

Chapter 1

Developments in the Activity and Structure of the Banking System in 2008

The year 2008 marked the turning point in the current business cycle, the beginning of the downward phase, and the end of the upward phase of the cycle that started in 2003, following the slump of 2001 and 2002.

Developments were not uniform during the year: in the first quarter the economy continued to expand at a rapid rate. The composite state-of-the-economy index continued to rise, and the unemployment rate continued to fall. In the second and third quarters there was a marked slowdown in the rate of growth: the composite index declined significantly, and the decline in the rate of unemployment also slowed. In the fourth quarter GDP began to contract, and unemployment began to rise.

Most of the changes in the economic trends originated abroad. The first indications of the change appeared in the money and capital markets, and these were followed later by its expressions on the real side, such as a fall in exports and an increase in the number of unemployed workers. Israel's economy, a small and open one, is greatly affected by developments abroad, and particularly by those in the advanced economies. Nevertheless, unlike the situation in most of the advanced economies, Israel's financial and banking systems did not constitute the focal point of the shocks, but certainly felt them, and to a not inconsiderable degree. First, the banks were affected by the steep drop in the value of their tradable assets (their nostro securities portfolio), which at the end of 2007 was almost three times their equity. The banks whose profitability and robustness suffered the greatest impact were those that deliberately adopted a business strategy that exposed them to assets which later turned out to have relatively high risk. Thereafter, as the signs of the recession became more evident, particularly in the last quarter of 2008, the banks were affected by fall in the quality of the credit portfolio and the steep increase in the loan-loss provision, which impacted on their business expenditure and increased the systemic risk.

The economic developments strengthened the centrality of the banking system in the economy, and led to a change in the mix of banks' activity, which reflected a return to the classic role of financial intermediation, i.e., an increase in deposits in banks together with an increase in bank credit. Thus, for the first time in several years, most of the economy's credit requirements were supplied by the banking

system, and not by nonbank sources. This re-intermediation is the reverse of the disintermediation process in which the classic bank function of intermediation has been declining in the last few years. It is doubtful whether this is a long-term trend change, as in the last cyclical recession, in 2001, classical financial intermediation by the banks also increased, but only temporarily.

The notable increase in bank credit, while interest on it remained relatively stable despite the reduction in the monetary rate, reflects a new equilibrium resulting from the increased demand (a move of the demand curve to the right and upwards) due to the drying up of nonbank credit sources (mainly in the last quarter of 2008) and the decline in the policy rate, partly offset by an increase in borrower risk. Business sector demand for bank credit did not rise uniformly during the year, but strengthened as the nonbank sources diminished. The increase did not encompass the whole of the business sector, but was heavily concentrated among the larger companies, which are taken to be less risky, whereas credit to small and medium enterprises (SMEs), considered to be more risky, stopped increasing as early as in the second quarter of the year. Credit to households (both consumer and housing credit) increased considerably, but in the fourth quarter housing credit fell steeply, and consumer credit also started to contract.

As bank credit increased, so did the public's deposits in banks. We consider this development, which incorporated individual depositors and institutional investors managing long-term savings, to express a decline in risk appetite among the different economic units.

A direct extension of the re-intermediation that occurred in 2008 both on the credit side and on the deposit side, against the background of the significant increase in borrower risk, in the last quarter of 2008 the banks exerted greater market power on their customers with regard to credit, particularly on businesses, but also on households.

In sharp contrast to the marked changes in the structures of financial systems in the advanced economies, the nature and extent of which it is too soon to assess, there were no significant changes to the structure of Israel's financial system in 2008. The few changes that took place were the extension, on a moderate scale, of long-term trends that started several years ago, such as the merging of mortgage banks with their parent companies, and the broadening of the central part of the distribution of the market segments of the system, due to the spinning-off of the ownership of two small banks from a large bank and their purchase by medium-sized banks.

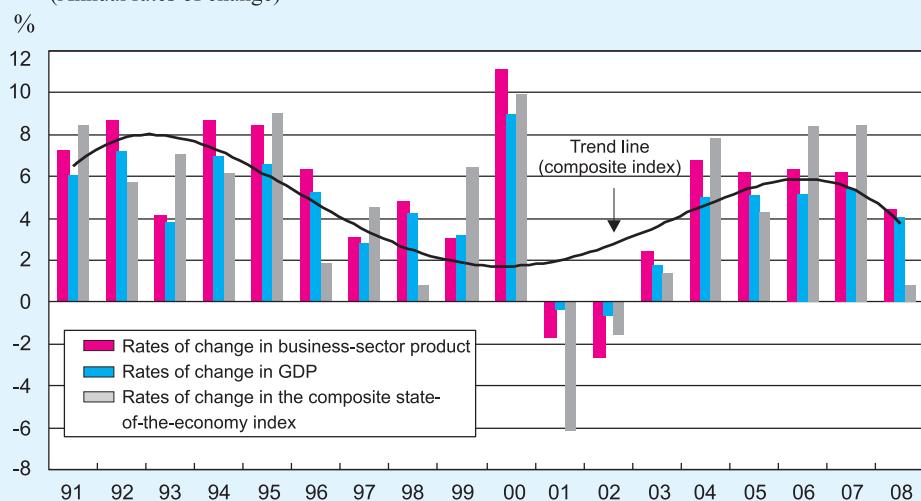
1. THE BACKGROUND—MACROECONOMIC DEVELOPMENTS WORLD WIDE AND IN ISRAEL

Israel's economy, a small and open one, is greatly affected by developments world wide, and in particular by those in the advanced economies. The effects are expressed via the capital markets and via the demand for Israel's goods and services, among other things, in both the expansionary and the contractionary phases of the business cycle.

In the first three quarters of 2008 the economies of the advanced economies showed signs of weakness; then, in the fourth quarter, their situation deteriorated rapidly and they entered a severe recession. The Dow Jones index in the US, which over the whole of 2008 fell by an average of 15 percent, plunged by 20 percent in the fourth quarter. GDP in the advanced economies grew by 1 percent over the whole of 2008, but in the fourth quarter contracted sharply, by 6.4 percent. US imports declined over the year as a whole by a moderate 3.3 percent, but in the last quarter slumped by almost 16 percent.¹

It did not take long for the effects of the global developments to be felt in Israel. Business sector product, which over the whole of 2008 grew by 4.3 percent, contracted in the fourth quarter by 1.2 percent; exports excluding diamonds increased by a buoyant 7.2 percent over the year as a whole, but in the fourth quarter they fell by more than

Figure 1.1
Annual Changes in GDP, Business-Sector Product and the Composite State-of-the-Economy Index, 1991-2008
 (Annual rates of change)



SOURCE: Based on data from the Central Bureau of Statistics.

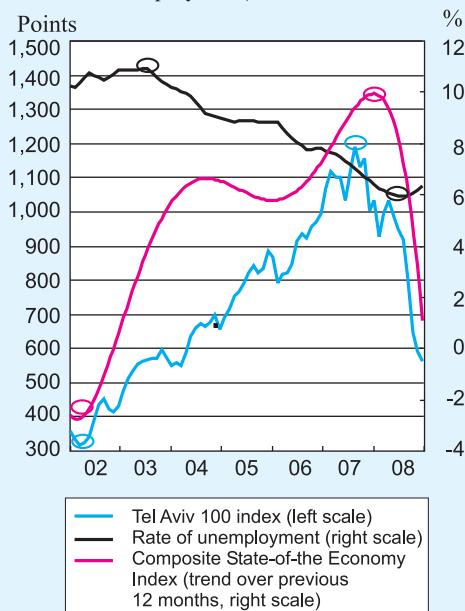
¹ See the Bank of Israel Annual Report, 2008, Table 2.2 (p. 45), Global Developments.

30 percent. Gross domestic fixed investment, which gives rise to most business sector demand for credit, increased by 4.6 percent over the year, but was at a standstill in the fourth quarter; private consumption, part of which is financed by bank credit, followed a similar path, increasing in the whole of 2008 by 3.6 percent, but declining at the same rate in the last quarter.² Thus, the upward phase of the current business cycle ended in 2008, a phase that had started in 2003 (Figure 1.1).

A more detailed analysis of the macroeconomic data shows that as in previous business cycles, the various indications of a trend change do not occur at the same time: the financial changes took place before the real ones. The first signs were those evident in the money and capital markets, whose performance, taken here to be represented by the Tel Aviv 100 index, started to decline in 2007:Q4.

Later (after a four-month lag) the signs of a slowdown started appearing on the real side of the economy, with the composite state-of-the-economy indicating weakness:

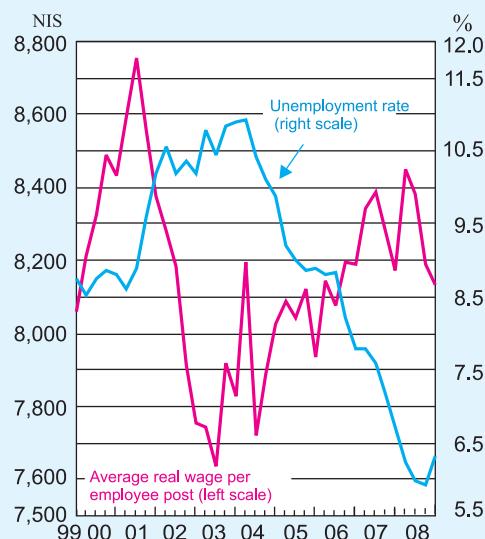
Figure 1.2
Financial and Real Indices over the Business Cycle, 2002-08
 (Financial Index—the TA-100 Index; Real Indices—the Composite State-of-the-Economy Index, and the Rate of Unemployment)



SOURCE: Based on data from the Central Bureau of Statistics, the Tel Aviv Stock Exchange and the Bank of Israel

Figure 1.3
Major Developments in the Labor Market—Unemployment and Average Real Wage per Employee Post, December 1999 to December 2008

(Quarterly data, seasonally adjusted, wages at December 2007 prices)



SOURCE: Based on data from the Central Bureau of Statistics.

² Ibid., Table 2.3 (p. 51) and Table 2.4 (p. 52).

it's rate of change changed from rapid expansion of about 10 percent over the previous twelve months to almost zero towards the end of 2008 (Figure 1.3). In the last quarter of 2008 the labor market started showing signs of weakness, with the unemployment rate rising quickly, from 5.9 percent in 2008:Q3 to 6.3 percent in 2008:Q4 (Figures 1.2 and 1.3). This order of developments occurred also at the beginning of the business cycle, at the end of 2002 and the beginning of 2003: the Tel Aviv 100 index reached a trough in January 2003, the composite index reached its lowest level two months later, and unemployment peaked even later, in March 2003 (Figure 1.2).

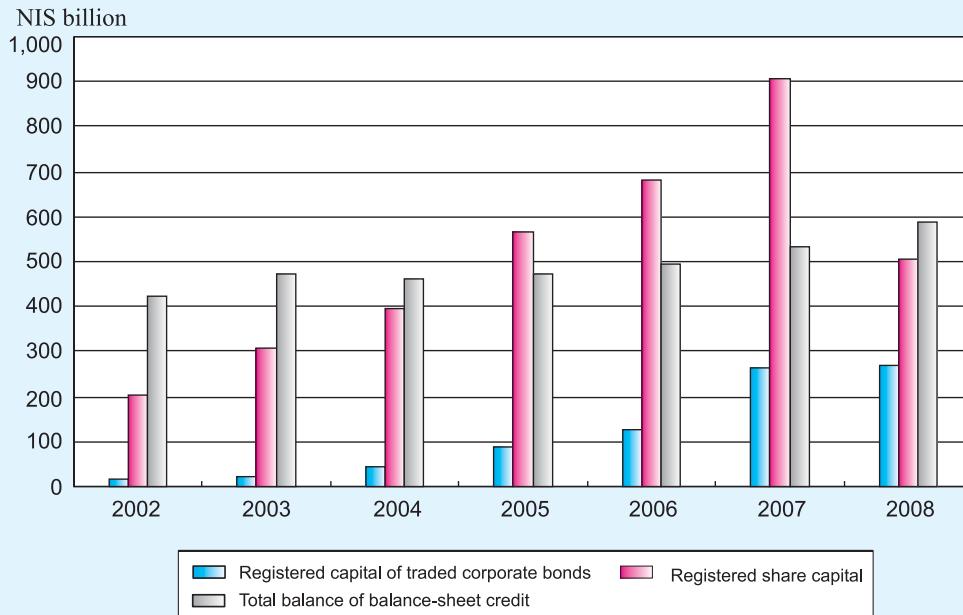
Following the marked increase in the risk premium required from borrowers in the capital market, the ability of the business sector, particularly of small and medium enterprises, to raise capital from nonbank sources declined during the year.^{3,4} Despite

³ See Section 4 below in this chapter.

⁴ Ruthenberg and Zilberberg foresaw this. They wrote, "It was found abroad that only especially good companies will continue to issue securities during a slowdown in economic activity, while the poor companies and some of the good ones will increase their demand for bank credit. Our assessment is that the situation in Israel would be similar." D. Ruthenberg and Zilberberg M., *Characteristics of companies with indebtedness to banks that issued bonds on the Tel Aviv Stock Exchange in the last few years*, Discussion Paper 08.01, March 2008, Research Unit, Bank of Israel Banking Supervision Department.

the continued expansionary trend of the turnover in corporate bonds on the Tel Aviv Stock Exchange (TASE) (Figure 1.4), total capital registered for trading of corporate bonds did not change in real terms (Figure 1.5). Moreover, the amount of capital raised from debt sources declined continuously during the year, until it almost reached zero in 2008:Q4. In the first quarter of 2008 there were 29 issues of corporate bonds issued to the public and institutional investors, totaling NIS 6.6 billion; in the second quarter the number of issues fell to 17, totaling NIS 2.9 billion; in the third quarter the numbers were down to only 7, and NIS 1.1 billion respectively; and in the last quarter there was just one issue, of NIS 0.1 billion.

Figure 1.5
Registered Capital for Trading of Corporate Bonds and Shares Traded on the Tel Aviv Stock Exchange, and Balance of Bank Credit to the Public,^a 2002-08



^a The balance of balance-sheet credit for 2003 and 2004 includes Mishkan and Tefahot banks.

SOURCE: Based on data of the Tel Aviv Stock Exchange and banks' financial statements.

2. PRINCIPAL DEVELOPMENTS IN THE INDICES OF BANKING ACTIVITY

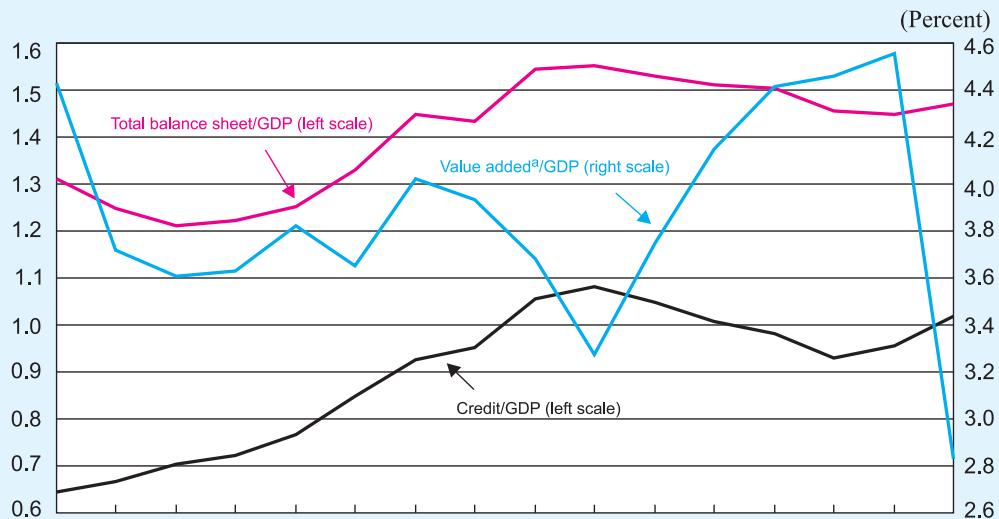
The share of banking activity in total economic activity, its changes over time and viewed from an international perspective are generally measured by means of two types of index that reflect the output of the industry: The first relates to balance sheet data, such as the ratio of the balance sheet of the whole banking system to GDP, or of total bank credit to GDP; the second relates to flow data such as the ratio of the banking

system's added value (production expenses and profit) to GDP (which is also a flow). This ratio is different from the other two, as it gives expression to income deriving from banks' off-balance-sheet activities (futures transactions, guarantees, etc.) which have increased in the last few years.⁵

In 2008 the various indices of banking activity showed contradictory developments. Whereas the two balance sheet indices (the balance sheet/GDP and credit/GDP ratios) indicate an increase in the share of banking activity in total economic activity, the third index, added value/GDP, shows a sharp decline (Figure 1.6).

Although this contradiction between the indices is quite striking, the actual development itself is not surprising; it is characteristic of periods of cyclical recessions, and occurred in the previous one, in 2000–02: while banking activity as measured by the balance sheet indices continued to expand, the ratio of the banking system's added value to GDP declined steeply. The difference can be explained by the effect of the downward phase of the business cycle on banks' balance sheets and profits: a recession increases the public's demand for bank credit, mainly due to the drying up of sources

Figure 1.6
Indices of Banking Activity of the Five Major Banking Groups Relative to GDP, 1993–2008



^a Value added is the sum of net ordinary before-tax income, salaries and related expenses, general expenses, maintenance and depreciation on buildings and equipment.

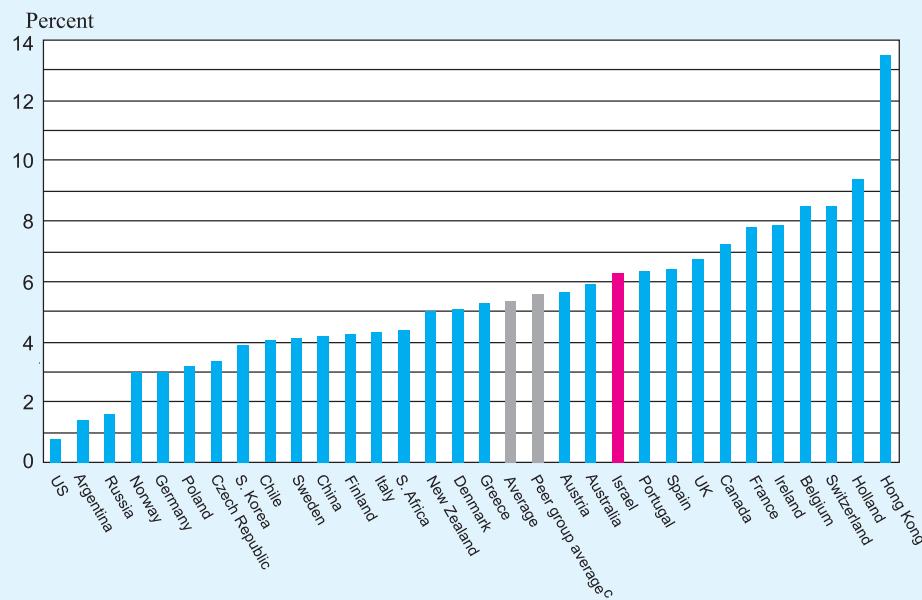
SOURCE: Based on banks' financial statements and data from the Central Bureau of Statistics.

⁵ For a fuller discussion see D. Ruthenberg (2002), *Bank Management in Israel: Asset, Liabilities and Risk Management*, Keter Publishing Co., pp. 53–54 (Hebrew).

of nonbank credit (the substitution effect),⁶ and thus boosts the role of the banking system in economic activity. On the other hand, a recession considerably erodes banks' profits, mainly because of the increase in loan-loss provisions and losses on the banks' nostro securities portfolios, and hence reduces the system's added value by more than the reduction in GDP.⁷

An international comparison of the share of added value of the banking system in GDP and the ratio of balance sheet credit to the public to GDP in 2007,⁸ (a boom year in the different economies) shows that according to both indices Israel's banking system

Figure 1.7
Value Added^a as Share of GDP 2007, International Comparison^b



^a Value added is the sum of net ordinary before-tax income, salaries and related expenses, general expenses, maintenance and depreciation on buildings and equipment.

^b In each country the optimal number of banking groups was chosen, as a function of the structure and size of the banking sector. In general, values were based on the 10 largest banking groups, except for: the US, which was based on the 50 largest banking groups; Chile, Portugal, and South Korea, on the seven largest banking groups; Israel, South Africa, Finland, Belgium, and the Czech Republic, on the five largest banking groups; and New Zealand, on the four largest banking groups.

^c Israel's peer group consists of eight similar countries in terms of size of GDP and banking system: Belgium, Denmark, Finland, Greece, Ireland, Norway, Portugal, and South Africa.

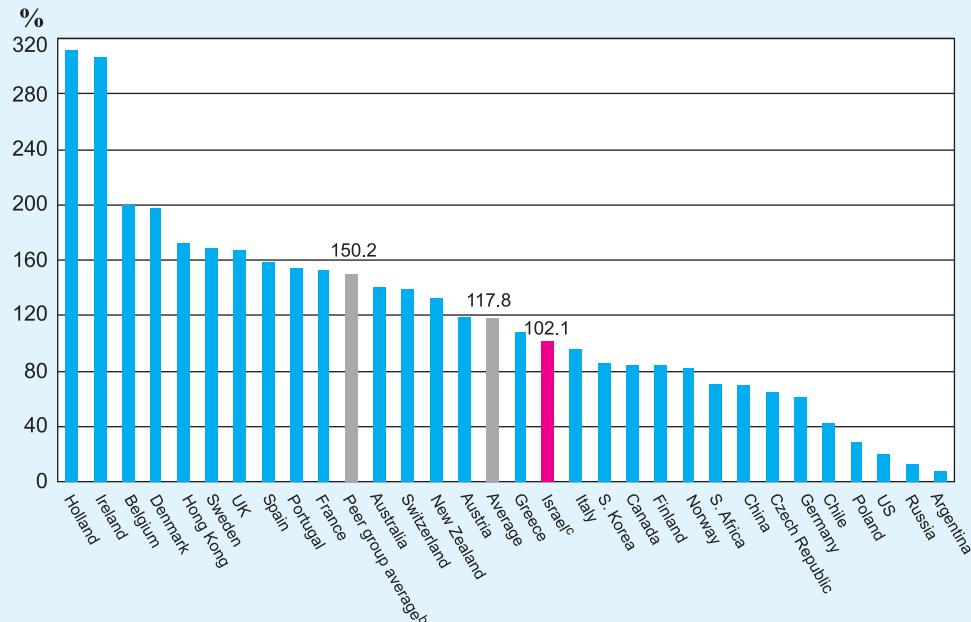
SOURCE: Based on data from Bankscope, and the IFS database of the International Monetary Fund.

⁶ See Section 1 above and Sections 3 and 4 below in this chapter.

⁷ A fuller discussion of this point—the link between the business cycle and banks' financial results—appears in Chapter 2 of this Survey.

⁸ The lack of availability of international data does not allow a more up-to-date comparison, for 2008, to be performed.

Figure 1.8
Balance-Sheet Credit to the Public as Share of GDP in Selected Banking Systems,^a 2007



^a In each country the largest ten banking groups were chosen, except for the US, for which the largest fifty groups were included, and South Africa, Israel, New Zealand, Finland and the Czech Republic, for which the largest five groups were included.

^b Israel's peer group consists of eight similar countries in terms of size of GDP and banking system: Belgium, Denmark, Finland, Greece, Ireland, Norway, Portugal and South Africa.

^c For Israel the share is calculated from published financial statements and data from the Bank of Israel Research Department.

SOURCE: Calculation Based on Bankscope.

is similar in size to that of countries with similar GDPs and banking system structures (such as Belgium, Denmark, Finland, Greece, Ireland, Norway, Portugal and South Africa) (Figures 1.7 and 1.8).

The difference between Israel and other countries, measured via the index of the ratio of balance sheet credit to GDP, widened during 2007, as the ratio rose in the other countries by more than it did in Israel.⁹ That said, such international comparisons must be treated with great caution, because of the significant changes that banking systems around the world underwent in 2008 as a result of the global financial crisis in which banks in many advanced countries feature very prominently—changes which it too early to assess.

⁹ See Figure 1.8 here and Figure 1.6a, on p. 8 in the Annual Survey of Israel's Banking System 2007.

3. THE STRUCTURE OF ISRAEL'S BANKING SYSTEM

The crisis in the world's financial systems set in motion structural changes in those systems, the nature and extent of which it is still too early to assess, as at the time of publication of this Survey it appears that the crisis is not yet over. Long-standing investment banks in the US with very large assets until the outbreak of the crisis were closed: some were sold to commercial banks, such as Bear Stearns which was sold to J.P Morgan Chase, and Merrill Lynch which was sold to Bank of America, and the investment bank Lehman Brothers went bankrupt. Banks and other financial institutions in advanced economies around the world, for example Indy-Mac Bank and AIG in the US, Bradford and Bingley in the UK, and Fortis Bank in the Netherlands and Belgium, were completely nationalized, and others, such as Citibank and Bank of America in the US were partially nationalized.

In stark contrast with changes that took place in most financial systems in the advanced economies, Israel's financial system did not undergo significant changes in 2008, and the few changes that did take place were a continuation in small measure of a trend that started several years ago. Thus, Adanim Mortgage Bank was merged with Mizrahi-Tefahot, its parent bank, and two small banks, Yahav and Massad, were sold by a large group, Hapoalim, to medium-sized banking groups, Mizrahi-Tefahot and the First International respectively.

A more detailed description of the developments in Israel's banking system in 2008 follows, in the context of the long-term trends, and the structure of the system and its competitiveness are analyzed by means of several generally accepted indices.

a. The structure of the banking system and the range of services it offers

In the last few years Israel's banking system has been undergoing a slow, moderate process of mergers: small banks are being bought by large and medium-sized banks, in order to take advantage of economies of scale and economies of scope.¹⁰ Thus, nearly all mortgage banks were merged with their parent companies: Bank Mishkan was merged into the Hapoalim group, Bank Tefahot and Bank Adanim were merged with the Mizrahi group, and the First International Mortgage Bank was merged with its parent company. In the last two years special-purpose banks changed ownership: Bank Massad, Bank Yahav and Otsar Hahayal Bank were taken over from the Hapoalim group by medium-sized banks. These changes ought to reinforce the middle part of the composition of the banking system, as it strengthens the medium-sized banks at the expense of the large ones, thereby increasing competition in the banking system. It appears that some, albeit

¹⁰ For a broader discussion see D. Ruthenberg (2002), *Bank Management in Israel: Asset, Liabilities and Risk Management*, p. 35, Keter Publishing (Hebrew); D. Ruthenberg (1994), The Optimal Structure of Israel's Banking System in Theory and Practice, Bank of Israel Banking Supervision Department, Banking Review No. 12, 49–79 (Hebrew); and Y. Landskroner, Ruthenberg, D. and Zaken, D., (2005), Diversification and performance in banking. *The Israeli case*, Journal of Financial Services Research 27(1), 27–49.

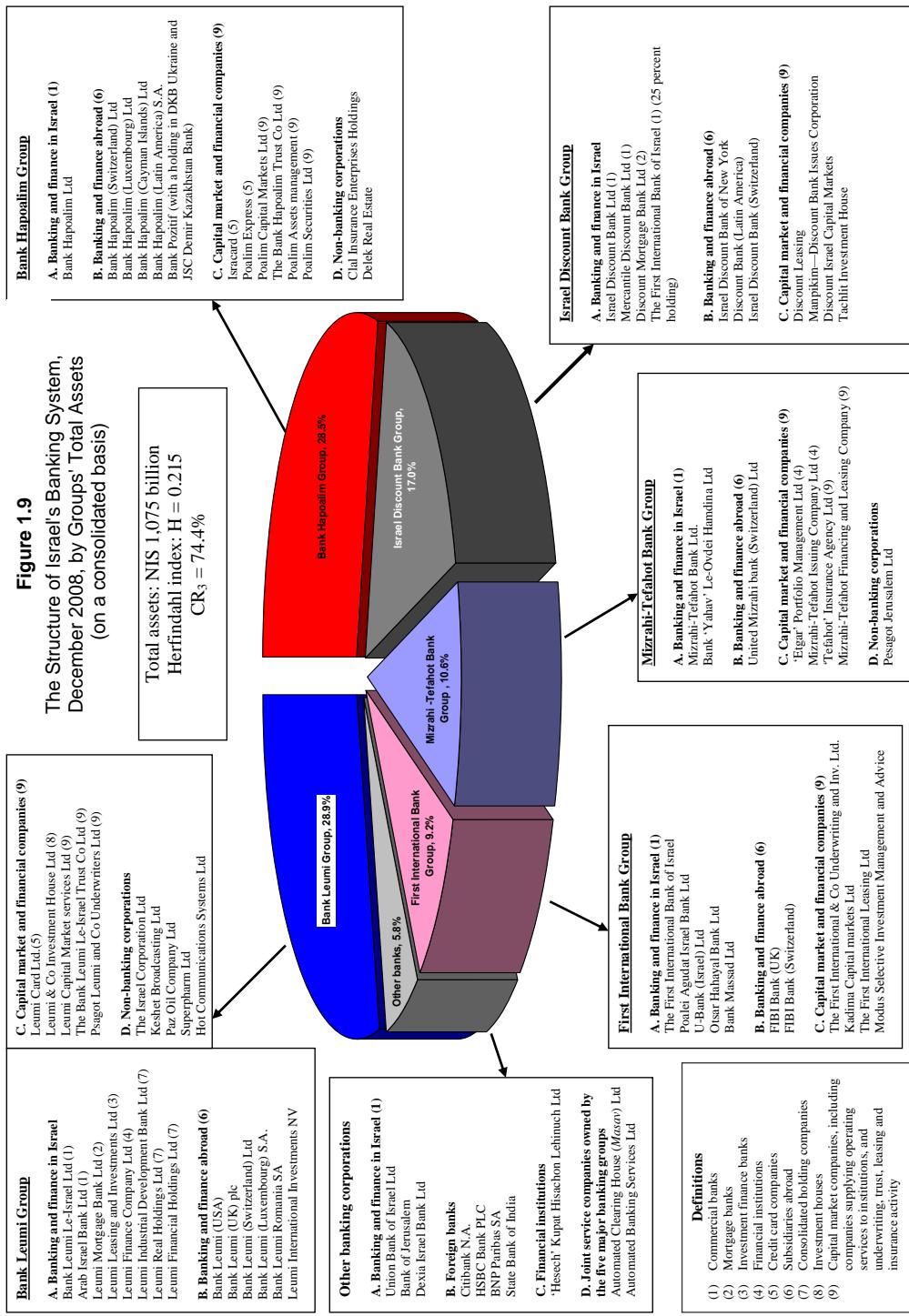
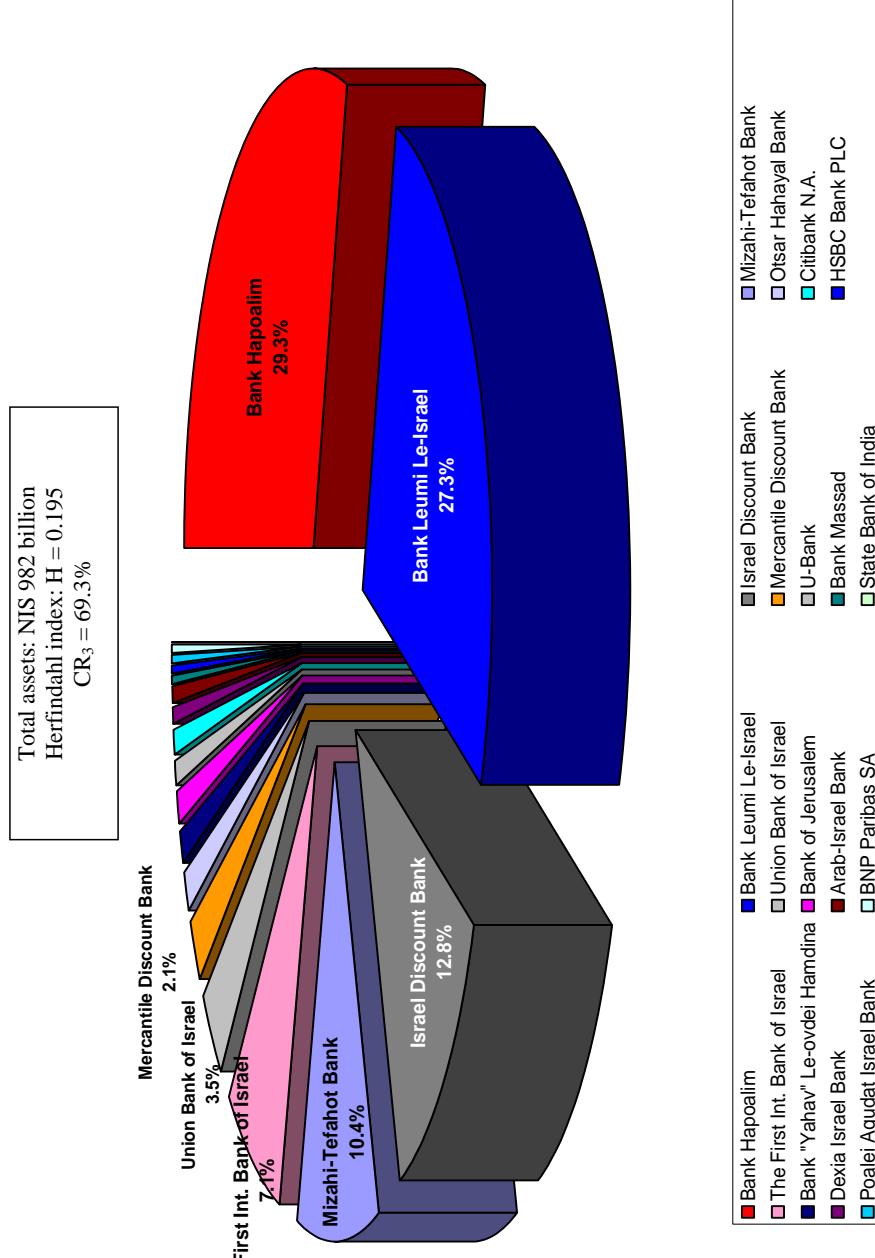


Figure 1.10

The Structure of Israel's Banking System, December 2008, by Total Assets of Individual Commercial Banks (on a non-consolidated basis)

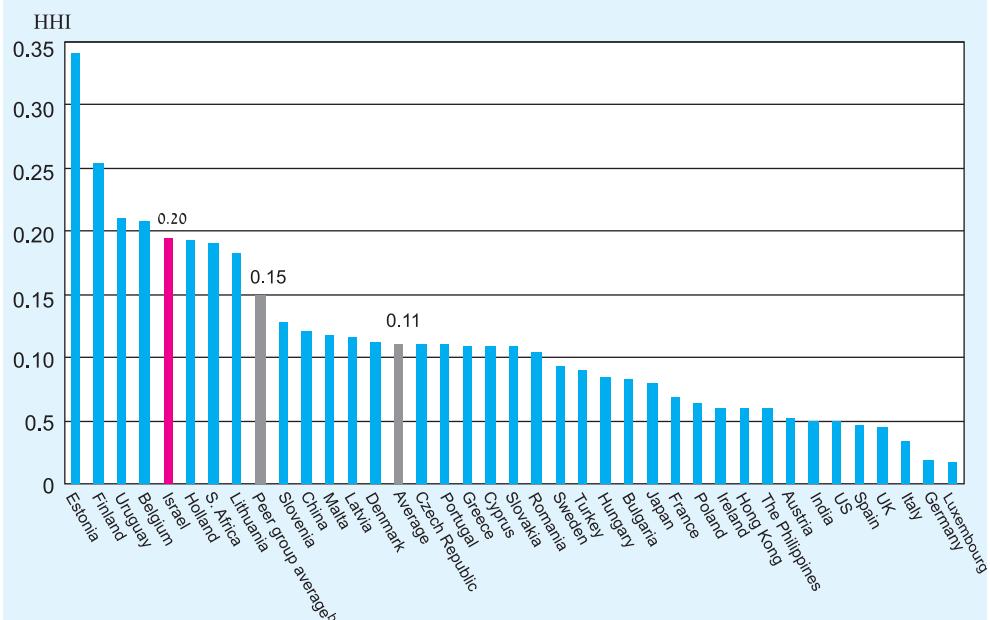


weak, signs of this are visible in the slow downward trend in indices of concentration (H and CR_2) evident since the beginning of 2006 (Figure 1.12). In 2008 the financial results of Bank Yahav were consolidated with those of Mizrahi-Tefahot, and Otsar Hahayal was consolidated for the first time with the First International. Towards the end of the year, the board of directors of Mizrahi-Tefahot decided to merge Bank Adanim into the group. In July 2008 the Industrial Development Bank ceased to be a banking corporation, and its license was revoked, in accordance with a plan approved several years ago.

Assuming that there is no competition between the different banks within each of the five major banking groups, whose assets account for 94 percent of the total assets of the banking system, the system consists of five groups (Leumi, Hapoalim, Discount, Mizrahi-Tefahot, and the First International), which include commercial banks, mortgage banks, overseas offices, credit card companies, financial institutions and joint service companies, alongside which there are three independent banks (Union, Jerusalem, and Dexia), and four branches of foreign banks—BNP Paribas, HSBC, Citibank, and State Bank of India (Figure 1.9 and Table 1.1).

Assuming that competition in banking exists also between individual commercial banks, the banking system comprises nineteen commercial banks (Figure 1.10).

Figure 1.11
Herfindahl-Hirschmann Index (HHI)^a--An International Comparison, 2007



^a Calculated from the total assets of individual banks, on a non-consolidated basis.

^b Israel's peer group consists of seven countries whose GDPs and banking systems are of a similar size to Israel's: Belgium, Denmark, Finland, Greece, Ireland, Portugal and South Africa.

SOURCE: The EU Banking Structure Report, Oct. 2008, and countries' banking authorities.

Although the mortgage banks, in addition to their main activity of providing housing loans, also accept deposits and extend non-housing loans ("all-purpose loans," etc.), that activity is not included in Figure 1.10, because it does not constitute real competition with the commercial banks. An international comparison of total banking activity shows that Israel's banking system is more highly concentrated than the average in Israel's peer group countries¹¹ (Figure 1.11).

If we focus on the banking groups, in addition to their classical banking intermediation activity they also operate via their subsidiaries in areas that complement their commercial activities. That said, in the last few years the scope of their activity has contracted, particularly with regard to securities. The main activity complementing their normal banking activity is that in credit card, which has been rising continuously in the last few years. The banks' capital market activity has shrunk very considerably in the last few years, and currently consists mainly of brokerage on securities and financial assets on behalf of their clients, provision of custodian services on securities, portfolio management for non-institutional clients, and underwriting and issuing securities. The contraction of capital market activities is the result of the limitations on investment coming into effect, which greatly restricted the permitted level of holdings, so that banks could not control underwriting companies. At the same time, banks started providing banking and financial services to all capital market players, as well as pension consultancy to the general public.

For many years Israeli banks have owned banking subsidiaries abroad, mainly in the major financial centers. These companies had great difficulty in competing with the large local banks, as a result of which their profits were low. The share of credit to the public in those Israeli subsidiaries was also significantly lower than the share in the local banks, and most of their activity focused on private banking. Their performances were poor, apparently because of high entry barriers, deriving from among other things the fact that there was a strong presence of large foreign banks alongside the local banks which had a long tradition of activity. In the last few years Israel's banks have extended their activity abroad, both because of the contraction of part of their activity in Israel and because of their desire to extend their profit sources, utilizing the advanced knowledge and technology developed in the domestic market. They did this mainly by buying local banks, especially in emerging markets, in the expectation that those banks would be better able to compete with the other local banks. Some of the expansion of banks' activity abroad may be due to their wish to compensate for the decline in their income that resulted from the sale of their holdings in companies operating in the domestic capital market, and from other regulatory directives that restricted their holdings in non-financial companies and underwriting companies. An empirical study of Israel's banking system found that the risk adjusted return on capital (RAROC) achieved by banks that expanded their activities beyond classical banking activity was higher than that of banks

¹¹ Israel's peer group consists of nine countries with economies of similar size to Israel's with banking systems of similar size and degree of concentration: Belgium, Denmark, Finland, Greece, Ireland, New Zealand, Norway, Portugal and South Africa.

that focused only on the latter activity. An index developed by the Research Division of the Banking Supervision Department, described in Chapter 3 below,¹² confirms these findings also for the period reviewed.¹³ In 2008, against the background of the global financial crisis, plans to purchase additional banks in emerging markets were shelved.

b. Concentration and competition in the banking system

(1) Concentration

Concentration in the banking system, which is one of the factors determining its degree of competition, is generally measured using two indexes: the Herfindahl-Hirschman index (H), which is calculated here for unindexed bank credit (which accounts for about 50 percent of total commercial bank credit; Table A1.4), and CR_2 , which measures the market share of the two largest banks (i.e., Hapoalim and Leumi) in total unindexed shekel credit. Concentration in 2008, according to H , remained unchanged from its level in 2007 (0.20). Similarly, there was little change in the concentration of the banking system from 2007 to 2008 according to CR_2 , which stood at about 58 percent at the end of 2008 (Figure 1.12).

(2) Competition

The degree of competition in the Israeli banking system, its trend in recent years and its ranking relative to other banking systems are generally measured using two approaches: The first is the indirect estimator approach, also known as the

Figure 1.12
The Herfindahl-Hirschman (H)
Index^a and Market Share Index for
the Largest Two Banks^b (CR_2)
Calculated from Unindexed Local
Currency Credit, 1993-2008



^a The H-Index is defined as $H = \sum_{i=1}^n \left(\frac{y_i}{Y} \right)^2$

where y_i is the output of bank i (unindexed local currency credit), and Y is the output of the banking industry.

^b CR_2 is the market share of the largest two banking groups.

SOURCE: Based on banks' financial statements and reports to the Supervisor of Banks.

¹² See footnote 10.

¹³ See Table 3.9 below.

Table 1.1

Israel's Banking System
Main Data from the Financial Statements of the Banking Institutions,^a December 2008

		Number of branches ^b	Total assets	Share of total banking system assets	Balance of credit to the public ^c	(NIS billion)	Share of total banking system credit	(NIS billion)	Share of total banking system deposits	(NIS billion)	Share of total banking system deposits										
Hapoalim group																					
Banking corporations	Bank Hapoalim	292	306.8	28.5	222.1	30.2	227.0	228.3	228.3	227.0	27.5										
Bank Leumi group																					
Banking corporations	Bank Leumi Le-Israel	330	310.8	28.9	213.2	29.0	244.8	221.4	221.4	244.8	29.6										
	Arab Israel Bank	221	267.7	144.6	144.6	144.6	144.6	144.6	144.6	144.6	144.6										
	Leumi Mortgage Bank	27	4.8	2.9	2.9	2.9	3.2	3.2	3.2	3.2	3.2										
		11	40.1	39.8	39.8	39.8	7.0	7.0	7.0	7.0	7.0										
Discount Bank group																					
Banking corporations	Israel Discount Bank	233	182.2	17.0	116.8	15.9	139.2	102.3	102.3	102.3	16.9										
	Mercantile Discount Bank	142	125.6	125.6	69.3	69.3	69.3	69.3	69.3	69.3	69.3										
	Discount Mortgage Bank	71	20.4	20.4	14.3	14.3	14.3	14.3	14.3	14.3	14.3										
		4	14.3	14.3	13.7	13.7	13.7	13.7	13.7	13.7	13.7										
Mizrahi-Tefahot Bank group																					
Banking corporations	Mizrahi-Tefahot Bank	157	114.0	10.6	88.0	12.0	91.8	82.1	82.1	82.1	11.1										
	Bank Yahav	122	102.4	102.4	79.3	79.3	79.3	79.3	79.3	79.3	79.3										
		32	11.8	11.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8										
First International Bank group																					
Banking corporations	The First International Bank of Israel	177	98.9	9.2	61.3	8.3	79.9	55.0	55.0	55.0	9.7										
	Bank Otsar Hahayal	83	70.2	70.2	44.6	44.6	44.6	44.6	44.6	44.6	44.6										
	Poalei Agudat Israel Bank	48	13.6	13.6	9.0	9.0	9.0	11.0	11.0	11.0	11.0										
	U-Bank	21	3.0	3.0	1.6	1.6	1.6	2.4	2.4	2.4	2.4										
	Bank Massad	6	8.5	8.5	1.9	1.9	1.9	6.8	6.8	6.8	6.8										
		17	3.9	3.9	2.1	2.1	2.1	3.5	3.5	3.5	3.5										

(cont'd)

Table 1.1 (Cont'd)
Israel's Banking System
Main Data from the Financial Statements of the Banking Institutions^a, December 2008

	Share			Share of total banking system assets	Share			Share of total banking system credit	Share of total banking system deposits
	Number of branches ^b	Total assets	Balance of credit to the public ^c		Share of total banking system	Total deposits of the public	Total deposits of the public		
Union Bank	35	34.1	3.2	18.5	2.5	27.8	27.8	3.4	
Bank of Jerusalem	16	9.3	0.9	7.5	1.0	7.3	7.3		0.9
Dexia Israel	1	5.6	0.5	4.4	0.6	2.6	2.6		0.3
Foreign banks									
Citibank	3	13.1	1.2	4.5	0.6	5.9	5.9	0.7	
HSBC	1	8.4		1.0		3.3			
BNP Paribas	1	3.1		2.1		2.4			
State Bank of India	1	1.6		1.3		0.17			
Total		1,244	1,075	100	736	100	826	100	

^aThe figure relating to the banking group (in bold) is generally larger than the sum of the components listed, because the group figure includes additional assets such as subsidiary companies abroad.

^bIncludes the branches where activity takes place.

^cCredit given in Israel and abroad.

SOURCE: Banks' financial statements and reports to the Supervisor of Banks.

structure approach,¹⁴ which emphasizes the connection between the structure of the banking system and the conduct and performance of the banks. This approach examines the market power of the banks as a measure of performance, using an index based on the relative deviation of the price of the banks' product, i.e., credit, from its marginal cost, i.e., the cost of raising funds, which is in most cases the Bank of Israel interest rate or the inter-bank interest rate. In an environment of perfect competition, price is equal to marginal cost and the market power index will approach zero.¹⁵

The second is the direct estimator approach, also known as the contestability approach, which involves a comparison between the extent of financial intermediation in the banking system, i.e., total bank credit, and the extent of non-bank financial intermediation, i.e., non-bank credit.

According to both approaches, the degree of competition in the banking system declined in 2008. Thus, there was a not insignificant drop in contestability and, at the same time, a significant increase in the concentration of financial intermediation in the banking system, although it is too early to determine whether this represents the conclusion, and perhaps reversal, of the trend towards a diminished role for classical financial intermediation.

In accordance with the indirect estimator approach, use was made of an index of market power. The index was calculated using unindexed shekel credit, which is a good proxy for financial intermediation, while differentiating between banking activity among households and that among firms.

The data indicate that the trend in 2008 was not uniform throughout the year. Thus, the first three quarters were characterized by movements in both directions, with increases in the index during the first few months followed by declines subsequently. During the fourth quarter, there was a jump in market power, particularly with regard to firms. Thus, within three months, the banks' market power over firms increased by 55 percent—from 0.34 to 0.53—to its highest level in ten years. The banks' market power over households also jumped, though by "only" 30 percent—from 0.49 to 0.64—to its highest level in seven years (Figure 1.13).

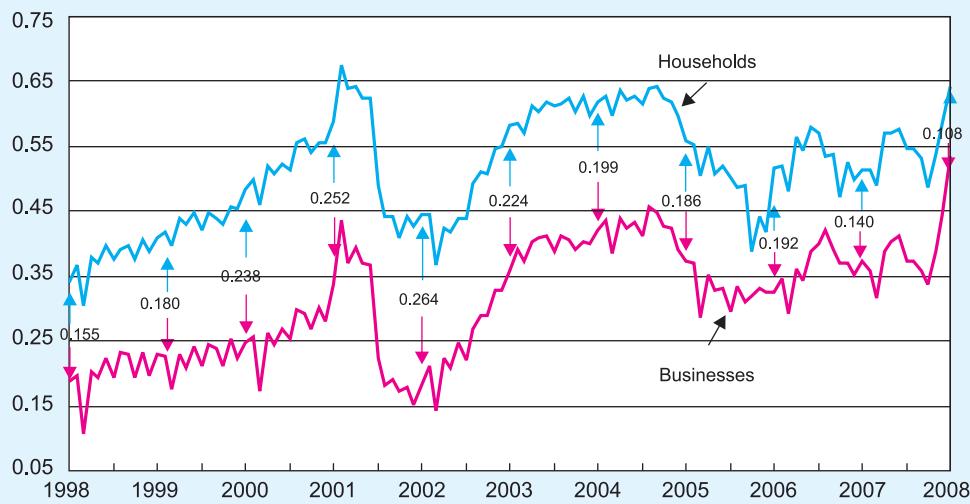
Over time, the banks' market power over households has been greater than in the case of firms, a phenomenon also observed in other countries. It can be assumed that the difference between the two populations is explained by the low bargaining power of households as compared to firms. This is due to the fact that firms have more alternative sources of credit and their costs of moving from one bank to another are lower, since they usually use several banks at the same time.

The banks' market power over their customers—households and firms—is determined by three types of factors: (a) demand factors, which are primarily related to the substitutions effect; (b) supply factors, which are primarily related to credit risk; and (c)

¹⁴ For more details, see David Ruthenberg (2005), "Competition in the banking sector: theoretical aspects and empirical evidence in Israel and abroad," Bank of Israel, Supervision of the Banks, Research Unit, Discussion Paper Series, 05.02.

¹⁵ Ibid., p. 4. Perfect competition implies infinitely elastic demand for bank credit.

Figure 1.13
The Market Power (M) Index^a of the Seven Major Commercial Banks,^b
Businesses vis-à-vis Households in the Unindexed Local Currency Segment,
December 1998 to December 2008



^a The M-Index is defined as $(R_L - R_M) / R_L$, where R_L is the rate of interest on unindexed local currency credit (including income from credit management fees), and R_M is the inter-bank interest rate.

^b Hapoalim, Leumi, Discount, First International, Mizrahi-Tefahot, Mercantile Discount, and Union.

SOURCE: Based on banks' reports to the Supervisor of Banks.

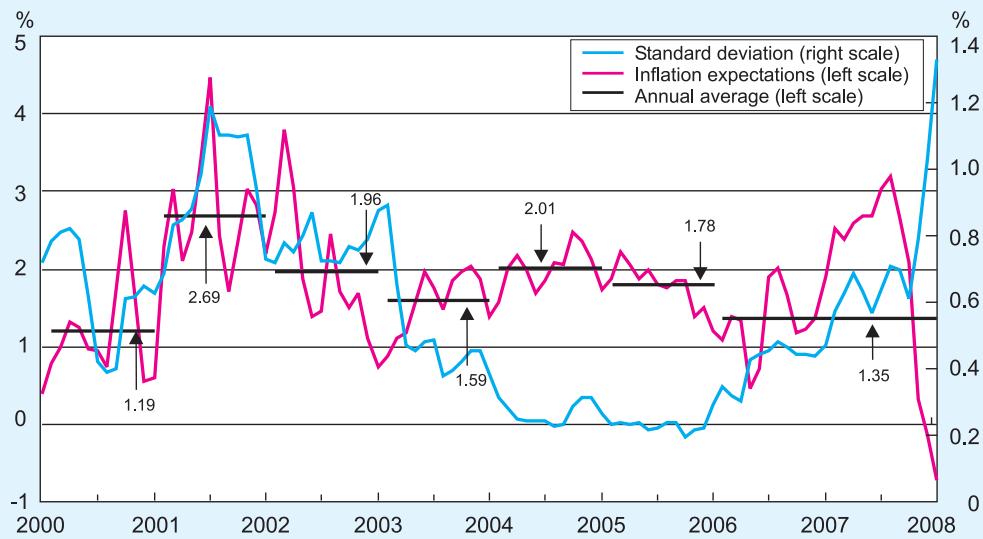
the degree of concentration in the banking system.¹⁶ During 2008, supply and demand factors operated in the same direction, i.e., to increase market power.

Demand factors: This year, issues on the TASE (both shares and bonds) declined significantly by a rate of about 85 percent (Table 1.6). Recall that, in recent years, non-bank sources of credit have been the main alternative to bank credit for firms, particularly large ones. The decline in the availability of non-bank sources of credit during the year, which are only available to firms, acted to increase the banks' market power, particularly over firms. This decline intensified over the course of the year, particularly during the fourth quarter.

Supply factors: credit risk, which is measured by the proportion of the loan-loss provision, rose significantly this year, though at different rates for households and firms. Thus, the proportion of the loan-loss provision for the economy as a whole rose sharply this year from 0.19 percent to 0.45 percent while among households it rose by only 5 percentage points to 0.28 percent (Table 3.3).

¹⁶ For more details, see David Ruthenberg (2005), "Competition in the banking sector: theoretical aspects and empirical evidence in Israel and abroad", Bank of Israel, Supervision of the Banks, Research Unit, Discussion Paper Series, 05.02.

Figure 1.14
One-Year Inflation Expectations, Annual Average and Standard Deviation,^a
December 2000 to December 2008



^a The standard deviation at any point in time is calculated from the last twelve monthly observations.

SOURCE: Based on data from the Bank of Israel Monetary Department.

According to the direct estimator approach, there was a significant decline this year in contestability from non-bank entities, both with respect to the banks' liabilities (deposits) and their assets (credit). Contestability with respect to the public's assets, which is measured by the proportion of financial assets held by the public outside the banking system relative to bank deposits, fell this year for the first time in the last five years (Figure 1.17). This is a result of the decline in total assets held by the public outside the banking system and an increase in total bank deposits. Thus, assets held by the public outside the banking system fell by about one quarter of a billion shekels (which was primarily made up of shares, for which the decline was even larger: more than 50 percent or NIS 222 billion), while bank deposits increased significantly by about 11 percent or NIS 65 billion (Table 1.5 and Figure 1.17).

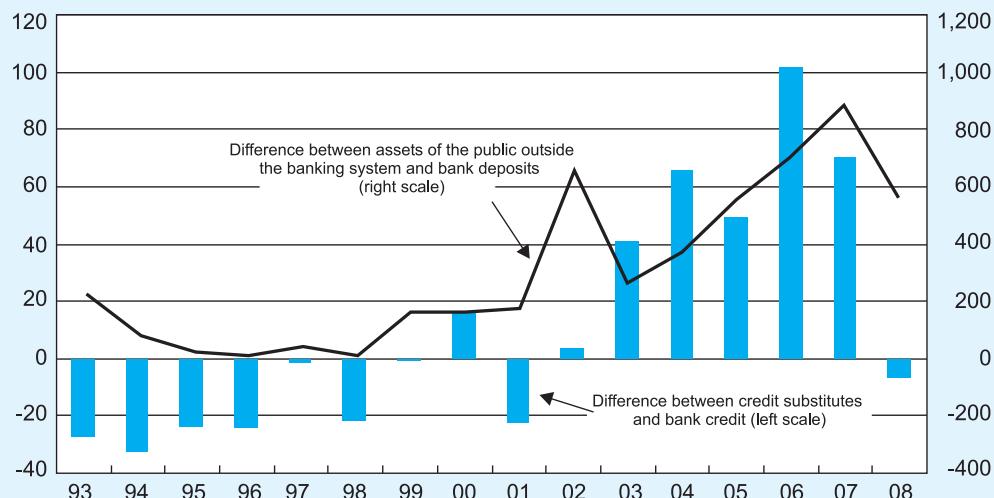
With regard to the public's liabilities to the banks (balance-sheet bank credit), there was a reversal in the trend of contestability, which is measured by the difference between credit alternatives and credit provided by the banks. Thus, for the first time since 2001, total bank credit provided to the public exceeded non-bank credit (Figure 1.11). While bank credit continued to increase in 2008 at a similar rate to that in 2007 (about NIS 36 billion in 2008 and about NIS 34 billion in 2007), non-bank credit shrunk by about 81 percent from NIS 104 billion in 2007 to only about NIS 20 billion this year. Most

of the drop occurred in issues on the TASE (about NIS 47 billion which represents a decline of 84 percent relative to 2007) and in the raising of capital from institutional investors (from about NIS 31 billion in 2007 to close to zero in 2008; Table 1.6 and Figure 1.18).

It is worth mentioning that the decline in competition (i.e., contestability) from non-bank entities also involves an increase in bank risk since it can be assumed that the less-risky firms will in the future return to raising non-bank credit and therefore it will tend to be the credit of riskier firms that remains in the banks' credit portfolio.¹⁷

Another way of directly determining the degree of concentration was developed by Panzar and Rosse.¹⁸ The starting point of their model is the profit function of a representative bank. The bank produces one product, i.e., bank credit, whose price is R_1 (the interest rate on credit) or, alternatively, a variety of banking services whose overall

Figure 1.15
Contestability in the Credit and Deposit Markets, 1993-2008
(NIS billion)



SOURCE: Based on banks' reports to the Supervisor of Banks, the Annual Report of the Commissioner of the Capital Market, Insurance and Savings in the Ministry of Finance, and the Tel Aviv Stock Exchange.

¹⁷ See footnote 4 above.

¹⁸ J.C. Panzar and J.N. Rosse (1987), "Testing for Monopoly Equilibrium," Journal of Industrial Economics 35, no. 4.

price is R_2 (the total rate of return on the bank's assets).¹⁹ To produce this product it uses one source of financing, i.e. deposits, whose price is w_1 (the interest rate on deposits) and two factors of production: human capital whose price is W_2 (the wage per worker) and physical capital (such as rent) whose price is W_3 .

According to Panzar and Rosse's model, a change in the interest rate on credit (according to the intermediation approach) or in the bank's revenue (according to the production approach) that, in equilibrium, is the result of a change in the prices of factors of production constitutes an estimator for the degree of competition. Therefore, the index they propose for measuring the level of competition in an industry is calculated as the sum of elasticities with respect to the prices of factors of production. In the situation of a monopoly or a perfect collusion, an increase in the prices of the factors of production increases marginal cost, reduces the output of the bank in equilibrium, raises the price of the product and, on the assumption that the bank operates in the region in which the elasticity of the demand for credit is greater than unitary, a drop in revenue and in profit. In this case, the index of competition $P-R$ is smaller or equal to zero ($P-R \leq 0$). In contrast, if the industry is characterized by perfect competition, an increase in the prices of the factors of production raises marginal cost, average cost and the firm's revenue in equal proportions, while the bank's output will remain unchanged in equilibrium. Therefore, $P-R=1$ in this case. Any intermediate case is defined as monopolistic competition, in which $0 < P-R < 1$.²⁰

Using data for 1997–2001, the average of the $P-R$ index for a variety of countries was found to be 0.68, which indicates a situation of monopolistic competition.²¹ In Israel,²² the $P-R$ index was estimated at 0.56 based on data for 1997–2003, which indicates that Israel is also characterized by monopolistic competition. However, the index's low

¹⁹ In the banking literature, there are two methods for defining a bank's output: The first is the intermediation approach which views a commercial bank as an entity whose function is to intermediate between surplus units and deficit units. According to this approach, bank output is to be defined as income-producing assets, such as bank credit. The second is the production approach, according to which the role of a commercial bank is to provide customers with a wide variety of account management services. These services include the clearance of checks, transfers from one account to another, execution of payments according to standing orders, execution of payments derived from the use of credit cards as a means of payment, the withdrawal of cash, foreign exchange services, etc. In addition to these, the bank provides its customers with management services for their securities portfolios, financial information services and even a specific type of security service in the form of safes in which to safeguard valuables. And finally, the banks provide trustee services, particularly in the case of inheritance and estates.

²⁰ For further details, see D. Ruthenberg (2002), *Banking Management in Israel: Management of Assets, Liabilities and Risks*, Keter Publishing Ltd., pp. 329–330.

²¹ For more details, see David Ruthenberg (2005), "Competition in the banking sector: theoretical aspects and empirical evidence in Israel and abroad", Bank of Israel, Supervision of the Banks, Research Unit, Discussion Paper Series, 05.02.

²² S. Claessens and L. Laeven (2003), "What drives bank competition? Some international evidence", *Journal of Money, Credit and Banking* 36, no. 3, part 2.

²² See footnote 20.

value relative to other countries, and relative to Israel's reference group, indicates that contestability in the Israeli banking system is lower than in comparable countries.

4. PRINCIPAL DEVELOPMENTS IN BALANCE-SHEET AND OFF-BALANCE-SHEET ACTIVITY

a. General

The total balance sheet of the Israel banking system continued to expand this year and at a rate similar to that in past years (about 5 percent). At the end of 2008, it stood at about NIS 1.06 trillion (Table 1.2). However, there were some significant changes in the composition of the balance sheet this year, which reflected an increase in classic financial intermediation, i.e., the expansion of bank credit and the growth in the public's bank deposits, and which contrasts with the sharp decline in activity involving securities. This represents a reversal of the prolonged trend of disintermediation in recent years. The growth in the banking system's degree of concentration in economic activity (and the increase in the banks' market power over its customers)²³ is a direct outcome of the global financial crisis and the recession in 2008, which led to, among other things, sharp declines in the prices of tradable financial assets and a shortage of non-bank sources of credit, accompanied by an increase in all types of risk (credit risk, market risk, etc.).

On the assets side, the banks' securities portfolio shrank in size, both in terms of value and as a proportion of the balance sheet. At the end of 2008, the securities portfolio totaled NIS 137 billion, as compared to NIS 170 billion the previous year, which represents a significant decrease of 19 percent. Thus, the proportion of the portfolio in the balance sheet fell by 3 percentage points to only about 13 percent, which was the first such drop in many years. The drop in the value of the portfolio was the result of the sharp decline in asset prices and the sale of parts of the portfolio.²⁴ Simultaneous with the decrease in the size of the nostro securities portfolio, which reflects a reduction in non-classical financial intermediation, there was a major increase in bank credit to the public, which is a reflection of increased classical financial intermediation. Thus, total balance-sheet bank credit to the public rose this year by 10 percent, which is its highest rate of growth in recent years, and reached a level of about NIS 732 billion, as compared to NIS 663 billion in the previous year. As a result of this development, the proportion of credit to the public in the balance sheet rose by 3 percentage points to a level of 69 percent, which is similar to the drop in the proportion of the securities portfolio (Table 1.2). This development was also reflected in the provision of bank credit to industries which in

²³ For further details on changes this year in the degree of competition in the financial system in general and in the banking system in particular, see Section 3 of this chapter.

²⁴ For a more in-depth analysis of the banks' activity in securities this year, see Section 5 below.

Table 1.2
The Balance Sheet of Israel's Banking System,^a 2005-08

	At current prices ^b				Distribution				Average balance at current prices		Annual rate of change in the balance at the end of year from 2007 to 2008 (percent)
	2005	2006	2007	2008	2005	2006	2007	2008	(NIS million)	(percent)	
	(NIS million)										
Assets											
Cash and Deposits in banks	122,270	138,889	125,733	125,978	13.3	14.5	12.5	11.9	136,877	119,042	0
of which: Cash ^b	24,865	21,631	23,544	83,326	20.3	15.6	18.7	66.1			254
Deposits in commercial banks	93,411	113,370	99,355	40,007	76.4	81.6	79.0	31.8			-60
Securities	152,906	164,023	170,138	137,475	16.6	17.1	16.9	12.9	168,662	146,861	-19
Credit to the public ^c	603,592	615,883	663,450	731,898	65.6	64.1	65.9	68.9	637,797	696,670	10
of which: Unindexed local currency	232,497	261,713	298,258	359,242	38.5	42.5	45.0	49.1	275,804	331,351	20
CPI-indexed local currency	181,889	176,722	186,084	189,136	30.1	28.7	28.0	25.8	181,303	190,800	2
In or indexed to foreign currency	188,296	176,350	177,485	183,024	31.2	28.6	26.8	25.0	179,132	173,294	3
of which: In dollars	144,909	126,473	118,195	125,597	77.0	71.7	66.6	68.6	124,206	115,773	6
Non-financial items	910	1,098	1,622	496	0.2	0.2	0.1	0.1	1,558	1,225	-69
Credit to the government	3,389	3,247	1,425	2,283	0.4	0.3	0.1	0.2	2,092	2,475	60
Investment in subsidiary and affiliated companies	4,410	3,751	4,981	4,621	0.5	0.4	0.5	0.4	4,447	4,867	-7
Buildings and equipment	11,187	12,099	12,705	13,554	1.2	1.3	1.3	1.3	12,344	13,063	7
Other assets	21,995	22,606	26,493	44,533	2.4	2.4	2.6	4.2	23,943	35,023	68
Total assets	919,748	960,499	1,007,215	1,061,777	100.0	100.0	100.0	100.0	988,124	1,019,970	5

(cont'd)

Table 1.2 (Cont'd)
The Balance Sheet of Israel's Banking System,^a 2005-08

	At current prices ^b				Distribution				Average balance at current prices (NIS million)		Annual rate of change in the balance at the end of year from 2007 to 2008 (percent)
	2005	2006	2007	2008	2005	2006	2007	2008	2007	2008	
Liabilities and capital											
Deposits of the public <i>of which:</i> Unindexed local currency	727,453	759,701	787,928	820,401	79.1	79.1	78.2	77.3	773,762	781,183	4
CPI-indexed local currency	297,092	324,410	355,946	412,952	40.8	42.7	45.2	50.3	340,547	376,628	16
In or indexed to foreign currency <i>of which:</i> In dollars	112,509	104,812	97,531	101,302	15.5	13.8	12.4	12.3	99,561	98,170	4
Deposits from banks	316,678	328,891	332,324	305,572	43.5	43.3	42.2	37.2	331,548	304,969	-8
Government deposits	246,278	253,997	245,999	223,853	77.8	77.2	74.0	73.3	250,214	221,059	-9
Bonds and subordinated notes	22,508	26,180	26,424	20,428	2.4	2.7	2.6	1.9	31,397	27,769	-23
Other liabilities	53,375	51,554	59,257	66,725	5.8	5.4	5.9	6.3	54,721	64,616	13
Total liabilities	868,784	903,013	944,585	999,722	94.5	94.0	93.8	94.2	927,105	957,238	6
Minority interests	1,322	1,549	1,532	1,770	0.1	0.2	0.2	0.2	1,488	1,656	16
Equity	49,643	55,937	61,098	60,285	5.4	5.8	6.1	5.7	59,532	61,076	-1
Total liabilities and capital	919,748	960,499	1,007,215	1,061,777	100.0	100.0	100.0	100.0	988,124	1,019,970	5

^a Consolidated. Includes the five major banking groups (Leumi, Hapoalim, Discount, First International, and Mizrahi-Tefahot), Union Bank, Bank of Jerusalem, and Dexia Israel, but does not include branches of foreign banks operating in Israel. Hence, the data in this table are slightly lower than those in Table 1.1 and in Figure 1.9 in this Review.

^b Including deposits with the central bank.

^c Excluding non-financial items.

SOURCE: Banks' financial statements.

Table 1.3
Ratio of Credit^a to Output, by Industry, 1998-2008

Sector	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Agriculture	1.25	1.46	1.41	0.77	0.71	0.69	0.67	0.54	0.60	0.66	0.66
Manufacturing	1.04	1.27	1.20	1.55	1.59	1.53	1.38	1.32	1.25	1.29	1.17
Construction and real estate	3.07	3.66	4.13	4.53	4.39	4.17	4.04	3.91	3.57	3.70	3.81
Construction	3.08	3.63	4.09	4.35	4.06	3.62	3.57	3.49	3.20	3.07	3.12
Real estate	3.00	3.75	4.26	5.18	5.54	6.25	5.62	5.29	4.74	5.64	5.95
Water and electricity	0.61	0.77	0.85	1.01	1.01	0.75	0.75	0.69	0.72	0.68	0.76
Trade and services	0.75	0.96	0.96	1.03	1.05	1.02	1.04	1.04	0.99	1.07	1.08
Trade	1.08	1.19	1.27	1.36	1.40	1.27	1.24	1.22	1.11	1.12	1.07
Services	0.62	0.85	0.85	0.90	0.92	0.92	0.96	0.97	0.95	1.05	1.09
Hotels and catering	1.60	1.84	1.74	2.39	2.44	2.38	2.15	1.84	1.66	1.58	1.44
Financial services	1.17	2.40	2.55	2.77	2.45	2.58	2.52	2.68	2.85	3.22	3.47
Communications and computer services	0.88	1.14	1.38	1.38	1.10	0.80	0.66	0.62	0.52	0.48	0.51
Transport and storage	0.49	0.82	0.80	0.82	0.88	0.80	0.78	0.77	0.70	0.69	0.70
Total	1.15	1.38	1.36	1.50	1.59	1.43	1.36	1.31	1.25	1.34	1.31

^aCredit is calculated for lending activity in Israel only and includes balance-sheet credit (credit to the public, investment in bonds and other assets in respect of derivatives) and off-balance-sheet credit risk weighted by conversion coefficients for balance-sheet credit (guarantees and other liabilities on behalf of customers, and futures transactions).

SOURCE: Based on reports to the Supervisor of Banks, the Central Bureau of Statistics, and other Bank of Israel data.

previous years had not been major recipients of bank credit, such as the construction and real estate industry (Table 1.3 and Table 3.3 below).²⁵

The expansion of bank credit to the business sector did not occur at a uniform pace over the course of the year. Essentially, its rate of growth increased as sources of non-bank credit diminished in size. The growth in credit also differed between the various types of customers: while bank credit to large firms grew significantly this year and, as mentioned, at a rate that increased as sources of non-bank credit shrunk in size, the growth in credit to small and medium-sized businesses (SMEs), which is considered to be riskier, essentially came to a standstill starting in the second quarter of the year (Table 1.4 and Figure 1.16). This occurred as banks began to ration credit, particularly to this sector. For further discussion of the rationing of credit and its motives and the difference between it and a credit crunch, see Box 1.1 below.

On the liabilities side, the banks recorded an increase of about 4 percent in deposits of the public, which totaled about NIS 820 billion at the end of the year, as compared to NIS 788 billion in 2007, another indication of increased financial intermediation. The composition of the public's deposits also changed this year: while unindexed and CPI-indexed deposits increased significantly, deposits in foreign currencies and those linked to foreign currencies declined in size.

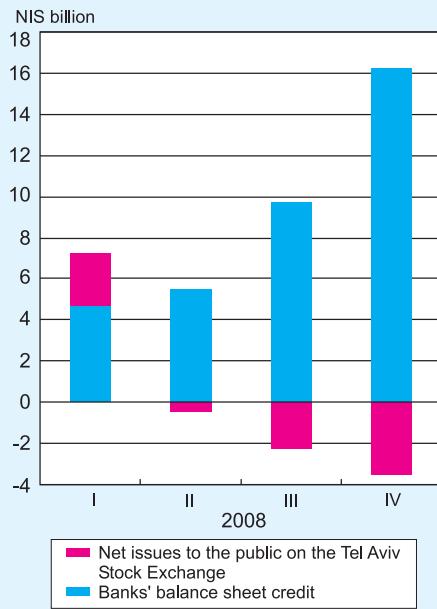
Table 1.4**Distribution of Balance Sheet Credit during 2008: Households, Total Businesses and Small and Medium-Sized Enterprises (SMEs)**

	I/2008	II/2008	III/2008	IV/2008	2008
NIS million					
Total increase in balance sheet credit	10,324	14,251	22,080	16,820	63,475
Households	5,675	8,812	12,359	563	27,409
<i>Of which:</i> Non-housing credit	3,053	3,516	5,305	-1,722	10,152
Housing credit	2,622	5,296	7,054	2,285	17,257
Total businesses	4,649	5,440	9,721	16,257	36,066
<i>Of which:</i> SMEs	1,896	-482	398	355	2,167
Percent					
Total increase in balance sheet credit	1.5	2.1	3.2	2.3	9.4
Households	2.5	3.8	5.1	0.2	12.1
<i>Of which:</i> Non-housing credit	3.4	3.8	5.5	-1.7	11.2
Housing credit	1.9	3.8	4.9	1.5	12.7
Total businesses	1.0	1.2	2.1	3.5	8.0
<i>Of which:</i> SMEs	3.4	-0.8	0.7	0.6	3.9

SOURCE: Banks' financial statements.

²⁵ For further details on credit by industry see Chapter 3: Risks and Capital Adequacy in this Survey.

Figure 1.16
The Change in Banks' Balance Sheet
Credit to Companies, and Issues of
Bonds and Shares to the Public on
the Tel Aviv Stock Exchange, 2008
(at current prices)



SOURCE: Based on banks' financial statements and reports to the Supervisor of Banks.

The banking system's total shareholders' equity decreased this year, though only slightly; however, this contrasts with the consistent upward trend in recent years (Table 1.2). Thus, the banks' shareholders' equity stood at about NIS 60.3 billion at the end of 2008, as compared to about NIS 61.1 billion in the previous year (a decline of about one percent). This was a result of three factors: the minimal net profit achieved by the banking groups this year (only NIS 0.2 billion as compared to NIS 9 billion during both 2006 and 2007; Table 2.1 below); the losses incurred in the nostro securities portfolio that were of a temporary nature (at this stage) and which were recorded to the capital reserve and thus reduced the banks' equity; and the situation in the capital markets, which impaired the banks' ability to raise Tier 1 capital.

Box 1.1

Credit rationing vs. credit crunch

It is necessary to differentiate between credit rationing and a credit crunch. A credit crunch implies a crisis situation involving market failure, which requires the intervention of the authorities. In this situation, the banks are unable to lend even to their best customers, even if they wish to do so, primarily because of a shortage of funds, liquidity problems, problems with capital adequacy or regulatory restrictions. In contrast, credit rationing is a situation in which surplus demand for credit exists even when the interest rate increases. This situation does not involve a crisis and is not an indication of market failure. Nonetheless, due to the heavy economic and social cost of a lack of funds from which to provide credit during the last year, the authorities in Israel decided to partially intervene in the credit market, as occurred in many other countries as well.

Models have been developed in the banking literature that are used to identify various measures that a bank should take in order to differentiate between risky and less-risky customers. Stiglitz and Weiss¹ and Chateau² claim that in a situation of equilibrium the credit market is characterized by credit rationing since the risk in the credit portfolio is influenced by the level of the interest rate. This represents a combination of effects: adverse selection, in which good customers will not be willing to take on credit due to the high interest rates, so that the mix of customers in the credit portfolio becomes riskier; and moral hazard, in which riskier borrowers tend to undertake projects with a lower expectation of success even at high interest rates. The banks, in choosing which customers will receive credit, take into account each customer's probability of repayment and will take measures to identify those customers for whom this probability is at a reasonable level. One of the ways of filtering out risky customers is the level of the interest rate. Thus, customers who are willing to pay high interest rates are classified as risky customers, all else being equal. If excess demand for credit still exists even when interest rates rise, the bank will adopt credit rationing in order to achieve equilibrium in the market.³

The phenomenon described above, i.e., a major expansion of credit to large firms which are perceived as less risky, alongside a standstill in the provision of credit to small and medium-sized firms, which are perceived as being more risky, is therefore to be considered as characteristic of credit rationing.

¹ J.E. Stiglitz and A. Weiss (1981), "Credit Rationing in Markets with Imperfect Information", *American Economic Review* 71 (June), 393–410.

² J.P.D. Chateau (1983), "Credit Rationing as a (Temporary) Suboptimal Equilibrium with Imperfect Information", *European Economic Review* 23 (November), 195–201.

³ For further details, see D. Ruthenberg (2002), *Banking Management in Israel: Management of Assets, Liabilities and Risks*, Keter Publishing Ltd, p. 137.

b. Principal developments in the public's deposits within the banking system

The portfolio of financial assets held by Israeli residents represents the public's potential supply of funds to the banking system. It is the general practice to divide this portfolio into three main parts, which are more or less equal in size.²⁶ The first is composed of tradable financial assets, most of which are managed by portfolio management companies and institutional bodies and some of which are managed directly by the public. This category of assets is composed of shares and bonds (government and corporate) in both Israel and abroad. The second part of the portfolio is composed mostly of long-term savings which are managed by institutional investors (like provident and compensation

²⁶ The public also holds a small part (about one percent) of its assets as cash.

funds, and pension and life insurance funds). The third and non-tradable part of the portfolio is composed of deposits with the banking system (Table 1.5).

There was a significant drop in the value of the public's portfolio of financial assets in 2008, which ended the upward trend that had prevailed since the beginning of the present business cycle's upward phase (from 2003 until 2007). The public's portfolio of financial assets totaled about NIS 1.9 trillion at the end of 2008, which represents a drop of about NIS 200 billion (close to 9 percent) relative to the previous year. This drop is the result of a decline of about NIS 260 billion in the value of tradable assets, which fell by almost 30 percent. This was primarily due to the decline of about 52 percent in the value of shares in the portfolio, which was similar to the decline in the Tel Aviv 100 Index (Figure 1.4 above).

In contrast, there was a significant increase of about NIS 65 billion (10.7 percent) in the public's assets deposited with the banks (i.e., deposits). This increase was a direct result of the decline in the risk-adjusted yields on the tradable portion of the portfolio relative to those on the non-tradable portion since in addition to the heavy losses incurred by investors in tradable assets, the risk in this type of investment also increased. In situations of uncertainty, investors have less appetite for risk and therefore prefer to locate themselves closer to the origin on the yield-risk curve. Bank deposits are naturally located in this area of the curve since they are, for the most part, viewed as a "safe haven", at least in the medium term until the recession ends.

Figure 1.17
Proportion of the Public's Assets in and outside the Banking System,
1993-2008^a



^a Due to structural changes in the capital market, in 2005 assets held in and outside of the banking system were reclassified.

SOURCE: Based on reports to the Supervisor of Banks, and data from the Bank of Israel Monetary Department.

Table 1.5
The Public's^a Assets Portfolio in Banks and not in Banks, 2004-08

Financial Assets	Balances						Composition			Rate of change			
	2004	2005	2006	2007	2008		2004	2005	2006	2007	2008	2007 relative to 2006	2008 relative to 2007
NIS billion (current prices)													
1. The public's assets in banks^b	526.2	553.5	581.4	611.8	677.0		36.9	33.3	31.3	29.0	35.3	5.2	10.7
Unindexed local-currency deposits	291.0	305.3	333.3	365.0	427.0		20.4	18.4	17.9	17.3	22.3	9.5	17.0
Deposits in and indexed to foreign currency	100.7	119.0	127.4	140.2	135.6		7.1	7.2	6.8	6.7	7.1	10.1	-3.3
Indexed deposits ^c	134.5	129.2	120.8	106.6	114.4		9.4	7.8	6.5	5.1	6.0	-11.8	7.3
<i>of which:</i> Bank deposits of provident and pension funds and insurance companies ^d	62.8	56.5	56.3	58.7	66.6		4.4	3.4	3.0	2.8	3.5	4.2	13.5
2. The public's tradable assets	485.5	602.9	725.3	879.7	620.0		34.1	36.2	39.0	41.8	32.3	21.3	-29.5
Shares ^e	194.3	256.4	327.9	426.7	205.1		13.6	15.4	17.6	20.3	10.7	30.1	-51.9
Traded bonds and <i>makam</i> ^f	175.4	210.6	244.8	299.9	256.6		12.3	12.7	13.2	14.2	13.4	22.5	-14.5
Residents' investments abroad	115.8	135.9	152.6	153.1	158.4		8.1	8.2	8.2	7.3	8.3	0.3	3.4
3. Cash held by the public	17.8	20.9	21.6	24.7	30.1		1.2	1.3	1.2	1.2	1.6	14.4	21.9
4. Assets of provident and pension funds and insurance companies (excluding bank deposits)^g	395.8	486.1	532.0	589.9	591.0		27.8	29.2	28.6	28.0	30.8	10.9	0.2
Total assets of the public: 1+2+3+4	1,425.3	1,663.4	1,860.3	2,106.1	1,918.1		100.0	100.0	100.0	100.0	100.0	13.2	-8.9

^a Not including the government, the Bank of Israel, or banking institutions.

^b Including commercial and mortgage banks.

^c Including savings plans and deposits approved for the granting of loans of related companies and others.

^d Of total bank deposits.

^e Shares held by the public not including the holdings of nonresidents and the government.

^f Including government bonds (indexed and unindexed) and corporate bonds.

^g Includes provident and compensation funds, advanced study funds, pensions and life insurance funds in the "guaranteed return" and "participating in profits" programs.

SOURCE: Based on reports to the Bank of Israel and data of the Monetary Department.

As a result of the substitution between the two parts of the public's portfolio, the proportion of bank deposits exceeded that of the tradable portfolio (35.3 percent versus 32.3 percent) for the first time in many years. This compares to the situation in 2007, in which the proportion of the tradable portfolio was the larger of the two by about 12 percentage points (Table 1.5 and Figure 1.17).

c. Principal developments in the banking system's credit to the public

The increase in total bank credit to firms against the background of a relatively stable interest rate is the result of a new equilibrium created by the cyclical slowdown in economic activity, which led to an increase in the demand for credit and its supply by the banks. As a result, most of the credit needed by the business sector was provided by the banking system this year, which had not been the case since 2001 (Figure 1.18 and Table 1.6).

There are two effects determining the demand for bank credit by firms: the substitution effect and the income effect. Empirical studies of the Israeli economy²⁷ have found the elasticity of demand for bank credit relative to the issue of credit alternatives (i.e., bonds and shares) to be negative and significant.²⁸ This implies that as the sources of non-bank financing become limited, as happened this year in the Israeli economy, the demand for bank credit grows significantly. In contrast, the income effect is expected to reduce the demand for bank credit. The elasticity of the demand for bank credit relative to growth in GDP is greater than unitary.²⁹ Nonetheless, total credit provided by the banks to firms is characterized by downward stickiness. This implies that GDP has a positive effect on total bank credit only during periods of prosperity while during periods of recession the sign of the effect changes to negative, though it is small in magnitude. This finding, which appears to contradict economic theory, is explained by the need on the part of firms that have encountered difficulties during the slowdown to finance the decline in their working capital, which is the result of the reduced demand for their output.³⁰ It was thus found that both these effects—substitution and income—work in the same direction during a recession, i.e., to increase the demand for bank credit.

There are four factors that affect the supply of credit from the banks: risk, capital adequacy, market power of the banks over their customers and the cost of sources of funding. The greater the risk of large borrowers, the smaller we can expect the supply of credit to be and the higher we can expect the interest rate on that credit (including a certain risk premium) to be. And indeed, a sharp increase was recorded this year in the

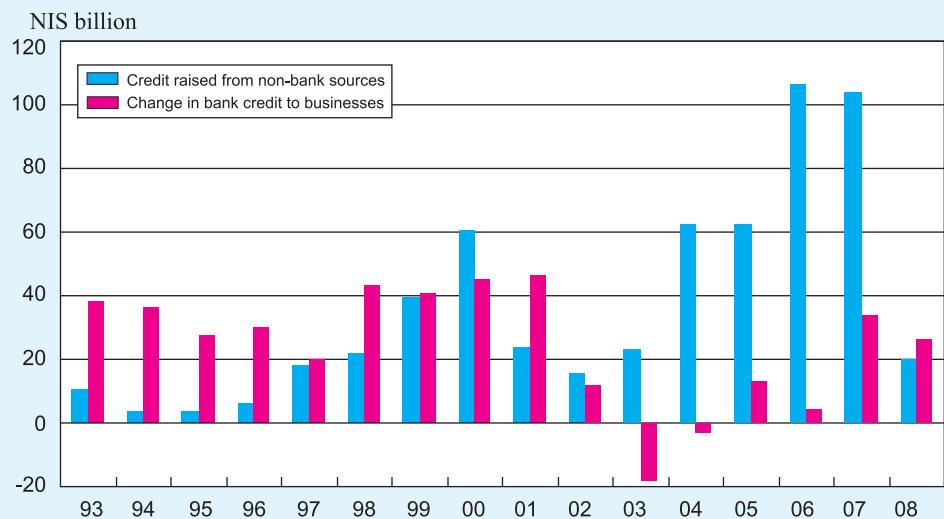
²⁷ For further details, see David Ruthenberg and Yoel Hecht, "The link between business cycles in the economy and the amount and quality of bank credit in the Basel II environment: the Israeli experience", Bank Supervision, Research Unit, Discussion Paper 06.01, March 2006.

²⁸ Ibid., Table 3, p. 31.

²⁹ Ibid.

³⁰ Ibid., p.30-31.

Figure 1.18
Credit from Non-Bank Sources Compared to Change in
Bank Credit to Businesses,^a 1993-2008



^a Business credit given throughout the year excluding credit to individuals.
 Due to structural changes in the capital market, in 2005 assets held in and outside of the banking system were reclassified.

The considerable increase in non-bank credit in 2006 was a result, *inter alia*, of Teva's raising of NIS 24 billion to finance its merger with the American pharmaceutical firm IVAX.

SOURCE: Based on reports to the Supervisor of Banks; Annual Reports of the Supervisor of Capital Markets Insurance and Savings in the Ministry of Finance; Bank of Israel data; and data from the Tel Aviv Stock Exchange.

risk of borrowers, as measured by, for example the proportion of the loan-loss provision within total credit (Table 3.1 below).

The availability of credit, as it is measured by the surplus of capital adequacy beyond regulatory requirements, is negatively correlated with the interest rate on credit.³¹ In other words, the larger the surplus of capital adequacy, the larger the supply of credit the banks can make available to the economy and the lower the rate of interest on credit. In 2008, surplus capital adequacy rose somewhat. However, since the availability of capital is affected by surplus capital adequacy, which is the difference between actual capital adequacy and the minimum capital requirement, the raising of the minimum capital requirement, which is expected at the end of 2009, will likely reduce the banks' ability to provide credit to the economy and even more so their ability to increase the total amount of credit offered in order to compensate for the reduced volume of non-bank credit.

³¹ Ibid., Table 3 (continued), on p. 32.

Table 1.6
The Change in Bank Credit to Businesses and its Main Substitutes, 1997-2008

Funds from non-bank substitutes (NIS million, at current prices)									
Difference between changes in bank credit and its substitutes	Overall changes in bank credit and its substitutes	Changes in bank business credit	Bond issues in Israel ^a	Share issues in Israel	Capital raised abroad ^b	Direct credit from abroad ^c	Venture capital funds	Credit from institutional investors ^d	
(1)=(3)-(4)	(2)=(3)+(4)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1997 1,593	37,908	19,751	18,157	1,546	8,256	6,895	3,160	1,730	-3,430
1998 21,365	64,990	43,177	21,813	2,549	7,895	4,562	6,736	2,448	-2,377
1999 897	79,812	40,355	39,458	1,681	5,659	17,802	6,728	4,462	3,126
2000 -15,621	106,129	45,254	60,875	292	14,212	19,267	9,451	13,351	4,301
2001 22,252	69,914	46,083	23,831	90	5,833	7,322	-250	8,708	2,129
2002 -3,515	27,136	11,811	15,326	2,969	5,555	1,061	-104	5,289	555
2003 -40,758	5,080	-17,839	22,919	2,793	3,148	3,855	2,634	4,427	6,062
2004 -65,648	59,266	-3,191	62,457	12,551	8,251	11,341	13,219	6,268	10,826
2005 -48,986	75,725	13,370	62,355	14,169	10,994	4,874	11,759	6,154	14,404
2006 -101,423	110,563	4,570	105,993	19,065	11,241	33,306 ^e	18,394	6,853	17,133
2007 -70,046	137,476	33,715	103,761	36,333	19,634	1,332	8,429	7,059	30,974
2008 16,358	55,774	36,066	19,708	3,818	5,383	5,405	2,202	2,752	149

^a Issues and allocations of corporate bonds on the Tel Aviv Stock Exchange by non-bank businesses to finance their activities. Excluding issues by banking corporations and issues of financial instruments such as Exchange traded funds (ETFs). From 2008 redemptions of previously issued series of bonds are deducted from the issues.

^b Including issues of bonds and shares abroad, after offsetting redemption of bonds and share buy-backs.

^c Non-tradable credit given to nonbank businesses by banks abroad. Does not include commercial credit.

^d From 2005 this item included non-negotiable bonds issued to institutional investors. From 2008 redemption of series of bonds issued in the past is deducted from new issues.

^e Of which some NIS 24 billion was raised by Teva to finance its merger with the American pharmaceuticals company IVAX.

SOURCE: Reports to the Supervisor of Banks, balance of payments data, and the Central Bureau of Statistics.

The banks' market power over their customers rose significantly this year,³² particularly during the fourth quarter, due to the increase in customer risk, the reduction in contestability from non-bank credit and the drop in the banks' profits.³³

The expansionary monetary policy carried out by the central bank during a recession is expected to bring down the cost of the commercial banks' sources of funds. Empirical studies have found that the elasticity of the interest rate on bank credit in Israel with respect to the Bank of Israel interest rate is close to unitary.

An examination of the breakdown according to indexation segment shows that, as in 2007, most of the expansion in bank credit this year occurred in the unindexed segment, including both the business sector and the retail and household sector. In the indexed segment, which is the main source of contestability to the banking system, there was more moderate growth (Figure 1.19) and the foreign-currency segment showed no significant change.

As mentioned in Section 1 of this chapter, a significant part of the growth in total bank credit was due to households, including both housing and consumer loans. This sector is considered to be less risky due to its high degree of diversification and indeed the annual expense due to the loan-loss provision for this sector grew much less than that for the business sector (only 0.05 percentage points to a level of 0.28 percent as compared to a much larger rise of 0.26 percentage points for the economy as a whole to a level of 0.45 percent; Table 3.2 below). The increase in demand for credit among households during the first three quarters of the year came to a halt during the fourth quarter (Table 1.4). This trend paralleled that of private consumption, which is the main source of the demand for credit. Thus, as the recession deepened, the rate of growth in private consumption declined and during the fourth quarter of the year even contracted (by about 3 percent in annual terms).³⁴ The delayed response of households to macroeconomic developments is apparently related to the delay with which the labor market was affected by the slowdown (Figure 1.3 and Figure 1.4 above).

Another sector for which total bank credit increased this year was the construction and real estate industry, which is historically considered to be one of the riskier industries, and indeed the annual expense due to the loan-loss provision for this industry grew faster than for the economy as a whole (by 0.30 percentage points to 0.59 percent, the highest rate in the economy; Table 3.3 below). In recent years, this industry has been particularly dependent on non-bank sources of credit and therefore was particularly affected when they shrank in size.

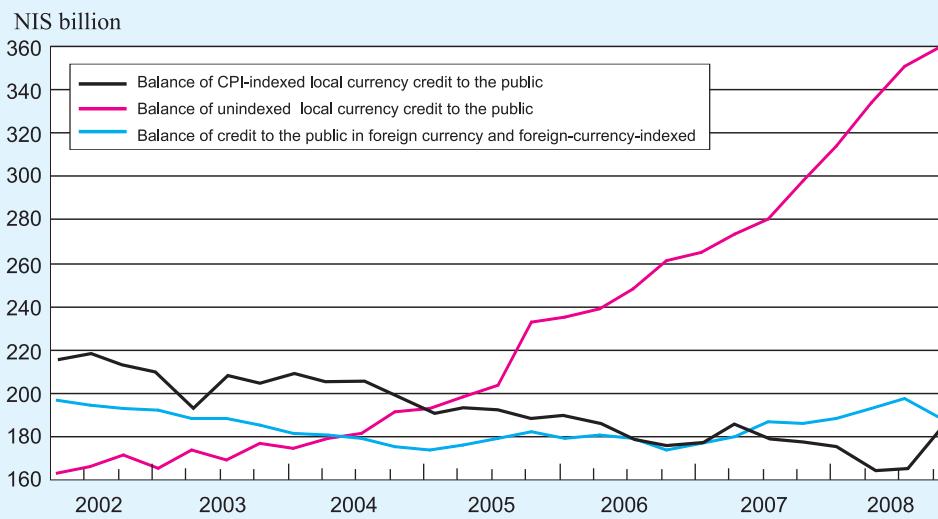
A description of the decline in credit to the financial industry appears below in Chapter 3 of this Survey in the section on the concentration of credit.

³² For further details on market power, the methods of measuring it and its trend during this year, see Section 3b above.

³³ For more details, see David Ruthenberg, "Competition in the banking sector: theoretical aspects and empirical evidence in Israel and abroad", Bank of Israel, Supervision of the Banks, Research Unit, Discussion Paper Series, 05.01, May 2005, Table 6 on p. 26.

³⁴ See the Bank of Israel Annual Report 2008, Table 2.4, p. 44.

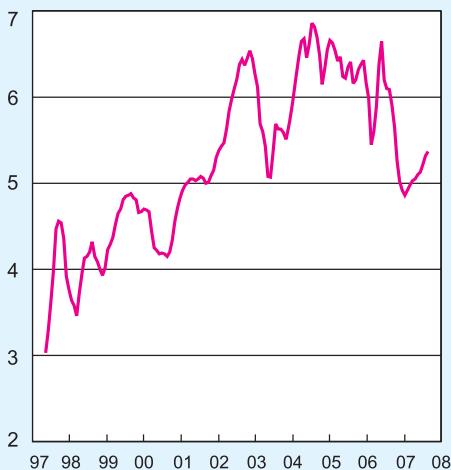
Figure 1.19
Quarterly Development of Balance of Credit from the Banking System^a to the Public, by Indexation, 2002-08



^a Including the five major banking groups (Leumi, Hapoalim, Discount, First International, and Mizrahi-Tefahot), Bank of Jerusalem, and Union Bank.

SOURCE: banks' financial statements.

Figure 1.20
Average Rates of Interest on Housing Credit,^a 1997-2008^b (Percent)



^a On CPI-indexed, fixed interest housing loans only.

^b From September 2002 the interest shown is only that on housing credit.

SOURCE: Reports to the Supervisor of Banks.

Total housing loans grew this year by 13 percent (to about NIS 152 billion; Table A.1.7). This reflects the consistent increase in the provision of housing loans throughout the year, which totaled a record NIS 30.1 billion. The expansion of credit for housing this year is in our estimation the result of the public's desire to change the composition of its asset portfolio by moving from financial assets to tangible assets. This trend appeared in 2008 as the volatility in the financial and capital markets intensified. In our estimation, a major portion of the funds withdrawn from provident funds was channeled to the housing market (which experienced a moderate rise in prices, primarily in areas of high demand). The purchase of an additional apartment or the purchase of

an apartment in order to improve living conditions usually requires bank credit. An examination of the number of transactions in the housing market (both new and second-hand apartments) shows that their number this year was basically similar to that in 2007 (despite the slowdown in real activity). The stability in the housing market was also due to interest rates. Thus, despite the increase in the indexed interest rate on housing loans during the second half of 2008, from a long-term perspective interest rates are still very low (Figure 1.20). In addition, it should be remembered that about half of total mortgage activity is located in the floating-rate segment, in which the interest rate is derived from the Bank of Israel rate. Despite the increase in the credit risk of borrowers this year (as described in the chapter on risks in this Survey), the activity in housing loans is still considered to represent low credit risk. Evidence of this is the stability (and even slight reduction) in total accumulated arrears among mortgage holders during the course of the year, despite the slowdown in the economy (Table A.1.7).

d. Main developments in off-balance-sheet activity

Off-balance-sheet activity involves credit risk due to the liabilities of customers to the bank that are created through two channels: The first involves transactions in off-balance-sheet financial instruments, in which the denominated amount represents credit risk. This activity includes letters of credit, guarantees³⁵ and commitments to provide credit that has been approved but not yet provided.³⁶ Most of these transactions involve revolving debitary accounts (*hahad-type*) and other lines of credit to the public which have not yet been utilized, as well as irrevocable commitments for the provision of credit that has been approved but not yet provided, which constitute 35 and 20 percent of total activity, respectively (Table 1.7). The total value of transactions in off-balance-sheet financial instruments, in which the denominated amount represents credit risk, stood at NIS 389 billion at the end of 2008 for the five large banking groups, which is similar to its total in the previous year.³⁷

The second channel involves derivative financial instruments. The contracts of this type are divided into four categories, according to their exposure to base risk: interest rate contracts,³⁸ foreign currency contracts, contracts on shares and commodities and other contracts. These instruments are categorized according to their use: derivatives for

³⁵ Credit guarantees, guarantees for homebuyers and other guarantees and obligations at the customers' expense.

³⁶ Lines of credit on credit cards which have not been utilized, unused balances of credit lines in revolving debitary accounts, irrevocable commitments to provide credit that has been approved but not yet provided and irrevocable commitments to issue guarantees.

³⁷ For further details on off-balance-sheet credit risk, see Chapter 3: Risks and Capital Adequacy in this Survey.

³⁸ Contracts for the purchase/sale of shekels indexed to the CPI in exchange for unindexed shekels or other interest rate contracts.

Table 1.7
Distribution of Off-Balance-Sheet Financial Instruments, the Five Major Banking Groups, 2006-08

	End-of-year balances			Rate of change (relative to the previous period)			Distribution		
				2007	2008		2006	2007	2008
	(NIS billion)			(percent)	(percent)		(percent)	(percent)	(percent)
Documentary credit	6	6	6	1.6	1.6	-11.5	1.9	1.6	1.4
Credit guarantees	22	28	25	27.6	-8.1	6.7	7.1	6.7	
Guarantees for home buyers	20	24	26	19.3	8.9	6.3	6.2	6.9	
Other guarantees and liabilities	33	38	40	16.8	5.1	10.2	9.8	10.5	
Non-recurring commitments for approved credit that has not yet been extended	79	90	75	14.2	-16.6	24.6	23.3	19.8	
Commitments to issue guarantees	19	19	19	-0.4	1.3	5.8	4.8	5.0	
Overdraft facilities and other credit facilities to the public not yet utilized	99	132	134	33.4	1.5	30.8	34.0	35.2	
Credit card facilities not yet utilized	44	51	55	16.3	7.7	13.7	13.2	14.5	
Total	322	389	381	20.8	-2.0	100	100	100	100

SOURCE: Banks' financial reports.

Table 1.8
Distribution of Balances of Financial Derivatives, the Five Major Banking Groups,
December 2007 and December 2008

	2007						2008						(NIS billion) ^a	
	Interest rate contracts			Exchange rate contracts			Interest rate contracts			Exchange rate contracts				
Hapoalim	205	250	59	514	204	186	39	430						
Leumi	121	192	26	340	161	186	14	361						
Discount	59	70	13	142	58	75	9	143						
Mizrahi-Tefahot	48	92	38	178	53	92	14	160						
First International	9	99	74	182	7	60	33	100						
Total	442	704	210	1,356	484	599	111	1,194						

^a In terms of notional principal, at current prices.

^b Contracts based on shares, commodities and others.
 SOURCE: Published financial reports.

hedging,³⁹ derivatives for asset and liability management (ALM),⁴⁰ other derivatives,⁴¹ credit derivatives⁴² and foreign currency swap contracts. During 2008, there was somewhat of a drop in the total value of foreign currency contracts and other contracts

5. THE BANKING SYSTEM'S ACTIVITY IN SECURITIES

Two main trends characterized the activity of the Israeli banking system in the area of *nostro*⁴³ securities up until 2007:

The first involved rapid and almost uninterrupted growth in the size of the portfolio (both in Israel and abroad). The total value of the securities portfolio of the five large banking groups more than tripled in size between 1996 and 2007 from NIS 51 billion to NIS 163 billion. The proportion of the *nostro* securities portfolio in total assets also grew—almost uninterruptedly—during this period, from 11 percent to 17 percent (Table 1.9 and Figure 1.21). Part of the growth in the securities portfolio is due to the change in the Short-Term Loan ("makam") Law and in the Bank of Israel's management of monetary policy. This included the removal of limits on *makam* that led to a drop in the value of the deposits of commercial banks with the Bank of Israel and the growth in their holdings of unindexed government bonds.⁴⁴ This is in addition to their tendency to diversify their sources of profit and is also a result of the greater efficiency and depth of the financial markets.

³⁹ A derivative that the bank management designates as being used for hedging and on the condition that it is appropriate for this purpose. This includes the following conditions: the derivative's exposure to risk is identical to that of what is being hedged; what is being hedged must be identified specifically; at the beginning of the transaction, formal documentation is created for the hedging relation and its goal, as well as the bank's strategy for risk management in creating the hedge, which includes identifying the hedging instrument, the nature of the hedged risk and the method for evaluating the efficacy of the hedging instrument in offsetting the exposure to changes in the fair value of what is being hedged, which can be attributed to the hedged risk.

⁴⁰ A derivative that the bank management views as a hedge although it does not fulfill the conditions for hedging as they appear in the accounting standards.

⁴¹ A derivative that is not a hedge and not an ALM.

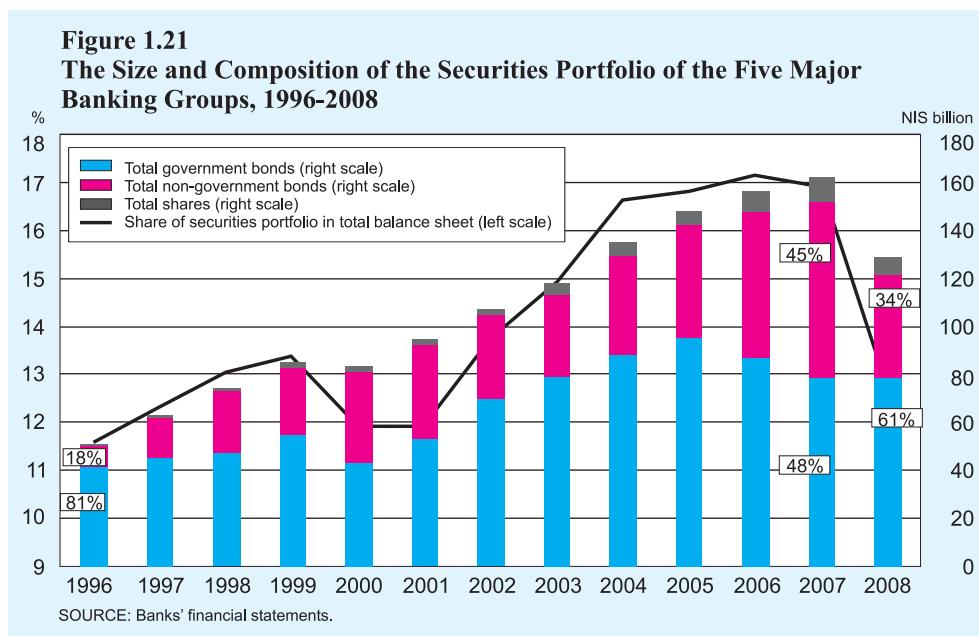
⁴² A contract that transfers credit risk from a buyer to a seller. Credit derivatives can take on several forms: options for protection against credit failure, a note to cover part of credit risk, a swap for full coverage of risk, etc.

⁴³ The securities portfolios of the banks themselves as opposed to the securities portfolios that the banks manage for their customers.

⁴⁴ For further details, see Annual Survey 2007 of the Supervisor of the Banks, Chapter 3, Section 5, p. 30.

The second trend involves the increase in the proportion of corporate bonds (in Israel and abroad) within the portfolio. At the end of 2007, 45 percent of the asset portfolio⁴⁵ of the five large banking groups was made up of non-government bonds, as compared to only 18 percent in 1996. At the same time, the proportion of government bonds fell from 81 percent in 1996 to only 48 percent in 2007 (Table 1.9 and Figure 1.21).

This year was characterized by the realization of risk (credit risk and market risk)⁴⁶ that the banks had taken on in selecting the composition of the nostro securities portfolio.⁴⁷ As a result of the decline in asset prices and the sale of some assets, the long-term trends described above came to a halt in 2008. Thus, the size of the securities portfolio shrank by about 20 percent to NIS 129 billion, as compared to NIS 163 billion at the end of 2007 and its proportion of the balance sheet fell to only 12.7 percent—its lowest level since 2001—as compared to 16.9 percent at the end of 2007. The composition of the portfolio also changed significantly: the proportion of corporate bonds (in Israel and abroad) fell from 45 percent to only 33 percent and at the same time the proportion of government bonds rose from 48 percent at the end of 2007 to 61 percent at the end of 2008 (Table



⁴⁵ The banks also hold tradable and non-tradable shares. Since the vast majority of these holdings are the result of the exercise of guarantees and shares held as collateral against credit, they do not reflect strategic purchases for the purpose of diversifying sources of profit

⁴⁶ For the definitions of concepts and an analysis of trends in recent years, see Chapter 3 of this Survey, Section 1 and 2.

⁴⁷ For an analysis of the effect of changes in the nostro securities portfolio on the banks' commercial results in 2008, see Chapter 2 of this Survey.

Table 1.9
The Securities Portfolios of the Major Banking Groups^a, 2007-08

	Hapoalim		Leumi		Discount			
	2007		2008		2007		2008	
	Fair value (NIS million)	Distribution (NIS million) (percent)	Fair value (NIS million)	Distribution (NIS million) (percent)	Fair value (NIS million)	Distribution (NIS million) (percent)	Fair value (NIS million)	Distribution (NIS million) (percent)
Bonds held to maturity								
Government bonds	20	0.0	68	0.3	1,476	3.1	1,467	3.3
Other bonds	2,731	5.4	1,965	7.4	123	0.3	8	0.0
Total bonds held to maturity	2,751	5.4	2,033	7.6	1,599	3.4	1,475	3.3
Securities available for sale								
Government bonds	13,562	26.7	14,077	52.8	10,103	21.4	0,399	23.1
Other bonds	26,921	53.1	6,992	26.2	22,989	48.7	8,991	42.3
Total bonds available for sale	40,483	79.8	21,069	79.1	33,092	70.1	9,390	65.4
Total shares available for sale	1,876	3.7	1,813	6.8	4,436	9.4	3,219	7.2
Total securities available for sale	44,675	88.1	22,882	85.9	37,528	79.5	2,609	72.6
Tradable securities								
Government bonds	3,213	6.3	1,648	6.2	5,208	11.0	9,261	20.6
Other bonds	50	0.1	62	0.2	1,933	4.1	1,489	3.3
Total tradable bonds	3,263	6.4	1,710	6.4	7,141	15.1	10,750	23.9
Total tradable shares	30	0.1	20	0.1	919	1.9	105	0.2
Total tradable securities	3,293	6.5	1,730	6.5	8,060	17.1	0,855	24.2
Total government bonds	16,795	33.1	15,793	59.3	16,787	35.6	1,127	47.0
Total other bonds	29,702	58.6	9,019	33.8	25,045	53.1	20,488	45.6
Total bonds	46,497	91.7	24,812	93.1	41,832	88.7	1,615	57,69
Total shares	1,906	3.8	1,833	6.9	5,355	11.3	3,324	7.4
Total securities	50,719	100.0	26,645	100.0	47,187	100.0	4,939	100.0
<i>Of which: total other securities</i>	<i>31,608</i>	<i>62.3</i>	<i>10,852</i>	<i>40.7</i>	<i>30,400</i>	<i>64.4</i>	<i>23,812</i>	<i>53.0</i>

(cont'd)

Table 1.9 (Cont'd)
The Securities Portfolios of the Major Banking Groups^a, 2007-08

Mizrahi-Tefahot										First International										Total of Five Banking Groups			
2007					2008					2007					2008					2007		2008	
Bonds	Government bonds	Fair value (NIS million)	Distribution (percent)	Fair value (NIS million)	Distribution (percent)	Fair value (NIS million)	Distribution (percent)	Fair value (NIS million)	Distribution (percent)	Fair value (NIS million)	Distribution (percent)	Fair value (NIS million)	Distribution (percent)	Fair value (NIS million)	Distribution (percent)	Fair value (NIS million)	Distribution (percent)	Fair value (NIS million)	Distribution (percent)	Fair value (NIS million)	Distribution (percent)	Fair value (NIS million)	Distribution (percent)
Bonds held to maturity	Government bonds	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4,539	2.8	2,877	2.2				
	Other bonds	0	0	0	0	0	0	1,227	5.7	704	4.2	4,104	2.5	3,190	2.5								
	Total bonds held to maturity	0	0	0	0	1,227	5.7	704	4.2	8,643	5.3	6,067	4.7										
Securities available for sale	Government bonds	4,079	66.4	6,699	72.4	9,789	45.5	8,120	48.9	61,817	38.0	61,095	47.4										
	Other bonds	1,587	25.8	1,740	18.8	8,153	37.9	5,757	34.6	66,816	41.1	37,940	29.4										
	Total bonds available for sale	5,666	92.2	8,439	91.1	17,942	83.5	3,877	83.5	28,633	79.1	99,035	76.8										
	Total shares available for sale	399	6.5	380	4.1	881	4.1	688	4.1	9,352	5.8	7,425	5.8										
	Total securities available for sale	6,065	98.7	8,819	95.2	18,823	87.5	4,565	87.6	137,985	84.9	106,460	82.6										
Tradable securities	Government bonds	79	1.3	437	4.7	1,356	6.3	1,229	7.4	12,274	7.6	14,190	11.0										
	Other bonds	1	0.0	3	0.0	76	0.4	107	0.6	2,668	1.6	2,037	1.6										
	Total tradable bonds	80	1.3	440	4.8	1,432	6.7	1,336	8.0	14,942	9.2	16,227	12.6										
	Total tradable shares	0	0	0	0	0	0	18	0.1	16	0.1	980	0.6	183	0.1								
	Total tradable securities	80	1.3	440	4.8	1,450	6.7	1,352	8.1	15,922	9.8	16,410	12.7										
	Total government bonds	4,158	67.7	7,136	77.1	11,145	51.8	9,349	56.2	78,630	48.4	78,162	60.6										
	Total other bonds	1,588	25.8	1,743	18.8	9,456	44.0	6,568	39.5	73,588	45.3	43,167	33.5										
	Total bonds	5,746	93.5	8,879	95.9	20,601	95.8	5,917	95.8	52,218	93.6	121,329	94.1										
	Total shares	399	6.5	380	4.1	899	4.2	704	4.2	10,332	6.4	7,608	5.9										
	Total securities	6,145	100.0	9,259	100.0	21,500	100.0	6,621	100.0	162,550	100.0	128,937	100.0										
	<i>Of which: Total other securities</i>	1,987	32.3	2,123	22.9	10,355	48.2	7,272	43.8	83,920	51.6	50,775	39.4										

^a In this table mortgage backed securities (MBSs) issued by federal US agencies (FNMA, FHLMC and GNMA) are included in government bonds whether or not they are backed by a government guarantee. In Table 3.5 these securities are included in the item "Other securities."

1.9 and Figure 1.21).⁴⁸ Particularly noticeable was the change in the securities portfolio of Bank Hapoalim, which accumulated the heaviest losses among the Israeli banks.⁴⁹ To this was added the regulatory effect of the directive of the Supervisor of the Banks to Bank Hapoalim to increase the capital it allocates against large parts of its securities portfolio, which reduced the profitability of holding them relative to other assets. Thus, the size of Bank Hapoalim's securities portfolio declined by close to 50 percent, from about NIS 51 billion at the end of 2007 to only about NIS 27 billion at the end of 2008. Most of the reduction (about NIS 21 billion) was in non-government bonds, the value of which was reduced by 70 percent to only NIS 9 billion at the end of 2008. The Leumi and First International groups also reduced the size of their portfolios and shifted them to more solid investments. Bank Mizrahi-Tefahot increased its holdings of government bonds somewhat (Table 1.9). At the request of the Supervisor of the Banks, in 2008 the banks included a detailed report of the composition of their securities portfolios with respect to mortgage-backed securities (MBS) and asset-based securities (ABS). For the data on these securities and its analysis, see Chapter 3 below, Section 1.6.

6. THE BANKING GROUPS' PRINCIPAL ACTIVITIES VIA SUBSIDIARIES

a. General

Apart from classical financial intermediation and other activities that the banks are involved in directly and which were described in the previous sections of this chapter, Israeli banks also operate through subsidiaries in a number of areas. These include: commercial banking in Israel, holdings in companies that specialize in activity in the capital market, leasing and mortgages,⁵⁰ the provision of consumer credit to households through credit card companies and bank activity abroad through branches and representatives. These activities make a significant contribution to the profit of the parent banks, which enables them to diversify their sources of profit. (The contribution of subsidiaries to profit and the size of the investment in held companies are presented in Table 1.10.) At the same time, this activity makes it possible for subsidiaries to specialize in niche populations that are not necessarily identical to the customers of the commercial banks that head the groups. Examples include Bank Poalei Agudat Yisrael of the First International group and the Arab Israeli Bank of the Leumi group. The exploitation of the advantages of diversification by the commercial banks has become increasingly important in recent years in view of the regulatory restrictions placed on them following

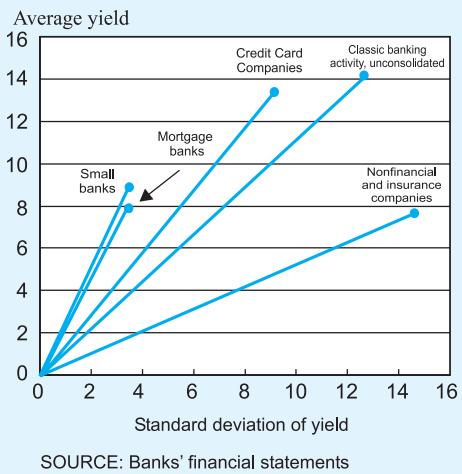
⁴⁸ For a definition of government bonds and which type of securities are included in it, see the footnotes to Table 1.9.

⁴⁹ See footnote 48.

⁵⁰ The mortgage banks that operate as separate subsidiaries of the large banks are becoming less important, in view of the mergers with the parent companies. For a description of the trend in 2008, see Section 3: The Structure of the Banking System in Israel in this chapter.

the recommendations of the Bachar Committee.⁵¹ In 2008, as in 2007, these supplementary activities provided a high yield relative to classic banking activity. While the activity of the banks themselves yielded a net loss of NIS 787 million in 2008, the activities of the main consolidated companies produced a net profit of about one billion shekels, most of which originated in the credit card companies (Table 1.10). A similar picture is obtained from the long-term perspective of risk-adjusted yield in the banking groups' various activities. Thus, while the Sharpe index for classic activity stood at about 0.9 for the period 1997–2008, its value for the activities of the main consolidated companies was about 1.5. Also from this perspective, the activity of the credit card subsidiaries stands out with respect to profitability, alongside the commercial banks and the mortgage banks (Table 1.10 and Figure 1.22).

Figure 1.22
Yields of the Main Companies in
which Banks have a Holding—Average
Vis-a-Vis Standard Deviations (Percent)



b. The banking groups' credit card activity

Credit card activity has expanded significantly in recent years. Apart from the increasing use of credit cards by the public, the credit card companies have also deepened their activity in this important consumer sector. The combined activity of the banks and their subsidiaries in this area has created two separate markets for consumers of credit: on the one hand, it allows the bank controlling the credit card company to provide consumer credit on its responsibility and, on the other hand, the credit card companies have created a consumer credit market for households that prefer to obtain credit directly, without the intermediation of the bank and on the responsibility of the companies. An examination of the return on investment from the point of view of their contribution to the parent bank's profit over time, together with the risk involved in this activity, indicates that the risk-adjusted profitability of this activity is relatively high, which is reflected in the desire of the banks to expand the scope of activity of these companies and their investment in them.

⁵¹ For further details, see the 2007 Annual Survey of the Supervisor of the Banks.

Table 1.10
Investment and Contribution to Profit of Companies in which the Bank has a Holding and of the Bank Itself, the Five Major Banking Groups, 2007-08

	Book value of investment at end of year		Rate of change		Contribution to net profit ^a		Rate of change		Investment distribution		Yield on investment		Yield on investment in 1997-2008	Shapre ^c
	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008		
			2006-	2007-			2007-	2007-			2007	2008		
a. Major consolidated companies														
Commercial banks	4,452	3,191	13	-28	440	429	-3	12	8	11	10	9.2	3.6	2.6
Mortgage banks	3,397	3,475	22	2	263	186	-29	9	9	5	8.0	3.5	2.3	1.46
Holdings, investments and others ^d	8,174	7,811	3	-4	430	209	-51	21	20	5	3	6.0	3.5	1.7
Banking and financial companies abroad ^e	11,041	11,057	0	0	-99	-343	-4	29	28	-1	-3	7.8	7.9	1.0
Capital market (underwriting and management)	1,092	1,093	-50	0	723	-4	-101	3	3	33	-0	19.9	45.4	0.4
Credit cards	2,020	2,479	12	23	352	520	48	5	6	20	26	13.6	9.3	1.5
Leasing	237	247	3	4	6	7	17	1	1	3	3	2.1	1.3	1.6
Total major consolidated companies	30,413	29,353	2	-3	2,115	1,004	-53	80	75	7	3	8.4	2.6	3.2
b. Major companies included on an equity basis														
Commercial banks ^f	1,451	1,453	16	0	26	43	65	4	4	2	3	7.0	4.8	1.5
Non-financial companies and insurance ^g	718	720	-2	0	377	38	-90	2	2	51	5	7.7	14.7	0.5
Holdings, investment, financial and other (including abroad)	1,478	1,195	5	-19	215	114	-47	4	3	15	8	10.9	5.5	2.0
Total major companies included on an equity basis	3,647	3,368	7	-8	618	195	-68	10	9	18	5	8.5	6.4	1.3
(cont'd)														

Table 1.10 (cont'd)
Investment and Contribution to Profit of Companies in which the Bank has a Holding and of the Bank Itself, the Five Major Banking Groups, 2007-08

	Book value of investment at end of year		Contribution to net profit ^a		Rate of change		Investment distribution		Yield on investment		Yield on investment in 1997-2008			
	2006-	2007-	2006-	2007-	2007-	2008	2007	2008	2007	2008	Average	St. dev.	Variance ^b	Sharpe ^c
Total major companies in which the banks have a holding	34,060	32,721	2	-4	2,733	1,199	-56	89	84	8	4	18.1	24.2	0.7
Non-major companies ^d	4,183	6,454	20	54	-67	-209	-212	11	16	-2	-5			
Total companies in which the banks have a holding	38,243	39,175	4	2	2,666	990	-63	100	7	3	9.0	5.8	1.6	1.03
The bank itself^e	21,027	18,498	26	-12	6,287	-787	-113	100	38	-4	14.2	12.7	1.1	0.88

^a Profits in the companies in which the banks have a holding include "profits from ordinary activities and profits from extraordinary activities" and do not include dividends or receipts from the sale of surplus holdings.

^b The average yield divided by the standard deviation measures the yield on an investment adjusted by the inherent risk.

^c The Sharpe index was calculated for the period 1997-2008. The risk-free interest rate is 3.0 percent, obtained from the average yield to maturity for CPI-indexed government bonds.

^d This includes merchant and investment finance banks as well holding and investment companies and other financial companies, mainly those of Bank Hapoalim.

^e The contribution to net profits and the yield of the investment in banking and financial companies abroad in 2006 was biased downward considerably, due to the significant negative profit statement of Discount Bank.

^f Discount Bank's holdings in First International Bank were not discounted from the total investments nor from the contribution to profits.

^g The yield on investment in these companies was downwardly biased, as the investment in non-banking companies does not have to maintain a minimum capital requirement, and therefore the capital invested in them can serve fully for profit-earning banking activity, which was not taken into account in the yield above.

^h Companies in which the banks have a holding which are not detailed as major companies in Note 6 of the Financial Statements.

ⁱ The investment in the bank itself is derived from deducting the investment in companies in which the bank has a holding, according to balance sheet value, from total shareholders equity, and this differs from the definition of shareholders equity for purposes of calculating item 23a according to the Banking Law (Licensing). The contribution to net profits of the bank itself was calculated as the net ordinary profits after tax plus extraordinary profits, by bank. This is in effect the profits from ordinary activities (and from extraordinary activities) of the bank, discounted by the (net) profits from ordinary activities and from extraordinary profits of all companies in which the bank has a holding (both major and non-major).

SOURCE: Banks' financial reports.

The continuing growth in credit card activity is a result of their convenience for carrying out purchases. The possibility of using a credit card in purchases over the phone or on the Internet has also contributed to the increase in their use.⁵²

In 2008, growth continued in the use of this important distribution channel for banking services. Thus, the number of active credit cards⁵³ and the number of transactions, in Israel and abroad, grew by 7 and 10 percent, respectively, which is similar to their growth rates in 2007. The volume of credit card transactions totaled about NIS 161 billion in 2008, of which about NIS 154 billion took place in Israel. This represents a growth rate of about 10 percent relative to the previous year and is similar to the growth rate in 2007 (Table 1.11).

c. Activity abroad

Israeli banks have been operating abroad on a large scale for a number of years. This is done primarily through subsidiaries and branches which provide financial services in their host countries. In 2008, growth continued in the number of subsidiary offices abroad, while the number of branches and representatives of Israeli banks abroad remained constant, as in previous years (Table 1.12).

The assets of all foreign extensions totaled about NIS 150 billion at the end of 2008, which represent about 15 percent of the banks' total assets. This compares to about NIS 166 billion or about 17 percent in the previous year. Most of the decrease was due to the decline in the value of the portfolio of foreign securities (Table 1.12 and 1.13).

The various extensions abroad contribute to the diversification of profit sources for Israeli banks and this enlarges their customer base. On the other hand, these activities involve risks, some of which were realized this year. The realization of credit and market risk was reflected this year in the large losses incurred on the foreign securities within the banking groups' *nostro* portfolio. It is worth emphasizing that although these assets and the losses incurred on them are recorded by the foreign extensions of Israeli banks, essentially these extensions operate according to the decisions and strategy dictated by the managements of the banking groups in Israel.

The activity of the banks' extensions in the US led to a large loss of about \$830 million in 2008, as compared to a profit of about \$171 million in 2007. Most of the loss was the result of the sharp drop in the prices of MBS and ABS in Hapoalim's portfolio, which were recorded by its New York branch. A sharp drop in profit (about 77 percent), from \$242 million in 2007 to about \$56 million this year, was also recorded by extensions in Western Europe (Table 1.15).

Despite their widespread deployment abroad and the significant scale of their investments, the banks' activity abroad has never succeeded in creating a significant and

⁵² For a survey of the types of credit cards and the companies active in the credit card market, see the Annual Survey 2007 of the Supervisor of the Banks, Chapter 1, Section 6, p. 31–37.

⁵³ Including cards only for carrying out transactions, which are usually linked to a customer club, and credit cards designated both for carrying out transactions and withdrawing cash.

Table 1.11
Credit Card Activity, 2005-08

	2005	2006	2007	2008	Rate of change from 2006 to 2007 (million) (percent)	Rate of change from 2007 to 2008 (percent)
Number of cards active at the end of the year <i>of which:</i> Cards at the sole responsibility of the credit card company	4.2	4.4	4.7	5.0	7.6	6.8
Number of transactions <i>of which:</i> in Israel	0.52	0.57	0.71	0.91	24.8	28.0
Amount of transactions <i>of which:</i> in Israel	490.4 482.5	541.2 532.0	595.9 585.5	653.3 641.3	10.1 10.1	9.6 9.5
Average credit card transaction (NIS)	240.8	242.9	245.5	245.9	1.07	0.14
Average monthly expenditure per credit card (NIS)	2,342	2,511	2,597	2,670	3.46	2.79
Average number of transactions per card per year	116.7	124.0	127.0	130.3	2.37	2.64

SOURCE: Reports to the Supervisor of the Banks.

Table 1.12**Banking Representation Abroad: Branches, Offices and Positions, 1991-2008**

Year	Total offices	Number of branches and representative offices ^a	Number of offices of subsidiaries ^b	Number of positions ^c
1991-1995 average	120	72	48	2,827
1996-2000 average	97	63	34	2,084
2001-2005 average	114	63	51	2,413
2006-2008 average	163	60	103	3,431
2004	120	64	56	2,502
2005	110	63	47	2,296
2006	147	61	86	3,050
2007	163	61	102	3,600
2008	179	59	120	3,642

^a Branches and representative offices of Israeli banking groups abroad.

^b Branches of subsidiaries abroad.

^c Not including overtime.

SOURCE: Reports to the Supervisor of Banks.

stable source of profit. The competition with local banks, which have a long tradition of activity among local residents, and the large number of foreign banks operating in the major financial centers abroad make it difficult for Israeli bank subsidiaries to penetrate the markets.

As a result of the weak performance abroad and the heavy regulatory restrictions imposed in recent years on bank activity (primarily due to the implementation of the Bachar Committee recommendations),⁵⁴ the banks have changed their strategy with regard to activity abroad. Thus, in recent years, there has been a trend towards the expansion of activity in emerging economies through the purchase of local banks that have been operating in their natural environment for a long period of time. This strategy is reflected in the purchase and maintenance of control in foreign banks, as part of a trend to merge them within the banking group. In 2006 and 2007, the Israeli banking system purchased four foreign banks: During 2006, Bank Leumi completed the purchase of a local Romanian bank (Eurom Bank SA), whose name was changed to Bank Leumi Romania and Bank Hapoalim completed the purchase of Bank Pozitif Kredi Ve Kalkinma Bankasi Anonim Sirketi, which operates in Turkey and specializes in commercial and investment banking. During 2007, Bank Pozitif, which was now under the control of

⁵⁴ For further details, see the 2007 Annual Survey of the Supervisor of the Banks.

Bank Hapoalim, purchased DKB Bank which operates in Kazakhstan and in December 2007 the bank, through a fully-controlled subsidiary, completed the purchase of OJSC Ukrainian Innovation Bank, which operates in Ukraine. At the beginning of 2008, Bank Discount completed the purchase of a small local Swiss bank, with the intention of merging it with its subsidiary in Switzerland.

There were a number of factors that reduced Israeli banks' "appetite" for expansion abroad, including the events that took place in the global banking system, the completion of the boom in the present business cycle, the cancellation of the permit to purchase a Ukrainian Bank (Ukrinbank) which had been granted to Bank Hapoalim and the denial of permission for Bank Hapoalim to complete the purchase of a bank in Russia (MDS). This has also led the banks to place the management of risks at the focus of their activity.

Table 1.13**Overseas Offices' Role in Total Credit and Assets in the Five Major Banking Groups in Israel, 1999-2008**

(NIS billion)						
	Assets			Credit		
	Total assets in the five banking groups	Of which: Overseas offices ^a	Assets of overseas offices as share of total assets (%)	Total credit in the five banking groups	Of which: Overseas offices ^a	Credit from overseas offices as share of total credit (%)
1999	637.6	88.9	13.9	407.3	38.6	9.5
2000	699.6	100.0	14.3	464.9	42.0	9.0
2001	795.6	117.1	14.7	543.4	45.5	8.4
2002	778.6	139.4	17.9	541.8	51.1	9.4
2003	789.1	135.6	17.2	535.2	52.0	9.7
2004	812.1	148.1	18.2	536.2	57.1	10.7
2005	877.5	157.7	18.0	573.3	58.7	10.2
2006	912.0	159.0	17.4	582.7	63.0	10.8
2007	961.7	166.4	17.3	635.1	73.5	11.6
2008	1012.8	150.4	14.8	701.4	73.5	10.5

^a Overseas offices in the US, Western Europe, South America and the Cayman Islands.

^b Balance sheet credit.

SOURCE: Reports to the Supervisor of Banks.

Table 1.14
Assets and Liabilities of the Overseas Offices,^a 2006–08

	US				Western Europe				Total overseas offices ^b					
	2006		2007		2008		Change		2006		2007		Change	
	(\$ million)		(\$ million)		(\$ million)		(percent)		(\$ million)		(\$ million)		(percent)	
Credit to the public	9,421	10,774	11,810	14.4	9.6	5,387	8,244	7,385	53.0	-10.4	14,914	19,144	19,321	28.4
Cash and bank deposits <i>of which: in related banks</i>	3,422	3,017	5,076	-11.8	68.2	4,036	4,700	3,843	16.5	-18.2	7,491	7,747	8,958	3.4
Securities	11,097	11,736	6,899	5.8	-41.2	3,021	3,479	2,913	15.2	-16.3	14,131	15,222	9,817	7.7
Total assets	24,742	26,339	24,708	6.5	-6.2	12,725	16,796	14,659	32.0	-12.7	37,629	43,314	39,557	15.1
Deposits of the public	19,655	18,362	15,880	-6.6	-13.5	7,815	10,573	8,454	35.3	-20.0	27,599	29,063	24,479	5.3
Deposits of banks <i>of which: in related banks</i>	2,134	4,725	6,243	121.4	32.1	3,467	4,461	4,343	28.7	-2.6	5,617	9,208	10,598	63.9
Total liabilities	23,680	25,184	23,551	6.3	-6.5	11,638	15,507	13,422	33.2	-13.4	35,471	40,855	37,147	15.2
Equity	1,061	1,155	1,157	8.8	0.2	1,087	1,289	1,238	18.6	-4.0	2,159	2,459	2,410	13.9
Off-balance-sheet credit risk	10,424	10,280	7,664	-1.4	-25.4	2,381	3,225	2,942	35.4	-8.8	12,819	13,519	10,617	5.5
Activity in derivatives ^c	17,559	16,309	9,438	-7.1	-42.1	9,847	11,149	0,469	13.2	-6.1	27,410	27,467	19,918	0.2

^a Selected items.^b Including overseas offices, primarily in South America, not included in the US (including the Cayman Islands) or Europe.^c Face value.

SOURCE: Reports to the Supervisor of Banks.

Table 1.15
Main Items in Profit and Loss Statements of the Overseas Offices,^a 2006–08

	US				Western Europe				Total overseas offices ^b						
	2006		2007		2008		Change		2006		2007		Change		
	(\$ million)		(\$ million)		(\$ million)		(\$ million)		(\$ million)		(\$ million)		(\$ million)		
Net interest income before loan-loss provision	425.1	171.0	-827.7	-59.8	-584.0	197.1	241.5	55.8	225	-76.9	627.9	419.0	-765.9	-33.3	-282.8
Loan-loss provision	8.9	13.3	34.3	49.4	157.9	3.1	15.5	62.2	400.0	301.3	12.0	28.8	96.5	140.0	235.1
Operating fees	55.9	70.2	66.1	25.6	-5.8	130.0	154.2	139.1	18.6	-9.8	186.8	225.5	206.2	20.7	-8.6
Other income	13.4	16.6	15.1	23.9	-9.0	8.7	11.5	21.4	32.2	86.1	22.9	29.2	38.4	27.5	31.5
Total non-interest and other income	74.1	89.8	80.3	21.2	-10.6	141.2	169.6	159.0	20.1	-6.3	217.1	261.6	242.2	20.5	-7.4
Salaries and related expenses	199.6	195.4	203.7	-2.1	4.2	119.4	156.3	163.1	30.9	4.4	322.1	355.2	371.1	10.3	4.5
Other expenses	91.0	92.7	91.8	1.9	-1.0	74.5	90.8	85.8	21.9	-5.5	168.5	186.5	180.6	10.7	-3.2
Total operating and other expenses	341.2	346.3	356.6	1.5	3.0	230.0	291.7	297.6	26.8	2.0	578.0	645.3	662.3	11.6	2.6
Ordinary before-tax income	149.0	-98.8	-1,138.3	-166.3	1,052.1	105.2	103.9	-145.0	-1.2	-239.6	255.0	6.5	-1,282.4	-97.5	-19,829.2
Provision for taxes on ordinary income	25.7	36.5	-3.0	42.0	-108.2	25.7	26.1	5.3	1.6	-79.7	51.8	63.4	3.2	22.4	-95.0
Net income	122.8	-135.9	-1,136.6	-210.7	736.4	79.6	78.4	149.0	-1.5	-290.1	202.6	-57.1	-1,285.6	-128.2	2,151.5

^a Selected items.^b Including overseas offices, primarily in South America, not included in the US (including the Cayman Islands) or Europe.

SOURCE: Reports to the Supervisor of Banks.

Table A.1.1

Unindexed Local-Currency Assets and Liabilities of Commercial Banks,^a 2006–08

	End-of-year balance				Real change on previous year		Annual average balance (Dec 2007 prices)		Real change on previous year		Balance-sheet composition	
	2006		2007		2008		2007		2008		2007	
	(NIS million)		(NIS million)		(percent)		(NIS million)		(percent)		(percent)	(percent)
Assets												
Banknotes and coins	3,884	4,698	4,181	21	-11	4,536	4,810	6	1	1		
Deposit in Bank of Israel	12,818	13,144	43,851	3	.	12,015	15,134	26	3	4		
Deposit in banks	7,787	18,182	17,710	133	-3	12,382	17,181	39	4	4		
Credit to the public	245,504	275,642	331,611	12	20	256,154	307,101	20	73	76		
<i>Makam</i> and unindexed bonds	52,200	53,283	43,399	2	-19	53,420	46,353	-13	15	11		
<i>Of which: makam</i>	10,106	8,283	3,430	-18	-59	11,271	5,127	-55	3	1		
Other assets	8,541	12,164	14,945	42	23	11,045	16,113	46	3	4		
Total assets	330,734	377,112	455,697	14	21	349,552	406,691	16	100	100		
Liabilities												
Monetary loan from Bank of Israel	8,280	411	-69	-95	.	10,160	5,866	-42	3	1		
Deposit from banks	5,927	12,031	10,109	103	-16	9,090	9,471	4	2	2		
Deposit of the government	1,089	887	1,096	-19	24	865	904	4	0	0		
Total deposits of the public	333,258	365,953	427,048	10	17	348,934	386,161	11	88	89		
Demand deposits	41,588	50,637	60,994	22	20	45,226	51,374	14	11	12		
SRO deposit	37,985	41,377	51,115	9	24	38,955	42,597	9	10	10		
Resident time and short-term deposits	253,057	273,847	314,893	8	15	264,554	292,107	10	67	68		
Other deposits	628	91	46	-85	-50	199	83	-59	0	0		
Other liabilities	24,778	28,434	29,423	15	3	25,249	30,226	20	6	7		
Total Liabilities	373,332	407,716	467,606	9	15	394,299	432,627	10	100	100		
Activity in derivatives	48,185	46,630	36,363	-3	-22	50,482	42,645	-16	13	10		
Surplus of assets over liabilities	5,587	16,026	24,455	.	.	5,735	16,709	.	.	.		

^a Including data on all the commercial banks on a bank basis, not including subsidiaries.

SOURCE: Reports to the Supervisor of Banks.

Table A.1.2
Local-Currency CPI-Indexed Assets and Liabilities in Commercial Banks,^a 2006-08

	End-of-year balance (December 2007 prices)				Real change on previous year				Annual average balance (December (2007 prices)				Real change on previous year		Balance-sheet composition						
	2006		2007		2007		2008		2007		2008		2008		2007		2008				
	(NIS million)				(percent)				(NIS million)				(percent)		(percent)						
Assets																					
Credit to the public	136,484	146,440	145,696	7	-1	140,635	149,657	6	77	75											
Deposit in banks	26,742	28,435	32,955	6	16	26,777	30,793	15	15	16											
Credit to the government	1,267	1,519	1,748	20	15	1,224	2,208	80	1	1											
Bonds	12,420	15,576	16,604	25	7	14,770	14,575	-1	8	7											
Other assets	260	-2,740	1,080	.	-139	565	1,394	147	0	1											
Total assets	177,173	189,229	198,083	7	5	183,632	198,627	8	100	100											
<i>of which: Credit from earmarked deposits</i>	918	698	534	-24	-23	776	573	-26	0	0											
Liabilities																					
Deposits of the public																					
Savings	30,170	24,122	21,762	-20	-10	26,288	22,886	-13	18	15											
Indexed deposits	75,161	78,971	84,862	5	7	74,653	80,622	8	52	52											
Other deposits	2,553	5,740	7,931	125	38	3,707	7,187	94	3	5											
Total deposits of the public	107,884	108,833	114,556	1	5	104,648	110,695	6	73	72											
Deposit from banks	4,664	4,719	4,801	1	2	4,721	4,935	5	3	3											
Deposit of the government	4,121	3,596	2,355	-13	-35	3,918	2,991	-24	3	2											
Other liabilities	28,565	28,697	36,267	0	26	29,319	35,626	22	21	23											
Total liabilities	145,234	145,845	157,978	0	8	142,607	154,247	8	100	100											
<i>of which: Earmarked deposits</i>	1,354	1,088	869	-20	-20	1,251	959	-23	1	1											
Derivatives	-21,189	-35,376	-35,453	67	0	-26,606	-35,773	34	-19	-23											
Surplus of assets over liabilities	10,750	8,009	4,653	.	-42	14,419	8,607	-40	.	6											

^a Including data on all the commercial banks on a bank basis, not including subsidiaries.

SOURCE: Reports to the Supervisor of Banks.

Table A.1.3
Assets and Liabilities of Commercial Banks Denominated in and Indexed to Foreign Currency,^a 2006-08

	Real				Composition of average balances (percent)	
	Real change on previous year		Annual average balance			
	2006	2007	2008	2007		
	(\$ million)	(\$ million)	(\$ million)	(\$ million)	(percent)	(percent)
Assets						
Banknotes and coins	422	400	400	-5	425	433
Deposits in banks abroad	23,376	22,332	11,977	-4	23,184	19,694
Deposits in banks in Israel	1,188	1,054	939	-11	1,112	1,214
Deposits in Bank of Israel	533	595	5,184	12	772	1,091
Nondirected credit to residents	22,771	23,951	22,601	5	-6	23,542
Nondirected credit to nonresidents	3,664	4,331	6,052	18	40	3,903
Credit to the government	264	199	133	-25	-33	234
Securities ^b	7,085	8,492	8,058	20	-5	7,576
Other assets	1,946	2,453	6,448	26	163	2,184
Total assets	61,249	63,806	61,791	4	-3	63,250
<i>of which:</i> Denominated in foreign currency	59,033	62,023	59,810	5	-4	61,282
Liabilities						
Deposits from banks abroad	1,246	1,762	1,592	41	-10	1,415
Deposits from banks in Israel	378	419	414	11	-1	399
Loan from Bank of Israel	.	.	.	.	.	592
Deposits of the government	1,482	1,428	1,429	-4	0	1,456
Residents' deposits	52,470	59,741	59,664	14	0	55,341
Nonresidents' deposits	21,933	23,150	23,095	6	0	22,398
Residents' and restitutions deposits	5,169	5,576	5,577	8	0	5,322
Other residents' deposits	25,368	31,016	30,991	22	22	27,622
Other liabilities ^c	2,213	2,832	2,700	28	-5	2,447
Total liabilities	57,789	65,973	67,202	14	2	61,061
<i>of which:</i> Denominated in foreign currency	55,452	63,919	65,262	15	2	58,900
Derivatives	-6,365	-2,798	-75	-56	-97	-5,794
Surplus of assets over liabilities	-2,905	-4,965	-5,486	71	10	-3,605

^a Including data on all the commercial banks on a bank basis, not including subsidiaries.

^b Excluding investment in shares in subsidiaries and in affiliated companies.

^c Including intermediate amounts, bonds, and promissory notes recognized as earmarked deposits.

SOURCE: Reports to the Supervisor of Banks.

Table A.1.4
Distribution of Credit to the Public,^a Total Commercial Banking System, 2006-08

	End-of-year balance		Change in end-of-year balance		Average balance at December 2007 prices		Real change in average balances		Composition of average balances	
	At December 2007 prices		2007 2008		2007 2008		2007 2008		2007 2008	
	2006	2007	2008	2007	2008	2007	2008	2007	2008	2007
			(NIS million)		(percent)		(NIS million)		(percent)	(percent)
Total credit to the public	493,634	531,835	586,217	8	10	508,835	559,329	10	100	100
Total local-currency credit	381,988	423,030	477,308	11	13	396,868	456,758	15	78	82
Unindexed	245,504	276,590	331,613	13	20	256,233	307,101	20	50	55
Overdraft accounts and facilities ^b	42,919	42,754	45,159	0	6	40,998	43,219	5	8	8
Other short-term credit ^b	152,819	182,433	238,992	19	31	166,608	213,227	28	33	38
On-call credit	49,766	51,403	47,461	3	-8	48,627	50,655	4	10	9
CPI-indexed	136,484	146,440	145,696	7	-1	140,635	140,640	0	28	27
Total foreign-currency credit	111,646	108,805	108,909	-3	0	111,967	111,962	0	22	18
To residents	96,167	92,162	85,899	-4	-7	96,049	96,043	0	19	15
<i>Of which: Foreign-currency-indexed</i>	6,734	4,660	3,446	-31	-26	5,621	5,620	0	1	1
To nonresidents	15,479	16,643	23,010	8	38	15,917	15,918	0	3	3

^a Including credit from earmarked deposits.

^b Including credit at the bank's responsibility only. Does not include credit to specialized banking corporations.

SOURCE: Reports to the Supervisor of Banks.

Table A.1.5
Average Annual Yields on Selected Assets and Liabilities in the Various Segments, 2007 and 2008

	Annual average		2008				Annual average				2008			
	2007		2008		I		II		III		IV		I	
	(Nominal rates of return)		(Nominal rates of return)		2007		2008		2007		2008		(Expected real rates of return)	
Unindexed local-currency segment														
Demand deposits ^a	0.9	0.9	1.0	0.8	0.9	0.8			-0.4	-1.0	-1.5	-1.9	-1.7	0.9
SRO deposits ^a	3.0	2.7	3.0	2.4	3.1	2.4			1.6	0.8	0.5	-0.4	0.4	2.5
Resident time deposits ^a	3.5	3.3	3.6	3.1	3.6	2.9			2.1	1.3	1.0	0.3	1.0	3.1
Total unindexed deposits	3.2	2.9	3.2	2.7	3.3	2.6			1.8	1.0	0.7	-0.1	0.6	2.8
Term credit ^a	6.3	6.0	6.4	5.7	6.3	5.8			4.9	4.0	3.8	2.8	3.6	6.0
Overdraft accounts and facilities ^a	9.9	9.8	10.2	9.4	10.1	9.5			8.4	7.7	7.5	6.5	7.2	9.7
Total unindexed credit (term credit, overdraft facilities and overdrafts)	6.9	6.6	7.0	6.2	6.8	6.3			5.4	4.6	4.3	3.3	4.1	6.5
<i>Makam</i> ^b	4.5	5.5	6.5	2.5	4.7	8.3			3.1	3.5	3.9	-0.3	2.0	8.5
Total unindexed assets	3.9	3.6	4.1	3.6	.	3.3			2.3	2.1	1.5	0.7	.	3.5
Bank of Israel declared effective interest rate^c														
interest rate ^c	4.0	3.7	4.1	3.4	4.1	3.2			2.6	1.7	1.6	0.6	1.4	3.4
CPI-indexed local-currency segment	.	.	.	.	.	.			2.1	1.4	1.5	0.6	1.0	2.5
Savings plans ^d	.	.	.	.	.	.			3.2	2.9	2.8	2.5	2.7	3.6
Indexed bonds ^e	.	.	.	.	.	.			4.7	4.5	4.6	3.9	4.4	5.1
CPI-indexed credit ^f	.	.	.	.	.	.		

(cont.)

Table A.1.5 (Cont'd)
Average Annual Yields on Selected Assets and Liabilities in the Various Segments, 2007 and 2008

	Annual average				2008				Annual average				2008																		
	2007		2008		I		II		IV		2007		2008		I		II		IV												
	(in dollar terms ^g)								(expected real rates of return ^h)																						
Foreign-currency-denominated and indexed credit																															
Time deposits	1.4	0.6	1.0	0.5	0.6	0.4	-8.1	-13.5	-15.7	-20.4	-17.3	-0.6																			
Foreign-currency-denominated deposits ⁱ	4.5	1.9	2.6	1.9	1.9	1.1	-5.3	-12.4	-14.2	-19.3	-16.3	0.2																			
Foreign-currency-indexed credit	7.1	5.3	5.7	5.1	5.3	5.2	-2.9	-9.4	-11.7	-16.7	-13.5	4.2																			
Foreign-currency credit to residents	6.6	4.1	4.6	4.0	4.1	3.8	-3.4	-10.5	-12.6	-17.6	-14.5	2.8																			
Deposits abroad ^j	5.2	2.8	3.1	2.6	2.8	2.6	-4.7	-11.6	-13.8	-18.7	-15.6	1.6																			

^a Effective annual yields/costs, as reported by the seven major banking groups.

^b The market yield for two months on *makam*.

^c The effective annual interest on monetary loans via auction and on deposits in the Bank of Israel via auction are usually the Bank of Israel declared effective rate plus or minus a few basis points.

^d Average rate of interest on savings deposits.

^e Average gross yield to maturity of five-year (or close to five-year) CPI-indexed bonds (market rate).

^f Based on reports of cost of credit extended during the month.

^g The data refer to dollar-denominated credit and deposit items.

^h Real interest calculated on the basis of the public's inflation expectations, derived from the capital market, and the expected exchange rate, calculated from the rate of actual depreciation over the previous twelve months.

ⁱ Including nonresidents' and residents' restitutions deposits.

^j 3-month Libor interest rate.

SOURCE: Based on the seven major banks' reports on costs and tariffs, reports to the Supervisor of the Banks and Bank of Israel estimates.

Table A.1.6

The Public's Credit and Deposit with All the Banking Corporations,^a

							(NIS million)
				Foreign currency (f.c.) and f.c. indexed	Non-monetary items	Total	Change from 2007 (percent)
Credit to the public							
Total residents	342,984,514	187,017,908	91,122,238	303,023	621,427,683	9.6	
Of which: Corporations	210,309,819	71,762,835	61,116,953	236,434	343,426,041	11.3	
Individuals	132,674,695	115,255,073	30,005,286	66,589	278,001,642	7.5	
Of which: Households	109,432,548	108,873,533	5,817,107	29,304	224,152,492	11.5	
Total nonresidents	2,449,254	1,094,230	45,022,135	72,801	48,638,420	26.3	
Of which: Corporations	1,234,877	604,715	38,300,452	64,922	40,204,966	33.6	
Individuals	1,214,377	489,515	6,721,683	7,879	8,433,454	0.0	
Of which: Households	987,697	487,869	3,494,734	0	4,970,300	-0.3	
Total credit to the public	345,433,768	188,112,138	136,144,373	375,824	670,066,103	10.6	
The public's deposits							
Total residents	421,514,245	123,360,362	144,305,226	454,361	689,634,194	9.0	
Of which: Corporations	169,821,903	64,123,718	63,661,801	360,385	297,967,806	12.0	
Individuals	251,692,342	59,236,644	80,643,425	93,976	391,666,387	6.9	
Of which: Households	235,905,178	53,171,601	75,728,878	38,772	364,844,429	7.8	
Total nonresidents	4,227,200	617,526	105,267,157	682	110,112,565	-11.7	
Of which: Corporations	1,167,550	534,644	23,243,608	682	24,946,484	-11.9	
Individuals	3,059,650	82,882	82,023,549	0	85,166,080	-11.6	
Of which: Households	2,637,617	76,465	74,793,160	0	77,507,241	-12.5	
Total deposits of the public	425,741,445	123,977,888	249,572,382	455,043	799,746,758	5.6	

^a Data taken from the monthly balance sheet on a bank basis.

SOURCE: Bank of Israel.

Table A.1.7**Mortgages Granted and Repaid of Mortgage-Granting Banks, and the Balance of Mortgage-Backed Housing Loans,^a 2004–08**

	2004	2005	2006	2007	2008	Change 2008 compared with 2007 (percent)
Total non-directed loans to mortgagors	15,886	20,661	16,845	24,498	30,119	22.9
Total early repayments (housing loans)	9,216	15,306	8,991	11,308	12,884	13.9
Total cumulative balance of mortgagors' arrears	2,006	2,134	2,233	2,229	2,124	-4.7
Total balance of mortgage loans to the public	120,436	125,430	123,257	134,923	152,422	13.0

^a Including the following banks: Adanim Mortgage, Hapoalim (from 2004, and before then, Mishkan), Union (from 2004), Mercantile Discount (from 2004), Jerusalem, Leumi Mortgage, Mizrahi-Tefahot (from 2005, and before then Tefahot), Discount Mortgage, First International (from 2006, and before then the First International Mortgage Bank and Atzmauth Mortgage).

SOURCE: Reports to the Supervisor of Banks.

