Chapter 1
The Economy and Economic Policy

- In 2013, GDP increased by 3.3 percent, a moderate rate taking into account that the start of natural gas production also contributed to growth this year. The moderation of growth that took place in recent years derives first and foremost from the slowdown in the growth of world trade and its negative impact on exports. Contributing to moderation in growth this year were the weakness of exports to an extent that exceeded the impact of world trade; the slowdown in growth of investments, in particular in the construction industry, and the required reduction in the government deficit.
- With that, the developments in the economy continued to be positive this year compared to the advanced economies. GDP per capita continued to grow, public debt declined, the employment rate continued to increase, and the current account remained in surplus.
- The inflation rate this year was 1.8 percent, near the midpoint of the target range for the second year in a row, with some volatility in the lower part of the target range. Inflation expectations for the short and long terms ranged within the target range, pointing to the credibility of monetary policy.
- Home prices continued to increase, for the sixth straight year, with the real increase totaling 6 percent this year, after reaching 50 percent between 2008 and 2012. The number of transactions and volume of housing credit continued to expand rapidly in 2013, and in order to maintain the stability of borrowers and of the banking system, the Supervisor of Banks issued additional directives during the year with regard to new mortgages.
- In view of the moderation in demand, and in the absence of inflation pressures, monetary policy in Israel remained accommodative this year, and continued to focus on supporting economic activity and maintaining financial stability. During the year, the Monetary Committee reduced the interest rate from 1.75 percent to 1 percent. The main challenge facing policy makers was to balance the need to deal with the slowdown in the economy and the appreciation of the shekel with the level of exposure to the risks inherent in prolonged monetary accommodation in a low interest rate environment.
- The overall general government deficit totaled 3.2 percent of GDP, 0.7 percent of GDP lower than the deficit in 2012. The cyclically adjusted deficit declined by about 1 percent of GDP, but remains at a high level relative to most advanced countries. The reduction derives from the policy adopted by the government with the aim of reducing the deficit, after the deficit

expanded rapidly in 2012 and raised the concern that it would negatively impact the credibility of fiscal policy.

- The decline in risks to which Israel is exposed contributed greatly to an increase in financial asset prices, a decline in long-term yields, and the appreciation of the shekel. Direct investment by nonresidents was characterized this year by high volume and high share of GDP compared to the rest of the world.
- The efforts to internalize the lessons derived from the crisis abroad and to identify domestic structural issues in the financial system continued in Israel this year. These efforts led to a series of regulatory measures intended to establish financial system regulation and to make the allocation of resources in the economy more efficient. Such regulation can be institutionalized by establishing a financial stability committee which will focus on the financial stability of the entire system, and would include the Bank of Israel, the Ministry of Finance, and the three supervisors heading the financial system supervisory authorities.
- The end of this chapter features discussions of two issues, accompanied by policy recommendations: (1) to raise womens' eligibility age for old-age allowances and to bolster the incentives for both men and women to delay leaving the labor market at the current retirement age, and (2) to reduce the automatic inflation-indexation mechanisms that could create distortions and deviations.

1. MAIN DEVELOPMENTS

In 2013, GDP increased by 3.3 percent, a moderate rate taking into account that the start of natural gas production from the "Tamar" site contributed to growth this year. The moderation continues the trend that became apparent last year, *inter alia* because the background conditions for economic activity remained similar. The moderation is the result, first and foremost, of the slowdown in demand from abroad. On the real side, this slowdown is reflected mainly in stability in exports and investments, while on the nominal side, it is reflected in the low inflation environment. Excluding the contribution of natural gas production, growth in 2013 moderated relative to last year, with a number of domestic factors contributing to this.

In 2013, GDP increased by 3.3 percent, a moderate rate taking into account that the start of natural gas production from the "Tamar" site contributed to growth this year.

The developments in the economy remained positive this year relative to the situation in other advanced economies. Per-capita growth was higher than the OECD average, as in recent years, the unemployment rate remained low and the current account surplus was maintained. The economy continued to grow, despite the serious shock from abroad it absorbed in 2011, mainly thanks to the stability of the financial system and the accommodative monetary policy.

The global environment of moderating economic activity, and particularly low monetary interest rates in major advanced economies, were the main background factors affecting economic activity and policy decisions this year. The growth rate of world trade remained stable and low this year, constraining the expansion of exports. This development, together with the slowdown in growth in both advanced and emerging economies, acted to slow growth in investments in Israel. In contrast, the accommodative monetary policy adopted by the central banks of advanced economies including Israel supported private consumption by lowering the cost of credit and by increasing the prices of the assets held by the public.

The global environment of moderating economic activity, and particularly low monetary interest rates in major advanced economies, were the main background factors affecting economic activity and policy decisions this year.

Over the past two years, inflation has generally been between the midpoint of the inflation target range and its lower part. This development has to be viewed against the background of accommodative monetary policy, and reflects the weakness of aggregate demand in the economy and the decline in commodity prices abroad (Figure 1.1). Inflation therefore faithfully reflects real developments in the economy since the outbreak of the global crisis in 2008. While the economy dealt well with the crisis until 2011—there was an increase in the share of exports in the trade of advanced economies and the output gap[1] was closed—there was a decline susequently in the rate of growth and in the inflation rate in 2012 and 2013.

The decline in the growth rate that took place in the past two years can be attributed to the increased duration and the worsening of the global crisis during 2011. The expansion in the construction industry, for instance, contributed to growth in 2010 and in 2011, and it slowed considerably in the past two years, but this is after the industry's weight in business sector product increased by close to one percentage point, such that

[1] The "output gap" refers to the difference between actual GDP and potential GDP. The output gap serves as an indicator of the state of the business cycle and the existence of inflation pressures. A more in-depth discussion of this topic appears in Box 2.1 of the Bank of Israel Annual Report for 2011.

the level of activity remained high. Exports continued to stagnate due to the slowdown in global trade that took place during the past two years, and due to the appreciation that was partially the result of the start of natural gas production. Investment remained stable. The need to reduce the government deficit, following its expansion last year and its high level, is a manifestation of the fact that the prolonged crisis abroad reduces fiscal maneuvering room.

Substantial growth in private consumption was supported by the combination of a low—and even negative—real short-term interest rate, an increase in financial asset prices, and an increase in the value of homes, even though the disposable income of households was negatively impacted by the slowdown in exports, tax increases, and the reduction in transfer payments.

In view of the moderation in demand, and in the absence of inflationary pressures, monetary policy in Israel continued to focus this year on supporting economic activity and maintaining financial stability. The Bank of Israel reduced the short-term interest rate in three steps by 0.25 percentage points each—including a reduction outside of the regular schedule—to 1 percent at the end of the year, in order to encourage domestic demand and investment, and in order to slow the appreciation of the shekel. The Bank of Israel also continued to purchase foreign exchange in accordance with the policy of intervention under the program announced by the Bank in 2009, and as part of a new program to offset the effects of natural gas production on the supply of foreign currency with the aim of weakening the appreciation of the shekel and supporting economic activity. The development of private consumption, GDP and prices indicate that monetary policy succeeded in supporting growth: the negative output gap is not high, and inflation is within the target range. However, alongside support for economic activity, the continuing accommodating monetary policy is not risk free.

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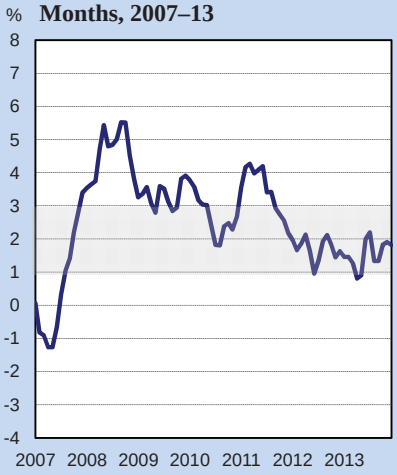
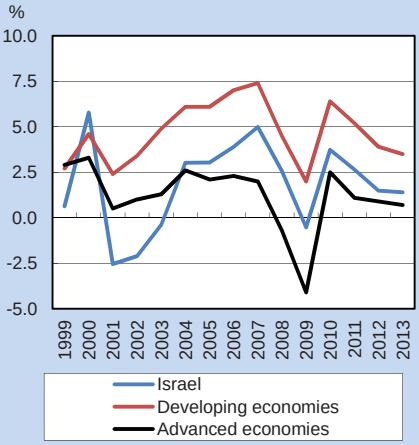
Figure 1.1
Rate of Change in the Consumer Price Index in the Preceding 12 Months, 2007–13



SOURCE: Central Bureau of Statistics.

Figure 1.2
Growth per Capita in Israel, Advanced Economies, and Developing Economies, 1999–2013



SOURCE: Based on Central Bureau of Statistics and Internaional Monetary Fund data.

The main challenge monetary policy makers faced was to balance the need to deal with the slowdown in the economy and the appreciation of the shekel with the extent of exposure to the risks inherent in prolonged monetary accommodation in a low interest rate environment, which is significantly affected by developments abroad and by the decline in Israel's credit risk. The main risk derives from the fact that home prices in Israel increased for the sixth straight year, with a high rate of increase in the volume of housing credit. This is a challenge shared by many countries that were not directly impacted by the crisis and that absorbed a decline in yields and in interest rates. In order to deal with the increasing risk, the Supervisor of Banks issued new directives during the year on taking out new mortgages, with the aim of maintaining the resilience of borrowers and of the banking system. These directives came in

The main challenge facing monetary policy makers was to balance the need to deal with the slowdown in the economy and the appreciation of the shekel with the level of exposure to the risks inherent in prolonged monetary accommodation in a low interest rate environment.

Table 1.1
Main developments, 2009–13

	2009	2010	2011	2012	2013
Mean population (million)	7.5	7.6	7.8	7.9	8.1
Nominal GDP (NIS billion, current prices)	809	866	924	993	1,053
Per capita GDP (NIS thousand, current prices)	108	114	119	126	131
Goods and services exports ($ billion, current prices)[a]	63.5	72.3	80.7	84.8	85.7
Goods and services imports ($ billion, current prices)[a]	58.6	69.1	82.9	85.2	83.1
Current account of the balance of payments ($ billion)	7.9	7.2	3.3	0.8	7.2
Overall government deficit (as a percentage of GDP)	5.3	3.6	2.7	3.9	3.2
Public debt (as a percentage of GDP)	75.3	71.5	69.7	68.2	67.4
Employed Israelis (thousands)	3,054	3,159	3,252	3,359	3,450
Real wage per employee post (yearly average, percent change)	-2.6	0.7	0.4	0.5	0.8
Nominal yield on 10-year government bonds (yearly average, percent)	5.4	4.9	5.1	4.6	4.0
Real yield on 10-year government bonds (yearly average, percent)	2.9	2.2	2.4	2.0	1.6
Gross domestic product (percent change)	1.2	5.7	4.6	3.4	3.3
Private consumption (percent change)	2.2	5.0	3.8	3.2	3.7
Unemployment rate (yearly average, percent)	9.5	8.4	7.1	6.9	6.2
Exports (excluding diamonds, percent change)	-9.2	11.7	6.2	5.1	0.0
Inflation (December compared to the previous December, percent)	3.9	2.7	2.2	1.6	1.8
Bank of Israel interest rate (yearly average, percent)	0.8	1.6	2.9	2.3	1.4
Real one-year interest rate (yearly average, percent)	-0.4	-0.7	0.3	-0.1	-0.5
Real effective exchange rate (percent change)	1.8	-5.1	-1.0	4.5	-6.4
NIS/$ exchange rate (yearly average)	3.9	3.7	3.6	3.9	3.6
Tel Aviv 100 index[b]	88.8	14.9	-20.1	7.2	15.1
World trade (percent change)	-10.6	12.8	6.1	2.7	2.9

[a] Excluding diamonds.

[b] Nominal rate of change - the last day of December compared to the last day of the previous December.

SOURCE: Based on Central Bureau of Statistics and International Monetary Fund.

addition to the directives and limitations issued by the Supervisor over the past few years to reduce the risk inherent in the expansion of housing credit.

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Fiscal policy this year dealt with the need to reduce the deficit, after it expanded rapidly last year. Following the elections, and as part of formulating the budget for 2013 and 2014, the government decided to reduce the deficit by raising taxes and cutting expenditure programs. This process was a continuation of the tax increases decided on in 2012, after the magnitude of the deficit became clear. Even though the government cut expenditure programs (that deviated from what was permitted based on the expenditure rule), it did not reduce the growth rate of public consumption, and the rate of hiring workers in public services remained high. In that way, the public sector helped maintain the stability of the labor market, particularly in view of the slowdown in the expansion of employment in the business sector.

2. THE ISRAELI ECONOMY

a. Real activity

The moderation in growth in recent years is the result first and foremost of the slowdown in demand from abroad. This year, the moderation in growth also derived from the fact that exports slowed even beyond what could be expected from the slowdown in world trade, the slowdown in growth of investment, and the reduction in the government's budget deficit.

GDP increased by 3.3 percent this year, similar to last year. However, excluding the effect of the start of natural gas production, the growth rate moderated to around just 2.5 percent, reflecting some slowdown relative to last year.[2] The moderation in growth that took place in recent years is the result first and foremost of the slowdown in demand from abroad and of the resulting decline in exports. It seems that the moderation in growth this year also derived from the slowing of exports even beyond what could be expected from the slowdown in world trade, the slowdown in growth of investment in the principle industries, and the reduction in the government's budget deficit. Alongside these factors, growth in private consumption remained stable, and was the major factor contributing to GDP growth.

While the start of natural gas production from the "Tamar" site contributed close to one percentage point to growth this year, the natural gas reservoirs have a more complex effect on economic activity. The start of natural gas production increases the surplus in the current account, both the existing surplus and that expected in the next few years, and contributes to appreciation of the shekel. In order to weaken the negative effects of the appreciation, and in order to create a fair intergenerational distribution of gas receipts, the government decided to establish a designated fund ("sovereign wealth fund") that would invest the receipts from natural gas levies abroad. The Monetary Committee decided that, at least until the fund begins operating, the Bank of Israel would purchase foreign currency in accordance with a program declared in advance, in order to offset the effects of natural gas production on the current account.

[2] The production of natural gas is expected to contribute 1–2 percent to the GDP level (but not to the growth level) in each of the next 30 years. The attribution of the large effect of natural gas production to GDP growth specifically this year derives from the fact that production began in April 2013. A further effect is also expected in 2014, as well as with the beginning of production from the "Leviathan" reservoir.

Some of the appreciation related to natural gas production reflects a more basic channel through which natural gas discoveries impact the real exchange rate. Natural gas discoveries have added wealth to the economy, and they create an income effect. This increases domestic demand, which in turn creates pressure for appreciation of the shekel. This reduces the worthwhileness of exports, expands imports, and slows growth. This is a natural process, referred to as the "natural resource curse" in economic literature, and which offsets some of the growth in GDP that derives from natural gas production.[3]

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The surplus in net exports (volume) remained relatively stable this year, following declines in 2011 and 2012, a reflection of the slowdown in both exports and imports. The slowdown in exports derives mainly from the slowdown in world trade, and particularly from the slowdown in imports by countries that are destinations for Israeli exports, although it is likely that the continuing appreciation also causes difficulties for exports. Since the 2008 crisis, the increase in the weight of global trade in total global economic activity has halted, apparently as a result of the attempt by countries that were negatively impacted by the crisis to divert demand toward domestic products. This policy creates difficulties for the growth of the small, export-based economies, including Israel.

The real exchange rate appreciated significantly in 2013—by about 6 percent—after depreciating by about 4 percent in 2012. This represents a cumulative appreciation of about 20 percent relative to 2007, and is mainly explained by fundamental economic factors that acted on the economy during this period, particularly the improvement in the state of the economy compared to countries that were directly impacted by the crisis. The improvement is reflected both in the fact that the per capita growth rate is higher than in the other advanced economies, and in the fact that expectations are that this situation will continue for some time. Other factors that contributed to the real appreciation are the discovery of natural gas reservoirs, the current account surplus Israel has enjoyed in recent years, the decline in geopolitical risks, and the improvement in the debt to GDP ratio compared to the rest of the world. After taking these factors into account, the real appreciation—despite its significant rate—is not extraordinary when comparing the changes in exchange rates worldwide since the start of the crisis (see Chapter 2 for a discussion of this). Alongside the fundamental factors in the foreign exchange market, there are also short-term financial factors that caused appreciation that superceded the fundamental factors. The Bank of Israel's intervention in the foreign exchange market acts to moderate these forces in a period in which exports are experiencing difficulties derived from the slow expansion of global demand.

The real exchange rate appreciated significantly in 2013, after depreciating in 2012. Since 2007, the appreciation totals about 20 percent, explained mainly by real factors acting on the exchange rate.

[3] The phrase "natural resource curse" in the literature relates to the possible negative impact of the income effect on the economy in which natural resources have been discovered. The phrase "Dutch disease" refers to the negative impact of appreciation of the domestic currency on the tradable sector, as derived from the improvement in the current account of the balance of payments as a result of the discovery of natural resources.

In view of the difficulties faced by export industries, the success of software services and R&D exports is noteworthy. In the past two years, exports in these industries increased by about 15 percent per year (in current dollar prices), and due to the fact that they grew continuously during the past two years, the share of these exports in Israel's total goods and services exports has already reached about 15 percent. The growth of the software and R&D industries is also reflected in an increase in the number of employees in these industries, growth which is more rapid than in the business sector as a whole. (A discussion on the range of export industries appears in Chapter 7, Section 7B.)

The current account in the balance of payments ended this year with a surplus of 2.4 percent of GDP. Excluding the contribution of natural gas production to the current account, it was still in surplus, despite the slowdown in exports. This is because of a parallel slowdown in imports, which was led by a slowdown in investment. Imports of consumer goods increased in 2013 by a high rate of about 8 percent (volume), mainly due to the rapid growth of vehicle imports. But since the import of consumer goods has a low weight in total imports, this component does not have a large impact on total imports. It therefore seems that the slowdown that originated abroad is moderating exports as well as the demand for imports.

Fixed capital formation remained almost stable, thereby contributing to the slowdown in growth. The slowdown in growth of investment derives from a decline in the utilization of existing capital, since this acts to slow the need for increased capital stock. It also derives from stability in investment in the construction industry and from the completion of two large projects—infrastructure development related to production of natural gas from the "Tamar" site, and the construction of the new Intel plant. This may indicate that the slowdown in investment derives from a decline in demand and not from financing difficulties (See Section 2c).

Private consumption and public consumption continued to grow this year at a stable rate, and together they constituted a stabilizing factor in the growth of GDP.

Private consumption and public consumption continued to grow this year at a stable rate, and together they constituted a stabilizing factor in the growth of GDP. A number of opposing forces acted on private consumption this year. Tax increases, the reduction in transfer payments, and the slowdown in exports and in investment contributed to a decline in the growth rate of consumption, since they acted to slow the growth of disposable income, while the accommodative monetary policy stimulated private consumption by reducing interest rates and supporting the prices of real and financial assets held by the public. The discovery and development of natural gas reservoirs may have also supported private consumption, although it is difficult to estimate their impact. The discovery of natural gas supports private consumption mainly through the "wealth effect", which passes through to the public through three channels: an increase in the value of oil and gas shares held by the public, increased tax revenue, which is expected to accelerate later on, and the appreciation of the shekel.

From the perspective of income, two factors allowed the stability of growth in private consumption: the flexibility of the labor market and the decline in noncyclical unemployment (frictional and structural). The business sector absorbed the slowdown

in demand by reducing work hours per employee and by slowing growth in employment. Since the public services industry maintained a high rate of hiring, and since there was a decline in noncyclical unemployment, the employment rate continued to grow and the unemployment rate declined. As a result, the return on labor was shared by an increasing number of individuals which, as noted, helped maintain stability in the growth of private consumption.

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The decline in noncyclical unemployment—a prominent and important phenomenon—has been happening gradually for a number of years, and is apparently the leading factor in the decline that has occurred in the unemployment rate despite the slowdown in growth. Noncyclical unemployment includes unemployment that derives from the fact that at any given moment there are unemployed workers who are looking for work and who remain unemployed until there is a match between them and an employer who is looking for employees. A more rapid and efficient matching process leads to a declining noncyclical unemployment rate and acts to lower the overall unemployment rate in the economy. Between 2004 and 2011, the improvement in compatibility between those looking for work and employers increased the likelihood that a newly unemployed person would find work in the next quarter by 15 to 20 percent, and shortened the average time to fill a vacant position (excluding cyclical effects) by a similar amount (See Chapter 5).

b. Price developments

The inflation rate was 1.8 percent in 2013, near the midpoint of the inflation target range. During the first half of the year, the inflation rate remained low, and in April and May it was even below the target range. However, in June, inflation returned to the center of the range due to a high CPI reading that was influenced mainly by the increase in VAT and other taxes. After the Bank of Israel continued reducing the interest rate and announced the foreign exchange purchasing program, thereby enhancing the monetary expansion, inflation in the second half of the year developed near the midpoint of the target range.

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There were primarily three components which contributed to price increases in Israel. The first is housing services, a component whose weight is 25 percent of the Consumer Price Index.[4] The housing component increased at a higher rate than the increase in the overall CPI this year for the sixth straight year. At the beginning of the current cycle, the housing index increased sharply, but in recent years, its increase has moderated, and in 2013 it was in line with the price increases of all nontradable products. This shows that there was an inadequate response on the part of supply to the increase in demand for housing services at the beginning of the cycle. Due to the growth in supply in recent years, we can see signs that the gap between increased demand and increasing supply narrowed this year.

The increases in rents moderated greatly in the past year, following sharp increases at the beginning of the current cycle.

[4] The prices of housing services are included in the Housing item of the Consumer Price Index. In January 2013, the weight of this item in the CPI was updated, increasing by one percentage point.

The food component contributed to the increase in inflation this year, and continued the trend that began in the second half of 2012.

The second component is food. Food prices declined in the second half of 2011, following the social protest, and continued declining during the first half of 2012. However, starting in August 2012, and during 2013, the food index in Israel increased. The increase offset the decline that took place with the social protest. It is possible that the implementation of the recommendations of the Kedmi Committee may contribute to reduced concentration in the food industries and help in reducing food prices in Israel.

The third component is home maintenance. The price of home maintenance increased for the third consecutive year, a result of the increase in electricity prices. The increase in previous years derived from the fact that energy prices increased greatly worldwide, and this year it derived primarily from the government's decision to smooth out prices until the losses previously accumulated by the Israel Electric Corporation would be covered.[5] In contrast with these three items, communications prices continued to decline in 2013, continuing the sharp decline that began in 2011 as a result of increased competition in the cellular industry.

Inflation in Israel was affected by the moderation in global demand.

The moderation in the pace of inflation became apparent in mid-2011, and continued throughout 2012 and 2013. This development is prominent against the background of accommodative monetary policy, and reflects the considerable effect that the weakness in global demand has on the economy. In the labor market as well, there were also no noticeable pressures for price increases, even though the unemployment rate declined to very low levels in recent years. There were indications of this in the fact that real wages have increased since the end of 2011 by only about one percentage point—less than the growth in GDP per employee—and in the cost of labor per unit of output. Over the past few years, this estimate has ranged around the long-term level, with a tendency toward some decline in the past two years (see further discussion in Chapter 2). Inflation thus well reflects the real developments that have taken place in the economy since the start of the crisis in 2008.

Inflation in Israel was affected, as noted, by the moderation in global demand, similar to inflation in other countries, as reflected in the prices of tradable goods in Israel. These prices increased in recent years at a very low rate, particularly relative to the rate of increase in the prices of nontradable goods (even after excluding the housing item). In 2013, there was almost no change in the prices of tradable products. The prices of nontradable products increased at a slightly higher pace. This reflects the forces for real appreciation of the shekel that are active in the market.

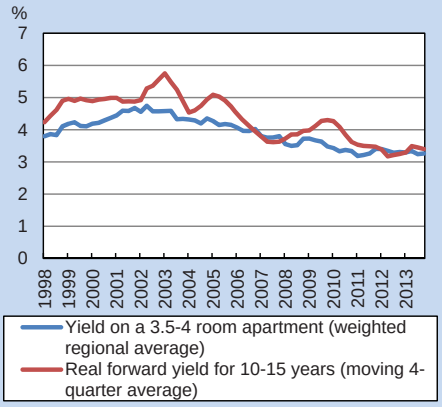
The real increase in home prices reached 6 percent for the year.

The housing market remained at the center of the public agenda in 2013, particularly due to the high level reached by home prices and due to the share of housing expenditure in of total consumption by the average family. The increase in home prices resumed in the second half of 2012, and continued throughout 2013.

[5] When the supply of natural gas from Egypt was halted, the government decided, through the Public Utilities Authority—Electricity, to spread out over three years the effect of unusual fuel costs on electricity prices. Therefore, the higher fuel prices in the past were reflected to a great extent in the temporary increase in losses by the Israel Electric Corporation, which were financed by loans guaranteed by the government.

The real increase in home prices reached 6 percent for the year, after an increase between 2008 and 2012 of about 50 percent. The number of transactions and volume of housing credit continued to increase at a high rate in 2013. Against this background, the question arises of to what extent the increase in home prices derives from an excess in fundamental demand by households for housing services, and to what extent it derives from excess demand of homes as an investment asset.

Figure 1.3
Yield on an Investment Home Compared to the Yield on Government Bonds[a], 1998–2013



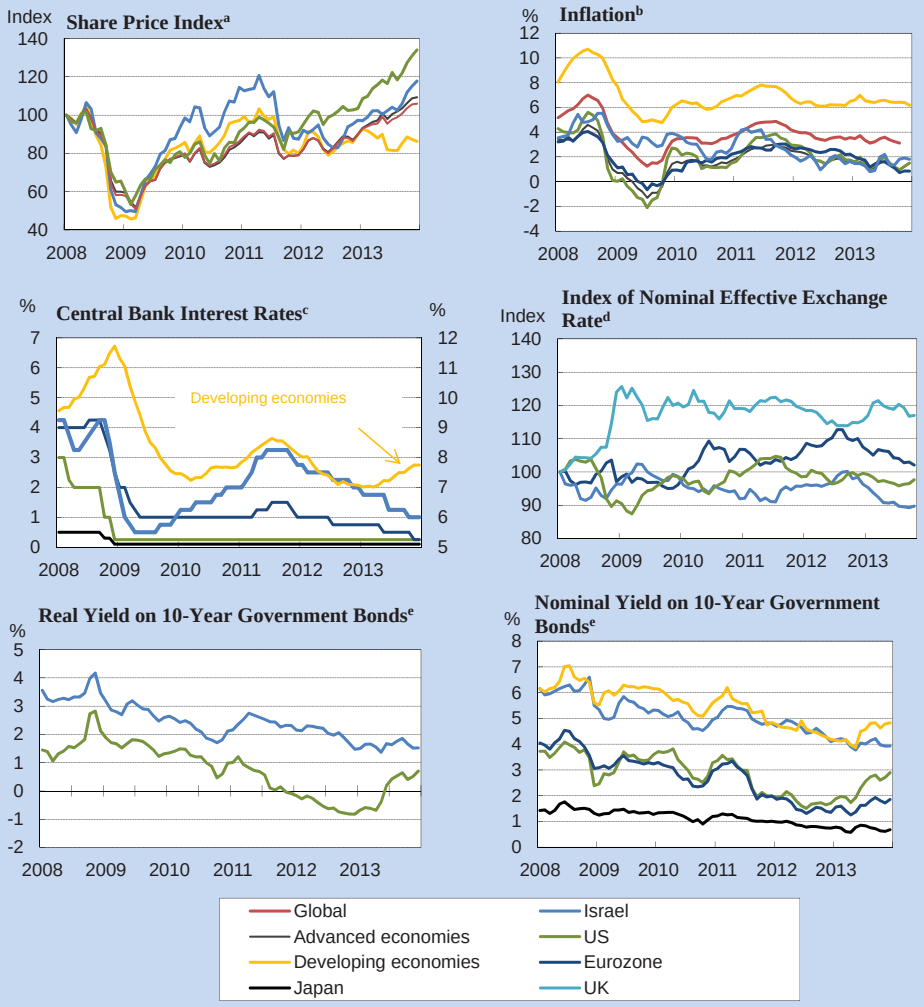
[a] The real forward yield is a benchmark for the real yield that will be prevalent at equal weight.
SOURCE: Based on Central Bureau of Statistics.

One generally acceptable method of analyzing the main demand factors of the increase in home prices is to assess the relationship between annual rent and the price of a home, since it reflects the yield on an investment in a home (Figure 1.3). This ratio can be compared to yields on alternative assets, such as CPI-indexed government bonds with a particularly long maturity period.[6] The yields on government bonds declined in recent years to historically very low levels, and in parallel, rents increased as a result of the increase in demand for housing services. The combination of these two developments—growth in demand for housing services beyond growth in supply, and the decline in alternative yields—increased demand for homes for residential and investment purposes. This analysis explains most of the increase in home prices. In addition, capital gains taxes increased in recent years, increasing the advantage of investing in real estate.[7] While bond yields continued to decline in the second half of 2013, it was at a slower pace and with a relatively high level of volatility (against the background of uncertainty regarding the timing and pace of the tapering of quantitative easing in the US). During 2013, the increase in rent prices moderated, which is consistent with the assessment that the growth in demand for housing services is no longer increasing at a more rapid pace than supply. Alongside these developments in housing demand, the level of activity in the construction industry remained high. (More discussion of this appears in Chapter 7, Section 7A.) The assessment is that as a result of the acceleration in activity that has taken place in recent years in this industry, and due to the moderation of the increase in rent prices, the pace of growth in supply is starting to close the gap with the pace of growth in demand. The moderation in the increase of rents, new tax measures aimed at

6 Although these two investments have different characteristics, and different risks, it can be seen that the yields on both develop similarly.

7 Investment in a home was exempt from tax until the end of 2013, while investment in financial assets is taxed at a rate of 25 percent of the real profit. In contrast, there are taxation differences that act in favor of financial assets. For instance, purchase tax is levied on buying a home, but not on securities.

Figure 1.4
Monetary Indicators, Israel and Abroad, 2008–13



[a] Based on monthly average in dollar terms. Advanced economies, developing economies, and global -based on MSCI indices; Israel - Tel Aviv 100 Index; US - S&P 500 Index.
SOURCE: Bloomberg and TASE.
[b] Inflation over the previous 12 months. The groups of countries are as per the IFS definition.
SOURCE: IFS database.
[c] SOURCE: Israel - Bank of Israel; Japan, US and eurozone - Bloomberg; developing economies - weighted average (weighted by size of GDP in 2011 in PPP terms) of the interest rates in Argentina, Brazil, Chile, Colombia, Russia, South Africa and Thailand.
[d] Increase indicates depreciation. SOURCE: IFS database.
[e] SOURCE: Bloomberg and Bank of Israel. Developing economies - the average of South Africa, Mexico, Thailand, South Korea, Slovakia, Poland and Hungary.

investors, and the moderation in the decline of alternative yields, have acted to reduce the growth of demand for homes as an investment asset.

c. The financial markets and sources of financing in the economy

The public's financial assets portfolio grew this year due to increases in financial asset prices in Israel and abroad, and due to the public's accumulation of financial assets, mainly by way of institutions that manage long-term savings. The increases in financial asset prices in Israel were greatly affected by trends on foreign markets and by the decline in the risks to which Israel is exposed. These price increases, in Israel and abroad, are notable in view of moderate global growth and in view of the high credit risks that characterize a number of advanced economies, and are affected by the high level of liquidity in the markets, which derives from the fact that short term and long term interest rates are low, and from expectations that the global economic recovery will continue.

The decline in the risks to which Israel is exposed, in addition to maintaining the surplus in the current account, also reduced the risk premium of a default on external debt, which is reflected well in the CDS spread between Israel and the US. As a result, there was an increase in total foreign investment in Israel, the yield spreads between Israel and the US narrowed, the forces acting for appreciation of the shekel increased, and prices of equities increased at a higher rate than in emerging economies and similar to the rate in advanced economies. Stock prices increased considerably, even though corporate profitability was low this year, and were supported by the environment of low interest rates that serve as benchmarks for the rate of discounting corporate profits. These capital market developments indicate that financial developments in Israel were positive compared with such developments worldwide.

The capital market trends in Israel were greatly affected by the trends abroad and by the decline in the risks to which Israel is exposed.

Nominal and real yields to maturity on long-term government bonds continued to decline in the first half of 2013, and ranged at historically low levels in the second half of the year. The spread between yields on 10-year government notes and the yields on similar US securities narrowed during the year. Based on the experience accumulated in recent years, it can be said that the developments abroad and the developments of risk in Israel affect long-term yields in Israel to a great extent. Geopolitical tension is an important component of the risk in Israel, and this tension declined in the second half of 2012 and during 2013, particularly since September. Israel's credit risk declined in tandem with it, which reduced the risk priced into all financial assets in Israel to a great extent. However, as noted, the yield spread narrowed due to developments abroad as well—the changes in expectations regarding monetary policy in the US, and particularly the assessments concerning the timing and pace of the tapering of quantitative easing[8]: In May, against the background of the continued improvement in the US labor market, and against the background of some recovery in economic activity, assessments were made that the US Federal Reserve would soon declare

[8] The quantitative easing program that was implemented in the US this year began in 2012 as a third Quantitative Easing program.

a tapering of quantitative easing, and US economic activity would be negatively impacted. As a result, US government bond yields increased, while Israeli government bond yields increased only slightly. In addition to the decline in geopolitical risk, this moderate effect can also be explained by Israel's relatively good economic condition. This was reflected in the reestablishment of government credibility in the deficit target, in the debt to GDP ratio (which is not high compared to the rest of the world), in an improvement in the current account of the balance of payments, and in the resilience of the financial system. As such, based on developments in the financial markets, Israel is not among the countries that would be negatively impacted by an increase in yields in the US as a result of the tapering of quantitative easing there.

The year 2013 was characterized by significant increases in corporate bond prices.

The year 2013 was characterized by significant increases in corporate bond prices, which were influenced by considerable net investment by the public in mutual funds. This, in turn, resulted from the fact that investment in funds is considered as having greater potential for profit than credit-risk free investments, such as government bonds. The yield spreads between them and government bonds narrowed, reaching particularly low levels from a historical standpoint. While there were financial forces acting for such narrowing—there was continued restructuring of large problematic debts from the past and new bond series were issued in accordance with rules drafted by the Hodek Committee—these cannot explain the entire reduction.

The balance of credit to the nonfinancial business sector declined by about 2 percent in 2013 compared with the previous year.

The balance of credit to the nonfinancial business sector declined by about 2 percent in 2013 compared to the previous year. Bank credit decreased and non-bank credit increased, as a result of growth in direct loans from institutional investors.[9] This development is the continuation of a long process of structural change in the credit channels to the business sector—a decline in the share of bank credit and an increase in the share of nonbank credit. The increase in financial assets held by the public through institutional investors is a result of (a) the many reforms carried out in the pension funds, including raising the retirement age and the Compulsory Pension Law that came into effect in 2008 (see Section 5), and (b) taxation: Tax rates on capital gains increased in recent years[10], but institutional investors are exempt from capital gains taxes while savings and CPI-indexed deposits in the banking system are taxable. Therefore, the public has preferred accumulating its assets through institutional investors. It is possible that the growth of assets in institutional investors' portfolios is

[9] This channel allows institutional investors to provide more credit to companies, in addition to the credit they receive through corporate bonds, on a relatively rapid track and with less transparency than the bond issuance track, but similar to the level of transparency in a bank loan. (A broader discussion appears in Chapter 4.)

[10] Pension, provident and advanced training funds are attractive to the public because the accumulations built up in them are exempt from income tax. Their attractiveness increased recently due to various reforms, including the Compulsory Pension Law, and increased further due to changes in taxation: As a result of the Trajtenberg Committee report, the tax rate on capital gains in real tracks was raised to 25 percent in January 2012, while the tax rate on nominal tracks was left unchanged (15 percent). A further indication of the increase in the attractiveness of these funds can be found in the fact that in recent years, there was an increase in the percentage of liquid assets in the tax-exempt funds.

what is motivating institutional investors to look for investment alternatives, including investments abroad and direct loans to the business sector.

Since credit to the business sector declined in relation to GDP, it may be asked whether the business sector is facing borrowing constraints, which negatively impacts GDP growth. To answer this question, at least in relation to the large companies, we rely on a number of various indicators (more details appear in Chapter 4): (a) the spreads between corporate bonds and government bonds narrowed while the volume of bond issues—even those of companies with relatively low ratings—increased; (b) various surveys show that there was a slight decline this year in financing difficulties in the business sector; (c) there was an increase in unused lines of credit in the banking system, with a parallel decline in the spread between the interest on credit and the interest on deposits. These all indicate that there is no effective limitation on the credit available to the business sector, and the decline in this credit in relation to GDP derives from the low volume of investment, which is in line with the moderating level of economic activity in Israel. This conclusion—that demand for credit declined—is also derived from the decline that took place this year in the use of capital stock in the economy, a decline that does not reflect companies' need to increase investment in capital. (For more discussion, see Chapter 2.)

It seems that there is no effective limitation on the credit available to the business sector.

3. THE GLOBAL ENVIRONMENT

The average annual rate of growth in world trade, a main channel through which global economic activity affects the economy, remained low this year. In the first half of 2013, assessments grew stronger that activity in the next few years would recover at a slower pace than previously expected, and as a result, demand for investments weakened. However, the global economy began stabilizing during 2013, and there were even signs of an exit from the crisis, mainly emanating from the US.

The average annual rate of growth in world trade remained low this year.

The low inflation rates, and the relatively high unemployment rates, in advanced economies made it possible for monetary policy makers to continue adopting accommodative policies, including low monetary interest rates and quantitative easing programs. Almost six years after the beginning of the crisis, growth in the eurozone continues to be moderate, and even though it has begun to recover in the US, per capita growth is still near zero. The rate of growth in some emerging economies moderated this year, although it is significantly higher than the growth rate in advanced economies. The global growth rate remained stable compared to 2012.

Low inflation rates and relatively high unemployment rates made it possible for monetary policy makers to continue accommodative policies.

Per-capita growth among the advanced economies remains near zero.

This year the differences between the advanced economies became sharper, in accordance with their fiscal situation. In some European countries, there are signs of an exit from the recession, while there is still a trend of moderation in others. The differences between European countries weighed down growth forecasts and were well reflected in the variance between them in terms of the yield to maturity on government bonds. In Germany, the UK and France, for instance, the decline in ten-year yields halted, and yields even increased in the second half of the year, while

government bond yields for Spain, Italy, Portugal and Greece declined in 2013 but still remained relatively high and ranged between 4 percent and 7 percent.

Another indicator which shows the wide variation between European countries is the unemployment rate, which continued to increase in the European Union, reaching about 10.9 percent at the end of the year, with significant variance between the various countries. These developments continued to have ramifications on the slow and fragile recovery of economic activity and sustained concerns of a deterioration of the debt crisis in Europe. Against the background of these developments, a historic agreement was formulated toward the end of the year regarding a banking union in the eurozone: By the end of 2015, the European Central Bank (ECB) will have the authority to supervise all of the large banks in the eurozone and to intervene in their operations.

Fiscal restraint in the eurozone is vital due to the rapid growth of debt, but it makes the recovery of economic activity in European countries difficult. This policy of restraint was adopted almost with no choice. In terms of monetary policy, the ECB lowered its short-term interest rate to a new low—0.25 percent—since the slowdown in activity continued and annual inflation in the eurozone declined to a level significantly lower than the target.

During 2013, there were noticeable signs of an exit from the crisis, mainly affected by the US.

In the US, the unemployment rate declined in 2013, reaching 6.7 percent at the end of the year, due to an increase in economic activity during the year, but also because of a decline in the labor force participation rate. The recovery that took place this year in the US economy relied heavily on monetary accommodation.

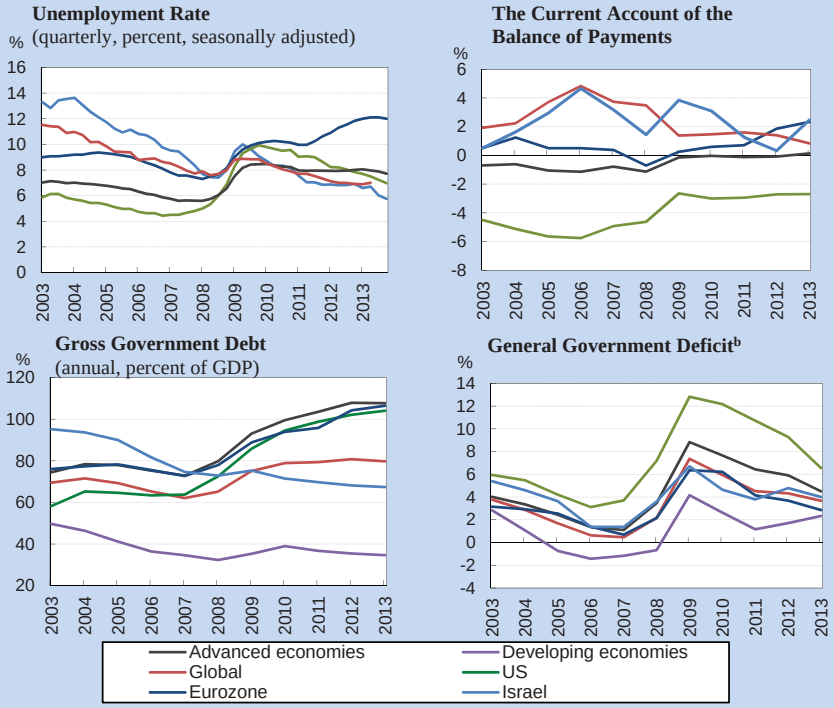
Emerging markets—primarily China and India, where growth is based mainly on exports, *inter alia* to advanced economies—have not at this stage transitioned to growth based on domestic demand. Growth rates in these countries continued to moderate, and are about 2 percentage points lower than the average rate in the decade preceding the 2008 crisis.

Capital markets in advanced economies recovered markedly.

Capital markets in advanced economies recovered markedly, and stock prices increased by 20–40 percent. It is important to remember that these increases occurred despite pessimistic assessments published regarding the global recovery—assessments that the recovery would be slow and moderate—against the background of low global interest rates and quantitative easing in the US, Europe and Japan. In some of the advanced economies, particularly those that have a deficit in the current account, the capital markets did not increase, and even declined after expectations of tapering in quantitative easing in the US increased. These expectations led to an increase in yields in these countries, which increased the cost of government debt, thereby increasing the risks to continued growth.

The moderating environment of global activity, together with historically low monetary interest rates, have in recent years accelerated the increase in home prices in many countries around the world, particularly those that were not directly impacted by the global financial crisis. While the rate of price increases in Israel in 2007–08 was very high compared to many countries, this followed price declines in the preceding years while there were substantial increases in other countries. A long-term

Figure 1.5
Indicators of Economic Activity in Israel and Around the World[a], 2003–13



[a] The aggregates in all graphs are taken from the IMF World Economic Outlook, except for unemployment, for which the figure for the advanced economies is taken from the OECD database, and the figure for developing economies is calculated from the weighted average (the weights relate to the size of the GDP in 2008 in PPP terms) of Argentina, Brazil, Bulgaria, Colombia, Latvia, Lithuania, Malaysia, Peru, the Philippines, Russia, South Africa and Thailand.
[b] The figure for Israel is adjusted to conform with the international definition so that the international comparison may be made. A positive sign denotes a deficit.
SOURCE: Israel - Bank of Israel; International - IFS Database, IMF World Economic Outlook 2013, and OECD database.

perspective indicates that between 2000 and the end of 2013, the rate of home price increases in Israel was low relative to the rate in a number of other countries. (See further discussion in Chapter 7, Section 7A.)

4. ECONOMIC POLICY

Economic policy was affected this year by five significant developments: the rate of expansion of economic activity moderated; inflation moderated; prices in the housing market continued to increase with an increase in new mortgage volume; there was a prolonged appreciation of the shekel; and the government deficit expanded in 2012. The combination of these developments led to accommodative monetary policy and to slightly contractionary fiscal policy. The combined economic policy stimulated economic activity, and there was no concern of increasing inflationary pressures. In addition, the efforts to internalize the lessons of the global financial crisis and to

identify structural problems unique to the economy continued this year. These efforts were reflected in recent years in a series of regulatory measures to update domestic regulation and to improve efficiency in the allocation of resources in the economy.

a. Monetary and macroprudential policy

Monetary policy remained accommodative this year and continued to focus on support of economic activity.

The Supervisor of Banks acted to maintain financial stability.

The main considerations at the forefront of Monetary Committee discussions were the moderate inflation rate, the appreciation of the shekel, and the standstill in exports, while the increase in home prices—which reached especially high levels—and the high pace of taking out new mortgages stood in contrast. The appreciation negatively impacted the economy's competitive ability, by moderating the volume of exports and increasing the volume of imports of consumer goods at the expense of domestic manufacturing. These developments are liable to negatively affect GDP growth, and particularly the labor market. In accordance with these background factors, the Monetary Committee reduced the monetary interest rate from 1.75 percent to 1 percent, while purchasing foreign exchange. The Supervisor of Banks imposed limitations on taking out new mortgages with the aim of maintaining the resilience of borrowers and of the banking system.

Inflation in Israel moderated, influenced by the global environment and the appreciation of the shekel.

The year 2013 was characterized by moderation in the global inflation environment, and together with the appreciation of the shekel, this continued to moderate inflation in Israel through the prices of tradable goods. In contrast, the prices of nontradable goods increased, affected by, *inter alia*, accommodating monetary policy, and overall price increases by the end of the year were within the inflation target range. This development indicates the possibility that owing to the effect of accommodative monetary policy, the negative output gap remained small. Support for these findings comes from the fact that the unemployment rate and wages in the economy remained relatively stable in the past two years, and from the fact that the unemployment rate is at a historically low rate.

Monetary policy in a small and open economy such as Israel's is affected by monetary policy around the world, which is given great weight in Monetary Committee decisions, since global economic activity has a large effect on developments in Israel, mainly through trade volume. Global monetary policy also has a direct effect on the economy, mainly through yield spreads and the relative attractiveness of investment in debt assets. (For more discussion on this, see Chapter 7, Section 7C.) These effects moderated the inflation environment, and also supported monetary accommodation in Israel in 2013, and so the Bank of Israel expanded its accommodative policy this year, and is acting to stimulate economic activity in Israel. Since the crisis worsened at the end of 2008, monetary policy has acted to increase demand, which reached its peak in mid-2009. This result is in line with the fact that the monetary interest rate declined to its low point of 0.5 percent during this period. From that time until the middle of 2011, there was some retreat in the extent of monetary accommodation, reflected in the Bank of Israel raising the interest rate, which reached 3.25 percent in mid-2011. In the second half of 2011, following the deterioration of the debt crisis in Europe, growth

in Israel moderated, and the Bank of Israel began lowering the monetary interest rate. The Bank adopted this policy during 2012 and 2013 as well, and reduced the interest rate gradually, to 1 percent. As a result of the reduction, the extent of accommodation adopted during the year increased, and is higher than the average accommodation in 2012. An indication of the deepening monetary accommodation is the slope of the real yield curve—the spread between the 10-year yield and the one-year yield. This spread reached 2.3 percentage points at the end of 2013, following an increase of 0.8 percentage points since the beginning of the year.

In recent years, the Bank of Israel has been using macroprudential tools both in the foreign exchange market and in the mortgage market.

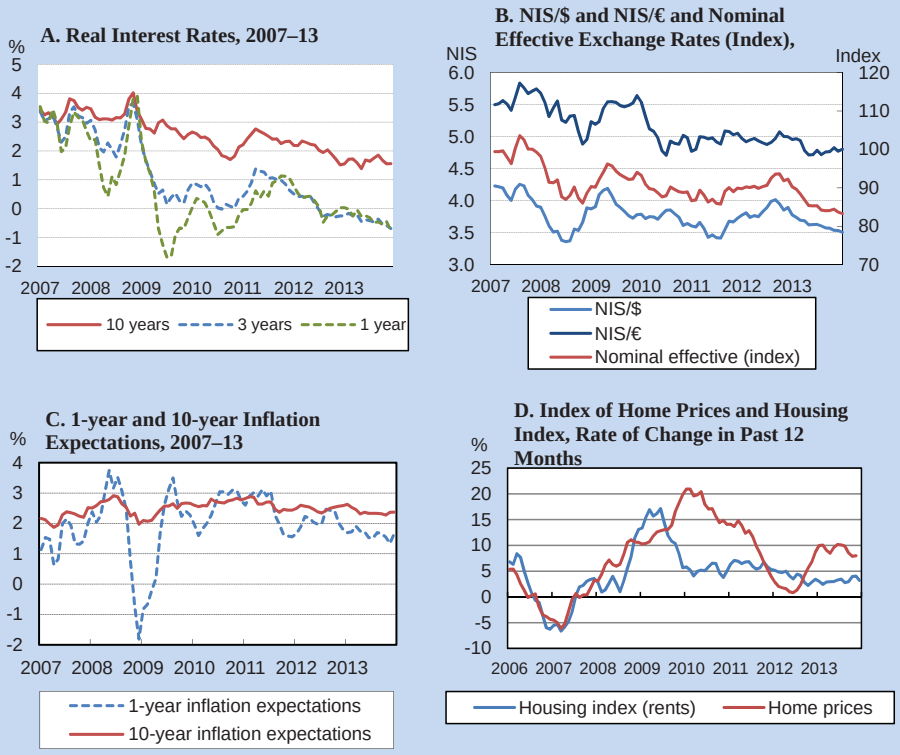
When the Bank of Israel formulates policy, it also takes into account financial stability considerations, similar to other central banks. In recent years, it has been using macroprudential tools in both the foreign exchange market and the mortgage market. Macroprudential policy is intended to reduce the financial and monetary risks that may negatively impact the robustness of the economy.

The start of natural gas production in Israel is causing a marked improvement in the current account which, in turn, is leading to pressure for appreciation of the shekel. This process may cause a phenomenon known as "Dutch disease", and may negatively impact the Israeli economy. Against this background, the Bank of Israel Monetary Committee announced a foreign exchange purchasing program that is intended to offset the effect of natural gas production on the supply of foreign exchange deriving from the improvement in the current account. According to the Committee's announcement, starting in May of 2013—and at least until the Sovereign Wealth Fund that the government is expected to establish in 2018 is operating—the Bank of Israel will purchase foreign exchange in quantities that are in line with the effect of natural gas production on the balance of payments.[11] Since growth in Israel is high relative to growth in many countries, and since geopolitical concerns have somewhat dissipated, the forces for appreciation of the shekel have increased. Moreover, direct investment in Israel expanded by a significant amount, and also constitutes a fundamental force supporting the marked appreciation of the shekel. With that, the assessment of the Monetary Committee was that there are also short-term financial forces that caused a more rapid appreciation than would have resulted from the fundamental forces. As such, in parallel to lowering the interest rate, the Bank of Israel purchased foreign exchange in addition to the purchases that were part of the program intended to offset the effects of the natural gas.

In the housing market, the trend of price increases continued for the sixth straight year, with growth in housing credit. Since the home price increases resumed during 2012, and since they continued during 2013 with accelerated growth in housing credit, the Supervisor of Banks decided to impose additional directives regarding mortgage tracks, mortgage duration, and the share of household income taken up by monthly mortgage payments. The Supervisor also increased capital adequacy requirements

[11] According to the Bank's assessment, the improvement in the current account totaled about $2.8 billion in 2013. After offsetting from the financial account the royalties of foreign partners, the amount purchased by the end of the year will be $2.1 billion.

Figure 1.6



SOURCE: Based on Central Bureau of Statistics.

in respect of mortgages. These directives and limitations came in addition to those announced in recent years with the aim of reducing the risk to the stability of borrowers and of the banking system inherent in the growth of mortgages.

b. Fiscal policy

The policy adopted by the government has led to a reduction in the overall deficit and in the structural deficit. The reduction of the deficit supported increasing credibility of the government's policy, and was reflected in a decline in government bond yields.

The overall general government deficit totaled 3.2 percent of GDP, 0.7 percent of GDP lower than the deficit in 2012. The structural deficit declined by 0.6 percent of GDP, and the cyclically adjusted deficit declined by about 1 percent of GDP.[12] The reduction of the deficit supported increasing credibility of the government's policy, and was reflected in a decline in government bond yields. The reduction of the deficit derives from the policy that the government adopted with the aim of reducing the deficit, after it expanded rapidly last year. The policy adopted by the government to reduce the deficit began before the national elections, and was reflected in tax increases. It continued at a stronger pace after the new government was formed, within the framework of the economic program for 2013 and 2014, which included

[12] The "cyclically adjusted deficit" relates to the deficit that would have been obtained had the economy produced the potential GDP. "Structural deficit" refers to the gap between the overall statutory tax burden (the tax rate) and the share of public expenditure in potential GDP.

further tax increases and reductions in expenditure relative to the programs to which the government had committed, in order for expenditure in 2014 to come within the level derived from the expenditure rule.

The budget deficit in 2012, and the pressure to reduce it, illustrated the extent to which fiscal policy is limited in its ability to support economic activity over time by maintaining or even expanding a high budget deficit. A high deficit increases public debt and negatively impacts the credibility of fiscal policy, and therefore cannot be maintained over time. While reducing the deficit by raising taxes and/or reducing expenditures may adversely affect growth in the short term, when it is done with the proper timing and with the assistance of monetary policy, it can lead to positive results in the medium and long terms. Economic policy adopted since mid-2012 has succeeded, in the sense that GDP growth did not fall significantly below its potential as fiscal policy transitioned from expansionary policy, supporting activity in the short term, to a more restrictive policy that supports reducing public debt and maintaining the ability of policy to act as required.

Large one-time revenues, and lower than planned expenditures, during the year helped reduce the deficit in 2013, while according to the original plan, the reduction was only expected to take place in 2014. While this had a slightly contractionary effect on activity this year, it acted, as stated, to return credibility to policy and to lower yields on government bonds, which acts, *inter alia*, to lower the cost of capital in the economy. At the end of the year, it can be said that only a small part of the reduction in the deficit had a direct effect on activity: Alongside an increase in tax revenue (beyond the one-time revenues), the growth rate of public consumption remained stable, and demand for employees in the public services helped maintain stability in the labor market. As a result of the surprising reduction in the deficit this year, the government decided to cancel the plan to raise income taxes in 2014.

The underexpenditure created this year is atypical, and is surprising in view of the large reduction in planned expenditures that was decided upon as part of the economic plan for 2013 and 2014. It is likely that the underexpenditure derived both from the fact that the budget was not approved until the middle of the year, and from the fact that the Ministry of Finance was wary of a situation in which the government would exceed the planned deficit two years in a row.

The share of civilian expenditure excluding interest in GDP remained low compared to the OECD average, as did the extent of government intervention in the distribution of income in the economy. The tax burden in Israel is low compared to the OECD average, even though the defense burden is high. This indicates that the societal choice in Israel tends toward low taxation in order to encourage activity, alongside reduced civilian services and diminishing intervention to reduce income inequality. As a rule, government expenditure on civilian services—such as welfare, education, and healthcare—reduces inequality and lowers the poverty rate in the economy. According to our assessment, the government's contribution to the reduction in inequality and poverty—by way of the tax system and civilian services—is lower than the OECD

The tax burden in Israel is low compared to the OECD average, even though the defense burden is high. This indicates that the societal choice in Israel tends toward low taxation in order to encourage activity, alongside reduced civilian services and diminishing government intervention to reduce income inequality.

average. The low contribution of the government is particularly prominent in relation to the reduction of poverty, where it totals only about 25 percent, while the OECD average is about 60 percent. The decision made by the government at the end of 2013 to cancel the increase in income tax—a progressive tax—and to leave the increase in VAT—a relatively efficient, yet regressive tax—in place strengthens the argument that the societal preference in Israel tends toward reduced government involvement in the distribution of income (see Chapter 8).

At the end of the year, the government decided to change the rule delineating the rate of growth in government expenditures (the fiscal rule) and to turn it into a more restrictive rule than its predecessor.

At the end of the year, the government decided to change the rule delineating the rate of growth in government expenditures (the fiscal rule) and to turn it into a more restrictive rule than its predecessor. The new rule limits the government expenditure growth ceiling to about 2.5 percent a year in each of the next few years[13], while the previous rule limited the growth ceiling to about 4 percent. In that way, the government signaled its intention to further reduce its involvement in the economy, even though civilian expenditure has a low share in GDP. The new rule will require significant adjustments, since the cost of the programs decided upon by the government is already higher than permitted according to the rule.

The start of natural gas production from the Tamar site is an important milestone in the use of a natural resource discovered along Israel's coast in 2009. The development of the Leviathan site will be another important stage. This year, the government approved the volume of exports from the natural gas sites, thereby removing an impediment for the development of Leviathan. However, the regulation of the industry has not been completed. The question of taxation on the exports has still not been answered, and no place has been found along the coast to receive the gas. It is important to solve these problems quickly, since a delay in the development of Leviathan could cost the economy a significant amount because the natural gas from Tamar and Leviathan is cheaper than imported natural gas or than alternative petroleum products.

c. Regulation of the financial system

The recent crisis exposed structural weaknesses in the capital market derived from the lack of a regulatory infrastructure that is appropriate for the market structure that was created after the reforms of the previous decade.

The financial crisis and the resulting global slowdown exposed the weaknesses inherent in the complexity of the global financial systems and the difficulty in understanding them, as well as the lack of efficient regulation over large financial entities. The faulty functioning of these systems and their effect on real economic activity emphasized the importance of maintaining financial stability and of reducing systemic risks. The crisis did not directly impact the functioning of the financial system in Israel, mainly due to the fact that the system was exposed only to a small extent to the variety of complex financial instruments abroad, and to the fact that there is tight supervision in Israel due to the lessons learned from previous domestic financial crises. However,

[13] According to the proposal, growth in expenditure will be limited to the pace of growth of the population, plus the ratio between 50 and the public debt (the latter is currently 67 percent). Should there be price adjustments (as there have been in the past), the increase in 2015 is expected to be even more moderate, due to the retroactive adjustment of the size of the budget to the gap between inflation projections in the budget for 2013 and 2014 and actual inflation.

the crisis did expose weaknesses derived from the lack of a regulatory infrastructure that is appropriate for the market structure that was created after the reforms of the previous decade.

The implementation of lessons from abroad and the identification of domestic structural problems led to a series of regulatory processes intended to correct the existing regulation in the Israeli financial system and to make the allocation of resources in the economy more efficient. Among the more prominent regulatory processes, some of which are still in the process of being formulated, are strengthening the regulation of the corporate bond market (the Hodek committee and debt restructuring deals), reducing concentration (the concentration committee), increasing competitiveness in the banking system (the Zaken committee), strengthening supervision over institutional institutions (regulations from the Capital Markets, Insurance, and Savings Division at the Ministry of Finance and the Goldschmidt committee), and a variety of measures by the stock exchange (the Ben-Horin committee and the committee to promote investments in public companies active in the R&D field). Since Israel does not have a sole supervisory body, these processes were led by the three regulators who lead the authorities supervising the financial system—the Supervisor of Banks, the Commissioner of Capital Markets and Insurance, and the Head of the Israel Securities Authority. Thus, the financial system has in the past few years undergone an in-depth examination, and numerous committees continue to assess the appropriate level of regulation in the various regulatory areas.

It should be emphasized that the solutions to the system's weaknesses are not simple, and formulating the solutions takes time and requires meticulous assessment by professionals. The financial system also needs time to implement new directives. Supervisory authorities and policy makers face a complex challenge in finding the proper balance between tight regulation of the financial system and over-regulation, and in enabling the financial markets to get used to the new directives. To the extent that the challenge is not dealt with by the supervisory authorities, it may negatively impact the efficient allocation of investments.

In the absence of institutionalized coordination between the various supervisory bodies, each supervisor is interested in strengthening regulation in the area of his responsibility, and an overall view of the system is lacking. The establishment of a financial stability committee that will include the Bank of Israel, the Ministry of Finance, and the three supervisors, and will focus on assessing the financial stability of the system as a whole, would allow improved coordination between the supervisory authorities and improved efficiency, and will assist in maintaining the proper balance. Such a recommendation appears in the FSAP report published by the IMF in 2012 after it assessed the stability of the financial system in Israel, and in the annual report on Israel for 2013, but the recommendation has not yet been implemented.

The establishment of a financial stability committee that will include the Bank of Israel, the Ministry of Finance and the three supervisors, and will focus on assessing the financial stability of the system as a whole, would allow improved coordination between the supervisory authorities and improved efficiency.

5. PENSIONS IN ISRAEL—THE CURRENT SITUATION AND POLICY RECOMMENDATIONS

Background

In the past two decades (since 1995), the government has carried out a series of reforms in the pension system, with the aim of covering the actuarial deficits that have accumulated in the system and reducing the growth in budgetary expenditure projected with the expected increase in the share of retirees in the population. The reforms focused on the transition from defined benefit pension insurances to insurance based on the accumulation of funds in accordance with deposits and returns during the pension savings period (defined contribution)[14], and on covering the actuarial deficits in the old pension funds. Due to the reforms, the pension system is currently better and more stable than it would have been without them.[15]

The transition from defined benefit plans to pension plans based on the accumulation of savings took place in two main steps. The first was taken in 1995, when the government ended the ability of new savers to join the old pension (defined benefit) funds and required that new, defined contribution, pension funds be established in their place. The second step was taken starting in 1999, when the government and the Histadrut (General Federation of Labor) agreed to cancel the budgetary pension arrangement for new employees in the civil service. This agreement came into effect gradually, starting at the beginning of the last decade, and new civil service employees have since then been insured in defined contribution pension funds. As a result of these two measures, the decisive majority of younger insured employees have pension savings in which the benefit is dependent on the saver's deposits and the fund's returns during the savings period.[16]

In order to deal with the actuarial deficit suffered by most of the old pension funds, the government formulated an arrangement that included a cut in the benefits of members, an increase in monthly deposits by active members, and an injection of funds by the government. As part of the reduction in benefits, the age of eligibility

[14] It is generally harder to maintain an actuarial balance in defined benefit funds than in defined contribution funds. It can be said that the deficits in most of the old pension funds derived from the fact that the pension benefits they granted to their members were broader than the benefits derived from the monthly deposits.

[15] The reforms in the pension system in Israel are described in: Ahdut, L. and Spivak, A. (2010), "The Pension System in Israel Following 15 Years of Reforms", Policy Study 8, Policy Studies Series, Van Leer Institute; Spivak, A. (2001), "The Reforms in the Pension Funds", in Ben-Bassat, A. (ed.), "From Government Intervention to a Market Economy: The Israeli Economy, 1985–1998", Am Oved; Yosef, R. and Spivak, A. (2008), "The New World of Pensions: After the Bang of 2003", Policy Study 5, Policy Studies Series, Van Leer Institute; Peleg, D. (2003), "The Reform in the Pension System in Israel, 2002–2004", Social Security, 71, pp. 84–108.

[16] At the beginning of 2008, the government took an additional step in the pension area: it expanded the agreement between the Histadrut and the Coordinating Bureau of Economic Organizations, and required all employers in the economy to put money into a pension fund for their employees. This step significantly increased the percentage of households that have pension savings.

for an allowance was raised by two years. The government took this significant step as part of a broader measure—raising the retirement age for the general population—and the main significance for the rest of the population was raising the eligibility age for old-age allowances and the age of mandatory retirement.[17] In parallel, a uniform mechanism was set for the pension funds within the arrangement, including a mechanism for adjusting members' rights to the fund's actuarial balance.[18] Such a mechanism currently exists in all pension funds (the old ones and the new ones).

Delaying the eligibility for old age allowances and for benefits from the old pension funds in the arrangement, and increasing the mandatory retirement age, led to a sharp increase in the average retirement age in the past decade, after three decades in which there had been a trend of decline. As a result, the average number of work years for individuals in the economy increased, together with the employment rate and GDP. A similar pattern—a decline in the retirement age until the last decade and then an increase—has been seen in many OECD countries. It may be that the decline in the retirement age that took place prior to the last decade derived mainly from policies that granted incentives to retire at a younger age[19], an improvement in economic well-being, and from technological changes that contributed to the older population leaving the labor market. In the past decade, there was a change in trend in OECD countries concerning these incentives, to a great extent because policy makers recognized that the burden of obligations toward the elderly population is increasing. The main step taken by Israel was to increase the retirement age, as described above.

Delaying the eligibility for old age allowances and for benefits from the old pension funds in the arrangement, and increasing the mandatory retirement age, led to a sharp increase in the average retirement age in the past decade, after three decades in which there was a trend of decline.

Figure 1.7 indicates the changes in the effective retirement age in Israel and in the OECD countries, by gender.[20] In Israel, there was an increase in the effective retirement age starting in 2004, indicating that the increase in the eligibility age for the old age allowance and for benefits from the employment pension fund had a large effect on the retirement age. It is possible that the fact that some of the working population close to retirement age is already insured in the new pension funds (or through managers' insurance) and these funds provide a significant incentive to remain in the labor market

[17] The age of mandatory retirement is the age at which the employer is permitted to force an employee to retire for reasons of age.

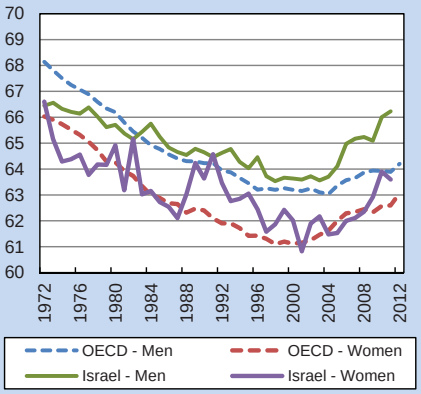
[18] If the fund has an actuarial deficit that exceeds 5 percent of liabilities (or exceeds 3 percent of liabilities for three consecutive years), it must reduce benefits of the insured, retirees and survivors, and if there is a surplus that exceeds 5 percent, it is permitted to expand their benefits.

[19] The economic incentives for early retirement do not need to be direct. To illustrate, an expanding social services system may encourage elderly workers with low salaries to leave the labor market.

[20] The effective retirement age is a synthetic calculation of the average retirement age. The calculation is based on changes in the participation rates at ages lower than retirement age. The calculation for Israel was based on a decline in the participation rates of cohorts aged 45–70, and for the purpose of calculating the average, it was assumed that those aged 70 and over do not participate in the labor force. It is possible to calculate the average retirement age in retrospect as well, by tracking the average retirement age of a certain cohort after reaching age 70. In the case of men, the two calculation methods generate a similar pattern of development. In the case of women, the alternative calculation (for each cohort separately) generates a different picture: About 15 years ago, there was a relatively sharp but smaller decline in the retirement age, and in recent years it again increased. Details regarding the method of calculation of the effective retirement age appear in Mark Keese, "A Method for Calculating the Average Effective Age of Retirement", OECD.

have also contributed to the increase in the retirement age. (See the discussion below, in the section on the "second pension tier".) Some individuals were forced to delay their retirement because their disposable income did not enable them to absorb the direct impact to their income from the delay in receiving the old-age allowance.[21]

Figure 1.7
Effective Retirement Age[a] in Israel and the OECD (average), 1972–2012



[a] See footnote 20. Israel data until 2011.
SOURCE: Based on OECD and Central Bureau of Statistics data.

The first pension tier

Close to 90 percent of those eligible for the old-age allowance receive it already at the age of conditional eligibility, and more than 90 percent of those newly eligible for the old-age allowances receive some seniority increment.

The old-age allowance is the basic amount paid by the State to pensioners at retirement age. The allowance constitutes the first tier of pension insurance, and its aim is to guarantee a basic income for the elderly population. The allowance is paid to every insured person[22] who has reached the age of absolute eligibility.[23] At the age of conditional eligibility—62 for women and 67 for men—it is paid on condition that the insured person passes an income test. The income test does not include income from pension payments, and close to 90 percent of those eligible for the old-age allowance receive it already at the age of conditional eligibility. The minimum old-age allowance (the basic pension) reached about NIS 1,500 in 2013, with additions for seniority, delay of receiving the allowance and pending additions, according to the individual's eligibility.

The seniority increment is equal to 2 percent of the basic pension for each year of seniority after the first ten years, and it has a ceiling of 50 percent with the accumulation of 35 years of seniority. Since this addition is paid according to insurance seniority (and not based on seniority in the labor force), more than 90 percent of those newly eligible for the old-age allowance receive it, and the average rate for this population was 35 percent in 2012. Almost 100 percent of men, while just 85 percent of women, receive some seniority addition.[24] The reason for the gap has to do with the insurance status of married women who do not work: They do not receive seniority additions.

[21] It is possible that other factors were active in raising the effective retirement age. This assessment is supported by the fact that the participation rates increased in the past decade also among individuals in their 50s.

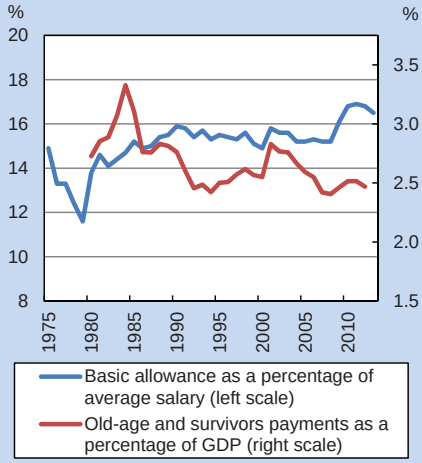
[22] The insured population includes all Israelis who have lived in Israel for a certain period of time prior to retirement age. New immigrants who arrive in Israel after retirement age receive an old-age allowance, but not based on the National Insurance Law.

[23] The age of absolute eligibility for men is 70. The age of absolute eligibility for women is currently 68, and the State is raising it gradually to 70.

[24] These rates relate to men and women who receive an old-age allowance based on the National Insurance Law.

Since the economic stability program of 1985, the basic old-age allowance has ranged around 15.5 percent of the average wage. The fluctuations generally did not exceed 3–4 percent of the allowance, and derived from changes in policy and/or from inflation that eroded the allowance (Figure 1.8). For most of the period, the basic old-age allowance was set at a fixed percentage of the average wage. This linkage method allowed the allowance to be automatically updated in accordance with increases in the standard of living. Beginning in 2006, the allowance is indexed only to the Consumer Price Index, which makes it necessary to update it every so often in accordance with changes in the standard of living.

Figure 1.8
Old-Age and Survivors Allowance Expenditure as a Percentage of GDP, and Basic Old-Age Allowance as a Percentage of Average Wage



SOURCE: Based on National Insurance Institute and Central Bureau of Statistics data.

In 2006, the government decided to gradually increase the old-age allowance, and in 2009, it decided to continue raising it. It is possible to hypothesize that these gradual increases came about in response to an increase in the age of eligibility for the allowance and to some reduction that was made to the allowance in the years preceding 2006, steps that negatively impacted the rights of the elderly population.

There are two factors that have an effect on public expenditure for old-age allowances: the rights of the elderly population to the allowance, and the share of the elderly in the general population. In the middle of the last decade, the ratio between the size of the elderly population and the size of the working-age population began to grow, and this growth is expected to continue in the coming decades. By 2040, this percentage is expected to increase by about 50 percent (relative to the existing situation), and to reach 27 percent.[25] This development is expected to create pressures to reduce old-age allowance rights, whether by reducing the allowance or by raising the eligibility age. In view of the increase in life expectancy, and in view of the fact that the age of eligibility for women in Israel is among the lowest in the OECD, it seems that raising the eligibility age for women is the most appropriate way of reducing the expected increase in this item in the public expenditure.

Raising the old-age allowance eligibility age for women is the most appropriate way of reducing the increase in expenditure on this allowance.

In order to deal with the increase in life expectancy, it is also important to integrate incentives to remain in the labor market into the old-age allowance. For example, there can be an increase to the increment in respect of delaying the allowance, such that it will encourage workers to remain in the labor market. An increment of 5 percent is currently paid for each year the allowance is delayed. This is a low addition, and

It is important to integrate incentives to remain in the labor market into the old-age allowance. For instance, there can be an increase to the increment in respect of delaying the allowance, and a seniority increment can be given to the employed elderly.

[25] See Paltiel, A., Sepulchre, M., Kornilenko, I., and Maldonado, M. (2012), "Long-Range Population Projections for Israel: 2009–2059", Central Bureau of Statistics.

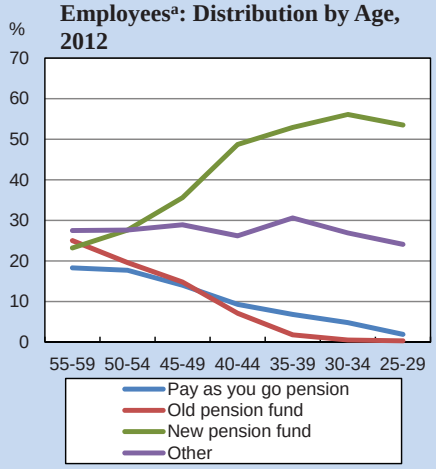
it does not compensate for the loss of years of eligibility to the old-age allowance. In other words, if the full allowance is made contingent on income being no more than 57 percent of the average wage, it is an incentive for workers to leave the labor market when they reach the age of conditional eligibility. This is a negative incentive that is contrary to a policy that encourages workers to delay their retirement. Since only about 10 percent of the population receives an additional payment in respect of delaying their allowance, an increase in this addition has both a reduced cost and the potential to increase the labor market participation rate after the age of conditional eligibility. Another possible measure is to increase the seniority increment for individuals who remain in the labor market at older ages.

The second pension tier

The second pension tier is pension savings that are contingent upon employment and the wages of working-age employees, and its aim is to ensure that workers will be able to maintain their standard of living after retirement. A significant portion of retirees currently still enjoy the rights they have accrued in the old pension funds or budgetary pensions. The share of this group among all retirees is expected to decline in a process that will continue for more than 20 years, following which the pension benefits of the working population will mainly be based on defined contribution funds (Figure 1.9).

There is a concern that pension based on a defined contribution plan will be lower and will not allow retirees to maintain their standard of living at retirement age. It is reasonable to assume that there is some basis for these concerns, particularly regarding the population that joined the labor market at an older age and/or redeemed parts of their pension funds under circumstances that permitted this during working age (such as redeeming severance pay funds). But the concern also exists in regard to the population that saves consistently throughout their working years as well. Therefore, in recent years the Ministry of Finance raised the maximum provision (as a percentage of salary) recognized for tax benefits, and wage agreements were signed increasing the employee and employer provisions for pension savings. Table 1.2 presents a simulation

Figure 1.9
Pension Arrangements of Salaried Employees[a]: Distribution by Age, 2012



[a] Employees who have more than one pension arrangement are classified by the following hierarchy: pay as you go (unfunded) pension, old pension fund, new pension fund, and other. "Other" includes Managers' Insurance, provident funds, and life insurance that includes a savings component. The remainder up to 100 percent is the group of employees who have no pension arrangement.

SOURCE: Based on the 2012 Social Survey.

Table 1.2
Simulation - net replacement rate (including old-age allowance receipts) for those saving in defined contribution pensions[a]

Years of savings	Annual return of pension funds, excluding fees on accumulated amounts	Deposits as a percentage of salary			
		17.5%[b]		19.5%[c]	
		Last salary NIS 7,500 (gross)	Last salary NIS 15,000 (gross)	Last salary NIS 7,500 (gross)	Last salary NIS 15,000 (gross)
25	2 percent	46	38	49	41
	3 percent	54	46	57	50
	4 percent	63	55	68	60
	5 percent[d]	70	62	75	68
35	2 percent	55	49	59	53
	3 percent	67	61	72	67
	4 percent	83	77	89	85
	5 percent[d]	96	92	105	100
40	2 percent	60	55	65	60
	3 percent	75	70	81	77
	4 percent	95	91	103	99
	5 percent[d]	114	110	124	120

[a] The replacement rate relates to net income; Footnote 27 shows additional assumptions at the basis of the calculation of the replacement rate.

[b] The minimum contributions as per the compulsory pension arrangement.

[c] Deposits according to the public sector wage agreements.

[d] Despite yields of 5 percent, the simulation is based on the assumption that the conversion ratio is no different than the currently existing ratio.

SOURCE: Bank of Israel.

of possible replacement rates[26], under various assumptions regarding the duration of pension savings, the average rate of return accumulated in the pension fund, the rate of savings out of current wages, and the last salary at the time of retirement.[27] The table shows that, assuming that the savings period totals 35 years and the net return ranges around 4 percent, the replacement ratio will be about 80 percent.

[26] The replacement rate is the ratio between the income in the first month of retirement and the salary in the last month of work before retirement.

[27] Additional assumptions that underpin the calculation: 80 percent of the current salary is pensionable salary; the old-age allowance includes seniority of 35 years; the income tax brackets are identical to those that currently exist; the tax exemption on the pension payment, up to the maximum, is derived from future income tax directives; retirement tax benefits were not used during the work period; severance pay was not withdrawn; the real growth rate of wages during the savings period is 2 percent per year (this assumption, plus the assumption that the last wage reaches NIS 7,500, in some cases leads to the fact that wages at younger ages are lower than minimum wage); the fee for deposits totals 6 percent; and the conversion rate is updated in accordance with the long-term yield.

The table highlights the uncertainty regarding the level of pension an individual can expect to receive upon retirement. The fund's return is a main factor in determining the benefits, but the possible range of its values leaves tremendous uncertainty regarding the expected level of the benefits. In the example presented, it can be seen that a gap of 25 percent may develop between the benefit received when the long-term return is 3 percent, net, during the savings period and the benefit received when the long-term return is 4 percent (both returns that are currently considered reasonable). The uncertainty is reduced the lower the individual's income, since in that case, the share of the old-age allowance as part of the individual's post-retirement income is greater. The uncertainty also diminishes as the individual comes closer to retirement age, since he already knows what the historical yield is. However, since the variance in the annual return is high, a relatively high amount of uncertainty remains regarding the level of the benefit even just prior to retirement. The uncertainty can be reduced by guaranteeing a minimum return in the years prior to retirement. Regarding the other parameters, individuals have a relatively large amount of information.[28]

The uncertainty regarding the level of pension payments is perhaps a disadvantage of the defined contribution pension, but it is difficult to avoid it.

The uncertainty regarding the level of pension payments is, perhaps, a disadvantage of the defined contribution method, but it is difficult to avoid it. This disadvantage is particularly prominent in view of the sharp decline of recent years in long-term bond yields, which had provided savers with decent profits. If the yields increase in the future, it could cause savers capital losses and reflect, in a very tangible way, uncertainty regarding returns. The designated bonds issued by the government, totaling up to 30 percent of pension fund assets, are one of the ways to reduce the variance in returns of the pension funds, and the surplus yields of designated bonds (should any exist) constitutes a subsidy of pension savings. Increasing the weight of designated bonds is expected to reduce the variance in the returns of pension funds, but it is also expected to increase the government subsidy component of the yield, reduce the government's tradable debt, and increase the tax burden. It is therefore difficult to assess how desirable government intervention in ensuring yields by way of designated bonds is. This is a complex question that cannot be answered within the bounds of the current discussion.

When a pension fund guarantees a benefit based on optimistic assumptions regarding returns and the assumptions do not come to fruition, an actuarial deficit is created in the fund, which can only be covered by transferring the burden of financing the deficit to the next generation.

When a pension fund guarantees a benefit based on (optimistic) assumptions regarding returns, and the assumptions do not, in the end, come to fruition, an actuarial deficit is created in the fund. In such a case, the actuarial deficit can only be covered by transferring the burden of financing the deficit to the next generation.[29] It is difficult—and perhaps even impossible—to create a stable mechanism for the inter-generational transfer of such a burden.

An important advantage of the new pension funds is the mechanism that provides an incentive for savers to remain in the labor market. When the saver remains in the labor market and delays the date of beginning to withdraw the principal, the benefit

[28] Therefore, the variance presented in the table does not represent what the individual is aware of.

[29] Alternatively, it is possible to cover the deficit by reducing retirees' benefits. But such a cut means that pension benefits are not insured, but are contingent on the funds' returns.

grows due to three factors: continued deposits to the fund; the return on the fund in the years during which retirement is delayed[30], and the reduced number of years during which benefits are received, taking into account life expectancy. These three factors may increase the annual benefits by more than 6 percent per year, among both men and women over age 60. The incentives mechanism is expected to increase the average retirement age, and it is reasonable to assume that its effect on the labor market will be seen when most savers nearing retirement age will be insured in the new defined contribution funds.

The new pension funds provide an incentive for savers to remain in the labor market. These incentives are expected to increase the average retirement age in the coming decades, and to increase the percentage of those employed.

Various, and generally weaker, incentives to remain in the labor market also exist in the old pension funds in the arrangement and in budgetary pensions—that is, an increase in seniority and in the determining wage for pension. However, after 35 years of seniority, the benefit accumulated in accordance with seniority reaches the ceiling (of 70 percent), and the determining wage generally doesn't change much.[31] At this stage, the motivation to remain in the labor market declines. It may therefore be worthwhile to change the uniform mechanism, with the aim of strengthening the incentives that employees with the maximum seniority have to remain in the labor market even after reaching the age of pension eligibility.

6. INDEXING TO INFLATION IN ISRAEL AND POLICY RECOMMENDATIONS

Inflation is a continued increase in prices, and over time, it erodes the purchasing power of the domestic currency. In order to maintain the real value of purchasing power in view of the continued decline of the value of money, it is possible to use mechanisms which link to an accepted and representative index. These indexations have three main characteristics: the index by which the adjustment or indexation is made, the indexing percentage and its frequency. For the most part, indexing is based on the Consumer Price Index, but it is possible to use any known and agreed-upon index.

Israel has a long history of high inflation rates, which reached their peak in the mid-1980s. At that time, many sophisticated indexation mechanisms were created, which were intended to maintain the value of money. Most of the indexation was to the Consumer Price Index calculated monthly by the Central Bureau of Statistics, but it seems that this indexation was not done at sufficiently high frequency for transactions made in the housing market or other markets. In order to avoid a situation in which

[30] If the return in a given year is negative, it may actually negatively impact the pension payment. It is therefore preferable, as explained above, to ensure a return for older savers.

[31] Other than certain cases, pension benefits accrued in the old pension funds in the arrangement and on the budgetary pension track are 2 percent per year of seniority. At older ages, the change in real wages is not large, and in the old pension funds in the arrangement—funds in which the determining wage is set based on the average wage—an increase in wages in a certain year generally has only a small effect on the benefit. In the budgetary pensions, while the determining wage increases before retirement, this increase is not contingent on the individual remaining in the labor market.

the value of money declined during the month, the public adopted an indexation mechanism based on the representative exchange rate of the shekel against the dollar, a rate published by the Bank of Israel every business day (other than Sundays). Home prices, as well as the prices of other goods and services, were denominated in dollars, and on the date of payment, the purchaser would transfer to the seller the amount determined according to the last representative rate published. Monthly rent payments were also indexed to the exchange rate, and rental prices in Israel developed in accordance with developments of the exchange rate.

Three types of indexation can be identified in Israel:

- Indexation by law—there are laws and regulations regarding indexation in almost every area that involves payments, including wages, fees, arrears and taxes.
- Indexation derived from custom—habits that developed as a result of the high inflation rates that were prevalent in the past. The prices of some goods and services are indexed to the Consumer Price Index or to the exchange rate.
- Indexation in the financial markets—government and corporate bonds, as well as loans and bank deposits, mainly long-term, are indexed to the Consumer Price Index and to the exchange rate.

The relationship between indexation and inflation

In an economy characterized by high rates of inflation, there is an advantage to an automatic and complete indexation mechanism for prices charged on various goods and services: It enables relative prices to develop without distortions that may cause real shocks. However, automatic and complete indexation could turn any price shock into prolonged price increases and create inflation[32], which forces policy makers to adopt a more aggressive monetary policy in order to achieve the inflation target.[33] Moreover, when inflation and its variance are high, the costs inherent in adjusting prices increase, and the economy derives tremendous benefit from the indexation mechanisms. But when inflation and its variances are low, the costs inherent in adjusting prices are no longer high, and the indexation mechanisms generate low, and even negative,

[32] Literature in the field, at least that which is based on theoretical models, posits that when indexing to prices is done automatically and completely, then real and/or monetary shocks with a one-time effect on prices will not allow market forces to make the real adjustments that are necessary to correct the distortion that caused the shock. By way of illustration, an increase in the domestic risk premium would be reflected in a depreciation of the exchange rate, an increase in prices, an increase in wages, and an increase in the prices of domestic assets. The depreciation would therefore not cause an adjustment in the public's asset portfolio, and it will continue. By way of further illustration, in an economy with the conditions for activity of real forces to correct real wages, the indexing of wages to inflation would make such a correction difficult, and the cost to the economy would be high. See, for example:
Gray (1976), "Wage Indexation, A Macroeconomic Approach", *Journal of Monetary Economics*
Fischer (1977), "Wage Indexation and Macro-Economic Stability", *Journal of Monetary Economics.*

[33] See, for example: Bonomo and Garcia (1994) "Indexation, Staggering and Disinflation", Journal of Development Economics.

benefit.[34] It is therefore recommended to reduce the levels of indexation, in terms of both frequency and volume, when inflation stabilizes at low levels.

Reducing the indexation mechanisms increases the measure to which the public is exposed to the cost of inflation, including inflation tax—the tax resulting from the inflation rate. However, the adoption of an inflation target regime anchored in law and the operation of effective policy to achieve it increase the credibility of policy concerning its anti-inflationary commitment, and thereby reduce the concern of exposure to the cost of inflation.[35]

In the past decade, the rate of inflation has been stable at around 2 percent, due to the strong commitment of the central bank to maintain price stability, in accordance with the Bank of Israel Law. This commitment is reflected in long-term inflation expectations which, in recent years, were stable and within the inflation target range. Since the inflation rate has declined to a level that is consistent with price stability, the government implemented a series of reforms intended to reduce the indexation mechanisms: the automatic cost of living increase mechanisms for wages were cancelled, which greatly contributed to reducing the inertia in inflation and to expanding elasticity in the labor market; the public, with the government's encouragement[36], was gradually weaned from the automatic mechanism of indexation to the exchange rate, and rents were denominated in shekels; accounting standards cancelled financial reporting adjusted to changes in purchasing power, and since 2002, financial statements in Israel are published in nominal terms, as accepted in many of the advanced economies; in 2007, the government approved the cancellation of the Adjustments Law in the Income Tax Ordinance, and starting in 2008, companies and individuals pay nominal taxes.

It is recommended to reduce the automatic inflation indexation mechanisms.

Accordingly, it is recommended to reduce the volume of indexation, particularly in areas in which the indexation mechanism may create distortions:

Capital market taxation

The current structure of taxation on capital gains came into effect gradually from beginning of 2003, after the report of the Rabinovich Committee for the first time required individuals to pay capital gains tax. The tax rates were raised over the years, and taxes on gains received from most financial assets (such as CPI-indexed bonds, equities, mutual funds, derivatives, and foreign currency securities) is currently 25 percent in real terms, and 15 percent in nominal terms on the gains received from

[34] See, for example: Ball (1988) "Is Equilibrium Indexation Efficient?", Quarterly Journal of Economics.

[35] Many countries have decided, in addition to adopting an inflation target, to also issue CPI-indexed government bonds, thereby reinforcing the credibility of anti-inflationary policy. See, for example: Price (1997) "The Rationale and Design of Inflation-Indexed Bonds", IMF Working Paper No. 97/12.

[36] Laws from 2005 and 2006 required new homes to be marketed in shekel-denominated prices.

unindexed bonds and bank deposits.[37] Different tax tracks for alternative financial assets may have a significant impact on the attractiveness of investing in those assets, and therefore on the development of their prices. With the tax on income from holdings of CPI-indexed bonds at 25 percent of the real gains, and the tax on income from unindexed bond holdings at 15 percent of the nominal gain, there are just a few very specific interest rate pairs that would generate the same tax payments. With other combinations, the tax payments will be different, will constitute a consideration in deciding whether to invest in these assets, and will prevent the efficient diversification of the investments. In addition, the difference between the indexation base of the tax on investments in foreign currency denominated assets and the indexation base of the tax on domestic investments also creates investment incentives resulting from tax considerations. These investment incentives act in the opposite direction to what is desirable for the economy from the standpoint of exchange rate volatility and financial stability: In periods during which the shekel is expected to depreciate, the incentive for investments abroad increases due to tax considerations, with the method of taxation thereby contributing to an acceleration in the trend of depreciation, and when appreciation is expected, the incentive for investments abroad decreases due to tax considerations as well, with the method of taxation thereby reinforcing the trend of appreciation. In contrast, a uniform nominal taxation method would contribute to the efficient diversification of the public's asset portfolio and to the financial stability of the economy, since it would cancel the taxation incentives acting to accelerate foreign exchange trends.

The calculation of real profit for tax purposes is one of the main technical problems in implementing the taxation method in Israel.

The calculation of real profit for tax purposes—the adjustment to inflation—is one of the main technical problems in implementing the taxation method in Israel. The inflation-adjusted gains are calculated based on the known CPI. When an investor purchases a financial asset on the 15th of the month (just prior to the publication of the CPI reading) and sells it the next day (following the publication of the CPI reading), he will pay real tax that is adjusted to the CPI reading just published, even though he held the asset for just one day and not at all during the month for which the CPI was calculated. In accordance with these calculations, an investor in indexed bonds and other assets, such as stocks and mutual funds, will increase his holdings around the dates on which positive CPI readings are published in order to gain the inflation adjustment, and will reduce his holdings around the dates on which negative CPI readings are published in order to avoid the inflation adjustment. In that way, the adjusted profit will decrease, tax payments will decrease accordingly, and net nominal profit will increase. In conclusion, this implementation of tax collection may create

[37] The tax rates on the various investment tracks were set at the end of 2011 by the Trajtenberg Committee on Economic and Social Change, with the aim of ensuring that the tax in the two tracks would be identical under the assumption that inflation is 2 percent and the real interest rate is 4 percent.

a strong connection between the worthwhileness of an investment and the timing at which price indices are published.[38]

Worldwide, capital gains are taxed through a nominal method, and other than Israel, there is no country in which there are two tracks for taxing capital gains. However, the collection of taxes on nominal profits may lead to the collection of an especially high effective tax during periods when inflation accelerates and capital gains contract. A situation is possible in which investors absorb real capital losses but are still forced to pay taxes on the nominal gains that derive from inflation. Moreover, during periods of high or low inflation, the public's investment considerations will be influenced by the taxation method, and the distribution of investment among the various tracks will be distorted. In order to overcome this difficulty—which has arisen in many countries that imposed a nominal tax on capital gains—some of the countries have decided to compensate investors, at least partially, for long-term holdings by way of certain reductions in the nominal tax rate.[39] This implementation of tax collection encourages long-term investment and reduces the volatility in prices of financial assets.

The nominal taxation method on capital gains will contribute both to the efficient diversification of the public's financial assets portfolio and to the financial stability of the economy.

The state budget

The fiscal rule for calculating government expenditure restrictions determines the growth in expenditure in real terms. The rule was changed in 2010, but only from the standpoint of the real growth rate. In order to determine the nominal government expenditure budget, the fiscal rule must be adjusted to inflation in the past year and to expected inflation. This adjustment may create two problems: high variance in government expenditure which is not necessarily connected to planned government expenditures, and the creation of a mechanism of inertia in inflation.

The real fiscal rule creates two problems: high variance in expenditure and a mechanism of inertia in inflation.

An increase in the Consumer Price Index—which is based on the consumption basket of households in Israel—does not necessarily reflect the decline in the purchasing power of the government, since the government consumption basket is completely different than the household consumption basket. The year 2013 is an excellent example of the problematic nature of implementing the fiscal rule. While the public consumption price index increased by 2.5 percent this year, the expenditure budget indexed to the CPI increased at a yearly average of just 1.5 percent—a rate even lower than the rate projected in the budget (1.7 percent). Not only did the government consume less in real terms, because the price of the government consumption basket increased more rapidly than the increase in the budget base, but the government also needs to reduce 0.2 percent from next year's budget in order to correct the downward deviation of inflation.

[38] Another problem in CPI indexing concerns how relevant changes are in the index to which indexation is done and how volatile it is. By way of illustration, monthly seasonality factors included in the CPI are not relevant for some of the prices that are indexed to it.

[39] The tax rate on holding an asset for a long term can also be reduced according to the following rule: If accumulated inflation over a number of consecutive years exceeds the accumulated inflation target, it will be possible to reduce the tax rate in accordance with the accumulated deviation of inflation.

In addition, when inflation in a given year is higher than the inflation rate projected in the budget, for instance 3 percent, government expenditure in the following year will also increase, thereby strengthening inflation pressures. The opposite is also true: When inflation is lower and perhaps even negative, government expenditure in the following year will increase less, and perhaps even decrease, thereby further weakening inflationary pressure.

It is recommended that a nominal fiscal rule be adopted that is based on the inflation target and is not directly connected to actual inflation.

Accordingly, it is recommended that a nominal fiscal rule be adopted that is based on the inflation target and is not directly connected to actual inflation.[40] This rule will reduce the uncertainty inherent in planning budgetary expenditures for coming years, since the government will be able to plan its expenditures without needing to make assumptions regarding the actual inflation rate.

Other areas

There are other indexations in the economy that create inertia in inflation, and it is recommended that consideration be given to cancelling them:

- The budget of the healthcare basket is indexed to the Cost of Health Index, which is calculated according to a formula that is based mainly on the Consumer Price Index (32 percent) and on wages in healthcare services and in the public sector (65 percent). As an alternative to automatic indexation, it is recommended to increase the component—currently updated mainly according to the Consumer Price Index—by a fixed rate of 2 percent per year. It is also recommended to index the wage component of the formula to the collective agreements between the government and the Histadrut labor federation, and to make one-time adjustments in the budget of the healthcare basket as a result of wage agreements—which will dictate special additions to the wages of doctors or nurses. This updating method will also help deal with the budgetary erosion derived from the existing formula, which dictates only partial compensation for special wage agreements in the health services.[41]
- Other indexations by law—of fees, the price of water, public transit fares, municipal tax (half of the level is updated according to the Public Wage Index), fuel excise, and other payments. These prices are updated automatically according to the Consumer Price Index on a yearly or even semi-annual basis. It is recommended that these automatic updates be cancelled and that these prices be raised at a fixed rate of 2 percent per year, in accordance with the inflation target.

[40] The Consumer Price Index and the Public Consumption Index increased at similar rates in the past ten years (2002–2012)—about 2 percent per year, in line with the inflation target.

[41] A discussion of the Cost of Healthcare Index and its ramifications appears in Recent Economic Developments, number 136.

Table 1.3
Economic indicators: international comparison[a], 2003–13

	Average 2003–07				Average 2008–12				2013			
	Israel	US	Eurozone	OECD	Israel	US	Eurozone	OECD	Israel	US	Eurozone	OECD
GDP growth rate	4.8	2.9	2.2	2.8	3.9	0.8	-0.3	0.6	3.3	1.7	-0.4	1.2
GDP per capita growth	2.9	1.9	1.6	2.0	2.0	0.0	-0.6	-0.1	1.4	0.8	-	-
GDP per capita ($ thousand, current prices)	20.7	44.0	29.9	29.9	30.6	49.0	35.4	35.4	36.2	52.8	-	-
Population growth rate	1.8	0.9	0.6	0.6	1.8	0.8	0.3	0.7	1.9	0.7	-	-
Civilian labor force participation rate, ages 25–64	75.1	79.0	-	75.3	77.3	78.3	-	76.2	78.8	-	-	-
Unemployment rate	11.5	5.2	8.6	6.5	7.9	8.3	9.7	7.7	6.2	7.5	12.0	8.0
Inflation rate (during the year)	0.8	2.9	2.2	2.5	3.2	2.1	2.1	2.2	1.5	1.5	1.4	-
Exports (percent of GDP)[b]	33.3	10.2	38.3	23.9	32.1	12.6	41.6	26.4	29.4	-	-	-
Gross investment (percent of GDP)	19.1	22.6	21.3	-	19.3	18.8	19.6	-	19.7	19.4	17.9	-
National saving (percent of GDP)	21.7	17.8	21.9	-	21.3	15.4	20.2	-	22.2	16.7	20.4	-
Current account (percent of GDP)	2.6	-5.2	0.5	-1.2	2.0	-3.2	0.5	-0.7	2.5	-2.5	2.6	-0.2
Public expenditure (percent of GDP)[c]	44.9	36.2	47.1	39.2	41.5	42.6	40.9	49.8	40.3	38.7	49.5	41.7
Tax revenue (percent of GDP)	34.1	25.8	38.1	34.7	30.4	24.2	37.9	34.0	30.3	-	..	-
Gross public debt (percent of GDP)	87.0	63.1	76.0	75.8	71.5	90.8	92.1	95.8	67.4	104.1	106.4	110.3

[a] Data for the eurozone and OECD countries are weighted averages of the countries in each group, as published in the OECD Economic Outlook.

[b] For Israel - exports excluding diamonds.

[c] The figure for Israel is adjusted to conform with the international definition so that an international comparison can be made.

SOURCE: International Monetary Fund, OECD and Bank of Israel.