



# **Section E**

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## **Market-Maker Reform**





## Section E – Market-Maker Reform

Over recent years, the Ministry of Finance has implemented an extensive array of reforms aimed at streamlining public expenditures and increasing competition in the economy. However, the reforms have hitherto applied only to some 80 percent of the state budget. A sizable and significant segment of approximately NIS 35 billion in interest expenses has remained without thorough treatment. Against this background, the importance of implementing the Primary Dealers reform has progressively increased. This reform has been adopted in many countries worldwide, and studies show that it has led to significant reductions in government funding costs; decreases in long-term interest rates; increased competition, transparency, and financial stability; and active participation of foreign investors in domestic markets.

In January 2005, the Knesset plenum unanimously passed Amendment 14 to the State Loans Law. The amendment, initiated by the Debt Management Unit in the Accountant General Division, constitutes the basis for a comprehensive reform in the bond market, which has been implemented as of 2006. The bond-market reform is the product of extensive work that began in 2001 with the establishment of an inter-agency committee to examine market making in Israel. The committee conducted in-depth discussions of the implementation of market making in government bonds, among other topics. Preparations for application of the reform were completed in the second half of 2005 and the first half of 2006. Bonds were issued through the Bloomberg system for the first time in June of 2006. Ten weeks later, in early September, market makers began quoting bid and ask prices using the MTS system, the government-bond lending facility became operational, and the clearing method was changed. Several years of work by the Unit as well as many participants in Israel and abroad was thereby realized and brought to fruition.

As part of the comprehensive reform in government bonds, five new systems became operational in 2006:

1. An auction system (Bloomberg);
2. A trading system (MTS);
3. A bond management system – receipts, payments, and databases (Merkava);
4. A bond lending (repo) facility;

Further, the clearing method of government bonds was changed.

### The Primary Market

#### The Primary Market Following the Reform

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Prior to the amendment of the law, all decisions concerning funding were made at the Ministry of Finance, while the actual issuance of bonds was performed by the Monetary Department at the Bank of Israel. Pursuant to the amendment, tradable-bond issues as well as nontradable-bond issues to pension funds have been carried out by the Ministry of Finance since June 2006.

During the initial period of the reform's implementation, issues of CPI-linked bonds and some 20 percent of the quantity sold of unlinked fixed-coupon bonds continued in a manner similar to that prior to implementation of the reform. Thus, these auctions were open to Primary Dealers, banks, TASE members, and other entities confirmed by the Accountant General. Approximately 80 percent of unlinked fixed-coupon bonds were sold in separate auctions to Primary Dealers.

### **Box E-1: Primary Dealers**

Primary dealers are large, stable financial institutions that commit to quote bid and ask prices for large series of government bonds, using the international trading system MTS, for several hours daily, at predetermined spreads. This activity has brought about a significant increase in turnovers of government bonds, reduced the liquidity premium for bond holders, attracted investors to the government-bond market, and reduced the government's funding costs. Primary Dealers commit to a minimum volume of activity in government-bond auctions (a volume of bond purchases over the year). In return, they enjoy access to designated bond auctions. Further, Primary Dealers enjoy the option of an additional allocation, at the average price of the auction, on the day following the auction, at a predetermined volume; access to the bond lending facility established by the Ministry of Finance; and exclusive access to the new designated trading system, MTS.

## **New International Auction System**

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With the transfer of issuance to the Government Debt Management Unit in the Accountant General Division, the existing auction system has been replaced by a bond-auction system from the international company Bloomberg. This issuance system is simple to operate, highly reliable, and functions very successfully in several countries, including Belgium, Ireland, and South Africa. The system enables market makers to participate in government auctions from abroad as well, in a simple and transparent manner. At the same time, as the system's terminals were already available prior to the reform at most of the entities that participate or are likely to participate directly in government bond auctions, the transition does not involve an added expense on their part. Furthermore, as Bloomberg is the world's leading analytical system, used by professional traders throughout the world for bond pricing, it is highly important that traders are now able to price all Israeli government bonds using the system.

Towards the end of the month preceding the month of the auction, an announcement is published stating the auction date and the series and quantities offered for sale. On the day of the auction, participants submit the requested quantity of each bond at each price through their terminals. Participants are permitted to change their bids without restriction until the deadline for bid submission. The last bid submitted by each participant by the deadline is binding.

Auctions are conducted using a graded ("discriminatory") auction model: immediately after the deadline for submitting bids, the auction closes to further bids and the system allocates bonds based on the prices offered, from the highest price to the lowest price, until all the bonds on offer are sold. The closing price is the price obtained at the point at which the full offered quantity is sold. All participants who offer a price higher than the closing price receive all the bonds they requested, and each bidder pays the prices bid in the auction. In case of surplus demand at the closing price, a pro-rata allocation of the remaining bonds is carried out, according to the quantity requested by each participant at that price. At the end of the auction, each participant receives details of its winning bids as well as general data about the results of the auction, such as the quantity sold, average price, closing price, etc. A summary of the auction results is also released to the public, on the website of the Debt Management Unit in the Accountant General Division and through the Bloomberg system.

An additional allocation procedure for Primary Dealers is carried out during the 24 hours following the closing of the auction, in which auction winners can purchase up to an

additional 15-18 percent of the amount (in face value) they purchased in the auction, at the auction's average price. This procedure is aimed at providing participants with an incentive to offer more aggressive prices in the ordinary designated auctions, thereby reducing the government's funding costs. The additional allocation is also carried out using the Bloomberg system, via a designated module.

Another improvement offered to auction participants is the possibility of paying for the bonds acquired in the auction through the TASE Clearing House, which collects the funds from the offering and transfers them in aggregate to the Finance Ministry. Virtually all auction participants have elected to take advantage of this option, in order to achieve greater efficiency.

## **Foreigner's Involvement in the Market**

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One of the key objectives of the capital-market reform was to encourage the entry of foreign banks as Primary Dealers, in order to lower the high level of concentration in the economy, increase competition, reduce funding costs, and increase liquidity in the government-bond market. Foreign banks began to operate as Primary Dealers in September 2006, at the launch of the reform and the inception of Primary Dealers' commitment to purchase government bonds. As demonstrated in Section B, the foreign banks' entry had a positive effect on the distribution of concentration in the bond market, and total acquisitions by foreign banks reached 35%. This high figure reflects their extensive involvement in the primary market, compared to the situation prior to the reform, when six local entities purchased more than 85% of issues. This figure also accounts for the downward trend of the Herfindahl index.



## The Secondary Market

### The Secondary Market Following the Reform

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Until the enactment of the reform, trading in government bonds was chiefly carried out on the Tel Aviv Stock Exchange. Investors submitted buy and sell orders through TASE members, and transactions were cleared by the TASE Clearing House.

Following implementation of the reform, bond trading is not only several times broader in volume, but also more diverse in terms of the various trading arenas. In other words, from a situation in which a single trading arena, the TASE, drew close to 100% of trading prior to the reform, within less than a year we have reached a point where a significant amount of trading is conducted through the MTS system or on the OTC market; the concentration of trading has thus decreased considerably.

Upon the launch of the Primary Dealers system, a new trading arena also began operating – the Inter-Dealer System, in which Primary Dealers operate and are obligated to provide quotes on a regular basis. The system selected for trading among Primary Dealers is by EuroMTS, the leading European developer of inter-dealer trading infrastructures for government bonds. This system is in use in most European Union countries, including Italy, Germany, France, Spain, and others. The system also allows two-way trading; i.e., Israeli traders and investors can purchase bonds abroad via the same system. As with the Bloomberg system, the use of a well-known international company whose trading system is installed at many financial institutions worldwide lowers costs, facilitates activity by overseas participants, and allows increased international exposure for Israeli government bonds.

### Trading on the Primary Dealers' MTS System

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Trading on the MTS system commenced in September 2006. Securities traded on the system were Shahar bonds and Government Bonds. Linked Galil bonds were also added to the system at a later date; however, trading in these bonds has been quite sparse so far, likely due to the fact that it is conducted on a voluntary basis, without the quoting commitments that apply to the unlinked bonds. Trading on the MTS system is conducted in parallel to trading on the TASE, on Monday through Thursday only. Nineteen<sup>9</sup> Primary Dealers participate, of which eight are international banks and eleven are Israeli banks and non-bank TASE members. Primary Dealers are obligated to provide quotes on the MTS trading system, within several requirements established by the Ministry of Finance, including the following:

- A. The net number of hours daily for which Primary Dealers must quote;
- B. Limit on order size;
- C. Spread between ask quote and bid quote according to the bond's term to maturity.

These criteria ensure sufficient liquidity in the market, at any given moment, to allow each market maker to buy or sell substantial quantities of bonds. One of the great advantages of the reform is the entry of eight leading, major international entities in the financial field into daily activity in the Israeli market. As shown, trading by these foreign entities accounts for a significant share of trading on MTS.

The reform also led to a change in the pattern of activity of Israeli banks. Whereas until the reform these banks served solely as mediators for the execution of transactions, without holding market positions, after becoming Primary Dealers they have also taken on

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<sup>9</sup> From the beginning of 2008, there are seventeen Primary Dealers.

positions in the market, in addition to their role as mediators; in other words, they take and manage risks, as is the common practice at banks around the world. This development has led to increased tradability and liquidity in the government-bond market.

## **Bond Trading on the TASE**

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Turnovers on the TASE have grown by 100% or more following the implementation of the reform. The TASE remains an important arena for trading between Primary Dealers and investors in general, and the increase in trading activity on the Primary Dealers' system makes it easier for market operators to price bonds, and reduces uncertainty. As noted, this assessment is supported by evidence from other countries – trading volumes have increased considerably in markets in which primary dealers were introduced.

## **Clearing**

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Transactions in government bonds carried out on the TASE or on the new MTS system are cleared by the TASE Clearing House, which serves as a central counterparty; i.e., if one of the parties does not uphold its obligations, the TASE Clearing House completes the transaction instead. In another type of transaction, known as over-the-counter (OTC) transactions, the TASE Clearing House is not a central counterparty, so that the responsibility for executing the transaction rests with the parties to the transaction.

As part of the bond-market reform, the TASE Clearing House has decided, in conjunction with the Finance Ministry, to continue to improve the stability of its clearing houses by adopting the important principle of Delivery Versus Payment (DVP), which refers to the simultaneous transfer of money and securities. Until now, securities were transferred on the day on which the transaction was performed, whereas payment for the security was only transferred or received by the clearing house on the following day. This created a risk for the clearing house that does not occur when the DVP principle is applied. In the first stage, the change applied only to trading in government bonds; in the future, it will be expanded to all other securities as well.

## **Bond lending Facility for Primary Dealers**


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Within the reform, Primary Dealers are obligated to quote bid and ask prices of bonds continuously, over time. This exposes them to risk at times of insufficient liquidity in the market, due to the fact that there is no liquid repo market in Israel where market makers can borrow bonds when necessary<sup>10</sup>.

Because there is no active repo market in Israel as yet, a decision was made to establish a bond lending facility for Primary Dealers, in order to assist them in complying with their quoting commitments. The facility was established jointly by the Ministry of Finance and the TASE Clearing House, which operates it based on rules determined by the Ministry. A Primary Dealer needing a bond can contact the TASE Clearing House and borrow the bond from the bond lending facility, up to a limit, which currently stands at NIS 500 million per Primary Dealer; in exchange, the Primary Dealer transfers cash, for which it receives interest. It is hoped that the existence of the facility for the use of Primary Dealers will serve as an incentive to the development of an active repo market, concurrently with the removal of the economic and legal barriers which have delayed this development in the

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<sup>10</sup> Repo market – a repo transaction is a transaction in which bonds are transferred from party A to party B, while in return, party B gives cash to party A, with a commitment by party B to return the bonds to party A at some later date; the bonds constitute collateral. These transactions may be executed for any period of time, although they generally are short term.



past. The bond lending facility became operational in September 2006, parallel to the start of operation of the MTS system. The facility currently allows Primary Dealers to borrow Shahar, Government, Galil, and Linked Government Bonds. The Primary Dealers are required to return the bonds no later than one year prior to the bonds' maturity date.

Concurrently, the Debt Management Unit in the Accountant General Division, together with the Ministry of Justice, the Bank of Israel, the Capital Market Division, and the Israel Securities Authority, has worked to promote the legislation of the Law of Special Transactions in Securities, dealing with repo transactions, which will allow the development of this essential market in Israel, as well as with the status of other transactions (spot transactions, futures transactions, and derivative transactions) in the inter-bank market, which require the possibility of netting between opposite transactions. Among other matters, the law defines the legal status of the asset, and clarifies the issue of its ownership in the event that one of the parties enters a process of liquidation or bankruptcy during the transaction. A liquid repo market will assist in the development of a non-bank credit market, thereby lowering financing costs for the business sector. This law was passed, and took effect at the beginning of 2006.

## Changes in State Loan Regulations

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As part of the reform in the bond market, the Government Debt Management Unit in the Accountant General Division worked to standardize issued bonds and to simplify the bond structure to the extent possible, as is common practice worldwide. Within this process, State Loan Regulations that refer to series issued in the past were amended, and regulations were instituted for new series to be issued starting in 2006. It should be emphasized that the change in the loan regulations does not impair the terms of the previously existing bonds and causes no damage to the holders of such bonds.

The following are the main changes to the regulations:


1. **Change in the names of bonds** – Bond names (such as Shahar, New Gilon, and Galil) will be replaced with names that indicate the bond's qualities: linkage and coupon type, interest rate, and maturity date, as is common practice elsewhere in the world. For example: "CPI-Linked Government Bond, 4%, May 2036."
2. **Early redemption** – Following the amendment to the law, which provides authorization to offer the public early redemption, the new regulations allow the same. It should be emphasized that this does not refer to unilateral redemption by the government, but to the government's ability to offer an option of early redemption to bond holders, based on debt-management considerations and in order to reduce funding costs.
3. **Cancellation of items related to taxation of bonds** – In the old bonds, the regulations referred to the taxation of interest payments to bond holders. The entire issue of interest taxation is currently regulated under Income Tax regulations; thus there is no need to address the matter in these regulations.
4. **Change in definition of the date of record for entitlement (the ex-date)** – In the past, the date of record for entitlement was defined as between 5 and 30 days before the date of the interest payment or bond redemption. In practice, the period has been shortened to approximately 10 days. Therefore, in the new version, the date of record is defined as the end of the 20th day of the month in which the interest or principal is paid.
5. **Possibility of bond issues between the ex-date and the date of payment** – In the past, according to some regulations, it was not possible to issue new bonds during the period between the ex-date and the date of payment. There is no such restriction under the new regulations.
6. **Definition of the sale of bonds as defined in Amendment No. 14 to the law** – Bonds are sold to Primary Dealers and the general public, or to market makers

only. Sales to the general public are performed through banking corporations, TASE members, and additional entities approved by the Accountant General Division in the Ministry of Finance.

7. **Failure to pay interest and/or principal on time** – The old regulations made no reference to the possibility that for technical reasons, interest and/or principal payments might not be made on time. An item regulating this matter was therefore included in the new regulations.
8. **Possibility of issuance for an original period other than a round number of years** – Dynamic, efficient management of government debt occasionally requires the issuance of series for original periods that are not whole years; however, the old regulations did not allow this. The new regulations are formulated such that it is possible to issue bonds for original periods other than whole years.
9. **Cancellation of loan-certificate issuance** – In light of the amendment to the law, which includes cancellation of the physical issuance of loan certificates (as was the practice in the past), formats of loan certificates (the first addendum to the existing regulations) were removed from the new regulations, as were references thereto.
10. **Change in the underlying asset of floating-rate bonds** – The underlying asset for floating-rate government bonds, based on which the periodic interest rate is determined, has been changed from the existing underlying asset for New Gilon bonds, and will now be the Makam series with the term to maturity closest to one year, i.e. the longest series. In New Gilon bonds, the underlying asset is the average yield of Makam series with terms to maturity of three months to one year. This change will simplify the pricing of new bonds and facilitate risk hedging for capital-market operators, as they will be looking at a specific bond, rather than an average of yields, which is difficult to hedge.
11. **Simplification of the procedure for determining interest rates in linked bonds** – The existing mechanism for determining the interest rate in Galil bonds is cumbersome, and has not achieved the goal of issuing the bonds at a price closest to 100 ("par"); a mechanism was therefore established that is identical to the practice for fixed-coupon (Shahar) bonds, in which the interest rate is determined by the Ministry of Finance.
12. **Full, two-way linkage for CPI-linked bonds** – Linkage in Galil bonds is partial, as it compensates the holder for the increase in the consumer price index since the series was first issued, whereas no linkage is carried out when the CPI decreases. This makes the bond's pricing difficult in certain cases, creates distortions, and unnecessarily increases the government's interest payments. Under the new regulations, CPI-linked bonds therefore have full two-way linkage. In other words, if the CPI falls below the payment base during the interest period, the actual payment will be lower than the nominal interest rate of the bond.
13. **Shortening of the first interest period** – Until now, the first interest period started at the beginning of the month in which the bond was first issued, even if the first issue was carried out at the end of the month. In the new bonds, the first interest period starts on the exact date at which the bond is sold for the first time.

The following are the main changes to the regulations for the old bonds:

1. **Adjustment of sections specifying the procedure for sales** – Amendment 14 to the law states that bonds will be sold to Primary Dealers and to the general public. Sales to the general public will be carried out through banking corporations, TASE members, and additional entities to be approved by the Accountant General Division at the Ministry of Finance. Accordingly, amendments were made to Section 5 of the State Loan Regulations (Shahar Series) and of the State Loan Regulations (New Gilon Series), as well as Section 3 of the State Loan Regulations (Galil Series). In addition, Section 13 of the State Loan Regulations (Shahar Series) and of the State Loan Regulations (New Gilon Series) was cancelled, as well as Section 14 of the State Loan Regulations (Galil Series).

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2. **Early redemption** – Subsequent to the amendment to the law, which provides authorization to offer early redemption to the public, this possibility was grounded in the regulations. It should be emphasized that this does not refer to unilateral redemption by the government, but to the government's ability to offer early redemption to bond holders, based on debt-management considerations and in order to reduce funding costs.

## **Transfer of the Domestic Debt Administration from the Bank of Israel to the Ministry of Finance**

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Following the amendment to the State Loan Law, responsibility for the operation of all aspects of domestic government debt that were previously handled by the Bank of Israel was transferred to the Government Debt Management Unit in the Accountant General Division.

For this purpose, the Debt Management Unit established three new operational units during 2005: the Issuance Unit, the Trading Supervision Unit, and the Back-Office Unit. These units have replaced the State Loan Administration at the Bank of Israel. The transfer of the administration was implemented in June 2006.

### **Issuance Unit**

The unit is responsible for the management of tradable bond auctions for entities authorized to participate in the issues, and to the general public through such entities. Auctions are conducted via the international Bloomberg system. The unit is also responsible for determining whether Primary Dealers meet their obligations, maintaining routine contacts with all entities involved in the issuance process, and publishing rankings of Primary Dealers according to their activity in the primary market.

### **Back-Office Unit**

The unit's activity encompasses issues of nontradable government bonds (performed directly with pension funds entitled to purchase nontradable bonds), and handling of receipts and payments for tradable and nontradable government bonds. To perform its duties, the unit interfaces with officials in the Ministry of Finance, the TASE, and the Bank of Israel. The unit responds to all contacts from the public, in Israel and abroad, on all subjects related to government bonds.

### **Trading Supervision Unit**

The unit supervises the activity of the various market makers on the MTS system, according to the commitments established. The unit established the bond-lending facility for market makers, jointly with the TASE, and is responsible for borrowing activity and for the collateral required of market makers. The system is operated by the TASE Clearing House. In addition, the unit publishes rankings of Primary Dealers according to their activity on the MTS system. Each Primary Dealer is notified of its rank on a monthly level; rankings are released to the public quarterly.

### **Personnel**

The unit increased its manpower in 2005-2006 and currently has 13 professional employees.

### **Publications**

Each year, the unit publishes a comprehensive report in Hebrew and in English. The unit also publishes tradable government-bond issuance data on its website and on the Bloomberg system. The website provides additional data regarding tradable and nontradable government

bonds (issues, redemptions and turnovers), as well as information regarding the bond lending facility and the new trading arena MTS-Israel.

### Computerization


An innovative, comprehensive computerized system has been developed for the administration's work, based on SAP software. The system was developed by the IT Department at the Accountant General Division, as part of the Merkava project, in which ERP (enterprise resource planning) is being implemented in all government ministries and in additional government agencies.

The transfer of the Domestic Debt Administration from the Bank of Israel to the Ministry of Finance completes the important process of concentrating all debt-management activities, which until a few years ago were divided among four different bodies, under one roof. This process allows for significant savings in manpower and more efficient management, control, and planning of government debt.

## Benefits of the Reform

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- **Increased turnovers** – Despite an increase of over 1,000 percent in turnovers over the last decade, the government-bond market prior to the reform was still far from maximizing its potential. Immediately upon implementation of the reform, turnovers began to grow rapidly in the three main trading arenas – MTS, the TASE, and OTC. In 2007, the volume of trading in government bonds reached an average of NIS 3.2 billion daily.
- **Decrease in funding costs for the government and for the private sector** – The reform was designed to increase competition in the primary market and tradability in the secondary market. The greater tradability of bonds reduces the liquidity premium required by investors, leading to lower funding costs for the government.
- **Globalization and upgrading of the financial markets** – The introduction of foreign financial entities and the transition to issuance and trading via international electronic systems has deepened the integration of the domestic bond market, and of the capital market in general, with the international markets. This has been reflected both in the number and power of players in the market, and in the speed and strength of the effect of capital markets overseas on developments in the local capital market.
- **Reduced concentration** – The entry of large international financial entities and new systems into the primary and secondary markets has decreased the concentration in the government-bond market in particular and in the capital market in general. The decrease in concentration is evident in several ways:
  1. Small entities ahead of large ones – As shown in Appendix E, the quarterly ranking of Primary Dealers indicates that the activity of Primary Dealers in the primary and secondary markets is not correlated with their size in the Israeli market; this reflects a decrease in concentration.
  2. Addition of trading arenas – Prior to the reform, the absolute majority of trading took place on the TASE. Following the reform, a new trading arena was added (MTS), and OTC trading grew significantly.
  3. Herfindahl index – The decrease in concentration is also apparent when measured using the Herfindahl index. Diagram B-9 shows that the reform has led to a decrease in concentration, from an average of eight banks to an average of twelve banks – a 50% increase.
- **A trigger for expansion of the activity of foreign banks and institutional investors in the Israeli capital market** – International financial entities that become Primary Dealers can be expected not to engage only in activity in the government-bond



market, but to operate in other sectors of the capital market as well. Thus, the reform in the government-bond market is a complementary measure in line with other actions taken by the Ministry of Finance to enhance the sophistication of the Israeli capital market.

- **Broader base of investors in government bonds** – With the equalization of taxation on capital gains and interest payments for foreign and domestic investments, local investors (private and institutional) have started to redirect investments from the domestic government-bond market to foreign capital markets. This trend has caused the Israeli economy to become a net creditor for the first time in its history; in other words, the total financial assets in foreign currency of Israeli residents are greater than the financial assets of non-residents in Israel. The Unit identified this trend several years ago, and consequently decided that the investor base should be widened and the activity of foreign entities on the domestic government-bond market should be expanded. The entry of globally deployed financial entities undertaking a commitment to continuous activity in the Israeli capital market facilitates the distribution of Israeli government bonds to institutional and private investors abroad, to whom access was limited, thereby widening the circle of investors in government bonds. In fact, since the beginning of the reform, institutional and banking entities that previously had no access to or involvement in the Israeli capital market have tended to invest in government bonds.
- **Adoption of international standards** – The reform includes the adoption of international standards of trading and clearing.
- **Development of new financial instruments** – The activity of knowledgeable, experienced Primary Dealers aids the development of financial instruments in the Israeli capital market, such as swap contracts, repos, bond futures, commercial paper, credit derivatives, etc.
- **Risk management** – The commitments of the Primary Dealers will lead to the development of local banks' risk-management capabilities in the area of securities, in line with their preparations for improved credit-risk management, as required under the Basel II regulations.