STATE OF ISRAEL
MINISTRY OF FINANCE
ACCOUNTANT GENERAL

GOVERNMENT DEBT MANAGEMENT UNIT

ANNUAL REPORT - 2002

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Introduction

We are pleased to submit the first Annual Report of the Government Debt Management Unit.

Government debt management included, at the end of 2002, liabilities of more than NIS 500 billion (about 103% of the Gross Domestic Product of the State of Israel), and the scope of annual activity was more than NIS 100 billion (about NIS 55 billion roll-over of principal, about NIS 30 billion interest payments and about NIS 20 billion deficit financing), representing over one third of the Government budget.

In 2001 the Minister of Finance decided that the most fitting and natural place for the unit managing all the Government's debts is in the Accountant General's Division, which is responsible for the whole of the Government's financial system and for the implementation of the state budget. This organizational change is justified both because the loans are an inseparable part of the management and implementation of the budget, and because of the close ties between the management of the debt and the areas of activity of other professional units in the Accountant General's Division.

Until this unit was established, the responsibility for management of the external debt rested with the Department of Foreign Currency Transactions in the Accountant General's Division, and the responsibility for management of the domestic debt was in the hands of the Capital market Department in the Capital Market, Insurance and Savings Division. The decision to unite the various departments into one unit, including a new department of Risk Management – was designed to streamline the management of Government debt and to consolidate the professional elements and the considerable accumulated knowledge in one body. The establishment of the Unit was based on the successful experience of other countries and on the recommendation of the International Monetary Fund (IMF) and the Organization for Economic Cooperation and Development (OECD). The Government Debt Management Unit is responsible for a wide range of issues, such as issuance and management of tradable bonds in the domestic and in overseas markets, management of the risks involved in managing debts with various interest rates and various currencies, development of a model for integrated debt management, dynamic management of the domestic tradable and non tradable debt, initiating and promoting structural changes in the domestic market for Government bonds, studying and monitoring of international markets, ongoing contact with international credit rating agencies, and working in conjunction with the Development Corporation for Israel ('The Bonds organization'). The GDMU also maintains relationships with other issuers and with international organizations such as the OECD on debt issues.

* * *

2002 was a second year of economic slowdown and of large budgetary deficits, in spite of the several budget cuts that were carried out during the year. Due to the large deficits, the Government was forced to increase its borrowings in Israel and abroad. In 2002 these loans totaled NIS 66 billion, of which NIS 45 billion were raised on the domestic market through issues of tradable bonds in weekly auctions. For that reason, the ratio of debt to gross domestic product (GDP) rose in 2002 from 96 at the beginning of the year to 103 percent of GDP at the end of the year, about 14 percent of GDP more than at the end of 2000.

For the capital market as well, 2002 was a stormy year. At the beginning of the year yields were low in all sectors of the domestic market following the sharp decrease in the Bank of Israel's interest rate in December 2001, but the accelerated devaluation in the first half of the year raised the exchange rate of the dollar to NIS 5 at the end of June, and yields also rose very quickly. The non linked bonds that were traded at the beginning of January with a yield of about 4.2% (Gilon, non linked floating interest rate bonds) and 6.5% (Shahar, non linked fixed interest rate bonds), reached levels of about 12% and more in June. CPI linked bonds, that in January were traded at a real yield level of 3.5%-4.0%, in June reached yield levels of more than 6%. In view of these developments, the Government adopted substantial budgetary measures and the Bank of Israel raised interest rates drastically.

In the wake of the sharp rise in the Bank of Israel's interest rate and the budget cuts in June, the trend was halted, but the yields remained at a high level until the end of the year. The Debt Management Unit adjusted the issuance of bonds to developments in the markets by increasing the CPI linked issuance and shortening the term to maturity of the non linked bonds.

In 2002, the Unit continued to encourage the liquidity and tradability of Government bonds, by increasing the volume of the issued series to almost NIS15 billion per series. Over the last year Government bonds became the most traded securities in the Tel Aviv stock exchange, and in the first quarter the average daily trading turnover reached about one billion shekels.

This was also a record year for funding by the Bonds organization, which raised some 1.3 billion dollars. Also, after about two years of absence, Israel returned to the global capital markets by means of a placement in the euro market.

In 2002 the tax reform was finalized and came into effect on January 1st 2003. There is no doubt that this reform will have a significant effect on the capital market in general, and on the bonds market in particular.

In the previous year, the Debt Management Unit continued to promote the Primary Dealers project in Government bonds, in order to reduce the cost of funding, to expand the pool of investors in these bonds, to upgrade the domestic market for Government bonds, and to strengthen the commitment of the local and foreign banks to the domestic capital market.

* * *

Part A describes the macro economic developments in 2002 and the main trends in the Government bonds markets in Israel and abroad.

Part B describes the main points of the Government debt management policy – the central objectives and considerations of Government debt management, the risk management system and other policy tools and means for funding by the Government in the domestic market and abroad.

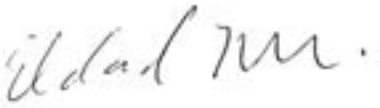
Part C describes the main developments in the overall Government debt, in the domestic debt (tradable and non tradable) and in the external debt. In addition, this part contains a description

of the Government deficit and the ways of financing it: tradable and non tradable funding in the domestic market, Government funding in international capital markets, and funding through the Bonds organization.

Part D contains a review of other subjects that the Unit deals with, such as introducing a system of Primary Dealers, supporting the State's credit rating, effects of the tax reform and changes in auction procedures of Government bonds in the domestic market.

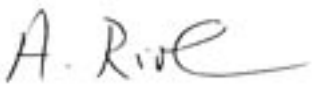
Respectfully,

Eldad Fresher



Senior Deputy Accountant General

Adi Rivlin



Director of Government Debt

1. Macro-economic developments and developments in the domestic capital market in 2002

In 2002 the economy of Israel was subject to a deep recession for the second consecutive year. During this year, the GDP fell by 1.0%, and the GDP per capita fell by 3.1%. The cumulative decrease in GDP per capita over the last two years, a decrease which totaled 7.2%, is without precedent in the history of the State of Israel. The reduction in economic activity was expressed in most components of GDP – a drop of 2.6% in the industrial product, a drop of 0.9% in expenditure on private consumption (for the first time since 1980) and a drop of 8.8% in the investment in fixed assets. In addition, exports of goods and services (without diamonds and startups) declined by 8.9%, and the deficit in the goods and services account (excluding security imports) grew by about 1 billion dollars (to about 2.7 billion dollars). On the other hand, expenditure on public consumption rose by 5.4% following the growth of 3.2% in civilian consumption and a steep rise of 10.6% in security expenditure.

It is possible to indicate three main causes of the economic recession in the Israeli economy in the last few years:

- **The slowdown in the global economy:** the slowdown in the global economy reduced demand for exports of goods and services from Israel, exports that represented 36% of GDP in 2001. The decline in demand for products of the high technology industry was particularly great, and affected the Israeli economy strongly because of the high share of this sector in the total Israeli GDP.
- **Continuing decline in world stock markets:** In 2002 the stock exchanges all over the world continued to decline following the deepening crisis in the high tech sector and the terror attack on the USA, which were the main causes for the drop in prices in 2001. To these were added the accounting scandals that were exposed in the USA and which led to a decease of investor trust in the financial system. The crisis in the stock market led to a dramatic fall in the flow of capital to startup companies, and seriously damaged this sector which was a central source of growth in the Israeli economy in recent years.
- **The security situation:** In 2002 the number of terror attacks increased, and the conflict with the Palestinians deteriorated. In addition, there was the fear of a US attack on Iraq, which could lead to an Iraqi response against Israel thus pushing it into another cycle of violence. The continuing conflict with the Palestinians mainly affected the tourism industry and the manufacturers of goods and services exported to the Palestinian Authority. In addition, the security situation affected investments in the economy in general, and in particular foreign investments, which are especially sensitive to geo-political and security shocks. The deterioration of the security situation led to a further increase in the Government's defense expenditure.

Following the slowdown in economic activity, State revenues from taxes declined, and the deficit in the State budget was significantly higher than expected according to the preliminary

forecast. The increase in security costs was financed mainly by transfers from other items, so the planned expenditure framework was not breached. Because of the deviation from the original deficit target, in June the Government announced an emergency economic plan which included a package of budgetary measures, including raising taxes and reducing expenditure. In addition, the Government adopted a new deficit plan, defining convergence into a deficit of 1% of GDP in the medium term, and a target deficit of 3.9% for 2002. The actual deficit in 2002 reached 3.8% of GDP, lower than the deficit target.

In the monetary area too, the past year was characterized by a lack of stability. After a continuous period of maintaining a very high real interest rate, the interest rate was sharply decreased at the end of December 2001. This decrease led to a significant devaluation in the rate of the shekel at the beginning of 2002, and a sharp increase in inflationary expectations. All these factors grew stronger in the second quarter, against the background of the escalating security conflict and market assessments that the Government would not meet its deficit target. Following the rise in nominal interest rates and the fiscal measures adopted by the Government in May and June, there was an appreciation of the shekel, and inflationary expectations in the short term returned to the area of price stability. In October, uncertainty returned to the markets due to fears of difficulties in approving the budget by the Israeli parliament (the Knesset) and the fear of a downgrade of the Government's credit rating. However, from the end of October, the markets settled down, and the exchange rate of the dollar (vis-a-vis the shekel) fell following the Government's success in getting the budget passed in the Knesset and the positive assessments of the markets regarding the willingness of the US Government to grant the Israeli Government loan guarantees. The markets "ignored" the downgrading in October of the credit rating of the domestic Government debt, and the uncertainty regarding the general elections in January.

Figure A-1: Development of interest rates, exchange rates and inflationary expectations in 2002 (in %)



Source: Bank of Israel

In 2002 the declines in the Tel-Aviv Stock Exchange continued, and trading figures remained low. The sharp declines can be attributed to the steep falls in external capital markets, to the drop in the banks' credit ratings, and to the market's pessimistic assessments of the economy's ability to overcome the current economic unrest in the short term. From the end of October, the Tel Aviv Stock Exchange experienced some price rises following similar rises in the stock exchanges of the USA and Europe, and the expectation of prompt approval of the budget in the Knesset and the US loan guarantees. In 2002 the TA-100 stock index fell by 25.6%, and the TA-25 stock index fell by 27.3%.

Activity in the Israeli capital market was also influenced by the introduction of the tax reform in June. The tax reform, which came into force on January 1, 2003, taxes personal income from interest payments and capital gains. Among other things, the new tax regulations stipulate that income from holding bonds issued before May 2000 (the date on which the State first announced its intention to tax income from capital) will remain exempt. In addition, it was decided that the imposition of taxes on income from capital gains would start only on January 1, 2004. Therefore, T-bills issued by Bank of Israel (MAKAM), which are discount securities, and bonds issued before May 2000 became more attractive, and demand for them increased greatly in the final weeks of 2002.

2. Main developments in the domestic market for Government bonds (non linked, CPI linked, USD linked)

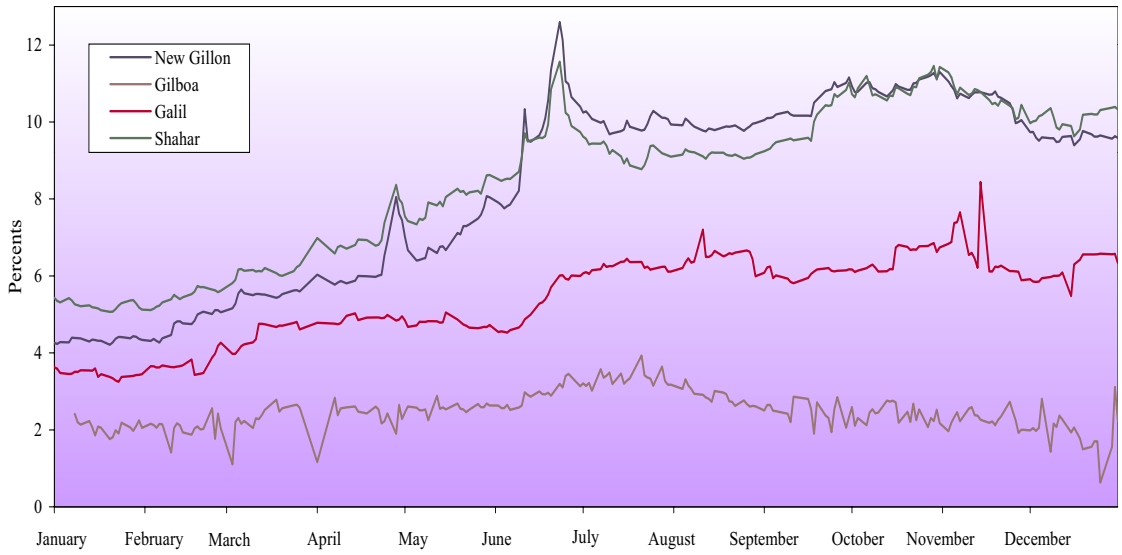
The market for Government bonds attracted much attention in 2002 and was characterized by large turnovers, large fluctuations, rise in yields in the non linked and CPI linked sectors, and a mixed trend in yields of USD linked bonds.

The first quarter of 2002 was characterized by low yields, but the rest of the year was characterized by a rise in yields and decrease in prices, which were a result of the considerable uncertainty under which the market operated regarding the security situation, the ability of the Government to meet its deficit target and the monetary policy of the Bank of Israel. Consequently there was a change in investors' preferences in the first half of the year, and an increase in the share of CPI linked and USD linked bonds, as well as non-domestic securities, in the financial portfolio of the public. On the other hand, the proportion of shares traded on the Tel Aviv Stock Exchange and non linked bonds decreased. As a result there was a rapid devaluation in the rate of the shekel that led to a rise in prices triggering a rise in inflationary expectations and in the yields of the Bank of Israel's T-bills. Nevertheless, in spite of some decline in the demand to supply ratio, the Ministry of Finance succeeded in selling large quantities of bonds and funding all its deficit needs.

Developments in the financial markets forced the Bank of Israel to intervene in a series of interest rate hikes totaling 4.5%, increases that began in May and ended at the beginning of July with interest rates at 9.1%. This sharp increase in the Bank of Israel interest rate, together with

Knesset approval for the cut in the Government budget, calmed the markets, as shown in the appreciation of the shekel, the decline in inflationary expectations, and the halt in the rise of yields in non linked sectors. In September-October there was a renewed devaluation of the shekel, accompanied by a rise in inflationary expectations and in the yields of short term loans and non linked sectors. This rise in yields may have also been due to the fears of institutional investors regarding the purchase of Government bonds, in spite of the attractive yields. This fear was apparently due to short term planning and an assessment that further declines in prices would affect their financial performance in 2002. In the last months of 2002 this trend was reversed, and there was a rise in the prices of non linked bonds and stability in the CPI linked bonds. It should be noted that the yields of bonds declined even though the rating agencies S&P and Fitch downgraded the credit rating of the domestic debt, and in spite of large amounts of capital raised by the Government in the domestic market in November and December.

Figure A-2: Development in yields of Government bonds in 2002 (weighted average)



Source: Government Debt Management Unit, Ministry of Finance

The average daily trading turnover in Government bonds (in the Tel Aviv Stock Exchange and OTC) grew during 2002 by 39%, reaching 747 million shekels, compared to 539 million shekels in 2001, and 103 million shekels in 1996 (a sevenfold increase!). During January and February in particular, there was lively activity in the Government bonds market, and the average daily trading turnover rose to more than a billion shekels. At the same time there was a sharp drop in the extent of trading in stocks.

It should be noted that the proportion of Government bonds in overall Stock Exchange activity has almost doubled in the last two years, reaching 53.9% in 2002, compared to 27.1% and 48.8% in 2000 and 2001 respectively.

The Domestic Market for Government Bonds and Global Bond Markets in 2002

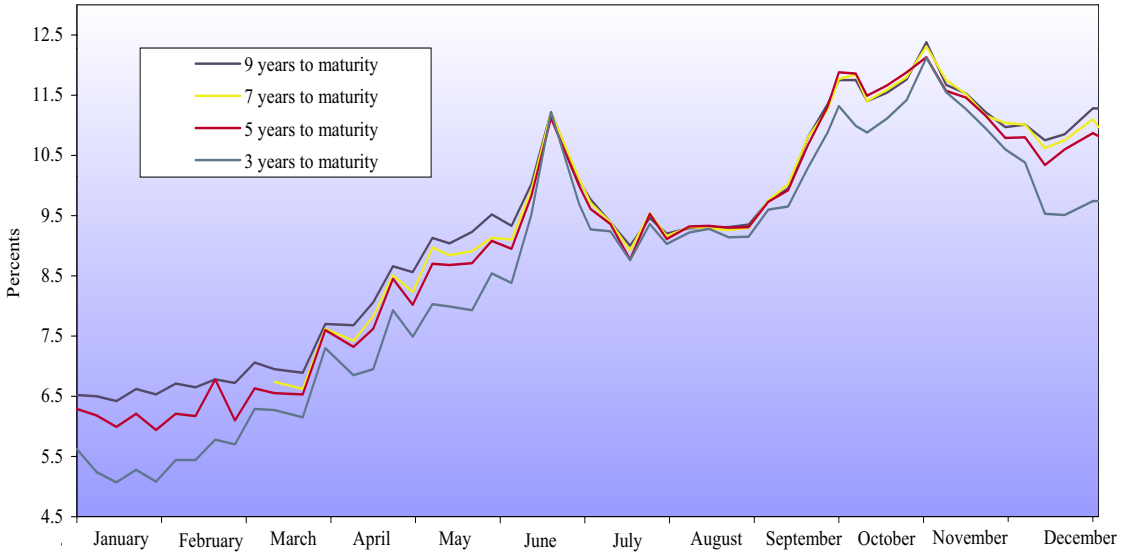
In 2002 the prices of Government bonds were characterized by considerable volatility which was previously not common in the Israeli Government bonds market. The standard deviation of the Government bond index (in monthly terms) rose sharply during 2002, reaching 1.7%, compared to 0.8% in 2000 and 1.0% in 2001.

To conclude, in 2002 Government bond prices recorded a real decrease of 5.9% compared to a real rise of 11.7% in 2001. CPI linked sectors recorded a real drop of 5.0%, non linked sectors recorded a real drop of 8.4%, and foreign currency linked sectors recorded a real rise in prices of 1.8% (compared to real rises of 13.8%, 8.5% and 11.2% respectively in 2001).

A. Non linked sector

Fixed interest – in 2002 non linked fixed interest bonds (Shahar) recorded a rise in yields that continued almost throughout the year. Their average yield rose by 4.6% (from 5.7% at the end of 2001 to 10.3% at the end of 2002), and their prices fell on average by a nominal rate of 4.6%. The average daily turnover in Shahar bonds increased in 2002 by 56.0%, reaching 264 million shekels, making it the most liquid single financial instrument in Israel.

Figure A-3: Yields of Shahar bonds for various terms to maturity in 2002



Source: Government Debt Management Unit, Ministry of Finance

In the first six months of the year there was a rise in yields of Shahar bonds for all terms to maturity, but the rise in Bank of Israel interest rates and the budgetary measures taken by the Government led in July to an appreciation of the shekel and a fall in inflationary expectations, and as a result the non linked sectors more attractive and yields decreased. However, in September, with renewed devaluation of the shekel, yields in this sector began to rise again and at the end

of October reached the highest levels of the year. From the beginning of November to the end of the year, the trend was for greater strength in the non linked sectors, and their yields declined.

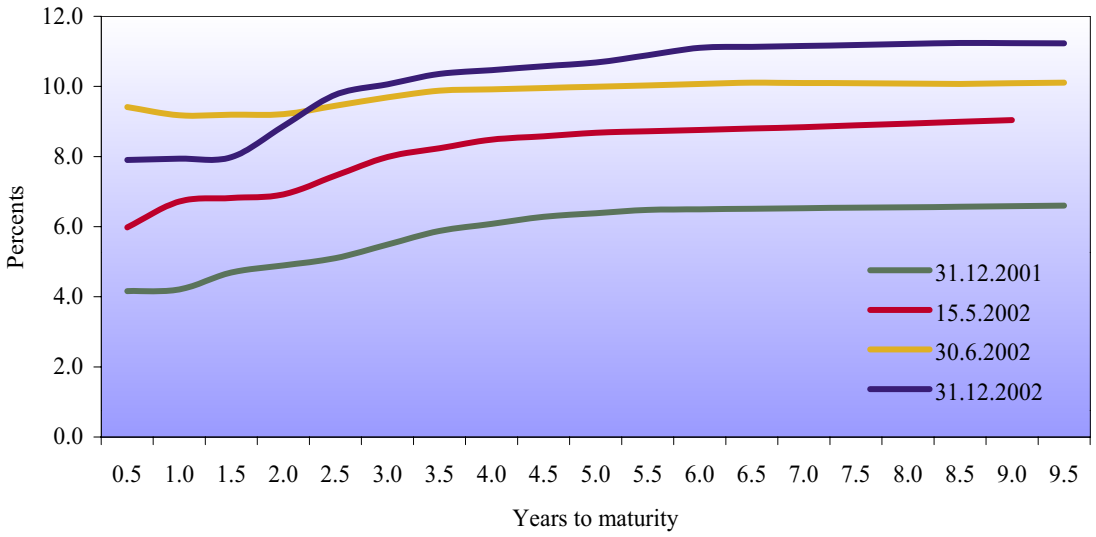
Figure A-4: Development of the shekel/dollar exchange rate, and development of yields of Shahar bonds in 2002



Source: Government Debt Management Unit, Ministry of Finance

In 2002 the close ties between the shekel/dollar exchange rate, inflationary expectations, and the yields of Shahar bonds were very striking. The holders of non linked fixed interest bonds are more influenced by macro economic changes, such as devaluations, inflation and interest rate changes, compared to holders of linked bonds (foreign currency or CPI) and holders of floating interest bonds. The holder of a Shahar bond is not protected against unexpected increases in the rate of inflation. By contrast, unexpected falls in the interest rate or the rate of inflation may produce handsome capital gains for the investor. Therefore, changes in yields and rates for Shahar bonds as a result of macro economic changes are particularly striking. As Figure A-4 shows, yields of Shahar bonds were adjusted to fluctuations in the exchange rate of the shekel to the dollar – in periods of devaluations (rises in the exchange rate) the yields rose, while in periods of appreciation, they dropped.

Figure A-5: Yield curves of non linked bonds in the years 2001-2002



Source: Government Debt Management Unit, Ministry of Finance

Figure A-5 shows the yield curves of Shahar bonds for various terms to maturity. The yield curve rising from left to right is the "normal" curve that reflects the risk premium that investors demand for a long term investment versus short term investment. By contrast, a flat curve represents setting this premium off against expectations of a fall in interest rates. When the market expects interest rates to rise, the yields of long term bonds rise sharply compared to the yields of short term bonds and the slope of the curve increases.

In the first half of 2002, yields of bonds for all terms to maturity rose and the curve's slope increased following the market's fears of high inflation in the short term and expectations that the Bank of Israel would raise its interest rates. In the wake of fiscal steps taken by the Government and the increase in interest rates by the Bank of Israel, which led to a halt in the devaluation of the shekel, inflationary expectations subsided and the yield curve became flatter. From the end of October there was a steep decline in the yields of short term (tax exempt) Shahar bonds as the market prepared itself for the tax reform, and the slope of the yield curve was once again positive. Because of the influence on the yields of long term Shahar bonds by the Bank of Israel's T-bills (MAKAM), it may be assumed that a real fall in the yields of long term bonds will not be possible without a similar drop in the Bank of Israel's interest rates and in the MAKAM yields.

FRNs – like the Shahar bonds, the yields of Gilon and New Gilon non linked floaters showed a rising trend during most months of the year. Their yields rose on average by 5.3% (from 4.3% at the end of 2001 to 9.6% at the end of 2002), and their average prices rose at a nominal rate of 0.5%. The average trading turnovers for non linked floating interest bonds grew this year by 32.3%, reaching NIS 100 million.

The two types of Gillon bonds bear interest that resets each period (for Gillon – every six months, for New Gillon – every quarter), according to the average MAKAM yields for a period of three to twelve months. This yield is the underlying asset of the Gillon, and the difference in the yield at which the bond is traded is measured in relation to it. The difference between the bond's yield and the yield of its underlying asset is called the "spread". The spread is positive when the yield of the bond is higher than the yield of its underlying asset, and the spread is negative when the yield of the bond is lower than the yield of its underlying asset. Since the interest rate for floating interest bonds is updated each period, when interest rates are falling investors will prefer fixed interest bonds which are expected to record higher capital gains. In such times, a rise in the spread of the Gillon is also expected, while at times of rising interest rates, investors will actually prefer floating interest bonds, that will provide them with protection against it, and therefore the spread of the Gillon bond is expected to decrease. Figure A-6 shows the spread between the MAKAM and the New Gillon bond for ten years. As can be seen, in the first four months of the year the spread was very low. Starting in June 2002 the spread grew wider, and during September-October it reached levels of more than 2%. Three reasons for this can be cited:

1. The expectations of a decrease in interest rates following their sharp increase by the Bank of Israel in May-June, and the resulting drop in inflationary expectations.
2. Introduction of the regulations of the tax reform, by which the MAKAM will remain tax exempt in 2003, while the holders of most Gillon bonds will pay tax at the rate of 10% on the interest and on the capital gains.
3. The relative complexity of the Gillon makes it less attractive and reduces demand for this bond.

However, these factors cannot fully explain the gaps in yields. It must be remembered that Gillon bonds are like MAKAMs that are automatically rolled over, since the yield is periodically updated.

Figure A-6: Yields of 10 year New Gillon, yield of the underlying asset and the spread between them in 2002 (in %)



Source: Government Debt Management Unit, Ministry of Finance

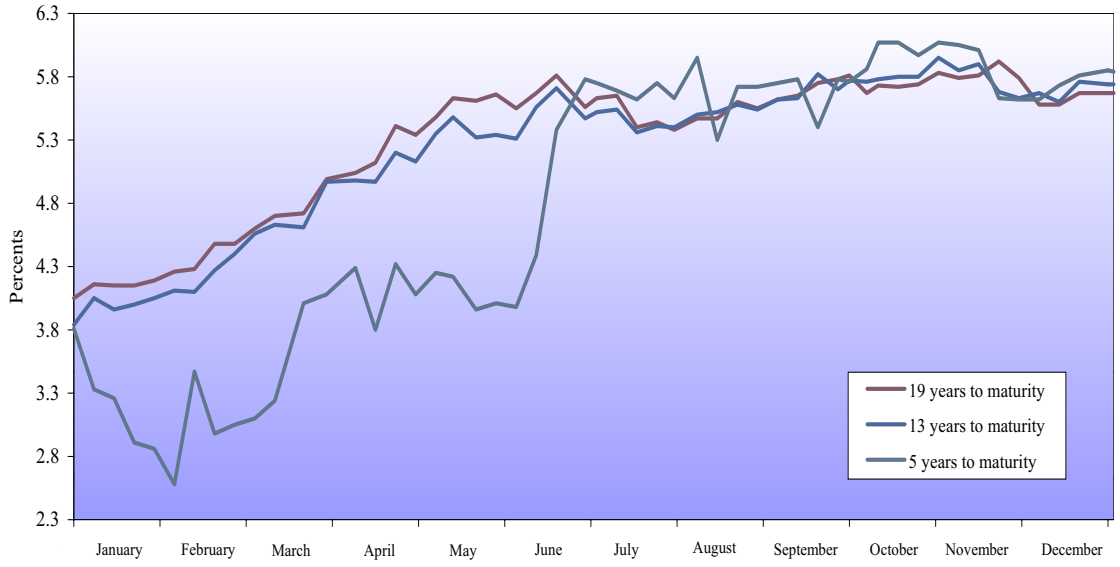
The Domestic Market for Government Bonds and Global Bond Markets in 2002

B. CPI linked sector

As with the non linked sectors, yields on long term CPI linked bonds rose during nearly all of 2002. The yields rose on average by 2.4% (from 3.6% at the end of 2001 to 6.0% at the end of 2002), and on average their prices rose by a nominal rate of 1.1% compared to 15.4% in 2001. In real terms, the prices of CPI linked bonds fell by 5.0% compared to a rise of 13.8% in 2001. The average daily trading turnover for CPI linked bonds grew during the year by a very steep rate of 128%, reaching some NIS 210 million.

In the first five months of the year, the trend in yields for medium term CPI linked bonds was mixed – the yields of short and medium term Galil bonds rose moderately, while the yields of long term bonds rose sharply. The low yields of short term bonds were a result of the strong demand for CPI linked bonds for these periods following the rise in short term inflationary expectations. However, in June there was a sharp rise in the yields of short term bonds, making their yields equal to the yields of medium and long term bonds.

Figure A-7: Yields of Galil bonds for various terms to maturity in 2002

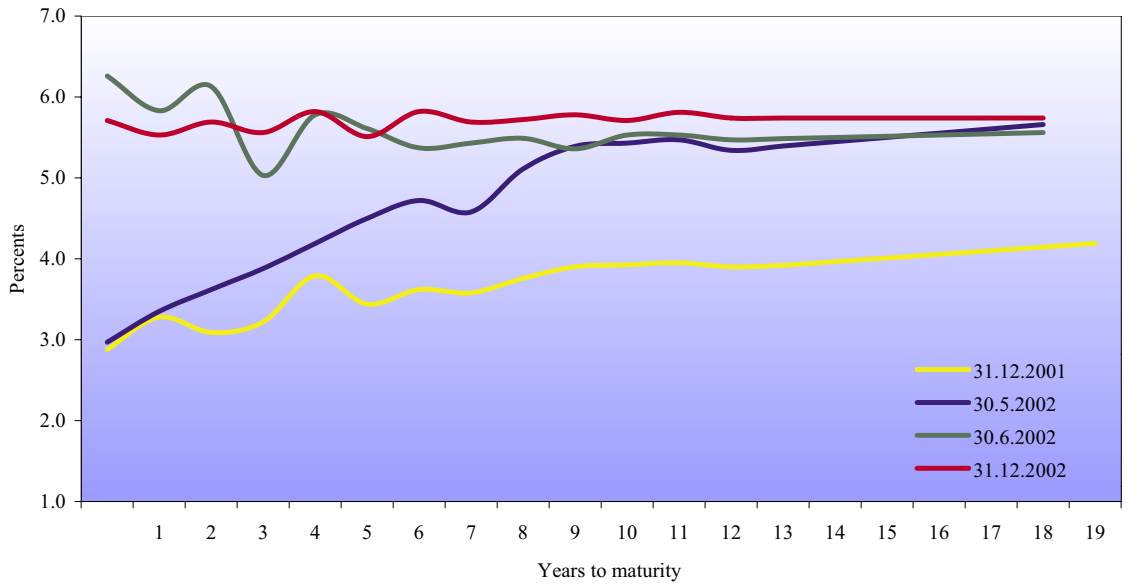


Source: Government Debt Management Unit, Ministry of Finance

Figure A-8 shows the yield curves of the Galil bonds for various terms to maturity. At the end of 2001 the yield curve had a moderately positive slope. This type of curve is a "normal curve", and it expresses the liquidity premium required for long term bonds. As stated, in the first five months there was a steep rise only in yields of medium and long term bonds, while the yields of short term bonds remained low. As a result, the yield curve became particularly steep, indicating expectations of high inflation in the short term. And indeed, after the Bank of Israel raised its interest rate to 9.1% at the end of June, inflationary expectations decreased, and the yields of short term bonds rose sharply. Therefore the curve took on a negative slope. A horizontal or

falling yield curve indicates expectations of a reduction in interest rates to compensate for the loss of liquidity. At the end of 2002 the yield curve was completely flat following the drop in inflationary expectations and the expectation that the Bank of Israel would consequently reduce interest rates in a moderate fashion.

Figure A-8: Yield curves of Galil CPI linked bonds in 2001-2002



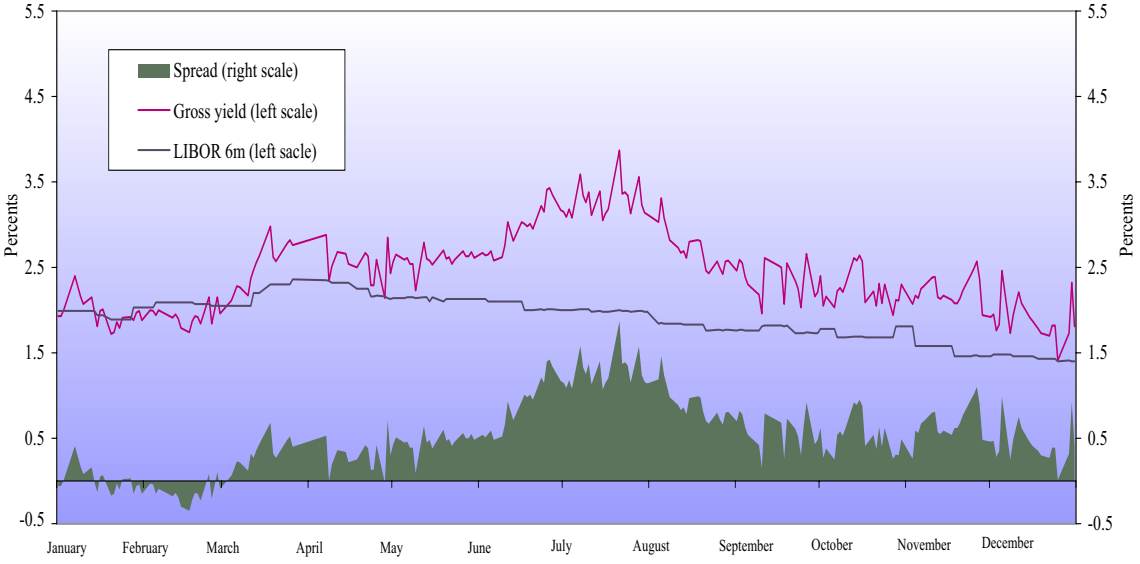
Source: Government Debt Management Unit, Ministry of Finance

C. The USD linked sector

In 2002, the Ministry of Finance refrained from issuing USD linked Gilboa bonds which were last issued in January 2000 (see details in part B). In 2002, the stock of USD linked bonds continued to drop, and the number of series at the end of the year was only five. The yields of USD linked bonds showed great stability in 2002 compared to the yields of Government bonds in the non linked and CPI linked sectors. The yields of Gilboa bonds rose on average by 1.1% (from 0.4% at the end of 2001 to 1.5% at the end of 2002), and their prices rose on average by a nominal rate of 8.4% compared to 12.8% in 2001. In real terms, the prices of foreign currency linked bonds rose by 1.8% compared to 11.2% in 2001. The average trading turnover of USD linked bonds rose at a lower rate than that of other sectors (by 13.1%) and reached NIS 75 million.

The reasons for the relatively moderate rise in the yields of USD linked bonds and for the relatively high rise in their prices were the large demand for foreign currency and assets linked to it, the fact that the Ministry of Finance did not issue additional USD linked bonds in the domestic market and the continuing fall in the dollar London inter-bank offer rate (LIBOR), which is the underlying asset for these bonds. The spreads of bonds in relation to the underlying asset rose mid year following the decrease in stability in the Israeli capital market and the steady fall in the LIBOR.

Figure A-9: Yields of a representative USD linked bond (of 1.5 years to maturity), interest on the underlying asset, and the spread between them in 2002 (in %)



Source: Government Debt Management Unit, Ministry of Finance

3. Developments in the Global Bonds Market

In 2002 the world economic slowdown continued, a slowdown that began the previous year following the drop in share prices and the rise in oil prices and as a result of the global instability that came in the wake of September 11th and the declaration by the US Government of a war on terror. The optimism that characterized the first quarter of the year, following the signs of recovery in the US and in some emerging markets in Asia, made way for renewed pessimism in the later part of the year. This pessimism was expressed in the decision by economists of the International Monetary Fund to reduce their forecasts of growth for 2003 in the US and in the other industrialized countries from 4% and 3% to 3.7% and 2.5% respectively. In addition, 2002 was characterized by very low rates of inflation, although the central banks in the industrialized countries frequently reduced interest rates.

The declines in the world's stock markets continued during 2002, as the optimistic forecasts of the beginning of the year proved false, and because of the growing fears of a US attack on Iraq and the assessment that this could lead to additional instability and increases in oil prices. In addition, the accounting scandals revealed in the USA led to a loss of trust by investors in the stock markets. In this climate of uncertainty and loss of trust, investors sought shelter in relatively secure and liquid assets, and the US Government bonds enjoyed a huge demand which led to a fall in their long term yields to levels that had not been seen for many years (see figure A-10). The continuing recession in the USA and in Europe led the US Federal Reserve and the European Central Bank (ECB) to reduce their interest rates to 1.25% and 2.75% respectively. As a

result, the LIBOR decreased as seen in figure A-12. The expectation that the Federal Reserve would not increase its interest rates in the near future also contributed to the further decrease in yields.

The trend in emerging markets was mixed. In Latin America where the crisis continued (the situation in Argentina stabilized, while Brazil and Uruguay sank into a financial crisis) yields continued to rise sharply. On the other hand, in the countries of East Asia the recovery continued, and the expectation for a continued rapid growth led to an increase in demand and a drop in yields. In the countries of Eastern and Central Europe, candidates for European Union membership in the coming years, yields fell against a background of expectations for future economic growth.

The initial public offering (IPO) market, of bonds of corporate and emerging markets and of shares, was lethargic for most of the year, due to the lack of demand for risky assets, and the number of issues was much lower than in previous years. In the last quarter of the year the market revived, and some countries and companies took advantage of the opportunity to raise capital in spite of the relatively high risk premiums that investors demanded.

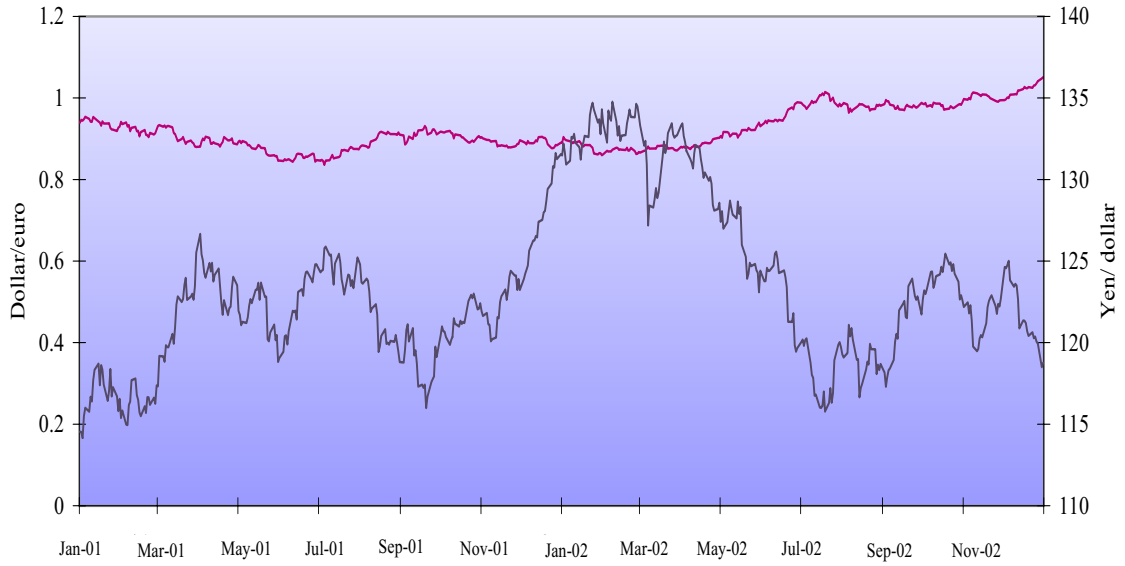
Figure A-10: Development in yields of US Government bonds of 5 and 10 years to maturity in 2001-2002



Source: Government Debt Management Unit, Ministry of Finance

The Domestic Market for Government Bonds and Global Bond Markets in 2002

Figure A-11: Development in exchange rates of the dollar to the Japanese yen and the euro in 2001-2002



Source: Government Debt Management Unit, Ministry of Finance

Figure A-12: Development of the LIBOR for three and six months in 2001-2002



Source: Government Debt Management Unit, Ministry of Finance

1. The Debt Management Unit – Structure and Functions

The Government Debt Management Unit is responsible for management of the domestic and external debts and for developing an overall model of debt management. The Unit is responsible for issuance of tradable bonds in the domestic and overseas markets, for management of the tradable and non tradable domestic debt, for initiating and promoting structural changes in the government bonds market, for studying and monitoring international markets, for the relationships with the international credit rating agencies, with the Development Corporation for Israel ('the Bonds organization'), with other issuers and with international organizations, such as the OECD, the IMF and the World Bank, on issues relating to debt management.

The Unit was established in January 2002 following a merger of the Foreign Currency Transactions Department in the Accountant General's Division, with part of the Capital Market Department in the Capital Market, Insurance and Savings Division. Until the establishment of the Unit, responsibility for management of the external debt lay with the Foreign Currency Transactions Department, and responsibility for management of the domestic debt lay with the Capital Market Department. The decision to unite these two units into one unit in the Accountant General's Division was designed to make the management of the Government debt more efficient. The establishment of the Debt Management Unit in the Accountant General's Division (which is responsible for the implementation and the financing of the state budget) thereby bringing together all the professional elements and accumulated knowledge under one roof, has led to better coordination between all the relevant bodies and better management of the Government debt. The establishment of the Unit was based on the successful experience of other countries and on the recommendations of the International Monetary Fund (IMF) and the Organization for Economic Cooperation and Development (OECD).

The Debt Management Unit includes of three departments, representing the main areas of activity: the domestic debt management department, the external debt management and foreign currency transactions department, and the risk management department.

A. The Domestic Debt Management Department

The Domestic Debt Management Department is responsible for issuance of the Government bonds in the domestic market, for dynamic management of the domestic tradable debt (selecting funding instruments, terms to maturity and types of indexation), for handling the non tradable domestic debt, and for interacting with the Bank of Israel in its capacity as a fiscal agent of the government for the domestic debt responsible for recording, clearing and payments (back office). Other activities include strengthening the tradability and liquidity of Government bonds and initiating structural changes, such as the introduction of the primary dealers system.

B. The External Debt Management & Foreign Currency Transactions Department

The External Debt Management & Foreign Currency Transactions Department is responsible for external issuance (choosing target markets, size and timing of issues, underwriters and preparation of legal and marketing material), for the maintenance and promotion of relations with large institutional investors abroad (which are the natural participants in the State of Israel's external issuance), for routine work vis-á-vis the international rating agencies, monitoring international markets and other issues related to the Government's foreign currency transactions. In addition, the Department works on a daily basis vis-á-vis the Ministry of Finance's office in New York and the Bonds organization.

C. The Risk Management Department

The Risk Management Department is responsible for assessing the risks relating to debt management, for developing methods to reduce the costs of the debt, and for pricing specific transactions of the Ministry of Finance.

2. The Government's debt management policy

D. Main aims

(1) Minimizing the cost of funding

The main objective of managing the Government debt is to provide the Government with stable finance at a minimum cost subject to the relevant risks and constraints. In the budget for 2003, interest payments on the Government's debts (without National Insurance) account for about 11% of the total Government budget. Therefore there is great importance to the proper planning of the following aspects of the debt: where to raise capital (in the domestic capital market or overseas, and if overseas, where)?; What kind of debt to raise (tradable or non tradable)?; What types of bonds to issue (in what currency, at fixed or floating interest, in linked or non linked bonds)? and in what mix?

(2) Increasing tradability and liquidity

The holder's ability to sell the bonds in his possession easily and for a price near to the market price at any given moment depends on the average volume of trade in the bond. Increasing the tradability and liquidity of bonds therefore makes them more attractive for investors, increases demand for them and reduces the Government's funding costs.

In order to strengthen the tradability and liquidity of Government bonds, in recent years the Ministry of Finance has reduced the number of tradable series and increased their volume (see details in Part C).

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(3) Creating benchmarks for domestic and overseas markets

Government bonds issued in the domestic market serve as reference (benchmarks) for various investors and facilitate pricing of corporate bonds. Therefore, the issuance of Government bonds supports the issuance of bonds by Israeli firms and encourages the development of the domestic bonds market.

The Ministry of Finance therefore aims to create a non linked (nominal) yield curve, based on highly tradable fixed interest bonds for various terms to maturity.

As in the domestic market, the Ministry of Finance works to create benchmarks in the international markets. The presence of traded bonds of the Government of Israel in international markets helps both corporate issues and the pricing of additional Israeli Government issues and issues of other Israeli entities.

E. Additional considerations and Tools

(1) Optimization of debt structure

- Determining the desired domestic debt composition and the resulting mix of funding:

In the past, the domestic debt was almost entirely linked to the CPI or to the US dollar. In 1994, the share of CPI linked debt was 84.7% of the total domestic tradable debt, and the share of the debt linked to the dollar was about 11.4% of the total domestic tradable debt. Therefore, in recent years the Ministry of Finance has been making efforts to increase the share of the non linked debt in the total domestic tradable debt in order to reach a more balanced Government debt portfolio. This is done by increased funding in non linked sectors issuing Shahar and New Gillon bonds. This trend is part of a broader trend of a decrease in the extent of indexation in the whole economy due to the restraining of inflation in recent years.

Increasing the share of non linked bonds increases their tradability and their validity as references for the various participants in the capital market. Therefore, the policy of reducing indexation is consistent with the Ministry of Finance's aim to create benchmarks for the domestic capital market.

- Determining the desired external funding mix:

Most of the external debt is denominated in US dollars (91%) and at fixed interest (84%). The Ministry of Finance has been trying in recent years to vary the currency mix of the external debt by means of issues in other currencies (such as euro, Japanese yen, Canadian dollar and British pound), and to change the interest mix (fixed/ floating) by means of issues of floating rate bonds based on the LIBOR, both through the Bonds organization and other funding methods (banking syndicates, private placements and swap transactions).

(2) Minimizing rollover risks

Rollover risk is the risk that the debt will have to be rolled over at a particularly high cost because of unfavorable market conditions or that it will be impossible to roll it over altogether. The Debt Management Unit works to reduce this risk in the following ways:

- Smoothing the maturity curve

'Smoothing the maturity curve' means spreading the maturity of bonds over time. Spreading the bond maturity over a number of years avoids the need to roll over a large proportion of the debt in a short period and thereby reduces the rollover risks and makes it easier for the Government to raise capital in the future.

The Unit strives to schedule the dates of opening series in such a way that the maturity dates of the new series will over time lead to the creation of a yield curve that is as continuous as possible, and the time gaps between the various bonds along the curve will be as equal as possible.

In addition, the Unit is working to change the law in a way that allows early redemption of Government bonds. This change will make it possible to "smooth" the curve in the best way possible, according to considerations of debt management.

- Setting the optimal term to maturity

Extending the average life of the debt reduces the need for frequent rollovers. For this reason extending the average life is an important tool for achieving better control over the portfolio of liabilities and neutralizing the risks of rollover. However, extending the debt involves costs, and therefore there is a need for 'optimization'.

(3) "Opening" overseas markets for the public and private sectors

The Government's activities in the global capital markets exposes the Israeli economy to new investors, encourages the entry of private Israeli companies into these markets, and varies the sources of capital for the business sector. Particular note should be taken of the activity of the Ministry of Finance in the following areas:

- Creating benchmarks for the issues of Israeli companies abroad.

Government bonds abroad act as benchmarks and make it easier to price the bonds of Israeli companies. Therefore, the issue of Government bonds in international markets supports the issues of bonds by Israeli companies abroad.

- Investor relations

The relationships of the Debt Management Unit with financial and economic analysts abroad adds value and contributes significantly to attracting foreign investors. The activities of the Debt

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Management Unit are aimed above all at potential lenders to the Government, at rating agencies and at investment houses, but they have proved their worth more than once as an effective instrument for promoting foreign investments in Israel. Following the steep decline in foreign investments in Israel in recent years, the Government Debt Management Unit will continue to invest time and resources in these activities, in conjunction with and in full cooperation with the agencies and divisions responsible for this subject both inside and outside the Ministry of Finance.

- The Government's credit rating

The Government Debt Management Unit interacts with the credit rating agencies on a regular basis. The credit rating of the Israeli Government domestically and abroad acts as a "cap" for the credit rating of Israeli companies[1], and any damage to its rating will affect the ability of the business and the banking sectors to raise capital abroad.

(4) Increasing transparency

The GDMU maintains very high disclosure standards and does much to increase transparency regarding debt management by making the relevant information openly available. Over the previous years the GDMU has developed important tools of distributing data regarding the government debt:

Funding plans – in order to increase certainty in the domestic government bonds market, the GDMU publicizes in advance its funding plans. The plans are published both in Hebrew and in English and are available on the GDMU's website.

Annual report – the GDMU publishes a comprehensive annual report both in Hebrew and English. The report contains information regarding the GDMU's policy goals and tools, recent developments in the Israeli and global bonds markets, the Government deficit, domestic and external funding, debt management and other related issues. The report is sent to relevant people and agencies in the private and public sectors, as well as to the economic media, and enjoys extensive coverage in the Israeli press. The report is available on the GDMU's website.

[1] Exceptions are companies whose principal business acivity and revenues are abroad or when an external foreign entity guarantees their activity.

Internet website – The GDMU's website is bi-lingual (Hebrew and English), and contains extensive and varied information about the methodology and long term objectives of the Government in managing its debt, information about funding issues in Israel and abroad, a sophisticated bonds query system, and information about recent market developments. Special attention has been paid to the English version of the site, which is designed to facilitate the activity and investments of foreign investors in Israeli Government bonds.

The website's address is: http://www.mof.gov.il/debt/gen/mainpage.asp.

(5) Maintaining the extent of foreign currency reserves

Maintaining a sufficient proportion of foreign currency reserves in the central bank is one of the considerations taken into account when determining the Ministry of Finance's funding policy, external funding in particular. In recent years, due to the anti-inflationary policy of the Bank of Israel, Israel has been holding high amounts of foreign currency reserves – some 23.5 billion dollars in December 2002.

3. Funding in the domestic market

The main source of capital for the Government of Israel is the domestic capital market. Capital is raised by means of issues of tradable and non tradable bonds denominated in shekels for private and institutional investors.

F. Raising tradable capital

Tradable capital is raised through issues of bonds that are traded on the Tel Aviv Stock Exchange. The Government currently issues non linked bonds with a fixed coupon, non linked bonds with a floating coupon and bonds linked to the CPI. An additional source of funds for the Government is the issue of non tradable bonds with real assured interest rates ("designated bonds") to pension funds and insurance companies. These bonds are fully indexed to the Consumer Price Index (CPI).

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Halting the issue of USD linked bonds by the Ministry of Finance

Since February 2000 the Ministry of Finance has not issued USD linked bonds of the Gilboa type to the public, for the following reasons:

1. The State of Israel has foreign currency liabilities (external debt) totaling NIS 130 billion, equal to about one quarter of the total Government debt. The Ministry of Finance's policy is to raise its dollar exposure only for foreign currency receipts by means of external issues. It has no interest in increasing its foreign currency exposure in return for shekels that are raised continuously by means of issues of non linked and CPI linked bonds.
2. The Ministry of Finance wishes to develop the non linked component of the total debt ("shekelization") – in recent years, following the fall in inflation and the demand for non linked bonds, the Ministry of Finance has succeeded in establishing the non linked component of the debt and in increasing liquidity in this sector by hundreds of percentage points. Today this is the most tradable sector in the Tel Aviv Stock Exchange. Issuance of USD linked debt will inevitably lower the non-linked issuance.
3. In January 2003 the liberalization of the Israeli foreign currency regime was concluded, and residents of Israel can purchase foreign currency linked assets without limitation, both through Israeli banks and brokers and through the representatives of foreign banks in Israel. Therefore there is no need for the Government to provide the capital market with financial instruments of this type.
4. Issuing Gilboa bonds resembles selling dollars, and just as the Ministry of Finance does not intervene in the foreign currency market by purchasing dollars, it also prefers not to intervene in the foreign currency market by selling USD linked bonds.
5. The Ministry of Finance encourages financial innovation in the capital market. Following the halt of the issue of USD linked bonds by the state, private financial bodies began issuing foreign currency linked bonds of various types, both 'plain vanilla' and structured products.
6. The cost of funding – Gilboa bonds are dollar linked LIBOR floaters. Therefore, in spite of the low yields at which these bonds were traded in 2002, based on the assumptions that the devaluation will continue and there will be a rise in the LIBOR (which was at an unprecedented low level), the real cost of funding by means of Gilboa bonds is likely to be significantly higher.

In spite of developments in the corporate bonds market in recent years, Government bonds still account for the major part of the tradable bonds market. Therefore, the Government's funding policy affects not only the cost of financing its deficit but also the strength and behavior of the bond market in Israel.

G. Raising non tradable capital

An additional source of funds for the Government is the issue of non tradable bonds at real assured interest rates ("designated bonds") to pension funds and insurance companies.[2] The remainder of non tradable capital is raised through deposits by various institutions in the Accountant General's Division of the Ministry of Finance ('emissions') according to agreements from past years.

Pension Funds

According to the regulations which were in force in 2002, new pension funds[3] were obliged to invest about 30% of their net accumulated funds in free investments in the capital market, while the remainder was invested in designated bonds of the "Arad" type which bear an effective annual yield of 5.05%. Old pension funds were obliged to invest **at least** 93% of their assets in designated bonds of "Miron" type, which bear real, effective, annual yields of 5.57%. The old pension funds, unlike the new ones, were allowed to increase their investments in designated Government bonds up to 100% of their assets. Therefore, in periods of low yields in the markets, an increase of the proportion of designated bonds in the portfolio of the old pension funds was to be expected, and vice versa. Changes in the composition of the holdings of the old pension funds had a real effect on Government funding, since one percent change in the composition of their holdings is equal to one billion shekels.

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2 According to the reform that was approved by the Knesset in May 2003, the issuance of designated bonds to the pension funds will be substantially reduced.

3 There are generally two types of pension funds in Israel: Old, mostly unbalanced defined benefits pension funds and new, balanced, defined-contribution pension funds. In March 1995, in response to large and rising actuarial deficits of Israel's pension funds, the Government adopted a new policy, including a comprehensive plan of recovery for existing pension funds. The primary elements of the new Government policy are: (1) the existing pension funds will be closed to new members, yet existing members will continue to be covered under the existing plans, subject to certain limitations on the future accumulation of benefits; (2) the Minister of Finance is empowered by the Government to draft recovery plans for pension funds in actuarial deficits, according to the principles established by the Government; (3) the Minister of Finance, at his discretion, is authorized to continue to issue special bonds to pension funds in actuarial deficits for an interim period; (4) new members enrolling in pension programs will join new, actuarially balanced funds that will operate separately and independently from existing funds, while benefits payable by the new pension funds will be subject to automatic reductions, to the extent necessary, to eliminate any actuarial deficit of such new funds; and (5) the Government will issue designated bonds, bearing interest at above-market rates (real rate equal to approximately 5% per annum), to each new pension fund with respect to 70% of its assets, provided the contributions made to any such fund are made with respect to wages not exceeding twice the amount of the average market wage. The portion of the new pension funds' assets that is not invested in designated bonds will be invested in the Israeli capital markets.

Insurance companies

According to the agreement between the State and the Life Insurance Companies, the State issues to the insurance companies designated bonds of the "Hetz" type (an acronym for "CPI linked life") against all or part of their obligations under CPI-linked life insurance schemes. The bonds are issued against policies that were sold up to the end of 1991 only. For policies sold up to January 1975 the coverage ratio was 100%. From then and up to the end of 1991 the issue of Hetz bonds was restricted to 86% of the insurance cover only. The above bonds are issued for periods ranging from 10 to 25 years and produce yields ranging from 4% to 6.2%.

4. External Funding

In addition to its funding in the domestic market, the State of Israel raises foreign currency capital in international markets. Capital is raised abroad both directly by the Government and also by means of the Development Corporation for Israel (the "Bonds organization"). The extent of foreign currency raised by the Government is determined according to its foreign currency needs to finance its external expenditure, to roll over maturing external debt, to the foreign currency reserves required by the Bank of Israel, and to the size of the external debt and its ratio to GDP.

H. The objectives of external funding

Rollover of external debt – external funding is used to redeem bonds issued abroad which have reached maturity.

Budget financing – external funding is used to fund the deficit in the Government budget, and is an alternative source to funding in the domestic market.

Opening markets for the private sector – the Government's presence in international financial markets helps Israeli institutions (financial and other) to reach these markets and raise money there. Government external issues expose the Israeli economy to the global financial markets, and the State's credit rating is a benchmark which makes it easier for analysts in the international financial markets to price the bonds of Israeli companies when they come to raise funds.

Financing the trade deficit and the Government's foreign currency expenditure – raising foreign currency abroad makes it possible to finance Israel's trade and current account imbalance in times of deficits. In addition, the fact that the Government raises capital in foreign currency in the financial markets allows it to make use of this money directly, i.e. without the costs of conversion.

Maintaining the desired level of foreign currency reserves – external funding enables the State to increase its reserves of foreign currency. The foreign currency reserves are set against the economy's needs both for the purpose of international trade, and for the purpose of international financing.

Dynamic debt management – the ability to raise capital abroad allows the Government to manage its debt dynamically and to improve ("smooth") its structure in order to reduce costs and limit risks.

I. The main sources for external funding

The Bonds organization

The Bonds organization (The Development Corporation for Israel) was founded in 1951. Its main objective is to provide the Government of Israel foreign currency financing by selling communities and individuals all over the world, non tradable bonds on behalf of the State of Israel.

The Bonds organization offers several different types of non tradable bonds which generally pay out a favorable interest rate from the issuer's point of view (see details in Appendix C).

Each year the Accountant General in the Ministry of Finance determines the target for annual funding by the Bonds organization depending on the Government's foreign currency needs and other strategic objectives in the management of the Government's debt. The Accountant General's Division also determines the interest paid for various securities.

From the day of its establishment through the end of 2002, the Bonds organization sold notes and bonds on behalf of the Government of Israel with a total value of over 27 billion dollars. Currently the organization's books contain the names of about a million holders of bonds for amounts ranging from 100 dollars to tens of millions of dollars. At the end of 2002 the outstanding bonds sold by the Bonds organization represent approximately 35% of the total external debt outstanding.

In 2002 the Bonds organization achieved record annual sales totaling 1.28 billion dollars. This represents an increase of 17% compared to sales in 2001 (1.09 billion dollars) and is 3% above the target which was set by the Accountant General (1.25 billion dollars). More than 50% of all the organization's sales took place within the USA. Other sales were made in Europe (about 20%), South America (about 20%) and Canada (about 10%). Following this demonstration of the organization's impressive ability to raise capital over the past year, and according to the Government's foreign currency needs for 2003, the Accountant General's Division has set the target for the organization in 2003 again at 1.25 billion dollars. It is worth noting that more than two thirds of the total foreign currency raised by the State of Israel in 2002 was raised by the Bonds organization.

Public offerings

Until the mid 1990s, all the tradable bonds that the Government of Israel issued were guaranteed by the US Governmet. Due to the Israeli economy's rapid development in early 1990s, combined with a supportive geopolitical environment, the government's credit rating improved substantially and enabled it to start issuing non-guaranteed bonds in the global markets. In 1994 the Accountant General's office made a strategic decision to conduct public placements of bonds

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for amounts of 200-250 million dollars each year for the period 1995-1998 in one or more of the international financial markets. From 1995 until the end of 2002 there have been seven international placements in three central capital markets – the US market, the euro market and the Japanese market. The strategic decision to access global markets was taken against a background of the economic development of the State of Israel, which made it possible to raise foreign currency without external guarantees, and because of the need to find an alternative source to the US Government guaranteed funding. In 1999 the size of the issue was increased for the first time to 400 million euro, and in 2000 it grew to 500 million dollars. Increasing the extent of the issue helped to increase the liquidity and tradability of the Government securities and to strengthen its issuance infrastructure.

The Israeli Government's bonds are priced in each of the international markets above the local benchmark (TB in the US market, Bund/OAT in the euro market, and JGB in the Japanese market). However, the bonds of the Israeli Government are not quoted in all the markets or for all possible terms to maturity. There are a number of methods for estimating the missing spreads:

- Setting the spread of the Israeli Government based on the spread of its peer group. This is a group of countries with a credit rating close to that of the State of Israel, and whose bonds are priced relatively closely in the market (i.e. South Africa, Chile, South Korea).
- Setting the spread based on the spread of the Israeli Government for different terms to maturity or in a different market. This quote is translated into the desired theoretical quote using swap quotes with various currencies, interest rates and markets.
- Setting the spread based on the spread of Israeli utility companies, and on this basis estimating the Government spread and risk.

Private placements

Private placement is a funding tool that complements the conventional tools. Unlike public offerings, whose price is quoted on various markets and which are traded on the secondary market, private placements are not traded and their publicity is limited.

Private placements are an arrangement between an investor and the borrower (the State of Israel) brokered by an investment bank. Since the private issue has no organized secondary market and the arrangement for the transaction is made in an opportunistic way based on a specific offer, the contact between the two parties is usually initiated by an investment bank, which is aware of the needs of both parties and brings them together.

Private placements have several advantages, as follows:

- Relatively low issue costs.
- Reinforcing the status of the State of Israel in international markets and improving the pricing for long term credit.
- Exposing the State of Israel to new institutional investors.

- Creating additional benchmarks for the Israeli Government in international markets (by means of relatively small issues).

Syndicated loans

A syndicated loan is a means of raising foreign currency directly from the banking system. The consortium is headed by an arranger bank, which contacts other foreign banks in the name of the State of Israel. This bank is chosen through a process similar to an auction. Before the process begins, the Government sets the main parameters: amount to be raised, type of currency, repayment schedule and maximum total cost. In 1995 a consortium of 43 banks raised the sum of 350 million German markets at interest of LIBOR + 0.45% for four years and LIBOR + 0.50% for five years. In 1996 a consortium of 21 banks raised the sum of 1.1 billion French francs (about 210 million dollars) for seven years at interest of LIBOR + 0.25% for the first five years and LIBOR + 0.30% for the remaining two years. In 2001 a consortium raised the sum of 225 million dollars at interest of LIBOR + 0.45%.

Shelf registrations

When trying to reach international markets, the Accountant General's Division is assisted by a process called shelf registration. This provides in advance the legal infrastructure for public offerings or private placements, and therefore makes it possible to issue bonds in international markets in a short time and with minimum effort.

Shelf registrations have a number of advantages, as follows:

- Flexibility – these registrations lay out a framework for management of external debt: funding in various currencies for various periods and with various types of interest (fixed, floating, zero coupon, etc.), with different forms (simple or structured) and in various types of placements (public or private).
- Quick execution of deals – one set of negotiations regarding the legal infrastructure for all deals in the plan makes the execution of deals very quick.
- Fast response – the plan makes it possible to take advantages of opportunities in the market and raise capital according to offers from banks (investor driven 'reverse inquiry' issues).
- The issuer can determine the scope, type and period for deals according to its needs and taking account of market conditions.
- The possibility for rapid funding in the event of unforeseen needs.
- The possibility of increasing or decreasing the scope of the plan.

In 1996 the Accountant General's Division joined the EMTN (Euro Medium Term Notes) program. This program sets out a defined framework for managing funding in the euro market and facilitates access to the market while streamlining the issue process. In addition, the Division opened shelf registrations also for placements in the USA in 1996 and in Japan in 1998.

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5. Risk management

Examining the distribution of risks relating to debt management, locating courses of action to reduce the costs of the debt and examining the risks of the State's debt portfolio are essential tools for the Government if it wishes to provide for its funding needs and to meet its obligations at the lowest cost possible (in the medium and long term) subject to the limitations of risk.

There are various types of financial risks that have to be measured and managed. Some of these risks are difficult to quantify and measure (operational risk, for example), and it is necessary to decide on monitoring and control procedures to reduce these risks.

- **Market risk** – this is the risk arising out of changes in market prices, such as changes in interest rates and exchange rates, changes in volatility and so on. In order to calculate risk indicators such as VaR, the market value of the portfolio and its sensitivity to changes in the relevant risk factors must first be assessed.
  Market risk factors include the zero curves for each relevant currency, exchange rates, standard deviations, correlations and possible changes in spreads.
- **Rollover risk/ refinancing risk** – this is the risk that the debt will have to be rolled over at a particularly high cost because of adverse conditions in the market or that it will be impossible to roll it over altogether.
- **Liquidity risk** – the liquidity risk has two aspects. On one hand, there is the cost ('the penalty') required from investors to get out of a position when the depth and volume of the market are shallow (even temporarily). On the other hand, difficulties may arise if there is a need to raise money within a short time.
- **Credit risk** – this is the risk that the party that owes money will not meet its obligations, and therefore this risk mainly affects the assets side (for example in swap deals).
- **Other risks** – in addition to the above risks, there are additional risks belonging to the category of "operational risk", including inter alia technical hitches, failure of computer systems, fraud and so forth, legal risk (also considered part of the operating risk) and model risk, which is the risk that models or the parameters of models are not accurate[4]

The activity of the risk management department (Middle Office) focuses on three main areas:

- Strengthening and expanding the framework of debt management.
- Deal pricing.
- Providing assistance on various strategic matters.

The framework for debt management can be divided into two levels: strategic and tactical. Debt policy is determined at the strategic level, while funding policy is determined at the tactical level.

[4] It is important to stress that the above risks are not independent.

Debt policy defines the various parameters of the liabilities portfolio, and it is derived from medium and long term considerations. For a given size of debt the policy defines the optimum currency mix and the optimum interest rate mix (fixed and floating) and the desirable debt average life. On the other hand, funding policy determines the best sectors for raising debt at any given moment.

The aim of the debt manager is to find a portfolio of obligations that will produce the minimum cost for a given risk (or vice versa) , taking account of costs and of economic and budgetary risks. The separation between economic cost and budgetary (accounting) cost is derived from the fact that interest payments on the debt (unlike principal repayments) are part of the deficit in the State budget.

The separation principle – it is possible to separate the decision over where to raise new debt and the decision over the optimal mix. The separation principle is valid when the party raising debt is a small player in the market (price taker) and when the market has financial instruments making it possible to swap risks. For example, it is possible to raise bonds denominated in dollars and convert the dollar obligation into a euro obligation through a currency swap deal.

Since the Government is a central player in the domestic bond market and since the market is not sufficiently developed (in terms of instruments for risk management), the separation principle is not valid yet for the domestic debt, and this means that currently more weight needs to be given to the strategic rather than tactical considerations.

The Benchmark model

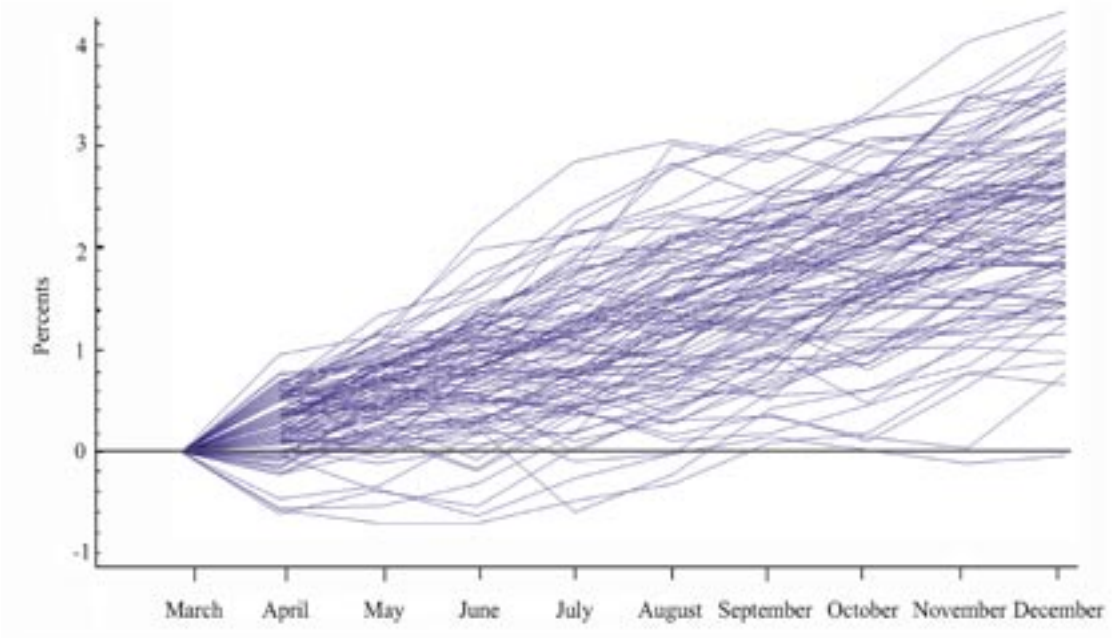
Since the Ministry of Finance only manages the liabilities portfolio (not the assets) there is no natural position that is risk neutral. Therefore, a benchmark has to be defined that can serve as a risk free position. For the debt manager, the benchmark represents the point (range) that he should aim for.

The model is an optimization model based on a simulation and generating, among other things, efficient cost/risk curves, and enabling decision makers to determine the optimal mixes according to their risk preferences. As the model is run, thousands of possible risk factor paths are sampled and various indicators of cost and risk are calculated for each path. The model is at an advanced stage, and the initial results obtained are expected to be presented to decision makers duriy 2003.

Figure 3 shows possible paths for inflation in 2003. These paths are used, among other presented, to simulate the breakdown of interest and principal repayments for this year.

The Debt Management Unit, Objectives of Debt Management Policy and the Tools for Implementation

Figure B-1: Simulation of inflation paths



Source: The Government Debt Management Unit, Ministry of Finance

Examining the sensitivity of interest and principal payments to market factors

In 2002 the Risk Management Department began examining on a regular basis the sensitivity of interest and principal payments to various risk factors and their effect on the State budget. The result of the sensitivity report is a **breakdown** of the payments and not a sensitivity analysis of the "what if" type. In other words, in addition to the expected payment if a particular event occurs, the probability of such an occurrence is also calculated.

To this report is added a stress testing report, which describes the effect of extreme situations on the expected cash flow. The purpose of these reports is to support the discussions on the deficit and on ways of financing it, and to assist in determining the safety margin needed to budget for interest and principal repayments.

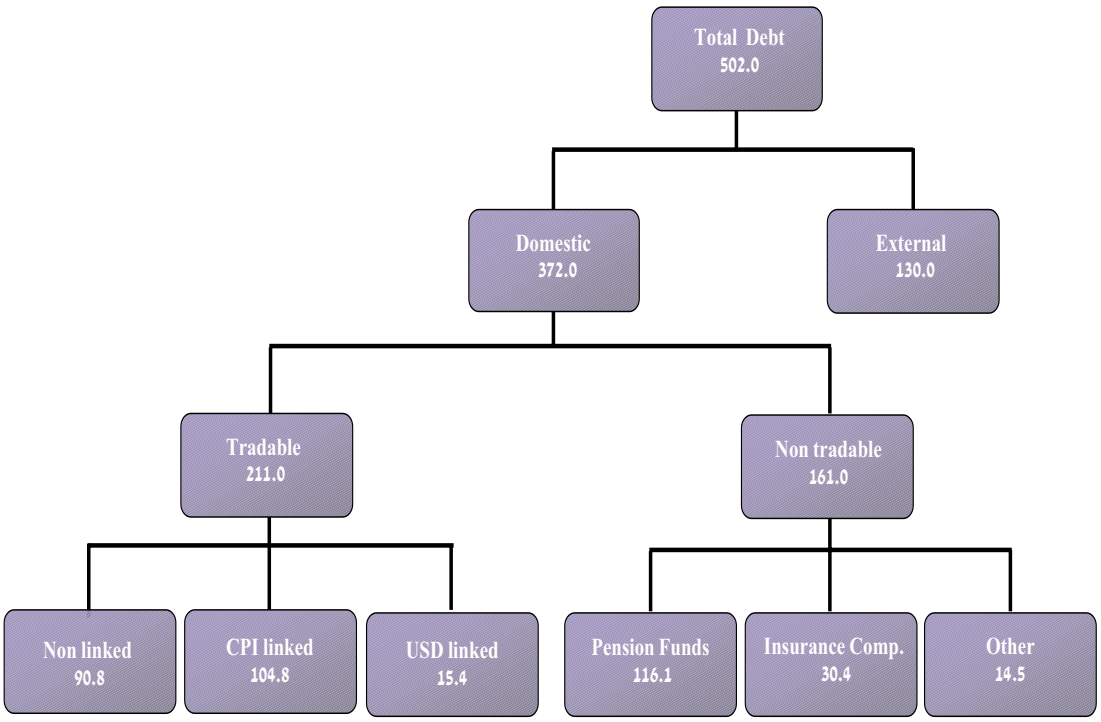
- **Pricing**

In the course of the year the Risk Management Department has developed in-house abilities to price financial instruments of various types, such as basis swaps, FX swaps, IR swaps, callable bonds and more.

1. The Government debt in 2002

At the end of 2002 the total Government debt reached NIS 502 billion compared to NIS 448 billion in 2001, a real increase of 5.2%. The domestic debt totaled NIS 372 billion, compared to NIS 326 billion at the end of 2001, a real increase of 7.1%. The external debt remained almost unchanged in real terms, and stood at NIS 130 billion at the end of 2002, compared to NIS 122 billion at the end of 2001.

Figure C-1: Structure of the Government debt at the end of 2002 (in NIS billions)



Source: Bank of Israel

A. The Government debt as a share of GDP

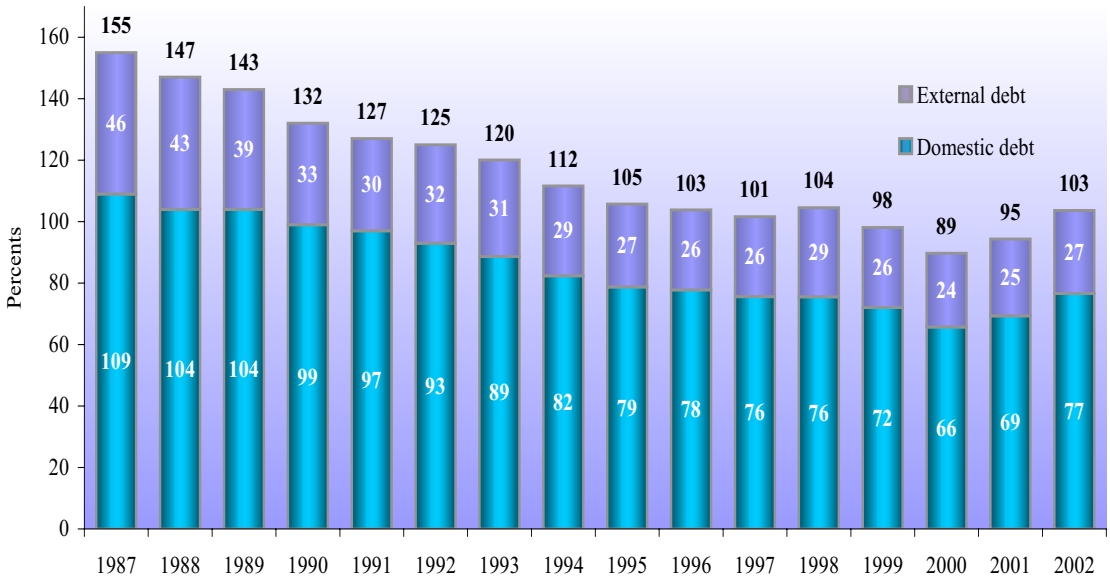
At the end of 2002, the Government debt reached the level of about 103.0 percent of GDP, compared to about 94.8 percent in 2001 and 99.4 percent (on average) of the GDP in the five previous years. The increase in the Government debt to GDP ratio recorded in the past year was due to three main factors:

1. The sharp and unexpected decrease in Government revenues from taxation, a decrease that led to a considerable deficit in the Government budget (NIS 19.3 billion).

2. Negative growth of the economy (1.1% decline in GDP) for the second consecutive year[5].
3. Rapid devaluation of the rate of the shekel (in 2002 the shekel-dollar exchange rate rose by 6.4%). This devaluation also contributed to an increase in the foreign currency linked component of the debt (in spite of negative net external funding).

The increase in Government debt to GDP ratio in the last two years was in contradiction to the long term trend of a constant decrease, a trend that characterized the Israeli economy from the stabilization plan of 1985 up to the year 2000. When we examine the development in the Government debt to GDP ratio in the period 1987-2000, we find a considerable and fairly rapid decrease of about 5.1 percentage points per annum (on average). This decrease was mainly due to the growth of the Israeli economy, but also to State revenues from privatization and from the fiscal discipline that was maintained in spite of the many pressures and constraints. Reduction of the debt reduces interest payments, which are a heavy burden on the State budget. It should be noted that the debt (principal + interest) payments in the 2003 budget (excluding the National Insurance) is NIS 84.0 billion, representing 31.1% of the State budget.

Figure C-2: Government debt as a percentage of GDP in 1987-2002



Source: Bank of Israel

[5] It must be noted that the decline in the debt/GDP ratio that began in the mid 1980s was the result of the growth in GDP rather than a decrease in the debt in nominal terms or even in real terms.

Table C-1: Deficit and debt as a percentage of GDP in various countries in 2002

Country	Deficit as % of GDP	Total debt as % of GDP
Israel(1)	3.8	102.9
Belgium	0.0	105.4
Greece	1.2	104.9
Italy	2.5	121.2
Japan	7.1	147.2
Ireland	0.3	33.7
UK	1.3	50.3
US	3.4	61.0
Germany	3.6	62.4
France	3.2	67.1
OECD average	2.9	76.1

(1) The component of inflation in the interest payment on the CPI linked debt is excluded from the definition of the Government deficit. Therefore, the accrued CPI differential on the principal and on the accrued interest are included in the total debt figures.

Sources: OECD Economic Outlook, Ministry of Finance

B. The domestic debt

The balance of the domestic debt (tradable and not tradable, excluding the debt of the National Insurance Institute) for 2002 totaled NIS 372 billion. The tradable debt, which is 56.7% of the total domestic debt, totaled NIS 211 billion, a real increase of 6.6% compared to 2001. The non tradable debt, which is 43.3% of the total domestic debt, totaled NIS 161 billion, a rise of 2.1% compared to 2001.

Table C-2: Breakdown of domestic debt (tradable and non tradable) in 1997-2002[6] (in %)

Type of debt	1997	1998	1999	2000	2001	2002
Tradable debt	51	52	53	54	55	58
Non tradable debt	49	48	47	46	45	42

Source: Bank of Israel

6 Excluding National Insurance.

(1) **The tradable debt**

Notwithstanding the fall in non linked funding in the past year (see details in Part C-2), the share of the non linked component grew in 2002 and by the end of the year reached 43.0% of the total tradable debt, compared to 38.4% in 2001. On the other hand, the share of the CPI linked component in the tradable debt declined in 2002 and by the end of the year reached 49.7% of the total tradable debt, compared to 52.8% at the end of 2001 and 81.8% at the end of 1995, a decrease of about 30% in seven years. The share of the USD linked component continued to decline and was 7.3% of the tradable debt at the end of 2002, compared to 8.8% in 2001. These trends are in line with the Ministry of Finance's policy to reduce the share of linked bonds in the overall Government debt. The reason for differences in the funding in 2002 versus total debt inventory lies in the fact that the debt inventory is influenced not only by funding but also by maturities. In 2002 maturities of CPI linked bonds were NIS 13.6 billion (representing 62.8% of all maturities of tradable bonds), compared to maturities of NIS 6.5 billion for non linked bonds (29.9% of all maturities of tradable bonds) and maturities totaling NIS 1.6 billion of USD linked bonds (7.3% of all maturities of tradable bonds).

Table C-3: Breakdown of the tradable debt by type of indexation in 1995-2002 (in %)

Tradable debt	1995	1996	1997	1998	1999	2000	2001	2002
CPI linked	81.3	72.3	73.4	68.7	65.2	58.5	52.8	49.7
USD linked	9.8	9.8	8.1	11.9	12.7	11.1	8.8	7.3
Non linked	8.8	17.9	18.5	19.4	22.1	30.4	38.4	43.0

Source: Bank of Israel

- **Holdings of tradable Government bonds**

Table C-4 and Figure C-3 describe the breakdown of holdings of tradable Government bonds among various types of investors in the period 1995-2002. The sharp decline in the proportion of mutual funds in the past year (contrary to the trend in recent years) is particularly striking. The relative proportion of provident funds also declined compared to the growth trend in the years 1997-2001. It is interesting to note the growth in the relative proportion of the pension funds, from 1.1% at the end of 2001, to 2.6% at the end of 2002. The old pension funds enjoyed the right to purchase designated bonds at an effective annual interest rate of 5.57% (see details in Part B) and usually had no interest in the purchase of tradable bonds in the free market. However, in 2002 the yield to maturity of CPI linked Galil bonds rose to above 6%. As a result, the old pension funds increased their holdings of tradable bonds. The growth in holdings by foreign investors in the past year should also be noted, contrary to the trend in the previous

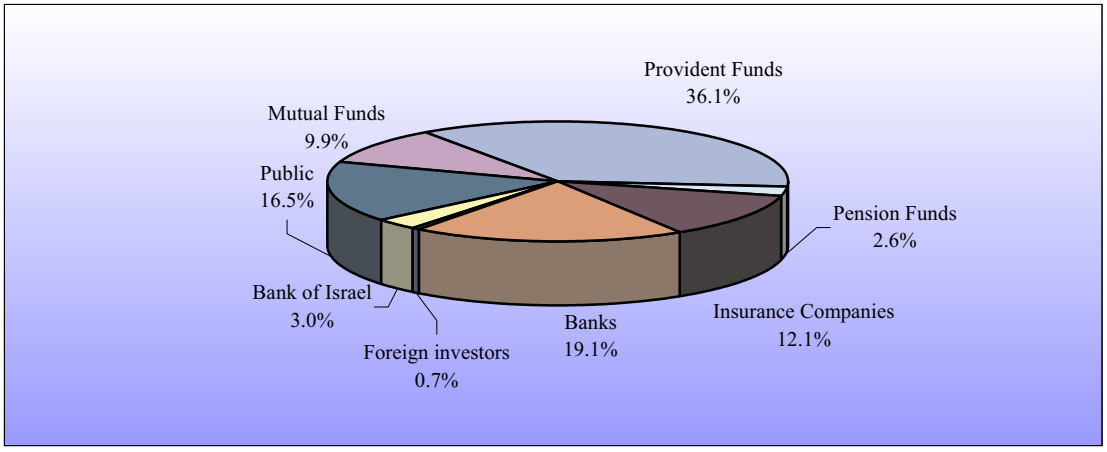
two years. However, their rate of holdings is still negligible compared to the potential shown by their participation in other segments of the Israeli capital markets such as ownership and trade in corporate shares.

Table C-4: Breakdown of tradable Government bond holders in 1995-2002 (in %)

Year	Total market value (NIS)	Public	Mutual funds	Provi-dent Funds	Pension Funds	Insu-rance Com-panies	Banks	Foreign Investors	Bank of Israel
1995	105.2	17.3	4.9	43.2	0.0	2.8	28.3	0.5	3.0
1996	122.8	21.2	4.6	35.7	0.2	3.9	29.8	0.5	4.0
1997	134.8	21.0	5.6	39.7	0.3	4.7	24.4	0.5	3.8
1998	146.2	17.9	7.1	39.6	0.5	5.3	25.4	0.4	3.8
1999	155.1	16.5	8.0	39.9	0.8	6.2	24.2	0.5	3.9
2000	157.3	16.0	12.1	40.8	1.5	7.0	18.1	0.4	4.2
2001	181.0	12.3	15.4	40.2	1.1	11.1	15.8	0.2	3.7
2002	197.1	16.5	9.9	36.1	2.6	12.1	19.1	0.7	3.0

Source: Bank of Israel

Figure C-3: Distribution of tradable Government bonds by holders at the end of 2002



Source: Bank of Israel

Table C-5 describes the breakdown of the holders of tradable Government bonds in general, and of CPI linked and non linked bonds in the years 2001-2002. As can be seen, direct holdings by mutual funds of non linked bonds are considerably higher than their holdings of tradable bonds in general, and on the other hands, the holdings by provident funds and pension funds of non linked bonds are much lower than their holdings of tradable bonds in general. The reason for this is that all the investors, apart from the provident funds and the pension funds, were liable for tax of 35% of the interest paid by CPI and foreign currency linked bonds, unlike the non linked bonds that were completely exempt from tax. As a result, investors had a greater incentive to invest in non linked bonds and not in linked bonds. Indeed, as shown in Table C-5, the proportion of holdings of non linked bonds was higher than the proportion of holdings of linked bonds. The provident funds and the pension funds, by contrast, paid the same rate of tax in all sectors, and the percentage of their holdings of linked bonds was considerably higher than the percentage of their holdings of non linked bonds. According to the regulations of the tax reform, holders of linked bonds that were issued after May 2000 must pay a tax of 15% on the interest starting on January 1, 2003. Following the change in the tax regulations, the tax rate paid by investors (who are not provident funds) was reduced, so they currently have a greater incentive than before to hold linked bonds rather than non linked bonds which are taxed for the first time. Therefore, it seems likely that in the next few years the proportion of holdings of CPI linked bonds by these investors will increase.

Table C-5: Breakdown of holders of tradable Government bonds (CPI linked and non linked) in 2001-2002 (in %)

	Total tradable		Non linked		Linked	
	2001	2002	2001	2002	2001	2002
Public	12.6	15.6	13.7	18.5	12.0	13.7
Mutual funds	14.6	10.0	28.0	15.5	6.9	6.5
Provident Funds	41.2	37.7	28.7	29.2	48.3	43.2
Pension Funds	1.1	2.2	0.4	0.7	1.4	3.1
Insurance Companies	11.3	12.3	11.0	13.0	11.5	11.9
Banks	15.7	18.7	17.9	21.9	14.4	16.6
Foreign Investors	0.2	0.6	0.3	1.3	0.2	0.2
Bank of Israel	3.4	2.8	0.0	0.0	5.4	4.7

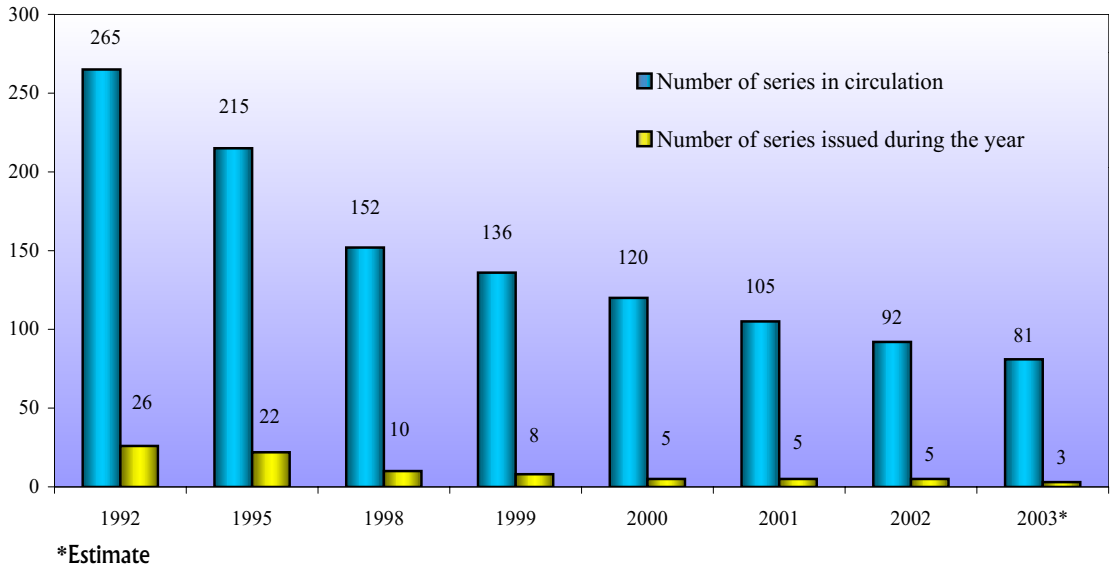
Source: Bank of Israel and data processed by the Government Debt Management Unit

Size and number of series

As part of the effort to strengthen tradability and liquidity in the domestic bond market, the Ministry of Finance has reduced the number of series in recent years and increased their volume (see details in Part B).

As Figure C-4 shows, in 2002 only five series were issued. At the same time 18 series reached maturity. As a result, there was a continuing decline in the number of series traded, which totaled 92 at the end of 2002. The Debt Management Unit intends to continue to issue a low number of new series in the next few years, and therefore the trend of a reduction in the number of traded series is also expected to continue.

Figure C-4: Number of series of tradable Government bonds in 1992-2003

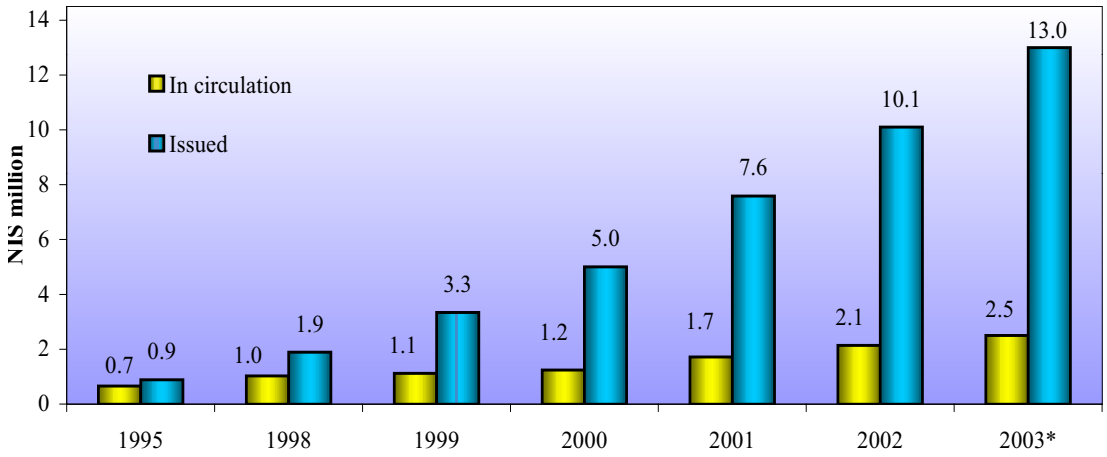


*Estimate

Source: Government Debt Management Unit, Ministry of Finance

In recent years, the average size of the issued series increased dramatically reaching NIS 10.1 billion in 2002. As a result, from 1995 to 2002 the average size of traded series grew by more than 220%, reaching NIS 2.1 billion. This trend was due to a strict adherence to the policy of large series creation, and the continuing maturity of small series. In 2003, the average size of issued series is increasing further to NIS 13 billion, while the average volume of series in circulation is expected to reach NIS 2.5 billion. Additional emphasis is put on ensuring the liquidity of the bonds which we regard as benchmarks.

Figure C-5: Average size of series in 1995-2003



Source: Government Debt Management Unit, Ministry of Finance

(2) **The non tradable debt**

Table C-6 shows the composition of the non tradable debt for the years 1997-2002. It is possible to identify the moderate rise over the years in the share of designated Miron bonds, issued to the old pension funds. On the other hand, there is a decrease in the share of the "Miscellaneous" item out of the total non tradable debt. This item includes various loans, deposits and emissions managed by the Ministry of Finance. It will be noted that starting in 1985, there has been a large reduction in new issues in this category so that this item has been declining over the years. In addition, it is possible to see growth in the proportion of designated Arad bonds, which have been issued to the new pension funds since 1995. In addition, it can be seen that the share of designated bonds of the Hetz type (issued for some life insurance policies) in the total non tradable debt has remained almost without change over the years.

Table C-6: Breakdown of the non tradable debt in 1997-2002 (in %)

	1997	1998	1999	2000	2001	2002
Total (NIS billions)	145.4	144.0	145.4	141.9	148.4	161.0
Pensions:						
Miron	50	55	58	63	65	66
Arad	1	2	2	4	5	6
Other	1	1	-	-	-	-
Insurance:						
Hetz	21	21	21	20	19	19
Miscellaneous[1]	27	21	19	13	11	9

Source: Bank of Israel

(1) Including various loans, deposits and emissions managed by the Ministry of Finance

Table C-7: Designated non tradable bonds as a proportion of the total investment portfolio of pension funds and life insurance companies in the period 1999-2002 (in %)

	1999	2000	2001	2002
Old pension funds	94.4	93.6	94.7	94.3
New pension funds	70.5	67.0	66.1	69.3
Insurance companies	48.1	41.2	36.9	37.4

Source: Capital Market, Insurance & Savings Division, Ministry of Finance

Average term to maturity

The average term to maturity of the total Government debt (Table C-8) remained 6.6 years as in 2001. In 2002 (for the second year running) and stood at about 6.7 years by the end of the year, compared to 6.6 years at the end of 2001. The average term to maturity of the domestic debt rose last year from 6.5 years at the end of 2001 to 6.6 years at the end of 2002. The average term to maturity of the external debt continued to decline and stood at 6.6 years at the end of the year compared to 6.9 years at the end of 2001.

Note should be taken of the lengthening term to maturity of the total Government debt and of the domestic debt, in spite of a shortening of the Government's funding in 2002 (mainly due to the increased cost of funding and the assessment that the current yield rates are high and expected to fall in the future). This development is the result of the large maturities which led to a rise in

the average number of years to maturity of the debt. The term to maturity of the tradable debt also increased in 2002 and reached 5.4 years, compared to 5.1 years at the end of 2001. In addition, the modified duration of the tradable debt, which expresses its sensitivity to changes in the interest rate, decreased from 3.0 to 2.9.

The decline in the external debt's average term to maturity is mostly due to the completion of the US Government loan guarantees program in 1998. This funding framework was first made available in 1992, and its average range is relatively long[7]. The receipt of new guarantees starting in 2003 should therefore lead again to a lengthening of the external debt.

Table C-8: The average term to maturity of the Government debt during the period 1997-2002 (in years)

	1997	1998	1999	2000	2001	2002
Total domestic debt	6.4	6.4	6.3	6.2	6.5	6.6
Tradable domestic debt	4.7	4.6	4.5	4.5	5.1	5.4
External debt	7.9	8.0	7.6	7.1	6.9	6.6
Total Government debt	6.8	6.8	6.6	6.5	6.6	6.6

Source: Bank of Israel

C. The external debt

The external debt of the State of Israel, like the domestic debt, is divided into tradable debt and non tradable debt. The tradable part of the external debt consists of two types:

(1) Bonds issued with a US Government guarantee, amounting to 12.45 billion dollars at the end of 2002.

(2) Bonds issued on global financial markets without guarantees ("non guaranteed issues"), amounting to 1.94 billion dollars at the end of 2002.

From 1995 until the end of 2002 the State of Israel conducted seven non guaranteed issues in the USA, Europe and Japan. This year bonds were issued in the euro market.

7 Further details later, in the section dealing with the external debt.

Table C-9 gives details of the characteristics of the tradable bonds issued abroad by the Ministry of Finance in recent years:

Table C-9: Bond issues in global financial markets in 1995-2002 (1)

Year	Market	Sum ($m)	Currency	Term to maturity (years)	Coupon (%)	Gov't bonds used as benchmark (BM)(2)	Spread from BM on issue date (basis points)	Spread from BM on 31.12.2002 (basis points)
1995	Yankee	250	Dollar	10	6.375	USA	76(3)	200
1996	Euro	200	Dollar	5	6.375	USA	-	-
1997	Samurai	170	Yen	10	3.0	Japan	-	-
1998	Yankee	250	Dollar	30	7.25	USA	210	270
1999	Euro	412	Euro	7	4.75	France	95	123
2000	'Global'	500	Dollar	10	7.75	USA	135	145
2002	Euro	350	Euro	7	5.979	Germany	123	188

(1) All issues are of fixed interest bonds.
(2) Benchmark – a bond that serves as a yardstick for the purpose of comparing yields.
(3) Basis point (BP) = one hundredth of a percent.

Source: Government Debt Management Unit, Ministry of Finance

The non tradable part of the debt is composed mostly of bonds that were issued over the years to individuals, companies and institutions by means of the Development Corporation for Israel (the Bonds organization). The total debt in these bonds was 9.56 billion dollars at the end of 2002. The rest of the non tradable debt are bonds issued to foreign Governments, international institutions and external banks. This debt totaled 2.7 billion dollars at the end of 2002.

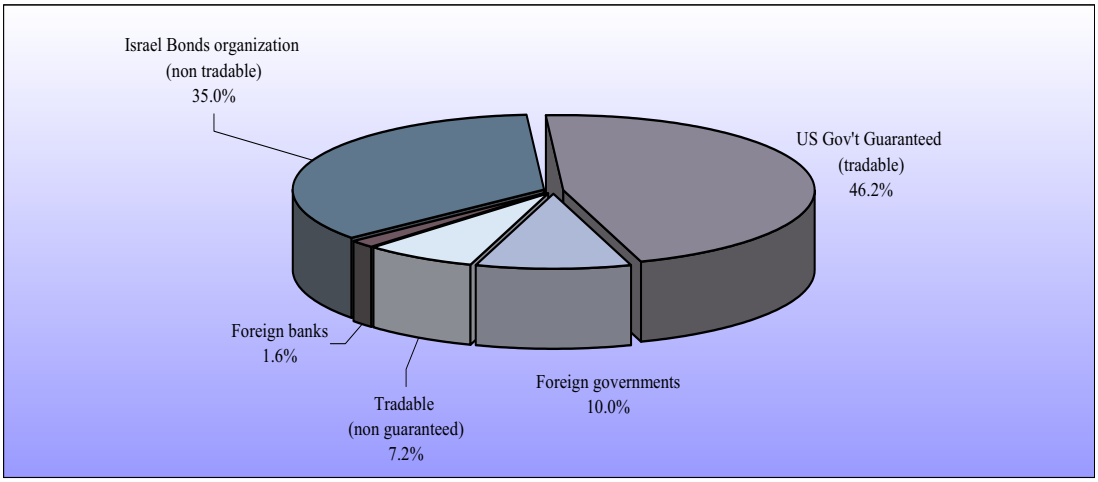
In 2002 one public placement and one private placement were carried out abroad.

- **Characteristics of the external debt**

At the end of 2002 the external public debt stood at some 27 billion dollars, representing 26% of the total debt. Apart from this low share Israel's external debt has a number of additional important features, as follows:

The large share of US government guaranteed issues in the total external debt - At the end of 2002 US Government guaranteed bonds accounted for about 46.2% of the total external debt. These loans enjoy preferential interest rates wich is derived from the credit rating of the US Government (AAA/Aaa) which is higher than the credit rating of the Israeli Government (A2/A-).

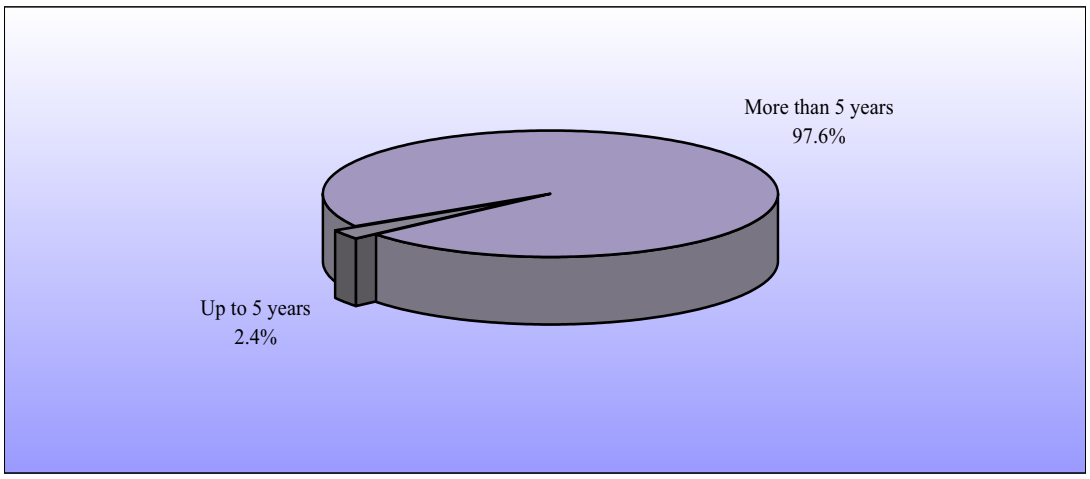
Figure C-6: Composition of the external debt by type of issue (as of 31.12.02)



Source: Bank of Israel

Long term to maturity – Funding by the Government of Israel is characterized by a relatively long term to maturity. Only 2.4% of the public debt is issued for an original term to maturity (on issuance day) of less than five years. This type of funding reduces the rollover risk and contributes to the Government's financial stability.

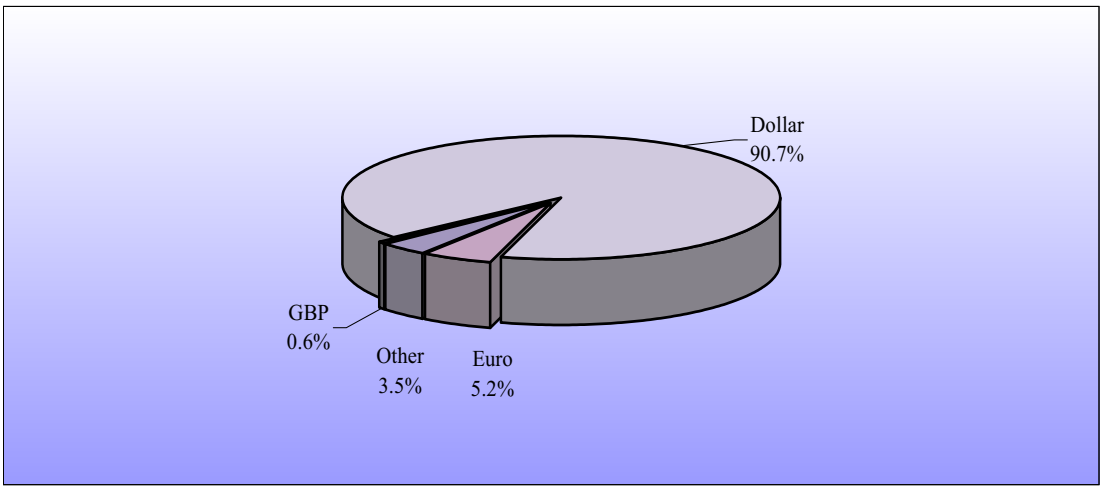
Figure C-7: Composition of the external debt by original term to maturity (as of 31.12.02)



Source: Bank of Israel

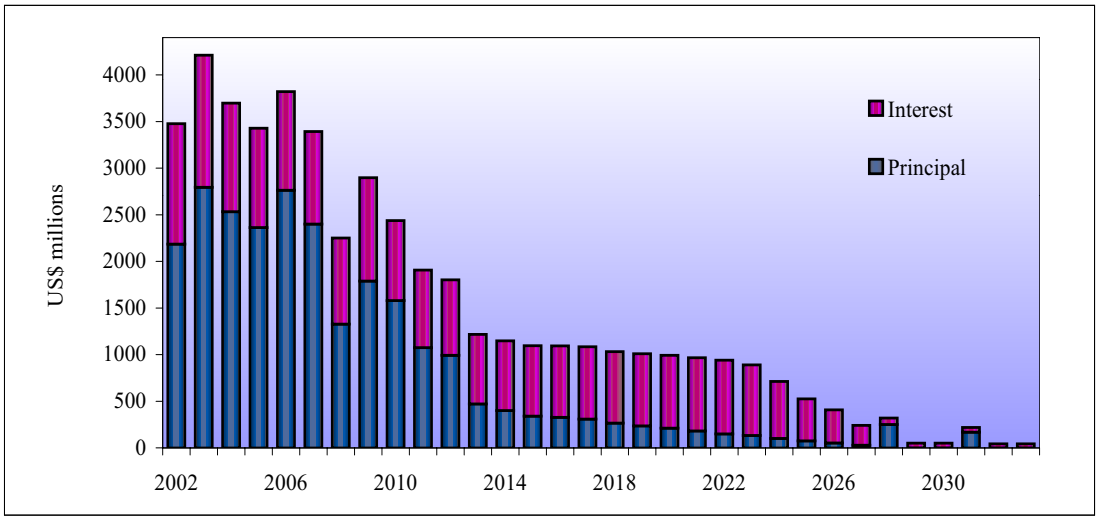
US dollars denominated debt dominance – at the end of 2002 the external debt of the Government of Israel denominated in US dollars accounted for about 91% of the total external debt. This is mainly due to the large proportion of the external debt that is guaranteed by the US Government and to the dominance of US investors in the purchase of bonds from the Bonds organization. In recent years the Accountant General's Division has been striving to diversify the currency composition of the debt.

Figure C-8: Composition of the external debt by currency



Source: Bank of Israel

Figure C-9: Forecast of external debt repayments (principal and interest) by year



Source: Government Debt Management Unit, Ministry of Finance

2. The Government Deficit and Financing Needs in 2002

The State Budget includes a forecast of the Government's expected income and expenditure. Government income is mainly derived from direct and indirect taxes collected by the Government, while Government expenses include all the activities of Government ministries and all the other entities supported by the State budget. The difference between income and expenditure is the deficit that has to be financed.

In both the deficit and its financing, there is a distinction between the domestic deficit and the external deficit or surplus. Nevertheless they are almost completely interchangeable and the domestic deficit can be financed by loans from abroad, and vice versa.

In 2002, the Accountant General's Division financed the deficit less the net loans received from abroad and the revenues received from privatization, in addition to the rollover of debt that reached its maturity. That is, capital was raised against the principal that matured during the year plus the sum required to finance the deficit[8]. The Debt Management Unit raised capital from the public in Israel in the form of tradable bonds (traded on the stock exchange) and as non tradable, 'designated' bonds issued to institutional investors under special agreements. In addition, the Debt Management Unit raised capital abroad.

In 2002 the Government deficit and its financing needs were much higher than planned in the State budget that was approved in February 2002. The main factor leading to the increase in financing needs was the slowdown of economic activity, which led to a sharp (and unexpected) drop in Government revenues from taxes. The economic slowdown also led to an almost complete halt in the privatization process, which was an important source of funding for the Government in the 1990s. Moreover, there was a sharp increase in defense expenditure following the rise in terrorism. Although the defense expenditure was financed by a transfer of funds from other Government ministries, it limited the Government's ability to make further cuts in the budget and adjust it to its declining income.

The Government's deficit (excluding credit) for 2002 reached NIS 18.7 billion, compared to a planned deficit of NIS 14.7 billion in the State budget approved by the Knesset in February. Payments of principal totaled NIS 43.4 billion in 2002, of which NIS 33.2 billion were in the domestic market and NIS 10.2 billion abroad. Privatization generated only NIS 352 million. To sum up, in 2002 a total of NIS 65.8 billion were raised, of which NIS 57.6 billion were raised on the domestic market and NIS 8.2 billion abroad.

[8] Interest payments are included in the Government's annual expenses and therefore are not part of the deficit financing.

Table C-10:
Financing the Government deficit in 2002 (in NIS billions)

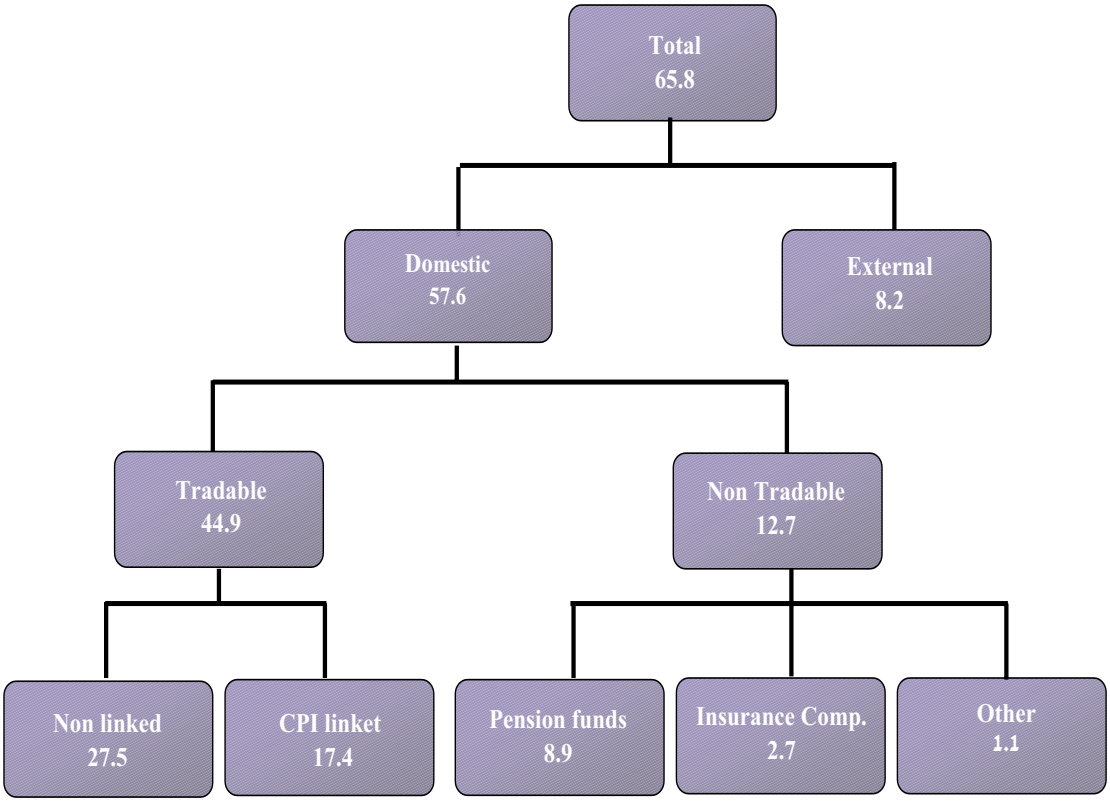
	Budget Law	Actual
Total deficit (excluding credit)	14.7	18.7
Domestic deficit	13.0	17.4
External deficit	1.7	1.3
Revenues	191.3	183.9
of which:		
Domestic	177.5	166.7
External	13.8	17.2
Expenditure and provision of credit	205.1	200.8
of which:		
Domestic	189.7	182.4
External	15.4	18.4
Total finance	13.9	16.9
Loans from abroad (net)	-1.0	-2.0
Loans received	9.3	8.2
Repayment of principal	10.3	10.2
Domestic loans from the public (net)	13.4	24.4
Loans received	47.6	57.6
Repayment of principal	34.2	33.2
Capital revenues (privatization)	1.5	0.4
Growth in reserves	0.0	-5.9

Source: Accountant General, Ministry of Finance

3. Government funding in 2002

The Government funding is done through funding in Israel and abroad. In 2002 the government raised a total of 65.8 billion shekels, of which 57.6 billion shekels were raised in Israel and 8.2 billion shekels were raised abroad. The breakdown of the Government funding (adjusted to the end of year prices) is shown in Figure C-10.

Figure C-10: Composition of funding sectors in 2002 (in NIS billions)



Source: Government Debt Management Unit, Ministry of Finance

D. Government domestic funding in 2002

- **Tradable funding**

As a result of the financing needs, there was a considerable growth in the extent of raising tradable capital on the domestic market in 2002, totaling NIS 44.9 billion, of which NIS 16.7 billion were in non linked Shahar bonds (at fixed interest), NIS 10.8 billion were in FRNs (New Gillon bonds), and NIS 17.4 billion were in CPI linked Galil bonds.

Table C-11: Funding and maturities in the tradable bonds market in 2002

	Funding		Maturities	
	NIS millions	% of total	NIS millions	% of total
Shahar	16,743	37.3	5,550	25.5
New Gillon[1]	10,753	23.9	950	4.4
Total non linked	**27,496**	**61.2**	**6,500**	**29.9**
Galil	17,434	38.8	3,970	18.3
Sagi	0	0.0	3,235	14.9
Kfir	0	0.0	6,426	29.6
Total CPI linked	**17,434**	**38.8**	**13,631**	**62.8**
Gilboa	0	0.0	1,592	7.3
Total foreign currency linked	**0**	**0.0**	**1,592**	**7.3**
Total	**44,930**	**100.0**	**21,723**	**100.0**

(1) The maturities refer to Gillon bonds.

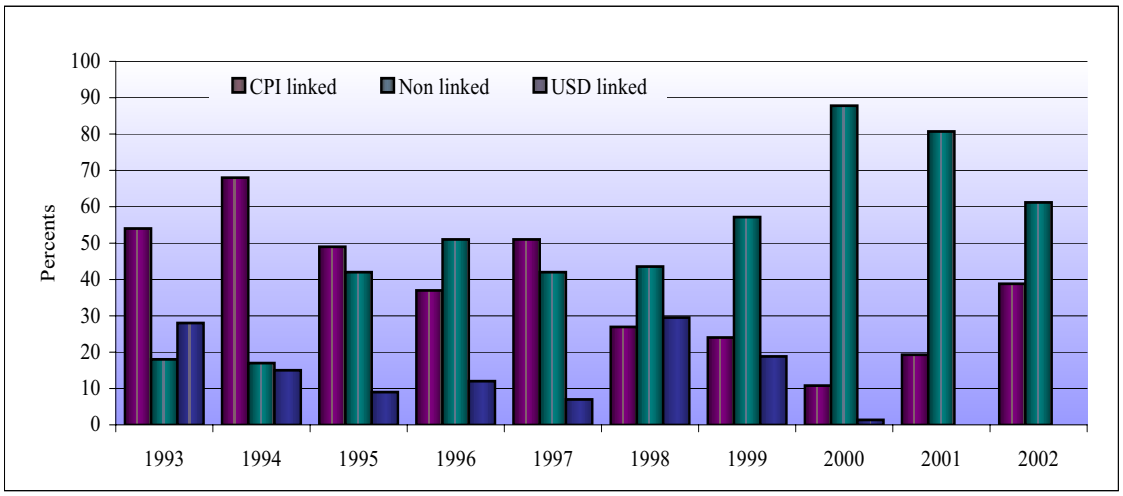
Source: Bank of Israel

The steep rise in yields of Government bonds in 2002, mainly in non linked bonds, led to a large rise in the cost of Government funding. As a result, the Debt Management Unit temporarily deviated from its long term funding policy in the following two central areas:

Increasing funding in CPI linked sectors – one of the central targets of the Government Debt Management Unit is to increase the share of non linked bonds in funding and in all Government debt (see details in Part B). Although in 2002 yields rose in all sectors , the rise in the non linked sectors was particularly high. Therefore, the Debt Management Unit reduced its funding in these sectors – the share of capital raised through non linked bonds (Shahar and Gillon) fell from 78.6% in 2001 to 61.2% in 2002, while the share of debt raised through CPI linked bonds (Galil) grew from 21.4% in 2001 to 38.8% in 2002.

However, if we examine the development of the breakdown in funding by sectors over the last ten years, we will see that the share of non linked capital raised in 2002 is similar to (or even higher than) the share of non linked capital raised in the 1990s (see Figure C-11), It must be remembered that the years 2000-2001 were unique, characterized by a sharp fall in yields and in the cost of funding in the non linked sectors.

Figure C-11: Composition of tradable funding by sectors in 1993-2002 (in %)



Source: Government Debt Management Unit, Ministry of Finance

Shortening the original term to maturity – In response to the rise in yields, and in order to reduce costs, in the last three quarters of 2002 the Ministry of Finance increased the share of medium and short term bonds at the expense of the long term bonds. The use of bonds of 4-5 years to maturity rose from 20.9% in 2001 to 42.0% in the last three quarters of 2002, while the use of long term bonds (13-20 years to maturity) fell from 14.4% in 2001 to only 4.6% in the last three quarters of 2002. Based on the expectation that the economic situation will improve and the high level of bond yields will fall in the medium term, the Debt Management Unit shortened the term to maturity of the bonds issued with fixed interest. However, long term funding has not stopped entirely, in order to preserve tradability for these bonds and to retain the capability of long term funding. On this matter, it is worth noting the increase in 2002 in the relative share of funding by Galil bonds, whose original term to maturity is 20 years (the longest term bond issued by the Government of Israel in the domestic market).

Table C-12: Terms to maturity of tradable Government bonds in the domestic market 2001-2002

Bond	Years to maturity	2001	Q1/2002 (in %)	Q2-4/2002 (in %)
Shahar	5-4	20.9	21.7	25.2
	7	14.9	4.2	9.7
	10	11.6	13.6	3.3
	Total	47.5	39.5	38.2
Gillon	10.0	31.1	32.9	15.2
	Total	31.1	32.9	15.2
Galil	5	0.0	0.0	16.8
	10	7.0	17.6	25.2
	13-14	11.5	0.0	0.0
	19-20	2.9	10.0	4.6
	Total	21.4	27.5	46.6

Source: Government Debt Management Unit, Ministry of Finance

- **Non tradable funding**

In 2002 non tradable funding was based mainly on issues of CPI linked designated bonds of Miron and Arad types for pension funds, and on issues of CPI linked bonds of the Hetz type to insurance companies. The remaining non tradable capital was raised by means of deposits with the Accountant General's Division in the Ministry of Finance. In 2002 about NIS 12.7 billion of non tradable capital was raised (22.0% of all domestic capital), of which NIS 11.5 billion was issued to the pension funds and the insurance companies (Table C-13 below). In addition to the rise in yields of tradable bonds in the past year, credit shortage in the banking system presented an opportunity for institutional investors to participate in a number of financing transactions. This served as an alternative to the investment in designated bonds. As a result, institutional investors reduced their purchases of designated bonds.

Table C-13: Funding and maturities of non tradable debt in 2002

Sector	Principal raising		Principal repayments	
	In NIS millions	In % of total	In NIS millions	In % of total
Miron	6,678.8	52.5	9,248.0	50.1
Arad	2,196.2	17.3	385.2	2.1
Hetz	2,666.8	20.9	4,092.6	22.2
Other issues	1,128.0	9.3	4,734.0	25.6
Total	**12,722.8**	**100.0**	**18,459.8**	**100.0**

Source: Bank of Israel and data processed by the Government Debt Management Unit

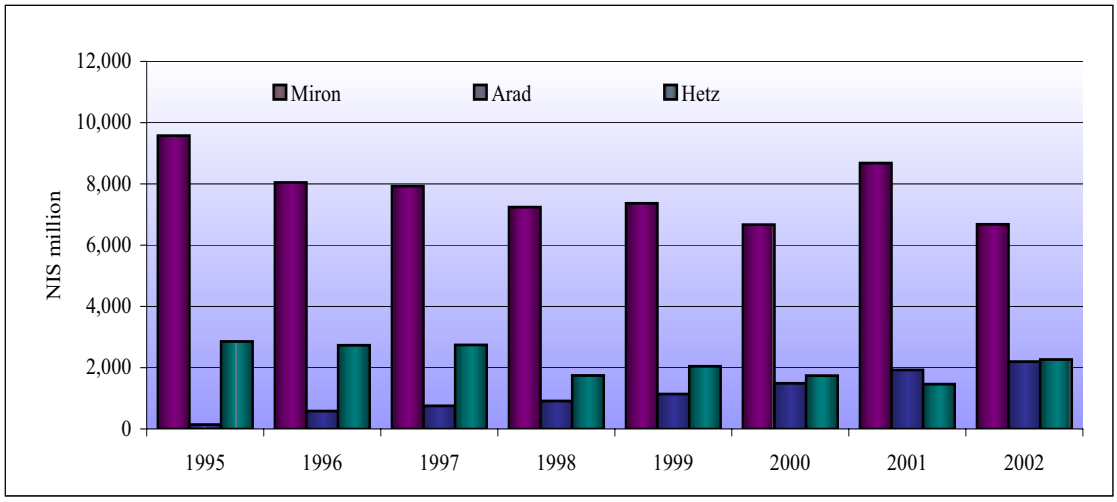
Non tradable funding is not initiated by the State but rather by the insurance companies and pension funds, as a percentage of their accumulated funds. Since the Government has no direct control over the latter, it has no control over the extent of non tradable funding. Raising of non tradable capital which derives from deposits with the Accountant General's Division is also characterized by the fact that the Government cannot control its extent, yet it is a relatively small, and decreasing, sector.

In 2002 funding from the old pension funds totaled NIS 6.7 billion, compared to NIS 8.7 billion in 2001. The main reason for the decline is the fact that the managers of the old pension funds had the right to determine the proportion of the funds' investment in non tradable Government bonds within the range of 93% to 100% of their total investment portfolio.[9] The non tradable bonds issued to the old pension funds were Miron bonds, bearing effective linked interest of 5.57%. In 2002 there were many months in which the yields of CPI linked tradable Government Galil bonds were higher than the yields of Miron bonds. Therefore the managers of the pension funds increased their investment in tradable bonds at the expense of non tradable bonds.

The total capital raised from the new pension funds in 2002 totaled NIS 2.2 billion, compared to NIS 1.9 billion in 2001. For the new pension funds Arad bonds were issued, bearing effective interest of 5.05%. The increase in capital raised from the new pension funds was largely funded by the deposits of new members, and a small amount by interest received on outstanding bonds.

[9] In May 2003 new investment regulations were approved by the Knesset and these regulations are no longer valid.

Figure C-12: Composition of non tradable funding in 1995-2002



Source: Bank of Israel

Non tradable capital raised from insurance companies that purchased bonds of the Hetz type, totaled NIS 2.7 billion. Hetz bonds are issued with interest ranging from 4.0% to 6.2%. The gross capital raised includes mainly the roleover of principal and interest, since no new investors are allowed into these insurance schemes.

Early redemption

Since the end of 1997 the Ministry of Finance has permitted early redemption of Hetz bonds. Redemption allows insurance companies to obtain higher yields by means of investment through bank deposits and the capital market. Early maturities of Hetz bonds in 2002 totaled about NIS 170 million.

The Ministry of Finance intends to continue with the early redemption of non tradable bonds in order to increase the share of tradable debt in the overall Government debt.

A small number of bodies are allowed to manage deposits within the Accountant General's Division by virtue of past agreements. In 2002 about NIS 1.128 million were raised in this sector.

- **Reverse auctions**

As part of the efforts to strengthen liquidity and tradability, from time to time the Debt Management Unit holds reverse auctions of CPI linked Galil bonds, which have low tradability.

The reverse auction is a multi price auction with no maximum price. Before the auction, the Ministry of Finance publishes the numbers of the series participating in the auction and the amounts to be purchased. The Ministry of Finance decides, based on the proposals submitted, the quantities that it will purchase of each series. The Ministry of Finance reserves the right to decide on the quantity of each series to be purchased, irrespective of the quantity offered in the preliminary publication.

In 2002 the Debt Management unit held three purchase auctions and one swap auction for the purchase of index linked Galil bonds totaling some NIS 145 million.

E. External funding in 2002

Public offering

On February 7th, 2002 a seven year bond with a face value of 400 million euros was issued through the EMTN program.

In August 2001, the Accountant General's Division selected UBS Warburg and Merrill Lynch investment houses as Lead Managers out of 12 investment houses that submitted applications. ABN AMRO, Bank of America BNP Paribas, Deutsch Bank, Lehman Brothers and Salomon Smith Barney were selected as secondary managers.

This was the second public offering of the Government of Israel in euros, and the seventh non guaranteed offering of the Government of Israel on the global markets.

The bond was sold at a price of 99.4% with a coupon of 5.875%, representing a yield to maturity of 5.979% and a spread of 100 basis points above the Euro Mid Swap rate.

The decision to issue the bond was preceded by a non deal road show to potential investors organized by the lead managers in a number of European countries. A few days later, in consultation with the underwriters, the decision was taken to issue the bond. The issue process was short and took only one and a half days from the announcement of the deal to its closure.

A public offering is considered to be successful depending on the following parameters: the issue price in terms of spread, the geographical distribution of investors, the composition of investors and the rate of participation by new investors. The price in terms of spread matched the Ministry of Finance's assessment before the issue and the spread limits according to which the underwriters were instructed. The spread is considered relatively low taking into account the uncertainty in the markets and the economic and geopolitical conditions in Israel at that time.

The composition of the investors was varied: 37% of the investors were from Britain, 19% from France, 14% from Germany, 17% from Switzerland, 5% from the US, 5% from the Benelux countries, 2% from Spain and 1% from Italy. The relatively high proportion of non US investors, indicates that the Israeli credit has managed to establish itself in Europe as well, thereby achieving the desired 'strategic' objective.

Another indication of the success of the issue can be found in the type of investors– 47% of the issue was purchased by portfolio managers, 23% by individuals, 20% by banks and 10% by insurance companies.

In terms of timing, the placement occurred during a short "window of opportunity" available to the Government. After the events of September 11th, the primary issues market was dormant for several months, and only returned to active life at the beginning of 2002, before the security and economic unrest in Israel started in March 2002. These circumstances made public offerings abroad very difficult.

Private placements

Private placements are a sector of funding which depends mainly on the investor's needs and how far they match the financing needs of the Government of Israel at a given time. In many cases the initiative comes from the investors ("reverse inquiry"). The placements are not usually large, no more than 200 million dollars, and their frequency is low.

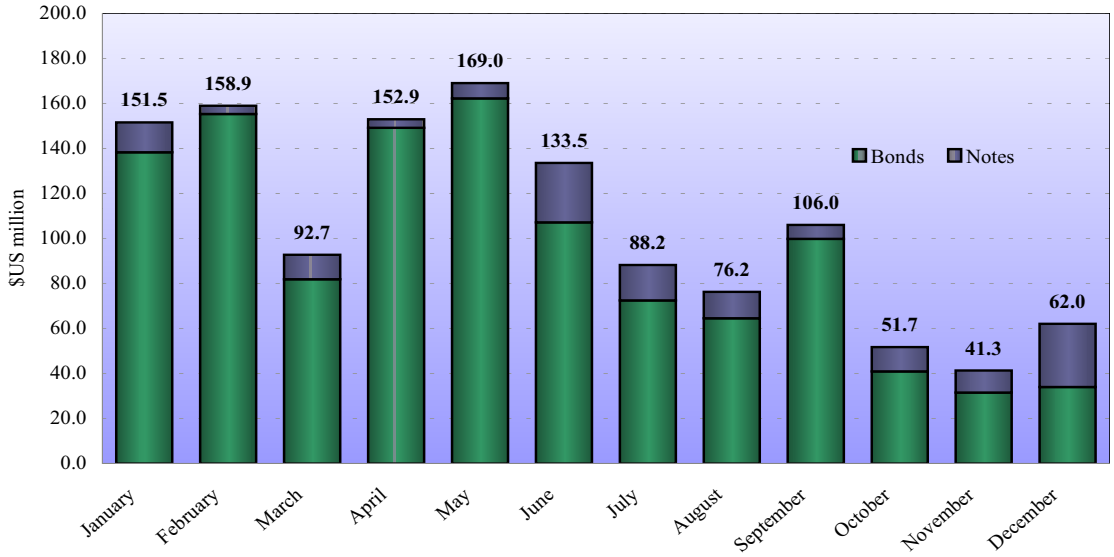
In the second half of 2002 a private investor contacted the Bonds organization in Canada, seeking to invest in Israel Government bonds. After negotiations, agreement was reached on an investment of 75 million dollars for a period of 10 years in a zero coupon bond. The total effective yield to maturity for the investor was 6.45%. The placement was made using a shelf prospectus of the Government of Israel in the US, and was an example of the flexibility that such prospectuses allow in the US, Europe and Japan, and their importance for executing complex placements in a short time.

Summary of funding by the Bonds organization in 2002

In 2002 the Bonds organization recorded a growth of 17% in the size of its annual sales, which reached 1,284 million dollars, compared to 1,094 million dollars in 2001. This amount is 3% greater than the target set by the Accountant General at the beginning of the year (which was 1,250 million dollars).

The average amount of capital raised each month in 2002 was 107 million dollars. However, since the monthly average of sales by the organization in January - June stood at 140 million dollars, the average funding pace was slowed down in July – December to 70 million dollars a month.

Figure C-13: Monthly sales of the Bonds organization in 2002

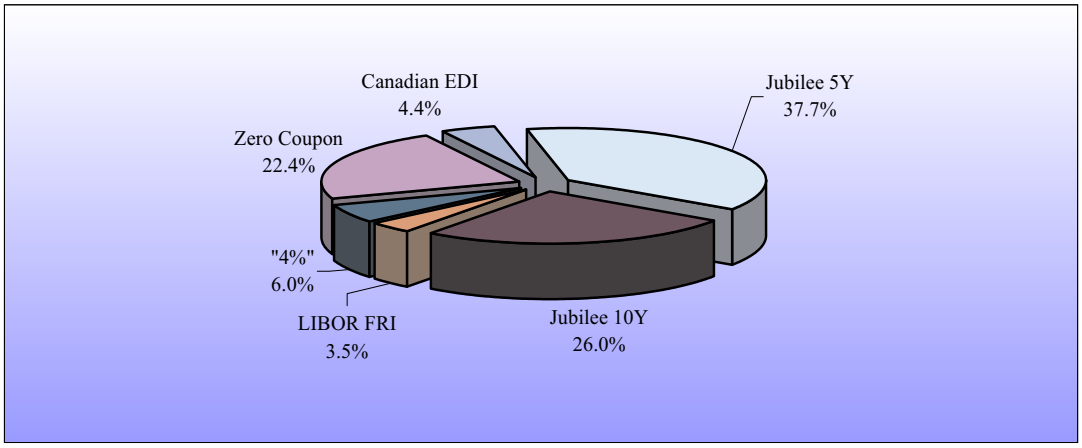


Source: Government Debt Management Unit, Ministry of Finance

About 85% of the capital raised by the organization in 2002 was at fixed interest, compared to 62% in 2001. This high share was due to the steep and lengthy declines in LIBOR and in the yields of Treasury Bills in 2002. At the same time, the sales of floating interest instruments declined – sales of FRI and LIBOR FRI bonds fell by 20% and 70% respectively, in the wake of the large gap between the short term LIBOR and the long term fixed interest rates (i.e. a steep yield curve) .

In 2002 the trend of shortening the debt's term to maturity that characterized recent years was reversed, and the average term to maturity of securities issued by the Bonds organization rose to 7.6 years (excluding early redemption), compared to 7.3 years in 2001. This rise fits with the Ministry of Finance's policy to extend maturity of the debt as much as possible.

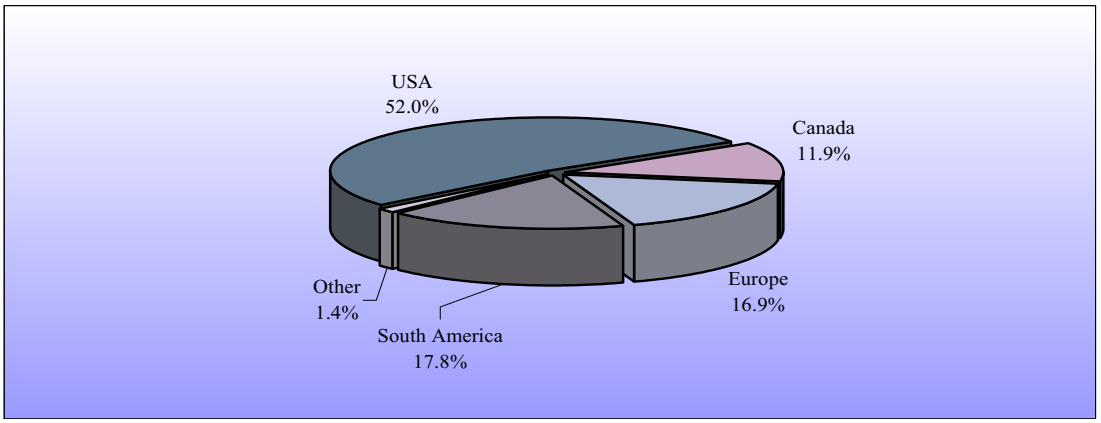
Figure C-14: Composition of sales of the Bonds organization by instrument in 2002



Source: Government Debt Management Unit, Ministry of Finance

Traditionally the US is the main source for funding by the Bonds organization. In 2002 sales in the US totaled 668 million dollars (compared to 519 million dollars in 2001), representing 53% of the organization's total sales. As a result of the deepening financial crisis in Argentina and its spread to other countries in South America, the bonds offered by the Bonds organization enjoyed great popularity among investors from Latin America, and sales in the months February – July were higher than normal. From August onwards, the markets of Latin America stabilized, and the trend in sales gradually returned to its initial level – 24 million dollars per month. The total capital raised in Latin America in 2002 stood at 229 million dollars (compared to 179 million dollars in 2001), representing 17.8% of all capital raised by the Bonds. Funding in Canada also increased to 153 million dollars (compared to 138 million dollars in 2001) reaching 11.9% of all capital raised by the Bonds. Finally, Funding by the Bonds in Europe decreased in 2002, reaching 217 million dollars (compared to 253 million dollars in 2001), representing 16.9% of all capital raised.

Figure C-15: Geographical breakdown of sales of the Bonds organization in 2002



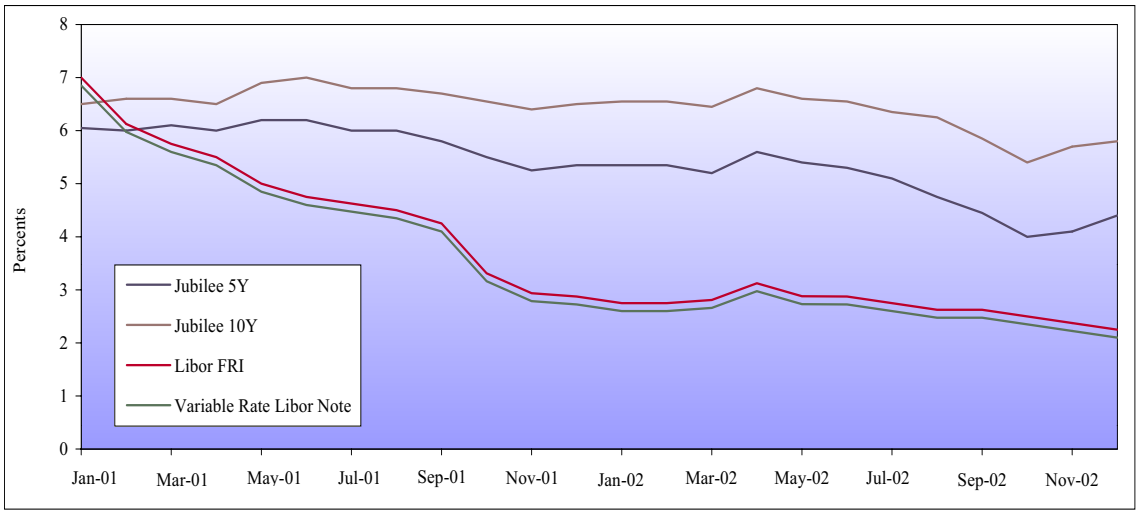
Source: Government Debt Management Unit, Ministry of Finance

The average return to the investor through the Bonds organization continued to decline in 2002, reaching the level of 5.6%, compared to 5.8% in 2001 and 7.2% in 2000. However, because of the steep fall of 40 basis points in the average yield of US Government seven year bonds (from 4.9% in 2001 to 4.5% in 2002), a rise of 26 basis points was recorded in the average spread for the investor – from 89 basis points in 2001 to 113 basis points in 2002.

The total cost of raising foreign currency through the Bonds organization for the issuer (the State of Israel), which includes the administrative costs and other costs involved in issuing the bonds, fell to 6.2% in 2002, compared to 6.5% in 2001 and 8.1% in 2000. On the other hand, the cost to the issuer in terms of the spread above the yield of US Government seven year bonds rose slightly – from 164 basis points in 2001 to 168 basis points in 2002.

The operational costs of the organization decreased by 20 basis points in 2002 – from 75 base points in 2001 to 55 base points in 2002. This is the continuation of the decrease of 11 base points that was recorded in 2001. The sharp fall in the cost of the organization is explained by the rise in the extent of capital raised (since most of the costs are fixed) and by the reduction in the costs of the fiscal agent following the switch to working with the Bank of New York.

Figure C-16: Development of the Bonds organization's coupon rates in 2001-2002



Source: Government Debt Management Unit, Ministry of Finance

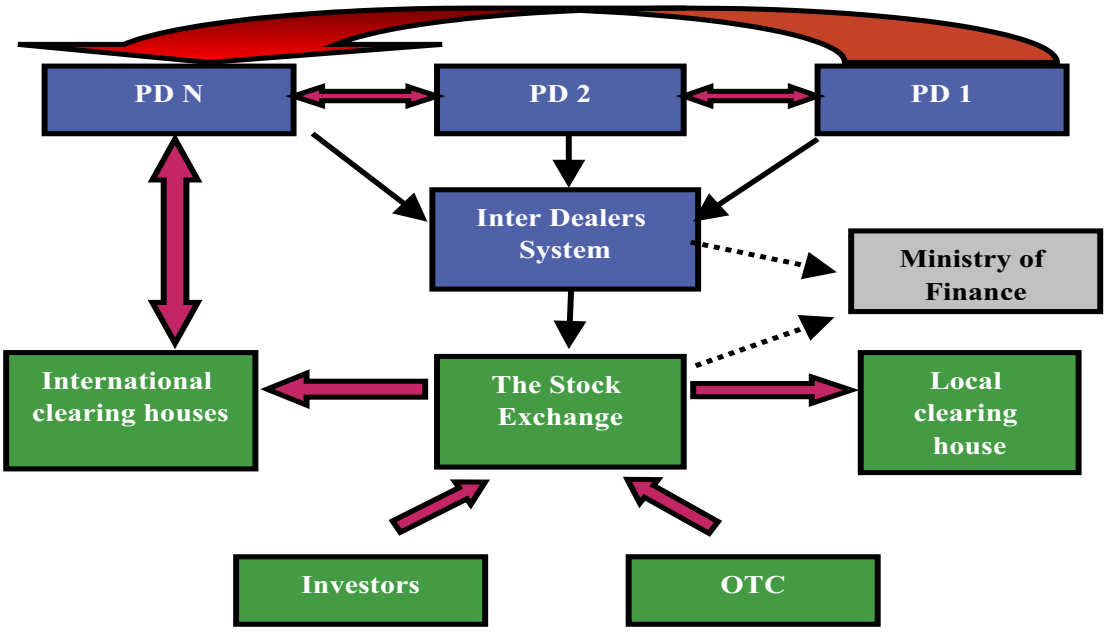
1. The Primary Dealers system

Primary dealers are financial institutions that have an agreement with the Ministry of Finance, under the terms of which they undertake to operate in the domestic primary and secondary markets.

The Ministry of Finance has been promoting market making in the Government bonds market for several years. In 2001 an inter-agency committee, consisting of representatives of the Ministry of Finance, the Bank of Israel, the Securities Authority and the Sock Exchange in Tel Aviv was set up to examine this issue. The committee submitted its recommendations on this subject at the end of 2002.

According to the model adopted by the Ministry of Finance, the primary dealers will commit themselves to a minimum volume of purchases in Government bond auctions. In addition, they will undertake to provide bid and ask quotes for large series of Government bonds in a new trading system to be set up (Inter-Dealer System – IDS), for a certain number of hours per day and at spreads to be determined in advance. In return, the primary dealers will enjoy exclusive access to auctions for Government bonds, excess allocation at the average price of the auction, exclusive access to the new Repo facility and exclusive access to the new trading system (IDS). The prices that will be agreed on the IDS will be available to all market participants and will therefore be an important benchmark for efficient pricing of the bond market as a whole.

Figure D-1: Structure of the new Government bond market



Bringing Primary Dealers into the domestic market for Government bonds is likely to change its appearance and lead, among other things, to increased liquidity and transparency, to the adoption of international norms and standards, to encourage the entry of international investors into the market, to upgrade the trading and clearing systems, and to promote the corporate bonds market, and the development of derivative instruments such as swaps, repos, short sales, strips, and so forth.

2. Israel's credit rating

The long term foreign currency credit rating of the Government of Israel did not change during 2002 and remained at A- according to S&P and Fitch, and A2 according to Moody's.

In 2002 there was concern in the financial markets that Israel's credit rating would be downgraded due to the difficult economic and security situation, but in spite of these fears, the long term external credit rating remained as it was at the beginning of the year. The credit rating agencies Fitch and S&P lowered the credit rating of the domestic debt to A- and A+ respectively, and Moody's left it at A2. In April 2002, S&P changed its rating forecast to 'Negative', Fitch changed its forecast from 'Stable' to 'Negative' back in May 2001, while Moody's left the rating forecast unchanged at 'Stable'.

For investors (particularly institutional investors), credit rating is a tool that helps them to assess the risk inherent in their investment. Most investors cannot follow the behavior of the entity to which they have given a loan, but they expect a yield that will reflect the level of risk in the placement of their money. Most institutional investors invest their funds for relatively long terms, and credit rating (in addition to other factors) provides them with an indication of the risk of the investment.

When they set out to determine the credit rating of a country, the rating agencies examine several parameters in a number of categories: political risk, fiscal stability, fiscal flexibility, monetary stability and external stability. For each parameter they compare the country in question with countries having a similar rating – the peer group. Israel's peer group includes mainly medium sized economies, mostly countries of the European periphery – Poland, Hungary, Greece, Cyprus, the Czech Republic, Estonia, Latvia, Iceland and so on, as well as Chile, Hong Kong, South Africa, Korea and Malaysia.

Israel's rating is unique, because of contradictory economic features. On one hand, Israel has a developed and diversified economy based on a developed business sector and hi-tech industry. This characteristic is reflected by Israel's high GDP per capita, which is more typical of countries rated AA, such as Spain and Portugal, than of countries in Israel's peer group, some of which have a GDP per capita of about one third or less that of Israel. On the other hand, Israel has experienced economic slowdown in the last two years and its GDP per capita has shrunk and might further shrink in 2003. At the same time, the rating of Central European countries has increased a great deal and the yields of their bonds have fallen sharply in recent years, following their anticipated joining of the European Monetary Union.

The State of Israel enjoys a developed domestic bond market, that has proved in recent years to be far deeper, more tradable and liquid than was previously thought. The Government of Israel is able to finance most of its deficit in the domestic market without the need to rely on foreign sources. This characteristic too is more typical of countries rated AA than countries in Israel's peer group, most of which are obliged through lack of choice to find overseas sources of finance, and therefore their dependence on foreign investors is greater than that of Israel. By contrast, the level of Government debt in Israel is one of the highest of all countries rated at investment grade, and its budget deficit is high. These two factors limit the Government's scope of action and make fiscal flexibility more difficult.

Monetary stability was also questioned this year as far as the credit rating agencies were concerned, but in the medium and long term there is no doubt that the State of Israel, which has already achieved price stability in recent years, will return to it.

When the rating agencies examine Israel's external stability they see a continuing process of reduction in the net external debt of the Government and of the economy as a whole, of removing most of the barriers in the foreign currency market in recent years, and of diversifying the Government's sources for funding, led by the Bonds organization and the US Government guarantee programs, which to a certain extent balance the high ratio of the Government's debt to GDP.

The crisis in Asia led the rating agencies to move from pure macroeconomic analysis to analysis that also measures the level of liquidity ratios in the economy, and examines which situations could create a risk for debt rollover, and from analysis of the economic balance sheet only to a financial analysis, and above all, to international considerations of liquidity.

For many years the State of Israel has maintained conservative management of State liabilities and enjoyed a growing accumulation of reserves, as well as varied sources of foreign currency, that led to a very convenient structure of maturities, to lower than usual funding costs and to a diversified investor base.

In addition , it is obvious that the complex geopolitical risk has a negative effect on the economy of the State of Israel and its rating.

Weighting all the parameters and taking the long term view have led the credit rating agencies to grant Israel the high rating it enjoys. Often in public debate, speakers focus on a specific or one-off piece of information, which they allege points to a possibility that the rating will fall. However, the rating agencies examine a country's credit risk taking a broad view and focusing on long term processes. Ongoing phenomena such as the inability to pass a budget for several years running, failure to take the route of a decreasing deficit and rising debt/GDP ratio – these are likely to indicate a long term structural problem. On the other hand, a one time rise in prices or devaluation is not such an event. Over the past two years the Israeli economy has coped with several challenges – the Intifada, the global economic recession and the crisis in the global high tech industry. Each of these in itself is a challenge for any developed economy, and all three

together constitute a stringent test for the strength of the Israeli economy. The question that the rating agencies ask themselves today is whether these factors are cyclical or permanent, and what are the long term implications of each of these factors for the Israeli economy, and above all, for the ability of the State of Israel to repay its debt.

3. The tax reform

In June 2002 a committee established to examine the Israeli tax system (the Rabinowitz Committee) submitted its recommendations for reform of the tax system in Israel to the Minister of Finance. The Government and the Knesset approved the recommendations and they came into force on January 1st, 2003. A central factor in the reform involves taxing gains derived from the capital market, including gains derived from holdings of Government bonds (a summary of the tax rates applying to Government bonds issued after May 8th, 2000 given in Annex D).

The following are the tax rates according to the type of investor:

a. Local individuals not in the business sector

1. Non linked bonds (Gillon, New Gillon and Shahar):

Series originally issued before May 8th, 2000 benefit from full exemption from tax on the interest and on capital gains.

Series originally issued after May 8th, 2000 are taxable at the rate of 10% on the interest only until the end of 2003. Starting on January 1st, 2004 the bonds will be taxable at the nominal rate of 10% both on the interest and on nominal capital gains.

2. CPI linked bonds (Galil, Kfir and New Kfir):

Series originally issued before May 8th, 2000 are taxable at the rate of 35% on the interest and exempt from tax on capital gains.

Series originally issued after May 8th, 2000 are taxable at the rate of 15% on the (real) interest only until the end of 2003. Starting on January 1st, 2004, these bonds will be taxable at the rate of 15% both on the real interest and on capital gains (excluding the indexation component).

3. USD linked bonds (Gilboa):[10]

Are taxable at the rate of 35% on the interest and exempt from tax on capital gains.

4. Government of Israel bonds issued abroad:

Series issued before May 8th, 2000 are taxable at 35% on the interest and exempt from tax on capital gains.

[10] All bonds of the Gilboa type were issued before May 8th, 2000, and therefore the old tax regulations apply to them.

Series issued after May 8th, 2000 are taxable at the rate of 15% on the interest only until the end of 2003. Starting on January 1st, 2004, these bonds will be taxable at the rate of 15% on the interest and 25% on the real capital gains[11].

b. Mutual funds

The new tax regulations define three types of mutual funds:

Exempt funds – funds which are not taxable, but unit owners are taxed at 25% on the real capital gain when selling their units.

Taxable funds – funds whose income is taxable is in accordance with the regulations for individuals.

Hybrid funds – funds whose tax obligation is split between the funds and the owners of the units. Investors in these funds will pay a 15% tax on real capital gains when selling their units.

c. Foreign investors

The tax regulations for bonds issued before May 8th, 2000 apply equally to foreigners and local individuals. In the case of bonds issued after May 8th, 2000 foreign investors are exempt from tax on capital gains derived from holdings of government bonds, but they are taxed on interest payments. The Ministry of Finance and the Income Tax Authority are considering exempting foreigners from the withholding tax on interest as well, in order to encourage their participation in the domestic Government bond market. The Participation of foreigners has increased in recent years but it is still at a very low rate at present (see Figure C-3). It should be noted that currently foreign investors are fully exempt or enjoy reduced tax rates due to different conventions for the prevention of double taxation to which Israel is a party.

Foreign investors are exempt from all taxes on holdings of Israel Government bonds that are issued abroad.

d. Pension and insurance plans

Pension plans managed by pension funds or by insurance companies are exempt from tax on capital gains and interest payments derived from holding Government bonds.

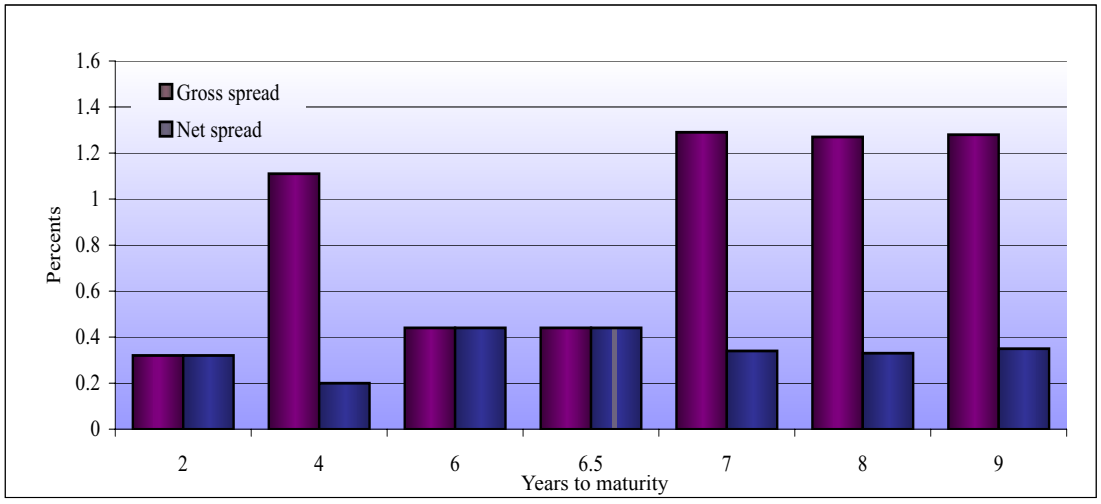
e. Other institutional investors

Other institutional investors will pay tax at the various rates and terms specified in the Income Tax Regulations.

[11] The Ministry of Finance is examining the option of reducing the rate of taxation on the interest receipts to 15%.

Since the tax reform regulations do not apply to bonds that were issued before May 8th, 2000 a lack of consistency (fragmentation) has arisen in the market. In the next few years bonds that are taxable at various rates and tax exempt bonds will be traded simultaneously (the last bond exempt from tax on capital gains is expected to reach maturity on October 30th, 2004). The various rates of taxes are embodied in the price of the bonds and their gross yield. As Figure D-2 shows, this is causing a distortion in the yield curve and in the spreads of the yield curves from the underlying assets. This lack of consistency will also continue because of the varying rates of taxation applying to different investors – 'gross payers', 'net payers' and 'hybrids'.

Figure D-2: Gross and net spreads of non linked Gillon and New Gilon bonds (As of 13.2.2003)



Source: Government Debt Management Unit, Ministry of Finance

At the end of 2002 there was a notable move to untaxed bonds. In the wake of the huge demand for these bonds, a number of mutual funds were even set up specializing in investment in untaxed bonds, and certain shekel based funds moved to investment solely in these instruments. As a result, the prices of untaxed bonds rose more than their relative value in comparison with the taxed bonds (after deduction of the tax element).

4. Procedures for bond auctions in the domestic market

The Government of Israel issues bonds through the Bank of Israel in a "scaled" (multi price) auction.

Preparations for the auction - At the beginning of each month the Ministry of Finance publishes its domestic funding program for that month. Two days before the auction, a circular is sent to all those permitted to submit bids in the auction, and at the same time the circular is published on the Internet site of the Bank of Israel. This circular is also sent to other potential participants who can make purchase offers through the banks or through members of the Tel Aviv Stock Exchange. The

circular specifies which bonds are being issued and the main parameters concerning them, such as the quantity offered, the specified interest rate and the term to maturity. Essential information about all auctions is also distributed through the online communications systems such as Reuters, ABS (Automatic Bank Services) and Kav-Mancheh Information Services. The minimum price for an issue is set on the auction date, and derived from yields in the secondary market, but is not published to the public. Bids priced lower than the minimum price are automatically excluded from the auction.

Execution of the auction – The participants in the auction submit their bids to the Bank of Israel by 12:30 noon on the day of the auction by means of the ABS system. The bid includes the price and quantity at this price. The bids are submitted in NIS 0.10 intervals, and on this basis a demand curve is constructed. The closing price is the price obtained at the point where the whole offered quantity is sold. All participants who bid a higher price than the closing price receive the full quantity they requested, and each bidder pays the price he offered. If the quantity offered at the closing price is lower than the quantity requested at this price, the quantity is divided among the bidders proportionately to the relative quantities they requested ('prorated'). It should be noted that each participant is allowed to submit offers at different prices and there is no limit on the number of offers. In the case of surplus demand at the closing price, there will automatically be an additional sale of bonds at this price, which will be no greater than 20% of the amount declared, providing that the closing price is no more than NIS 0.2 less than the average price of the auction (before the sale of the additional quantity).

The Ministry of Finance reserves the right to change these parameters (20% and NIS 0.2), according to its needs. The effective parameters are published before each auction in the Bank of Israel's issue circulars.

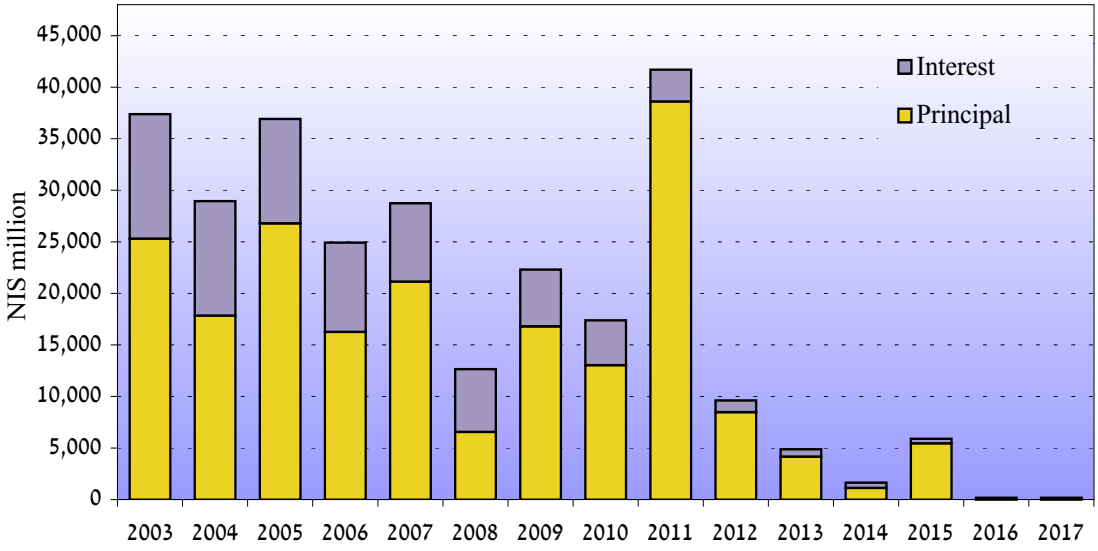
Publication of the auction results – About ten minutes after the auction closes, the results are published through the ABS system. Each participant in the auction receives a notice including the closing price, the average price, and the quantity sold. All participants receive a detailed message regarding the quantities they purchased and the price they paid. About one hour later the general results of the auction are published on the Internet sites of the Bank of Israel and the Ministry of Finance, and in several data distribution systems, such as Reuters and Kav-Mancheh. The following day the results of the auction are published in two daily newspapers.

Participants in the Primary Market – Currently, all members of the Stock Exchange, as well as banks that are not members of the Stock Exchange, are entitled to participate in the Government Bonds auction . In addition to them, Mutual funds, insurance companies, provident funds, pension funds and portfolio managers are also authorized (since 1994) to submit bids for amounts greater than NIS 100,000.

Tradability - the bonds, which are sold in the auctions, are tradable from the following trading day.

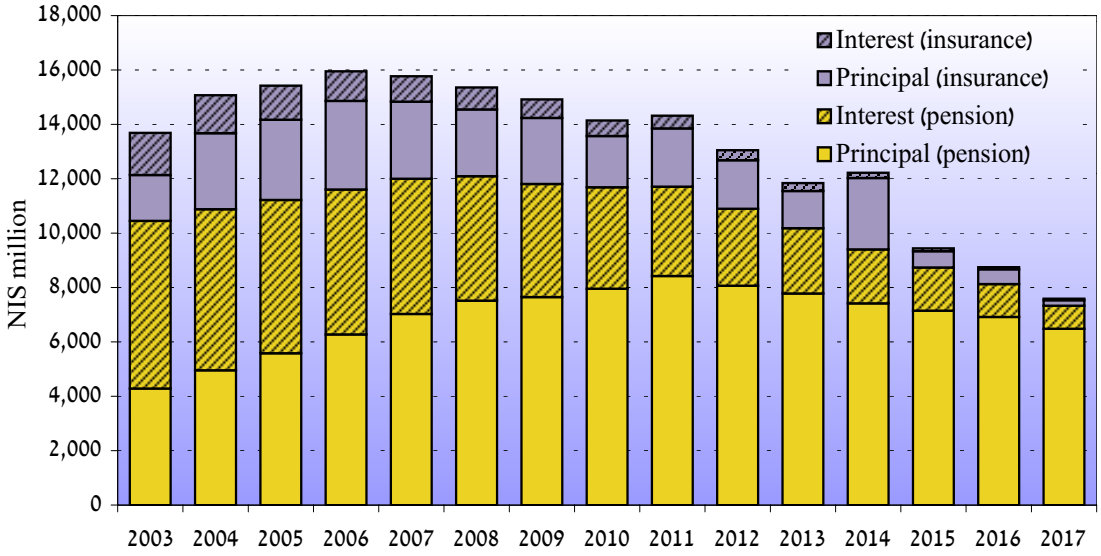
Appendix A:
Domestic Debt Maturity Structures

Figure AP-1: Principal maturities and interest payments of tradable domestic bonds



Source: Government Debt Management Unit, Ministry of Finance

Figure AP -2: Principal maturities and interest payments of non tradable domestic bonds



Source: Government Debt Management Unit, Ministry of Finance

Appendix B:
Characteristics of tradable bonds in the domestic market

Bond	First issue date	Interest	Interest payment	Original term to maturity
CPI linked				
Kfir*	4.9.90	Floating – based on yield of CPI linked bonds of 3-5 years to maturity.	Once every six months	Issued for periods of 7-12 years; possible term to maturity 4-25 years.
New Kfir*	15.2.98	Floating – based on yield of fixed interest CPI linked bonds of 2-5 years to maturity.	Once every three months	Issued for periods of 6 years; possible term to maturity 1-25 years.
Galil	31.12.84	Fixed – based on yields of fixed interest CPI linked bonds.	Once a year.	Issued for periods of 5-20 years; possible term to maturity 2-30 years.
USD linked				
Gilboa*	24.10.88	Floating – based on six month LIBOR.	Once every six months	Issued for periods of 4-5 and 10 years; possible term to maturity 2-25 years.
Non linked				
Gillon*	2.7.92	Floating – based on the average T-bills (MAKAM) yields for periods of 3-12 months.	Once every six months	Issued for periods of 2-7 years; possible term to maturity 1-10 years.
New Gillon	28.4.99	Floating - based on the average T-bills (MAKAM) for periods of 3-12 months.	Once every three months	Issued for periods of 4 and 10 years; possible term to maturity 1-25 years.
Shahar	24.8.95	Fixed – as determined by the Ministry of Finance.	Once a year	Issued for periods of 1-10 years; possible term to maturity 1-20 years.

* Bond no longer issued.

Appendix C:

Characteristics of bonds issued by the Bonds organization (abroad)

Type of bond	Interest formula	Interest payment	Maturity (years)	Minimum Purchase	Other parameters
At fixed interest					
Jubilee 5 years	TB5y + spread	Half yearly	5	$25,000 (and multiples of $5,000)	
Jubilee 10 years	TB10y + spread	Half yearly	10	$25,000 (and multiples of $5,000)	
Development	4%	Annually	15	$500 (and multiples of $500)	Option for early redemption in Israel up to $2,500 per month.
ZERO: Development saving	4%	End of period	15	$500 (and multiples of $500)	
ZERO: Development international	4%	End of period	15	$500 (and multiples of $500)	Issued to investors outside the USA
Chai	4.5%	End of period	5	$144 (and multiples of $180)	Not tradable, no early redemption option.
Zero Coupon	Strip 10y+spread	End of period	10	$3,382	No early redemption option.
Canadian Zero Coupon	Strip 10y+spread	End of period	10	Can$3,305	No early redemption option.
Canadian Zero Coupon	Strip 5y+spread	End of period	5	Can$136 (and multiples of Can$180)	No early redemption option.
Canadian EDI	Canadian TB5y + spread	Half yearly	5	Can$25,000 (and multiples of Can$5,000)	No early redemption option.
At floating interest					
Floating bond	LIBOR + 75	Half yearly	10	$5,000 (and multiples of $2,500)	Not authorized for sale to banks, can be mortgaged, early redemption option.
3rd Floating rate LIBOR Notes	LIBOR + 60bp	Half yearly	5	$100,000 (and multiples of $25,000)	Not authorized for sale to banks.
LIBOR Notes	LIBOR + 40bp	Half yearly	7	$150,000 (and multiples of $50,000)	Early redemption option
Canadian FRI	Cad prime-0.75%	Half yearly	12	Canadian $5,000	

Appendix D:

Breakdown of tradable funding by type of indexation in 2002

	Non linked, fixed interest (Shahar)	Non linked, floating interest (New Gillon)	CPI linked, fixed interest (Galil)	Total in millions
	Percents			Shekels
January	34.0	36.0	30.0	5,150
February	31.0	34.0	35.0	4,217
March	40.0	34.0	26.0	4,036
April	45.0	35.0	20.0	3,851
May	32.0	28.0	40.0	2,358
June	37.0	20.0	43.0	2,805
July	37.0	18.0	45.0	2,909
August	42.0	24.0	34.0	3,379
September	55.0	15.0	30.0	2,813
October	34.3	14.3	51.4	3,335
November	30.0	16.7	53.3	4,280
December	31.7	16.7	51.6	5,750
Total	37.3	23.9	38.8	44,883

Source: Government Debt Management Unit, Ministry of Finance.

Appendix E:

Rates of tax applying to Government bonds issued after 8/5/2000

		Local Individuals	Foreign Individuals	Mutual funds			Institutions
				Exempt	Taxable	Mixed	
Domestic							
Non linked bonds	Capital gains	10% from 1.1.2004	0%	0%	10% from 1.1.2004	Investors in these funds will pay tax of 15% on real capital gains when the fund is realized	0%
	Interest	10%	10%	0%	10%		0%
CPI linked bonds	Real capital gains	15% from 1.1.2004	0%	0%	15% from 1.1.2004		0%
	Interest	15%	15%	0%	15%		0%
Forex Linked bonds	Real capital gains	15% from 1.1.2004	0%	0%	15% from 1.1.2004		0%
	Interest	15%	15%*	0%	15%		0%
External							
Israeli Gov bonds issued abroad	Capital gains	25% from 1.1.2004***	0%	0%	25% from 1.1.2004***	Investors in these funds will pay tax of 15% on real** capital gains when the fund is realized	0%
	Interest	15%	15%	0%	15%		0%

* The Ministry of Finance and the Tax Authority are considering exempting foreigners from the withholding tax on interest payments.

** Currency depreciation/appreciation is not taxable.

*** The Ministry of Finance is examining the possibility of reducing the tax rate to 15%.

Appendix F:

Functionaries in the Government Debt Management Unit

Name	Position	Telephone	Email
Adi Rivlin	Director of Government Debt	972-2-5317463	adir@mof.gov.il
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Adi Shachaf	Director - Risk Management	972-2-5317586	adis@mof.gov.il
Inon Dafni	Domestic Debt Coordinator	972-2-5317044	inon@mof.gov.il
Eyal Klien	Assistant Director - Foreign Currency Transactions	972-2-5317632	kliene@mof.gov.il
Ora Ben Hananya	Assistant Director - Foreign Currency Transactions	972-2-5317536	ora@mof.gov.il
Eti Shriky	Secretary	972-2-5317463	