Chapter 2
The Structure of the Banking System in Israel and Competition, From a Long-Term Perspective

1. STRUCTURAL FEATURES OF THE BANKING SYSTEM

The Israeli banking system is comprised of five large banking groups and eight independent banks (Figure 2.1). Apart from activity in classical banking intermediation, which is focused on the area of commercial banking, via subsidiaries the large banking corporations engage in additional areas of activity that complement their activity in the area of commercial banking, such as mortgage banking, banking abroad (subsidiaries and branches), the ownership of non-financial companies and insurance companies, credit card activity,[1] and a range of activities connected with the capital market, such as advice and trading in securities and financial assets, portfolio management for customers, mutual fund management, provident fund and advanced study fund management, underwriting and issues.

The large banking corporations' diverse holdings as described above enable them to engage in universal banking, and thereby exploit economies of scale and diversification in the area of production, while benefiting from enhanced financial risk diversification.

In 2003, 21 commercial banks operated in the Israeli banking system, alongside six mortgage banks, three foreign banks and a number of other banking institutions (Table 2.1 and Figure 2.1). The banking corporations run 1,040 branches, of which 960 engage in commercial banking (Table 2.3). The Israeli banking system is notable for a high degree of concentration by international standards as reflected by the Herfindahl-Hirschman index (the H index), which rose during recent years after declining for many years (Figure 2.2 and Figure 2.3). The five largest banking corporations account for the

[1] Although ownership is limited to 20 percent of the capital of a banking corporation and 20 percent of the means of control in the purchased company.

Table 2.1
Number of Banking Institutions by Areas of Activity, 1980, 1990, 1995 and 2000 to 2003

	Total banking corporations[a]	Commercial banks[b]	Mortgage banks	Investment finance banks	Other banking corporations
1980	63	30	16	8	9
1990	58[c]	26[c]	9	8	15
1995	46	24	9	2	11
2000	45	23	8	1	13
2001	43	23	7	1	12
2002	41	22	7	1	11
2003	38	21	6	0	11

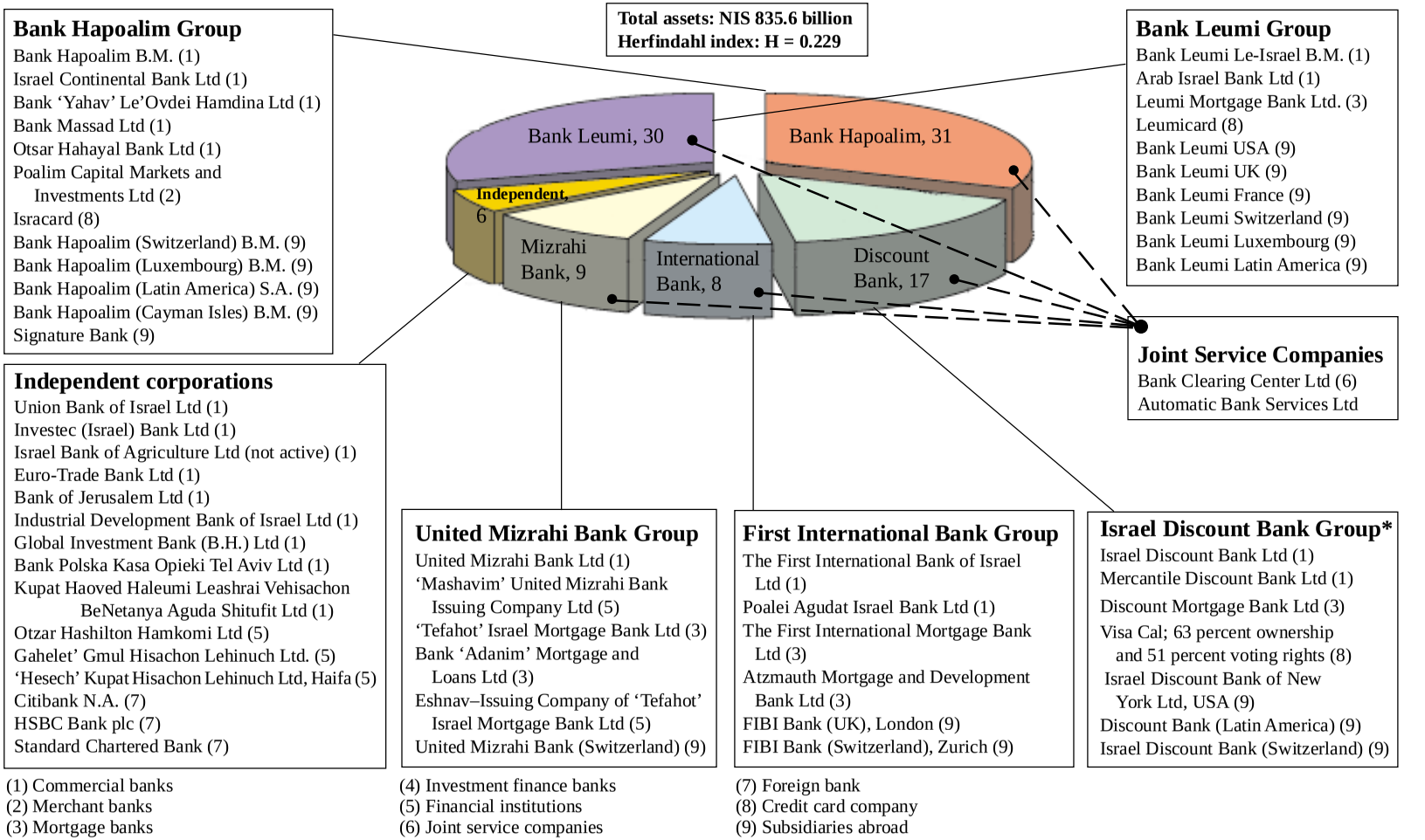
[a] Including, apart from commercial banks, foreign banks, business development banks, cooperative credit associations, financial institutions and joint service companies.
[b] In 1998 the Bank of Jerusalem became a commercial bank.
[c] Excluding banks in Judea, Samaria and the Gaza Strip.
SOURCE: Returns to the Banking Supervision Department.

majority of banking activity in Israel. These corporations hold 95 percent of the total assets in the system (Figure 2.1). As stated, the corporations also operate outside of Israel via 118 offices, of which 55 are offices of subsidiaries (Table 2.4).

The Israeli banking system underwent a number of changes during the last three years. These changes included mergers and acquisitions, principally between small banks and large banks (part of them within the banking groups themselves) and the liquidation of a number of small banking institutions (see Appendix 1). The merger and closure of small banks did not have a major impact on the concentration and competition in the system, since from the very outset these banks' contribution to competition was small. From 2000 and until the present, the number of banking corporations decreased by 16 percent, from 45 in the year 2000 to 38 in 2003 (Table 2.1), and the proportion of small independent banking institutions fell by one percentage point from 6.6 percent in 2000 to 5.6 percent in 2003. The banks that were closed included two commercial banks and two mortgage banks, as well as three small banking institutions. These structural changes were a direct result of several factors: the existence of clear economies of scale and diversification among the large banking institutions, which is reflected *inter alia* by lower production, management and marketing costs in the provision of banking services, and by enhanced risk diversification in the financial intermediation process. In addition, frequent technological changes together with the Supervisor of Banks' requirements relating to the supervision and control of the use of advanced technological facilities involve relatively high current expenses for the small banks, and for the independent banks in particular.[2] Economies of scale also exist with respect to the application of various supervisory directives, such as the anticipated application of the directives of Basle Committee II (towards the end of 2006, regarding the management of credit risks and operational risks

[2] Banks in which subsidiaries benefit *inter alia* from the parent bank's technological services.

Figure 2.1
The Structure of Israel's Banking Groups, December 2003

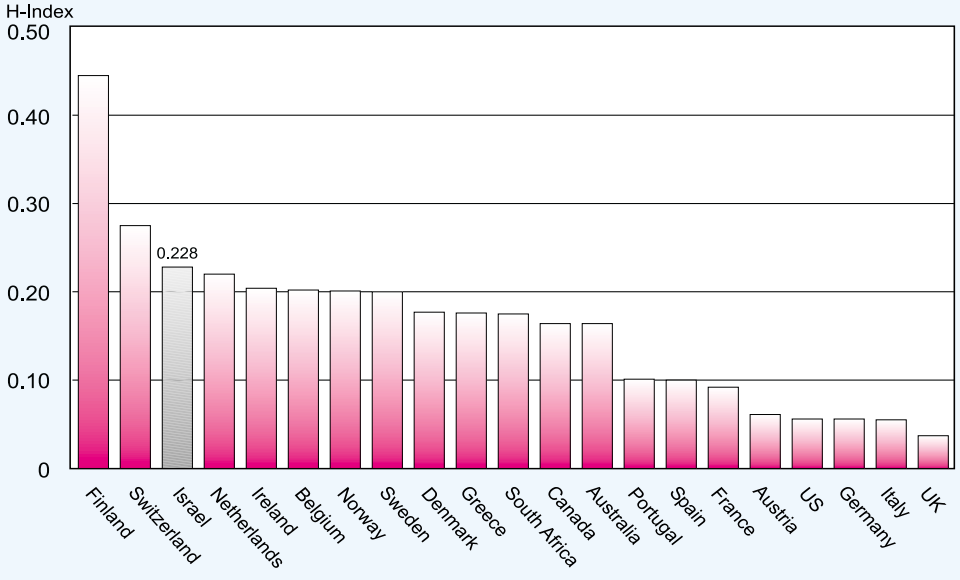


(1) Commercial banks
(2) Merchant banks
(3) Mortgage banks
(4) Investment finance banks
(5) Financial institutions
(6) Joint service companies
(7) Foreign bank
(8) Credit card company
(9) Subsidiaries abroad

* Israel Discount Bank owns 26.5 percent of The First International Bank of Israel, but this investment is not consolidated in the financial statements.

SOURCE: Banking Supervision Department.

Figure 2.2
Concentration (H-Index) of Selected Banking Systems, 2002[a]

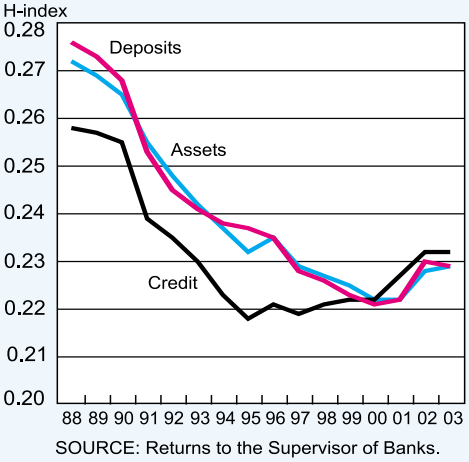


[a] For Australia, Denmark, Germany, Ireland and Portugal the H-index is calculated from data relating to 1999.

SOURCE: For 2002—Banking supervision authorities of the relevant countries; for 1999—the Bankstat Database.

and the allocation of capital in respect of these risks), and the Supervisor of Banks' directives relating to the prevention of money laundering. It appears that the large banks in the system are capable of developing internal models in accordance with the Basle directives more effectively than small banks. Given the small banks' relative disadvantages and basic management problems, which have harmed their immunity and stability, for several years now the Banking Supervision Department has taken a more active position toward encouraging such small banks to merge with larger banks or to leave the industry. This deliberate policy has played an important role in reducing the number of small banks in the system.

Figure 2.3
Changes in the H-index of the Five Major Banking Groups and the Group of Independent Banks, 1998-2003



SOURCE: Returns to the Supervisor of Banks.

2. COMPETITION IN THE BANKING SYSTEM

Competition is one of the criteria for assessing the current functioning of the banking system, and especially the manner in which it fulfills its economic functions. By increasing the efficiency in which resources in the economy are allocated, competition contributes to increased welfare. Increased competition also leads to larger scale banking intermediation, to a decrease in the price of this intermediation (as reflected by a decrease in the net interest margin and a decrease in commissions), and to an improvement in the quality of banking services. Since no single index for examining competition in the industry is in widespread use in the literature, we will focus below on three indicators: the Herfindahl index of concentration (the H index), the Marketing Power index (the M index) of the banks in the industry, and on the contestability that non-banking entities introduce into the banking system.

The Herfindahl index, which is affected by the distribution of the banks' market segments and by the number of banking institutions operating in the industry, is an index of concentration. The prevailing assumption is that the greater the competition in the industry, the more extensive will be the competition and *vice versa*.[3]

The concentration index for the Israeli banking system, which is calculated on the basis of the distribution of the banking groups' market segments, amounted to 0.23 in 2003 (Figure 2.3).[4] This is high relative to the index for a peer group of countries comparable to Israel (Figure 2.2) but from a long-term perspective, lower than that a decade ago. During the last decade, the concentration index for the banking groups' assets fell continually. The decrease until the middle of the 1990s derived mainly from the liberalization measures that the Bank of Israel and the government adopted. Considering there were no major changes in the number of commercial banks or the number of banking groups for which we calculated the H index during those years, it can be said that the changes in the variability of the groups' market segments was the factor that affected the development of the index. Since 2001, the concentration index of total assets has risen.[5] This trend is apparent from the three largest banking groups' increased

[3] The Herfindahl index is defined as $H = \sum_{i=1}^{n} S_i^2$,

where S_i is the market segment of the banking group *i*, and *n* is the number of banking groups in the system.

Alternatively, the index can be formulated as follows: $\frac{1}{n} \le H = \sigma^2 n + \frac{1}{n} = \sum_{i=1}^{n} (s_i - \bar{s})^2 + \frac{1}{n} \le 1$,

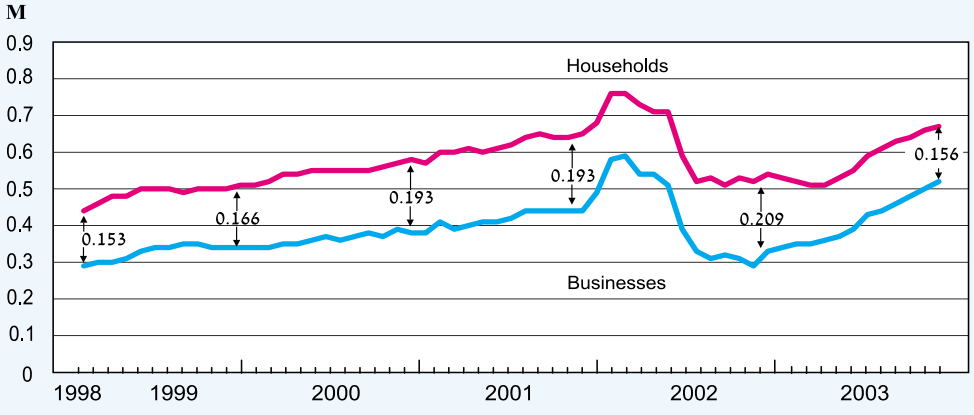
where σ^2 is the variability if the market segments of the banking groups in the system and $\bar{S}$ = the average market segment in the system.

This alternative formulation makes it possible to distinguish between changes in the index derived from changes in the number of banking groups, and changes in the index deriving from changes in the distribution (variability) of their market segments.

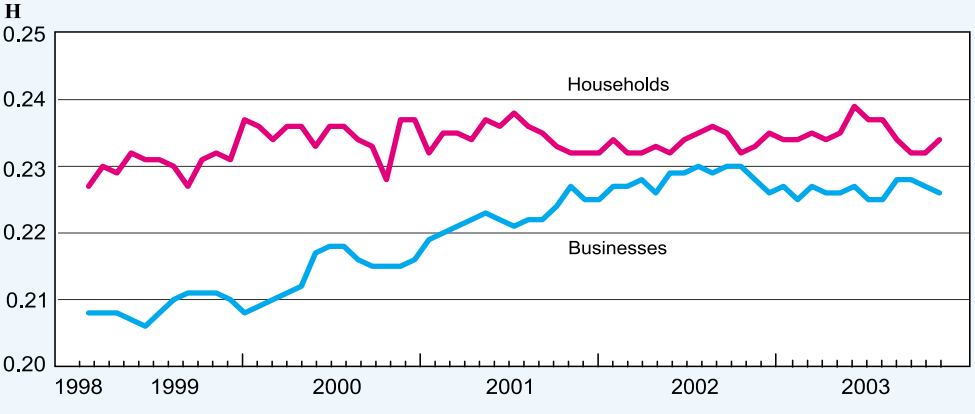
[4] The index was calculated for six banking groups – the five largest banking groups and the group of independent banks.

[5] See Chapter 1 of the survey for 2002 for a long-term review of the changes in the structure of the banking system.

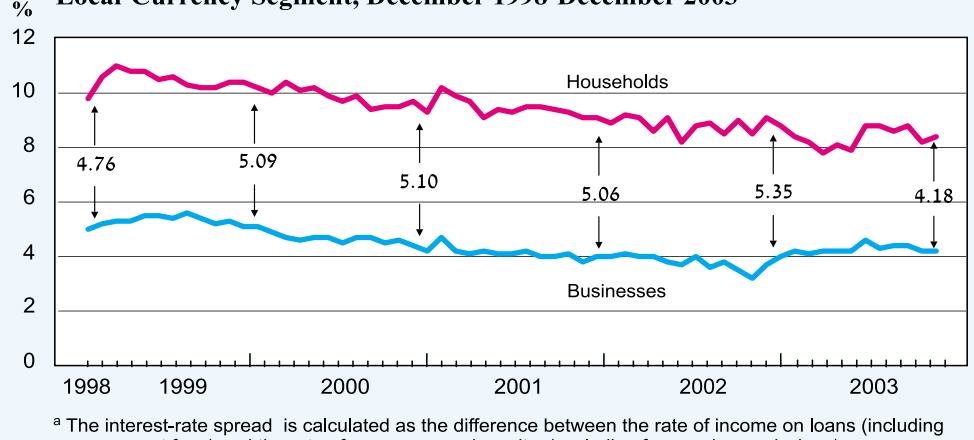
Figure 2.4
Market Power Index (M) for Businesses and Households, December 1998-December 2003



Concentration Index (H) for Businesses and Households, December 1998-December 2003



Interest-Rate Spread[a] between Businesses and Households, the Unindexed Local-Currency Segment, December 1998-December 2003



[a] The interest-rate spread is calculated as the difference between the rate of income on loans (including managment fees) and the rate of expenses on deposits (excluding fees and commissions).

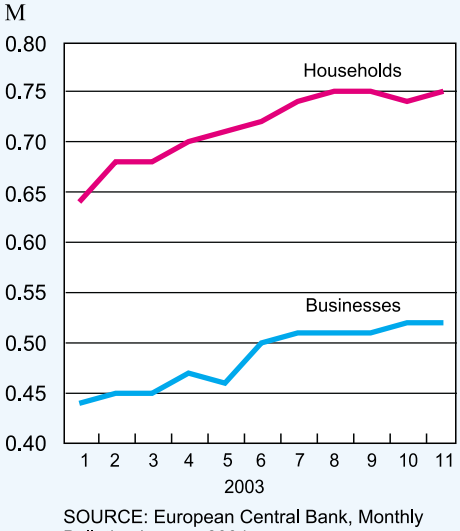
SOURCE: Returns to the Supervisor of Banks.

proportion in the entire banking system. The three largest banking groups' proportion of total assets rose from 75.4 percent in 2000 to 77.2 percent in 2003. Concurrently the Herfindahl index for total assets rose from 0.22 in 2000 to 0.23 at the end of 2003. A similar growth trend in concentration can be found with deposits of the public. In the area of credit to the public, the concentration index began to rise back in 1997 as a result of the increased pace of privatization in the economy, under which the banks (mainly the largest banks) extended large amounts of credit to large borrowers (Figure 2.3).

Another indicator for measuring competition in the banking industry is the Marketing Power index, which is calculated as the relative deviation of the price of the banking product (credit) from its marginal cost.[6] This indicator is calculated here with respect to unindexed shekel credit as representing the features of financial intermediation, with a distinction between activity with households and activity with firms.

The data show that the marketing power that the banks exert on households is greater than the marketing power that they exert on firms.[7] It should be noted however that a similar phenomenon (in intensity and direction) is found in the European countries (Figure 2.5). It can be assumed that the difference in marketing power between the two populations derives from households' relatively low bargaining ability vis-a-vis the banks, as compared to the bargaining power of firms, which usually have access to more numerous substitutes for bank credit (Table 2.2) and that incur lower costs in moving from bank to bank. However, the difference in marketing power between firms and households decreased in the past year. The differing extent of competition for the household

Figure 2.5
The Market Power Index (M) in the EU, Businesses vis-â-vis Households, January-November 2003



SOURCE: European Central Bank, Monthly Bulletin, January 2004.

[6] The marketing power of firm *j* is defined as the relative deviation of the price of a product from its marginal cost. The marketing power of the industry in its entirety is calculated as the weighted average (in the relative size of the firms) of the marketing power of the individual banking firms: $M = \sum_{j=1}^{n}\left[\frac{p_j - c_j'}{p_j}\right]\frac{Y_j}{Y}$, where P_j = the price of bank credit of bank *j*; Y_j = the amount of credit to the public of bank *j*; Y = the amount of credit in the system; n = the number of banking firms in the industry.

[7] See Parush and Ruthenberg (2003), "Measurement of Competition in the Banking Industry in Israel," Banking Issues 16.

market segment and firms is also reflected in the differences between the concentration (H) indexes of their market segments. The H index in respect of unindexed shekel credit for households is larger than that calculated in respect of firms, although here too the difference between the indexes decreased during recent years (Figure 2.4).

A third indicator of the development of competition in the banking industry is the extent of the industry's contestability. Contestability derives mainly from the activity of other (local and foreign) financial institutions and from the capital market, which serves as a substitute for banking intermediation (for deposits and for bank credit). Despite the growth in the banking system's concentration during recent years, the amount of credit extended by the system decreased considerably in the last two years. The decrease in the credit portfolio derived from net repayments of credit and from the banks' management bodies setting stricter criteria for the extension of credit due to the lessons learned from the excessive credit allocations that were granted (especially) during the period of recession in economic activity. As a result, total credit raised from the banking system fell by NIS 9 billion for the first time in a decade, following a moderate increase of NIS 9 billion in 2002 and a large increase of over NIS 40 billion in credit to the public in each year during the period between 1998-2001 (Table 2.2).[8] The year 2003 was notable as stated for a move from uptake of credit for the banking system to the uptake of credit from alternative sources.[9] While the banking system channeled its credit extensions in a strictly regulated and cautious manner, in the expectation of a recovery in the economy, firms (principally the most financially stable among) exploited the boom in the stock market in 2003 in order to issue marketable and non-marketable bonds.[10] These bonds became attractive because of the large decrease in yields-to-maturity on government bonds (due to the decrease in the budget deficit) concurrent with the reduction in the interest rate in the economy. Issues of marketable corporate bonds totaled NIS 2.8 billion in 2003 (Table 2.2), similar to the amount issued in the previous year. Institutional investors' issues of non-marketable bonds reached a record NIS 4 billion in 2003. As a result of the rapid expansion of the corporate bond market in Israel, Israeli companies did not have to resort to a large amount of credit from abroad during the year, and this credit totaled only NIS 1 billion compared with NIS 7 billion in 2002 (Table 2.2) In addition, the upsurge in worldwide stock markets, which was also apparent in Israel to some extent, enabled a number of relatively small companies to continue issuing shares on the Tel Aviv Stock Exchange and in the USA, albeit at smaller amounts than in the record years of 1999-2000. We believe that the very existence of available sources of substitutes for credit increases the contestability to the banking system. This is despite the fact that the uptake of credit substitutes only occurred due to the banks' deliberate decrease in the supply of credit as previously mentioned.

[8] See the section on Credit to the public in Chapter 3 for more details.

[9] Stock issues in Israel and abroad, finance from venture capital funds, and credit and non-marketable bonds granted by institutional investors.

[10] Due to the policy of ceasing the issue of Gilboa dollar-indexed bonds and the large redemptions of these bonds, financial entities began to issue dollar bonds, but these are not a substitute for bank credit.

Table 2.2
Raising of Bank Credit and its Principal Substitutes, 1998 to 2003

	Total bank credit and its substitutes	Bank credit[a]	Total Bank credit substitutes raised	Direct credit from abroad[b]	Credit from institutional investors[c]	Share issues	Corporate bond issues[d]	Capital raised abroad[e]	Venture capital funds	Difference between credit and substitutes
1998	60,820	42,189	18,631	3,554	–2,377	7,895	2,549	4,562	2,448	23,558
1999	83,701	46,088	37,613	4,883	3,126	5,659	1,681	17,802	4,462	8,476
2000	104,023	50,467	53,555	2,131	4,301	14,212	292	19,267	13,351	–3,088
2001	74,553	49,824	24,729	648	2,129	5,833	90	7,322	8,708	25,095
2002	30,863	8,671	22,193	6,763	555	5,555	2,969	1,061	5,289	–13,522
2003	12,504	–8,738	21,242	992	6,027	3,148	2,793	3,855	4,427	–29,980

[a] Credit to the public from commercial banks and mortgage banks. We assume that the change in outstanding credit reflects new credit extended.
[b] The series was reclassified.
[c] Including non-marketable bonds issued by institutional investors and credit extended by institutional investors and insurance companies.
[d] From 2001 all bond issues that do not constitute credit substitutes were deducted.
[e] Israeli companies' issues of shares and bonds in foreign stock markets.
SOURCE: Returns to the Banking Supervision Department, direct credit from abroad and capital raised abroad and returns to the Foreign Exchange Activity Department; venture capital funds – from the IVC-online database; capital raised in Israel – "Monthly Main Indicators," Statistics, The Tel-Aviv Stock Exchange.

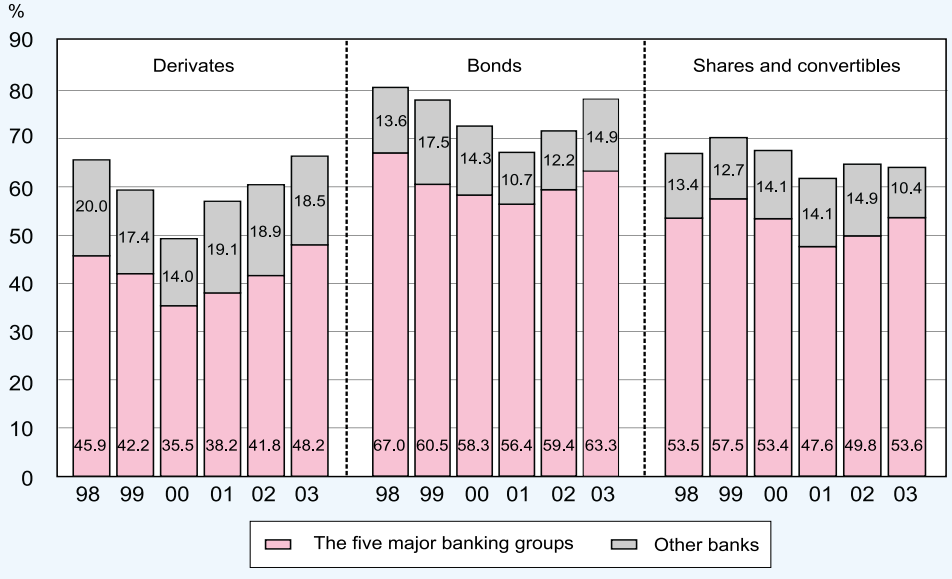
Concurrent with the decrease in bank credit and the uptake of credit relative to credit substitutes, the proportion of the public's assets at the banks declined, as can be seen from the composition of the public's asset portfolio (Table 3.5 and Figure 1.9). In 2003 the proportion of the public's assets at the banks amounted to 39 percent of total assets of the public (at the banks and not at the banks) compared with 44 percent in 2002. The decrease in the public's assets at the banks derived mainly from a decrease in CPI-indexed saving plans. The investment feasibility of saving plans declined in 2003 due to the large fall in the real interest rates that are paid on these plans. The fall in interest rates, inflationary uncertainty and exchange rate uncertainty increased the investment feasibility of the different forms of investment in the capital market. In addition, the reform in the taxation of final assets was fully implemented in 2003. The reform encourages a move to investment in marketable securities such as shares, bonds and Treasury bills, as a result of the opportunities for offsetting losses. It should be remembered however that the large rise in 2003 in the proportion of the public's assets that are not held of the banks resulted largely from the increased returns on share and bond investments deriving from the upsurge in the equities market following a long period of sluggish trading. Accordingly, the revaluation element had an appreciable impact on the distribution of the public's asset portfolio. As an example, the real returns on bond investments rose by 14 percent, and the returns on share investments increased by 61 percent in 2003.

The contestability to the banking system is not posed by credit and deposit substitutes alone. That is, it does not reflect merely the potential adverse affect on the banks' net interest income in respect of classical banking intermediation, but is also apparent in areas related to the banks' activities in the capital market. These activities include portfolio management, advice and trading in securities on behalf of the banks' customers, the issue of securities in the primary market (underwriting) and the distribution of these securities, and the management of provident and advanced study funds.[11] The purchase and sale of securities, the distribution of mutual funds and securities custody activity are conducted directly at the banks. Under the law, all other activities are conducted via subsidiaries. In 2003 all of these activities yielded non-interest income of NIS 2.7 billion for the five banking groups, an amount equivalent to 26 percent of total non-interest income.[12] Income from activity in securities (purchase and sale, advice, custody fees, underwriting and distribution fees) accounted for 12 percent of non-interest income, while management fees from provident funds and mutual funds accounted for 14 percent of total non-interest income. The banking system's dominant role in the capital market was apparent in both the primary market and the secondary market. In the primary market (issues and underwriting), via subsidiaries the two largest banks are responsible for the

[11] Including provident funds, central severance pay funds, provident funds for other purposes, and advanced study funds for salaried employees and the self-employed.

[12] Non-interest and other income at the banking groups totaled NIS 10.5 billion, with mutual fund management fees accounting for NIS 557 million of this amount, provident fund management fees for NIS 862 million and securities activity for NIS 1,300 million.

Figure 2.6
The Banks' Share of Turnover in Securities in the Tel Aviv Stock Exchange, 1998-2003



SOURCE: The Tel Aviv Stock Exchange.

management of over 50 percent of total issues.[13] In the secondary market, the majority of securities trading activity is concentrated at the banks. The five largest banking groups account for 54 percent of trading in shares and convertible securities, 63 percent of bond trading and 48 percent of the derivatives market (Figure 2.6). The banking groups' dominance in the capital market is also reflected by the proportion of assets managed by the large banking groups to the total assets of the mutual funds and the provident funds. This proportion amounted to 88.5 percent and 75 percent respectively (Figure 2.7).

To conclude, the first two previously mentioned indicators for measuring the development of the extent of competition in the banking industry show a rise both in the banking system's concentration and in the banks' marketing power over households and firms. These have the effect of reducing competition in the industry.

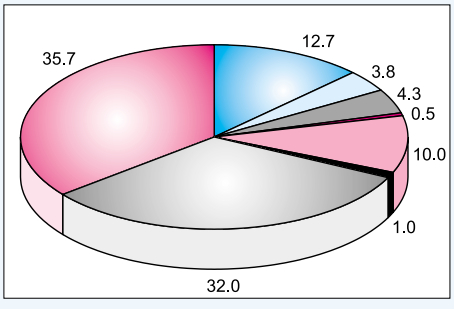
However, the initial signs of an increase in contestability are apparent in the area of classical banking intermediation: bank credit and deposits of the public. Although this contestability is far from adequate in its effect, it can be assumed that fundamental measures that will be taken in the future to increase the sophistication of the money and capital markets, particularly measures aimed at encouraging the use of deposit and credit substitutes (such as the implementation of Repo arrangements, short purchases/sales, the issue of commercial papers, the encouragement of securitization in the markets, and

[13] Leumi & Co. is a subsidiary of Bank Leumi; Poalim IBI is a subsidiary of Bank Hapoalim.

Figure 2.7

A. Distribution of the Assets of Mutual Funds, by Fund Managers, 2003 (Percent)

Total assets: NIS 83.3 billion
H-index: 0.259
Share of the three major banking groups in the total assets of the banking system: 80.4 percent
Share of the five major banking groups in the total assets of the banking system: 88.5 percent

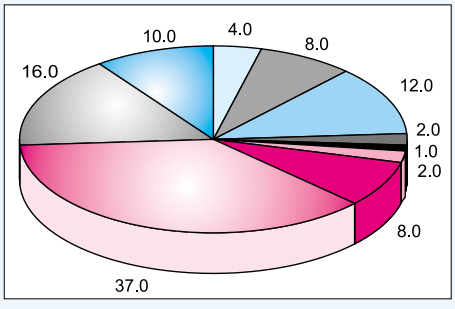


[a] Including P.K.N. and Lahak, and Bank Otsar Hahayal, Bank Massad and Bank Yahav.
[b] Including Ilanot Discount and Mercantile.
[c] Including Leumi PIA and Psagot Ofek.

SOURCE: Bank of Israel, Monetary Department .

B. Distribution of the Assets of Provident Funds under Direct and Indirect[a] Management, 2003 (Percent)

Total assets: NIS 189.2 billion
H-index: 0.202
Share of the three major banking groups in the total assets of the banking system: 63 percent
Share of the five major banking groups in the total assets of the banking system: 75 percent



[a] Direct management: direct holding in provident funds. Indirect management: management of the provident funds' investments.
[b] Including Bank Yahav (9 percent).

SOURCE: Annual Report of the Commissioner of the Capital Market, Insurance and Savings, Ministry of Finance 2003.

a greater emphasis on the issue of corporate bonds) will help to promote competition in the industry and to increase the public's welfare. Only in the coming years will we be able to know whether the growth in contestability during the last two years resulted from the recession years in the economy and the bank management's resulting cautious credit risk management policy, or whether suitably deep and competitive markets serving as a good substitute for the banking system actually developed.

3. THE NETWORK OF BRANCHES

The number of branches in the banking system totaled 1,040 at the end of 2003. 92% of these branches are commercial banking branches that also provide mortgage banking

services via mortgage counters.[14] The number of branches fell by 3% in 2003, mainly branches of the commercial banks, whose number dropped from 990 to 960. A net total of 92 branches were closed (20 in 2002), of which 18 were branches of the two largest banking corporations and 17 were branches of medium-sized banks, while the First International Bank was the only bank to open a net number of branches during the year. The relative proportion of the size groups (large, medium-sized and small banks) in the system therefore remained largely unchanged (Table 2.3). The reduction in the number of branches is a trend typical of the world's developed countries (Table 2.8).[15]

As regards the capital market, it is evident that no entities emerged in recent years that could constitute serious contestability to the bank's activity. At this stage at least, the banks are thereby perceived as the dominant factors in that market, as they are in the deposit and credit and deposit and credit substitute markets.

The number of temporary branches opened in 2003 amounted to 164, an increase of 12 percent compared with 2002 (Table 2.5). 49 percent of the branches were opened in universities and colleges, compared with 86 percent in 2002. A temporary branch is opened for period of up to three months, and the average reported period for the activity of a temporary branch in 2003 was 17 days, half the average number of days in 2002.

Table 2.3
Number of Offices of Commercial Banking Groups,[a] by Size of Group, 1996–2003

		Of which Commercial	Number of offices by size of banking groups[b]			Relative share (percent)		
	Total	banks	Large	Medium	Small	Large	Medium	Small
1996	1,193	1,075	610	511	72	51	43	6
1997	1,193	1,076	605	515	73	51	43	6
1998[c]	1,187	1,092	604	509	74	51	43	6
1999	1,141	1,055	580	485	76	51	43	7
2000	1,111	1,032	571	474	66	51	43	6
2001	1,092	1,013	575	453	64	53	41	6
2002	1,072	990	571	442	59	53	41	6
2003	1,040	960	553	431	56	53	41	5

[a] Including branches of banking institutions owned by a group and operating in Israel.
[b] Large : Leumi and Hapoalim banking groups.
Medium: Discount, United Mizrahi, and First International banking groups.
Small: Independent banking institutions, including branches of foreign banks.
[c] In 1998 the Jerusalem Mortgage and Development Bank was issued a commercial bank license, and its branches are included in the number of branches.
SOURCE: Returns to Supervisor of Banks.

[14] Principally Bank Hapoalim, Bank Leumi, Bank Discount and the First International Bank. Another 71 branches of the mortgage banks (Bank Tefahot, Bank Adanim, Atmzaut Mortgage Bank and their main branches) supply mortgage banking services only.

[15] For a comparison, see the data in Table 6.4 of the Supervisor of Banks' Annual Survey for 2002.

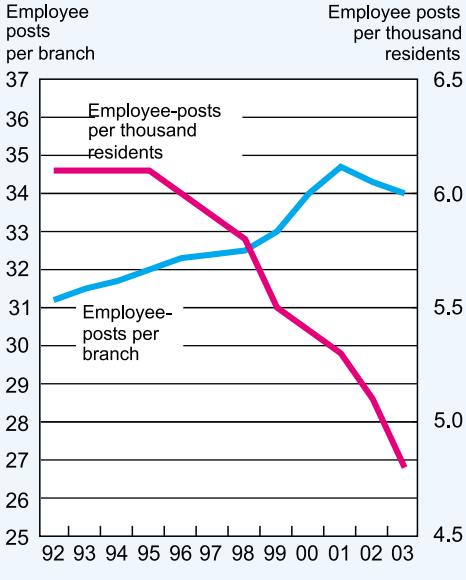
Table 2.4
Overseas Offices: Branches and Employee Posts, 1991–2003

	Total number of offices	Number of branches and representative offices[a]	Number of subsidiaries' offices[b]	Number of employee posts[c]
1991–1995 (Average)	120	72	48	2,827
1996–2000 (Average)	97	63	34	2,084
2001	111	64	47	2,243
2002	117	63	54	2,469
2003	118	63	55	2,502

[a] Branches and representative offices abroad of Israeli banking corporations.
[b] Branches of subsidiaries abroad.
[c] Not including overtime.
SOURCE: Returns to Supervisor of Banks.

Concurrent with the closure of branches, the banks began to reduce the number of days in which the remaining branches are open, and part of their branches are open to the public for only five days a week. An estimate for the five largest banks at the end of 2003 shows that 34 percent of branches operate for only five days of the week (and are closed on Sunday and Friday). This phenomenon appears to be increasing, since the data obtained for the first half of 2004 indicate that the proportion of branches operating five days a week rose to 53 percent, and that most of the branches in question are closed on Friday.

Figure 2.8
Number of Employee Posts per Resident and per Branch in the Commercial Banks, 1992–2003



SOURCE: Returns to the Supervisor of Banks.

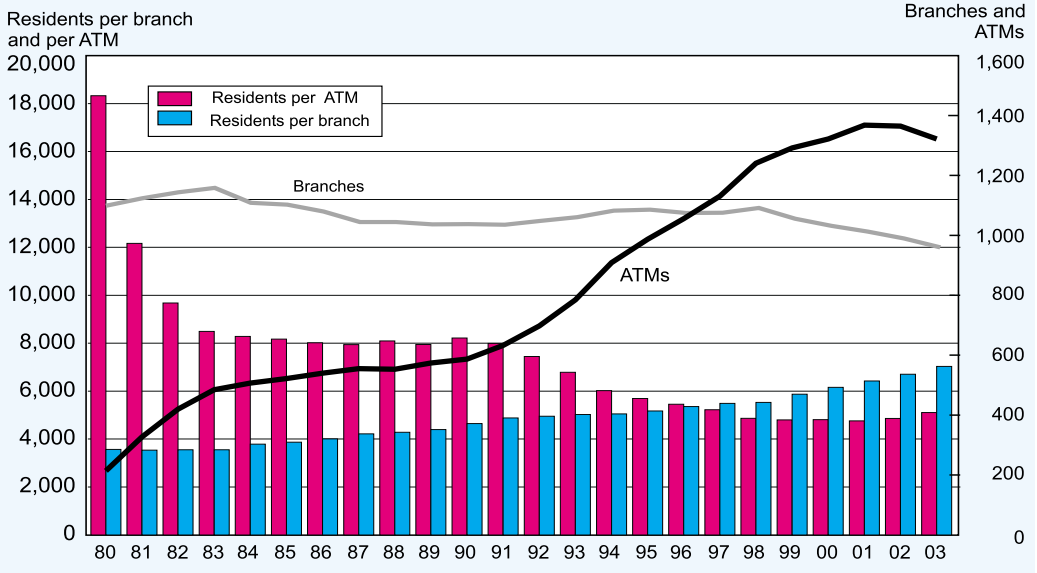
While the decrease in the number of branches and the change in the days when the branches are open and closed reflects the efficiency-drives that the banks have adopted, it also results from customers' reduced need to visit the branches in order to conduct current activity. This is due to the decrease in the traditional function of the banking branches as a result of the introduction and absorption of new banking technology. For example, automatic teller machines at which cash can be withdrawn serve as a substitute for the branch, since a customer can withdraw cash from any of the 1,322 ATMs throughout Israel without reference to the bank and the branch to which he

Table 2.5
Bank Branches, Employee Posts, ATMs and Activities at the Counter, 1986–2003

										monthly average (thousands)		
	No. of branches[a]	No. of temporary branches	No. of employee posts[c]	No. of ATMs for cash withdrawal	No. of ATMs for information retrieval and giving instructions	No. of employee posts per branch	No. of employee posts per thousand residents[d]	No. of residents[d] per branch	No. of residents[d] per ATM	Activity at the counter		No. of cash withdrawals per ATM
										Debits	Credits	
1986–1990 (average)	1,049	–	–	555	1,320	–	–	4,311	8,043	–	–	–
1991–1995 (average)	1,063	–	–	722	1,695	–	–	5,017	6,787	–	–	–
1996–2000 (average)	1,066	148	34,604	1,208	2,094	32.7	5.7	5,693	5,041	2,073	1,422	7,145
2000	1,032	170	34,410	1,322	2,170	33.3	5.4	6,160	4,809	1,874	1,397	7,074
2001	1,013	241	34,503	1,368	2,132	34.1	5.3	6,425	4,758	1,769	1,376	6,999
2002	990	147	33,951	1,365	2,067	34.3	5.1	6,703	4,861	1,839	1,364	7,605
2003	960	164	32,652	1,322	2,044	34.0	4.8	7,030	5,105	1,740	1,316	7,551

[a] Branches of commercial banks operating in Israel: regular branches, limited-service branches, and counters, including the branches of the Bank of Jerusalem.
[b] Branches opened for a period of up to 3 months and meant to provide banking services under terms specified in the permit.
[c] Twelve-month average; including tenured staff, trainees, pentioners, temporary staff, and part-time staff (weighted by their share of a full-time post). Includes overtime: 165 hours of overtime are counted as a full-time post.
[d] Number of residents determined by the permanent population at the end of the year.
SOURCE: Returns to Supervisor of Banks.

Figure 2.9
Number of Branches and ATMs, 1980-2003



SOURCE: Returns to the Supervisor of Banks.

belongs. Information retrieval screens and other facilities for conducting basic banking activities also fulfill this function. The traditional functions of the banking branches are gradually decreasing, as is apparent from the decline in the two indexes that reflect the frequency of visits to the branch: the number of debit transactions at teller desks and the number of credit transactions at teller desks. These indexes have fallen by 29 percent and 7 percent respectively since 1996 (monthly average, Table 2.5). In the same period, a parallel decrease (at a rate similar to the decrease in the number of branches) was recorded in the number of employee posts in the banking system. As a result, the number of employee posts per branch remained practically unchanged in the last three years. This is in contrast to the consistent increase in the number of employee posts per branch typical of the years 1997-2001. Most of the decrease in the number of employee posts (Figure 2.8) occurred at the large banks as part of their efficiency programs, the main aim of which is to reduce salary expenses and to enhance human capital.

The multi-year increase in the number of residents per branch continued. In 2003 this increase amounted to 5 percent, as a result of the 2 percent growth in the number of residents and a 3 percent decrease in the number of branches (Table 2.5 and Figure 2.9). An international comparison shows that the number of residents per branch in Israel is particularly high. In the G-10 countries, the number of residents per branch averaged 3,072 compared with 7,030 in Israel (Table 2.8). There is no single explanation for this

phenomenon. It may result from the reduced supply of banking services deriving from the application of market power in this area, or could be indicative of the existence of an operationally efficient banking system concurrent with the greater use of credit cards in Israel than worldwide (see Section 5 below).

4. HIGH-TECHNOLOGY BANKING SERVICES

Technological developments in the area of computerization during recent years have contributed to an increase in the banks' efficiency. The banking system is continuing to harness technology in order to improve, change and adapt the range of banking activities, while using technology as a means for promoting business activity and achieving strategic objectives in the different areas of banking activity. Customers' extensive use of high-technology banking services is a result of the convenience and greater efficiency involved, and the encouragement given to the use of these facilities by means of the discounts and incentives that the banks provide to those using them. The number of customers using high-technology banking services continued to grow in 2003. As an example, the number of private and business customers using the Internet rose to a monthly average of 898 thousand in the first quarter of 2003, compared with 679 thousand in the first quarter of 2001, an increase of 32 percent (Table 2.6).

The increase in the number of users reflects the number of those using information retrieval services and the number of transactions conducted via the Internet. A large increase was recorded in the number of Internet banking retrieval operations in 2002, to a monthly average of 33 million in the first quarter of the year compared with 16 million at the end of 2002. The number of monthly Internet applications per user rose considerably during the last two years and amounted to 37 applications, an increase of 60 percent compared with the end of 2002 (Table 2.6). The number of applications rose more rapidly than the number of users, a trend indicating that this technology is being absorbed and that the personal use of it is increasing. These developments are particularly notable in view of the continued decrease in the usage of traditional means for the transfer of banking information, such as teller desks at the branch and automatic teller machines, which are time and space-consuming substitutes. This decrease is not being offset by the increase in the number of Internet information retrieval applications. The usage of the Internet has thereby acquired another dimension apart from the fact that it serves as a substitute channel for the receipt of information.

Transactions conducted via the Internet are mainly connected with shekel deposits and securities trading, which together account for over 75 percent of the total number of transactions. The placement/withdrawal of shekel deposits has increased by 29 percent, and the number of securities purchase/sale transactions doubled in comparison with 2002 (monthly averages for the last quarter, Table 2.6). The increase in the number of Internet securities transactions largely resulted from the upturn in stock market activity from the

Table 2.6
Selected Distribution Channels for Banking Services: Number of Customers, Applications for Receipt of Information and Transactions Conducted, 2001 to 2003

	2001	2002				2003			
	IV	I	II	III	IV	I	II	III	IV
No. of customers – private and business									
Via Internet	484	541	580	626	679	727	774	840	898
Via computer-to-computer communications	39	38	37	35	34	33	31	33	31
No. of applications for information									
Via Internet	7,571	9,266	10,468	12,306	15,771	18,529	26,639	27,308	32,824
Average applications per user	16	17	18	20	23	25	31	33	37
Via computerized call center	3,651	3,829	4,147	4,040	4,331	4,243	4,600	4,860	5,049
At teller desk	5,551	5,221	5,312	5,430	5,463	5,123	4,872	5,184	4,915
At ATMs	2,000	1,774	1,800	1,834	1,832	1,692	1,782	1,774	1,641
Transactions via internet									
Placement/withdrawals of shekel deposits	36	33	38	49	56	63	69	76	72
Transfers between same customer's accounts	11.2	12.9	14.5	17.4	20.2	17.9	17.9	21.0	21.8
Transfers to third party	4.7	5.2	6.0	7.4	9.1	10.4	14.0	17.2	19.0
Purchase/sale of securities	43.6	66.2	54.1	51.6	59.5	54.9	91.7	90.4	140.4
Other[a]	11.3	11.4	12.1	14.6	12.1	12.0	19.2	27.2	28.0
Transactions via computer-to-computer communications									
Placement/withdrawals of shekel deposits	2	2	2	2	2	2	2	1	1
Transfers between same customer's accounts	3	2	2	2	2	1	1	1	1
Transfers to third party	3	4	4	4	6	8	9	11	10
Purchase/sale of securities	206	235	224	236	229	186	237	264	262
Other[a]	72.6	81.3	77.9	74.5	116.3	92.8	109.7	111.1	138.0
Transaction amounts – private and business customers[b]									
Via Internet	1,506	1,932	2,165	2,182	2,390	2,329	3,036	3,323	4,052
Via computer-to-computer communications	7,153	7,340	6,755	5,457	5,557	5,570	6,676	5,847	8,331
Tradability data from stock exchange									
No. of transactions (thousand)	–	–	–	–	–	223	354	315	448
Trading turnover (NIS million)	–	–	–	–	–	22,407	30,086	27,419	33,845

[a] Including portfolio split operations by portfolio managers, other transactions and foreign trade transactions.
[b] Excluding portfolio managers.
SOURCE: Returns to the Banking Supervision Department.

second quarter of the year. 31 percent of stock market transactions in the last quarter of 2003 were conducted via the banking Internet system and accounted for 5 percent of quarterly stock market turnover. Internet users were notable for conducting numerous small-scale purchase and sale transactions.

Despite the 70 percent increase in the volume of the transactions that private and business customers conducted via the Internet compared with the same period of 2002, the usage of computer-to-computer communications still accounts for a substantial proportion of activity in the stock market.[16] The move from computer-to-computer communications to Internet usage is gradual, as reflected by the monetary decrease in the proportion of activity conducted via the former from 83 percent at the end of 2001 to 70 percent at the end of 2002, and to 67 percent at the end of 2003. Large customers, for whom Internet usage is a substitute involving relatively high adjustment costs, are the main users of this technology.

The number of transactions conducted in the stock market via computer-to-computer communications with the banking system accounted for 58 percent of total stock market transactions in the last quarter of 2003 – 60 percent of the monthly turnover in the market

The absorption of technology is also apparent from the composition of demand deposit account debits. Data reported to the Banking Supervision Department show that the downtrend in check deposits and teller debits is continuing, concurrent with a moderate increase in the average amount per debit. The average amount for a check was NIS 4,766, and the proportion of check debits to total debits fell to 2.8 percent. The proportion of debits by standing order and other debits increased (Table 2.7). These trends are also typical of the G-10 countries, and are indicative of the substitutability existing between the use of traditional payment channels (teller transactions, checks and cash, to the benefit of alternative channels such as the use of credit cards (see Section 5 below) and use of computerized communications, whose proportion to total debit operations in Israel is increasing (Figure 2.10).[17]

Table 2.7
Number and Composition of Debits in Current Accounts, the Seven Major Banks, 1991–2003

(monthly average)

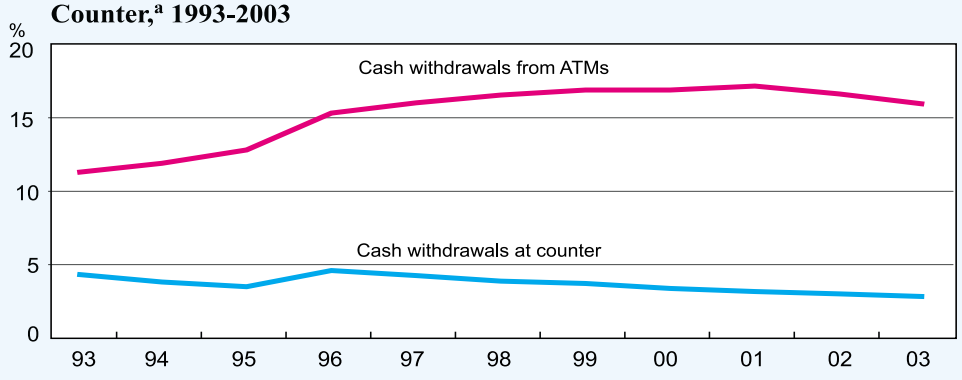
	Number of debits (percent of total)							
	By check	At counter	ATM	Author-ization	Credit card[a]	Other[a]	Total	Total (mill.)
1991–1995 (average)	37.9	4.4	11.4	14.8	2.7	29.1	100.0	48.0
1996–2000 (average)	28.6	4.0	16.4	17.2	4.4	25.0	100.0	52.4
2001	24.9	3.2	17.2	18.9	6.2	29.6	100.0	55.9
2002	23.9	3.0	16.6	19.5	7.5	29.5	100.0	56.5
2003	23.1	2.8	15.9	20.0	6.9	31.2	100.0	55.9

[a] From 2001 including an estimate of debits from abroad via international credit cards.
SOURCE: Returns to Supervisor of Banks.

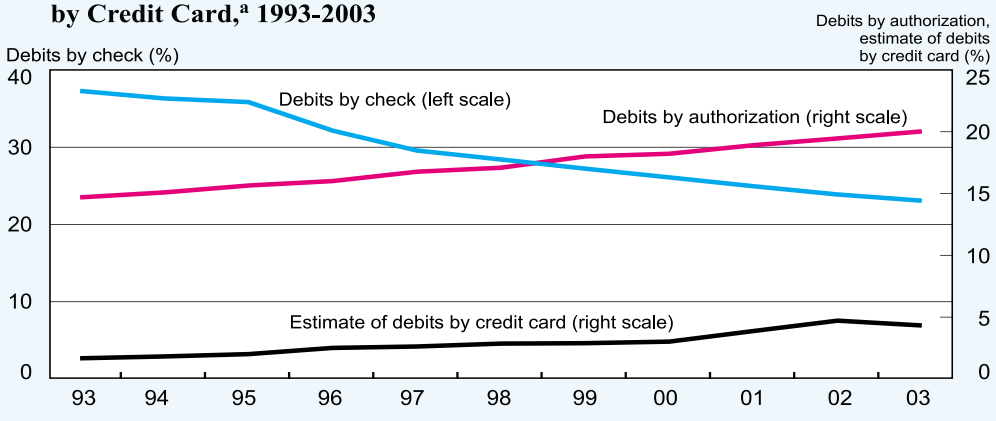
[16] Not including portfolio managers.
[17] Bank of International Settlements (2002) – Statistics on payment in the Group of Ten countries.

Figure 2.10

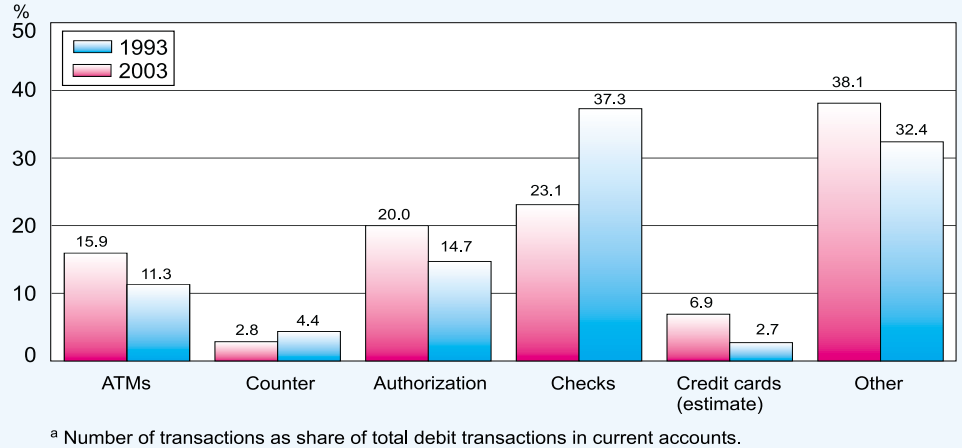
A. Cash Withdrawals from ATMs vis-à-vis Cash Withdrawals at Counter,[a] 1993-2003



B. Debits by Check vis-à-vis Substitutes: Debit by Authorization and Debit by Credit Card,[a] 1993-2003



C. Composition of the Number of Debit Transactions in Current Accounts, by Method of Debiting, 2003 vis-à-vis 1993



[a] Number of transactions as share of total debit transactions in current accounts.

SOURCE: Returns to the Supervisor of Banks.

Table 2.8
Indicators of the Structure of the Banking Industry: An International Comparison, 2002

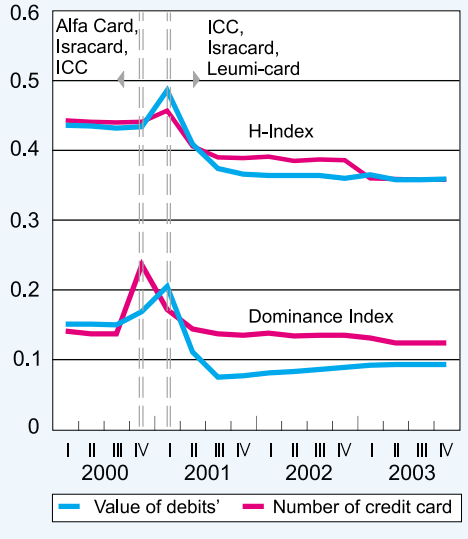
	Number of institutions	Number of branches	Residents per office	Number of ATMs	Residents per ATM	Number of residents per branch and ATM	Number of withdrawals per resident	Average number of transactions per card	Average amount of withdrawal per resident	Average transaction amount[d]
										US$
Israel[a,b]	38	960	6,489	1,322	5,105	2,957	15.9	113.2	82.4	54
Belgium	111	5,550	1,862	7,058	1,464	820	23.0	36.0	97.7	58
Canada	1,500	14,249	2,207	40,004	786	580	45.6	28.7	74.9	65
France	481	26,083	2,348	39,004	1,570	941	19.8	97.9	59.1	48
Germany[c]	2,419	50,426	1,636	50,480	1,634	817	19.7	15.9	158.0	77
Italy	754	29,820	1,946	39,633	1,464	835	10.9	18.8	184.0	94
Japan	2,134	36,795	3,463	114,050	1,117	845	2.9	–	461.0	–
The Netherlands	102	3,022	5,343	7,525	2,146	1,531	29.7	51.6	105.6	52
Sweden	126	1,952	4,569	2,649	3,367	1,939	36.0	69.5	86.2	72
Switzerland	316	2,724	2,698	5,188	1,416	929	21.5	33.7	113.7	125
UK	447	14,500	4,083	40,853	1,449	1,070	38.3	39.6	90.0	72
USA	19,712	79,268	3,641	352,092	820	669	36.7	22.0	68.0	69
Median G10	481	14,500	2,698	39,633	1,464	845	23	35	98	71
Average G10			3,072	63,503	1,567	998	26	41	135	73

[a] 2003 data.
[b] Number of branches, including commercial banks, merchant banks, mortgage banks, investment finance banks, financial institutions and other banks.
[c] Including the branches of Deutsche Postbank AG.
[d] Euro data derived from BIS publications are translated into dollars according to the exchange rate of $0.791 to the euro as of December 31, 2002.
SOURCE: Statistics on payment systems in the G10 countries (2002): Bank of International Settlements. For Israel: Returns to Supervisor of Banks.

5. THE CREDIT CARD MARKET

Three credit card companies, controlled by the large banking corporations, currently operate in Israel.[18] In 2000 Bank Leumi sold its share in ICC to Bank Discount, and the First International Bank's Alpha Card completely left the credit card market.[19] As a result, Bank Leumi established a new credit card company – Leumi Card - based on the operational infrastructure of AlphaCard, and this company began to issue cards to customers in January 2001. The change in ICC's ownership structure, from joint ownership by Bank Leumi and Bank Discount to ownership by the First International Bank and Bank discount, and the establishment of the new company Leumi Card under the ownership of Bank Leumi led to a more equitable distribution of market segments in the credit card market, in terms of the number of cards issued and debit amounts, even though the number of companies operating in the credit card market remained unchanged. The change in the distribution of market segments can be seen from the development of

Figure 2.11
Activity of Credit-Card Companies– The H-Index and the Dominance Index, 2000-2003

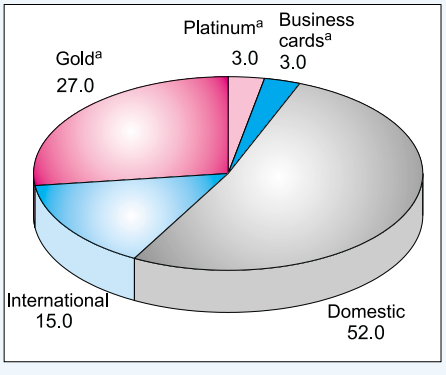


H-Index: [illegible] Dominance Index: [illegible]

SOURCE: Returns to the Supervisor of Banks.

Figure 2.12
Number of Credit Cards, by Type of Card, 2003

(percent)



[a] Business, Gold and Platinum cards are also used for transactions abroad.

SOURCE: Returns to the Supervisor of Banks.

[18] The Isracard conglomerate, which is wholly owned by Bank Hapoalim, Leumi-Card, which is wholly owned by Bank Leumi, and Israel Credit Cards (ICC), which is jointly owned by Bank Discount (51 percent of voting rights), the First International Bank (15 percent of voting rights) and others.

[19] As required by the Supervisor of Banks and the Anti-Trust Commissioner.

Table 2.9
Credit Card Activity, 2002 and 2003

	2002	2003	Rate of change compared with 2002
	(Annual average, millions)		(percent)
No. of cards	3.5	3.6	2.5
No. of transactions	385.5	409.4	6.2
Of which: in Israel	376.3	402.1	6.9
Amount of transactions	90,340	96,045	6.3
Of which: in Israel	85,249	91,400	7.2

SOURCE: Returns to Supervisor of Banks.

the Herfindahl index (the H index) of banking industry concentration, as well as from the development of the Dominance index during recent years (Figure 2.11).[20]

At the end of 2003, there were an average of 3.6 million active credit cards in Israel, a moderate increase in comparison with 2002. Of this number, 52 percent were for local use only (Figure 2.12) and via which 402 million transactions were conducted (Table 2.9). Approximately three quarters of total transactions were at amounts of up to NIS 200 and accounted for only a quarter of total transactions (Table 2.10). The number of transactions per card rose by 4 percent to 111.2, approximately 9 transactions per card per month.

A comparison of credit card activity with the G-10 countries shows that the average amount per transaction in Israel is relatively low, while the number of transactions per credit card is high. The average amount per transaction in Israel is in the region of $54 (NIS 235), and is centered in the lower part of the distribution together with France, Holland and Belgium. In Israel however, the number of transactions per card per year is 113,[21] more than the median (35) and the average (41) for the G-10 countries and only France, where credit cards are used extensively, is close to Israel, with an average of 98 transactions per card (Table 2.8).

The widespread use of credit cards results from the convenience of using them and the protection that the Charge Card Law gives to the customer, by limiting the amount of damage caused to the customer in the event of loss or misuse. Most of the cards issued in Israel are of the deferred debit type, where the card is debited once a month, with the opportunity for conducting transactions in a number of payments.[22] In addition, no minimum payment is stipulated (or if it is, the amount is small) as a condition for payment by credit card at the majority of business establishments. Despite the relatively high

[20] The dominance index equation is $0 \leq D = \sum_{i=1}^{n-1} (S_i - S_{i+1})^2 \leq 1$, where S_i is the market segment of the banking group, and S_{i+1} is the market segment of the next banking group after in size.

[21] The number of transactions per card in Israel and abroad.

[22] The number of payments is sometimes staggered over several years.

Table 2.10
Transactions Conducted via Credit Cards, Distribution by Amount of Transaction, 2002 and 2003

	2002		2003			
			No. of transactions		Amount of transactions	
	No. of transactions	Amount of transactions	Amount	cumulative (%)	Amount	cumulative (%)
Up to 50	21.8	682	23.4	23	726	3
From 50 to 100	23.6	1,743	24.4	47	1,805	11
From 100 to 200	25.9	3,709	26.5	74	3,832	27
From 200 to 500	17.3	5,189	18.7	92	5,581	52
From 500 to 1,000	4.8	3,187	5.0	97	3,380	66
Above 1,000	2.9	7,811	3.0	100	7,838	100

SOURCE: Returns to Supervisor of Banks.

commission charge, some businesses prefer and actually encourage the use of credit cards due to the deterioration in the payments record in the economy, as reflected by the number of returned checks in the banking system (Table 5.4). All these factors are an incentive for conducting a high proportion of purchases by credit card. In Israel credit cards therefore appear to serve as a good substitute for cash and other means of payment compared with the situation in other Western countries. As stated, this phenomenon explains, even if only partially, the differences in other international comparative data such as the number of residents per ATM and the number of residents per branch, for which the values in Israel are particularly high by international standards (Table 2.8).

The credit card companies are mainly exposed to operational risks and to credit risks. The majority of operational risks are risks relating to the misuse of credit cards, such as forgery and theft. In order to protect themselves against these risks, the credit card companies employ sophisticated computer systems that present the manner in which a customer uses a card. The systems provide an indication of atypical uses or exceptional uses by the customer. In 2002 expenses in respect of the misuse of credit cards totaled NIS 45 million, 33 percent less than in 2002. It can be assumed that the credit card companies' application of these technologies contributed to the reduction on expenses in respect of card misuse.

Credit risk in the usage of credit cards is the risk that customers holding credit cards will fail to adhere to their obligation to pay for the transactions that they conducted. The card issuer bears the credit risks in the card, and determines the credit line in it. Since the banks issue most credit cards, the banks bear the principal element of the credit risk in respect of these cards. The banks detail the risk in this area in their periodical reports, in the loan-loss provision and in the classification of problem loans in respect of the credit card user population. With respect to the cards that the credit card companies issue at their own responsibility (10 percent of all cards), it should be noted that an increase was recorded in the loan-loss provision and the balance of debt in arrears, by 59 percent and 27 percent to NIS 27 million and NIS 70 million respectively compared with 2002.

Appendix 2.1
Sales of the means of control, ownership replacement and other structural changes, January 2001 to June 2004

In October 2001 the license of the business development bank Leumi Business Development Bank was rescinded.

In December 2001 the Union Bank completed the purchase of Carmel Mortgage and Investment Bank, and that bank's license was rescinded.

In April 2002 the large-scale embezzlement by an employee of the Trade Bank was exposed, leading to the seizure and liquidation of the bank.

In July 2002 the financial institution license of Leumi Finance Co. was rescinded.

In September 2002, as the result of large losses in the credit portfolio and depositors' sensitivity following the collapse of the Trade Bank, the Industrial Development Bank encountered severe liquidity difficulties. Due to this development, the Bank of Israel extended the bank a special credit line, and the government (which has a holding of over 50 percent in the bank) resolved to gradually realize the bank's asset and liability portfolio until the bank's license is rescinded and the bank is closed.

In January 2003 the license of the investment finance bank Leumi Industrial Bank was rescinded.

In February 2003 under a purchase offer from December 2002, Bank Hapoalim purchased the entire holding in Maritime Bank. At the end of June 2003, Maritime Bank was merged with Bank Hapoalim and ceased to exist.

In May 2003, as part of the transaction for the purchase of IDB Holding Co., Yitzhak Dankner relinquished his means of control in Bank Hapoalim and the share of the rest of the Dankner family that remained with a core of control, fell to 3 percent. Concurrently, the share in the core of control of the Arisson family increased by 11.34 percent (the total core of control is 20 percent of the means of control in the bank)

In September 2003 the transfer of control in FIBI Holdings Ltd., owner of the control in the First International Bank of Israel Ltd. from Palimon B.V., owned by Safra, to the Bino-Liberman group was completed.[23] FIBI holds 48.3 percent of the equity and 67.25 percent of the voting rights in the First International Bank.

[23] The group includes Tzadik Bino, Helen and Michael Abeles, Lee Liberman, Yehoshua Liberman, Kasi Liberman-Harris and Barry Liberman.

In November 2003 Bank Hapoalim purchased from the German bank SEC AG its entire holdings (37 percent) in Israel Continental Bank, and since then Bank Hapoalim has wholly owned Continental Bank.

In December 2003 Bank Hapoalim purchase the entire ownership of Bank Polska Caso Opieki Tel Aviv (Bank PKO). In March 2004 Bank PKO's license was rescinded and it became an auxiliary corporation in the Bank Hapoalim group.

In December 2003 the merger of Bank Mishkan – Bank Hapoalim Mortgages with Bank Hapoalim was completed, and it ceased to exist.

In March 2004 the World Investment Bank was closed and its license was rescinded. The closure process lasted for over a year, as the bank's assets and liabilities were redeemed in an orderly manner and its customers' accounts were closed.

In May 2004 the tender for the privatization of Israel Discount Bank began.

In June 2004 an agreement was signed for the purchase of Investec Bank by the First International Bank.