The Ministry of Transportation decided to open the used-vehicle market to exports to Arab countries. The exporting will be handled by Jordanian vehicle dealers who will transport the cars through the Allenby Bridge terminal to destinations throughout the Middle East.
	14	The Ministry of Industry, Trade and Labor signed a cooperation agreement with the Chinese government's overall-planning ministry (NDRC).	The agreement will facilitate cooperation between Israeli companies and the Chinese authorities in the areas of infrastructure, energy and technology.
	14	Basel 3 regulations determine more stringent capital-adequacy requirements.	According to the new regulations, the banks will be required to hold equity capital of 7 percent of the volume of their risk assets, as against only 2 percent in the existing regulations.

September	**21**	The regulations granting reimbursement in cash for goods and services will come into force in December 2010.	The right of cancellation applies even if there is no defect or deception regarding the product, but the consumer wishes to cancel for any reason. The cash reimbursement will entail a cancellation fee of 5 percent of the value of the product or the services, or NIS 100, whichever is lower.
	21	Israel is ranked 81st out of 141 countries on the Index of Economic Freedom published by the Jerusalem Institute for Market Studies.	The index deals with the size of government relative to economic activity, efficiency of the legal system, stability of the currency, freedom of international trade, and the extent of regulation of business activity. The area in which Israel performs poorly is the size of government.
	21	Tender issued for a new cellular operator.	The Ministry of Communications will issue a tender for sufficient frequencies to facilitate the entry of two cellular operators. The aim is to intensify competition and reduce the tariffs for private cellular consumers by establishing a new cellular infrastructure.
	27	The Bank of Israel interest rate for October will be raised by 0.25 percentage points to 2 percent.	
October 2010	**4**	The conclusions of the Hodek Committee came into force.	The recommendations of the Hodek Committee, which discussed rules for the activity of institutional bodies in the corporate bonds market, have come into force. The recommendations will oblige all institutional bodies to conduct a detailed analysis prior to purchasing bonds, both in the primary and the secondary market. Institutional investors will have to formulate clear and logical policy regarding investment in corporate bonds—policy that is meant to include how much of each rating, type and volume of the bond each body can purchase.
	6	The Bank of Israel inaugurated a representative office in New York.	
	6	The S&P rating agency downgraded Israel Electric Corporation's bond rating by one level—to BBB.	S&P placed the rating on CreditWatch with negative implications, which suggests the possibility of a further rating downgrading.
	8	The average salary of a salaried employee fell to NIS 8,602 in July 2010.	According to the Central Bureau of Statistics, the average salary in the economy fell by 2.4 percent relative to June.
	10	The Minister of Agriculture canceled the tax on tomatoes.	Because of the rise in the price of tomatoes, the tax on tomatoes was removed, and permission was given to import 2,000 tons immediately.

October	**10**	The Customs Directorate in the Tax Authority launched the AEO (Authorized Economic Operator) program designed to assist exporters, importers, and anyone involved in foreign trade.	According to the program, interested companies will undergo annual security and customs checks, which will entitle them to very significant concessions in the trading process, both in Israel and abroad. Among other things, the program will assist exporters to meet schedules abroad, greatly reduce costs, and provide them with certainty in conducting international trade.
	12	The world report for 2010 of REN21, an international research organization under the auspices of the UN and IEA (International Energy Agency), maintains that Israel produces a very low percentage of its energy consumption from renewable sources.	The report shows that Israel excels in one area, namely the use of solar energy for heating water, but ranks low in other areas. Israel currently produces only 0.4 percent of electricity from renewable sources.
	13	Israel and India agreed on a free trade zone between the two countries.	Official negotiations will commence in November 2010, and the agreement is expected to be signed at the beginning of 2011.
	14	The Economic Arrangements Law has been cut back.	The Ministerial Committee for Legislation agreed to remove 28 clauses from the Economic Arrangements Law that do not pertain directly to the two-year budget, and transfer them to regular legislation.
	14	A committee was set up to deal with the issue of concentration of ownership.	The Prime Minister ordered the establishment of a committee to deal with concentration of ownership in the economy. The committee's aims: finding ways of improving competitiveness, tightening the restraint-of-trade provisions, and making it more difficult for large economic groups to purchase government assets.
	14	Reform in the financing of the health maintenance organizations (HMOs).	The Labor, Welfare, and Health Committee approved a change in the method of financing. Henceforth, the HMOs will receive higher remuneration for members living in the periphery, for the elderly, and for women of childbearing age. Together with the change in the method of financing, NIS 160 million will be added to the HMOs' budget for the purpose of improving the service in peripheral areas.
	24	Program to reorganize regulation in the water economy.	Following submission of the conclusions of the commission of enquiry on the water economy, the government today approved the committee's recommendations, the major ones being: leaving the water-pricing procedure in professional hands, preserving the independent status of the Water Authority, and increasing transparency in the management of the water economy.
	25	The Bank of Israel interest rate for November was left unchanged at 2 percent.	

October	**25**	New directives for leveraged housing loans at floating interest rates.	The directives stipulate a higher capital provision for housing loans given at a high loan-to-value ratio and at floating interest rates. As part of the new directives, the banking corporations are required to increase the capital provisions for housing loans at floating interest rates whose LTV ratio at the time of granting the credit (the ratio between the debt and the value of the asset) is greater than 60 percent, and the ratio between the floating interest part of the housing loan and the total sum of the loan equals or exceeds 25 percent. These directives do not apply to housing loans of less than 800 thousand shekels.
	26	The Knesset passed the first reading of the Broadcasting Authority Law.	The law deals with changing the structure of the Authority, so that its institutions will be appointed professionally and its administration will be subject to similar control mechanisms to those of government companies. As part of the reform, television license fees will be raised by 20 percent over the next two years.
	26	The Knesset passed the first reading of the Budget and the Economic Arrangements Law.	The budget for the year is 348.2 billion shekels, and 365.9 billion shekels for 2012.
	26	The Knesset passed the first reading of the New Lights for Employment program, also known as the Wisconsin Program.	A renewed version of the program was passed, the original program having been cancelled in May.
	29	The price of water will increase on January 1.	Water prices have jumped in the past eighteen months by 40 percent, and are expected to increase again on January 1 by 2 percent.
November 2010	**2**	A new wage agreement was signed for the public sector.	The agreement stipulates that public-sector employees will receive wage increases of 6.25 percent over a period of three years from 2011 to 2013, and a one-time grant of NIS 2,000 in November.
	3	The Ministry of Justice will introduce an amendment to the Companies Law to include the supervision of salaries of senior employees .	According to the proposal, the majority required for transactions of public companies with stakeholders will be raised, the positions of chairman and CEO will be separated, and the authority of external directors in the auditing committee will be increased.
	5	Israel is ranked 27th in financial development.	Israel was ranked 27th out of 57 of the leading markets in the financial-development ranking of the World Economic Forum for 2010.
	8	The National Insurance Institute published its annual poverty report for 2009.	The report points to a slight reduction in poverty in Israel. Minorities and the elderly, who received higher allowances than in the past, experienced a slight easing in poverty distress. However, among single-parent families and people with disabilities, poverty increased.
	8	The state will grant a safety net of up to 25 percent of the investment of institutional investors in hi-tech.	The state will participate in the risk of the institutional bodies by means of a risk-capital fund or another body, at a rate of up to 25 percent of the investment. The state will guarantee a profit of up to 15 percent of the investment in the event that the fund does not produce a yield, and will cover 25 percent of the losses, if the fund incurs them.

November	**11**	The Sheshinski Committee for examining gas royalties published its interim report.	According to the committee's interim conclusions, the state's share of the natural gas and oil companies' income will reach 66 percent. The tax payment will be progressive in accordance with the entrepreneurs' profits, and will take into account the variable costs of the drilling projects, and the repayment of the entrepreneurs' expenses.
	16	The government announced a series of actions and reforms for easing the purchase of an apartment, and for fighting the rise in housing prices.	The major steps: a 15 percent discount on the price of land for contractors who reduce the duration of construction, reducing land betterment tax to 20 percent, and direct collection of development levies for constructing public buildings.
	17	In the coming eight months provident fund members can draw severance pay money.	The new law seeks to correct the distortion in the Provident Funds Law.
	22	The Bank of Israel interest rate for December was left unchanged at 2 percent.	
	25	Further step to encourage competition in the communications industry.	The Knesset's Economic Committee decided yesterday that the cellular companies' exit fines would be reduced, and that this decision would apply also to existing customers.
	26	VAT will be imposed on purchasing groups.	The Knesset's Economic Committee approved the clause in the Economic Arrangements Draft Bill 2011-2012 pertaining to taxation of purchasing groups. According to the clause, starting in January 2011, VAT of 16 percent of the price of the land (not the price of the apartment) would be imposed on each member of the purchasing group who purchased an apartment as part of the group.
	30	The Economics Committee approved two reforms for promoting competition in the cellular market.	The reforms approved are "inter-regional roaming" and shortening of the process of importing cellular devices by suppliers that are in competition with the cellular companies. The inter-regional roaming would allow a cellular company to supply services even in areas in which it does not have antennas and coverage of its own, by "piggybacking" on the antennas of competing companies.
December 2010	**1**	Reform to increase competition in the pension market.	The reform will include reducing the management commissions in pension saving, reducing the ceilings that can be charged for management fees, increasing transparency in the reports of the financial bodies, and eliminating the bias of financial consultants.
	7	Clearing reform—the credit card market will be opened to competition.	The Ministerial Committee for Legislation approved a bill for increasing competition in the credit card industry. The bill would ease entry of new competitors into the clearing market by enabling them to use the clearing infrastructure of the large credit card companies. Furthermore, the bill seeks to increase competitiveness in discounting credit vouchers.

December	**7**	As part of the Economic Arrangements Law, three additional regulations were approved for increasing competition in the communications market.	From January 1 all cellular devices will be sold in Israel without SIM locking. The company's portal will not be given priority in surfing, and VoIP calls will not be blocked.
	16	Steps to cool the real-estate market—an increase in purchase tax on apartments for investment purposes, and an exemption from betterment tax for sellers of investment apartments.	The purchase tax on apartments for investment purposes will be raised in 2011-2012 from 3.5 percent to 5 percent for apartments costing up to one million shekels; from 5 to 6 percent for apartments costing between one and three million shekels; and from 5 to 7 percent for apartments above 4 million shekels. The sale of two additional apartments in 2011-2012 will be exempt from betterment tax, above and beyond the provisions of the previous law.
	20	Decision made on the four personalities to appear on the new series of banknotes.	The personalities expected to be displayed on the NIS 200, 100, 50, and 20 banknotes will be the former prime ministers Menachem Begin and Yitzchak Rabin, the writer Shai (Shmuel Yosef) Agnon, and Rachel the Poetess.
	27	The Bank of Israel interest rate for January was left unchanged at 2 percent.	