Chapter 2
Developments in The Banking System

1. GLOBAL AND LOCAL MACROECONOMIC DEVELOPMENTS[1]

The global economy continued to expand in 2010, at a rate of about 5 percent, and world trade increased by 12 percent. While emerging economies grew by 7 percent, growth in advanced economies, which were harder hit by the recession, averaged only 3 percent. Among Israel's principal trading partners, the GDP growth rate of the US was 2.7 percent and in the eurozone it was 1.7 percent. In view of this difference in real activity between developed and emerging economies, and given the rise in inflation in the developing economies, the monetary interest rate in the latter began to rise during the year, while interest rates were left at nearly zero levels in the developed economies,. These differences encouraged an influx of capital in to the developing economies and led to an appreciation of their currencies, a phenomenon that Israel experienced as well.

Despite the trend of recovery in 2010, the debt crisis in Greece and Ireland worsened in the second quarter of the year, endangering the continued existence of the euro bloc. As a result, financial institutions and the IMF rushed to help those countries cope with the crisis. The aid packages that were offered were conditioned on the implementation of ambitious programs for cutting the budget deficit. Following international organizations' announcement of the aid program, the financial markets stabilized. Later in the year, however, concern was again expressed regarding the ability of the countries that had received aid to apply the programs which had been agreed upon. Doubts also rose regarding the ability of other countries to cope with their problems without foreign aid.

The positive trends in the global financial system that began 2009 continued, and were reflected by continued gains in equity markets, but with differences in the rate of increase in the stock indices between the developed and the developing economies. The MSCI index for developed markets rose by 9.6 percent in 2010, while the MSCI Emerging Markets Index increased by 16.4 percent.

The Israeli economy benefited from a continued growth in activity 2010, a trend that began in the second quarter of 2009. Paralleling developments in other economies that were not at the center of the global recession but were only harmed by it indirectly, Israel's GDP growth rate in 2010 was more rapid than in the large developed economies and amounted to 4.7 percent (Figure 2.1).

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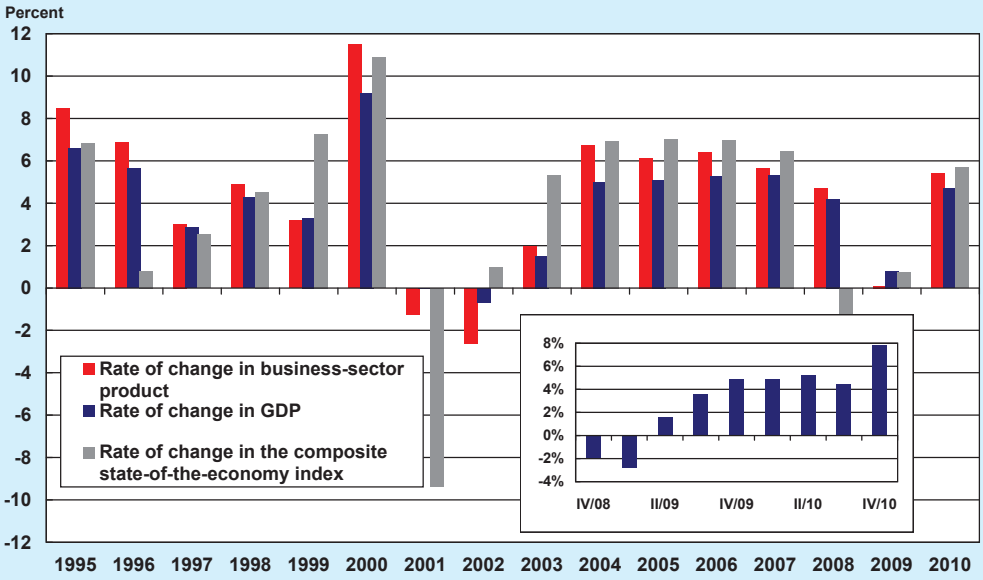
[1] The purpose of this section is to provide a brief description of the macroeconomic environment in which the banking system operated during the year reviewed, and the connection between this environment and the developments that occurred in the system over the course of the year. For a more comprehensive review of macroeconomic developments in 2010 in Israel and worldwide, see the Bank of Israel Report for 2010, Chapters 1 and 2, at: http://www.boi.gov.il/deptdata/mehkar/doch10/eng/doch10e.htm

Figure 2.1
Annual and Quarterly Change in GDP, and Annual Change in Business Sector Product and in the Composite State-of-the-Economy Index, 1995 to 2010
(Annual rates of change)

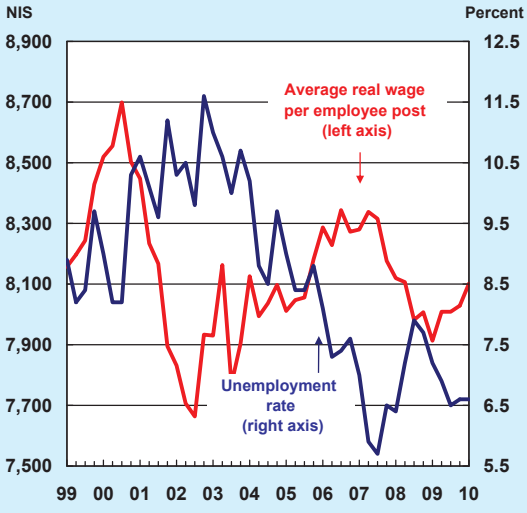


SOURCE: Central Bureau of Statistics and Bank of Israel Research Division.

The growth in economic activity was reflected by a 3.5 percent increase in the number of employed persons and by a decrease in the unemployment rate to 6.6 percent—a level that only prevailed in the recent past during the period of prosperity in 2007—concurrent with a moderate rise in real wages (Figure 2.2)

Monetary policy in 2010 was notable for a gradual adjustment of the interest rate to the improvement in activity in the Israeli economy and rate of price increases in it. The Bank of Israel interest rate was raised from 1 percent at the end of 2009 to 2 percent at the end of 2010. The gap between the low level

Figure 2.2
Major Developments in the Labor Market - Unemployment and Average Real Wage per Employee Post, Dec. 1999 to Dec. 2010
(Quarterly data, seasonally-adjusted, wages at Dec. 2009 prices)

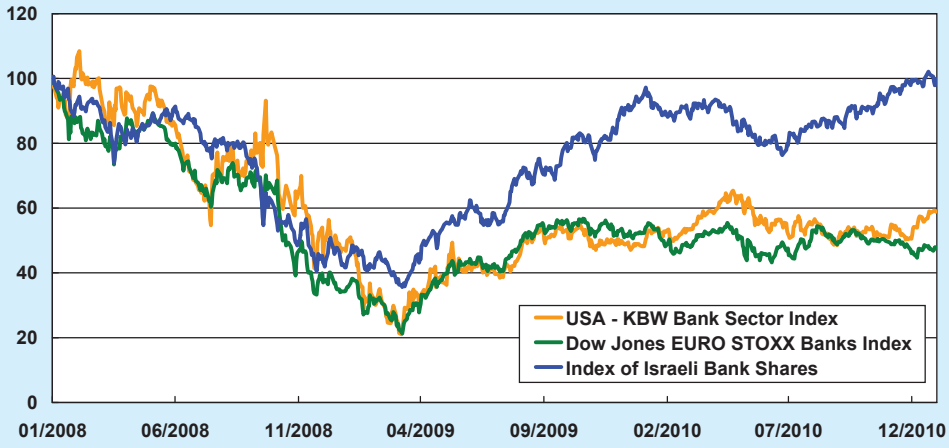


SOURCE: Central Bureau of Statistics.

of the interest rate in the developed countries and the local interest rate increased the incentive to import capital, and led to an appreciation of the shekel. In order to moderate the appreciation of the shekel, the Bank of Israel intervened in the foreign-currency market and purchased foreign currency at varying amounts during the year. In addition, at the beginning of 2011 the Bank of Israel adopted additional measures in the foreign-currency market[2] in response to the growth in foreign investors' short-term investment. In other countries where the process of recovery was relatively rapid, the central banks also intervened in the foreign-currency markets, and some of them imposed restrictions of various types on activity in the market. Despite the appreciation of the shekel, the current-account surplus remained stable at the high level of $6.7 billion or 3.1 percent of GDP.

Against the background of the high level of real activity and expansionary monetary policy, asset prices rose considerably: The Tel Aviv 100 Index gained 15 percent; the Bank Shares Index, which reflects investors' assessments regarding the profitability and resilience of the banks in Israel, continued to rise in 2010 and by the end of the year had returned to its level at the end of 2007, at the eve of the global recession. This was in stark contrast to the parallel index in the US, whose value is still 40 percent lower than before the onset of the recession, and the parallel index in Europe, which is even lower (Figure 2.3).

Figure 2.3
Index of Israeli Bank Shares and Indices of Bank Shares in the US and Europe, 2008-2010
(01/01/2008 index = 100)



SOURCE: Tel Aviv Stock Exchange and finance.yahoo.com web site.

[2] A reporting requirement was imposed on swap transactions, shekel-foreign currency futures transactions and on nonresident investors' transactions in *makam* (bills issued by the Bank of Israel) and short-term government bonds. The Bank of Israel also imposed a liquidity requirement of 10 percent on swap transactions and nonresidents' futures transactions in foreign currency.

Households: The favorable developments in the economy and the continued rise in the prices of financial and real assets increased households' confidence in the economy and the wealth effect. Against this background, private consumption expenditure, which is the main source of households' demand for non-housing credit, rose during the year by 5 percent, more than in the previous five years except for 2007. The growth in private consumption encompassed both current consumption (4.3 percent), and durables consumption (12.8 percent). The quantitative increase in durables imports in the first half of the year is also attributed to the increased worthwhileness of their purchase due to the appreciation of the real exchange rate. The upturn in households' activity was also apparent from the growth in demand for housing, the price of which rose by 15 percent in 2010.

The business sector: Exports expanded at the high rate of 13.4 percent as world trade expanded at a similar rate. Investment in the principal industries (nonresidential construction, machinery, equipment, vehicles and software) surged by 13 percent during the year. Investment in residential construction rose by the high rate of 11.7 percent during 2010 in response to the growth in demand in the housing market.

In 2010, the non-financial private sector raised a gross amount of NIS 22 billion through issues of bonds. Although this was similar to the amount raised in 2009, the net volume of the issues (issues minus redemptions) fell to only NIS 1.5 billion in 2010 compared with NIS 8 billion in 2009. Concurrent with this development, demand for bank credit increased in 2010, as will be described later. In 2010 the bond market became more accessible to companies that are not of the highest rating. Accordingly, the share of companies rated at AA and above out of total issues fell to only 40 percent in 2010, compared with 64 percent in 2009. With that, the majority of issues in 2010 were of high-rated companies (companies rated at A and above accounted for 87 percent of issues)[3].

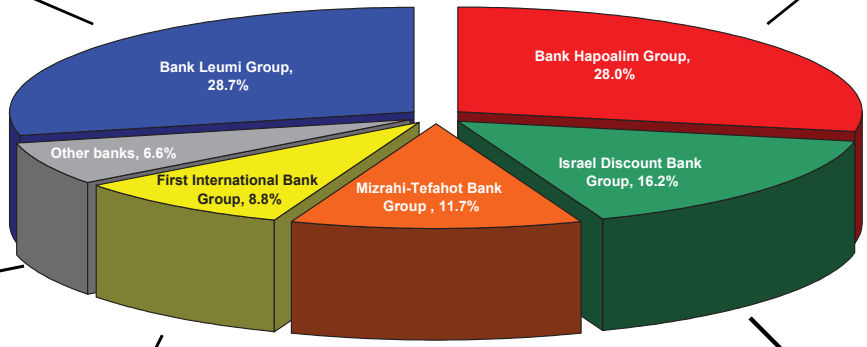
2. THE STRUCTURE OF THE ISRAELI BANKING SYSTEM

This section provides a description of the Israel banking system and its levels of concentration. The findings show that no significant changes have taken place in the system in recent years according to the criteria examined. They also show that compared with parallel systems in similar countries, Israel's banking system is conspicuous in its concentration.

[3] For more details, see the Bank of Israel Report for 2010, page 171, at: http://www.boi.gov.il/deptdata/mehkar/doch10/eng/doch10e.htm

Figure 2.4
The Structure of Israel's Banking System, December 2010, by Groups' Total Assets (on a consolidated basis)

Total assets: NIS 1,145 billion
Herfindahl index: H = 0.213
CR_3 = 72.9%



Bank Leumi Group

A. Banking and finance in Israel
Bank Leumi Le-Israel Ltd (1)
Arab Israel Bank Ltd (1)
Leumi Mortgage Bank Ltd (2)
Leumi Leasing and Investments Ltd (3)
Leumi Finance Company Ltd (4)
Leumi Industrial Development Bank Ltd (7)
Leumi Real Holdings Ltd (7)
Leumi Financial Holdings Ltd (7)

B. Banking and finance abroad (6)
Bank Leumi (USA)
Bank Leumi (UK) plc
Bank Leumi (Switzerland) Ltd
Bank Leumi (Luxembourg) S.A.
Bank Leumi Romania SA
Leumi International Investments NV

C. Capital market and financial companies (9)
Leumi Card Ltd.(5)
Leumi & Co Investment House Ltd (8)
Leumi Capital Market services Ltd (9)
The Bank Leumi Le-Israel Trust Co Ltd (9)
Psagot Leumi and Co Underwriters Ltd (9)

D. Non-banking corporations
The Israel Corporation Ltd
Keshet Broadcasting Ltd
Paz Oil Company Ltd
Superpharm Ltd
Hot Communications Systems Ltd

Bank Hapoalim Group

A. Banking and finance in Israel (1)
Bank Hapoalim Ltd

B. Banking and finance abroad (6)
Bank Hapoalim (Switzerland) Ltd
Bank Hapoalim (Luxembourg) Ltd
Bank Hapoalim (Cayman Islands) Ltd
Bank Hapoalim (Latin America) S.A.
Bank Pozitif (with a holding in DKB Ukraine and JSC Demir Kazakhstan Bank)

C. Capital market and financial companies (9)
Isracard (5)
Poalim Express (5)
Poalim Capital Markets Ltd (9)
The Bank Hapoalim Trust Co Ltd (9)
Poalim Assets management (9)
Poalim Securities Ltd (9)

D. Non-banking corporations
Clal Insurance Enterprises Holdings
Delek Real Estate

Other banking corporations

A. Banking and finance in Israel (1)
Union Bank of Israel Ltd
Bank of Jerusalem
Dexia Israel Bank Ltd

B. Foreign banks
Citibank N.A.
HSBC Bank PLC
BNP Paribas SA
State Bank of India

C. Financial institutions
'Hesech' Kupat Hisachon Lehinuch Ltd

D. Joint service companies owned by the five major banking groups
Automated Clearing House (*Masav*) Ltd
Automated Banking Services Ltd

Definitions
(1) Commercial banks
(2) Mortgage banks
(3) Investment finance banks
(4) Financial institutions
(5) Credit card companies
(6) Subsidiaries abroad
(7) Consolidated holding companies
(8) Investment houses
(9) Capital market companies, including companies supplying operating services to institutions, and underwriting, trust, leasing and insurance activity

First International Bank Group

A. Banking and finance in Israel (1)
The First International Bank of Israel
Poalei Agudat Israel Bank Ltd
U-Bank (Israel) Ltd
Otsar Hahayal Bank Ltd
Bank Massad Ltd

B. Banking and finance abroad (6)
FIBI Bank (UK)
FIBI Bank (Switzerland)

C. Capital market and financial companies (9)
The First International & Co Underwriting and Inv. Ltd.
Kadima Capital markets Ltd
The First International Leasing Ltd
Modus Selective Investment Management and Advice

Mizrahi-Tefahot Bank Group

A. Banking and finance in Israel (1)
Mizrahi-Tefahot Bank Ltd.
Bank 'Yahav' Le-Ovdei Hamdina Ltd

B. Banking and finance abroad (6)
United Mizrahi bank (Switzerland) Ltd

C. Capital market and financial companies (9)
'Etgar' Portfolio Management Ltd (4)
Mizrahi-Tefahot Issuing Company Ltd (4)
'Tefahot' Insurance Agency Ltd (9)
Mizrahi-Tefahot Financing and Leasing Company (9)

D. Non-banking corporations
Pesagot Jerusalem Ltd

Israel Discount Bank Group

A. Banking and finance in Israel
Israel Discount Bank Ltd (1)
Mercantile Discount Bank Ltd (1)
Discount Mortgage Bank Ltd (2)
The First International Bank of Israel (1)

B. Banking and finance abroad (6)
Israel Discount Bank of New York
Discount Bank (Latin America)
Israel Discount Bank (Switzerland)

C. Capital market and financial companies (9)
Discount Leasing
Manpikim—Discount Bank Issues Corporation
Discount Israel Capital Markets
Tachlit Investment House

a. Description of the system

The Israeli banking system comprises five major banking groups (Leumi, Hapoalim, Discount, Mizrahi-Tefahot, and First International), which hold 93 percent of the assets of the system. There are also three independent banks—Union Bank, with 3 percent of the system's assets, Bank of Jerusalem and Dexia Israel Bank, each of which holds less than one percent of the assets, and four branches of foreign banks— Citibank, HSBC, BNP Paribas, and the State Bank of India, which together constitute about two percent of the system.[4] The banking corporations provide the full range of banking services ("universal banking") by means of commercial banks, mortgage banks, overseas branches of Israeli banks, credit card companies, financial institutions, and joint service companies (Figure 2.4). In addition to these, representatives of foreign financial institutions operate also in Israel, but they are not considered part of the banking system, because they do not provide credit or accept deposits.

In addition to the activity of classic banking intermediation, the banking corporations, by means of subsidiaries, deal with areas that complement their commercial banking activity, such as credit card activity, which has been increasing in recent years,[5] and capital-market activity. With that, in recent years the banks have been required to reduce their activity in the area of provident funds and advanced training funds as a result of regulatory changes, the most prominent of which was the implementation of the recommendations of the Bachar Committee.

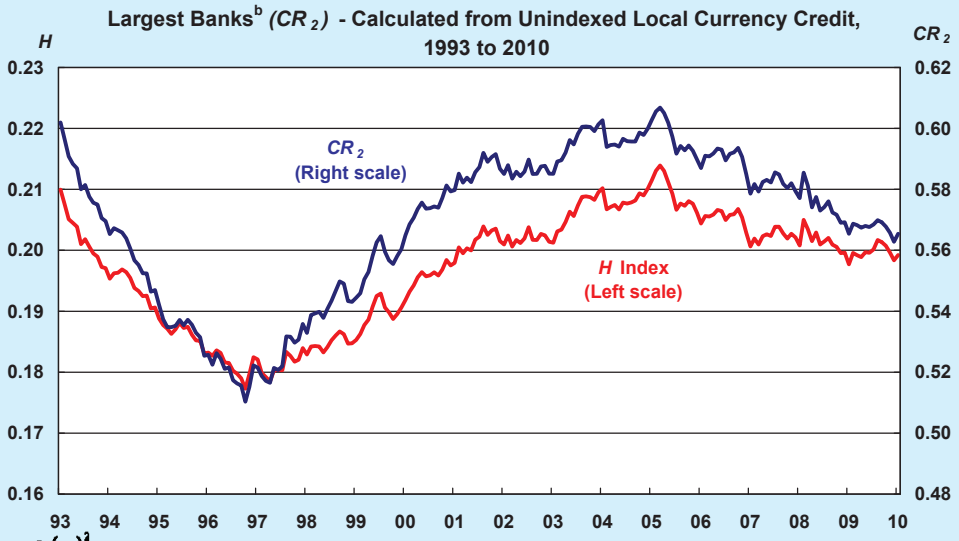
b. Concentration of the banking system

Two measures are customarily used to determine the concentration of the banking system, which is one of the factors affecting the extent of its competitiveness: the first, the Herfindahl-Hirschman Index (the HHI), is calculated here on the unindexed banking credit, which is around two-thirds of the banking credit balance of the commercial banks; the second, CR_2, measures the market share of the two largest banks (Leumi and Hapoalim) of the overall unindexed shekel credit. At the end of 2010, the concentration according to the HHI stood at 0.20, essentially unchanged from the end of 2009. A similar picture of stability in the concentration of the system this year, with a slight, gradual decline since the beginning of 2006, is obtained from the CR2 measure, which stood at 56.5 percent in 2010, as it did at the end of 2009 (Figure 2.5). An international

[4] The four branches of the foreign banks operating in Israel together employ 254 people, less than half a percent of the 45,236 positions in the Israeli system, and the volume of their combined balance sheets totals NIS 19 billion, which is 1.8 percent of the assets of the system as a whole. These branches operate mainly among "niche populations" where they enjoy relative advantages, for example, wealthy customers throughout the world who are interested in keeping a bank account in Israel; companies in the process of merger or acquisition, or in the process of raising capital abroad; companies active in the global capital markets or the diamond industry; and managers of special actions, such as guarantee transactions for industries in Israel vis-à-vis customers abroad.

[5] For details see Section 14 of this chapter.

Figure 2.5
The Herfindahl-Hirschman *(H)*[a] Index and the Market Share Index for the Two Largest Banks[b] *(CR_2)* - Calculated from Unindexed Local Currency Credit, 1993 to 2010

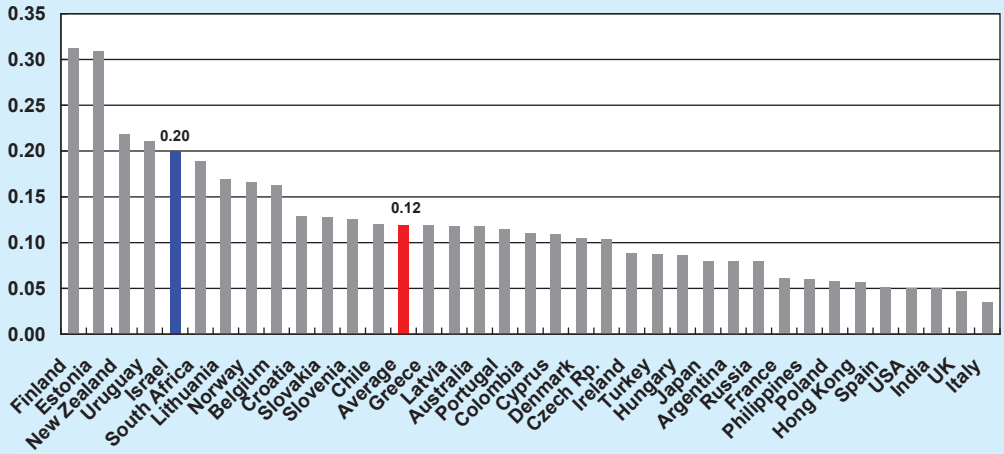


[a] $\sum_{i=1}^{n}\left(\frac{y_i}{y}\right)^2 = H$ = the Herfindahl-Hirschman Index of industry concentration, where y_i = output of bank *i* (unindexed shekel credit) and *y* = the industry's output.

[b] CR_2 = The market segment of the two largest banks in the system (Leumi and Hapoalim).

SOURCE: Published financial statements and reports to the Banking Supervision Department.

Figure 2.6
The Herfindahl-Hirschman *(H)* Index[a] in selected banking systems, 2009[b]: International comparison



[a] Calculated on total assets, on an unconsolidated basis.

[b] Except for the following countries, in which the data refer to 2008: New Zealand, Uruguay, South Africa, Chile, Australia, Turkey, Argentina, Hong Kong and India.

SOURCE: The EU Banking Structures Reports, September 2010, and National Supervisory Authorities.

comparison according to the assets of the individual banks shows that the concentration in the Israel banking system is considerably higher than the average of Israel's reference group (Figure 2.6).

3. BALANCE-SHEET AND OFF-BALANCE-SHEET ACTIVITY

a. Main trends in balance-sheet and off-balance-sheet activity

Like other industries in the economy, the performance of the banking system is affected by the business cycle. The continuing expansion of economic activity, together with the continuing positive trend in the capital markets and the tendency of the banks to conduct conservative banking activities, led this year to changes in a number of balance sheet categories. Prominent among these, on the assets side, is the growth in the total volume of credit to the public of 7.2 percent and, on the liabilities side, the decline in total cash and deposits in the banks of 15.6 percent and the small increase in total deposits of the public of 1.2 percent and the increase in the issue of bonds and subordinated debt notes of about 12.9 percent (Table 2.1). These developments were also impacted by the Bank of Israel's expansionary monetary policy, which was characterized by a low interest rate environment, as will be described below.

The banks' aggregate balance sheet[6] totaled about NIS 1.12 trillion this year, which represented an increase of about 3.1 percent. This exceeded last year's increase of 2.5 percent though it was lower than the average of about 4.6 percent for the years of prosperity prior to the crisis.[7]

The structure of the Israeli banking system's balance sheet reflects that of a conservative banking system which is primarily based on the classic banking activities of extending credit and accepting deposits. This was manifested in the relatively high proportion of credit within total assets, which stood at about 69 percent this year, and the relatively low and stable proportion of credit within total deposits, which stood at about 91.3 percent (Figure 2.7). This is the result of a broad and stable deposit base among the banks, which serves as the main source for the funding of their activity. This contrasts with banks in other countries which are characterized by a greater degree of diversification in the sources of their funding.

Particularly noticeable this year on the assets side was the increase of about 7.2 percent in total balance sheet credit to the public following two years of particularly high volatility, with an increase of about 10.48 percent in 2008 and a decline of about 1.43 percent last year. With regard to credit performance, there was a particularly noticeable change in business credit, which returned to an upward trend this year, following a decline last year, and the expansion of credit to private individuals, primarily consisting

[6] This includes the five large banking groups and Union Bank, Bank of Jerusalem, and Dexia Bank.

[7] 2004–07.

Table 2.1
Balance sheet of the Israeli banking system[a], 2007 to 2010

	At current prices				Rate of change in 2010	Distribution				Average balance at current prices	
	2007	2008	2009	2010		2007	2008	2009	2010	2009	2010
	(NIS million)				(Percent)	(Percent)				(NIS million)	
Assets											
Cash and deposits at banks	125,733	125,978	160,785	135,648	-15.6	12.5	11.9	14.8	12.1	142,732	145,184
Of which:											
Cash[b]	23,544	83,326	126,958	110,686	-12.8	18.7	66.1	79.0	81.6	105,142	118,822
Deposits at commercial banks	99,355	40,028	32,412	23,780	-26.6	79.0	31.8	20.2	17.5	36,220	28,096
Securities	170,138	137,475	150,871	154,358	2.3	16.9	12.9	13.9	13.8	147,891	150,258
Credit to the public[c]	663,450	732,428	721,960	773,748	7.2	65.9	69.0	66.3	69.0	727,316	743,796
Of which:											
Unindexed local currency	298,258	359,772	386,192	435,412	12.7	45.0	49.1	53.5	56.3	371,659	408,465
CPI - indexed local currency	186,084	189,136	178,120	186,375	4.6	28.0	25.8	24.7	24.1	182,140	179,821
In or indexed to Foreign-currency	177,485	183,024	156,804	150,903	-1.2	26.8	25.0	18.1	16.7	167,596	144,806
Of which: In dollars	118,195	125,597	103,459	103,856	0.4	66.6	68.6	79.3	13.4	116,731	104,904
Non-financial items	1,622	496	844	1,057	25.2	0.2	0.1	0.1	0.1	651	1,023
Credit to the government	1,425	2,283	2,973	2,379	-20.0	0.1	0.2	0.3	0.2	2,817	2,443
Investments in subisidary and affiliated companies	4,981	4,548	4,490	4,151	-7.6	0.5	0.4	0.4	0.4	4,334	4,260
Premises and equipment	12,705	13,554	13,856	13,875	0.1	1.3	1.3	1.3	1.2	13,625	13,751
Other assets	26,493	44,533	29,955	34,041	13.6	2.6	4.2	2.8	3.0	35,054	33,319
Total assets	**1,007,215**	**1,062,234**	**1,088,378**	**1,121,629**	3.1	**100**	**100**	**100**	**100**	**1,077,161**	**1,096,214**
Liabilities and equity											
Deposits of the public	787,928	820,401	836,904	847,273	1.2	78.2	77.2	76.9	75.5	832,581	832,162
Of which:											
Unindexed local currency	355,946	412,952	434,957	473,279	8.8	45.2	50.3	52.0	55.9	421,609	443,617
CPI - indexed local currency	97,531	101,302	99,822	95,056	-4.8	12.4	12.3	11.9	11.2	101,218	97,237
In or indexed to Foreign-currency	332,324	305,572	238,820	227,504	-4.7	42.2	37.2	28.5	26.9	296,563	267,682
Of which: In dollars	245,999	223,853	212,810	204,048	-4.1	74.0	73.3	89.1	89.7	221,859	210,739
Deposits from banks	26,424	20,428	18,879	15,636	-17.2	2.6	1.9	1.7	1.4	19,818	18,176
Government deposits	4,895	3,536	3,649	3,431	-6.0	0.5	0.3	0.3	0.3	3,616	3,822
Securities that were lent or purchased under repo agreements	7,514	9,002	8,718	8,619	-1.1	0.7	0.8	0.8	0.8	9,616	8,659
Bonds and subordinated notes	59,257	66,725	78,710	88,862	12.9	5.9	6.3	7.2	7.9	72,357	82,940
Other liabilities	58,567	80,087	71,431	81,763	14.5	5.8	7.5	6.6	7.3	73,244	77,078
Total liabilities	**944,585**	**1,000,179**	**1,018,291**	**1,045,583**	**2.7**	**93.8**	**94.2**	**93.6**	**93.2**	**1,011,110**	**1,022,849**
Minority interest	1,532	1,770	1,853	1,774	-4.3	0.2	0.2	0.2	0.2	1,803	1,805
Equity	61,098	60,285	68,234	74,272	8.8	6.1	5.7	6.3	6.6	64,248	71,559
Total liabilities and equity	**1,007,215**	**1,062,234**	**1,088,378**	**1,121,629**	**3.1**	**100**	**100**	**100**	**100**	**1,077,161**	**1,096,214**

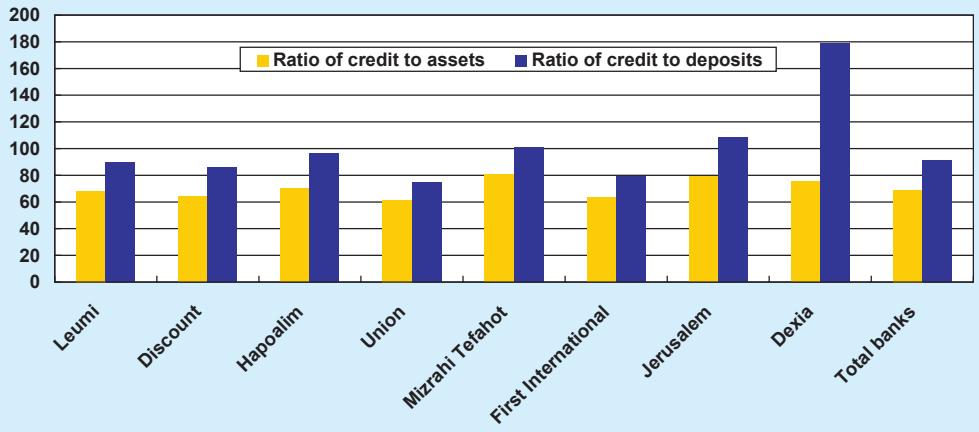
[a] On a consolidated basis. The five largest banks (Leumi, Hapoalim, Discount, First International and Mizrahi-Tefahot), Union Bank, Bank of Jerusalem and Dexia Bank. Not including branches of foreign banks operating in Israel.

[b] Including deposits at the Bank of Israel.

[c] Excluding non-financial items.

SOURCE: Published financial statements.

Figure 2.7
Ratio of credit to deposits and ratio of credit to assets,
The five large groups and the three independent banks



SOURCE: Published financial statements.

of housing credit, which continued to grow at double-digit rates for the third consecutive year. With respect to credit to the public according to indexation segment, it appears that the basis for growth was non-indexed shekel credit, primarily against the background of the low interest rate environment maintained by the Bank of Israel this year.

Total cash and deposits at the banks dropped sharply this year by a rate of about 15.6 percent, following a steep increase of about 27.6 percent last year. This is a reflection of the increase in credit to the public, which was funded by a reduction in cash and deposits. There are two main factors behind the increase in credit this year: (1) The recovery of the Israeli economy from the recession and the desire of the banks to reduce liquidity surpluses held during that period, and (2) the tendency of the banks to reduce their exposure to financial institutions led this year to a drop in the share of cash and deposits in the total balance sheet to about 12.1 percent. This is close to its level during the years of prosperity prior to the crisis and below last year's level of about 14.8 percent.

The banks' securities portfolio grew this year by a rate of about 2.3 percent and totaled about NIS 154 billion. The growth in the portfolio was due partly to the initiated expansion of holdings in hold-to-maturity and ready-for-sale government bonds (as a result of the uncertainty in the capital markets this year and the desire of the banks to reduce their risk exposure) and partly due to the price rises in the bond and share markets (for the year as a whole).

On the liabilities side, there was, as mentioned, a noticeable increase in bonds and subordinated debt notes of about 12.9 percent. Their share of the total balance sheet rose again this year and reached about 7.9 percent, which represents a continuation of the rapid growth trend in debt securities over the last three years.

Total deposits of the public grew this year by a low rate of about 1.2 percent. This was a reflection of the expansion in the non-indexed shekel segment of about 8.8 percent, which is consistent with the long-term trend and reflects the low rates of inflation in Israel during the past decade. The growth of deposits in this segment was offset by the declines in other indexation segments: about 4.8 percent in the CPI–indexed segment and about 4.7 percent in the segment denominated in or indexed to foreign currency. This is partly explained by the 2.8-percent decline in the deposits at overseas branches of the banks (Table 5.4.3), primarily in Europe, and the appreciation of about 6 percent in the exchange rate of the shekel against the dollar.

The off-balance-sheet activity of the banks grew by about 20 percent this year and totaled about NIS 1.57 trillion. The growth in activity was the result of: (1) an increase in the banks' activity in financial derivatives, particular currency contracts, of about 26 percent (Table 2.2), which was due to the high level of volatility in the shekel–dollar and shekel–euro exchange rates this year; and (2) an increase of about 5.3 percent in guarantees and commitments to issue credit, to a total of about NIS 394 billion this year. This was due in part to the increase in guarantees to home buyers of about 15.8 percent (Table 2.3) as reflected in the continuing developments in the residential real estate market (for further details, see Box 2.1).

Table 2.2
Distribution of the balance of derivative instruments, Israeli banking system[a], 2010 compared with 2009
(NIS million)[b]

	By type of instrument		Rate of change compared with 2009	By type of transaction			Rate of change compared with 2009
	2009	2010			2009	2010	
Interest-rate contract	478,973	539,440	12.6	Hedging derivatives[d]	21,110	21,258	0.7
Exchange rate contract	639,307	805,393	26.0	ALM derivatives[d,e]	941,126	1,129,747	20.0
Other contracts[c]	190,760	225,599	18.3	Other derivatives[f]	346,805	419,427	20.9
Total	**1,309,040**	**1,570,432**	**20.0**	**Total**	**1,309,040**	**1,570,432**	**20.0**

[a] Includes the five largest banks and the independent banks (Union, Jerusalem and Dexia).

[b] In notional principal terms, at current prices.

[c] Contracts in respect of shares, commodity and others.

[d] Excluding credit derivatives.

[e] Derivatives constituting part of the bank's assets and liabilities management.

[f] Including credit derivatives and currency swaps.

SOURCE: Published financial statements.

Table 2.3
Transactions in off-balance-sheet financial instruments (credit risk), Israeli banking system[a], 2008 to 2010

	Year-end balance		Rate of change compared with previous year	Distribution	
	2009	2010		2009	2010
	(NIS million)		(Percent)	(Percent)	
Documentary Credit	5,637	5,904	4.7	1.5	1.5
Credit guarantees	21,700	20,981	-3.3	5.8	5.3
Guarantees for home buyers	30,843	35,711	15.8	8.2	9.1
Other guarantees and liabilities	42,342	41,359	-2.3	11.3	10.5
Unutilized credit card credit lines	77,917	75,943	-2.5	20.8	19.3
Unutilized credit lines to the public	88,037	91,197	3.6	23.5	23.1
Irrevocable commitments for approved credit that has not yet been extended	80,706	87,204	8.1	21.5	22.1
Liabilities for the issue of guarantees	27,375	36,154	32.1	7.3	9.2
Total	**374,558**	**394,453**	**5.3**	**100**	**100**

[a] Includes the five largest banking groups and the independent banks (Union, Jerusalem and Dexia).

SOURCE: Published financial statements.

b. Analysis of bank assets and the liabilities according to indexation base[8]

1. General

Two major macroeconomic developments affected the balance sheet of the banks, its composition with regard to indexation bases, and the inherent risks, developments that began in 2009 and intensified this year.[9] The main one was the surge in the public's demand for real estate, which led to a rise in demand for housing credit. The second development was the continuing appreciation of the shekel against the major foreign currencies—6 percent against the dollar and 13 percent against the euro.

Assets

In view of the near zero real interest rates in the unindexed credit category, and the average CPI-indexed interest rate of 2.6 percent, which prevailed in 2010, most of the increased demand for housing credit was channeled into unindexed loans, whose interest rate is essentially connected directly to the Bank of Israel interest rate. This interest rate

[8] See Tables A.2.1 to A.2.5

[9] These developments are exogenous to the banking system, and for this reason will not be analyzed here. We will only examine their implications for the activity of the banks, and the composition of their balance sheets. The macroeconomic developments are analyzed in depth in the Bank of Israel's reports.

is in a rising cycle, and is expected to lead to a rise in households' debt burden. NIS 25 billion of unindexed housing credit has been extended to households. Likewise, the balance of consumer credit balance rose by NIS 9 billion, mostly unindexed. The growth in the unindexed retail credit led to a marked rise of unindexed bank credit, which grew by a significant 13 percent, or NIS 49 billion.

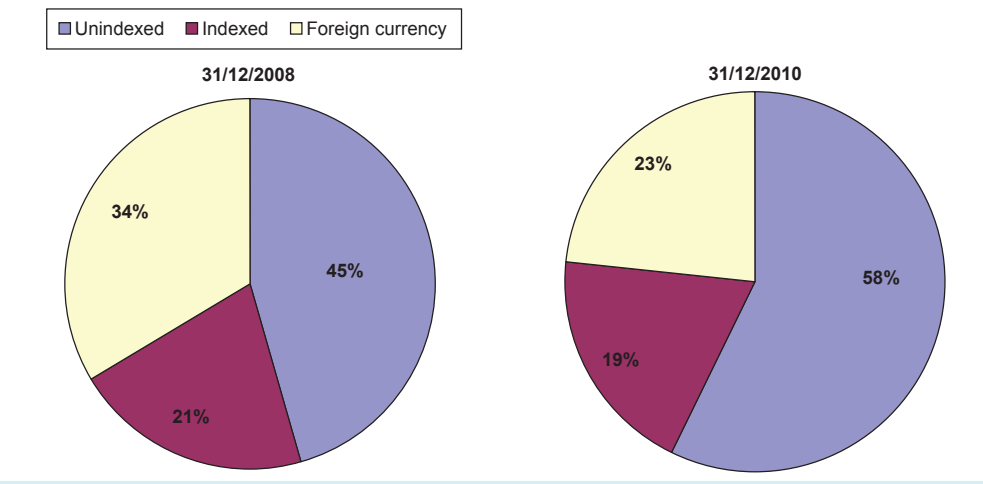
The increased economic activity, which increases the demand for credit for working capital, and the substantial growth of investments in the various sectors of the economy, increased the business sector's demand for bank credit, the balance of which, in the unindexed, CPI-indexed, and the foreign currency-indexed categories combined, grew by NIS 17 billion. At the same time, the appreciation of the shekel led to erosion in the shekel value of the foreign currency denominated credit, despite its rise in dollar terms.

The combination of the developments described above led to a fundamental change in the public's credit mix with respect to its indexation base: the weight of the unindexed assets in the balance sheet rose within only two years by 13 percentage points to 58 percent at the end of 2010, and the share of foreign currency-denominated and foreign currency-indexed credit fell by 11 percentage points, to only 23 percent (Figure 2.8)

Liabilities

The near zero rates on deposits in all the channels (Table A.2.5) did not provide a solution to the compensation depositors demand for the lack of liquidity. This is shown by the continuing growth in the weight of the unindexed deposits, which by their nature

Figure 2.8
The banks' total assets by indexation base, 2008 and 2010



SOURCE: Published financial statements.

are short term, alongside a reduction in exposure to foreign currency, because of the continuing erosion in the shekel value of the deposits denominated in foreign currency and indexed to it.

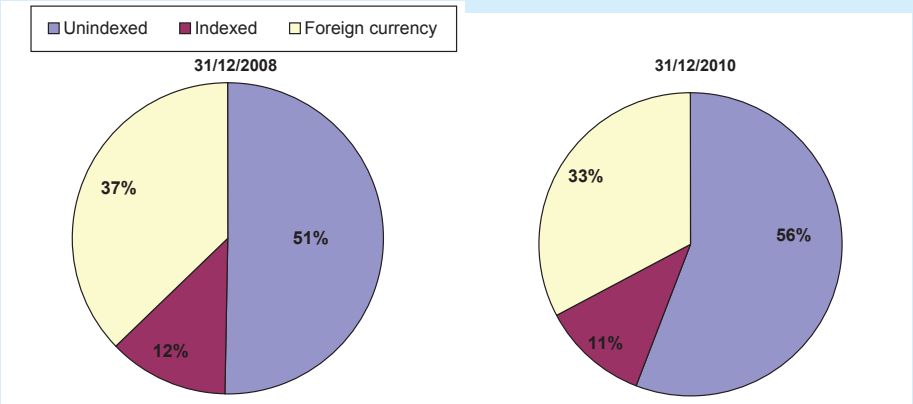
These developments were well reflected in the mix of deposits that the public holds in the banks, which are more than 80 percent of the banks' liabilities, excluding equity. The balance of unindexed deposits grew at a substantial rate of 9 percent, equivalent to NIS 38 billion, while the balance of CPI-indexed deposits decreased by 5 percent, equivalent to NIS 5 billion. The rate of decline in the foreign currency category and deposits indexed to it was even greater—9 percent (NIS 23 billion).

As a result of these changes the deposit mix changed with respect to the indexation bases: the weight of the unindexed deposits grew within two years by five percentage points, to 56 percent, while the foreign currency deposits decreased in shekel terms (Figure 2.9).

2. The unindexed segment

Most of the growth in unindexed-assets was in credit to the public—NIS 49 billion, prominent in which was credit to households (for housing and consumption), most of which this year was unindexed. At the same time, the supply of bank credit expanded, against the backdrop of a decline in borrowers' risk, availability of the unindexed sources—the public's deposits and the banks' deposits in banks and in the Bank of Israel—and competition between the banks, particularly in the area of housing credit. This resulted in equilibrium in the credit market, in which the balance of unindexed credit grew significantly, together with a moderate decrease in the real interest rate on this credit.

Figure 2.9
Distribution of balance of deposits of the public by indexation base, 2008 and 2010



SOURCE: Published financial statements.

An increase was recorded also in unindexed securities of NIS 15 billion, mainly in makam (short-term bills issued by the Bank of Israel). This finding stands out in light of the reduction in volume of the nostro securities portfolio indexed to the CPI and indexed to foreign currency, even in dollar terms. It can be assumed that this development is connected to the actions adopted by the banks to reduce their exposure to securities abroad and to foreign currency, a lesson gained from the last financial crisis, and against the backdrop of the continuing appreciation in the rate of the shekel. At the same time, the balance of deposits in the Bank of Israel decreased, even though it remains high in historical perspective—about NIS 100 billion, which reflects the system's high liquidity level.

The liabilities side shows a marked increase of NIS 38 billion in the public's unindexed deposits, a result of the public's preference for short-term deposits and demand deposits, which are unindexed, against the backdrop of the low, even negative, real interest rates in all the channels.

3. The CPI-indexed segment

No significant changes took place this year in this sector, which is the smallest of the banks' indexation bases (Figure 2.8). The banks' CPI-indexed assets rose this year at a moderate rate of 2 percent, equivalent to NIS 4 billion, while no substantial changes in liabilities were recorded in this sector. All the growth in indexed assets was in credit to the public, which rose by 5 percent, equivalent to NIS 8 billion, particularly to the business sector, even though its level was similar to that at the end of 2008. On the other hand, the balance of CPI-indexed nostro securities decreased by NIS 4 billion.

4. The foreign currency segment and the foreign-currency-indexed segment

The banks' foreign-currency assets and foreign-currency-indexed assets continued to shrink substantially this year. At the end of 2010 these assets stood at NIS 256 billion, 11 percent less than the previous year, and almost 30 percent less than at the end of 2008. This decrease has resulted from a combination of the continuing appreciation of the shekel, which erodes the shekel value of the foreign-exchange assets, and the banks' desire to reduce their holdings in foreign currency securities and deposits, together with their desire to reduce the volume of the nostro securities portfolio in branches abroad. The volume of cash, deposits, foreign currency securities, and foreign-currency-indexed securities held by the banks fell this year by 21 percent in shekel terms (and by 32 percent since 2008), and by 16 percent in dollar terms (and by 28 percent since 2008).

Despite the fall in the shekel value of credit to the public in foreign currency, the balance of this credit grew this year by 2 percent, equivalent to one billion dollars, of which close to 400 million was granted by the overseas branches of the banking groups. Only a small percentage of the credit granted by the overseas branches was intended for use in Israel, and this portion grew this year by 150 million dollars, a high rate of 25 percent. The credit granted by the overseas branches to individuals, not for housing, also grew by 140 million dollars, an increase of almost 10 percent.

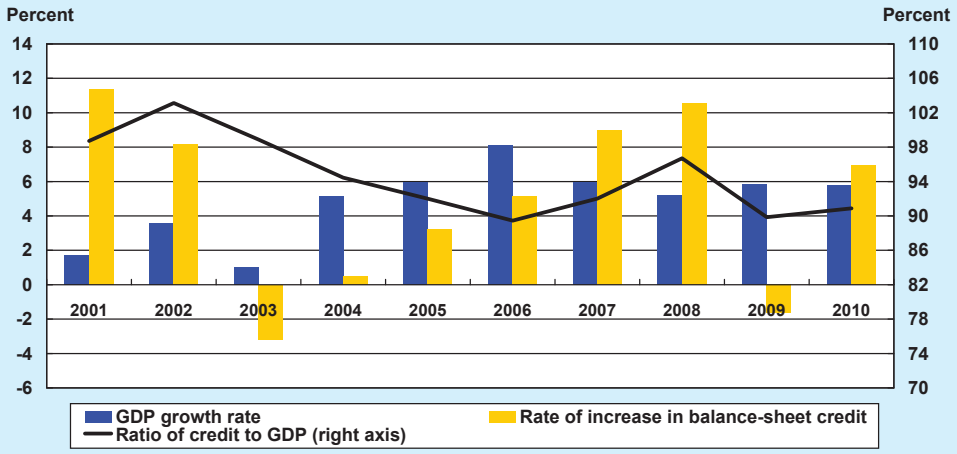
4. THE CREDIT PORTFOLIO AND CREDIT RISK[10]

a. Total credit

The five large banking groups' total credit portfolio increased by 6 percent in 2010 to NIS 1,158 billion, similar to its level prior to the recession (Table 2.4). This development derived from the expansion of credit for housing and credit to the construction industry and the real estate industry, which is notable for high leverage[11], against the background of the upsurge in demand for apartments and the growth in residential construction. The proportion of these components in the overall credit portfolio rose by six percentage points during the last two years and at the end of 2010, the banks' exposure to these sectors of activity accounted for a third of their credit portfolio. The expansion of the credit portfolio was reflected by an increase of 7 percent in balance-sheet credit and 5 percent in off-balance-sheet credit (Table 2.4)

Balance sheet credit increased in 2010 at a rate similar to that of GDP growth .As a result, the ratio of balance-sheet credit to GDP, which serves as an indicator of repayment ability, remained largely unchanged and at the end of the year reviewed amounted to 91 percent, below its level prior to the recession (Figure 2.10). In addition, the ratio of

Figure 2.10
Nominal GDP annualized growth rate, rate of increase in balance sheet credit to the public at the five major banking groups, and credit to GDP ratio, 2001-10



SOURCE: Published financial statements and the Bank of Israel's Information and Statistics Department.

[10] The analysis of the credit portfolio and credit risk in this section encompasses both balance-sheet items and off-balance-sheet items, which are weighted by conversion coefficients to balance-sheet credit. Balance-sheet items are outstanding credit to the public, investment in bonds of the public and other assets in respect of derivative instruments. Off-balance-sheet credit risk is credit risk in off-balance-sheet financial instruments as calculated for the purpose of borrower indebtedness restrictions.

[11] As reflected by the ratio to GCP of credit to the construction and real estate industry (Table 2.5).

Table 2.4

Distribution of outstanding credit to the public by principal industries, December 2009 and December 2010

	Total credit to the public [a]				Balance-sheet credit risk [b]								
	Balance		Distribution		Balance		Distribution		Changes in credit	Share of problem loans in total balance-sheet credit		Ratio of loan-loss provision to balance-sheet credit	
Princpal industries	2009	2010	2009	2010	2009	2010	2009	2010	2010	2009	2010	2009	2010
	(NIS million)		(Percent)		(NIS million)		(Percent)		(Percent)	(Percent)		(Percent)	
Agriculture	7,396	7,082	0.7	0.6	5,796	5,592	0.8	0.7	-3.5	7.3	7.2	0.9	0.2
Manufacturing	111,813	115,626	10.3	10.0	63,089	64,488	8.7	8.4	2.2	11.1	8.8	1.4	0.5
Construction and real estate	167,902	187,216	15.4	16.2	104,179	106,188	14.4	13.8	1.9	15.3	13.6	1.1	0.6
Of which: Purchase groups	5,429	8,804	0.5	0.8	1,715	2,685	0.2	0.3	56.6				
Electricity and water	9,299	10,411	0.9	0.9	5,473	5,970	0.8	0.8	9.1	0.3	1.4	0.0	0.1
Commerce	65,405	69,605	6.0	6.0	46,548	51,372	6.5	6.7	10.4	6.0	5.1	0.5	0.6
Tourism [c]	13,519	13,848	1.2	1.2	11,810	11,743	1.6	1.5	-0.6	28.5	21.4	0.8	-0.7
Transport and storage	17,852	19,362	1.6	1.7	12,982	14,422	1.8	1.9	11.1	10.4	7.4	0.5	-0.6
Communications and computer services	24,854	25,530	2.3	2.2	13,254	18,099	1.8	2.3	36.6	11.1	6.7	2.0	-0.3
Financial services	100,349	106,928	9.2	9.2	55,524	61,058	7.7	7.9	10.0	8.4	5.7	0.8	0.5
Other business services	33,348	35,097	3.1	3.0	23,823	25,431	3.3	3.3	6.7	4.6	4.4	0.9	0.6
Public and community services	20,878	21,045	1.9	1.8	16,612	16,768	2.3	2.2	0.9	5.6	4.8	0.2	0.1
Private individuals	360,680	396,151	33.1	34.2	255,459	288,869	35.4	37.4	13.1	2.7	2.1	0.4	0.3
Of which: Housing loans	166,605	195,088	15.3	16.8	157,659	182,761	21.9	23.7	15.9	2.1	1.6	0.0	0.0
Non-housing loans	194,075	201,063	17.8	17.4	97,800	106,108	13.6	13.7	8.5	3.5	3.0	1.0	0.8
Borrowers' activtiy abroad	156,232	150,102	14.3	13.0	106,786	101,718	14.8	13.2	-4.7	8.1	7.2	0.7	0.7
Total	**1,089,527**	**1,158,003**	**100**	**100**	**721,335**	**771,718**	**100**	**100**	**7.0**	**7.6**	**6.1**	**0.7**	**0.4**
Local authorities	8,936	8,936	0.8	0.8	8,370	8,412	1.2	1.1	0.5	2.1	1.8	0.0	0.0

[a] Includes outsanding credit to the public, investment in bonds of the public, other assets in respect of derivative instruments and credit risk in off-balance-sheet financial instruments, as calculated for the purpose of borrower indebtedness restrictions. The distribution of outstanding credit is calculated with respect to the acitivity of borrowers in Israel and abroad.

[b] Includes investments in bonds of the public.

[c] Hotels, food and accomodation services.

SOURCE: Published financial statements.

Table 2.5
Ratio of credit[a] to GDP, by industry, 1999 to 2010

Industry	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Agriculture	1.34	1.19	0.70	0.66	0.64	0.57	0.54	0.60	0.69	0.72	0.59	0.61
Manufacturing	1.28	1.20	1.56	1.60	1.46	1.36	1.32	1.29	1.29	1.33	1.18	1.13
Construction and real estate	2.89	3.25	3.50	3.46	3.27	3.40	3.47	3.22	3.20	3.32	3.14	3.47
Electricity and water	0.76	0.79	0.87	1.11	0.82	0.83	0.79	0.76	0.74	0.74	0.54	0.70
Trade and services	0.76	0.72	0.78	0.85	0.81	0.82	0.85	0.83	0.92	0.93	0.83	0.84
Of which: Food & accomodation services	0.27	0.26	0.30	0.32	0.31	0.28	0.25	0.24	0.24	0.25	0.22	0.22
Of which: Financial services	0.46	0.40	0.45	0.49	0.45	0.49	0.53	0.54	0.65	0.63	0.57	0.56
Transport, storage, communications and computers	1.21	1.43	1.47	1.48	1.20	0.94	0.98	0.88	0.86	0.85	0.87	0.86
Total	**1.25**	**1.23**	**1.36**	**1.46**	**1.34**	**1.27**	**1.27**	**1.23**	**1.32**	**1.34**	**1.26**	**1.27**

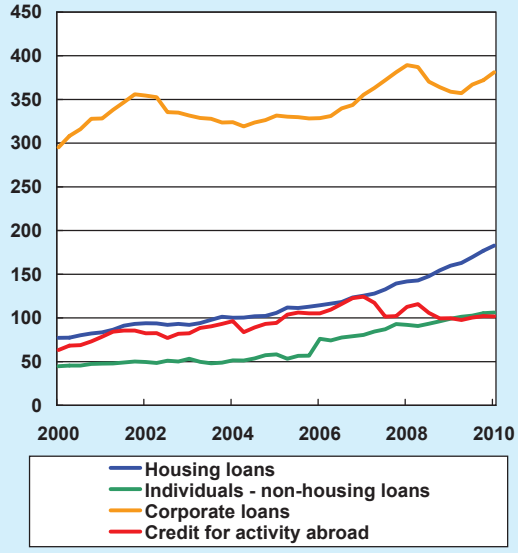
[a] The credit is calculated with respect to borrowers' activity in Israel alone and includes: balance-sheet credit (credit to the public, investments in bonds and other assets in respect of derivative instruments) and off-balance-sheet credit risk, which is weighted by conversion coefficients to balance-sheet credit.

SOURCE: Reports to the Banking Supervision Department and the Central Bureau of Statistics.

balance-sheet credit to the capital base continued to decline to 6.1 percent, its lowest level for the past decade, in a trend reflecting the banks' increased ability to absorb loan losses.

An analysis of the balance-sheet credit portfolio by principal industries[12] shows that most of the increase was recorded in housing loans, which expanded by 16 percent over the year. As a result, outstanding credit to the business sector for activity in Israel rose by 6 percent, after contracting in 2009. However, balance-sheet credit extended to borrowers whose main activity is abroad, decreased for the third consecutive year due to the increased risk involved in activity abroad resulting from the recession (Figure 2.11). The

Figure 2.11
Outstanding balance-sheet credit risk, five major banking groups, Dec. 2000 to Dec. 2010
(NIS billion)



1) The increase in credit to individuals in 2006 derived largely from the reclassification of open credit card transactions, from off-balance-sheet to balance sheet.
SOURCE: Published financial statements.

[12] See Paragraph 4.3 for further details.

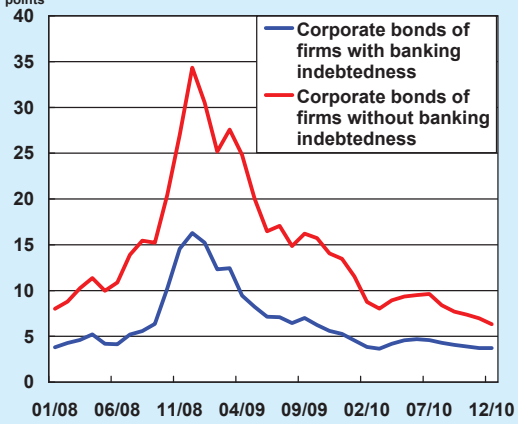
growth in off-balance-sheet credit derived from banking commitments for the granting of guarantees and credit to contractors and for the granting of bank guarantees to purchasers of apartments as activity in the construction industry increased (Table 2.4).

Concurrent with the growth in bank credit to the business sector, non-bank credit expanded as well. The business sector raised a gross amount of NIS 23 billion from issues of bonds in 2010, similar to the amount raised in 2009 but considerably less than the record amounts recorded in the years 2006–2007. It should be noted that the volume of bond redemptions was very large compared with their volume at the time of the recession, with the result that net capital raised amounted to only NIS 1.5 billion. Although the accessibility of the capital market for companies that are not top-rank (including companies from the real estate industry) increased in 2010, in contrast to previous years most issuers were high-rated companies. During the last two years, the non-bank credit market competed with the banking system, mainly for higher quality business customers. These companies accounted for 77 percent of issues in 2010, and the outstanding bank credit of some of them increased concurrent with an increase in their volume of marketable bonds.

b. Quality of the credit portfolio

The improvement in the quality of the credit portfolio, which began in the second half of 2009, continued in 2010 due to borrowers' improved position. This was against the background of positive growth data in Israel, the expansion of exports and the continued improvement in the local labor market. The increased quality of credit was reflected by the majority of generally accepted indicators, such as capital market indices, and indicators based on data from financial statements. However, an examination of the quality of credit by principal industries shows that in several industries—including construction and real estate, diamonds, and credit for the purchase of means of control—the level of risk increased[13].

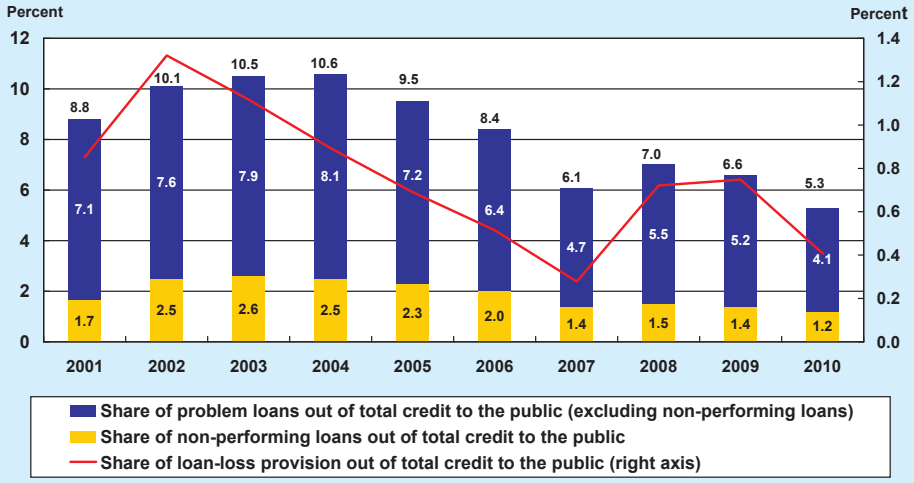
Figure 2.12
Yield spread between corporate bonds and government bonds[a], 2008–10



[a] The median rather than the average spread was calculated because the spread does not have a normal distribution. The calculation is based on data for 96 CPI-indexed bonds of companies without banking indebtedness, and 131 companies with banking indebtedness at the five major banking groups. Government bonds are represented by Galil bonds with the same duration as the corporate bonds.
SOURCE: Bank of Israel Information and Statistics Department data, and reports to the Banking Supervision Department.

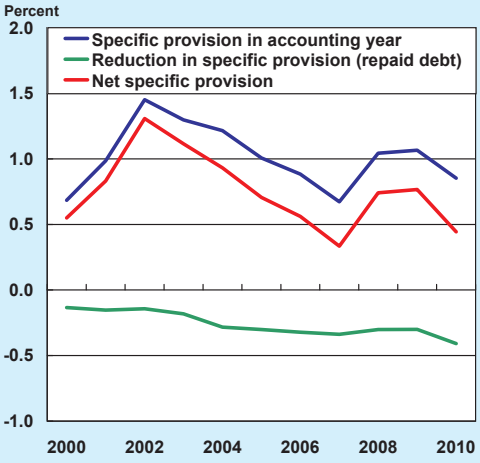
[13] See Paragraph 4.3 for further details.

Figure 2.13
Share of non-performing loans out of total credit to the public, share of problem loans out of total credit to the public and share of the loan-loss provision out of total credit to the public, five major banking groups, Dec. 2001 to Dec. 2010



SOURCE: Published financial statements.

Figure 2.14
Share of components of the specific loan-loss provision out of balance-sheet credit, five major banking groups, 2000 to 2010



SOURCE: Published financial statements.

Prices in the local capital market rose during the year, leading to an increase in the value of the public's financial asset portfolio and to an improvement in the position of borrowers for whom equities are a significant part of their overall net worth. Concurrently, yield spreads between corporate bonds and government bonds declined to some extent, continuing a trend that began in 2009, and their average level at the end of the year was similar to that in the first quarter of 2008, on the eve of the recession (Figure 2.12). The present contraction of yield spreads reflects a decrease in companies' risk due to the improvement in the state of the economy. Credit risk among companies with banking indebtedness[14] that issued bonds

[14] Companies with indebtedness of over NIS 20 million.

Table 2.6

Indices of credit portfolio quality of the five major banking groups, December 2004 to December 2010

	Year	Leumi	Hapoalim	Discount	Mizrahi Tefahot	First International	Five groups
Ratio of total risk-weighted assets to total assets[a]	2004	0.674	0.714	0.588	0.670	0.617	0.667
	2005	0.679	0.719	0.600	0.673	0.614	0.673
	2006	0.670	0.722	0.598	0.666	0.613	0.669
	2007	0.690	0.728	0.619	0.682	0.588	0.680
	2008	0.695	0.723	0.648	0.669	0.591	0.683
	2009*	0.642	0.679	0.606	0.671	0.544	0.641
	2009**	0.670	0.692	0.633	0.596	0.562	0.652
	2010	0.683	0.686	0.672	0.587	0.610	0.664
Share of balance-sheet credit to problem borrowers[b] in total credit to the public (percent)	2004	10.7	11.5	10.2	6.5	12.7	10.6
	2005	9.7	9.9	9.0	6.8	11.9	9.5
	2006	9.8	8.5	7.8	6.0	7.6	8.4
	2007	6.5	6.4	6.3	5.0	5.1	6.1
	2008	8.5	6.1	7.0	6.7	5.9	7.0
	2009	7.8	6.4	7.5	4.9	4.8	6.6
	2010	5.8	5.4	6.7	3.3	3.5	5.3
Share of non-performing loans in total credit to the public (percent)	2004	1.5	3.2	3.5	1.4	3.3	2.5
	2005	1.3	2.9	3.1	1.5	2.7	2.3
	2006	1.4	2.4	2.8	1.4	1.6	2.0
	2007	0.8	1.8	2.2	1.3	1.2	1.4
	2008	0.9	1.8	2.0	1.3	1.2	1.5
	2009	0.9	1.8	2.1	1.0	1.1	1.4
	2010	0.6	1.6	1.8	1.1	0.9	1.2
Ratio of annual loan-loss provision to total balance-sheet credit, multiplied by 100	2004	0.87	0.93	1.08	0.56	0.99	0.90
	2005	0.79	0.66	0.79	0.45	0.62	0.69
	2006	0.51	0.53	0.63	0.44	0.42	0.52
	2007	0.21	0.25	0.44	0.31	0.33	0.28
	2008	1.01	0.68	0.67	0.44	0.39	0.72
	2009	0.74	0.94	0.87	0.39	0.44	0.75
	2010	0.26	0.46	0.69	0.44	0.18	0.41
Share of the balance of loan-loss provisions in total balance-sheet credit to problem borrowers[b], plus balance of loan-loss provision (percent)	2004	30.8	34.7	40.5	37.1	29.9	34.2
	2005	34.6	38.2	42.8	37.4	30.8	37.1
	2006	33.6	41.0	46.4	40.4	41.2	39.3
	2007	40.4	44.5	48.1	43.9	50.1	44.3
	2008	35.3	44.0	43.4	34.8	44.2	40.0
	2009	40.2	45.6	43.7	42.1	50.1	43.5
	2010	44.8	49.0	44.5	50.5	55.8	47.4

[a] Total risk assets are (balance-sheet and off-balance-sheet) assets, weighted by risk weights. Total assets are total (balance-sheet and off-balance-sheet) assets without risk weighting.

[b] Includes non-performing loans, rescheduled loans, loans designated for rescheduling, loans in temporary arrears and loans under special supervision.

* The ratio is calculated in accordance with Basel I principles.

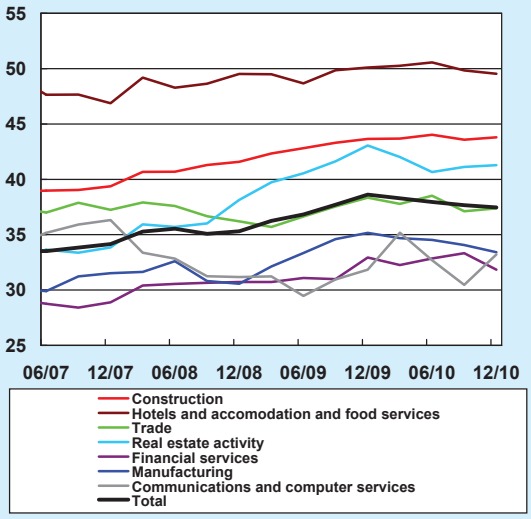
** The ratio is calculated in accordance with Basel II principles. Risk assets are calculated after deduction of credit risk (CRM).

SOURCE: Published financial statements.

on the Tel Aviv Stock Exchange is lower than that of companies without banking indebtedness that issued bonds. In our opinion, this results from the conservative monitoring employed by the banks for the purpose of credit appraisal, in the course of which high-risk borrowers are winnowed out.

Data from financial statements also show an improvement in the quality of the credit portfolio. For example, the ratio of the annual loan-loss provision to total credit to the public fell by 0.3 percentage point in 2010 and reached a level of 0.4 percent, similar to the low levels prevailing in the most recent years of prosperity (Table 2.6, Figure 2.13). This derived from a decrease in provisions during the accounting year (gross provisions) and from the increased collection of debts (reduction in provisions) resulting from an improvement in borrowers' position and in the value of their collateral (Figure 2.14). Similar trends were apparent in the share of balance-sheet credit to problem borrowers out of total credit to the public and in the share of non-performing loans out of total credit to the public. These reached rates of 5.3 percent and 1.2 percent respectively, the lowest levels recorded in the past decade (Table 2.6, Figure 2.13). The ratio of the annual expense on the loan-loss provision to profit from financing activities before loan-loss provision fell again in 2010, due to reduced provisions. This differed from 2009 when the decrease derived from an increase in the banks' financing profits resulting from the positive developments in the capital market.

Figure 2.15
Average credit risk[a] rating by principal industries at the five major banks, June 2007 to December 2010



[a] The banking corporations rank the credit risk of companies whose outstanding indebtedness exceeds NIS 20 million within the context of reports to the Banking Supervision Department. Since the rating scales reported by the banks differ from bank to bank, for the purposes of this review we constructed a standard rating scale for all five major banking groups, with values ranging from 0 to 100. (Credit ratings of 0-36 denote low risk, 37-57 medium risk, and 58-100 high risk). The lower the reported value, the higher the quality of the company's credit.
SOURCE: Reports to the Banking Supervision Department.

Against the background of increased demand for credit and large volume of cash and deposits at banks last year, the composition of the banks' asset portfolio changed. There was an increase in the proportion of credit to the public, characterized by high risk and a decrease in the share of assets considered low risk–cash and deposits at commercial banks and central banks. By December 2010, the asset portfolio composition was similar to its composition right before the crisis. These changes

were seen in the worsening ratio of total risk-weighted assets[15] to total assets, an indicator of risk in bank assets.

The improvement in the quality of credit in 2010 also reflects some improvement in the risk rating of borrowers' credit.[16] This improvement was apparent in most industries, and especially in those that were negatively affected by the recession (real estate, financial services and diamonds). However, the level of risk rating remained high compared with that before the recession (Figure 2.15).

Box 2.1

The Impact of the new Directive: The Measurement and Disclosure of Impaired Debts, Credit Risk and Allowance for Credit Losses

At the end of 2007 the Supervisor of Banks ("the Supervisor") issued a directive, "The Measurement and Disclosure of Impaired Loans, Credit Risk and Allowance for Credit Losses ("the Directive"). The Directive went into effect on January 1, 2011, and brought the Directives for Reporting to the Public, applicable to banking corporations and credit card companies in Israel, into line with the issue's regulations applicable to the banking systems in the US and in other major economies.

The Directive adopts more structured and detailed standards for the measurement and disclosure of credit risks in banking corporations' financial statements. These are intended to:

- Ensure that the allowance for credit losses appropriately covers all expected credit losses on the credit portfolio, even if these credit losses have not been

[15] The banks' risk–weighted assets, which are calculated with respect to the requirement to hold a minimum capital ratio, are obtained by weighting the balance of all assets by risk coefficients of between 0 percent and 350 percent depending on the risk rating of the counter-party to a transaction, in accordance with the Basel II standardized approach. Before this, the balances of off-balance-sheet items are multiplied by conversion coefficients, which reflect the customer's balance-sheet credit value equivalent (vis-à-vis the bank) in respect of the same off-balance-sheet item or futures transaction.

[16] The banking corporations rate the credit risk of companies whose outstanding indebtedness exceeds NIS 20 million within the framework of reports to the Banking Supervision Department. Since the rating scales reported by the banks differ from bank to bank, for the purposes of this survey we built a uniform rating scale for all five largest banks, with values ranging between 0 and 100. (Credit rating of 0–36 denotes low risk, 37–57 denotes medium risk, and 58–100 denotes high risk). The lower is the reported value, the higher is the quality of the company's credit.

identified yet. This is done, among other things, through a mechanism of a group allowance for credit losses for loans with similar characteristics.
- Improve the ability of banking corporations to monitor and manage credit risks by, among other things, increasing the uniformity and consistency of the measurement of expected credit losses, as well as tightening the connection between changes in the quality of credit and changes in the allowance for credit losses.
- Enable comparisons to be made of banks in Israel with each other and with banks abroad.

The principles of the Directive are a material change from the existing directives regarding problem loan classification and measurement of allowances for credit losses and they are a real influence on specific balance sheet items. According to the instructions of the Banking Supervision Department, banks were required to include, in a note to their 2010 annual financial statements, pro-forma financial information that reflected the expected effect of the initial adoption of the directive on certain balance sheet items, if the directive would have been implemented on December 31, 2010. The pro-forma information was also presented in their financial statements for the first quarter of 2011.

The main issues dealt with by the directive:

a. **Change in allowance for credit losses**. A distinction has been made between the allowance on an individual basis and the allowance on a group basis, and rules have been introduced for calculating these allowances.
   - **Individual allowance for credit losses**—the allowance is required to cover expected credit losses on large commercial loans evaluated individually and indentified as impaired. This allowance is determined based on the future cash flow expected from the loan, discounted at the original effective interest rate on the loan, or based on the fair value less cost to sell the collateral for that loan, when the loan is collateral dependent.
   - **Group allowance for credit losses**—an allowance for large commercial loans evaluated on an individual basis and not identified as impaired loans, and the allowance for large groups of small homogeneous loans (mainly consumer loans). The group allowance is based on groups of loans with similar risk features (industry, risk classification), based on the history of credit loss for each group, adjusted for the current economic conditions at the balance sheet date. The above notwithstanding, banking corporations will continue to calculate a minimum allowance on housing loans, according to a formula set by the Supervisor, based on the time they are past due.

b. Loan write-offs—The directive requires that any loans considered uncollectible and with such low value that their continuance as assets is not warranted, should be written off in the financial statements. For small loans assessed on a group basis, the write-off rules are based primarily on the amount of time they are past due.

c. Problem loan classification

- The directive requires classification and disclosure in the notes of the financial statements for loans classified as impaired, and for loans that are not impaired but are past due 90 days or more.
- Generally, impaired loans include commercial loans, which the bank evaluates on an individual basis, and expects it will not be able to collect all amounts due based on the loan agreement, including such loans that are past due 90 days or more.
- Generally, loans that are not impaired but are past due 90 days or more, include mainly consumer loans, which in light of their size are not evaluated individually, and are past due. In addition these loans might include certain commercial loans that are past due but meet certain criteria (well secured and in the process of collection).
- The directive requires additional disclosure in the supplemental information that accompanies the financial statements, of problem credit risk related to commercial loans. This credit risk includes impaired commercial loans, and also includes commercial loans that have not been identified as impaired, but are considered as substandard or under special supervision, in light of potential or existing weaknesses in the credit quality.[1]

d. Interest income—In light of the uncertainty and inherently high risk level in debts classified as impaired debts, the directive instituted that no uncollected interest on impaired debts shall be recorded.

e. Disclosure—The Directive broadens the disclosure of the quality of credit and the allowance for credit losses in reports to the public, bringing it into line with the accepted practices in the major economies around the world, and expands the disclosure of methods used and assumptions made in measuring the allowance for credit losses and its different components. Thus, it enables readers of the financial statements of the banking corporations and of credit card companies to obtain a better understanding of the risks in the bank credit

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[1] The directive includes the following definitions for these loans:

- **Substandard loan**—A loan not covered by sufficient collateral or by the borrower's repayment ability, and regarding which there is a distinct possibility that the banking corporation will incur a loss on the loan if the deficiencies are not corrected.
- **Debt under special supervision**—A loan with potential weaknesses which requires special management attention. If the weaknesses are not dealt with, the result is likely to be an increase in the risk of non-repayment of the loan, or the reduced standing of the banking corporation as a creditor.

portfolio, the changes in the quality of credit, changes in the allowance for credit losses, and the relation between them.

The main effects of the initial implementation of the directive

Following is an initial review of the effect of the directive on Israel's five major banking groups, as of January 1, 2011, based on the data included in their financial statements as of March 31, 2011:

1. Allowances for credit losses

As a result of the implementation of the directive, allowances for credit losses in the banking system increased by about NIS 4 billion[2]. Additionally, as a result of the implementation, the banking corporations recorded significant write offs of loans, for part of which NIS 23 billion had previously been included in allowances (Table 1). As a result, the ratio of the allowance for credit losses to total credit to the public reached 2.1%, of which 1.1 percentage point was for allowances on an individual basis, and 1 percentage point of which was for allowances on a group basis (Table 2).

Table 1

Effect of the directive concerning the allowance for credit losses for loans and off balance sheet credit instruments as of January 1, 2011, five major banking groups

(NIS million)

	Leumi	Hapoalim	Discount	Mizrahi Tefahot	First International	The five groups
Allowance for credit losses, as of December 31, 2010	10,541	11,589	6,384	3,607	2,836	34,957
Cumulative write-offs, as of January 1, 2011	-5,840	-7,712	-5,543	-1,891	-2,236	-23,222
Other changes in the allowance for credit losses as of January 1, 2011	1,074	1,677	1,382	919	432	5,484
Allowance for credit losses, as of January 1, 2011	**5,775**	**5,554**	**2,223**	**2,635**	**1,032**	**17,219**
			(Percent)			
Change in the allowance for credit losses (excl. write-offs)	10.2	14.5	21.6	25.5	15.2	15.7

SOURCE: Published financial statements.

2. Equity

Following the coming into effect of the directive on January 1, 2011, the equity of the five major banking groups decreased by about 4% (Table 3). All banking groups still have capital adequacy ratios above 12%, and all of them, except Discount group, have a core capital ratio above 7.5%. The drop in the capital adequacy ratio ranged from 0.27 percentage points at the Leumi group to 0.56 percentage points at the Discount

[2] The figure is the net increase, net of the effect of NIS 23 billion in write offs, and the effect of tax adjustment of NIS 1.5 billion.

Table 2

Outstanding credit to the public[a] and the allowance for credit losses as of January 1, 2011, five major banking groups

(NIS million)

	Leumi	Hapoalim	Discount	Mizrahi Tefahot	First International	The five groups
Credit to the public	229,626	229,222	119,386	108,832	64,047	751,113
Allowance for credit losses from credit to the public	5,378	5,013	2,068	2,454	941	15,854
Allowance for credit losses out of credit to the public (percent)	2.3	2.2	1.7	2.3	1.5	2.1
Of which:						
Allowance for credit losses on an individual basis	3,233	2,938	461	1,060	404	8,096
Allowance for credit losses on an individual basis out of credit to the public (percent)	1.4	1.3	0.4	1.0	0.6	1.1
Allowance for credit losses on a group basis	2,145	2,075	1,607	1,394	537	7,758
Allowance for credit losses on a group basis out of credit to the public (percent)	0.9	0.9	1.3	1.3	0.8	1.0

[a] Before allowance for credit losses.

SOURCE: Published financial statements.

Table 3

Effect of the directive on shareholders equity[a] as of January 1, 2011, five major banking groups

	Leumi	Hapoalim	Discount	Mizrahi Tefahot	First International	The five groups
Equity as of December 31, 2010 (NIS million)	23,985	23,426	11,569	7,591	6,205	72,776
Change in shareholders equity (NIS million)	-721	-807	-830	-357	-220	-2,935
Change in shareholders equity (percent)	-3.0	-3.4	-7.2	-4.7	-3.5	-4.0

[a] Including minority interest.

SOURCE: Published financial statements.

group, and the decline in the core capital ratio ranged from 0.27 percentage points at the Leumi group to 0.59 percentage points at the Discount group (Table 4).

3. Problem loans

Based on the new definitions of problem loans, the share of impaired credit (not accruing interest) to the public, out of total credit to the public of the five major banking groups, as of January 1, 2011 reached 3.6%; the share of loans to the public that are past due 90 days or more out of total credit to the public was 0.7%; and the share of commercial credit risk exposures to the public out of total credit risk to the public was 3.9% (Table 5).

Table 4

Effect of the directive on capital adequacy[a] as of January 1, 2011

The five major banking groups: Before and after implementation of the directive

	Leumi		Hapoalim		Discount		Mizrahi-Tefahot		First International		The five groups	
	Before	After	Before	After	Before	After	Before	After	Before	After	Before	After
	(Percent)											
Core capital ratio	8.6	8.3	8.2	7.9	7.9	7.3	8.0	7.6	8.1	7.8	8.2	7.9
Capital adequacy ratio	15.1	14.8	14.1	13.8	13.7	13.1	14.1	13.6	12.5	12.1	14.2	13.9

[a] The effect of the directive on risk assets was not taken into account.

SOURCE: Published financial statements.

Table 5

Data on problem loans as of January 1, 2011, five major banking groups

(NIS million)

	Leumi	Hapoalim	Discount	Mizrahi Tefahot	First International	The five groups
Non-performing loans[a] to the public	8,904	10,887	3,359	2,318	1,219	26,687
Non-performing loans out of total credit to the public[b] (percent)	3.9	4.7	2.8	2.1	1.9	3.6
Impaired and performing loans to the public[c]	43	271	2,491	61	109	2,975
Impaired and performing loans out of total credit to the public[b] (percent)	0.0	0.1	2.1	0.1	0.2	0.4
Total impaired debt	8,947	11,158	5,850	2,379	1,328	29,662
Impaired debt out of total credit to the public[b] (percent)	3.9	4.9	4.9	2.2	2.1	3.9
Credit to the public past due 90 days or more	1,105	1,326	891	1,810	352	5,484
Credit to the public past due 90 days or more out of total credit to the public[b] (percent)	0.5	0.6	0.7	1.7	0.5	0.7
Problem commercial credit risk to the public[d]	14,534	15,372	8,307	3,869	2,426	44,508
Problem commercial credit risk to the public out of total credit risk to the public (percent)	4.2	4.0	5.8	2.5	2.5	3.9

[a] This figure is similar to the balance of non-performing loans presented in financial statements of banking corporations in the US.

[b] Gross credit to the public.

[c] Impaired credit to the public after reorganization of problem debst accruing interest.

[d] Includes balance-sheet and off-balance-sheet credit that is not deficient, inferior and under special supervision, except for balance-sheet and off-balance-sheet credit risk in respect of private individuals.

SOURCE: Published financial statements.

c. Principal industries and the households sector[17]

The rebound in the local economy and the global economy and the gains in the capital markets in Israel and abroad benefited the business sector and led to an improvement in borrowers' repayment ability, particularly in industries that were hit by the recession, led by real estate, diamonds and credit for the acquisition of means of control. These positive trends favorably affected the repayment ability of the households sector as well. However, the large increase in the volume of housing loans resulting from the developments in the housing market necessitated supervisory measures for the purpose of cooling down the demand for credit, improving the risk management of the mortgage portfolio and for increasing transparency for the public.

(1) The real estate industry[18]

In the years preceding the recession, the liabilities of companies in the real estate industry and their exposure to real estate investments abroad increased considerably. This development had the effect of increasing the companies' risk, which reached record levels in 2009. The tentative recovery recorded since then in global real estate markets together with the positive trends in the financial markets paved the way for companies in the industry to raise non-bank credit and issue bond with lower yields fell, thereby improving the position of companies that had to rollover debt or finance new projects. However, the level of risk of the companies in the industry, which are notable for high leverage, remained substantially higher than before the recession, especially among borrowers whose main activity is abroad. Concurrent with the favorable developments in the real estate markets and the financial markets, the banks' exposure to the real estate industry increased during the year, and the share of risk weighted credit to the industry out of total risk weighted credit amounted to 8 percent at the end of 2010.

According to accounting indices calculated from financial statements and capital market indicators, the risk of companies from the real estate industry declined to some extent. The ratio of the annual expense on the loan-loss provision to total balance-sheet credit fell slightly from 1.2 percent in December 2009 to 0.9 percent at the end of 2010, as the level of risk remained high. Moreover, the credit ratings noted in reports to the Banking Supervision Department continued to show a relatively high level of risk (Figure 2.15). Despite having fallen, the spreads on the industry's bonds are still far from the very low levels prevailing from 2005 to mid-2007.

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[17] The analysis of credit risk by principal industries in this section encompasses both balance-sheet credit and off-balance-sheet credit. This is with the exception of the analysis of the credit risk of the households sector, which is based on balance-sheet credit alone. The analysis of credit risk for the real estate industry in this section includes credit risk for borrowers' activity in Israel and abroad, while the analysis of credit risk for the construction industry and the households sector is based on credit risk in respect of borrowers' activity in Israel alone.

[18] Due to the high level of risk in the real estate industry abroad and the substantial share of credit risk abroad in overall credit risk, the analysis in this section includes credit risk for the industry in respect of borrowers' activity in both Israel and abroad.

(2) The construction industry

Construction industry activity expanded in 2010 in comparison with the past decade. The industry's product grew by 7.1 percent, a level higher than the average growth rate in the business sector. The upturn in activity in the industry was reflected by a large increase in the number of building starts and by an increase in nonresidential construction following a decrease in the previous two years. Due to the vibrant activity in the construction industry, the banks' exposure to the industry rose to 15 percent and amounted to NIS 120 billion at the end of 2010. The increased exposure was in banking commitments for the granting of guarantees and the extension of credit to contractors, and in bank guarantees that were provided to home-buyers.

The construction industry is notable for a high level of risk, and the industry's loan losses are negatively correlated with its economic activity. As a result, the ratio of expense on the loan-loss provision reached a record level of 2.2 percent in the years 2004–2005 because of the continued freeze in the industry's activity, while in 2010 it reached a low of 0.5 percent due to the upsurge in activity in the industry and housing price increases.

The professional literature[19] indicates that the development of crises in the banking system very often results from the banking corporations' exposure to the construction and real estate industry and to housing loans. This exposure is more significant in view of the growth in the volume of credit granted as housing loans, and the receipt of collateral in the form of real estate assets for financing loans that are not actually intended for the purchase of dwellings. In addition, worldwide experience shows that the banking corporations tend to inaccurately assess the risks inherent in their exposure to the construction and real estate industry, for two reasons: First, the industry's relatively good repayment record, in view of the rarity of crises in the real estate market, resulted in risk management based on past, rather than on forward-looking behavior. Second, the risk inherent in exposure to a high concentration of credit to the construction and real estate industry was under-estimated due to a lack of data and information, such as inadequately extensive data and the paucity of failure data, which are not adequate for the purpose of conducting extreme-case scenarios. Against this background, the Banking Supervision Department endeavored to mitigate undesirable developments in the real estate market and the financial system.[20]

Purchase groups: The volume of purchase groups' activity[21] increased considerably during recent years and they have come to account for a considerable proportion of housing starts. The increase stemmed from the cost savings and the significant taxation advantages involved, factors whose impact was boosted by the public's growing awareness of the activity and the incentives offered by those organizing the purchase group projects. Microeconomic parameters unique to the construction industry,

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[19] As seen in: Bubbles in Real Estate Market, Richard J. Herring and Susan Wachter, 2002.

[20] See Box 2.2.

[21] Purchase groups are an association of a group of people for the purpose of purchasing land and constructing dwellings.

such as the supervisory restriction on finance for the industry,[22] the limited supply of available land for construction, and concern over the building companies' lack of financial resilience also contributed to the growth in purchase groups' activity. With the advantages compared with purchasing an apartment from a contractor, credit taken within the framework of purchase groups involves additional risks—apart from the risk in the extension of "standard" housing loans—both for the members of the purchase group and for the bank financing this form of activity. Accordingly, the Supervisor of Banks stipulated that with effect from financial statements for June 30, 2010, credit to purchase groups of projects in the process of construction and until its completion will be classified as indebtedness of a corporation in the construction and real estate industry, and will therefore be weighted at a rate of 100 percent in the calculation of capital adequacy. On completion of the construction and after occupancy by the purchasers, credit to members of the group will be classified as credit for housing, and will be assigned lower risk weightings (35 percent or 75 percent). The proportion of credit risk related to purchase groups to total credit risk for the construction and real estate industry amounted to 5 percent, or NIS 8.8 billion, at the end of 2010 (Table 2.4). In the course of the year, outstanding credit risk in respect of the purchase groups increased by 60 percent. However, the supervisory measures adopted appear to have made their mark, and the rate of increase fell in the second half of 2010.

(3) Credit for the acquisition of means of control

Credit extended for financing the acquisition of means of control in corporations is notable for high rates of financing, repayment ability based mainly on the corporation acquired, and the fact that part of the credit is sometimes granted as non recourse. In cases where the borrower's repayment ability relies on the acquired company's shares, erosion in the company's value has the effect of reducing the value of collateral and leads to an increase in credit risk. Because of all these factors, the level of risk inherent in credit of this type is high, and all the more so in periods when the capital markets are falling.

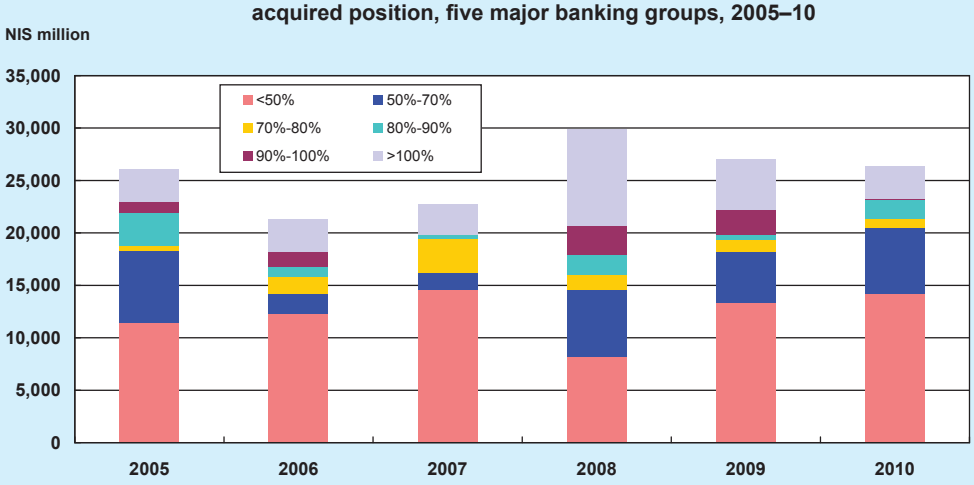
Credit for the acquisition of means of control[23] at the end of 2010 totaled NIS 26 billion, similar to the amount at the end of 2009 (NIS 27 billion). With respect to the composition of this credit, 24 percent of credit for the acquisition of means of control was to the construction and real estate industry, 22 percent to manufacturing, 21 percent to financial services, 15 percent to communications, and the remainder to other industries. Although credit for the acquisition of means of control was stable during the year, its distribution by industry changed due to loan repayments and with the extension of new credit at considerable amounts: Credit to the communications industry increased

[22] The banking corporations are recorded to record a supplementary loan-loss provision if the share of credit to a specific industry exceeds 20 percent of their credit portfolio (Proper Conduct of Banking Business Regulation No. 315).

[23] As defined in Proper Conduct of Banking Business Regulation 323 concerning financing for the purchase of means of control in corporations.

by 49 percent to NIS 4 billion as the result of a number of leveraged acquisitions. The risk inherent in exposure to the communications industry is high, particularly in view of recent changes in regulation in the industry[24]. Finance to the construction and real estate industry increased by 14 percent to NIS 6.2 billion. The positive trend in the local financial system in 2010, as reflected by the continuing gains in the stock market, had the effect of increasing the fair value of collateral and reducing the level of risk of this credit. Accordingly, the share of credit with a loan to value (LTV) ratio exceeding 100 percent[25] decreased during the year, continuing a trend that began in 2009, and accounted for 12 percent of total credit for the acquisition of means of control compared with 31 percent at the height of the recession and similar to its level in the years 2005–2007 (Figure 2.16). Despite the positive developments in the risk associated with credit for the acquisition of means of control, it should be noted that the risk inherent in credit of this type is nevertheless very high, and is known to have a major impact on the banking corporations' aggregate credit risk.

Figure 2.16
Distribution of outstanding credit for the acquisition of means of control by level of financing, determined on the basis of the market value of the acquired position, five major banking groups, 2005–10



SOURCE: Bank of Israel Information and Statistics Department data, reports to the Banking Supervision Department and financial statements.

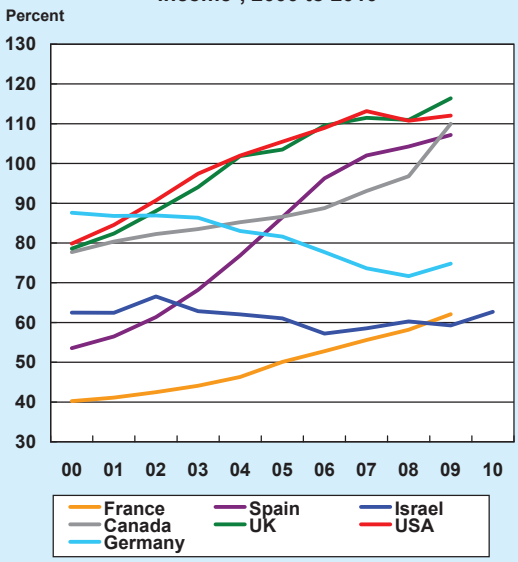
[24] However, the industry's product rose by 5.1 percent as the result of increased usage and the introduction of new products.

[25] Meaning that the ratio of credit for the acquisition of means of control to the company's market value is greater than 1.

(4) The households sector[26]

Outstanding credit to private individuals[27] expanded by 13 percent in 2010, similar to the average rate of expansion in the previous five years, and the share of this credit in the total credit portfolio reached 37 percent in December 2010. The proportion of credit to private individuals in the credit portfolio varied from 29 percent at the Discount group to 66 percent at the Mizrahi-Tefahot group. Despite the rapid expansion of credit to households, the debt burden did not change to any major extent. The debt burden, which serves as an index of borrowers' repayment ability and is reflected by the ratio of credit extended to private individuals to disposable income, is still low compared with other Western countries (Figure 2.17).

Figure 2.17
Ratio of households' debt to disposable income[a], 2000 to 2010



[a] Unlike elsewhere worldwide, disposable income data in Israel include companies' profits, which leads to a certain deviation.
SOURCE: Israel data: Bank of Israel Information and Statistics Department data and CBS; foreign countries' data - OECD.

(a) Credit for housing

Three quarters of the growth in credit to private individuals derived from credit for housing, which accounts for 63 percent of total credit to private individuals. Since 2007, outstanding housing loans have increased by double-digit rates (Figure 2.11), and their share of total bank credit rose from 18 percent to 24 percent. The increased uptake of mortgage loans is clearly apparent from the large growth in new housing loans granted in the last four years: The average amount of new housing loans in the banking system rose from a billion shekels in 2006 to four billion shekels in 2010 (Figure 2.18). The large expansion in the volume of housing loans resulted from the growth in demand deriving inter alia from the low interest rates in the economy (Figure 2.7), against the background of the low Bank of Israel interest rate and the competition among the banks for the retail segment.

An examination of the composition of housing loans by indexation base shows that in the last year 87 percent of mortgage loans taken by the public were at variable-

[26] The analysis of credit to private individuals includes only credit in respect of activity in Israel, and refers to balance-sheet credit risk alone.

[27] Including households and the private banking sector.

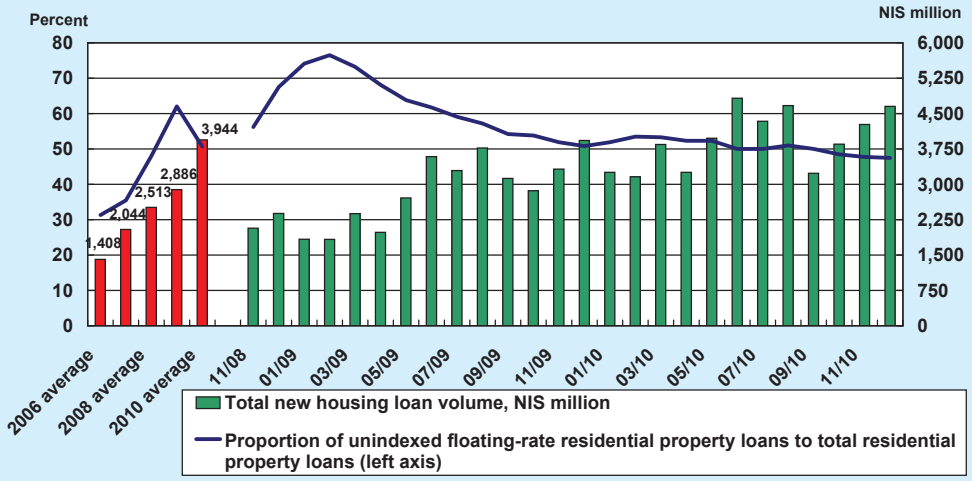
Table 2.7
Principal housing loan market indicators, entire banking system, 2005 to 2010

	2005	2006	2007	2008	2009	2010
Year-end balance of housing loans (NIS million)	124,189	126,057	136,994	154,123	172,033	200,237
Rate of change		2%	9%	13%	12%	16%
Year-end balance of loans for the purchase of residential property (NIS million)	110,734	111,710	122,210	138,491	155,843	180,145
Rate of change		1%	9%	13%	13%	16%
Year-end balance of loans secured by a residential property [a] (NIS million)	13,455	14,347	14,784	15,632	16,191	20,093
Rate of change		7%	3%	6%	4%	24%
Average monthly volume of new loans for the purchase of residential property (NIS million)	1,717	1,409	2,044	2,512	2,885	3,932
New loans granted in the floating-rate unindexed segment (NIS million)	374	436	725	1,202	1,737	1,980
New loans granted in the floating-rate indexed segment (NIS million)	273	341	452	776	678	1,229
New loans granted in the fixed-rate indexed segment (NIS million)	909	474	740	448	336	464
New loans granted in the floating rate foreign currency segment	158	145	100	60	110	189
Average weighted interest rate on loans for the purchase of residential property (NIS million)	4.5%	5.4%	4.6%	4.1%	2.2%	2.5%
Floating interest rate in the unindexed segment	4.8%	6.2%	4.8%	4.4%	1.7%	2.6%
Floating interest rate in the indexed segment	4.2%	5.0%	4.4%	3.7%	2.7%	2.2%
Fixed interest rate in the indexed segment	4.3%	4.8%	4.2%	3.8%	3.1%	2.6%
Floating interest rate in the foreign currency segment	5.1%	6.1%	6.3%	5.0%	2.8%	2.8%
Number of loans for the purchase of residential property granted to the public during December					7,904	8,380
Average loan size in shekels in the month of December					497,280	555,016

[a] Not for residential purposes.

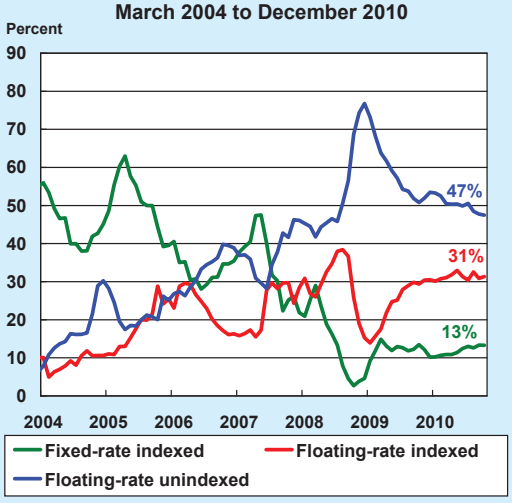
SOURCE: Reports to the Banking Supervision Department.

Figure 2.18
New loans for the purchase of residential property granted - monthly data
October 2008 to December 2010



SOURCE: Reports to the Banking Supervision Department.

Figure 2.19
Share of new residential property loans granted by indexation segments, banking system total, March 2004 to December 2010

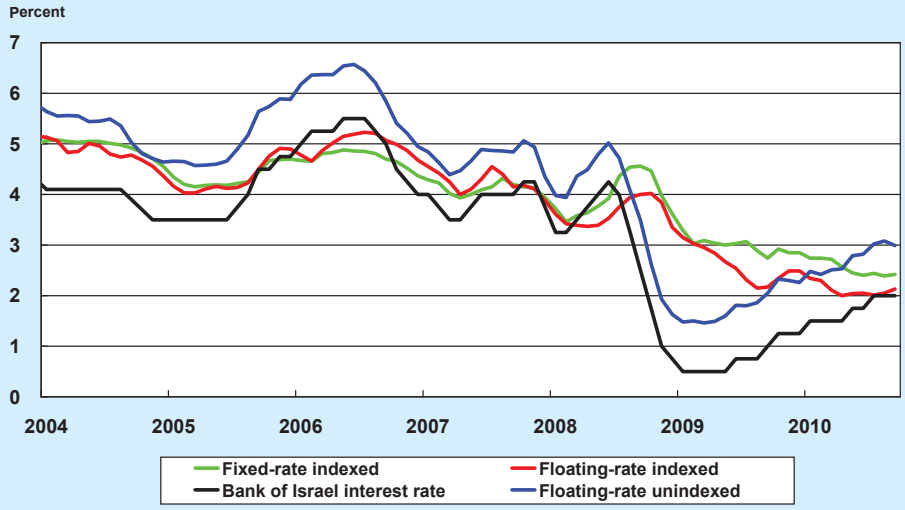


SOURCE: Reports to the Banking Supervision Department.

rate interest, and that nearly half of those consisted of loans indexed to the prime rate (Figure 2.19). The interest rate on unindexed floating-rate loans is directly connected to the Bank of Israel interest rate, which rose from 1.5 percent to 3 percent in the past year and a half (Figure 2.20), The Bank of Israel interest rate is expected to continue rising, and thereby lead to an increase in households' monthly repayments and to an increase in the debt burden.

The average LTV and average debt burden in Israel are lower than is common in other Western countries. However, the Banking Supervision Department is closely monitoring developments in the housing market and to the increase in the proportion of the mortgage loan portfolio to total bank credit. (See Figure 3 in box 2.2). The Department recently adopted a series of measures for reducing the risk inherent in the portfolio, for improving the banking corporation's management of the risk in the mortgage portfolio and for

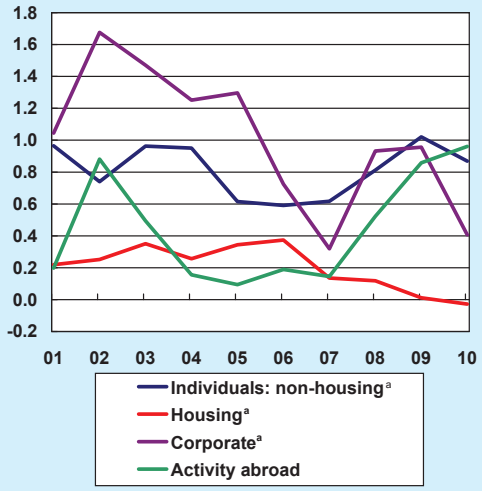
Figure 2.20
Interest rate on residential property loans by indexation segments, April 2004 to December 2010



SOURCE: Reports to the Banking Supervision Department.

increasing transparency to the public.[28] The banking corporations were required to re-examine their housing loan portfolio, with due reference to the different segments in the portfolio and the future implications of stress scenarios. As part of the Banking Supervision Department's monitoring of developments in the mortgage portfolio, the banks are required to send specific data on the portfolio. These and other data are regularly analyzed by the Banking Supervision Department, an activity that includes sensitivity analyses and assessments regarding future developments. In addition, the Banking Supervision Department conducts comprehensive examinations at the banking corporations.

Figure 2.21
Loan-loss provision divided by total credit to the public[a], five major banking groups, December 2001 to December 2010
(multiplied by 100)



[a] In respect of activity in Israel only.
SOURCE: Published financial statements.

[28] See Box 2.2 for details of the Banking Supervision Department's measures in the matter of housing loans.

(b) Other credit to private individuals

Apart from housing loans, other outstanding credit to private individuals expanded in 2010 but at a lower rate (8 percent; Figure 2.11). This credit expanded against the background of the continued rebound in the Israeli economy and the continued improvement in the unemployment rate, which benefited borrowers' position relative to the height of the recession and supported growth in private consumption and in demand for credit. Credit quality indices based on financial statements show that the level of risk of this credit fell slightly in 2010, but remained high relative to the period before the recession and relative to credit extended to the business sector. The risk remained high despite the favorable developments in the labor market and in the public's financial asset portfolio (Figure 2.21).

Box 2.2: Principal developments in the housing market in recent years

Demand for housing loans (new mortgages granted) is derived directly from the principal developments in the housing market. Since the third quarter of 2007, a continued growth in activity (number of purchase and sale transactions) has been apparent in the market, in the form of a marked acceleration in housing loans granted and growth in activity (number of transactions) in the market for residential apartments. Unlike the bank credit market, the housing market has been notable for substantial demand surpluses in recent years, and these surpluses have been gradually translated into apartment price increases. The cumulative increase in apartment prices since the beginning of 2008 amounts to 50 percent, or 32 percent in real terms, a rate of increase that is leading to concern over the development of a bubble in apartment prices in Israel.

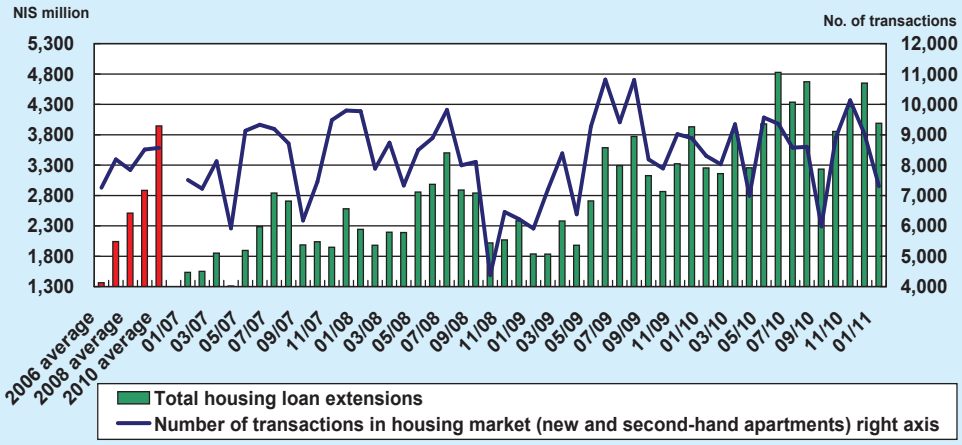
At the end of the period reviewed and at the beginning of 2011, housing market activity fell off to some extent, apparently due to the adoption of policy measures[1] that were intended to restrain demand and increase the supply of apartments, and also because of the cumulative impact of the increased cost of credit. With that, along with the downturn in activity (apartment purchase and sales transactions) the uptrend in house prices continued.

A number of issues arise from an examination of the developments in the housing market that led to the upsurge in apartment prices:

1. The low yields on income generating investments, which the public regard as low-risk, together with the greatly increased uncertainty of investment in the financial markets in Israel and abroad, prompted many investors to allocate their

[1] An increase in the Bank of Israel interest rate and other Bank of Israel policy measures, as well as fiscal measures. See the Bank of Israel Report for 2010, pages 62 and 135 for a list of the macroprudential policy measures and fiscal policy measures that were adopted by the Bank of Israel and the Israel Government.

Figure 1
Housing loan market activity versus housing market activity - monthly extension of housing loans (NIS million) versus number of apartment purchase and sales transactions, January 2007 to January 2011



SOURCE: Ministry of Housing and Construction, and returns to the Banking Supervision Department.

money to the housing market—a phenomenon that began in the last quarter of 2007.[2] The rapid growth in demand for apartments initially came from households that owned at least one additional apartment.[3] These households financed the purchase of apartments from sources of capital that were shifted from the capital and money markets concurrent with the taking of unindexed floating-rate mortgages. Apart from investors' desire to diversify their investment portfolios by adding real investments at the expense of financial investments, it should be noted that then, as now, investment in a residential apartment implies a tax benefit[4] on capital gains

[2] The increased pace of investment apartment purchases was recorded at the onset of the financial crisis in the last quarter of 2007, due in our estimation to the losses in the stock market, and peaked in the last quarter of 2008 with the collapse of the Lehman Brothers investment bank.

[3] The large increase in prices, which encompassed the entire country and was particularly apparent in the case of small apartments, was indicative of an upsurge in activity by those purchasing investment apartments. Unlike in the past, when demand for investment apartments was centered in the Tel Aviv and central regions, during the years 2008–2009, the share of these regions fell considerably concurrent with a large increase in apartment purchases in less sought-after areas, such as Haifa and Beer Sheva. Additional evidence of the vibrant activity by investment apartment buyers can be found from an analysis of the length of the investment horizon. As an example, it transpires that in areas where the number of investment apartments had increased considerably, the average time horizon decreased to a major extent.

[4] At the end of the period reviewed, a number of changes were made in the tax indebtedness on land transactions. As an example, the purchase tax applying to investment apartment buyers was raised to a considerable extent, while the exemption from betterment tax (a tax parallel to capital gains tax) in investment apartments was expanded.

Table 1
Indicators of activity in the primary housing market (new apartments under construction) and in the secondary housing market (old apartments)

	2006	2007	2008	2009	2010	Change in 2010 compared with 2009
Total residential house transactions	87,077	98,269	94,083	102,168	103,969	1.8
Of which: Transactions for purchase of an investment house	24,008	28,711	27,801	31,415	28,870	-8.4
Percentage of investment houses	27.6	29.2	29.5	30.9	27.8	-
Residential land transactions	22,794	14,017	15,109	17,230	24,867	44.3
Amount of demand for new houses[a]	30,493	33,103	32,239	36,988	39,287	6.2
Of which: Number of "build your home" and independent construction transactions	13,541	15,348	15,294	16,966	17,069	0.6
Average nationwide house price according to CBS survey (NIS thousand)	756	747	774	888	1,040	17.2
Average nationwide rental price (NIS)	2,339	2,304	2,330	2,735	2,941	7.5
Average nationwide return on investment (percent)	3.71	3.70	3.61	3.70	3.39	-
Housing starts	31,259	30,834	32,693	34,724	39,030	12.4
Months supply of stock of unsold houses	12.0	9.5	9.4	7.8	6.3	-19.2

[a] Including new houses up for sale (in respect of which a sale contract was signed or on which advance payments were made), new houses built for the landowner's own use, for example, within the framework of "build your home" or purchase projects, houses for the elderly population, hostels and an estimate of illegal construction.

SOURCE: Ministry of Housing and Construction, State Revenue Administration and Central Bureau of Statistics.

and on current income, in contrast to the purchase of a financial asset in Israel or abroad. Between 2008 and 2010, the share of buyers purchasing an apartment as an investment, out of all buyers, rose. With that, the taxation measures that were applied to investment apartment buyers nevertheless did moderate their activity to a significant extent. These measures are not yet apparent in 2010 data, because many investors brought forward their apartment purchases to before the end of 2010, after which the legislative amendments went into effect. Data for the first quarter of 2011 show a large decrease in activity by investment apartment buyers.

2. Concurrent with the increased pace of investment apartment purchases, part of the apartment consumer population began to organize themselves into purchase groups.[5] The formation of these groups created a new trend and greatly shortened the apartment purchase process. Alongside the economic advantages deriving from multi-person organization, the purchase groups benefited from significant tax discrimination.[6] The market's atmosphere, and expectations that apartment prices would continue to rise became self-fulfilling, and numerous building ventures sprouted on paper like mushrooms after a rainstorm. Sales of these projects were completed within a very short space of time, which was notable for aggressive marketing campaigns that received widespread media publicity.

3. These developments in the public's demand for housing, which resulted from the Bank of Israel's expansionary monetary policy since the beginning of 2009 and from the competitive structure of the mortgage supply market, were accompanied by a full pass-through between monetary policy and the prices of home backed loans. The pass-through greatly reduced prices of credit, principally unindexed credit, which had the effect of increasing the amount of demand for apartments, this time from those seeking to improve their housing conditions. We believe part of these buyers brought forward their apartment purchases because of the inexpensive price of credit. The large improvement in the tradability of the housing market, especially in demand areas, also helped in the process of realizing real estate assets.

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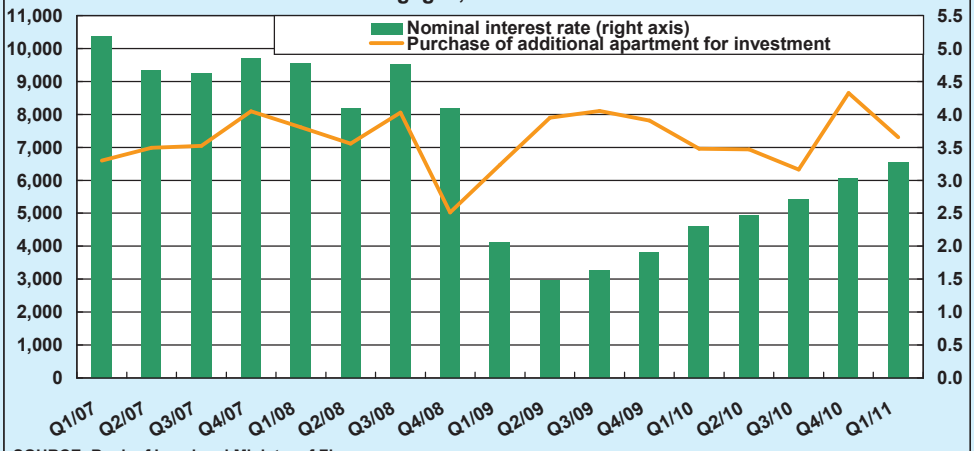
[5] A purchase group is owner of land rights or person who organize themselves for the purpose of the joint purchase of land rights. The group hires the services of well known professionals, and usually forms a contractual association with a contractor for carrying out the building work until occupancy of the property. Because of the economically worthwhile nature of this form of activity, heavy demand was recorded for purchasing apartments in projects of this type, and the apartments were sold very quickly.

[6] Until recently, members of purchase groups benefited from an exemption from purchase tax on the cost of construction, which is the main expense component. Purchase groups also benefited from an exemption from value added tax if they had purchased the land from a non-business entity.

Figure 2
Number of purchase transactions for investment apartments in the housing market versus the average interest rate on floating-rate unindexed mortgages, March 2007 to March 2011



SOURCE: Bank of Israel and Ministry of Finance.

On the supply side, the upsurge in demand for housing did not lead to a parallel increase in the number of new apartment building starts.[7] For profitability reasons, private sector building companies, including the largest companies, which had a stock of land available for construction, were in no hurry to adjust the level of supply to the large growth in aggregate demand for housing. As an example, a survey conducted by the Finance Ministry's Budgets Division found that the stock of land available for immediate construction owned by the ten largest companies in the economy was adequate for the immediate construction of 10,000 apartments. The public sector responded with a considerable lag to the apartment supply shortage. Only towards the end of 2009 were marketing campaigns held for state-owned land for the purpose of expanding the stock of land for construction. The marketing campaigns had the result of increasing the number of building starts, but these will only be added to the supply of apartments toward the end of 2012. As expected, developments in the supply of apartments led to a rise in apartment prices. The combination of price increases and an increase in the number of transactions pushed up the average cost per apartment, and led to a large growth in new credit granted for the purchase of residential apartments.

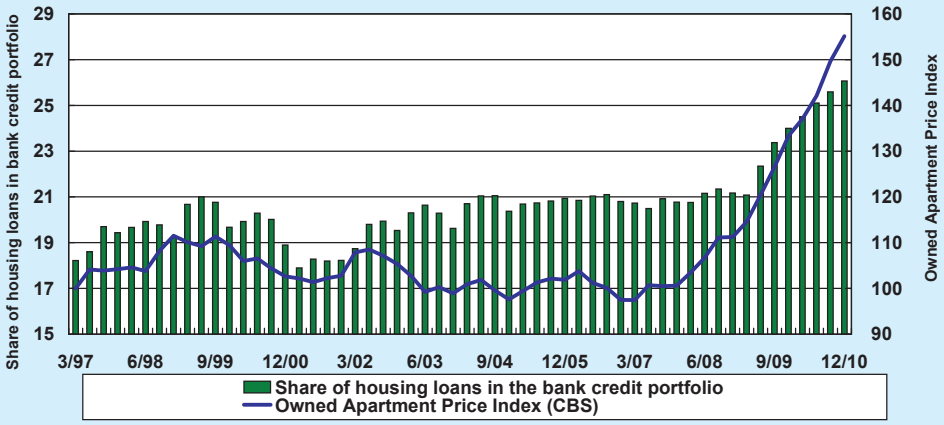
[7] The situation changed slightly in 2010, and a 12 percent increase was apparent in the number of new apartment building starts. Most of the increase was recorded in the last quarter of the year.

From 2009 onwards the Supervisor of Banks issued a number of directives that were aimed at moderating the unwanted developments in the housing market, and as a result of the increased risk in the banking corporations' housing loan portfolio.

- In August 2009 the banks were required to act with due caution in the marketing and extension of floating-rate housing loans.
- In March 2010 clarifications were published concerning the credit classification in the matter of indebtedness restrictions, sector-specific classification and the capital adequacy of the banks in their activity with purchase groups. The banks were also required to define procedures for processing credit for purchase groups' projects. In this respect, they were instructed to determine parameters for the examination of credit risk with reference to the repayment ability of the single borrower and to the risks inherent in the projects. Apart from the usual parameters for examining the repayment ability of a housing loan recipient, the banks were directed to take into account the unique or typical characteristic parameters of credit for purchase groups.
- In May 2010 the Supervisor of Banks ordered the banking corporations to re-examine the risks in the credit portfolio. The directives covering this matter stipulated that the banking corporation must examine the need for increasing loan-loss provisions in respect of the increased risk inherent in housing loans. The banks were also instructed to hold a supplementary provision at a rate of not less than 0.75 percent in respect of outstanding housing loans that were extended from April 1, 2010, and in which the LTV at the time of extension exceeded 60 percent.
- In October 2010 the Supervisor of Banks issued new directives requiring the banking corporations to increase the allocation of capital in respect of variable-rate housing loans approved from that month onwards, in which the LTV at the time of extension exceeded 60 percent and the variable-rate component amounted to 25 percent or more of the total. In the past, these loans were weighted by 35 percent or 75 percent. Since the amendment, they have been weighted by 100 percent. These directives did not apply to loans of less than NIS 800 thousand.
- In May 2011 the Supervisor of Banks issued directives to the banks which restrict the floating-rate component of a housing loan to 33.3 percent of the total, with certain exceptions. In addition, the banks were required to provide detailed information in a set format, describing the implications of an increase in the prime rate on the level of monthly repayments, to borrowers who had taken housing loans in which the unindexed floating-rate component amounts to 33.33 percent or more of the total.

These measures were adopted in view of the high degree of correlation that was found between activity in the housing market and activity in the housing credit market (Figure 3).

Figure 3
Share of the housing loan portfolio in the total bank credit portfolio versus the change in the Housing Price Index, March 1997 to December 2010
Housing Price Index in March 1997 = 100



SOURCE: Central Bureau of Statistics and published financial statements.

d. Concentration of the credit portfolio

The concentration of the credit portfolio is estimated in this review in two ways: (1) by principal industries—the more the credit portfolio is diversified among the principal industries, the lower is the credit risk in respect of concentration; (2) by borrower size—the more extensive the diversification of the credit portfolio among different borrowers, the lower the exposure to credit risk, and vice versa.

(1) Concentration by principal industries[29]

The concentration of the credit portfolio by principal industries was affected by a number of factors in 2010: The substantial expansion of credit to private individuals (principally housing loans) compared with a more moderate increase in business credit and a decrease in the amount of credit extended to borrowers operating abroad led to an improvement in the concentration of the overall credit portfolio. However, the proportion of the construction and real estate industry rose, a development that increased the concentration of the business credit portfolio (Table 2.8).

Credit risk to private individuals (especially housing credit) rose by a double-digit rate, and its share of total credit risk amounted to 34 percent (Table 2.8). Since households are notable for extensive borrower diversification and a relatively low

[29] Credit by principal industries includes both balance-sheet credit risk and off-balance-sheet risk in respect of borrowers' activity in Israel, as this is presented in the financial statements. Credit in respect of borrowers' activity abroad appears as a separate item.

correlation between them, an increase in the proportion of credit to private individuals is regarded as a positive development, which has the effect of reducing the portfolio risk. Against the background of developments in the housing market however, a potential increase in that sector's level of risk is causing concern, especially in view of the high correlation between the values of the collateral that is put up against housing loans.

A deterioration in the concentration of the business credit portfolio was recorded in 2010 (Table 2.8) as the result of a 12 percent increase in credit risk to the construction and real estate industry, which is notable for a high level of risk. The construction and real estate industry is the largest of the principal industries, and its credit risk as a share of aggregate credit risk reached 16 percent in 2010 (Table 2.4). The growth in credit to the industry was mainly in off-balance-sheet credit as the result of an increase in banking liabilities for the granting of guarantees and credit to contractors, and for the granting of bank guarantees to home-buyers. With respect to balance-sheet credit to the industry, a decrease in its proportion to total balance-sheet credit was apparent (Table 2.4), a development that is attributed to the industry's increased capital raising from non-bank sources.

Credit risk to borrowers whose main activity is abroad continued to decline in 2010—a trend that began as result of the recession—and its share of total credit risk amounted to 13 percent at the end of 2010 compared with 18 percent at the end of 2007 (Table 2.8).[30]

(2) Concentration by borrower size

The credit portfolio by borrower size is notable for relatively high concentration in Israel, because of the concentrated structure of ownership and control in the Israeli economy. As part of the Banking Supervision Department's efforts to reduce borrower concentration and as a result of the lessons learned from the most recent recession, in May 2011 the Supervisor of Banks updated the restrictions applying to the indebtedness of a borrower and groups of borrowers.[31] The rate of net indebtedness of a borrower group was restricted to 25 percent of capital instead of 30 percent, and existing restrictions were extended and applied to exposure to banking corporations as well. In addition, a new restriction was determined in place of the "six largest borrowers" restriction that was required in the previous directive, whereby the net indebtednesses of borrowers and borrower groups whose net indebtedness to the banking corporation exceeds 10 percent must not together exceed 120 percent of its capital.

The share of the largest borrowers in the bank credit portfolio and in the capital base remained stable in 2010, and the proportion of the six largest borrower groups at the end of 2010 amounted to 9.1 percent of total credit risk and 87 percent of the capital base. This level is lower than that prevailing before the recession, when it amounted to 10 percent of total credit risk and 119 percent of the capital base. The high accessibility of the capital market in 2010 and with it the continued contraction of the spreads in

[30] See Paragraph 6 for further details.

[31] Proper Conduct of Banking Business Regulation No. 313.

Table 2.8
Indices of concentration of the portfolio of credit[a] to the public of the five major banking groups, December 2007 to December 2010

	Year	Leumi	Hapoalim	Discount	Mizrahi Tefahot	First International	Five groups
Concentration by principal industries							
Herfindahl-Hirschman *(HH)* Index of the concentration of the aggregate credit portfolio excluding credit to individuals [b,c]	2007	0.090	0.095	0.104	0.060	0.103	0.087
	2008	0.092	0.073	0.090	0.045	0.067	0.074
	2009	0.093	0.080	0.088	0.039	0.070	0.076
	2010	0.093	0.079	0.086	0.041	0.070	0.076
Herfindahl-Hirschman *(HH)* Index of business credit portfolio concentration [d,e]	2007	0.184	0.173	0.169	0.199	0.190	0.174
	2008	0.190	0.170	0.168	0.184	0.172	0.172
	2009	0.199	0.171	0.173	0.189	0.177	0.177
	2010	0.205	0.175	0.173	0.197	0.177	0.181
Credit to individuals as percentage of total credit	2007	27.1	28.6	22.0	44.4	26.3	28.7
	2008	27.8	33.0	26.1	50.1	37.4	32.9
	2009	29.9	29.5	27.8	54.4	37.5	33.1
	2010	30.5	30.9	28.9	54.7	37.2	34.2
Share of credit for borrowers' activity abroad in total credit portfolio (percent)	2007	20.5	21.8	21.4	3.9	5.9	17.9
	2008	19.1	13.4	21.0	3.1	4.9	14.2
	2009	18.6	13.1	23.0	3.1	4.4	14.3
	2010	17.3	11.5	21.9	2.4	3.9	13.0
Concentration by borrower size							
Gini Index of credit diversification by borrower size[f]	2007	0.907	0.896	0.909	0.825	0.897	0.897
	2008	0.908	0.909	0.904	0.810	0.837	0.896
	2009	0.905	0.903	0.912	0.808	0.854	0.897
	2010	0.907	0.913	0.908	0.813	0.855	0.902
Share in group's total credit of credit granted to borrowers whose indebtedness exceeds NIS 40 million (percent)	2007	41.6	52.0	42.9	32.6	41.0	44.5
	2008	43.6	51.1	41.6	29.0	33.7	43.1
	2009	40.6	50.2	41.8	26.1	30.8	41.4
	2010	42.2	49.0	43.2	26.1	33.3	41.7
Share in total credit of credit granted to borrowers whose outstanding indebtedness exceeds 5% of the group's equity[g] (percent)	2007	6.1	8.4	7.3	10.2	15.0	
	2008	8.4	10.4	8.3	8.9	11.9	
	2009	5.0	11.3	9.2	6.6	9.6	
	2010	5.3	7.9	7.6	7.4	10.3	

[a] On a balance-sheet and off-balance-sheet basis.

[b] This index is the sum of the squares of of the weights of credit in a specific industry (excluding credit granted to individuals) in total credit to the public (including credit granted to individuals).

[c] The principal industries weighted in this index include the borrower's activity in both Israel and abroad, unlike in Table 2.4 in which the principal industries include only the borrower's activity in Israel, and the borrower's activity abroad appears as a separate industry.

[d] This index is the sum of the squares of of the weights of credit in a specific industry (minus credit granted to individuals) in total credit to the public excluding credit granted to private individuals).

[e] The principal industries weighted in this index include the borrower's activity in Israel only, as presented in Table 2.4.

[f] The Gini Index expresses inequality in the distribution of credit by borrowers.

[g] Plus minority interest.

SOURCE: Published financial statements.

the bond market favorably affected the diversification of the bank credit portfolio: The largest borrowers in the bank credit portfolio financed their sources via the capital market and via the banks in 2010, while maintaining their share in the bank credit portfolio at the same level as at the end of 2009.

An additional index known as the Spanish Index[32] is used world wide to estimate the concentration of credit by borrower size. During 2010 the index was indicative of a certain improvement deriving from a decrease in the concentration of the 1,000 largest borrowers, while their share in the portfolio remained unchanged.

5. THE SECURITIES PORTFOLIO

The banks' securities activity, alongside classical banking activity, enables the banks to diversify their sources of income and to increase their profitability while diversifying risk as well. However, securities activity necessarily involves exposure to credit risks and market risks. The recent recession, in which the value of asset-backed securities plummeted and bond spreads widened greatly, emphasizes the major impact of the securities portfolio on the banks' performance. The recession also showed that assets that until then were regarded as relatively low risk, such as investment in the securities of banks and financial institutions, are actually exposed to volatility that could lead to considerable losses.

Since the recession, the securities activity of the banks in Israel has been marked by the purchase of government bonds concurrent with a reduction in investment in the bonds of foreign financial institutions, corporate bonds and asset-backed securities (ABS). This course of action reflects the conservative policy which the banks are adopting with respect to their securities activity due to the change in the perception of the risks inherent in it, and also because of the sharp drop in profitability which part of the banks suffered during the recession. A figure that highlights the change in the banks' policy is the large increase in the proportion of government bonds (which are regarded as lower risk) in their securities portfolio, from 41 percent in 2007 to 66 percent at the end of 2010 (Figure 2.22).

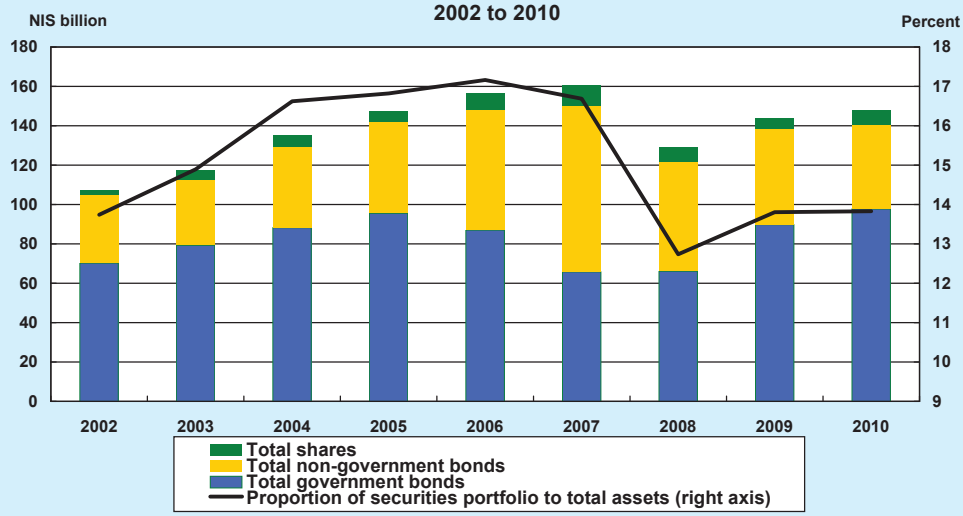
During the year reviewed, the banks maintained a securities portfolio with a composition similar to that at the end of 2009, though increasing the government bond component to some extent. The share of the securities portfolio in the balance sheet remained unchanged, at 14 percent, and its size grew from NIS 144 million in December 2009 to NIS 148 billion in December 2010 (Figure 2.22).

The level of the risk to which the banks are exposed from investments in securities is affected by the risk in the investment portfolio itself and its share in total assets. The variability between the five largest banking groups is clearly apparent from the composition and size of each group's portfolio, reflecting differences in the groups'

[32] The Spanish Index is expressed in the equation $\beta = \frac{\sum x^2}{(\sum x)^2} \cdot \frac{\sum x}{\sum y} \cdot 100$ where $\sum x$ is the credit granted to the 1,000 largest borrowers, $\sum y$ is total credit.

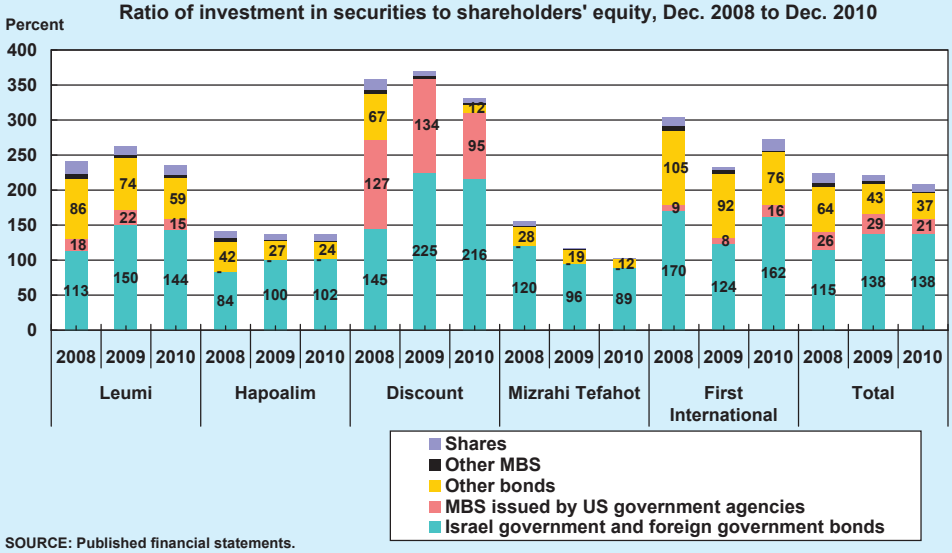
appetite for risk and their investment strategy. The Mizrahi-Tefahot and Hapoalim groups are notable for the small size of their portfolio and a high proportion of government bonds compared with the other groups, thereby reflecting a low level of risk. The Leumi and First International groups are notable for their high exposure to "other bonds", which include bonds of foreign financial institutions and corporate bonds (Figure 2.23).

Figure 2.22
The five major banking groups' securities portfolio - size and composition, 2002 to 2010



SOURCE: Published financial statements.

Figure 2.23
Ratio of investment in securities to shareholders' equity, Dec. 2008 to Dec. 2010



SOURCE: Published financial statements.

6. EXPOSURE ABROAD

a. Sovereign risk

Although the global economy did rebound in 2010, some of the developed countries were plagued by heavy debts, a development that resulted from government support for the financial sector and from the financing of incentive programs that were intended to cope with the deep recession and the slump in the labor market. The eurozone countries implemented spending cuts in order to reduce the budget deficit and the volume of the debts incurred, and some of them—Greece and Ireland for example—were forced to adopt these programs as a precondition for the injection of cash from the European aid fund.[33] Against the background of the uncertainty surrounding the debt crisis, and in view of the large budget deficits which a number of European countries had accrued—including Portugal, Ireland, Greece and Spain —Israeli banks reduced their exposure to those countries in 2010: The share of total assets of balance-sheet exposure to those four countries amounted to 0.1 percent at the end of the year.

Table 2.9

Exposure to foreign countries[a], the five major banking groups, December 2009 to December 2010

(NIS billion)

	Total exposure[b]		Outstanding problem loans	
	2009	2010	2009	2010
Exposure to AAA rated countries	184	177	4.3	3.0
Of which: USA	104	90	3.1	1.9
UK	36	42	0.6	0.6
Exposure to other countries	54	52	0.5	1.7
Of which: Turkey	4	4	0.1	0.1
LDC countries[c]	12	11	0.2	0.2
Total	**237**	**228**	**4.8**	**4.8**

[a] Foreign countries include those to which the total exposure exceeds 1 percent of consolidated assets or 20 percent of capital, whichever is less.

[b] Total exposure to foreign countries includes balance-sheet exposure to foreign countries (balance-sheet exposure abroad and the balance-sheet exposure of the banking corporation's offices abroad to local residents.

[c] Least Developed Countries are classified by the World Bank in a low or medium income group. Disclosure is required regarding these countries when the exposure to them exceeds 1 percent of total assets or 20% of capital, whichever is less.

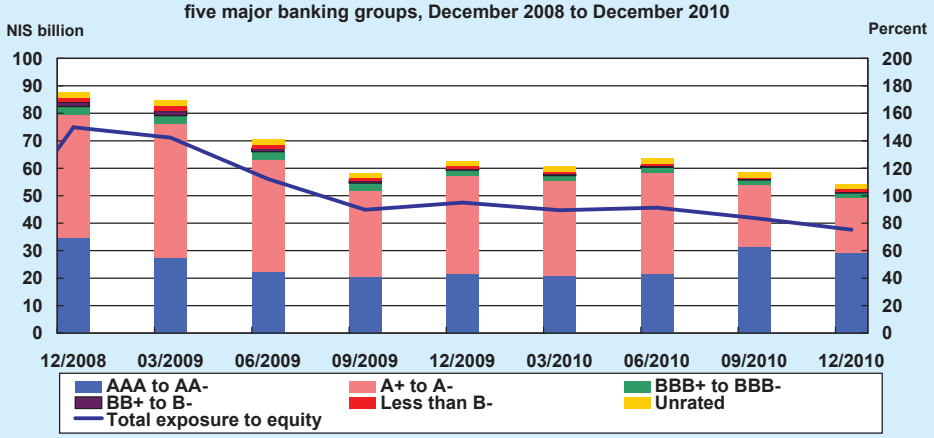
SOURCE: Published financial statements.

[33] A fund that was established for the purpose of assisting in the rollover of the debts of countries that had encountered difficulties.

The volume of the five largest banking groups' exposure to foreign countries[34,35] decreased by 4 percent during the year and totaled NIS 228 billion. The decrease resulted from the appreciation of the shekel against most currencies and from the action taken by the banks to reduce their exposure. As a result, the share of balance-sheet exposure to foreign countries out of total assets fell by 2.6 percentage points to 12 percent. The composition of the exposure did not change during the year, and the share of exposure to AAA-rated countries remained at 77 percent. Outstanding problem loans also remained unchanged and the percentage of total exposure amounted to 2 percent, similar to the percentage at the end of 2009 (Table 2.9).

Approximately a quarter of the exposure to foreign countries derived from exposure to foreign financial institutions, which amounted to NIS 53.4 billion at the end of 2010, a decrease of 14 percent compared with December 2009 (Figure 2.24). Out of the exposure to foreign financial institutions, 95 percent is in the form of indebtedness to investment grade institutions.[36] In 2010, the outstanding problem loans of the five largest banking

Figure 2.24
Current credit exposure[a] to foreign financial institutions[b,c] and credit exposure relative to equity, five major banking groups, December 2008 to December 2010



[a] Current credit exposure includes balance-sheet credit risk - bank deposits, credit to the public, bond investments, securities borrowed or purchased under reverse repo agreements, and other assets related to financial instruments; and off-balance-sheet credit risk - principally guarantees and commitments to grant credit, including guarantees to secure third party debt. Credit risk is presented after deduction of specific loan-loss provisions.

[b] Foreign financial institutions are: investment banks, broker-dealers, insurance companies and entities controlled by them. Credit exposure does not include positions in financial institutions that have explicit and full government guarantees, and does not include investment in asset-backed securities.

[c] The credit rating of the positions is based on the rating of the Fitch, S&P and Moody's rating agencies.

SOURCE: Published financial statements.

[34] Total exposure to foreign countries includes balance-sheet exposure (overseas balance-sheet exposure and the balance-sheet exposure to local residents of the banking corporation's overseas offices) and off-balance-sheet exposure to foreign countries (credit risk in off-balance-sheet financial instruments as calculated for the purpose of borrower debt restrictions).

[35] The foreign countries are those to which the total exposure to each of them exceeds 1 percent of consolidated assets or 20 percent of capital, whichever is lower, as well as less developed countries (LDC), which are classified by the World Bank in a low or medium-income group.

[36] A rating between AAA (the highest rating, of the most secure bodies) and BBB-.

groups to foreign financial institutions decreased to NIS 98 million, which amounted to 0.2 percent of total exposure, compared with 0.5 percent in 2009. The ratio of exposure to equity capital also fell, from 95 percent to 75 percent (Figure 2.24).

b. Credit to borrowers whose main activity is abroad[37,38]

Since the onset of the recession, the banks in Israel have reduced their exposure abroad and cut back on credit to borrowers operating abroad. As a result, the proportion of this credit out of total credit fell from 18 percent in December 2007 to 13 percent in December 2010. This decrease in outstanding credit to borrowers operating abroad was recorded mainly in 2008, and largely stemmed from the sale of mortgage backed securities (MBS), which were at the focus of the recession. The decrease in credit to borrowers operating abroad continued in 2010, but at a rate of only 4 percent compared with 14 percent in 2008, and its balance amounted to NIS 150 billion. This development is attributed to a considerable extent to the appreciation of the shekel against most currencies during the year. The composition of credit to borrowers operating abroad remained unchanged, as the financial services industry accounted for 29 percent, construction accounted for 21 percent, and the real estate industry accounted for 18 percent.

No major change occurred in the quality of credit to abroad during 2010 compared with the considerable improvement in the quality of credit for activity in Israel. This resulted from the rebound in the local economy while part of the world's countries still have to cope with the ramifications of the recession (especially in the construction and real estate industries): The share of loan loss provision out of total credit in respect of activity abroad rose by 0.1 percentage point to 1.0 percent, compared with a decrease of 0.6 percentage point (from 1.0 percent to 0.4 percent) in respect of borrowers whose main activity is in Israel (Figure 2.21).

7. ACTIVITY ABROAD VIA OVERSEAS OFFICES

a. The contribution of the overseas offices to the activity of the banking groups

During the past decade the banks expanded their activity abroad via overseas offices—branches abroad and subsidiaries abroad, mainly in the area of private banking—and also by purchasing existing banks. The expansion was based on the approach that such activity would enable the banks to diversify their sources of earnings at times when profits from local activity are declining, along with the expansion and development of additional growth drivers for the local commercial banks. Despite extensive deployment

[37] Activity is classified as activity abroad if most of the borrower's income and costs derive from abroad.

[38] The analysis in this section included balance-sheet credit and off-balance-sheet credit risk.

Table 2.10
Investment and contribution to profit at principal subsidiary and affiliated companies of the five banking groups and at the bank itself, 2009 to 2010

	Book value of investment at year-end		Rate of change		Contribution to net income[a]		Rate of change		Distribution of investment		Return on investment		Return on investment for period 1997-2010			
	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010	Average	Implied volatility	Ratio of average to implied volatility	Sharpe Index[e]
	(NIS million)		(Percent)		(NIS million)		(Percent)		(Percent)		(Percent)		(Percent)			
a. Principal consolidated companies																
Commercial banks	4,402	4,647	25.9	5.6	361	269	-16	-25	10	10	10	6	9.4	3.7	2.6	1.5
Mortgage banks	4,107	4,818	18.2	17.3	161	204	-13	27	10	11	5	5	7.5	3.4	2.2	1.0
Holdings, investments and other	10,120	10,665	23.0	5.4	405	443	59	9	24	24	5	4	5.8	3.4	1.7	0.6
Banking and financial companies abroad	11,971	11,733	7.1	-2.0	393	-280	218	-171	28	26	4	-2	6.8	7.8	0.9	0.4
Capital market (underwriting and management)	1,631	1,679	7.9	2.9	154	122	208	-21	4	4	10	7	18.6	41.8	0.4	0.4
Credit cards	2,692	2,762	8.7	2.6	372	333	-28	-10	6	6	15	12	13.6	8.6	1.6	1.1
Leasing	190	195	-23.1	2.6	5	4	-29	-20	0	0	2	2	2.1	1.2	1.8	-1.6
Total principal consolidated companies	**35,113**	**36,499**	**14.7**	**3.9**	**1,851**	**1,095**	**66**	**-41**	**82**	**81**	**6**	**3**	**7.9**	**2.8**	**2.8**	**1.4**
b. Principal investee companies																
Commercial banks[b]	1,632	1,532	12.3	-6.1	219	227	103	3.7	4	3	15	14	8.6	4.8	1.8	1.0
Real and insurance companies	622	58	-6.2	-90.7	112	394	195	252	1	0	17	63	19.5	21.4	0.9	0.7
Holdings, investments, financial and other (including abroad)	1,371	1,635	14.7	19.3	-1	-1			3	4	0	0	22.0	27.5	0.8	0.7
Total principal investee companies	3,625	3,225	9.5	-11.0	330	620	1.5	88	8	7	10	17	14.5	13.6	1.1	0.8
Total principal subsidiary and affiliated companies	38,738	39,724	14.2	2.5	2,181	1,715	52	-21	91	88	6	4	16.7	22.8	0.7	0.6
Non-principal companies[c]	3,982	5,292	-20.9	32.9	85	15	113	-82	9	12	2	0	9.3	13.6	0.7	0.4
Total subsidiary and affiliated companies	**42,720**	**45,016**	**9.7**	**5.4**	**2,266**	**1,730**	**196**	**-24**	**100**	**100**	**6**	**4**	**9.2**	**5.5**	**1.7**	**1.0**
Shareholders equity[d]	22,128	25,668	19.6	16.0	3,020	4,845	477	60	100	100	16	22	16.4	14.2	1.1	0.9

[a] Profit at subsidiary and affiliated companies includes "ordinary income and extraordinary income" and does not include dividends or proceeds from the sale of surplus holdings, as mentioned in Note 6.

[b] Bank Discount's holdings in First International Bank were not deducted from total investments and contribution to profit.

[c] Subsidiary and affiliated companies that are not detailed as principal companies in Note 6 to the published financial statements.

[d] The investment in the bank itself is derived from deducting the investment in subsidiary and affiliated companies, according to balance-sheet value on a solo basis, from shareholders equity. This differs from the definition of shareholders equity for the purpose of calculating Paragraph 23.a of the Banking Law (Licensing): Contribution to net income at the bank itself is obtained from the difference between the banking group's aggregate net income minus profits deriving from (principal and non-principal) subsidiary and affiliated companies on a solo basis.

[e] The Sharpe Index was calculated for the period 1997-2010. The risk-fee interest rate that was used for calculating the index was 3.9 percent, which was the average yield-to-maturity of CPI-indexed government bonds for that period.

SOURCE: Published financial statements.

and considerable investment, banking activity abroad failed to create significant and stable profit centers for the Israeli banks. An examination of the volume of investment at the overseas offices and the profitability derived from them, which is measured by means of a number of risk and yield indices,[39] shows that these investment centers are notable for low profitability and a high level of risk (Table 2.10).

Overseas offices' assets at the end of 2010 totaled $36 billion, a decrease of 5.6 percent compared with 2009 (Table 2.12). These assets accounted for 12 percent of the assets of the five largest banking groups, a decline from 14 percent in 2009. This drop was a result of the reduced activity of subsidiaries abroad and the rapid growth in the activity of the commercial banks at the head of the groups (Table 2.11). Overseas offices are active mainly in the US (60 percent of overseas offices' activity), the UK (12 percent) and Switzerland (15 percent) (Table 2.12). A relatively new activity consists of the acquisition of local banks in Romania, Turkey and Kazakhstan.

Offices in the US are centered more on commercial than on retail activity, and part of them provide financial services (investment services, global banking, and private banking) to relatively affluent populations. Activity in the UK is carried out via

Table 2.11
Overseas offices' share in total credit and assets at the five largest banking groups in Israel, 1999 to 2010

(NIS million)

	Assets			Credit[a]		
	Total at five banking groups	Of which: Total at overseas offices	Ratio of overseas offices' assets to total assets (percent)	Total at five banking groups	Of which: Total at overseas offices	Ratio of credit at overseas offices to total credit (percent)
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	166.6	17.3	635.1	73.6	11.6
2008	1,013.3	150.4	14.8	701.9	73.8	10.5
2009	1,042.2	145.4	13.9	690.4	64.7	9.4
2010	1,068.8	129.0	12.1	738.4	62.2	8.4

[a] Balance-sheet credit.

SOURCE: Returns to the Banking Supervision Department.

[39] The averages, standard deviations, and Sharpe indices take into account the banks' holdings in companies that that were included in the past (and some of which are no longer held) on the basis of investment and share in the holding by timing.

Table 2.12

Assets and liabilities at overseas offices by geographical distribution, 2008 to 2010

	USA				Europe					Total offices[a]				
			Change					Change					Change	
	2009	2010	2009	2010	2008	2009	2010	2009	2010	2008	2009	2010	2009	2010
	($ million)		(Percent)			($ million)		(Percent)			($ million)		(Percent)	
Credit to the public	9,385	9,794	-21.2	4.4	7,385	7,624	7,587	3.2	-0.5	19,417	17,130	17,515	-11.8	2.2
Cash and deposits at banks	5,725	4,737	12.8	-17.3	3,843	4,811	3,830	25.2	-20.4	8,958	10,601	8,620	18.3	-18.7
Of which: At related banks	740	1,566	25.1	111.6	1,691	2,430	1,942	43.7	-20.1	2,328	3,236	3,552	39.0	9.8
Securities	7,141	6,690	4.9	-6.3	2,913	2,488	2,337	-14.6	-6.1	9,723	9,634	9,031	-0.9	-6.3
Total assets	**23,017**	**22,017**	**-6.9**	**-4.3**	**14,659**	**15,282**	**14,134**	**4.2**	**-7.5**	**39,559**	**38,506**	**36,356**	**-2.7**	**-5.6**
Deposits of the public	14,542	14,661	-8.4	0.8	8,454	9,427	8,627	11.5	-8.5	24,479	24,134	23,451	-1.4	-2.8
Deposits from banks	4,453	3,102	-28.8	-30.3	4,343	3,755	3,287	-13.5	-12.5	10,610	8,219	6,401	-22.5	-22.1
Of which: From related banks	4,123	2,840	-26.9	-31.1	3,570	3,021	2,515	-15.4	-16.7	9,223	7,154	5,367	-22.4	-25.0
Total liabilities	**21,760**	**20,684**	**-7.6**	**-4.9**	**13,422**	**13,922**	**12,670**	**3.7**	**-9.0**	**37,150**	**35,872**	**33,541**	**-3.4**	**-6.5**
Shareholders equity	1,257	1,333	8.6	6.0	1,237	1,360	1,464	9.9	7.7	2,410	2,634	2,814	9.3	6.8
Off-balance-sheet credit risk	6,611	6,297	-12.9	-4.8	2,809	2,605	2,863	-7.3	9.9	10,406	9,231	9,170	-11.3	-0.7
Activity in derivative financial instruments[b]	6,677	12,259	-29.3	83.6	10,469	17,352	15,705	65.7	-9.5	19,918	24,036	27,968	20.7	16.4

[a] Including additional offices that are not in the USA (including Cayman) or in Europe, principally in South America. Accordingly total branches for each item slightly exceeds the number of branches in the USA and Europe.

[b] At nominal value.

SOURCE: Published financial statements.

branches, principally in the business sector, while activity in Switzerland is managed via subsidiaries and consists mainly of off-balance-sheet financial services in global private banking. Due to the nature of this activity, the banks engaged in it are exposed to operational risks, including legal risks, rather than to credit risks.

The number of overseas offices (branches, representative offices and offices of subsidiaries) fell by 7 percent in 2010 and at the end of the year amounted to 147, similar to their number in 2006, and the number of employee posts continued to fall (Table 2.13).

The profitability of the Israeli banks' subsidiaries abroad, measured in terms of return on equity (ROE), rose slightly during the year to 4.6 percent, compared with 4.5 percent in 2009.

Overseas offices' shekel contribution to profit

The contribution of overseas offices to the banking groups' profit[40] dropped sharply in 2010 (Table 2.10) and amounted to a loss of NIS 280 million, compared with a profit of NIS 393 million in 2009. The main reason for the large decrease in contribution to profit was the real appreciation of the shekel against the dollar during the year. The nominal net profit of subsidiaries abroad rose only slightly in 2010 and totaled $157 million. The shekel contribution of subsidiaries abroad to the profit of the banks is Israel is comprised of nominal net profit in local currency terms, translated to shekels,

Table 2.13
Branches and representative offices abroad of the banking groups
1991-2010

Year	Total	Number of the banking groups branches and representative offices abroad	Number of subsidiaries offices	Number of posts
Average 1991 - 1995	120	72	48	2,827
Average 1996 - 2000	97	63	34	2,084
Average 2001 - 2005	114	63	51	2,413
Average 2006 - 2010	159	59	101	3,384
2004	120	64	56	2,502
2005	111	64	47	2,296
2006	149	63	86	3,050
2007	163	62	101	3,600
2008	179	59	120	3,642
2009	158	56	102	3,337
2010	147	53	94	3,289

SOURCE: Reports to the Banking Supervision Department.

[40] This profit is after conversions and adjustments to shekels, excluding income or expense in respect of the hedging of the bank's investments abroad against exposure to exchange rate fluctuations, if such hedging activity was conducted.

and of income or expenses in respect of exchange rate differentials on the investment. For banks that carry out hedging transactions to protect their investments abroad, that also produces revenue or expenses. However, these are not included in the contribution of held companies, and are charged to net interest income before loan-loss provision in the profit and loss statement (on a bank basis). The nominal profits of held companies abroad (not including profits from the banks' branches operating abroad) totaled $126 million in 2010 compared with NIS 113 million in 2009 (Table 2.14).

In 2010 investment in banking and financial subsidiaries abroad was the largest investment item in the banks' equity capital, at NIS 11.7 billion or 26 percent of the total investments of the five largest banks.

b. Risks in the activity of the overseas offices of the Israeli banking groups

(1) General

Although the overseas offices do not constitute a uniform group, and are notable for differences in the nature of their activity from place to place, all the overseas offices share two common risks which for structural reasons are higher than in the banks' activities in Israel: The first risk is the difficulty of control and supervision. This is because the activity of the banks' overseas offices involves a special risk deriving from geographical remoteness, differences in business culture and management methods, differences in the business environment, the need to comply with local legislation and local regulatory requirements, difficulties in supervision and control, and from differing standards of corporate governance. All these create an aggregate risk deriving solely from the decision to operate abroad. The second risk derives from the limited ability, mainly of the smaller offices, to rely on the services, systems and processes of the parent company. This limitation, together with the high degree of competition with local and foreign banks which benefit from their stronger tradition and foothold in the host countries, affects the overseas offices' ability to achieve a favorable level of risk adjusted return over time.

(2) Credit risk

Volume of credit: Outstanding balance-sheet credit to the public at overseas offices totaled $ 17.5 billion (NIS 62.2 billion) at the end of 2010. Aggregate credit risk (balance-sheet and off-balance-sheet) amounted to $28.8 billion (NIS 102 billion). Credit granted by the overseas offices accounts for 8 percent of total balance-sheet credit to the public extended by the five major banking groups (Table 2.11) and 9 percent of the groups' aggregate credit risk. Outstanding balance-sheet credit to the public rose by $ 386 million (NIS 1.4 billion) in 2010. This 2.3 percent increase was lower than that in the balance-sheet credit of all the banking groups, which expanded by 7 percent. The aggregate risk in credit to the public remained unchanged in 2010 (Table 2.14).

Table 2.14
Princpal data on overseas offices, 2007 to 2010

($ million)

	Subsidiaries					Branches abroad					System total
	2007	2008	2009	2010	Percentage change between 2009 and 2010	2007	2008	2009	2010	Percentage change between 2009 and 2010	2010
Total assets	26,748	26,065	25,970	25,247	-2.8	16,566	13,494	12,536	11,108	-11.4	36,356
Credit to the public	13,375	12,645	11,854	12,817	8.1	5,769	6,772	5,276	4,699	-10.9	17,515
Cash and deposits at banks	3,655	4,830	5,123	3,971	-22.5	4,092	4,128	5,478	4,648	-15.1	8,620
Of which: Israeli banks in the group	790	1,110	1,655	1,282	-22.6	958	1,219	1,580	2,270	43.7	3,553
Securities	8,875	7,493	8,110	7,546	-7.0	6,347	2,231	1,524	1,485	-2.6	9,031
Deposits of the public	18,504	16,647	17,541	16,702	-4.8	10,559	7,832	6,593	6,749	2.4	23,451
Of which: From host country	56,312	4,505	4,024	4,083	1.5	5,445	3,491	3,283	3,965	20.8	8,048
From Israel	2,180	1,770	2,029	1,995	-1.7	1,400	690	600	468	-22.0	2,463
From other countries	11,012	10,372	11,488	10,623	-7.5	2,635	2,409	2,274	2,305	1.4	12,928
Deposits from banks	3,427	4,055	2,663	2,539	-4.7	5,781	6,555	5,555	3,862	-30.5	6,401
Of which: From Israeli banks in the group	2,018	2,720	1,661	1,556	-6.3	5,154	6,504	5,493	3,811	-30.6	5,367
Shareholders equity	2,459	2,410	2,634	2,814	6.8	-	-	-	-		2,814
Credit to the public + Off-balance-sheet saving	21,514	20,722	19,672	20,424	3.8	17,642	11,422	9,076	8,377	-7.7	28,801
Total problem loans	282	530	677	500	-26.2	59	182	337	237	-29.5	737
Of which: Non-performing, to problem borrowers	38	112	178	170	-4.2	19	11	62	124	99.8	295
Balance of loan-loss provision (specific + general)	169	223	272	296	9.2	23	27	61	78	27.6	375
Net interest income before loan-loss provision	577	487	640	636	-0.5	-156	-1,253	163	156	-4.7	792
Provision for loan losses	25	87	113	111	-2.3	4	12	34	27	-19.3	138
Net interest income after loan-loss provision	551	401	526	526	-0.2	-160	-1,265	130	129	-1.0	654
Operating and other income	233	216	220	254	15.7	30	26	25	21	-18.0	275
Operating and other expenses	534	557	597	611	2.4	114	102	109	115	5.0	725
Net income	185	45	113	126	11.3	-242	-1,329	44	37	-17.8	162
			(אחוזים)					(אחוזים)			
Loan-loss provision/Credit to the public (percent)	0.2	0.7	0.9	0.9		0.1	0.2	0.6	0.6		0.8
ROE	8.0	1.9	4.5	4.6		-	-	-	-		

SOURCE: Published financial statements and returns to the Banking Supervision Department.

The more moderate increase in the volume of credit granted by the overseas offices compared with the credit that was granted by the banking groups overall resulted from a combination of supply factors and demand factors.[41] On the supply side, the banks moved to reduce their exposure to foreign countries. Demand side factors included more moderate growth in the principal developed countries in Europe and the US, and the economic crisis during the year that hit other countries in which Israeli banks' subsidiaries operate, such as Romania.

Quality of credit

The quality of the overseas offices' credit portfolio, as measured by the ratio between provision for doubtful debts to total credit, remained unchanged at the relatively high level of 0.8 percent. This level is considerably higher than that in 2007 (before the global recession), when it was 0.2 percent, and high in comparison with all the banking groups in which this ratio amounted to only 0.4 percent in 2010 (Table 2.14).

Concentration of credit

Two principal industries are notable for their high proportion in the overseas offices' credit portfolio—the financial services industry, at 24 percent, and the construction and real estate industry, at 17 percent. Credit risk in the construction and real estate industry rose by 11 percent in 2010, following an increase of 22 percent in 2009.

The proportion of households, which are notable for wider borrower diversification and a low correlation between borrowers (due also to the widespread geographical deployment of the overseas offices), in the overseas offices' credit risk amounted to 10.8 percent in 2010. Although the balance of this credit at the offices rose by 3.7 percent during the year, its volume, $3.1 billion, was no higher than at the end of 2007.

(3) Market risks

Market risks are based on the possibility of erosion in the economic value of a bank's capital as the result of unexpected changes in market prices—interest rates, share prices, the exchange rate or the inflation rate. Since part of the overseas offices are close to the world's major financial centers, such as New York, London and Zurich, they manage 22 percent of the banking groups' securities portfolio. By its very nature, a portfolio of this size is exposed to a considerable level of market risk. This risk amounted to $9 billion (NIS 32 billion) at the end of 2010 (Table 2.14), an amount equivalent to 25 percent of their assets compared with 35 percent in 2007. Since the materialization of part of the market risks at the overseas offices due to the most recent financial crisis, the downtrend in this portfolio has continued. As a result, the balance of securities at the offices fell by $ 600 million or 6 percent in 2010. This was in line with the groups' efforts to reduce their exposure abroad.

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[41] Apart from exchange rate differentials, this was mainly due to the 7 percent strengthening of the dollar against the euro in 2010.

8. OPERATIONAL RISK

One of the risks to which the banking corporation is exposed in the management of its assets and liabilities is operational risk. This risk is defined as the risk of loss as the result of an impropriety or impediment relating to internal processes, persons and systems, or as the result of external events. The definition of risk includes the entire range of substantial operational risks faced by the banking corporation, and refers to the most important causes of serious operating losses. The types of events or situations of operating loss which have the potential to lead to considerable losses have been identified in a Basel Committee on Banking Supervision (BCBS) publication "Sound Practices for the Management and Supervision of Operational Risk."[42] The situations are: internal and external fraud; employment practices, safety in the work place;[43] specific customers, products, and business practices;[44] damage to physical assets; business activity disruption and system failures; failures in performance, in distribution and in process management.[45]

In 2010, the banking system in Israel allocated capital in the amount of NIS 67 million against operational risk (Table 2.18).

a. IT risks

In view of the rapid pace of technological developments during recent years and the banks' use of those technologies, inter alia for the purpose of developing and promoting new products and services for customers, operational risks are increasing, including IT risks, reputation risks and legal risks. New services include internet services, the use of social networks for marketing purposes and the increased provision of services via mobile devices. The use of external telecommunication networks exacerbates the potential risks to which the banks are exposed, including cybernetic risks. The Banking Supervision Department has issued a circular on the subject of social networks, requiring the banking corporations to mitigate the risks deriving from the use of these networks.

As part of the banks' preparations for complying with the Basel II directives on operational risk, during recent years the banking system carried out a gradual and continued process of closing the gaps with respect to the guidelines contained in the Basel Committee publication.

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[42] The document was published in September 2003.

[43] For example: workers' compensation claims, violation of safety and health laws at work places, action taken by employee labor unions, discrimination claims, and general liability.

[44] For example: fiduciary breaches, improper use of classified information on customers, improper trading activities in the bank corporation's account, money laundering and the sale of unauthorized products.

[45] For example: data input errors, collateral management failures, incomplete legal documents, the provision of unapproved access authorizations to customers' accounts, defective functioning by a counterparty (not a customer) and disputes with suppliers.

The banking corporations are investing a considerable effort in this process in order to implement operational risk management as an overall discipline and as an inseparable part of the management of their business activities. Accordingly, the banking corporations are managing such projects as monitoring compliance with the requirements listed in the Basel Committee publication, gathering information on loss events that have occurred, current processes for the detection, mapping and assessment of operational risks, and periodic reports. However, the processing of certain aspects is still inadequate. These include measurement tools, existing supervision and control, definition of risk appetite, key risk indicators (KRIs) and stress scenarios. As such, the banking corporations need to improve dealing with these aspects in order to minimize operational risks as far as possible and to manage those risks properly.

b. Prohibition of money laundering and financing of terrorism

During the past decade the world—and the Israeli banking system with it—has been waging a consistent struggle against money laundering and the financing of terrorism. The materialization of money laundering and terrorism financing risks is likely to expose the banking corporations to reputation risks, operational risks and legal risks. Moreover, exploitation of the banking corporations for the purpose of engaging in money laundering and terrorism financing activity could damage the reputation of the banks and the State of Israel, as well as the public's credibility in the banking system. The Banking Supervision Department recognizes the importance of combating money laundering and the financing of terrorism, and of maintaining the credibility and the reputations of the banking corporations and the State of Israel. The department is therefore aiming at a constant improvement in the money laundering and terrorism financing risk management network in the banking system.

To that end, the Banking Supervision Department conducts special audits relating to the prohibition of terrorism financing, with an emphasis on the control network and infrastructures for applying the provisions of the law and regulatory directives. Particular importance is placed on the process for identifying and verifying the details of beneficiaries and controlling owners in an account, the "know the customer" process, the propriety of the information databases, the process for reporting on transactions by their size, and the process for detecting and reporting unusual transactions.

9. MARKET RISKS AND LIQUIDITY RISK

a. Market risks—General

Market risks are defined as the potential drop in the economic value of a bank's net worth because of unexpected changes in market prices (interest rates, share prices, the exchange rate and inflation). The analysis of market risks in this review is based on

Value at Risk (VaR). This value expresses the maximum expected loss from the holding of financial instruments that are sensitive to changes in market prices, for a given horizon and the level of data significance at a specific point in time. (See the Annual Survey of the Banking System, 2008, for further details of the VaR model.)

b. Interest rate risk

Interest rate risk is the risk that unexpected changes in interest rates will worsen the bank's financial position (or will reduce the economic value of its net worth).[46] This risk arises when the sensitivity of the value of the bank's assets to unexpected changes in interest rates differs from the sensitivity of its liabilities.

Exposure to interest rate risk, which is expressed by the VaR of the bank's position,[47] is affected by three elements: (1) the difference between the present value of assets and the present value of liabilities plus the effect of futures transactions (hereinafter: the position);[48] (2) the sensitivity of the position to changes in interest rates, which is measured by duration, or by the modified duration; (3) the maximum change in the interest rate in the course of the planning period. The first two factors are dependent on the distribution of the assets and liabilities of each bank and by their characteristics over time, while the third is the same for all of them, since it is derived from the volatility of interest rates.

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[46] The economic value of a bank's net worth is calculated as the difference between the present value of assets and the present value of liabilities. The present value of assets and liabilities is obtained by discounting the future cash flows (principal and interest) by the risk interest rate in accordance with the term structure of the relevant interest rates for each segment.

[47] This value is the expected change in the net worth of the position in the case of the maximum expected change in the interest rate, and is calculated according to the equation:

$VaR_p = P \cdot \frac{D_k}{(1+i)} \cdot \Delta(1+i)$, where P is the position, D_k is the duration of the economic value of the bank's net worth, i is the discount interest rate and $\Delta(1+i)$ is the maximum change in the interest rate at a probability of 99 percent (that is: at a probability of 99 percent the change in the interest rate will be less than it and at a probability of 1 percent it will be greater than it). The second term on the right-hand side of the equation is the modified duration of the capital. The longer the modified duration of an asset, the greater the change in the present value of the asset caused by a change in the interest rate, and thereby reflects higher interest rate risk. See Table 2.15 for details.

[48] Based on the accounting reporting in Appendix D to the published annual report.

Table 2.15
Exposure to changes in interest rates[a], five largest banking groups, 2009 and 2010

	Leumi		Hapoalim		Discount		Mizrahi-Tefahot		First International	
	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010
Unindexed segment										
Net position in the segment[b] (NIS million)	16,925	17,391	15,318	15,375	6,170	6,003	3,387	3,385	5,839	3,767
Duration of assets (years)	0.59	0.75	0.60	0.69	0.78	0.80	0.56	0.79	0.39	0.61
Duration of liabilities (years)	0.60	0.67	0.55	0.67	0.64	0.67	0.56	0.80	0.28	0.33
Duration gap[c] (years)	0.03	0.12	0.08	0.05	0.17	0.16	0.01	0.01	0.14	0.29
Modified duration of capital[d] (years)	0.41	2.28	1.42	1.01	3.52	3.78	0.38	0.55	1.81	6.16
Maximum change in the interest rate[e] (percentage points)	1.82	1.45	1.82	1.45	1.82	1.45	1.82	1.45	1.82	1.45
Value at Risk (VaR)[f]	126	576	395	227	395	330	24	27	193	338
Indexed segment										
Net position in the segment[b] (NIS million)	3,688	4,679	2,858	6,235	274	2,469	2,091	3,580	-939	759
Duration of assets (years)	2.86	2.87	3.24	3.45	3.62	3.74	3.03	3.02	3.66	3.19
Duration of liabilities (years)	3.45	3.39	4.07	4.13	3.79	3.82	3.58	3.38	3.22	3.32
Duration gap[c] (years)	-0.40	-0.29	-0.66	-0.31	-0.14	0.22	-0.37	-0.12	0.27	0.01
Modified duration of capital[d] (years)	-7.36	-4.19	-15.63	-3.42	-15.77	2.81	-7.69	-1.57	5.15	0.16
Maximum change in the interest rate[e] (percentage points)	-0.46	-0.46	-0.46	-0.46	-0.46	0.46	-0.46	-0.46	0.46	0.46
Value at Risk (VaR)[f]	124	90	203	98	20	32	73	26	22	1
Foreign currency segment[g]										
Net position in the segment[b] (NIS million)	-2,802	-1,904	1,310	-9	-1,309	-1,963	349	363	30	-146
Duration of assets (years)	0.90	1.07	1.05	1.08	1.01	1.37	0.54	0.89	0.58	0.65
Duration of liabilities (years)	0.75	0.96	0.90	1.04	0.76	0.83	0.43	0.73	0.50	0.50

Table 2.15 (contd.)
Exposure to changes in interest rates[a], five largest banking groups, 2009 and 2010

	Leumi		Hapoalim		Discount		Mizrahi-Tefahot		First International	
	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010
Duration gap[c] (years)	0.14	0.10	0.15	0.04	0.24	0.52	0.11	0.16	0.08	0.15
Modified duration of capital[d] (years)	13.57	17.31	31.98	1,284.68	21.52	31.48	20.21	36.01	182.72	63.88
Maximum change in the interest rate[e] (percentage points)	0.47	0.48	0.47	0.48	0.47	0.48	0.47	0.48	0.47	0.48
Value at Risk (VaR)[f]	178	157	196	53	132	295	33	62	26	45
The bank's net worth[h] (NIS million)	17,812	20,167	19,486	21,602	5,136	6,509	5,827	7,328	4,930	4,380
Total interest-rate VaR[i]	428	824	795	378	547	658	130	116	241	383
As a percentage of the bank's net worth	2.4	4.1	4.1	1.8	10.6	10.1	2.2	1.6	4.9	8.7

[a] Under the Supervisor of Banks' directives of December 2009, changes were made in the manner and method of presenting the report on Exposure to Changes in the Interest Rate (in Appendix D), which serves as a basis for calculating interest-rate risk in this survey: In Appendix D, this year financial instruments are presented on the basis of their fair value instead of as balance-sheet balances, and the internal rate of return is presented as the discounting of expected flows to fair value instead of to balance-sheet balance. As a result of these reporting changes, differences exist between the present calculation of interest rate risk and the calculation in previous annual surveys . Likewise, the average duration of the assets and liabilities in this survey include, for the first time, the gross effect on assets and liabilities of futures transactions and options, unlike the average duration shown in previous surveys, which included their net effect.

[b] The difference between the present value of assets and the present value of liabilities, including the effect of futures transactions. The present value of assets and liabilities is obtained by discounting the future flow (principal and interest) by the market interest rate in accordance with the timing structure of the relevant interest rates for each segment.

[c] The duration gap expresses the sensitivity of the bank's net worth to changes in interest rates in terms of time, and therefore makes it possible to assess the duration of the assets/liabilities that need to be purchased/sold in order to immunize the bank's net worth against interest-rate risks.

The duration gap is calculated as follows: $Dgap = D_A - D_L \cdot \frac{L}{A}$

where: D_A is the duration of assets; D_L is the duration of liabilities; A is the present value of assets: L is the present value of liabilities.

[d] The modified duration of capital is calculated as follows: , $\text{modified duration} = \left[\frac{D_k}{1+i}\right]$ where: $D_k = D_{gap} \cdot \frac{A}{K}$ is the duration of the bank's net worth, where: K is the total exposure in the segment.

It is also possible to relate to the modified duration of capital as the position's rate of exposure to a one percentage point change in the interest rate. When the sign is positive, an unexpected increase in the interest rate will erode net worth and a decrease will enhance it. When the sign is negative, the effect will be the opposite.

[e] The maximum change in the yield-to-maturity on Makam for a month in the unindexed segment, on 5-year CPI-indexed bonds in the indexed segment and on the 3-month LIBID in the foreign currency segment is derived from 10 days' changes over the past 7 years, on the assumption of normality and a confidence level of 99 percent.

[f] The change that occurs in the bank's position as the result of a maximum change in the interest rates calculated in accordance with the VaR model.

, $VaR = P \cdot \frac{D_k}{(1+i)} \cdot \Delta(1+i)$ exists, where: P= position; D_K = duration of the bank's net worth; i = the discounting interest rate; $\Delta(1+i) =$ the maximum change in the discounting interest rate.

[g] Including the foreign-currency indexed segment.

[h] The difference between the present value of financial assets and the present value of financial liabilities, plus the effect of futures transactions.

[i] The total interest-rate VaR obtained by simple addition of the risk-adjusted values in the three segments, on the strong assumption that the worst change will occur from the aspect of the bank's position in all the segments.

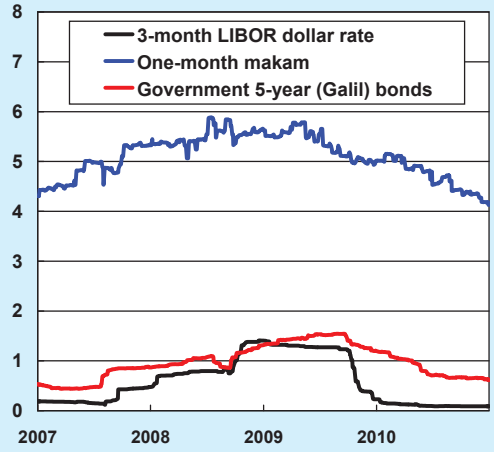
SOURCE: Published financial statements.

The interest rate VaR[49] increased slightly during the year reviewed, with variability between the banking groups, and at the five banking groups ranged between 2-10 percent of the economic value of net worth (Table 2.15).

In the unindexed segment, in which most activity is at floating-rate interest indexed to the prime rate and the term to maturity of assets and liabilities is short, the sensitivity of assets and liabilities to changes in interest rates is less than in the other segments, However, the volatility of the interest rates in this segment, which are usually correlated with the yields-to-maturity on makam (short term bills issued by the Bank of Israel), is high relative to those in the other segments (Figure 2.25). An increase in the duration of the five banking groups' assets was apparent in 2010 as a result of the large growth in housing loans, most of which were unindexed. The duration of liabilities increased at the same time but to a lesser extent, with the result that the duration of capital rose at most of the banking groups. At the end of 2010, all the banking groups were exposed to a rise in the interest rate.

In the CPI-indexed segment, the sensitivity of assets and liabilities to changes in interest rates was greater than in the other segments, because the majority of assets and liabilities are fixed-rate and for medium and long terms. However, interest rates in this segment are usually correlated with the yields-to-maturity on CPI-indexed bonds, and are notable for relatively low volatility. In recent years, a trend toward shorter duration of CPI-indexed credit (which accounts for 80 percent of total assets in this segment) has been apparent, as duration dropped from 3.8 years at the end of 2005 to 3.3 years at the end of 2010. This trend derived

Figure 2.25
Standard deviation[a] of the changes in selected interest rates, 2007 to 2010



[a] Calculated on a daily basis for the previous year.
SOURCE: Bank of Israel Information and Statistics Department.

[49] The Supervisor of Banks' directives of December 2009 changed the calculation method and presentation method of the report on exposure to changes in interest rate (in Appendix D), which serves as the basis for calculating interest rate risk in this survey: In Appendix D for 2010, financial instruments are presented according to their fair value instead of as balance-sheet values, and the internal rate of return is presented as the rate used to discount expected flows to fair value instead of balance-sheet balances. Because of these reporting changes, the present calculation of interest rate risk differs from the calculation in the previous annual reviews. In addition, the duration of assets and liabilities presented in this review includes for the first time the gross effect of futures transactions and options on assets and on liabilities, unlike the duration data in previous reviews, which included the net effect of futures transactions and options.

from the increased extension of long-term CPI-indexed credit by institutional entities (which due to their structure have a surplus of long-term CPI-indexed sources) at the expense of bank credit.

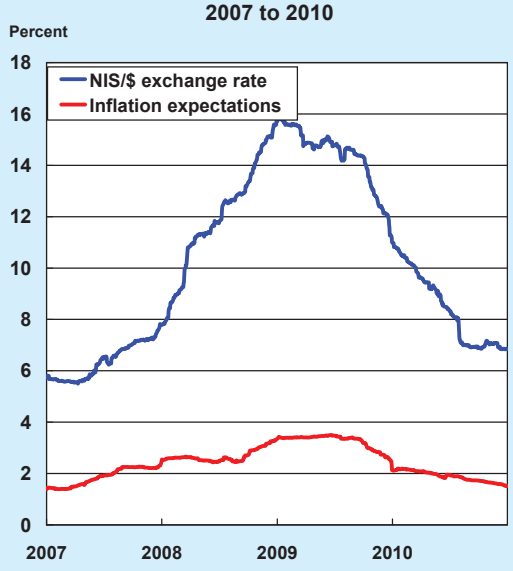
The five banking groups' exposure to changes in the CPI-indexed interest rate declined in 2010 due to an increase in their CPI-indexed assets, which are notable for a lower duration than liabilities, while their volume of liabilities did not change to any major extent. At the end of the year reviewed, the exposure of most of the banking groups in this segment was mostly to a decline in the interest rate.

The interest rate VaR in the foreign-currency segment is generally less than in the local currency segments. This is because of the banks' policy of maintaining a small position, and the low volatility of interest rates, which is reflected by the volatility of the Libor interest rate (Figure 2.25).

c. Indexation base risks

Exposure to indexation base risk is affected by two elements: One element, the quantity effect, is the difference between the value of assets and the value of liabilities, plus the net effect of futures transactions (hereinafter: the position).[50] The second element, the price effect, is the unexpected change in relative prices between the different indexation segments. The analysis in this survey focuses on the three indexation segments (without reference to the wide variety of foreign currencies), on the assumption that financial capital is defined as unindexed. Accordingly, market risk in the CPI-indexed local currency segment develops in the event of an unexpected decrease in prices (deflation), which erodes the net worth of banks with a surplus of assets over liabilities, or in the event of an unexpected increase in prices (inflation), which erodes the net worth of a bank with a surplus of liabilities over assets in that segment. Similarly, market risk in

Figure 2.26
Standard deviation[a] of the NIS/$ exchange rate and of changes in inflation expectations, 2007 to 2010



[a] Calculated on a daily basis for the previous year.
SOURCE: Bank of Israel Information and Statistics Department.

[50] Based on Note 16 to the financial statements.

the foreign-currency segment materializes in the event of an unexpected rise in the nominal exchange rate of the shekel against the dollar (an unexpected depreciation), eroding the bank's liabilities when the value of liabilities exceeds that of assets, and in the event of an unexpected appreciation, eroding the bank's assets when the value of assets exceeds that of liabilities.

The indexation base VaR of the entire banking system fell slightly in 2010 and amounted to NIS 288 million, less than the interest rate VaR.

The consumer price index rose by 2.7 percent in 2010, within the targeted range of increase and similar to the inflation expectations derived from the capital market, which amounted to 2.5 percent at the beginning of the year. At the end of the year, the five major banking groups had a surplus of assets over liabilities in the CPI-indexed segment, and were thereby exposed to an unexpected price decrease (deflation).

The shekel appreciated against the dollar by 6 percent in 2010 concurrent with a considerable reduction in volatility to the levels prevailing before the recession (Figure 2.26). At the end of 2010, all the groups except for Mizrahi-Tefahot were exposed to a rise in the exchange rate because of the negative position in the foreign-currency segment (Table 2.16).[51]

d. Liquidity risk

Liquidity is a banking corporation's ability to finance growth in assets and repay liabilities on time without incurring unacceptable losses. One of the functions of banking corporations is to supply long-term loans, which are financed by means of short-term deposits. This function makes them vulnerable to liquidity risk—both to the risk that is specific to the banking corporation and to the risk affecting the markets as a whole.[52] Efficient management of liquidity risk helps to ensure that the banking corporation will be able to adhere to its balance-sheet liabilities, which involve uncertainty due to their being affected by endogenous events and by the behavior of other entities. Liquidity risk management is of overwhelming importance, because a liquidity shortage at a specific bank could affect the entire system. Developments in the money markets have increased the awareness of liquidity risk and the complexity of liquidity risk management.

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[51] The calculation of the banking corporations' exposure to foreign currency in this review is based on the positions obtained from Note 16 to the financial statements. The positions presented below do not take into account taxation effects, which the banking corporations are likely to take into account in the management of their exposure.

Changes in the exchange rate have an effect on the effective rate of tax, because exchange rate differentials in respect of investments abroad are not taken into account in the income base for the purpose of calculating the provision for taxes while exchange rate differentials in respect of sources of finance are taken into account, thereby creating a lack of symmetry as regards these differentials. Given the volume of investment abroad, these changes are likely to have a substantial effect on the provision for taxes. Some of the banks hedge against tax exposure in respect of investments abroad.

[52] The risk that a bank will not be able to easily exit a particular position at the market prices or to offset it because of inadequate depth in the market or disruptions in the market.

Table 2.16
Exposure to changes in the CPI and the exchange rate, five largest banking groups, December 2009 and December 2010
(NIS million)

	Leumi		Hapoalim		Discount		Mizrahi-Tefahot		First International	
	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010
Unindexed segment										
Total assets (excluding futures transactions and options)	155,049	170,811	167,279	192,275	86,750	93,112	60,927	70,536	67,127	62,932
Total liabilities (excluding futures transactions and options)	134,369	146,962	147,857	163,942	80,634	85,645	56,644	69,778	56,211	55,371
Effect of futures transactions and options	-3,039	-6,780	-5,618	-14,410	-253	-1,498	-849	2,141	-5,110	-4,434
Difference between assets and liabilities plus effect of futures transactions and options	17,641	17,069	13,804	13,923	5,863	5,969	3,434	2,899	5,806	3,127
The bank's net worth[a]	13,783	15,318	15,554	17,260	4,562	5,878	5,426	6,131	4,272	3,191
Total position in the segment[b]	3,858	1,751	-1,750	-3,337	1,301	91	-1,992	-3,232	1,534	-64
Indexed segment										
Total assets (excluding futures transactions and options)	59,822	59,655	57,247	56,185	28,323	27,743	37,182	41,271	15,090	16,050
Total liabilities (excluding futures transactions and options)	52,157	52,439	44,940	43,811	23,286	22,654	32,337	33,200	16,087	15,536
Effect of futures transactions and options	-7,247	-5,874	-10,627	-7,280	-4,627	-2,667	-2,978	-4,871	-132	136
Total position in the segment[c]	418	1,342	1,680	5,094	410	2,422	1,867	3,200	-1,129	650
Change in the CPI[d] (percent)	-1.13	-0.82	-1.13	-0.82	-1.13	-0.82	-1.13	-0.82	1.13	-0.82
Value at Risk (VaR)[e]	4	9	17	36	4	17	19	22	11	5
Foreign currency segment[f]										
Total assets (excluding futures transactions and options)	97,797	87,443	78,939	65,388	66,052	58,827	18,604	19,741	18,691	17,432
Total liabilities (excluding futures transactions and options)	112,309	102,999	95,138	88,928	72,681	65,316	22,333	22,427	24,359	22,457
Effect of futures transactions and options	10,286	12,654	16,245	21,690	4,878	4,162	3,826	2,719	5,242	4,298
Total position in the segment[c]	-4,226	-2,902	46	-1,850	-1,751	-2,327	97	33	-426	-727
Change in the exchange rate[g] (percent)	4.25	4.28	-4.25	4.28	4.25	4.28	-4.25	-4.28	4.25	4.28
Value at Risk (VaR)[e]	169	65	13	38	87	79	5	3	7	14
Total indexation base VaR[h]	173.2	74.5	30.1	74.2	90.7	95.6	23.6	25.4	17.7	18.3
As a percentage of the bank's net worth	1.25	0.48	0.19	0.43	2.00	1.58	0.44	0.41	0.42	0.60

[a] The bank's net worth is attributed (by definition) entirely to the unindexed segment, with the result that the nominal exposure to indexation bases occurs in the indexed segment and in the foreign currency segment.

[b] The difference between assets and liabilities includes the effect of futures transactions exclusive of the bank's economic value.

[c] The difference between assets and liabilities includes the effect of futures transactions.

[d] The maximum change in the CPI derived from 10 days' changes in inflation expectations during the past 7 years, on the assumption of normality and a confidence level of 99 percent.

[e] The change that will occur in the bank's position as the result of a maximum change in the CPI and the exchange rates calculated in accordance with the VaR model.

[f] Including foreign-currency indexed. The calculation of the banking corporations' exposure to foreign currency in this survey is based on the positions obtained from Note 16 to the financial statements. The positions presented do not take into account taxation effects, which the banking corporations are likely to take into account when managing the exposure.

[g] The maximum change in the nominal exchange rate of the shekel against the dollar, which is derived from 10 days' changes in the exchange rate over the past 7 years, on the assumption of normality and a confidence level of 99 percent.

[h] The Total indexation base VaR is obtained by simple addition of the values at risk in the indexed segment and the foreign-currency segment, on the assumption that the worst change will occur, from the bank's aspect, in both segments.

SOURCE: Published financial statements and Central Bureau of Statistics data.

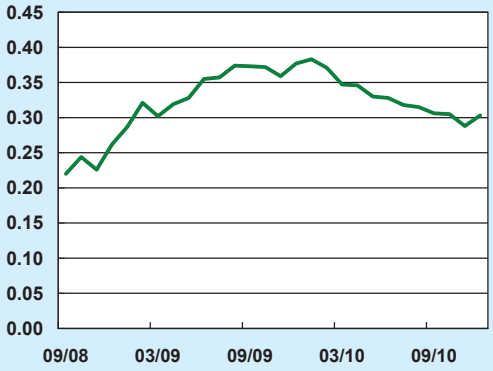
As a result of the global financial recession, the Basel Committee formulated principles that emphasize the need for determining a suitable framework for the proper management of liquidity risk and for holding an adequate level of liquidity,[53] and published guidelines for international standards for the measurement and monitoring of liquidity risk.[54] The guidelines include, for the first time, two quantitative supervisory indices. The Banking Supervision Department is planning to adopt the guidelines determined in Basel III with the necessary adjustments.[55]

The banks maintained the relatively high level of liquidity reached in 2009, although the level of liquidity declined to some extent in 2010, (Figure 2.27). This high level is attributed to three main factors: (a) The expansionary monetary policy adopted by the Bank of Israel after the recession, which injected liquidity into the market. The liquidity was absorbed mainly by means of monetary deposits and in 2010, by means of makam issues as well; (b) The banks' preference in the last two years for investing in liquid government bonds in their nostro portfolio, in response to the financial crisis; (c) The relatively low price of holding liquidity due to the low level of interest rates in the economy.

The banks in Israel rely on deposits from the public as their principal source. The ratio of credit to deposits at the five large banking groups amounted to 91 percent in 2010. The Israeli banks differ from the global banking system in the structure of their sources, because they hardly resort at all to inter-bank markets and to financial markets in Israel and abroad. This sources structure reflects a low liquidity risk by international standards.

The low interest rates on deposits offered by the banking system on deposits compared with the relatively high yields in the money and capital markets had the effect of holding down the growth in deposits during recent years, and led to an increase in the ratio of credit to deposits. As stated however, the present ratio (91 percent)

Figure 2.27
Ratio between local and foreign-currency liquid assets and liabilities for a redemption period of up to a month based on the standard model[a], seven largest banking groups, September 2008 to December 2010



[a] The standard model in accordance with Proper Conduct of Banking Business Regulation 342.

SOURCE: Reports to the Banking Supervision Department.

[53] Principles for Sound Liquidity Risk Management and Supervision.

[54] Basel III: International Framework for Liquidity Risk Measurement, Standards and Monitoring.

[55] See Box 2.3 for further details.

is regarded as low by international standards, and explains the high level of liquidity of the banks in Israel.

An examination of the concentration of deposits at the five large banking groups shows that in December 2010, 35 percent of total deposits were deposits up to NIS 1 million and that 28 percent were concentrated in large deposits of over NIS 50 million.

An examination of the ratio of liquid assets to total assets and the ratio of liquid assets to liquid liabilities shows that in the past two years, as a result of the recession, the liquidity at all five banking groups increased, although in the past year some decrease was recorded at most of the groups (Table 2.17).

Table 2.17
Selected liquidity indices, five largest banking groups, 2007 to 2010
(Percent)

	Year	Leumi	Hapoalim	Discount	Mizrahi-Tefahot	First International	Five groups
Rato of liquid assets[a] to total assets	2007	17.1	14.8	20.3	13.2	22.8	17.1
	2008	16.8	14.9	17.5	10.1	22.7	16.1
	2009	22.7	23.3	24.5	13.2	29.0	22.8
	2010	19.1	22.7	21.7	12.2	23.9	20.2
Ratio of liquid assets[a] to liquid liabilities[b]	2007	31.0	23.6	35.0	23.7	32.8	28.8
	2008	30.7	23.2	31.7	18.2	32.9	27.3
	2009	39.1	37.0	41.1	23.6	42.4	37.5
	2010	32.6	37.5	33.5	20.3	33.3	32.8

[a] Liquid assets include cash and deposits at the Bank of Israel and at banks with an original redemption time of up to 3 months, and government bonds.

[b] Liquid liabilities include total deposits with an original redemption time of up to 3 months.

SOURCE: Published financial statements.

Box 2.3 International Liquidity Standards

Many banks, including those with adequate levels of capital, experienced difficulties during the global financial crisis because they did not prudently manage their liquidity. The financial crisis highlighted the importance of liquidity in the proper functioning of the financial markets and the banking system.

In response to the crisis, the Basel Committee on Banking Supervision in September 2008 published "Principles for Sound Liquidity Risk Management and Supervision". The document delineates the lessons learned from the crisis and provides guidelines for creating an appropriate framework for the management of liquidity risk and the maintenance of a sufficiently high level of liquidity.

To complement these principles, and as part of the Committee's reforms to strengthen global capital and liquidity regulations, the Basel Committee in December 2010 published "Basel III: International Framework for Liquidity Risk Measurement, Standards and Monitoring".

The document presents two supervisory quantitative standards that are to be used for the measurement and monitoring of a bank's liquidity risk and defines their method of calculation. Nonetheless, the Committee has left certain areas to the discretion of local regulators. The document defines appropriate minimal levels of liquidity (similar to the standards for capital adequacy) which will serve as the main, though not exclusive, supervisory tool for liquidity risk. The regulator will supplement this with assessment of the quality of risk management according to the guidelines stated in the Principles for Sound Liquidity Risk Management and Supervision (published by the Basel Committee in 2008) and through the use of monitoring tools proposed in the document.

Description of the standards:

1. Liquidity Coverage Ratio (LCR): a measure meant to increase a bank's short-term resilience by ensuring that it has a sufficient quantity of high-quality liquid assets that will enable it to survive a major stress scenario that continues for 30 consecutive days. LCR is defined as the ratio of a bank's inventory of high-quality liquid assets to its expected net cash outflow during the next 30 days. A bank is required to maintain an LCR of at least 100 percent at all times.

The numerator is composed of assets that that should be liquid during times of stress and ideally be central bank eligible (as a collateral) . The document characterizes these assets by describing the various criteria they must fulfill in order to be included within the LCR numerator. The numerator can include two types of assets: (A) Level 1 liquid assets: a small group of assets that primarily includes cash, central bank reserves and marketable securities representing claims on or claims guaranteed by governments and central banks that fulfill certain criteria. These assets are included in the numerator without restriction, according to their market value and without haircut. (B) Level 2 liquid assets: an additional group of assets that includes marketable securities representing claims on or claims guaranteed by sovereigns and central banks that are not Level 1 assets, and marketable corporate bonds that can be included in the numerator if they fulfill certain conditions. Level 2 liquid assets can constitute up to 40 percent of the numerator and are to be included in it after applying a haircut of at least 15 percent. The denominator reflects the expected net cash outflows during the next 30 days. This is composed of cash outflows less either expected cash inflows or 75 percent of the cash outflows, whichever is less. All obligations, including off-balance-sheet obligations, will be included in the cash outflows while cash inflows will be included if they have not been included as assets in the numerator and if it is reasonable to assume that they indeed will be received. The document defines sub-categories of balance-sheet

obligations, off-balance-sheet obligations and assets for which a net cash outflows will be calculated, as well as the minimal rates for the calculation of outflows and inflows in each sub-category.

2. Net Stable Funding Ratio (NSFR): A measure whose purpose is to reinforce a bank's resilience in the longer term through the creation of incentives to finance its activities from more stable sources of funds on an ongoing basis. The measure is also meant to prevent over-reliance on short-term wholesale funding during times of abundant liquidity in the market and to reduce the incentives for funding of the liquid assets required according to the LCR using short-term funding sources whose maturity is only just beyond the 30-day limit. The measure is defined as the ratio of the available amount of stable funding to the required amount of stable funding.

Available stable funding is defined as the portion of those types and amounts of equity or liability financing expected to be reliable sources of funds over a one year time horizon under conditions of extended stress,. The document specifies the types of liabilities and equity that can be included as available stable funding sources and the safety factor assigned to each particular type. Required stable funding is a function of the liquidity characteristics of a bank's assets, its off-balance-sheet exposures and its activities. The document specifies the types of assets and off-balance-sheet exposures against which stable funding is to be maintained and the factor assigned to each particular type.

A bank is required to maintain an NSFR that exceeds 100 percent at all times.

The proposed supervisory monitoring tools utilize five types of indicators: contractual maturity mismatch, for defined time bands, in local currency and in significant foreign currencies; concentration of funding sources according to significant counterparty and according to significant products and instruments; available unencumbered assets that are marketable as collateral in secondary markets and/or eligible for central banks' standing facilities; LCR by significant currency; and market related monitoring tools that can be used as early warning signs in monitoring potential liquidity difficulties at banks. The indicators will include market wide information, information on the financial sector and bank-specific information.

In the document, the Committee specifies transitional arrangements for the implementation of the two supervisory standards. These standards will be implemented at the end of an observation period, which will be used to assess their expected impact and to make final decisions with regard to specific issues that remain open. Reporting to the supervisors is first expected by January 1st, 2012 for the two standards. The LCR will be adopted no later than January 1, 2015 and the NSFR by January 1st, 2018.

It is the intention of the Banking Supervision Department to adopt the guidelines of the documents with the necessary modifications and according to an as yet to

be determined timetable, following the assessment of their impact on the banking system in Israel.

In 2011, the Supervisor of Banks published a draft for discussion on revision of Proper Conduct of Banking Business Regulation 342 (Liquidity risk management), among other things, as an interim stage prior to the adoption of Basel III. The draft includes, among other things, tightening of the requirements for liquidity risk management on a group basis, a redefinition of the requirements for meeting a minimum liquidity ratio, the addition of a requirement for the assessment of a stable funding ratio and a redefinition of the tools and measures for monitoring liquidity risk.

10. CAPITAL ADEQUACY

As a result of the global financial crisis, the Basel Committee and leading regulators worldwide formulated guidelines for the purpose of strengthening the robustness of the global banking system. The guidelines discuss a capital conservation buffer and a countercyclical buffer, beyond the minimum level of required capital, and an improvement in the components of capital and the quality of capital. These changes, which were embodied in Basel III, are due to go into effect gradually until their full implementation in 2019.[56] In order to maintain the capital adequacy of the banks in Israel even before the issue of the final Basel III recommendations, the Supervisor of Banks prescribed an interim capital policy, whereby by December 31, 2010, the Core Tier 1 capital ratio must not be less than 7.5 percent. The banking corporations were required to submit to the Banking Supervision Department a work program for reaching to this ratio. Banks failing to adhere to this objective or whose dividend distribution results in their failing to adhere to the objective were ordered not to distribute a dividend without the prior approval of the Supervisor of Banks. As of December 31, 2010, all the banking corporations conformed to this directive. The banks were also asked to take into account the high probability that new issues of capital instruments would not be recognized for capital adequacy purposes in the future.

Subsequently, and as part of the supervisory measures that were adopted with respect to leveraged housing loans during the year,[57] the banking corporations were required to increase the allocation of capital in respect of loans that were granted within the framework of purchase groups and in respect of floating-rate leveraged housing loans, by assigning a risk weighting of 100 percent instead of 35 percent or 75 percent.

The banking system in Israel has been acting in accordance with the Basel II directives since December 2009, adopting the standardized approach for the allocation of capital in respect of credit risks. The banks maintained high levels of capital (above the target)

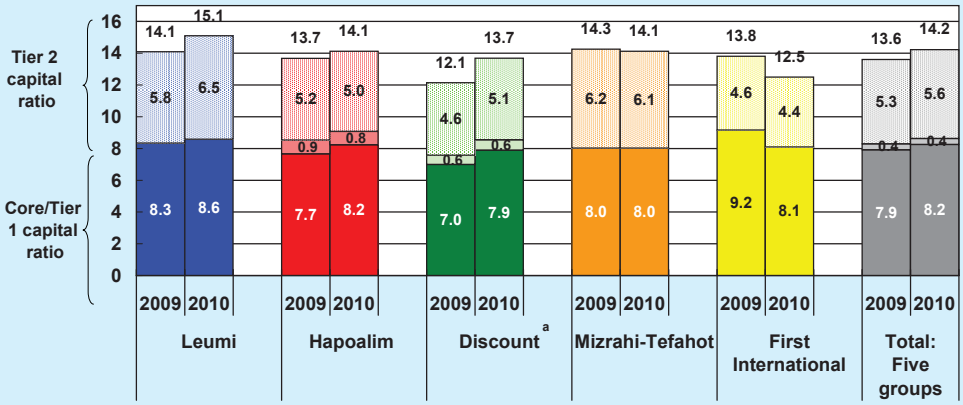
[56] See Box 2.4 for further details.

[57] See Box 2.2 for further details.

during the year, and the average capital adequacy ratio at the five banking groups reached a record 14.2 percent (Table 2.18, Figures 2.28, 2.29). The ratio increased at the three largest groups, while the ratio at the two other groups fell (especially at the First International group, where the decrease amounted to one percentage point).[58] As of December 2010, all the banks in the system complied with the Basel III directives that are valid for the period lasting until 2015.[59]

The positive development in the capital ratio of the banking system stemmed from the expansion of the capital base. This expansion resulted from an increase in Tier 1 capital due to the banks' NIS 6.6 billion of profits accrued during the year, which were offset

Figure 2.28
Tier 1 and Tier 2 capital ratios and overall Capital Adequacy Ratio at the five major banking groups, December 2009 and December 2010



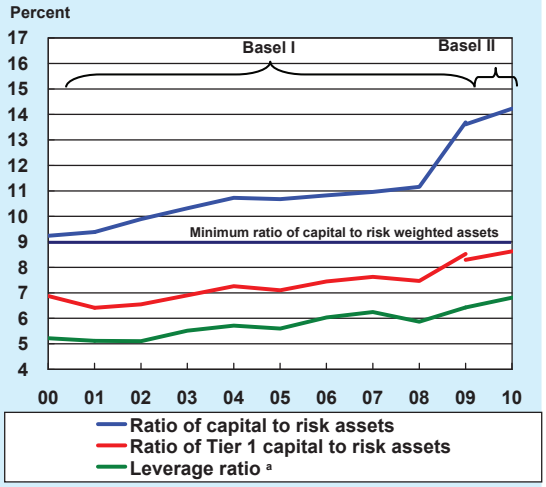
[a] The Discount group's core capital for December 2009 and December 2010 does not include the deduction for the group's investment in the First International Bank.
SOURCE: Reports to the Banking Supervision Department and published financial statements.

[58] From 13.8 percent to 12.5 percent. The decline in the ratio stemmed mainly from a decrease in Tier 1 capital as the result of a dividend distribution on September 6, 2010, and a reduction in minority interest rights due to the purchase of part of the minority interest in Bank Poalei Agudat Israel and Bank Otsar Hahayal.

[59] In September 2010 the Basel Committee published guidelines for a new capital framework whereby the capital ratios required by 2015 will be as follows: Core Tier 1 capital ratio—4.5 percent; Tier 1 capital ratio—6 percent; overall capital ratio—8 percent. In addition, the banks are required to hold a capital conservation buffer of 2.5 percent and a countercyclical capital buffer (subject to the local national supervisor's discretion) of 2.5 percent—a requirement that will be applied until the period between 20016 and 2019. It should be noted that the capital conservation buffer must be based on essentially on common equity. In addition, a special capital allocation will be required for systemically important financial institutions (SIFIs).

by NIS 2.1 billion as the result of a dividend distribution, the first since the recession[60], and from the issue of complex capital instruments[61] and subordinated notes. All the banking groups except for the Hapoalim group exhausted the restriction governing subordinated notes and other capital instruments that are included in Lower Tier 2 capital.[62] The positive effect of the capital base on the capital adequacy ratio was offset by an increase in risk assets: Firstly, the banks' credit risk assets increased due to a change in the composition of their balance sheets whereby the share of cash and deposits at the banks, which are notable for low risk, decreased while the share of business credit and credit for private individuals, which are regarded as higher risk, increased.[63] Secondly, the amount of capital allocated in respect of market risks increased (Table 2.18).

Figure 2.29
Capital ratios, average of the five major banking groups, December 2000 to December 2010



[a] The leverage ratio is calculated as total shareholders equity to total balance-sheet assets, and includes in the numerator shareholders equity plus minority interest.
SOURCE: Reports to the Banking Supervision Department and published financial statements.

During the year the banks prepared to adopt capital policy for the interim period, and the ratio of Core Tier 1 capital at the five banking groups increased by 0.3 percentage point to 8.2 percent. As of December 2010 and as stated, all the banking groups complied with the Core Tier 1 capital target required (Table 2.18, Figure 2.28).[64] Apart from that, the ratio of equity capital to total assets, whose importance as an additional index alongside the capital adequacy ratio increased because of the recession, rose by 0.4 percentage point to 6.8 percent (Table 2.18 and Figure 2.29).

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[60] In the course of the year Bank Leumi, Bank Mizrahi-Tefahot and First International Bank of Israel distributed a dividend due to the profits which they had accrued and in view of their adherence to the Tier 1 capital target. Bank Hapoalim was unable to distribute dividend because of the losses which it accrued in 2010, and Bank Discount was unable to do so because of the requirement for adhering to the Tier 1 capital target.

[61] The growth in complex capital instruments was based mainly on Bank Leumi's issue of NIS 2.3 billion of subordinated debt notes in February 2010.

[62] The Leumi group was close to the restriction.

[63] The increase in risk assets was however offset by 2 percent as a result of the depreciation of the shekel against most currencies.

[64] The Core Tier 1 capital of the Discount group does not include the deduction in respect of the group's investment in First International Bank.

Table 2.18
Distribution of capital and capital ratios[a] at the five major banking groups, December 2009 and December 2010

	Leumi		Hapoalim		Discount		Mizrahi-Tefahot		First International		Five groups	
	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010
	(NIS million)											
Equity[b]	22,144	23,985	20,948	23,426	10,292	11,569	6,885	7,591	6,735	6,205	67,004	72,776
Core capital[c,d]	21,478	23,271	20,286	22,779	9,880	11,187	6,702	7,313	6,058	5,643	64,404	70,194
Tier 1 capital[c]	21,478	23,271	22,562	25,107	10,700	12,101	6,702	7,313	6,058	5,643	67,500	73,435
Tier 2 capital[c]	14,863	17,716	13,631	13,968	6,469	7,293	5,220	5,575	3,073	3,082	43,256	47,634
Tier 3 capital[c]	0	0	0	0	0	0	0	0	0	0	0	0
Total capital for risk-weighted capital ratio calculation	36,341	40,987	36,193	39,075	17,169	19,394	11,922	12,888	9,131	8,725	110,756	121,069
	(NIS million)											
Total balance sheet	321,775	328,170	309,555	320,876	187,817	185,814	118,439	133,266	104,568	100,683	1,042,154	1,068,809
Credit risk	229,551	239,900	240,402	252,064	125,641	125,514	75,982	83,268	58,083	61,291	729,659	762,037
Market risk	7,418	10,653	4,460	5,483	2,752	2,907	624	579	1,508	2,006	16,762	21,628
Operating risk	20,928	20,904	19,835	19,154	12,969	13,233	6,702	7,313	6,543	6,506	67,313	67,204
Total risk-weighted items	257,897	271,457	264,697	276,701	141,362	141,654	83,644	91,254	66,134	69,803	813,734	850,869
	(Percent)											
Ratio of shareholders equity to total assets	6.9	7.3	6.8	7.3	5.5	6.2	5.8	5.7	6.4	6.2	6.4	6.8
Ratio of core capital to risk assets	8.3	8.6	7.7	8.2	7.0	7.9	8.0	8.0	9.2	8.1	7.9	8.2
Ratio of Tier 1 capital to risk assets	8.3	8.6	8.5	9.1	7.6	8.5	8.0	8.0	9.2	8.1	8.3	8.6
Ratio of Tier 2 capital to risk assets	5.8	6.5	5.2	5.0	4.6	5.1	6.2	6.1	4.6	4.4	5.3	5.6
Ratio of overall capital to risk assets	**14.1**	**15.1**	**13.7**	**14.1**	**12.1**	**13.7**	**14.3**	**14.1**	**13.8**	**12.5**	**13.6**	**14.2**

[a] In Basel II terms.

[b] Including minority interest in accordance with the groups' balance sheets.

[c] After all the deductions.

[d] The core capital of the Discount group for December 2009 and December 2010 does not include the deduction in respect of the group's investment in First International

SOURCE: Reports to the Banking Supervision Department.

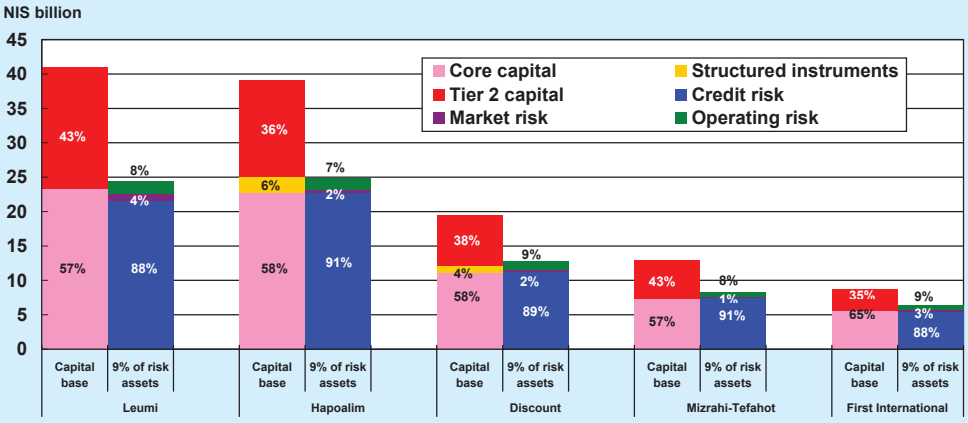
The data presented in Figure 2.30 show that the banking groups in the system differ from each other in the level and makeup of the capital base and in the demands on capital for risk weighted assets, so the banks are differentiated by the "coverage ratio" of credit risks by Core Tier 1 capital, which is the most stable and high-quality component of the capital base.[65] As an example, Core Tier 1 capital at the Leumi group covers 95 percent of the group's risk assets compared with only 88 percent at the Discount group.

Beginning January 1, 2011, the bank corporations have been required to adopt the directive, "Measurement and Disclosure of Impaired Debts, Credit Risk and Allowance for Credit Losses". An examination of the effect of the directive on capital adequacy shows that following its application to December 2010 data, all the banking groups had a capital adequacy ratio of over 12 percent, and that all of them except for the Discount group adhered to a core capital ratio of 7.5 percent. The decline in the capital adequacy ratio varied from 0.27 percentage point at the Leumi group to 0.56 percentage point at the Discount group, and the decline in the core capital ratio varied from 0.27 percentage point at the Leumi group to 0.59 percentage point at the Discount group.[66]

The positive development in the capital adequacy of the Israeli banking system during recent years had the effect of improving its position relative to other developed countries, and as of December 2010 the capital adequacy ratio in Israel was similar to the average

Figure 2.30

Capital components and capital requirements for various risk assets[a] in accordance with Basel II, the five major banking groups, December 2010



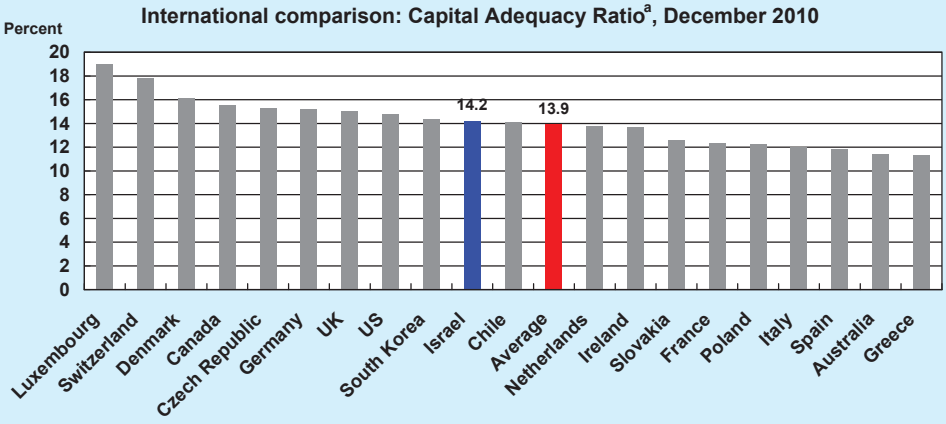
[a] The minimum required level is 9%.

SOURCE: Reports to the Banking Supervision Department and published financial

[65] Basel III emphasized the great importance of Core Tier 1 capital in the capital base that is allocated against risk assets. We therefore chose to present the "coverage ratio", which examines that part of risk assets against which Core Tier 1 capital is allocated. A high coverage ratio implies that more stable capital is allocated against a large part of the risk assets.

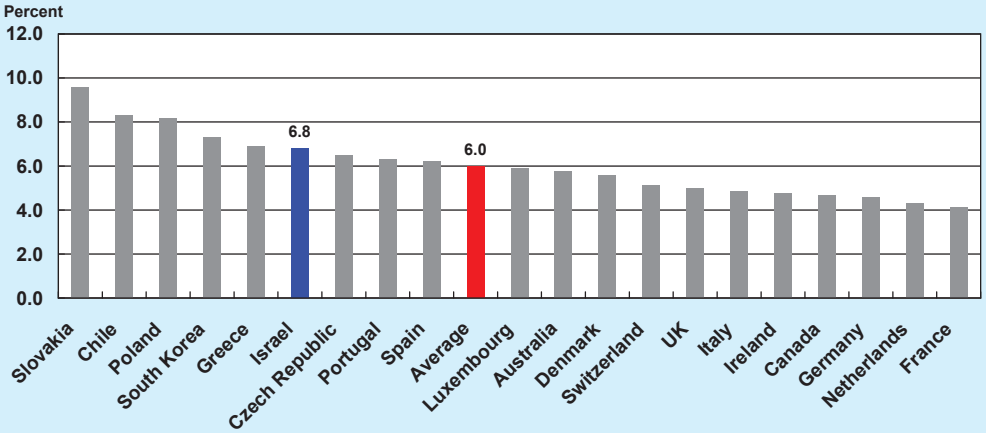
[66] See Box 2.1.

Figure 2.31
International comparison: Capital Adequacy Ratio[a], December 2010



[a] Poland's figures are correct as of September 2009; figures for France, South Korea, Slovakia and Switzerland are as of December 2009; data for the UK and Spain are as of March 2010; data for Greece and Italy are as of July 2010; data for Germany, Luxembourg, Holland, Ireland and the United States are as of September 2010; data for Israel, Canada, Chile, the Czech Republic, Australia and Denmark are as of December 2010.
SOURCE: The International Monetary Fund and published financial statements.

Figure 2.32
International comparison: Shareholders' equity out of total assets[a], December 2010



[a] Poland's figures are correct as of September 2009; data for France, South Korea, Slovakia and Switzerland are as of December 2009; data for the UK and Spain are as of March 2010; data for Greece and Italy are as of July 2010; data for Germany, Luxembourg, Holland, Ireland and the United States are as of September 2010; data for Israel, Canada, Chile, the Czech Republic, Australia and Denmark are as of December 2010.
SOURCE: The International Monetary Fund and published financial statements.

for OECD countries (Figure 2.31). Unlike the situation in other countries however, most banks in Israeli have totally exhausted the restriction concerning subordinated notes and other capital instruments that are included in their lower Tier 2 capital. This means that from the aspect of composition, the ratio of Tier 1 capital in the capital base of the banks in Israel is low by international standards, even though most of their Tier 1 capital consists of core capital.

Regulation worldwide is moving toward increasingly stringent capital requirements that are to be applied to the banking institutions. This convergence relates to an increase in the capital base, an improvement in the capital structure and the reinforcement of core capital, an examination of the requirements that are to be imposed on systemically important financial institutions (SIFIs) and the creation of attractive capital instruments. In view of the growing trend that is becoming apparent, the banks in Israel will have to prepare for the strengthening of their capital adequacy. This process will be applied concurrent with supervisory activity for the purpose of increasing the stringency of the accounting regulations (as reflected by the application of the directive concerning impaired debts and the guideline concerning employees' rights, for example). The process can be expected to impede the banks' ability to distribute dividend.

The Banking Supervision Department's directives require the banking corporations to allocate capital at a rate of at least 8 percent in respect of the risks included in the First Pillar of Basel II (credit risk, market risk and operational risk). The banks also have to maintain a capital buffer against other risks included in the Second Pillar (including single-borrower concentration, borrower groups, industry-specific concentration, country risk and market risks) and against the materialization of extreme case scenarios. Although the overall capital adequacy ratio must therefore exceed 9 percent, in accordance with the expectations of the Banking Supervision Department all the banking corporations have set internal capital targets of at least 12 percent.

Described in the Second Pillar of Basel II is the supervisory review process (SRP), which is intended to assure the adequate allocation of capital and to encourage the development and usage of enhanced techniques for the management of risks. The banking corporations carried out the SRP process for the first time in 2010, and in this respect managed an internal capital adequacy assessment process (ICAAP) while formulating a strategy for assuring that process. The ICAAP reports which the banks submitted were examined and analyzed at the Banking Supervision Department as part of the supervisory review and evaluation process (SREP), with due reference to the risk profile of the banking corporation, assessments of the banking corporations' internal capital adequacy, their strategies, and the ability to monitor and assure compliance with supervisory capital ratios. Under the SREP process, the Banking Supervision Department determines whether the capital available and the capital targets are appropriate for the banking corporation's risk profile and if necessary, required remedial measures, including addition of capital.[67]

[67] See Chapter 3 for further details.

Box 2.4 Strengthening of the Regulatory Capital Framework (Basel III)

One of the main reasons the financial and economic crisis, which began in 2007, became so severe was that the banking sectors of many countries had built up excessive leverage, through both on– and off–balance-sheet exposures. This process was accompanied by a gradual erosion of the level and quality of the banks' capital base and as a result the banking systems were not able to absorb the systemic trading and credit losses nor could they cope with the realization of some of the risks related to large off-balance-sheet exposures. The crisis was amplified by a procyclical deleveraging process and by the mutual exposure between institutions with systemic importance through an array of complex transactions. As part of the lessons learned from the crisis, the Basel Committee on Banking Supervision (BCBS) published two guidelines in December 2010, "A Global Regulatory Framework for More Resilient Banks and Banking Systems" and "International Framework for Liquidity Risk Measurement, Standards and Monitoring" (for further details, see the box on "International Liquidity Standards" in this chapter). Together the documents are intended to promote reform measures for the strengthening of corporate governance and risk management at the banks and for the supervision of banks, thus strengthening the resilience of the banking industry, improving its ability to absorb shocks of various types, and enhancing transparency and full disclosure. These measures include changes in regulation at the level of the individual bank (micro-prudential measures) with the goal of improving their resilience in a time of crisis and steps meant to deal with systemic risks (macro-prudential measures) and to deal with their pro-cyclical effect.

This box, which is based on the first document, will focus on the framework to strengthen the quality of capital and its level in the banking system. This framework will outline the steps for improving the quality and amount of capital and for ensuring a sufficiently broad coverage of risks and will propose the leverage ratio as an additional and reliable way of strengthening capital in times of crisis (alongside capital adequacy and other measures).

a. Improving the quality, consistency and transparency of the regulatory capital base

During the financial and economic crisis, it became clear that the amount and quality of the banks' Tier 1 capital, which is used to absorb losses on an ongoing basis, were insufficient. During the mid-1990s, many banks (primarily in the US) began issuing new instruments that possessed the characteristics of both equity and debt and which were included, among other things, in Tier 1 capital as well. These instruments have advantages for both the issuer and the investor but they also have a number of disadvantages, including a limited ability to absorb losses, a relatively high degree

of complexity and a lack of transparency. One of the effects of this situation was the gradual erosion of the capital base and its quality and as a result market participants lost their confidence in the ability of Tier 1 capital to absorb losses. The crisis also revealed a lack of consistency in the definition of capital between various countries. There was a lack of disclosure regarding this situation, where full disclosure would have allowed the market to correctly evaluate the quality of the capital of the various institutions and to make comparisons between them.

Therefore, the document specifies that the primary component of Tier 1 capital must be common shares and retained earnings (common equity) which will make it possible for this type of capital to fulfill its role, which is the absorption of losses when necessary. This standard will be implemented through a set of principles that ensure comparable levels of high-quality Tier 1 capital, and establishes a uniform international framework for deductions from that capital, which are implemented in general at the level of Tier 1 capital. In addition, there will be a gradual phase-out of innovative hybrid capital instruments, with an incentive to redeem through various features, such as step-up clauses, which are currently limited to 15 percent of the Tier 1 capital base. In addition, Tier 2 capital instruments will be harmonized and Tier 3 capital, which is only available to cover market risk, will be eliminated. Finally, in order to improve market discipline, the transparency of the capital base will be enhanced through the disclosure of all its components. The guidelines state that the banks must meet the new capital requirements in relation to risk-weighted assets, i.e. a core capital ratio of 4.5 percent and a Tier 1 capital ratio of at least 6 percent, and to gradually reach these ratios by January 2015. The overall capital requirement will remain at its current level of 8 percent. Similarly, the banks are expected to meet the requirements regarding various deductions from Tier 1 capital by January 1, 2018.

b. Enhancing risk coverage through supervisory capital

One of the main lessons learned from the crisis is the need to strengthen the risk coverage of the capital framework. Failure to capture on– and off–balance-sheet risk, as well as derivatives-related exposure, was a key destabilizing factor during the crisis. Therefore, the Committee decided to tighten capital requirements for counterparties credit risk arising from banks' derivatives, repo agreements and securitization transactions, which will go into effect on January 1, 2013. These changes will increase the amounts of capital buffers backing these exposures, reduce procyclicity and provide additional incentives to move over the counter (OTC) derivative contracts to central counterparty and thus will assist in reducing systemic risk across the financial system. In addition, the guidelines provide incentives to strengthen the risk management of counterparty credit exposures.

c. Supplementing the risk-based capital requirements with a leverage ratio

The excessive accumulation of on– and off–balance sheet leverage was one of the underlying features of the crisis among banks worldwide. The Basel Committee has decided to add a clear and explicit leverage ratio, which will be used as a supplementary measure to the risk-based capital requirements. The goals of the leverage ratio are: 1. to constrain the build-up of leverage in the banking sector in order to avoid instability, which is liable to adversely affect the financial system and the economy; and 2. to strengthen the risk-based requirements through the addition of a simple measure that is not risk-based. The basis for its calculation is the monthly average leverage ratio during a quarter according to the new definitions of capital and total exposure, which in general is consistent with the accounting measure. The leverage ratio is calculated in a manner that will facilitate international comparison, with modifications that are the result of differences in accounting standards. The Committee will assess a minimal Tier 1 capital leverage ratio of 3 percent during the transitional period from January 1, 2011 to January 1, 2017, which will include a period of simultaneous monitoring and assimilation.

d. Reducing procyclicity and promoting countercyclical buffers

One of the most destabilizing elements of the crisis was the procyclical effect that intensified financial shocks throughout the banking system, in financial markets and in the broader economy. The Committee is introducing a number of measures to increase the banks' resilience to procyclicity. These measures will help ensure that the banking industry serves as a shock absorber rather than a risk transmitter.

Capital conservation buffer: At the start of the financial crisis, a number of banks worldwide continued to distribute generous dividends and/or bonuses and/or carried out share buybacks, despite the deterioration in their financial resilience and the expectation of further deterioration in the banking sector. This behavior was to a large part motivated by the fear that to trim back these activities would be considered a signal of weakness to the capital markets. However, these activities reduced the resilience of individual banks and that of the banking sector as a whole and increased the procyclicity of the system. In order to deal with this market failure, the Committee is instructing the banks to maintain a capital conservation buffer at a level of 2.5 percent of total risk weighted assets, which will be composed of common share capital and will be in addition to the minimal supervisory capital. This buffer will be available to absorb losses. Non-fulfillment of this requirement will lead to constraints on the distribution of capital, including the payment of dividends, share buybacks and payment of bonuses to employees. These measures will be intensified as the bank's level of capital approaches the required minimum level. The banks will be required to gradually implement this guideline during the period from January 1,

2016 to January 1, 2019. Banks will also have the option of raising funds from the private sector, as an alternative to internal sources of capital. The balance between the two options will be reached in consultation with the Supervisor of Banks as part of the capital planning process.

Countercyclical buffer: The losses to the banking system caused by a recession that is preceded by a period of excessive growth in credit can be very large. These losses can create a cycle in which the deterioration in the stability of the banking system will intensify the recession in the real economy, which in turn will intensify the damage to the financial and banking systems. The Committee has proposed that the Supervisor of Banks should require the maintenance of a countercyclical buffer if he comes to the conclusion that the excessive growth in aggregate credit is associated with an accumulation of systemic risk, to ensure the banking system has a buffer of capital to protect it from potential future losses. Creation of the countercyclical buffer will include the following components: (A) The Supervisor of Banks will monitor the growth of credit and other indicators that may signal the accumulation of systemic risk and will decide whether the growth in credit is excessive and whether it may lead to an accumulation of systemic risk. Based on this assessment, he will decide whether to impose a requirement for a countercyclical buffer that will be cancelled when the systemic risk subsides. (B) Banks that are active abroad will examine the geographic distribution of their credit exposure and will calculate the specific requirement for a countercyclical capital buffer as a weighted average of the requirements that apply in the various countries to which they have credit exposure. (C) The requirement of a countercyclical buffer that is imposed on a bank will increase the capital conservation buffer. Banks will be subject to restrictions on the distribution of profit if they do not meet the requirements. The countercyclical buffer is composed of Tier 1 equity and ranges from zero to 2.5 percent of total weighted risk assets and is in addition to the minimal capital requirements and the capital conservation buffer.

e. Addressing systemic risk and mutual exposure

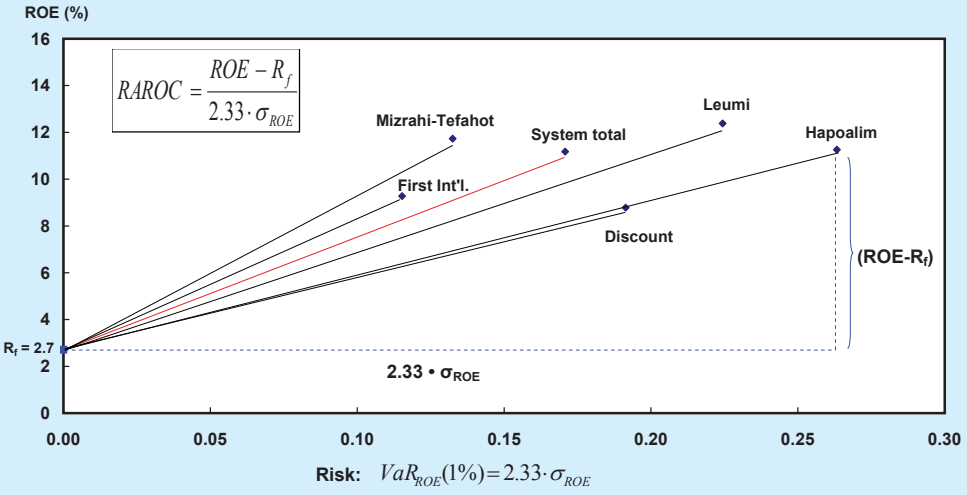
Excessive mutual exposure between systemically important banks transfers shocks across the financial system and the economy as a whole. Systemically important banks should have the ability to absorb losses beyond the minimum standards and the work on this issue is ongoing. The Basel Committee and the Financial Stability Board (FSB) are developing an integrated approach to systemically important financial institutions which may include a combination of capital surcharges, contingent capital and bail-in debt. As part of this effort, the committee is developing a proposal for a system that will include quantitative and qualitative indicators for assessing the systemic importance of financial corporations at a global level. The committee is conducting a study of the magnitude of additional losses that these systemically important banks can absorb. This is in addition to the evaluation of

the magnitude of losses that they need to absorb on an ongoing basis and which can be accomplished through various capital instruments. The Committee's analysis also relates to additional means for reducing the risks or externalities associated with systemically important banks, including liquidity surcharge, more stringent restrictions on large exposures and the strengthening of supervision.

11. RISK ADJUSTED RETURN ON CAPITAL

This year there was an improvement in the risk adjusted return on capital (RAROC) of the five banking groups compared with 2009 (Table 2.19). The return to profitability in the banking system concurrent with a decline in the level of risk in the system led to an improvement in the RAROC Index. However, the level of risk remained high relative to that prevailing before the recession. An analysis of the performance of the five banking groups during recent years shows differences, sometimes substantial differences, between the groups in their risk adjusted performance (Figure 2.33).

Figure 2.33
Risk Adjusted Return on Capital,
comparison between the five major banking groups and the banking system total,
2004 to 2010 average



R_f - Average annual risk-free interest rate for the period 2004 to 2010. The interest rate is based on the yield to maturity of 5-year (Galil) CPI-indexed bonds.
ROE - Average annual return on equity for the period 2004 to 2010.
σ_{ROE} - The standard deviation is based on the ROE for each quarter in the period 2004 to 2010 (so that the calculation was made on the basis of 28 observations).

SOURCE: Published financial statements.

Table 2.19
Risk Adjusted Return on Capital; the variance-covariance approach[a], by banking group, 2002 to 2010

Year	R_f	Leumi	Hapoalim	Discount	Mizrahi-Tefahot	First International	Five groups
2002	4.82	-0.10	-0.17	-0.40	0.34	-0.53	-0.22
2003	4.89	0.21	0.40	-0.13	0.45	-0.02	0.28
2004	3.76	0.72	0.81	0.33	0.59	0.24	0.81
2005	2.98	0.84	1.01	0.22	0.84	0.65	0.96
2006	3.70	1.00	0.89	0.36	0.75	0.56	1.00
2007	3.19	0.83	0.60	0.48	0.90	0.73	0.83
2008	2.93	-0.10	-0.27	-0.01	0.50	0.00	-0.13
2009	1.51	0.37	0.20	0.40	0.47	0.67	0.41
2010	0.89	0.43	0.35	0.31	0.82	0.63	0.52

[a] RAROC is calculated by the variance-covariance approach

$$RAROC = \frac{ROE - R_f}{2.33 \cdot \sigma_{ROE}}$$

where:

ROE = Return on equity in the last year

R_f = The risk-free interest rate; yield-to-maturity on 5-year (Galil) CPI-indexed bonds during the last determinant year.

σ_{ROE} = Standard deviation of ROE, calculated on the basis of quarterly ROE data for the past 7 years.

2.33 = Z value at a confidence level of 99 percent.

SOURCE: Published financial statements.

12. STRESS TESTS

a. Introduction

During recent years stress tests have become an important tool in the banking corporations' internal and current risk management network, and an important complementary tool employed by the supervisory authorities for the purpose of assessing the stability of the banking corporations and the financial system and of identifying sources of risk.

The consolidation of the status, centrality and importance of stress tests in today's economic reality has increased greatly as a result of the global recession of recent years. The recession raised doubts as to the credibility of part of the currently existing risk indices and their ability to serve as a reliable tool for the prediction of financial resilience and robustness in stress conditions. The recession did however highlight the importance of stress tests as a complementary tool to the contemporary risk indices, the need for adapting these indices to developments in the financial system, and the challenge of increasing their credibility.

These developments were accompanied by the emergence of new methods for conducting stress tests, the publication of guidelines by international bodies and supervisory authorities regarding the proper management of stress tests by the banking

corporations, the publication of principles for the supervisory authorities with respect to the supervision of stress tests, and the promotion of systemic stress tests. During and after the crisis, supervisory authorities worldwide devised orderly processes for performing and publishing stress tests: In the US, (SCAP[68], and then CCAR[69]) stress tests were anchored in the Dodd-Frank Act, as a fixed procedure with ramifications for the banks' capital adequacy and their ability to distribute dividends. In Europe, as part of the lessons learned from the global financial crisis, a new banking authority, the EBA[70], was established on January 1, 2011. This authority contains all of the responsibilities and duties which were previously the preserve of the CEBS,[71] including the conduct of stress tests. The stress tests which it conducts serve as a key device for the assessment of the resilience of the banking system in the European Union member countries, for assuring that an adequate level of capital is maintained, and for determining capital requirements.

b. Working framework in the Banking Supervision Department

The Banking Supervision Department at the Bank of Israel has also formulated set procedures for conducting stress tests. A conceptual framework has been defined for the range of terms used by those engaged in the area[72], and an extensive international review was made of the manner in which other supervisory authorities deal with the matter.

Stress tests are intended to assess the sensitivity to risk of an individual bank and of the entire banking system, and to examine their resilience under stress conditions. The banks' vulnerabilities are also evaluated, and a quantitative estimate is obtained of their sensitivity to large deviations in a wide range of risk factors. Stress tests are conducted on a regular basis as well as on an ad hoc basis for specific or systemic purposes, and are used in determining the capital adequacy required of the banking corporations. The tests also form the basis for regulators' decisions and regulatory measures.

c. The stress tests conducted by the Banking Supervision Department

In view of the growing importance of stress tests, the Banking Supervision Department is concentrating on the development of methodologies for conducting stress tests, and is also studying worldwide practice and adapting its processes to international standards. As part of that, in 2010, the Department conducted, among other things, sensitivity analyses for the purpose of examining the implications of changes in risk factors (such as the proportion of problem loans in the credit portfolio, interest rates and exchange rates) on the financial results and the capital of the banks and the banking system. Also

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[68] Supervisory Capital Assessment Program.

[69] Comprehensive Capital Analysis and Review.

[70] European Banking Authority (EBA).

[71] Committee of European Banking Supervisors.

[72] See Box 2.5 for more details.

examined was a sovereign debt crisis scenario in order to identify centers of risk and to check the resilience of the banks and the banking system. These exercises were a continuation of macroeconomic stress tests of business credit risk, consumer credit risks and other extreme-case scenarios which the Banking Supervision Department examined during the recession. The studies thereby constituted a further stage in the development and adoption of optimal stress test methods, while adapting these methods to worldwide developments.

(1) Stress scenario—sovereign debt crisis

In 2010 the Banking Supervision Department examined a stress scenario that assumed deterioration in the sovereign debt crisis and the onset of another global recession, the development of a crisis in the global and local financial markets, and its encroachment into real activity in the Israeli economy.

- The risk factors that were examined were credit risks and market risk. Liquidity risk was not examined under this scenario.
- The principal assumptions on which the scenario was based were: (1) A scenario horizon of a year (2011), in light of the scenario's features–the adverse effect of the scenario defined centered mainly on the capital and financial markets, and was reflected by its impact on financial results within a relatively short period of time. At a later stage, we intend to stage other scenarios to a horizon of two years, as is accepted worldwide practice. (2) static balance sheet (zero growth). (3) The exchange rate of the shekel against major currencies remained unchanged during the scenario. (4) Deferred taxes in accordance with the Basel III directives.
- The effects and implications of the scenario on the profit (loss), capital base and risk assets of each of the banking groups and the entire banking system were examined. At the first stage, profit from ordinary operations, before attribution of the losses in respect of the scenario was examined,[73] and at the second stage, losses deriving from risk factors were deducted (these included the collapse of two borrower groups, exposure to borrowers who had issued bonds in the Israeli stock market,[74] credit for financing the acquisition of means of control, provisions for credit losses, and losses on trading book assets and the available for sale portfolio).
- The scenario methodology is based on an examination of timing series and financial ratios based on the banks' reports to the Banking Supervision Department and the banks' financial statements, and on the development of indicators from

[73] An estimate was calculated of ordinary income before losses, including: (1) net interest income minus (plus) profits (losses) from investments in bonds; (2) the bank's ordinary operating income minus (plus) profits (losses) from investments in shares, net; (3) operating expenses. The profit (loss) from investments in shares, net and the results from investments in bonds (included in other financing income/expenses) were deducted and were estimated separately within the framework of specific losses.

[74] We assumed that the combination of deterioration in the financial markets, which makes it difficult to raise or rollover debt, and the collapse of two borrower groups as stated would lead to deterioration in the situation of borrowers who had issued bonds in the Israeli stock market, with the result that the bank would record losses in respect of those borrowers' bank credit.

the capital market with a certain degree of exacerbation. The relationship between the macroeconomic factors and the variables that measure the quality of the banks' assets and the estimate of their effect on the banks' results and capital adequacy were based on various methods and expert assessments.

- The scenario results show that the banking system, as a system, maintains its resilience and that the average capital adequacy ratio in the banking system remains above the minimum required were the extreme-case scenario to materialize. However, the scenario highlighted the need for a further strengthening of Core Tier 1 capital and for enhancing risk management and the controls over risk-oriented activities, such as securities activity and leveraged credit, as well as the controls applied with respect to the concentration of borrower groups.

(2) The bank credit portfolio

Sensitivity analyses confirm that among the various risk factors, the effect of the materialization of credit risk on the banks' stability is the greatest. As part of the analysis of the effect of deterioration in the quality of credit on the rate of loss from the capital base, we examined a scenario of an increase in the proportion of problem loans to total credit to the public from a rate of 5.3 percent to a rate of 10 percent—the level that prevailed in 2002. The assumptions on which the scenario was based were: (1) Non-performing loans[75], the most problematic type of credit, became losses, and the other components of problem loans were translated into losses to a partial extent: A weighting of between 10 percent and 60 percent was attributed to each component, according to the extent of its seriousness[76]; (2) An adverse effect on ordinary income before loan-loss provisions; (3) The banks did not raise additional capital during the scenario (4) zero growth; (5) The exchange rate remained unchanged; (6) deferred tax in accordance with Basel III. The planning of the scenario was based on the assumption that at a time of activity downturn, the highest-risk borrowers are those who suffer more from the adverse effect. In the scenario that was examined, the rate of loss from the banking system's capital base was estimated at 20 percent. The scenario results show that the capital adequacy ratio at all the banks remained above the minimum required in the stress tests.

(3) Housing credit

The dramatic decline in the Bank of Israel interest rate and the large increase in the proportion of unindexed floating-rate loans to total housing loans[77] increased the banks'

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[75] Based on its share of total credit to the public in December 2002.

[76] Rescheduled loans were weighted at 60 percent, loans designated for rescheduling at 40 percent, loans in temporary arrears at 30 percent and loans under special supervision at 10 percent. The result was equivalent to an average rate of loss of 40 percent of total problem loans, and a ratio of annual loan loss provision to total credit of 3.

[77] In February 2009, the share of unindexed variable rate loans out of total housing loans hit a record 77 percent, and the ratio of all variable-rate housing loans reached a record level of 96 percent.

exposure to a rise in the interest rate. Although borrowers who took floating-rate loans currently benefit from a limited debt burden, they are exposed to an increase in the Bank of Israel interest rate, the possibility of which is expected to occur gradually, in view of the present low level of the interest rate. An examination of the effect of an interest rate hike on an unindexed floating-rate housing loan on the debt burden[78] showed that a 4 percentage point[79] rise in the interest rate to a level of 7 percent increases the debt burden by 17 percentage points to 62 percent, similar to the level in 2003. Such an increase in the debt burden can be expected to lead to a growth in loan-loss provisions in respect of housing loans.

(4) Interest rate risk

The effect of a 3 percentage point rise across the yield curve in the unindexed segment and a 2 percentage point rise in the CPI-indexed and foreign-currency segments was examined. The scenarios included only the direct effect on the banking system and not the indirect effect, whose implications could be significant.[80] The scenario results show a loss at a rate of 4 percent of the banking system's capital base[81] compared with 2 percent in 2010.

(5) Exchange rate risk

The direct effect of a 10 percent depreciation in the shekel was examined.[82] The direct effect of a change in the exchange rate on losses in the banking system was found to be negligible, amounting to less than 1 percent of the banking system's capital base, because the system's policy is to maintain low positions in the foreign-currency segment. However, the direct effect of changes in the exchange rate on risk assets and

[78] In this context, the debt burden is defined as the ratio of the average monthly repayment of a housing loan to average income. The rate of repayment was calculated on the basis of the original average period to maturity, the average interest rate, the average size of housing loan and inflation expectations. Average income was calculated on the basis of the average real wage per employee post.

[79] A Bank of Israel Research Division assessment (based on a DSGE model) of the level of Bank of Israel interest rate for 2012 shows that a 6 percent interest rate falls within a range of covering 66 percent of expected interest rate distributions. This implies a 4 percentage point increase from the level of the interest rate at the end of 2010 (Inflation Report 33 for the fourth quarter of 2010).

[80] A rise in the nominal interest rate increases the real interest rate, and makes it difficult for borrowers to repay their debt and take new credit. There is generally a positive correlation between a high interest rate and credit losses.

[81] Since the scenario examined was an interest rate hike, the adverse effect was at the banks in which the standardized capital duration was positive.

[82] A depreciation scenario was examined because at most banks the position in the foreign-currency segment on December 31, 2010 was negative, and they were therefore exposed.

the capital base[83] was found to be substantial, with a 0.36 percentage point decrease in the average capital adequacy ratio at the five largest banking groups, to a level of 13.9 percent, and a 0.2 percentage point decrease in the Core Tier 1 capital ratio to a level of 8 percent. The analyses that were made did not relate to the indirect effects of changes in the exchange rates.

Box 2.5: Stress tests—main terms

Generally accepted types of stress tests

1. **Sensitivity analysis:** A technique that is used for estimating the effect of a change in a single risk driver or in a number of risk parameters on the financial position of the banking corporation or the banking system, without identifying the source of that change. The advantages of this form of analysis lie in its simplicity and intuitiveness and in its ability to isolate specific risk drivers. The disadvantages are that the analysis only examines each driver itself, and is not sensitive to changes in the overall economic situation.

2. **Scenario analysis:** A technique that is used for examining the effect of simultaneous shocks in a number of risk drivers, which are effected by a selected and well defined extreme-case scenario. The formulation of the scenario involves decisions regarding the assets that are to be examined, relevant risk drivers and the severity of the shock. Scenario analyses are divided into two types, based on the nature of the scenario:

2.1 **Historical scenario:** The implication of a crisis such as a past crisis on the banking corporation's assets portfolio in the present, or on the position of the banking system. The advantage of this technique is that it is based on a real scenario. This makes it possible for the scenario to provide information on the simultaneous behavior of risk drivers and to assess the correlation between them. The disadvantage of the technique is the low probability of the re-emergence of a similar crisis and its inability to express developments in the financial markets and recently developed products.

2.2 **Hypothetical scenario:** The implication of hypothetical shocks on the banking corporation's asset portfolio or on the position of the banking system while relying on estimates and expert-based assessments The advantages of this technique are its greater flexibility than that of the historical scenario, since it can be used to examine several potential extreme-case scenarios, and its ability to discern the effect of the most serious situation. The disadvantages of the technique are that it is hypothetical and dependent on subjective assessments,

[83] The Banking Supervision Department regularly examines the immediate effects of changes in the exchange rate on risk assets and the capital base. For this purpose, reliance is placed on returns to the Banking Supervision Department and on data from published financial statements.

the difficulty of achieving consistency in the scenario's performance, and the inability to assess the probability of its materialization because it is not necessarily connected directly to actual occurrences.

3. **Reverse stress test:** A technique that is used for assessing a banking corporation's resilience by identifying the intensity of the scenario or event that leads to a given result (such as failure to adhere to the supervisory capital ratio, liquidity shortage or repayment default). The starting point in this technique is the result, hence its name, A reverse stress test encourages the banking corporation to examine scenarios outside of the normal course of business, as well as events that have a contagion effect and systemic implications. Accordingly, reverse stress tests have important quantitative and qualitative uses, including as a basis for the senior management's assessment of weak points in the banking corporation.

The methodological framework for conducting stress tests

Complex models can be used in assessing the relationship between macroeconomic and other risk drivers, and loss variables. These models include macroeconomic credit risk models, interest-rate risk models, statistical models, models examining the relationships between financial institutions (CoVaR),[1] and models that were developed based on Merton's CCA[2] model—or less sophisticated estimates such as expert-based assessments based on historical data (for example, the determination of a rate of provisions similar to that prevailing in a recession period in the past).

The framework includes **macro stress testing**, which uses a variety of techniques for the purpose of examining the sensitivity and vulnerability of the entire financial system or of a single financial institution to shocks in macroeconomic variables (such as GDP and the interest rate), and for testing the effect of these shocks on financial variables. (See Box 3.2 in Chapter 3 of the Annual Survey of the Banking System for 2009 for further details.)

The selection of the methodological framework is dependent on the purpose for which the stress test is conducted, on the entity conducting the test and on the data base available to that entity.

Approaches to conducting stress tests

The application method is intended to make it possible to quantify the cumulative effect of macroeconomic shocks and scenarios on the bank's portfolio or on the financial system. There are two generally accepted approaches to conducting stress tests—top-down and bottom-up—and the choice between them is affected by the

[1] Conditional Value at Risk.

[2] Contingent claims analysis.

framework employed (macroprudential or microprudential). The two approaches are perceived sometimes as complementary and sometimes as alternative.

Two separate concepts are employed with respect to the terms top-down and bottom-up in connection with carrying out stress tests: These are largely dependent on the entity conducting the stress tests (the supervisory authority or the banking corporation), as detailed below.[3]

1. Definition of these terms with respect to stress tests that are conducted by the banking corporation:

Top-down: Stress tests that are applied under this approach are performed mostly by means of a single scenario and with parameters that are applied consistently to all the portfolios and business units. The advantage of this approach is the rapidity and relative ease with which the stress tests can be run and in the systematic aspect which it provides to decision-makers. Since the scenarios are less complex than under a bottom-up method, the results are not sensitive to the unique characteristics of the portfolio, and provide a general picture of the impact of the scenario.

Bottom-up: Stress tests that are applied under this approach are performed separately by the business units or the risk units, and are then combined in order to obtain an overall result concerning the level of aggregate risk. The advantage of this approach is that it takes into account positions at the individual level, including their unique risk characteristics. The disadvantage is the use of different methods and assumptions for the purpose of obtaining a result at the aggregative level. This difference could impair the results of the aggregation and detract from their significance.

2. Definition of the terms top-down and bottom-up with respect to stress tests that are conducted by the supervisory authority:

Top-down: Under this approach, the supervisory authorities define the extreme-case scenario, and they themselves estimate its effect on the portfolio of the single bank or the aggregate portfolio of all the banks, and analyze its impact on the entire banking system or on the single bank. The advantage of this approach is that it makes it possible to compare between the results of the tests. The disadvantage is that it is less accurate, particularly in its analysis of the aggregate portfolio of all the banks.

Bottom-up: Under this approach, the supervisory authorities define the extreme-case scenario, and the banking corporations estimate its effect on their banking portfolio. The authorities collate the estimation results and analyze the overall impact of the scenario on the banking system. A process such as this facilitates more accurate estimation at the banks because of the acquaintance with the characteristics of their activity and their portfolio, and due to the availability of the data and the ability to use in-house models. However, performing individual tests for each bank separately does not take into account the mutual dependence between the institutions selected.

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[3]Marina Moretti, Stephanie Stolz and Mark Swinburn, "Stress Testing at the IMF", IMF Working Paper.

13. FINANCIAL RESULTS

a. Profits and profitability of the banking groups

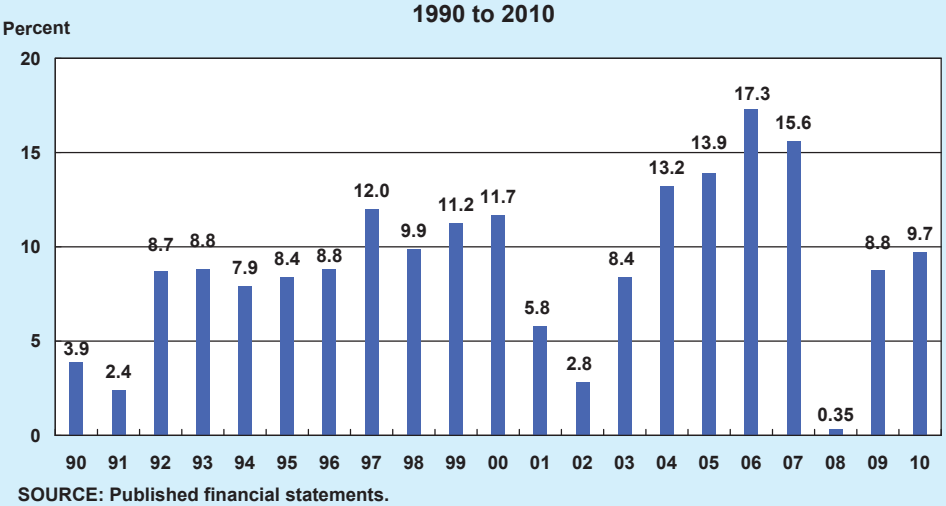
The continuing positive trend in economic activity in Israel and the recovery of the global economy from the recent financial crisis have led to an improvement in the performance of the five large banking groups, which for three of them also included an increase in profits and profitability.

The total net profit of the five large banking groups grew rapidly this year by a rate of about 23.7 percent and totaled about NIS 6.6 billion, as compared to about NIS 5.4 billion last year (Table 2.20). The increase in profits could also be seen in the rise in Return on Equity (ROE) to 9.7 percent, as compared to about 8.8 percent in 2009. The ROE thus approached its average level of 10 percent for the past decade (Figure 2.34).

The growth in profits this year can be viewed as a continuation of the trend during the pre-crisis years. Although the background to the increase in profits both this year and last was economic growth on the macroeconomic level, this year it was based on the expansion in banking activity, unlike last year when it was mainly the result of the unusually positive results in the capital markets.

The net profits of three out of the five major banking groups—Leumi, Hapoalim and Mizrahi-Tefahot—grew during the reporting period, while profit declined at 21.6 percent at Discount and by 14.8 percent at First International. Nonetheless, it is important to mention that this can partly be explained as a correction to the particularly high profit

Figure 2.34
Return on Equity (ROE) of the five major banking groups, 1990 to 2010



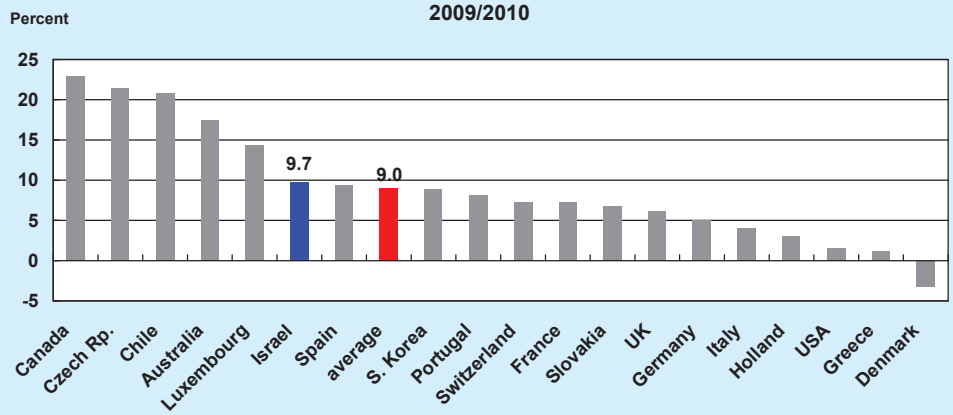
SOURCE: Published financial statements.

levels recorded last year, against the background of the sharp price increases in the capital market and the more moderate increases this year. In an international comparison, the Israeli banking groups showed only a slightly higher level of profitability than the average for a selected sample though it was higher than that of banks in most of the developed countries, which have not completely recovered from the effects of the global crisis (Figure 2.35).

The main factors positively affecting the profits of the banking groups this year were: a) the continuing positive trend in real activity which was a result of the increase in demand, and was characterized by, among other things, an increase in GDP, a drop in unemployment and improved corporate profitability. These worked to improve the repayment ability of borrowers and reduce estimated risk, as well as to reduce loan-loss provisions, increase interest revenue on impaired loans that had been recorded in the past and increase the demand for bank services, which could be seen in the increase in credit provided to the public and the revenue from operating fees. b) the Bank of Israel's monetary policy, according to which the rate of interest was raised four times by 0.25 percent each time, from 1 percent at the end of 2009 to 2 percent by the end of 2010. This contributed to the widening of the overall bank interest spread, which together with the expansion in economic activity, positively influenced net interest income.

Among the factors that worked to lower the level of profits compared to last year, it is worthwhile mentioning the magnitude of price increases in the capital market last year, which played a major role in banks' profit growth in 2009, in contrast to the relatively moderate trend in prices this year. The cumulative impact of the capital

Figure 2.35
Return on Equity (ROE) in selected banking systems[a], 2009/2010



[a] Data for Australia, Denmark, France, Slovakia and Switzerland are as of December 2009; data for the UK and Spain are as of March 2010; data for Greece and Italy are as of 2010; data for the Czech Republic, Germany, Luxembourg, Holland, Portugal and the USA are as of September 2010; data for Israel, Canada and Chile are as of December 2010.
SOURCE: IMF.

Table 2.20
Main items in consolidated profit and loss statements of the five major banking groups, 2008 to 2010
(NIS million)

	Leumi				Hapoalim				Discount			
	2008	2009	2010	% change in 2010 compared with 2009	2008	2009	2010	% change in 2010 compared with 2009	2008	2009	2010	% change in 2010 compared with 2009
Net interest income before loan-loss provision	6,380	7,023	7,433	5.8	3,256	6,718	7,775	15.7	4,127	4,757	4,830	1.5
Provision for loan losses	2,145	1,517	584	-61.5	1,520	2,017	1,030	-48.9	780	998	821	-17.7
Net interest income after loan-loss provision	4,235	5,506	6,849	24.4	1,736	4,701	6,745	43.5	3,347	3,759	4,009	6.7
Total operating and other income	2,800	4,563	4,111	-9.9	4,532	5,107	5,109	0.0	2,573	3,091	2,661	-13.9
Of which: Fee income	3,538	3,511	3,710	5.7	4,531	4,489	4,811	7.2	2,504	2,633	2,547	-3.3
Total operating and other expenses	7,003	6,937	7,890	13.7	8,024	7,503	8,310	10.8	5,348	5,486	5,631	2.6
Of which: Salaries and related expenses	4,118	4,052	4,615	13.9	4,762	4,062	4,650	14.5	3,106	3,175	3,190	0.5
Ordinary before-tax income	32	3,132	3,070	-2.0	-1,756	2,305	3,544	53.8	572	1,364	1,039	-23.8
Tax provison	421	1,191	1,256	5.5	-397	996	1,353	35.8	169	507	467	-7.9
Ordinary after tax income	-158	1,986	2,195	10.5	-1,469	1,288	2,212	71.7	255	943	688	-27.0
Extraordinary after-tax income	250	28	183	553.6	574	28	16	-42.9	-10	-20	36	-280.0
Net income	**92**	**2,014**	**2,378**	**18.1**	**-895**	**1,316**	**2,228**	**69.3**	**245**	**923**	**724**	**-21.6**
Capital for calculation of ROE[a]	20,000	19,745	23,020	16.6	18,724	19,642	21,715	10.6	9,074	9,418	10,493	11.4
Ordinary ROE (%)	-0.79	10.06	9.54		-7.85	6.56	10.19		2.81	10.01	6.56	
Total ROE (%)	**0.46**	**10.20**	**10.33**		**-4.78**	**6.70**	**10.26**		**2.70**	**9.80**	**6.90**	
Total return on assets (ROA) (%)	**0.03**	**0.64**	**0.73**		**-0.29**	**0.43**	**0.71**		**0.14**	**0.50**	**0.39**	

[a] Capital for the purpose of calculating total ROE includes total capital resources minus the average balance of minority interest minus/plus the average balance of losses/profits that have yet to be realized from reconciliations to fair value of bonds for trading and losses/profits in respect of bonds available for sale, which include shareholders equity.

SOURCE: Published financial statements.

Table 2.20 (contd.)
Main items in consolidated profit and loss statements of the five major banking groups, 2008 to 2010
(NIS million)

	Mizrahi-Tefahot				First International				Total			
	2008	2009	2010	% change in 2010 compared with 2009	2008	2009	2010	% change in 2010 compared with 2009	2008	2009	2010	% change in 2010 compared with 2009
Net interest income before loan-loss provision	2,289	2,385	2,959	24.1	1,857	2,164	2,205	1.9	17,909	23,047	25,202	9.4
Provision for loan losses	395	375	473	26.1	238	268	115	-57.1	5,078	5,175	3,023	-41.6
Net interest income after loan-loss provision	1,894	2,010	2,486	23.7	1,619	1,896	2,090	10.2	12,831	17,872	22,179	24.1
Total operating and other income	1,229	1,464	1,367	-6.6	1,357	1,762	1,486	-15.7	12,491	15,987	14,734	-7.8
Of which: Fee income	1,161	1,307	1,324	1.3	1,320	1,419	1,437	1.3	13,054	13,359	13,829	3.5
Total operating and other expenses	2,153	2,640	2,562	-3.0	2,635	2,741	2,774	1.2	25,163	25,307	27,167	7.3
Of which: Salaries and related expenses	1,273	1,630	1,525	-6.4	1,461	1,468	1,552	5.7	14,720	14,387	15,532	8.0
Ordinary before-tax income	970	834	1,291	54.8	341	917	802	-12.5	159	8,552	9,746	14.0
Tax provison	356	286	470	64.3	213	371	336	-9.4	762	3,351	3,882	15.8
Ordinary after tax income	601	532	802	50.8	161	566	483	-14.7	-610	5,315	6,380	20.0
Extraordinary after-tax income	1	-2	2	-	0	2	1	-50.0	815	36	238	561.1
Net income	**602**	**530**	**804**	**51.7**	**161**	**568**	**484**	**-14.8**	**205**	**5,351**	**6,618**	**23.7**
Capital for calculation of ROE[a]	5,788	6,235	6,872	10.2	5,552	5,856	6,050	3.3	59,138	60,896	68,150	11.9
Ordinary ROE (%)	10.38	8.53	11.67		2.90	9.67	7.98		-1.03	8.73	9.36	
Total ROE (%)	**10.40**	**8.50**	**11.70**		**2.90**	**9.70**	**8.00**		**0.35**	**8.79**	**9.71**	
Total return on assets (ROA) (%)	**0.57**	**0.45**	**0.64**		**0.17**	**0.56**	**0.47**		**0.03**	**0.68**	**0.85**	

[a] Capital for the purpose of calculating total ROE includes total capital resources minus the average balance of minority interest minus/plus the average balance of losses/profits that have yet to be realized from reconciliations to fair value of bonds for trading and losses/profits in respect of bonds available for sale, which include shareholders equity.

SOURCE: Published financial statements.

market developments, which work in opposite directions and with varying intensity on different components of income, was positive though smaller than that of last year.

The profit mix of the banking groups, though it is also derived in part from activity in financial instruments, is primarily determined by services provided to customers, the main source of the banks' income. This activity involves the segmentation of borrowers into various segments of activity and the provision of specialized financial services to each of them, according to their needs and the nature of their activity. In the effort to spread risk, increase profits and diversify sources of profit, the banking groups have over the years developed supplementary income channels, in addition to their classic intermediation activities, which primarily consist of credit card activity, mortgages, the activity of customers in securities and activity abroad.

b. Developments in income and expenditure

(1) Net interest income before loan-loss provisions

The total net interest income of the five large banking groups before loan-loss provisions grew rapidly this year at a rate of about 9.4 percent and totaled about NIS 25.2 billion (Table 2.21). Net interest income grew this year in each of the banking groups and was the main factor in the growth of total aggregate net profit. Although the growth encompassed all the banking groups, net interest income varied widely among the banks, as a result of the varying sensitivity of each bank's income components to the factors that affected net interest income this year.

In contrast to the increase in net interest income in 2009, when the positive developments in the capital markets, and in particular the rise in bond prices, constituted the main factor behind the increase, this year there were additional factors at play: a) the continuing positive trends in economic activity; b) the Bank of Israel's monetary policy, which although it continued to be expansionary was characterized by measured increases in the rate of interest over the course of the year to a final level of 2 percent. In contrast to these factors the lower intensity of developments in the capital market, relative to the previous year, had a negative effect on net interest income. This was manifested in a decline in activity in options and other derivatives, as will be described below. Additional factors affecting net interest income this year, both positively and negatively, were the differences in accounting treatment between the value of underlying assets, which is measured on an accrual basis, and the value of derivatives, which is measured according to fair value.

An examination of the categories of profit from net interest income indicates that they were all characterized by an uptrend this year, apart from activity in options and other derivatives, in which, while positive this year, the contribution to the change in financing profit was negative. In contrast, the income from classic financial activity grew (despite the drop in profit from the activity in foreign currency), following a sharp decline last year, and thus it returned to the upward trend that characterized it for many

Table 2.21
Breakdown of net interest income before loan-loss provision by indexation segments, five major banking groups, 2008 to 2010

(NIS million)

	2008	2009	2010	Change in 2010 compared with 2009	
	At current prices			NIS	Percent
Net income[a] by indexation segments (including derivatives)					
Unindexed local currency	13,011	12,105	14,737	2,632	21.7
CPI-indexed local currency	2,871	104	561	457	439.4
Foreign currency	5,633	6,411	5,226	-1,185	-18.5
Total net income from the indexation segments (1)	**21,515**	**18,620**	**20,524**	**1,904**	**10.2**
Other financing income					
Fees on financing transaction	920	992	1,056	64	6.5
Other net financial income	-3,819	2,890	3,251	361	12.5
Of which: Interest income on problem loans previously not recorded	1,388	994	1,372	378	38.0
Of which: Profits from the sale and revaluation of bonds [b]	-5,804	1,241	1,285	44	3.5
Total other financing income (2)	**-2,899**	**3,882**	**4,307**	**425**	**10.9**
Options and other derivatives (3)	**-707**	**545**	**371**	**-174**	**-31.9**
Net interest income before loan-loss provision (1 + 2 + 3)	**17,909**	**23,047**	**25,202**	**2,155**	**9.4**

[a] Net: Income from assets minus expenses on liabilities.

[b] Including profits/losses from the sale of bonds for trading and from the sale of bonds available for sale and bonds held to maturity.

SOURCE: Published financial statements.

years prior to the crisis. The growth in classical financial activity encompassed all the banking groups, and its overall level converged to what it was in 2007, prior to the crisis. Total other net interest income grew this year and despite its decline in two of the five banking groups (Discount and First International) its level for all five was high, particularly so for Bank Hapoalim.

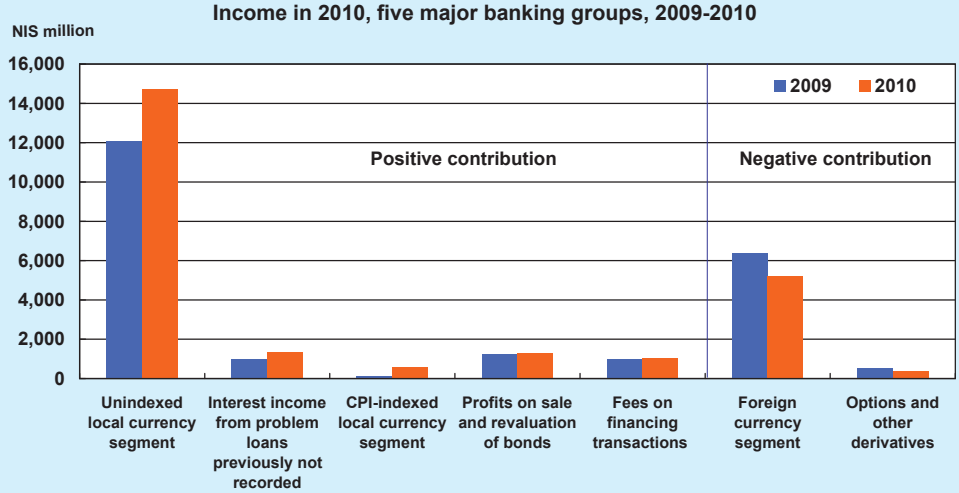
Total net interest income derived from classic financial activity (including activity in derivatives) grew significantly this year by about 10.2 percent and totaled about NIS 20.5 billion (Table 2.21). Thus, the profits in this category, as mentioned, returned to the upward trend that characterized them for more than a decade and constituted the main factor behind the positive growth in net interest income this year, as well as being one of the main factors in the growth of total net profit. In contrast to other income categories, which were characterized by mixed trends among the banking groups, all of the banking groups recorded growth in this category of income this year. This was especially true for Bank Hapoalim which showed a sharp rise in net interest income (21.4 percent), against the background of the sharp decline it recorded last year. Profits were positively affected this year by the growth in total managed assets (the quantity effect) and also by the widening of the overall interest gap (the price effect) from 1.05 percent last year to 1.2 percent this year (Table 2.22). In addition, net interest income was influenced to a

large degree by the banking groups' activity in derivatives, against the background of a sharp appreciation of about 5 percent in the shekel/dollar exchange rate this year.

With respect to the contribution of each of the indexation segments to profits, particularly noticeable was net interest income from non-indexed shekel activity (about 21.7 percent) and from CPI-indexed activity (about NIS 457 million), which despite the increase this year remained significantly lower than in previous years. Activity indexed to or denominated in foreign currency was characterized by a sharp decline of about 18.5 percent in profit, which offset part of the increase in the other two segments (Table 2.21, Figure 2.36).

Net interest income in the non-indexed shekel segment grew rapidly this year by about 21.7 percent and totaled about NIS 2.6 billion. This was to a large degree the result of the continuing long-term growth trend in total non-indexed activity (the quantity effect), which is the result of inflation converging to a low level, and to a lesser extent the price effect, which was reflected in the widening of the interest rate gap. The growth in total assets in this segment was influenced this year primarily by the expansion of non-indexed shekel credit, which grew as part of the overall increase in demand for credit in the economy (as a result of the continuing positive trends in real economic activity). The increase in the demand for credit this year was driven more by the expansion in the demand of households than that of the business sector. The interest rates that characterize non-indexed shekel activity, which is primarily short-term in nature, are derived to a large extent from the changes in the Bank of Israel interest rate and thus they were determined by the moderate and gradual raising of that rate through four hikes of 25 basis points each, to a final level of 2 percent.

Figure 2.36
Variability of Interest Income components and nature of their contribution to total Interest Income in 2010, five major banking groups, 2009-2010



SOURCE: Published financial statements.

Net interest income of the CPI-indexed shekel segment grew rapidly this year (Table 2.21) and were determined primarily by the widening of the interest rate gap in this segment (the price effect), from an outlying negative gap last year to a positive one this year. The quantity effect was characterized by a certain degree of stability this year and despite the growth in total indexed credit (Table 2.2.2-3) the overall effect of quantity on profits this year was marginal. The trend in the interest rate in the indexed segment was only slightly influenced this year by factors that constitute the base from which the prices in indexed activity are derived, i.e. the yields in the indexed government bond market (in the medium and long terms), which were characterized by a mixed trend this year, and the Bank of Israel interest rate (in the short term), which as mentioned rose this year. The can be explained by the moderate change in their levels, against the background of a low interest rate, as well as the effect of the difference in accounting treatment between the value of derivative instruments, which is measured according to fair value, and that of the underlying assets, which is measured on an accrual basis. The difference in accounting treatment led to a widening of the interest rate gap this year, following its negative and unambiguous effect on the segment's profits last year.

Unlike the two shekel segments, the net interest income derived from activity indexed to or denominated in foreign currency made a negative contribution to total net interest income this year, in contrast to its positive effect last year. Total profit in this segment, which fell this year by about 18.5 percent and totaled about NIS 5.2 billion (Table 2.21), was negatively affected this year by the narrowing of the interest rate gap in this segment and by the decline in total managed balance-sheet assets. Total assets in the segment fell this year despite relative stability in total foreign currency credit (in dollar terms). There were a number of reasons for this: a) the appreciation of the shekel against the US dollar by about 5 percent this year; b) the measures taken by the banking groups to reduce exposure abroad through activity of their foreign branches; and c) the initiated reduction of liquidity surpluses that were maintained by the banking groups during the crisis, which was reflected in the reduction of total cash and deposits in foreign currency at the Bank of Israel and the foreign banks. As in previous years, the interest rate gap in this segment was affected by the low level of the dollar Libor interest rate[84] and the difference in accounting treatment between the value of derivatives (measured on the basis of fair value) and the value of the underlying assets (measured on an accrual basis).

Thus, the share of net interest income derived from non-indexed shekel activity grew again this year and totaled about 71.8 percent of the total profit derived from classic banking activity. The share of the CPI-indexed segment also grew this year to about 2.7 percent, after reaching a particularly low level of 0.6 percent last year. In contrast to the two shekel segments, the contribution of the foreign currency segment fell this year and its share in profits totaled about 25.5 percent (Table 2.21).

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[84] The 3-month LIBOR dollar interest rate, though it increased during the first half of the year, fell again in the second half of the year and reached its end-of-2009 level (about 0.26 percent).

Total other net interest income grew this year by about 10.9 percent (Table 2.21), which was a direct continuation of last year's upward trend. This was the result of a number of factors: a) the continuing improvement in the economy which had a positive effect on the repayment ability of borrowers in all segments of activity and particularly customers in the business sector. The improvement could be seen in the high level of interest revenue on impaired loans not recorded previously and its high rate of growth this year (about 38 percent). b) the continuing positive trends in the bond market and the price increases that encompassed all types of bonds, which positively affected profits from the sale and revaluation of bonds (Figure 2.37) (which despite its moderate rate of increase of about 3.5 percent remained high in historical terms and totaled about NIS 1.3 billion); and c) the continuing upward trend in the holdings of bonds (primarily government bonds) which began in recent years as part of the policy to diversify sources of income and reduce risk exposure. Although total income from activity in options and other derivatives was positive this year (about NIS 371 million), it was lower than the level recorded last year, and so tended to reduce total net interest income this year. As in previous years, income from bank fees on financing transactions grew this year as well (by about 6.5 percent; Table 2.21), as a result of the expansion in off-balance-sheet activity, including an increase in total guarantees to homebuyers.

(2) Loan-loss provisions

The total loan-loss provisions of the five large banking groups declined this year by about 42 percent and totaled about NIS 3 billion, as compared to about NIS 5.2 billion last year (Table 2.23). In December 2010, the loan-loss provision constituted about 0.4 percent of total balance-sheet credit as compared to about 0.7 percent last year.

The continuing recovery of the local economy this year led to an improvement in the repayment ability of borrowers and an increase in the value of their collateral. This in turn led to a reduction in the current loan-loss provision (the gross specific provision) and an increase in the collection of debts written off in previous years (the past reduction in the specific provision; Figure 2.14). An analysis by industry[85] reveals that the business sector in Israel[86] was influenced by the business cycle of the Israeli economy more than were households and activity abroad. Against this background, the rate of the specific provision for the business sector dropped by 54 percent this year and the proportion of the sector's provisions within total specific provisions fell from 66 percent in 2009 to 50 percent this year. Most of the decline was recorded in the construction and real estate industries, manufacturing, communication and computer services. In contrast to the business sector, the provision for activity abroad continued to grow this year due to the slow recovery of other economies[87] and its weight in total specific provisions rose

[85] As analyzed in Chapter 3.

[86] Including credit for the activity of borrowers in Israel and excluding credit provided to individuals; see Chapter 3.

[87] See Chapter 5.

Table 2.22

Rates of income and expenses and interest-rate spread in respect of assets and liabilities (including derivatives), the five major banking groups, 2000 to 2010

(NIS million, at current prices)

	Assets[a]			Liabilities[b]			
Year	Interest income (1)	Average annual balance (2)	Rate of income from assets (1)/(2) = (3)	Financing cost (4)	Average annual balance (5)	Financing costs share of liabilities (4)/(5) = (6)	Weighted interest spread (3-6) = 7
2000	41,231	643,242	6.41	27,833	611,738	4.55	1.86
2001	62,776	741,081	8.47	47,546	707,636	6.72	1.75
2002	39,899	781,626	5.10	24,602	748,774	3.29	1.82
2003	33,141	1,031,814	3.21	17,597	998,100	1.76	1.45
2004	49,271	1,041,018	4.73	32,181	1,005,842	3.20	1.53
2005	70,350	1,101,418	6.39	51,794	1,061,141	4.88	1.51
2006	32,555	1,239,314	2.63	13,468	1,196,037	1.13	1.50
2007	36,334	1,397,993	2.60	15,788	1,353,639	1.17	1.43
2008	57,974	1,521,408	3.81	36,459	1,475,013	2.47	1.34
2009	62,320	1,630,264	3.82	43,700	1,578,744	2.77	1.05
2010	9,925	1,742,119	0.57	-10,599	1,685,903	-0.63	1.20

[a] Assets include: credit to the public, bonds held to maturity, bonds available for sale, bonds for trading, cash and deposits at the Bank of Israel, deposits at banks and others.

[b] Liabilities include: deposits of the public, deposits of the government, deposits from banks and others.

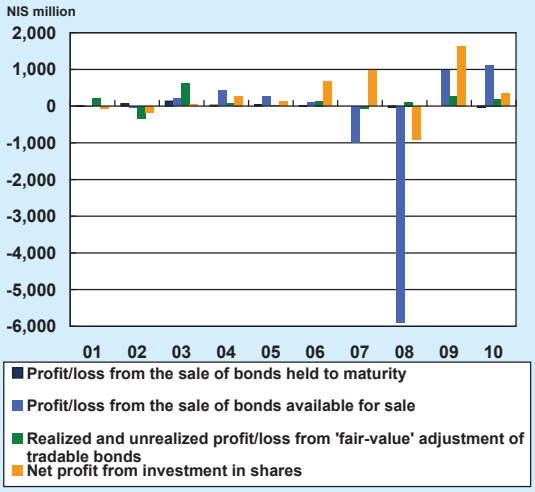
[c] Net interest income and the net average annual balance are obtained from the difference between assets and liabilities.

SOURCE: Published financial statements.

from 6 percent in 2007 to about one-quarter in 2010 (Figure 2.38).[88] It should be mentioned that in parallel to the increase in the total provisions due to activity abroad, total credit to this segment shrank and its share of the credit portfolio declined from 18 percent in 2007 to 13 percent this year.[89]

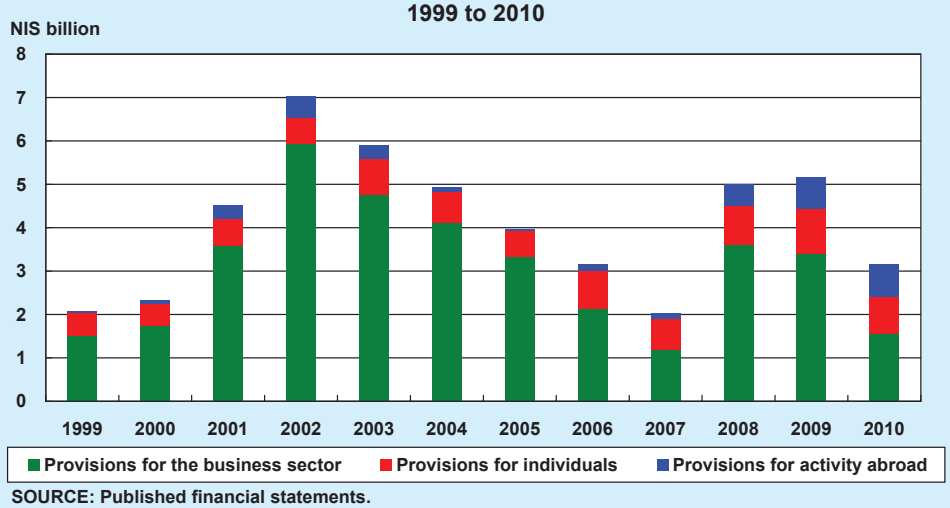
The general and additional provision, which provides for risks implicit in the credit portfolio whose scope cannot be identified or estimated when preparing the balance sheet, was of a negligible amount in December 2010 and its cumulative total declined due to

Figure 2.37
Profit\Loss deriving from changes in bond prices on the capital market and from investments in shares, five major banking groups, 2001 to 2010



SOURCE: Published financial statements.

Figure 2.38
Balance of the specific loan-loss reserve, five major banking groups, 1999 to 2010



SOURCE: Published financial statements.

[88] The breakdown of provisions for activity abroad by bank shows that 67 percent of total provisions were created by Bank Leumi, 25 percent by Bank Discount and 7 percent by Bank Hapoalim. It should be mentioned that in December 2010, the share of Bank Leumi in total balance-sheet credit for activity abroad stood at 44 percent and the shares of Discount and Hapoalim stood at 25 percent each.

[89] See Chapter 5.

the decrease in impaired loans. As part of the Directive for Measurement and Disclosure of Impaired Debts, Credit Risk and the Allowance for Credit Losses, which went into effect on January 1, 2011, the general and additional provision was cancelled and replaced by a group provision for credit risk.[90]

In July 2010, the Supervisor of Banks determined that as a result of the increased risk arising from developments in the housing market, banks must maintain an additional provision of at least 0.75 percent for total housing loans provided since July 1, 2010 and for which loan-to-value (LTV) is greater than 60 percent at the time they are provided to the customer.

(3) Non-interest and other income

The non-interest and other income of the five large banking groups totaled about NIS 14.7 billion, which represents a decrease of about 7.8 percent compared with last year (Table 2.24). The drop in income included all the large banking groups, apart from Hapoalim, and in particular Discount and First International whose income fell by about 13.9 and 15.7 percent, respectively. The decrease in income this year follows its high level last year and was influenced primarily by the drop in income from activity in the capital market and the relatively moderate increases in prices in the capital market this year, as will be described in what follows:

Total non-interest income derived from activity in the capital market fell sharply during the period reviewed (by 24.3 percent) and totaled about NIS 4.8 billion. It can be divided into two categories: a) income derived indirectly from developments in the capital market, which includes the banks' profits/losses on investments in shares and the management of compensation funds; b) income derived directly from the volume of customers' activity in the capital market by way of operating fees on activity in securities.

Although the income of the banking groups is indirectly influenced by developments in the capital market, which were positive this year, it declined this year by 76 percent relative to 2009 and totaled about NIS 548 million. The sharp drop in this type of income is attributable to a combination of two main factors: a) the high level of this type of income last year and the more moderate increases in prices in the capital market this year; and b) large one-time profits last year which were the result of, among other things, the sale of Bezek and Hot shares by most of the banking groups. Nonetheless, we would mention that these shares served as collateral and the profit from their sale was not the result of the banking groups' activity in the capital market. Income from the direct activity of customers in the capital market, which includes fees on activity in securities, fees for the distribution of financial products and income from management and operating services provided to institutional entities, grew this year by about 6 percent and totaled about NIS 4.2 billion. Income from this activity was positively affected by,

[90] For further details, see Box 3.3: "Directives for Reporting to the Public: Measurement and Disclosure of Non-Performing Debts, Credit Risk and the Provision for Credit Losses", Annual Survey 2009.

Table 2.23
Components of the loan-loss provision at the five major banking groups, 2008 to 2010

(NIS million)

	2008			2009			2010		
	Specific provision	General and supplementary provision	Total	Specific provision	General and supplementary provision	Total	Specific provision	General and supplementary provision	Total
Balance of provision at beginning of year	**27,971**	**2,999**	**30,970**	**29,857**	**3,075**	**32,932**	**32,148**	**3,060**	**35,208**
Provisions in the accounting year	7,324	243	7,567	7,361	236	7,597	6,297	189	6,486
Reduction of provisions	-2,120	-167	-2,287	-2,073	-251	-2,324	-3,021	-324	-3,345
Collection of debts written off in previous years	-202	0	-202	-98	0	-98	-118	0	-118
Amount charged to profit and loss statement	**5,002**	**76**	**5,078**	**5,190**	**-15**	**5,175**	**3,158**	**-135**	**3,023**
Debts written off	-3,116	0	-3,116	-2,899	0	-2,899	-3,274	0	-3,274
Year-end balance of provision	**29,857**	**3,075**	**32,932**	**32,148**	**3,060**	**35,208**	**32,032**	**2,925**	**34,957**

SOURCE: Published financial statements.

among other things, a sharp increase in total activity on the Tel Aviv Stock Exchange[91] and was reflected in an increase in income from the distribution of financial products and the growth in total assets managed by institutional entities.

Total income from services, which is composed primarily of operating fees that are not derived from activity in the capital market, totaled about NIS 91.6 billion this year (an increase of about 2.5 percent relative to 2009) and constituted about 65 percent of total non-interest and other income. This income was partly determined by the increasing activity in credit cards,[92] the developments during the year in housing loans and also the expansion of credit to the public. This income varied widely between the banks and was characterized by a mixed trend, which is a result of the differences in the characteristics and main segments of activity between the banking groups and the degree to which they affect the income generated by the provision of banking services.

(4) Operating and other expenses

The issue of operating expenses continues to be one of the greatest challenges facing the banking groups. The difficulty experienced by the banking groups in creating new channels of income together with their declared intention to expand activity in markets abroad will require them to improve their operating efficiency if they wish to present higher levels of profitability without increasing risk exposure.

The total operating and other expenses of the five large banking groups grew significantly this year (by about 7.3 percent) and totaled about NIS 27.2 billion. This increase in expenses followed a certain degree of stability last year (an increase of about 0.56 percent) that encompassed all the large banking groups, apart from Bank Mizrahi-Tefahot, which experienced a decline due the initiated increase in expenses for an early retirement program last year.

An examination of the various components of operating expenses shows that they all grew by high rates this year, ranging from 5.8 percent for maintenance and depreciation of buildings and equipment to 8 percent for salaries and salary-related expenses. In the category of other expenses, which grew by about 7.2 percent, there was a noticeable decrease in computer expenses, following several years of growth, and an increase in marketing and advertising expenses.

The main increase this year was, as mentioned, the result of increases in salaries and salary-related expenses, which account for about 57.2 percent of operating and other expenses (as compared to about 56.8 percent last year) and totaled about NIS 15.5 billion this year (Table 2.24). The increase in salaries, (aside from last year's decline), is a direct continuation of the upward trend in these expenses that continued for many years prior to the crisis. In contrast to the years prior to the crisis, during which the increase in salaries was determined to a certain extent by the increase in the number

[91] It is worth mentioning the high volume of trading this year on the Tel Aviv Stock Exchange and the increase in the share of the banks, as members of the stock exchange, within trading volume.

[92] For further details, see Section 12 in Chapter 3.

Table 2.24
The five largest banking groups operating income and expenses, 2008 to 2010

	Amounts			Distribution			Changes compared with previous year	
	2008	2009	2010	2008	2009	2010	2009	2010
1. Operating income	(NIS million, at current prices			(Percent)			(Percent)	
Income from banking services								
Account management fees	2,975	3,075	3,043	23.8	19.2	20.7	3.4	-1.0
Credit cards	3,211	3,334	3,415	25.7	20.9	23.2	3.8	2.4
Credit services and contracts	1,126	973	1,202	9.0	6.1	8.2	-13.6	23.5
Foreign trade activity and special services	366	342	378	2.9	2.1	2.6	-6.6	10.5
Other fees[a]	1,761	1,669	1,586	14.1	10.4	10.8	-5.2	-5.0
Total income from services (1)	9,439	9,393	9,624	75.6	58.8	65.3	-0.5	2.5
Income from activity in the capital market								
From securities activity (2)	2,715	3,142	3,206	21.7	19.7	21.8	15.7	2.0
Provident and mutual funds distribution fees[b] (3)	506	503	655	4.1	3.1	4.4	-0.6	30.2
Management, operational and trust fees for institutional investors (4)	394	321	344	3.2	2.0	2.3	-18.5	7.2
Net profits/losses from investments in shares	-908	1,633	336	-7.3	10.2	2.3	-	-79.4
Profit from severance pay funds	-	683	212	0.0	4.3	1.4	-	-69.0
Total income from capital market activity	2,707	6,282	4,753	21.7	39.3	32.3	132.1	-24.3
Other income[c]	345	312	357	2.8	2.0	2.4	-9.6	14.4
Total income from operating fees[d] (1 + 2 + 3 + 4)	13,054	13,359	13,829	104.5	83.6	93.9	2.3	3.5
Total operating and other income	12,491	15,987	14,734	100	100	100	28.0	-7.8
2. Operating expenses								
Salaries and related expenses[e]	14,720	14,387	15,532	58.5	56.8	57.2	-2.3	8.0
Of which: Salaries	9,015	9,634	10,309	35.8	38.1	37.9	6.9	7.0
Maintenance and depreciation of premises and equipment	4,654	5,092	5,389	18.5	20.1	19.8	9.4	5.8
Other expenses	5,789	5,828	6,246	23.0	23.0	23.0	0.7	7.2
Of which: Marketing and advertising	878	744	898	3.5	2.9	3.3	-15.3	20.7
Computer expenses	932	911	856	3.7	3.6	3.2	-2.3	-6.0
Communications	646	651	641	2.6	2.6	2.4	0.8	-1.5
Insurance	114	139	137	0.5	0.5	0.5	21.9	-1.4
Office expenses	355	341	351	1.4	1.3	1.3	-3.9	2.9
Professional services	815	778	802	3.2	3.1	3.0	-4.5	3.1
Total operating and other expenses	25,163	25,307	27,167	100	100	100	0.6	7.3
Coverage ratio[f] (%)	49.6	63.2	54.2					

[a] Includes mainly margin and collection fees on credit from the Finance Ministry, and from conversion and other differentials.

[b] As part of the Bachar Reform, the banks began to charge a "distribution fee"; the ceiling for the distribution fee in respect of mutual funds amounts to 0.25 percent of the asset balance in funds that invest mainly on low-risk short-term investments, 0.80 percent of the asset balance in equity funds and 0.40 percent of the asset balance in the other funds; in repect to provident funds and pension funds the fee ceiling amounts to 0.25 percent of the asset balance in a fund.

[c] Includes profit from the realization of assets that were received in respect of the discharge of credit on buildings that are not used by the bank, and dividend that is not from a subsidiary/affiliated company.

[d] Includes total income from services, securities activity, financial product distribution fees, and management, operational and trust fees for institutional investors.

[e] Including payroll tax, severance pay, royalties, pension and national insurance.

[f] The ratio between operating and other income, and operating and other expenses.

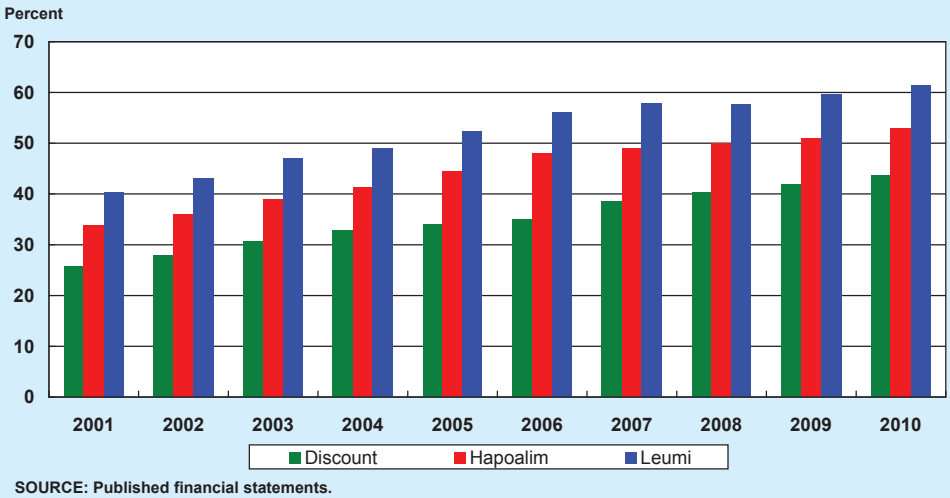
SOURCE: Returns to the Banking Supervision Department.

of employees, there was relative stability this year in the number of employees (an increase of about 1.3 percent; Table 2.25). The main factors behind the sharp increase this year were therefore the lack of change in salary expenses last year, the increase in annual one-time bonuses (a result of the improved performance of the banking groups), the signing of new wage agreements and the decline in yield on the reserves designated for compensation relative to last year, which enabled the reduction in salary-related expenses in 2009. An additional factor that can explain the increase in salary expenses is the continuing increase in the proportion of university graduates among the banking groups' employees (Figure 2.39).

Salary expenses can be divided into discretionary and non-discretionary components, which enables the banking groups to control their salary expenses to some extent and to reduce these expenses during a recession, primarily through the reduction of bonuses and incentives. The number of posts is relatively non-discretionary, as can be seen from its rapid rate of growth during the last five years and its relative inflexibility during periods of downturn (Table 2.25). An examination of the ratio of operating expenses to total revenues (less financing expenses) in comparison to other countries reveals the Israeli banking groups' high level of expenses relative to other banking systems around the world. Thus, the ratio for the Israeli banking groups (about 68 percent) is significantly higher than the average for the sample group (62.8 percent) and higher than for most of the countries included in the sample.

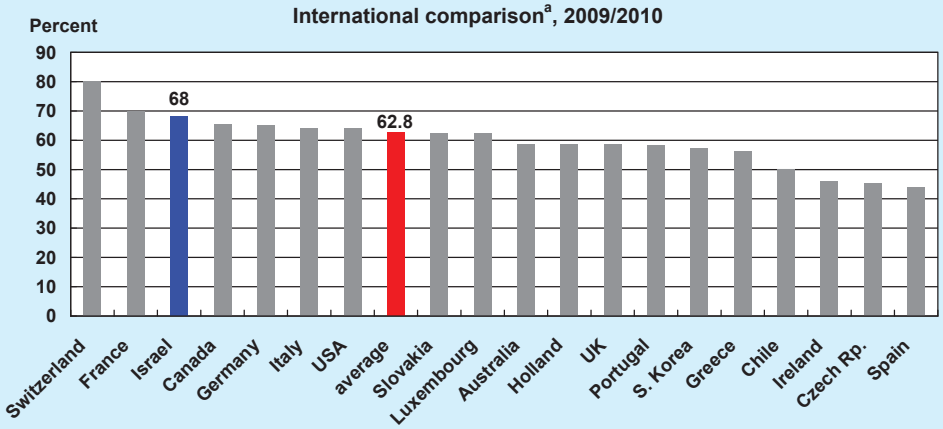
An examination of the other expense items reveals two interesting developments this year: First, computer expenses declined for the second consecutive year (by about 6 percent; Table 2.24) following a long period of growth. The decline for the banking groups as a whole (despite the increase in the two largest banking groups) is attributable

Figure 2.39
Proprotion of employees with higher education, three major banking groups, 2001 to 2010



SOURCE: Published financial statements.

Figure 2.40
Coverage ratio (exclusive of financing expenses): International comparison[a], 2009/2010



[a] Data for Ireland, Australia, Denmark, France, South Korea, Slovakia and Switzerland are for December 2009; data for the UK and Spain as as of March 2010; data for Greece and Italy are as of July 2010; data for the Czech Republic, Luxembourg, Holland, Portugal and the USA are as of September 2010; data for Israel, Canada and Chile are as of December 2010.
SOURCE: IMF.

this year to the completion of some of the projects which required expensive computer infrastructure, such as: the preparations for implementing Basel II, the implementation of the Directive regarding "non-performing debts" and the upgrade and modification of computer and communication infrastructures in some of the small banks purchased previously by the smaller banking groups. Second, there was a sharp increase in marketing and advertising expenses (of about 20.7 percent). This expense item grew for all of the banking groups, apart from Bank Mizrahi-Tefahot, which increased its expenditure in this category last year. This can be attributed to the increased competition between the banking groups in the area of housing loans and in some of the banking groups to the increase in the marketing expenses of subsidiaries, such as CAL.

(5) Operating indices and operating efficiency

The following analysis makes use of two conventional indicators for measuring the efficiency of the Israeli banks: the operational coverage ratio[93] and the operational efficiency ratio,[94] which make it possible to evaluate a bank's ability to cover its operating expenses relative to its operating and financing income.

[93] Calculated as the ratio between total operating and other income and total operating and other expenses.

[94] Calculated as the ratio between total operating and other income plus profit from financing activities and total operating and other expenses.

Table 2.25
Salaries and related expenses of the five major banking groups, 1998 to 2010
(Reported amounts,[a] at current prices)

Year	Average number of posts[b]	Salaries		Related expenses[c]		Salaries and related expenses	
		Total	Per post	Total	Per post	Total	Per post
		(NIS million)	(NIS thousand)	(NIS million)	(NIS thousand)	(NIS million)	(NIS thousand)
1998	38,230	6,341	166	2,955	77	9,296	243
1999	38,248	6,607	173	3,063	80	9,669	253
2000	39,251	7,220	184	3,557	91	10,777	275
2001	39,753	7,231	182	3,560	90	10,791	271
2002	39,531	6,819	172	3,976	101	10,795	273
2003	38,427	7,260	189	3,566	93	10,826	282
2004	38,170	7,732	203	3,677	96	11,409	299
2005	40,029	8,753	219	4,122	103	12,875	322
2006	42,200	9,561	227	5,354	127	14,915	353
2007	44,286	9,815	222	4,701	106	14,516	328
2008	46,628	9,015	193	5,705	122	14,720	316
2009	47,097	9,634	205	4,753	101	14,387	305
2010	47,690	10,309	216	5,223	110	15,532	326
		Change compared with previous year (Percent)					
1999	0.05	4.2	4.1	3.6	3.6	4.0	4.0
2000	2.6	9.3	6.5	16.1	13.2	11.5	8.6
2001	1.3	0.1	-1.1	0.1	-1.2	0.1	-1.1
2002	-0.6	-5.7	-5.2	11.7	12.3	0.0	0.6
2003	-2.8	6.5	9.5	-10.3	-7.7	0.3	3.2
2004	-0.7	6.5	7.2	3.1	3.4	5.4	6.1
2005	4.9	13.2	7.9	12.1	7.3	12.8	7.7
2006	5.4	9.2	3.6	29.9	23.3	15.8	9.6
2007	4.9	2.7	-2.2	-12.2	-16.5	-2.7	-7.1
2008	5.3	-8.2	-12.8	21.4	15.1	1.4	-3.7
2009	1.0	6.9	5.8	-16.7	-17.2	-2.3	-3.5
2010	1.3	7.0	5.7	9.9	8.9	8.0	6.9

[a] Until 2002, amounts are adjusted for the effect of inflation on the basis of the December 2003 index.

[b] The number of posts includes posts at subsidiaries abroad and at consolidated companies, translation of the cost of overtime and external personnel budgets that were required to supplement current personnel and for the assimilation of projects.

[c] This item includes mainly severance pay, advanced study fund, pension, vacation, national insurance and payroll tax, other related expenses, voluntary retirement expenses and benefit deriving from the allocation of options to employees.

SOURCE: Published financial statements. and returns to the Banking Supervision Department.

According to both indices, there was a deterioration in the operating efficiency of the banking groups this year relative to the improvement last year and in addition their level of efficiency is low relative to the pre-crisis years.

The operational coverage ratio of the five banking groups declined during 2010 and converged to around 0.54, as compared to 0.63 last year (Table 2.26), which is lower than its pre-crisis levels. This was due a combination of the drop in operating and other revenues of about 8 percent (which was due to the moderate increase in revenues from banking services alongside the large decline in revenue from activity in the capital market)[95] and the increase in operating and other expenses by about 7 percent. The trend in this ratio during the last two years was influenced by the high level of volatility in income from activity in the capital market, which is included in non-interest income and which fell this year by 24 percent, following a rise of 132 percent last year (Table 2.24).

A similar picture is obtained regarding the drop in the efficiency ratio, which fell this year following an increase last year. Thus, the average efficiency ratio for the five large banking groups fell from 1.54 in 2009 to 1.47 in 2010 (Table 2.26).

c. Analysis of performance of the five large banking groups[96] by activity segment

The activity of the banking groups in Israel is based on a diversified and stable mix, which can be clearly divided into two categories: a) customer-driven activities, which are the main activities of the banking groups and are based on the five classic segments of banking activity[97] and through which the banks supply a wide variety of financial products and services to various types of customers; and b) financial activity, which is included within the financial management segment. (Although its definition differs from bank to bank, it generally includes a bank's own investments and those made in the name of its customers in local and foreign securities, investments in complex financial instruments[98] and real investments). An examination of the asset portfolio of the banking groups shows that at the end of the reviewed period, the share of the classic segments of banking activity, i.e. customer-driven activities, stood at about 71 percent of managed assets and the remainder (29 percent) was managed in the financial segment (Figure 2.41).

The development of the financial management segment as an important component of the banking groups' activity was made possible by the various reforms carried out

[95] For further details, see section 11.2.3 in this chapter.

[96] The banks are required to provide disclosure of six main activity segments: the business sector, the commerce sector, small businesses, private banking, households and financial management. Each of the banking groups can itself define the activity segments according to the nature, size and characteristics of its customers' activity.

[97] The five classic areas of activity are the business sector, commerce, small businesses, private banking and households. The classic areas of activity can also be divided into two main sub-categories: business activity and retail activity.

[98] In addition, financial activity includes activity in the trading room and the management of market and liquidity risk (including activity in financial derivatives).

Table 2.26
Operational coverage ratio[a] and efficiency ratio[b] of the five major banking groups, 2008 to 2010

Bank	2008		2009		2010	
	Coverage ratio	Efficiency ratio	Coverage ratio	Efficiency ratio	Coverage ratio	Efficiency ratio
Leumi	0.40	1.31	0.66	1.67	0.52	1.46
Hapoalim	0.57	0.97	0.68	1.58	0.62	1.55
Discount	0.48	1.25	0.56	1.43	0.47	1.33
Mizrahi-Tefahot	0.57	1.63	0.56	1.46	0.53	1.69
First International	0.52	1.22	0.64	1.43	0.54	1.33
Average for the five largest banking groups	0.50	1.21	0.63	1.54	0.54	1.47

[a] The ratio between operating and other income, and operating and other expenses.

[b] Calculated as the ratio between total operating income and net interest income, and operating and other expenses. The efficiency ratio is sometimes presented as the reverse of the ratio which we calculated here, meaning total operating and other expenses to total (financing and operating) income.

SOURCE: Published financial statements.

in the Israeli financial system[99] during the last decade (primarily the Bachar reform)[100] and arose from the need of the banking groups to create alternative channels of revenue that complement already-existing ones. Therefore, the banking groups have attempted to diversify their asset portfolios over the years, to investigate alternative investments and to expand their areas of activity or the types of services they provide to customers. Among the steps taken in this context were the expansion of activity into foreign markets and of financial investment activity through the financial management segment.

The complexity of the financial management segment, the variation in investment channels chosen for themselves by each of the banks and the numerous areas of activity make the analysis somewhat more difficult and not only because of the difficulty in defining common factors from among the many that are likely to affect each group. The analysis will therefore focus on characterizing the main developments in the activity of the segment and its contribution to the groups' profits.

The activity of the financial management segment was characterized this year by two main developments: the intensification of the downward trend (about 40 percent) in total risk assets managed in the segment and the growth in the profits of the segment, alongside stability in the segment's contribution to the groups' profits (about 7 percent after deducting the "others" segment and adjustments).

[99] Relaxation of the rules of investment for institutional investors (2002); tax reform (2003); pension reform (2003); the Law to Increase Competition and to Reduce Concentration and Conflicts of Interest (2005); and reform in the government bond market (2005).

[100] For further details, see "The Financial Results of the Five Major Banking Groups" in the 2005 Annual Survey of Israel's Banking System.

The decline in the average balance of risk assets in the segment this year followed two years of more moderate declines (of about 5.5 percent on average). The factors explaining this decline include the efforts of the banking groups to reduce exposure to foreign financial institutions and foreign countries, while their asset portfolio in fact grew. This was carried out through a change in the mix of the banking groups' investment portfolio, which included an initiated increase in government bonds and a reduction in the proportion of non-government bonds that carry risk. The change in the sector's profit was determined, as in previous years, by a variety of factors, including the growth in profits derived from the investment portfolio itself, non-recurring profits, the trend in operating income derived from the scope of customers' activity in the capital market and the profits of non-financial subsidiaries.

An examination of the remaining five segments of customer-driven activity reveals that profits have increased in each of them at double-digit rates, apart from the private banking segment, which recorded a decline due to the increase in its related operating expenses. The contribution of each of the segments to profits was fairly stable, with a noticeably high contribution by the business segments (business and commerce), whose combined share of the banking group's profits is about 58 percent. Of these, the contribution of the business segment to profit (about 47 percent) is particularly large. The contributions to profit of the three retail segments (households, private banking and small businesses) stood at about 34 percent this year (Figure 2.41) and the contribution of small businesses stood out among them, with the highest yield per shekel of asset (about 1.4 percent; Table 2.27).

An examination of the performance of the classic banking activity segments indicates the following: 1) The performance of the business segment is cyclical and during periods of prosperity it exceeds that of the household segment and vice versa during periods of downturn. This situation reflects the sensitivity of business activity to macroeconomic developments and to the economy's business cycle, which is the result of the homogenous nature of business firms and their exposure to common risk factors. Unlike them, retail customers are characterized by heterogenity and as a result the exposure of the segment to macroeconomic developments is relatively moderate and its level of profit tends to be smoother over the course of the business cycle. 2) The small business segment produces the highest return from among the segments, which is partly due to the high risk that characterizes its activity. This can be seen in the high ratio (0.92) of provisions relative to total risk weighted assets in the segment (Table 2.27). The large contribution of the segment to net interest income (about 13 percent) relative to its share of managed assets (about 6 percent) may indicate that the risk premium component in the cost function for credit to the segment's customers is higher than in other segments of activity and is meant to compensate the banking groups for the high level of risk implicit in this activity, as mentioned above. 3) The performance of the household segment, as reflected in the segment's yield on assets, was low during the last two years, in contrast to its high levels in previous years. This trend can be attributed to the high level of competition between the banking groups in the area of

Table 2.27

Performance indices by segments of activity[a,b] at the five largest banking groups, 2009 and 2010

	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010
	Household segment	Household segment	Private banking segment	Private banking segment	Small business segment	Small business segment	Commercial segment	Commercial sgement	Corporate segment	Corporate segment	Financial management segment	Financial management segment
Items and profit components							Distribution (percent)					
Average balance of assets	23	25	4	4	5	6	10	10	28	26	29	29
Average balance of risk assets	24	22	4	4	6	7	13	14	37	40	17	12
Net interest income before loan-loss provision	29	30	8	8	12	13	14	14	29	28	7	8
Total operating and interest income	34	35	11	12	12	13	11	12	25	22	6	6
Loan loss provisions	19	26	2	2	14	18	16	23	48	31	1	0
Operating and other income	41	46	16	18	11	13	7	8	20	12	5	4
Operating and other expenses	43	43	14	14	12	12	11	10	12	11	8	10
Ordinary income	14	16	8	6	11	14	10	11	49	49	7	5
Net income	14	15	8	6	11	13	10	11	49	47	7	7
							Ratios (percent)					
Loan-loss provision to total assets	0.4	0.3	0.2	0.1	1.3	0.9	0.8	0.7	0.9	0.4	0.0	-
Net interest income before loan-loss provision to total assets	2.9	3.0	4.7	4.4	5.2	5.5	3.2	3.4	2.3	2.6	0.6	0.7
Total income[c] to total assets	5.6	5.5	10.4	9.9	8.2	8.3	4.3	4.4	3.4	3.3	0.8	0.8
Operating expenses to total assets	4.6	4.5	8.4	8.4	5.1	5.2	2.5	2.7	1.0	1.1	0.7	0.9
Net income per shekel asset	0.3	0.4	1.0	0.9	1.1	1.4	0.5	0.7	0.9	1.1	0.1	0.2
							Ratios (percent)					
Coverage ratio[d]	0.58	0.54	0.67	0.65	0.59	0.55	0.40	0.38	1.03	0.57	0.35	0.19
Efficiency ratio[e]	1.21	1.22	1.23	1.18	1.60	1.61	1.70	1.66	3.34	2.99	1.15	0.96
Return on risk weighted assets[f]	0.39	0.55	1.47	1.07	1.24	1.41	0.55	0.61	0.90	0.93	0.28	0.48
Loan-loss provision to total risk assets	0.52	0.45	0.30	0.13	1.52	0.92	0.82	0.61	0.84	0.29	-	-

[a] Each banking group defines the segments of activity at its own discretion and in accordance with the characteristics and volume of its customers' activity. Generally, the household segment is comprised of private customers with low to medium financial wealth; the private banking segment is comprised of private customers with high financial wealth; the small business segment is comprised of commercial customers with a low volume of business activity; the commercial segment is comprised of business companies with a high volume of activity; the corporate segment is comprised of companies with high sales turnover and indebtedness.

[b] Not including the financial management, other and reconciliations segment.

[c] Total income is calculated as the sum of operating and other income and net interest income before loan-loss provision.

[d] Calculated as the ratio of operating and other income to operating and other expenses.

[e] Calculated as the ratio between operating and other income and net interest income before loan-loss provision, and operating and other expenses.

[f] Calculated as the ratio between net income, and the average balance of risk assets.

SOURCE: Published financial statements.

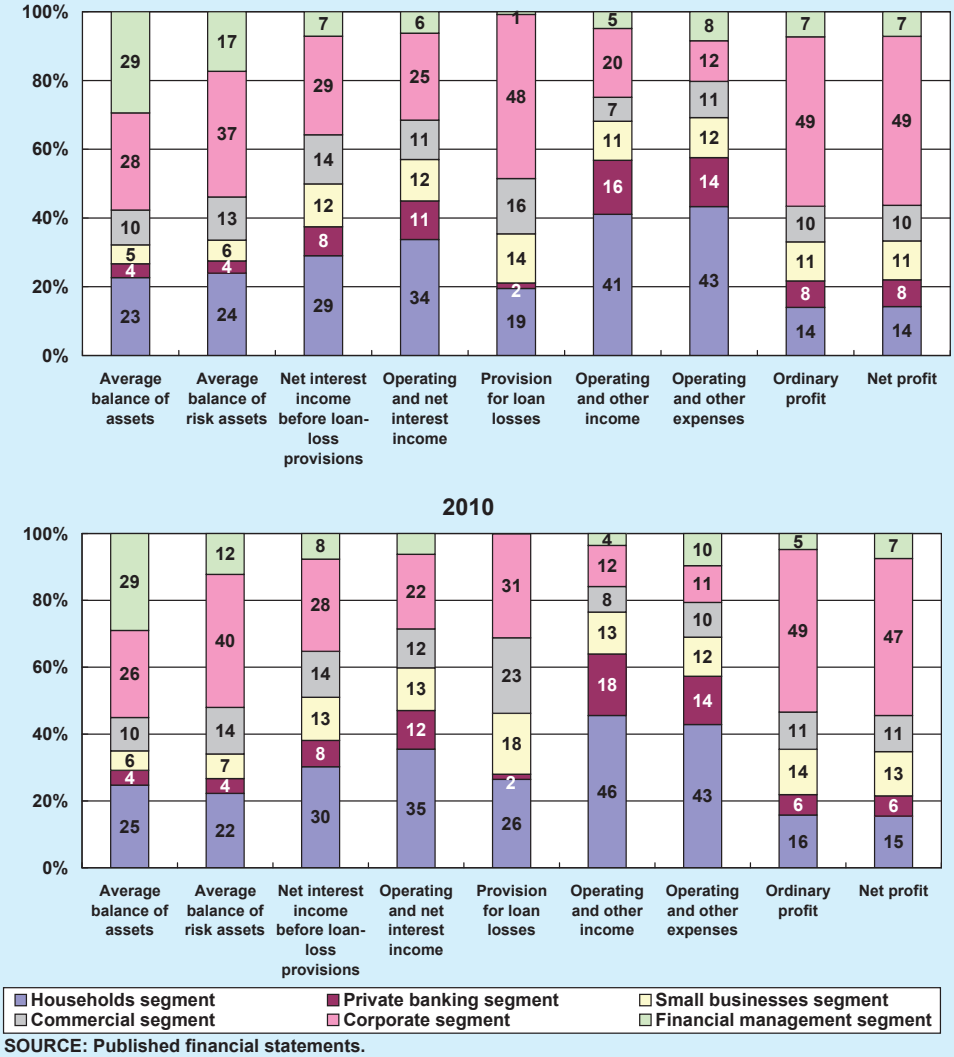
housing loans, which provided about 74 percent of the total increase in assets in this segment this year (for further details see "The Credit Portfolio and Credit Risk" in this chapter). Nonetheless, it is important to mention that this situation is not an indication of the level of competition in the households segment, which is characterized by a lack of sufficient credit alternatives. 4) The operating costs of the household segment are higher than those in other segments. The share of this segment in total operating and other expenses was high this year (about 43 percent), as it was last year (Figure 2.41), which is due to the necessity of maintaining and operating a large number of branches in order to provide access to customers of the retail segments, thus requiring a high level of expenditure on human and physical resources. In contrast, the relatively low share of expenses due to the activity of the business segment (about 21 percent) is a result of, among other things, the limited number of business centers.

The decline in loan-loss provisions this year was an important factor in the increased profits derived from the classic banking activity segments. The decline encompassed all areas of activity and in particular the business segment, which accounted for about 73 percent of the decline in the loan-loss provision this year. This is not surprising in the current situation of renewed growth and recovery from the recession and is to a large extent due to the higher risk assessments of business firms during the crisis and the additional loan-loss provisions made to cover those risks. The continuing upward trend in economic activity, which led to the improved performance of business firms and an improvement in collateral, enabled the banking groups to reduce their risk assessments and later to reduce the loan-loss provisions and even to collect debts that had been written off in previous years.

The ratio of loan-loss provisions to average risk weighted assets in each segment was calculated after neutralizing the effect of the change in the scope of activity on the loan-loss provisions. An analysis of the results shows that while loan-loss provisions fell in the retail segments despite the growth in average risk weighted assets, the fall in loan-loss provisions in the business segments was accompanied by a slight reduction in average total assets. Although the small business segment experienced the sharpest decline (from 1.5 to 0.9 percent), its ratio remained high relative to the other segments of activity. The explanation for this is connected to the high level of risk attributed to the activity of the segment's customers, most of which are unable to provide collateral that is sufficient to cover the level of risk implicit in their activities. The reason for the decline in this ratio was, as mentioned above, the growth in average total assets and the renewed expansion of credit, following its decline last year.

The operational efficiency of the activity segments has been analyzed here using two indicators that are based on the segments' flow of income relative to the scope of their operating expenses and therefore it is also indirectly affected by the sensitivity of each segment to the economy's business cycle. The fact that business activity is affected more by the business cycle than the activity of households increases the volatility of the operational efficiency ratio for that segment over the business cycle. Therefore we would expect to see a high level of operational efficiency in the business

Figure 2.41
Distribution of activity segments' contribution to selected financial statement items, five major banking groups, 2009



SOURCE: Published financial statements.

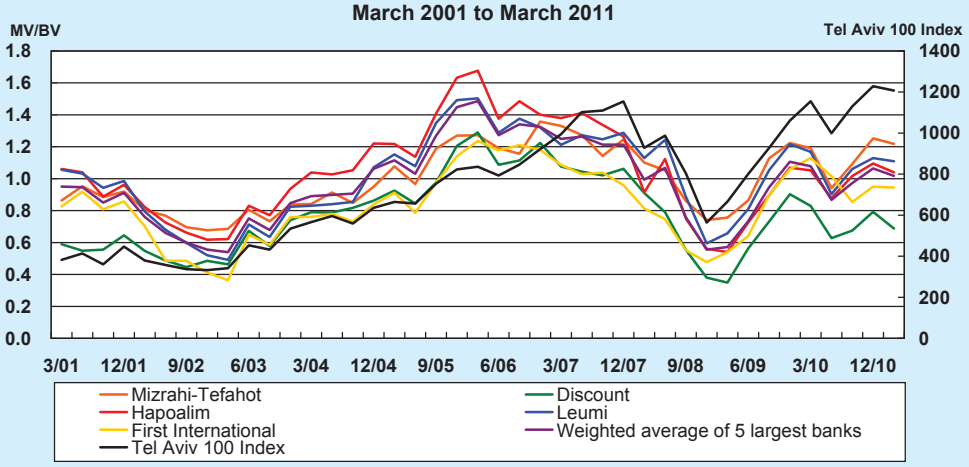
segment, alongside a relative degree of stability in the household segment this year. The household segment indeed showed stability in operational efficiency with an efficiency ratio of about 1.22, in comparison to about 1.21 last year while in the business segment the ratio remained high, despite the drop of its operational efficiency, as can be seen in this year's efficiency ratio of 2.99, in comparison to 3.34 last year (Table 2.27).

d. Analysis of the banks' performance as measured by the market value to book value ratio (MV/BV)[101]

There was a certain amount of volatility this year in the average MV/BV ratio for the five large commercial banks, which ended the upward trend since the second quarter of 2009. During the first two quarters of the year, the value of the ratio fell to a value of below one; this was followed by a change in direction, which brought its value to above one. Thus, the ratio stood at about 1.04 at the end of 2010, as compared to 1.08 last year (Figure 2.42).

Some of the factors affecting this indicator during the year were systemic and derived from macroeconomic developments and the volatility in the capital markets in Israel and worldwide, while others were internal and particular to the banking system, such as the improvement in performance and the return to a path of profitability and distribution of dividends.

Figure 2.42
Market value to book value (MV/BV) of the five major banks vis-à-vis the Tel Aviv 100 Index, March 2001 to March 2011



SOURCE: Published financial statements and Tel Aviv Stock Exchange data.

[101] The ratio is defined as $(MV/BV)_i$ where MV_i is the market value of the shares and options of bank i in period t. The market value of any company first is defined as the value of its traded shares and options (not including convertible bonds). Market value also includes non-traded shares and they are valued at the market price of traded shares.

BV_i is defined as the balance-sheet value of shareholders' equity, including redeemed share capital, reserves and retained earnings of bank i at time t-1.

14. CREDIT CARD COMPANIES

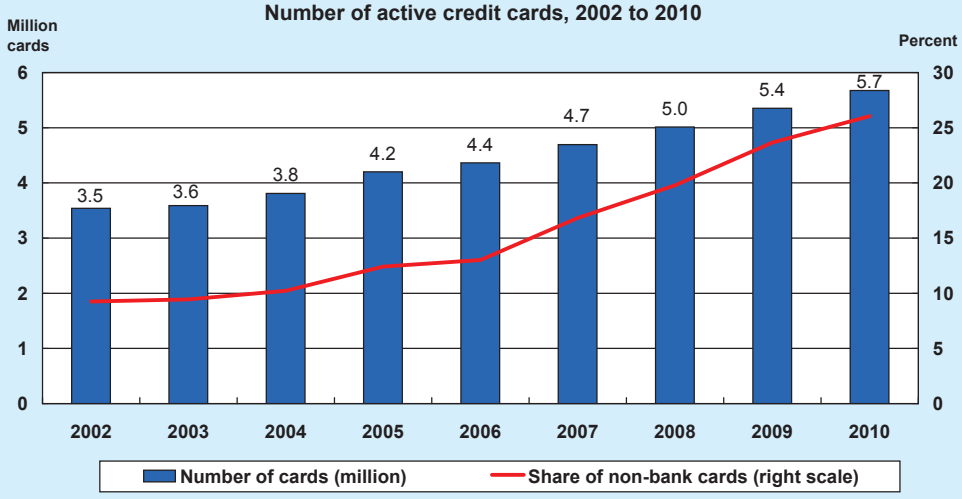
a. Credit card activity

(1) Extent of use

The use of credit cards has expanded greatly in recent years, with the improvement in the economic situation of consumers and the continuing growth of private consumption. This expansion is supported, among other things, by the increasing number of businesses that allow credit card transactions, which itself has been fueled considerably by the decrease in clearing commissions, and the development of electronic commerce.[102] From the customers' side, the prevalence of credit cards is encouraged by their ease of use as a means of payment as well as a source of credit, complemented by several steps that have been adopted to protect the consumer.[103]

From 2002 to 2010 the number of active credit cards increased at an average annual rate of 6 percent. At the end of 2010 there were around 5.6 million cards, of which around 1.5 million were non-bank cards issued directly by the credit card companies (see also Box 2.6, Figure 2.43). The continuing rise in the proportion of non-bank cards relative

Figure 2.43
Number of active credit cards, 2002 to 2010



SOURCE: Returns to the Banking Supervision Department.

[102] Due to technological developments that enable transactions to be carried out in a safer and more friendly manner, twenty-four hours a day, and with businesses abroad as well.

[103] In 2007 several amendments were introduced into the Debit Cards Law for protecting the consumer in the event of non-supply, cancellation of deferred payments, and misuse. A further amendment imposes the actual carrying out of the procedure of canceling a direct debit on the credit card company (Proper Conduct of Banking Business Regulation 439).

to total cards issued is explained by the credit card companies' desire to diversify their sources of income by increasing their financing activity and utilizing their cooperation with various business and consumer groups. The credit card companies also acted to some extent as an alternative source for credit overruns in current accounts, following the restrictions imposed on these overruns by the Supervisor of Banks in 2005.[104]

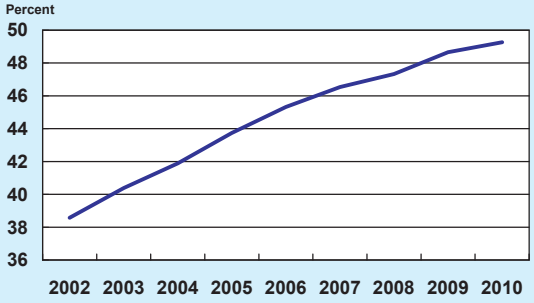
Along with the rise in the number of cards, in the years 2002–10 the number of transactions and their overall value also grew at a high annual rate of around 9 percent. In the year reviewed about 761 million transactions were carried out with credit cards for a sum of NIS 184.5 billion, a growth of 10 percent as against 2009 (Table 2.28). An examination of the volume of checking account debits shows that in recent years the use of checks is declining. Checks are used mainly as a means of payment for large transactions and as a convenient way of transferring money between accounts[105]; for most transactions they are being replaced by credit cards.

An additional finding that points to a significant rise in credit card use is the continuing growth in the rate of (cumulative) annual transactions as a proportion of private consumption expenditure, excluding housing services.[106] In 2010, credit card transactions constituted around 49 percent of all private consumption expenditure, as against around 39 percent in 2002, an average annual rise of around 3 percent (Figure 2.44). These increases include also the use of credit cards by the business sector for business needs, particularly because of the convenience and the ability to document and keep track of expenditure.

The developments described above attest to the increasing use of credit cards, the reason being that they are a convenient and available means of payment, and because they enable households to execute a wide range of transactions for which the debit is deferred, instead of paying in cash or by check.

The continuing growth in the volume of transactions stands out also in relation to consumer markets in many countries (Table 2). The widespread use of credit cards in Israel and their increasing

Figure 2.44
Total credit card transactions relative to private consumption expenditure, excluding housing services, 2002 to 2010



SOURCE: CBS and returns to Banking Supervision Dept.

[104] Proper Conduct of Banking Business Regulation 325.

[105] Contributing on the one hand to the decrease in the use of checks is the relatively large number of restricted accounts for which the clearing risk is high; on the other hand, transactions between individuals who are not business concerns cannot be carried out by means of credit cards.

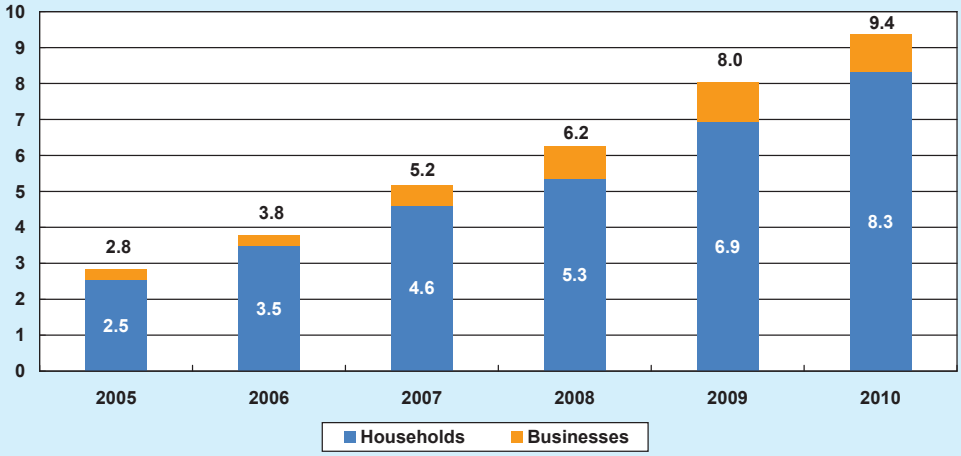
[106] We assume that credit cards are not used as payments for housing.

importance as a means of payment are reflected in the high volume of transactions relative to GDP.

(2) Financing activity

In addition to the main use of credit cards as a means of payment, the credit card companies utilize their operational platform for activity in the non-bank credit market, mainly in the household sector, by a direct approach, for example through customer clubs, without the need for mediation by the parent bank or the bank in which the customer's checking account is held. The balance of credit granted directly by the credit card companies grew from 2005 to 2010 at an average annual rate of around 27 percent, a high rate of growth that characterizes their deepening entrenchment in the non-bank credit market. In practice, this is the most accessible non-bank credit market for households. The sharp growth of the balance of credit which is the direct responsibility of the credit card companies was supported, among other things, by a growth in the issue of non-bank cards, the increasing use of revolving-credit cards (see box), extending direct credit to customers who do not hold a card, and credit to businesses by means of loans and other services. The continuous growth of financing activity continued during 2010, at the end of which the credit balance under the responsibility of credit card companies stood at NIS 9.4 billion—a rise of 17 percent over 2009—of which 8.3 billion was for households (Figure 2.45).

Figure 2.45
Outstanding credit at credit card companies risk to households and businesses, 2005 to 2010, (NIS billion)



SOURCE: Published financial statements.

Table 2.28
Credit card activity, 2007 to 2010

	2007	2008	2009	2010	Change in 2009 compared with 2008	Change in 2010 compared with 2009
	(NIS million)				(Percent)	
Number of active cards at the end of the year	4.7	5.0	5.4	5.7	6.8	6.0
Of which: Cards at the sole responsibility of the credit card companies	0.7	0.9	1.2	1.4	30.0	17.9
	(NIS million)					
Number of transactions	596	653	697	761	6.7	9.1
Of which: In Israel	585	641	685	745	6.7	8.8
	(NIS million)					
Amount of transactions	146	161	168	184	4.6	9.8
Of which: In Israel	139	154	161	176	4.6	9.8
Activity indices						
Average credit card transaction (NIS)	246	246	241	242	-2.02	0.63
Average monthly expenditure by credit card (NIS)	2,597	2,670	2,615	2,709	-2.06	3.62
Average transactions per card (per year)	127	130	130	134	-0.04	2.97

SOURCE: Returns to the Banking Supervision Department.

Table 2.29
Credit card activity in 2009 and international comparison in dollar terms

	Per-capita GDP	Number of credit cards issued per resident (up to 2009)	Annual volume of transactions relative to annual GDP in percent	Average annual expenditure per resident	Average amount of a single transaction	Increase in number of transactions compared with 2008 in percent
Switzerland	63,216	0.6	4.9	3,118	163	6.2
Australia	44,703	0.9	17.0	7,611	113	4.4
Sweden	43,261	0.9	4.1	1,765	55	-
Germany	40,926	0.1	0.5	196	196	21.3
Canada	39,722	2.2	18.9	7,512	95	3.7
Italy	35,402	0.6	3.7	1,297	136	8.9
UK	35,182	1.0	7.7	2,723	93	1.6
Israel	**27,277**	**0.7**	**21.9**	**5,892**	**64**	**6.8**
Russia	8,697	0.1	0.3	22	87	27.9

SOURCE: The data on foreign countries were taken from the Committee on Payment and Settlement Systems (CPSS); Israel data were taken from returns to the Banking Supervision Department and from the Central Bureau of Statistics.

b.The risks and capital adequacy

(1) The risks

Credit card companies' major risks are derived directly from the characteristics of the credit card industry, and are concentrated in credit risk and operational risk.

As part of the operational risk: Beyond the legal risk, a failure in the computer systems, human error, etc., the companies are exposed to damages as a result of misuse of credit cards, fraud, forgery or theft. In 2010 the companies spent NIS 64.5 million for damages or misuse, a rise of 20 percent over 2009. This year these expenses constituted around 1.8 percent of equity capital—a rise of 0.1 percentage point as against 2009, and of 1 percentage point as against 2008.

The major means the credit companies use to deal with this risk are to develop various monitoring systems and procedures that are designed to reduce the incidence of fraud and the misuse of credit cards. Furthermore, the companies have started to develop smart cards as part of the change introduced by the international credit card companies in June 2006, the main element of which is to impose the responsibility for the use of forged cards on the issuer and not on the clearer.

The credit risks to which the credit card companies are exposed are derived directly from the financing activity of extending credit to card holders and businesses, and to customers that do not hold cards. The credit to card holders includes credit in the course of executing a transaction ("credit" transactions, postponement programs, or scheduling payments), direct credit (providing short- and medium-term loans), credit not connected to a transaction (all-purpose credit), and revolving credit. Note that the credit extended to households, which is characterized as being for consumption purposes, is for a short time—usually with a maturity of up to two years, is characterized by a high dispersion, and in most cases is given without any guarantees. Most of the credit to businesses is in the form of loans and discounting, security being provided by customers' transactions and charging the issuer for the payment.

This year, for the first time, the ratio of loan-loss provision to total credit has decreased, in contrast to the trend in recent years. Following a rise in this ratio from 1.1 percent in 2005 to 1.7 percent at the end of 2009, a provision of only 1 percent was recorded this year. This ratio is similar to the ratio of provision that prevails in the financing of individuals (excluding housing loans) by the banking system.

(2) Capital adequacy

The credit card companies operate according to the directives and instructions of the Supervisor of Banks regarding the management of risks and capital adequacy in compliance with Basel II. They are required to meet the same minimal capital adequacy targets determined for the banking corporations—an overall capital ratio of 9 percent, and a core Tier 1 ratio of 7.5 percent.[107]

[107] See the section on capital adequacy for details.

Table 2.30
Principal items from the balance sheet of the three credit card companies, 2009 and 2010

		2009				2010				
		ICC	Leumicard	Isracard Group	Total	ICC	Leumicard	Isrcacard Group	Total	Change compared with 2009
		(NIS million)								(Percent)
Total assets		**8,579**	**7,170**	**13,703**	**29,452**	**8,646**	**7,926**	**15,160**	**31,732**	**7.7**
Of which:	Cash and deposits at banks	546	22	744	1,312	152	63	348	563	-57.1
	Receivables in respect of credit card activity	7,776	6,978	12,340	27,094	8,196	7,684	14,185	30,065	11.0
	Of which: Receivables in respect of credit cards	5,369	5,268	10,603	21,240	5,796	5,837	11,685	23,318	9.8
	Credit to card holders	2,117	1,028	630	3,775	2,103	1,291	731	4,125	9.3
	Credit to businesses	383	228	492	1,103	402	227	421	1,050	-4.8
	Securities	26	0	178	204	25	0	74	99	-51.5
Total liabilities and capital		**8,579**	**7,170**	**13,703**	**29,452**	**8,646**	**7,926**	**15,160**	**31,732**	**7.7**
Of which:	Credit from banking corporations	1,072	977	53	2,102	1,095	1,141	79	2,315	10.1
	Payables in respect of credit card activity	5,899	5,244	12,122	23,265	6,033	5,691	13,158	24,882	7.0
	Of which: Businesses	5,257	4,841	11,720	21,818	5,486	5,074	12,650	23,210	6.4
	Credit card companies	541	322	131	994	447	515	185	1,147	15.4
	Bonds and subordinated notes	43	0	29	72	62	0	72	134	87.6
	Shareholders equity[a]	1,056	834	1,185	3,075	1,131	982	1,453	3,566	16.0

[a] Not including minority interest.

SOURCE: Published financial statements.

Table 2.31
Distribution of capital and capital adequacy ratios of the three credit card companies, 2009 and 2010

	2009				2010			
	ICC	Leumicard	Isracard Group	Total	ICC	Leumicard	Isracard Group	Total
	(NIS million)							
Core capital	1,055	833	1,198	3,086	1,130	982	1,445	3,556
Tier 1 capital	1,055	833	1,198	3,086	1,130	982	1,445	3,556
Tier 2 capital	15	0	29	44	45	0	76	121
Total capital base	**1,070**	**833**	**1,227**	**3,130**	**1,175**	**982**	**1,521**	**3,677**
Credit risk	6,050	4,739	8,407	19,195	5,463	5,288	9,262	20,013
Market risk	83	21	47	151	44	6	81	131
Operational risk	1,673	1,414	1,418	4,506	1,753	1,530	1,608	4,891
Total risk weighted assets	**7,805**	**6,175**	**9,872**	**23,852**	**7,261**	**6,824**	**10,951**	**25,036**
Ratio of capital to risk assets	**13.7**	**13.5**	**12.4**	**13.1**	**16.2**	**14.4**	**13.9**	**14.7**

SOURCE: Published financial statements.

In 2010, the capital adequacy ratio of the three credit card companies rose by 1.6 percentage points, compared with the end of 2009, to an average level of 14.7 percent. This development is a result of the sharp growth of the capital base (for most of the credit card companies this is all core Tier 1 capital), whose source is in two major factors—the growth in profit and the Supervisor of Banks' instruction mandating the ICC–Israel Credit Cards (CAL) company to comply with a capital adequacy ratio of at least 15 percent (Table 2.31 and Figure 2.46). Note that the average capital adequacy ratio in the credit card companies exceeds the 14.2 percent figure of the five large banking groups, which reached a record level in 2010, thanks to, among other things, the credit card companies' high level of profitability.

(3) Profit and profitability

The growth in the number of cards in conjunction with the expansion of economic activity and financing activity, are the major factors underlying the growth in net profit of the credit card companies. Net profit of the credit card companies this year was NIS 581 million—a rise of around 4 percent compared to 2009 (Table 2.32)—and the average return on equity of the three credit card companies stood at 17.1 percent, a decrease of 3 percentage points relative to the previous year, which is attributed to Leumi Card and to ICC. This development is a result, among other things, of the growth in capital, particularly in the wake of the coming into force of the Basel II regulations.

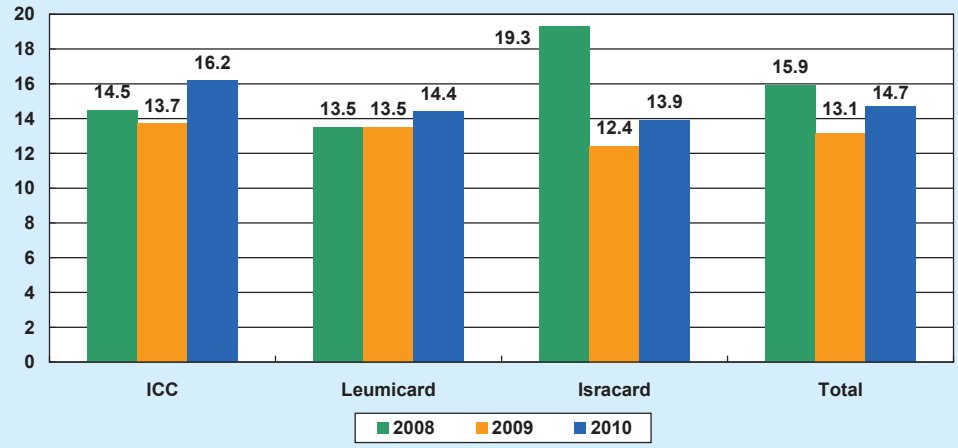
Income from the issuing sector totaled NIS 2.8 billion, an increase of around 4 percent over the previous year. This sector includes the income from operational commissions charged to card holders, income from interchange fees, and the profit from financing services to card holders. Income from commissions increased this year by around 3 percent, while the profit from financing activity rose by around 12 percent. The relatively

Table 2.32
Principal data from the profit and loss statement of the credit card companies, 2009 and 2010

	2009				2010				
	Settlement segment	Issue segment	Other	Total	Settlement segment	Issue segment	Other	Total	Change compared with 2009
	(NIS million)								(Percent)
Income									
Fee income	426	2,370	176	2,972	574	2,438	50	3,062	3.0
Net interest income before loan-loss provision	72	295	29	397	66	331	61	458	15.5
Other	5	10	24	39	3	4	52	59	51.4
Total income	**503**	**2,675**	**230**	**3,407**	**642**	**2,773**	**163**	**3,579**	**5.0**
Expenses									
Provision for loan losses	6	108	24	138	15	54	29	98	-29.2
Operating	284	807	106	1,197	342	896	66	1,304	8.9
Sales and marketing	71	378	8	457	83	375	11	469	2.8
Payments to banks	18	629	0	648	35	644	0	678	4.7
Other	59	119	11	188	61	130	11	201	6.9
Total expenses	**438**	**2,041**	**150**	**2,628**	**535**	**2,098**	**116**	**2,750**	**4.6**
Ordinary before-tax income	65	634	80	779	107	675	47	829	6.3
Provision for taxes	15	188	19	222	30	195	14	239	7.7
Ordinary after-tax income	**50**	**446**	**61**	**557**	**77**	**479**	**33**	**589**	**5.7**
Share of the company and minority interest in ordinary after-tax income/loss	0	1	1	2	0	-7	-1	-8	-
Net income	**50**	**447**	**62**	**559**	**77**	**472**	**32**	**581**	**3.9**
ROE (%)				**20.1**				**17.1**	
ROA (%)				**2.0**				**1.9**	

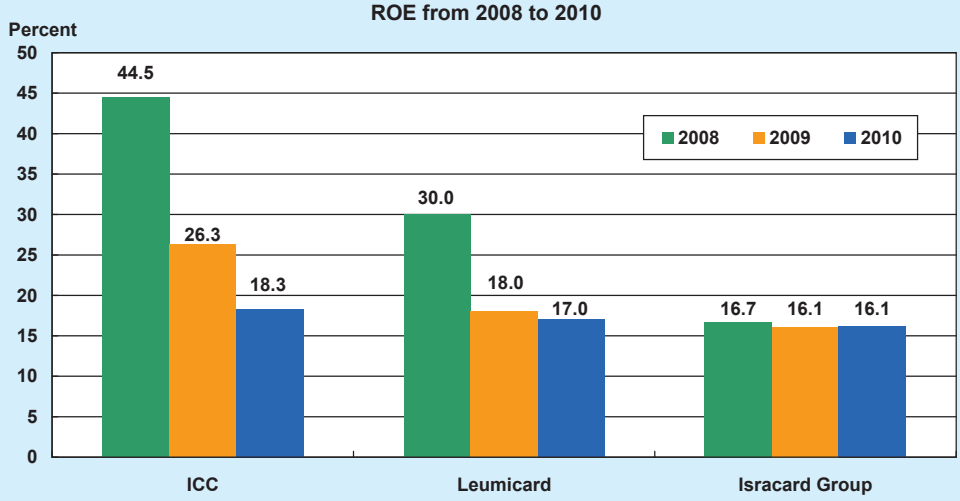
SOURCE: Published financial statements.

Figure 2.46
Credit card companies capital adequacy ratios, 2008 to 2010, Basel II



SOURCE: Published financial statements.

Figure 2.47
ROE from 2008 to 2010



SOURCE: Published financial statements.

small increase in income from commissions, despite the expansion of activity of the credit card customers, is explained by the agreement signed between the companies in 2006 that reduced the rate of interchange fees. The substantial development in profits from financing activity was positively affected by the rise in the volume of credit in conjunction with stability in financial spreads; these are relatively larger than the spreads in the banking corporations, because of the higher risk entailed in the financing activity of the credit card companies. Against this is the growing competition over households, in conjunction with the establishment of consumer groups, a factor that slightly eroded the growth in financing income. The rapid growth of financing profits reflects the continuing expansion of direct financing activities with card-holding customers, and its growing importance as an additional source of income for the credit card companies. Note that even though the major, stable source on the credit card companies' income side is the income from commissions, the rise in the volume of financing activity contributes to the growth of financing profits in the overall income of the issuing sector. To illustrate this: in 2010 the profit from financing activity constituted 12 percent of the income of the issuing sector, as against 4 percent in 2005.

The income of the clearing sector whose source is in commissions from businesses and in financing them, totaled around NIS 642 million this year, an increase of 28 percent as against 2009. Income from commissions grew by around 35 percent against the previous year, and reached NIS 574 million, a consequence of the growth in activity cycles due to a rise in the volume of use, and from the expansion in the number of businesses that allow transactions to be conducted with credit cards. Against this, the profit from financing activity decreased compared with 2009 by around 9 percent, totaling NIS 66 million, as against a rise in this item in the issuing sector. This reduction is a result of the variety of credit sources available to businesses, primarily the banking corporations, most of which offer easier credit conditions.

The expenditure side showed an increase of 5 percent, or NIS 2.7 billion, of which NIS 1.3 billion were operating expenses, which grew by around 9 percent against 2009. Among the major reasons for the increase in expenditure were the expansion of activity with households (both directly and with the mediation of the banking corporations) and businesses, payments to banks, upgrading computer and software systems, and salaries, which grew as a result of improvements the companies introduced into customer service, changes that required recruitment of suitable personnel. Loan-loss provisions had a positive effect on the expenditure of the credit card companies, totaling NIS 98 million, a decrease of 29 percent against 2009. The other expenditure items grew at an average rate of 5 percent, including increased rental costs, attracting and keeping customers, and intensifying the marketing of credit products.

Survey of the credit card industry

1. Background

The use of credit cards as a means of payment began in Israel in the 1970s – late, compared with similar economies around the world. Today, there are three credit card companies which operate in Israel, and are held by major banking groups:

1. The Isracard Group: A managerial and operational entity for three companies held by Bank Hapoalim: Isracard and its related companies, Poalim Express Ltd. and Aminit Ltd.
2. Cal (Cartisey Ashrai Le'Israel) – Israel Credit Cards Ltd.: Jointly held by Israel Discount Bank (72 percent) and First International Bank of Israel (28 percent).
3. Leumi Card – Jointly held by Bank Leumi (80 percent) and the Azrieli Group (20 percent).

Most of the cards issued by these companies are global brands like Visa, Mastercard, Diners, and American Express through franchises which the local companies received from those firms. All the local companies cross-clear the Visa and Mastercard brands, as the result of an agreement signed in 2007. The Isracard consortium has exclusivity in issuing and clearing the local Isracard cards, which are limited to transactions in Israel, and it also has exclusivity in issuing and clearing the American Express brand. Cal has exclusivity in issuing and clearing Diners cards.

The credit card companies are defined, by the Banking (Licensing) Law 5741-1981 as an auxiliary corporation, and as such they may extend credit, like banking corporation operations. The difference is that the credit card companies are not allowed to operate on the deposits side. In their areas of activity, the companies are exposed to the same risks to which the banking corporations are exposed. They are under the supervision of the Supervisor of Banks, so the directives of the Supervisor apply to them as well – including directives on reporting to the public, reporting to the Banking Supervision Department, and Proper Conduct of Banking Business regulations. This also includes instructions regarding meeting capital adequacy ratios set in Basel II. The relations between the credit card companies and their customers are legislated in the Debit Card Law 5746-1986.

2. Main developments in credit card company activities

Up until several years ago, most cards that were issued were bank cards, which primarily served as means of payment, while the financing activities of the credit card companies were relatively limited. In recent years, these companies have tried to utilize their efficient operational platforms in order to enter other activities; and in fact, rapid growth of their financing activities can be seen – granting non-bank credit under the issuers' responsibility. These activities are carried out in two main ways: (1) Issuing non-bank credit cards and revolving credit cards, and (2) extending short term and medium term loans to customers – households and merchants. These two methods combine with the two traditional business lines of credit card companies –

credit without interest, on the account of the merchant, and credit granted by credit card companies in credit transactions with interest charges.

1. The financing activities through non-bank credit cards, including revolving credit cards, provide the customer an additional credit limit (besides the bank credit limit), and allows the customer to manage an additional expense account, and sometimes even parallels the credit limits of bank credit card and the bank credit limit connected to the checking account.

2. An additional financing option, in which there has been a lot of development in recent years, is offered to households and merchants. Credit card companies offer credit for any purpose, a parallel activity to granting bank credit. This financing activity does not necessarily require owning a credit card, and it is offered to all households. Most of this type of credit is not indexed, is granted for the short and medium term, and the borrowers do not need to post collateral. The credit approval process and transfer of funds to customer accounts is short and quick, through direct channels (phone, Internet, etc.). In these loans, unlike revolving credit, the customer is required each month to repay the (full) principal, in addition to interest.

Definitions:

Types of activity of credit card companies:

Issuing: Issuing, marketing, and distribution of credit cards and providing operational services and additional financial services to card holders.

Clearing: Authorizing payment and depositing funds into merchants' accounts for transactions that were conducted with the credit card. For this, the merchant pays a fee and is subject to contractual ties signed with the clearing institution – the credit card company.

Financing: Providing credit to households and companies from the credit card company, and at its responsibility (among other things, through non-bank credit cards).

Types of fees charged for use of credit cards:

Customer fees: Fees paid by the customer to the credit card company for issuing the card, and for various services (card fees, deferred payment fees, early payment fees, foreign transaction fees, and more).

Merchant fee: A fee that the clearing institution (the credit card company) charges to the merchant as payment for transferring the remittance to the merchant for the services or products that were payed for by the merchant's customers' credit cards. An interchange free, described below, is embodied in this fee.

Issuer fee/Interchange fee: A fee that the issuing company retains when it pays the clearing company for a transaction in which the clearing company is not the issuing company.

Types of cards:

1. Bank card: A card issued to a customer by a credit card company, by the bank in which the card holder has a checking account - according to the issuing and distribution agreement that the credit card company signed with that bank, which also distributes the cards through its branches. The card is linked with the customers' checking account, and the issuing bank is required to honor every payment request and debit the customer's account, when they are presented to it by the credit card company. The credit risk for these cards is borne by the bank.

2. Non-bank card: A credit card issued by a credit card company directly to customers, without connection to a bank. These cards are connected, for the most part, to large consumer groups, and are distributed through them. The credit limit granted to customers is without regard to their bank credit limit, and independent of it. It is under the responsibility of the credit card company. The customer is charged through an automatic debit to the bank account.

3. Debit card: An alternative to cash as a means of payment. Use of the card results in an immediate charge to the customer's checking account, at the point of transaction.

4. Deferred debit card: A charge card in which the customer's charges are consolidated and the customer pays on a set date (usually, the 2nd, 10th, or 15th day of the month following the transaction) for the transactions that he conducted during the period. The customer—the card holder—can choose to spread out transactions over installments, which essentially are credit that was granted by the issuer (These are generally credit transactions on which interest is charged)[1] or the merchant. Most credit cards in Israel are deferred debit cards, although in recent years the number of non-bank credit cards has grown, primarily "revolving credit cards" described below.

5. Revolving credit card: In a revolving credit card, the card owner is granted a separate credit facility, which is not connected to his or her bank account. This credit facility is intended to serve as an alternative to the bank credit facility. The card holder sets the periodic payment amount in advance, and the rest of the charges are deferred, or "revolved" to the next month, and accrue interest charges.

6. Pre-paid/Gift card: A card preloaded with an amount of money, and transactions can be conducted with the card. It also serves as a present, and for consumers who want to maintain the confidentiality of a transaction.

7. Virtual Credit card: A virtual credit card allows a consumer to conduct transactions via the Internet, telephone, etc. without using a physical card. The transaction is carried out using a secret code and card number which are known only to the customer.

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[1] In a credit transaction, the merchant receives from the clearer the full payment at the next payment date. For a transaction on the merchant's account, broken into multiple payments, the merchant receives the payment in line with the customer's scheduled payments.

Table A.2.1
Balance sheet of the Israeli banking system[a], unindexed segment[b], 2008 to 2010

	Year-end balance			Change in balance during the year		Rate of change during the year		Distribution of balances		
	2008	2009	2010	2009	2010	2009	2010	2008	2009	2010
	(NIS million)							(Percent)		
Unindexed assets										
Cash and deposits at banks[c]	51,671	108,821	99,334	57,150	-9,486	111	-9	11	19	16
Securities	44,884	52,768	67,810	7,884	15,042	18	29	10	9	11
Securities that were lent or purchased under short sale agreements	1,359	3,488	3,254	2,129	-234	157	-7	0	1	1
Credit to the public	359,772	386,192	435,412	26,421	49,220	7	13	76	69	70
Credit to the government	11	3	20	-8	17	-73	567	0	0	0
Investments in equity-basis investees	91	95	95	4	0	4	0	0	0	0
Other assets	13,619	12,396	17,062	-1,223	4,666	-9	38	3	2	3
Total assets[d]	**471,407**	**563,763**	**622,987**	**92,356**	**59,224**	**20**	**11**	**100**	**100**	**100**
Unindexed liabilities										
Deposits of the public	412,952	434,957	473,279	22,005	38,323	5	9	88	87	86
Deposits of banks	6,770	7,878	5,753	1,108	-2,125	16	-27	1	2	1
Deposits of the government	686	1,098	1,080	412	-18	60	-2	0	0	0
Securities that were lent or sold under repo agreements	424	216	762	-208	546	-49	253	0	0	0
Bonds and subordinated notes	5,831	8,679	16,841	2,848	8,162	49	94	1	2	3
Other liabilities	43,225	46,502	53,967	3,278	7,465	8	16	9	9	10
Total liabilities[d]	**469,887**	**499,330**	**551,683**	**29,443**	**52,353**	**6**	**10**	**100**	**100**	**100**
Surplus of assets (+)/liabilities (-)	**1,520**	**64,434**	**71,304**	**62,913**	**6,871**					
Total effect of derivative instruments	**35,324**	**-15,660**	**-25,958**	**-50,984**	**-10,299**					
Total surplus of assets (+)/liabilities (-)	**36,844**	**48,774**	**45,346**	**11,929**	**-3,428**	**32**	**-7**			

[a] On a consolidated basis. The five largest banks (Leumi, Hapoalim, Discount, First International and Mizrahi-Tefahot), Union Bank, Bank of Jerusalem and Dexia Bank. Not including branches of foreign banks operating in Israel.

[b] Not indexed to the consumer price index. At current prices.

[c] Including deposits at the Bank of Israel.

Table A.2.2
Balance sheet of the Israeli banking system[a], indexed segment[b], 2008 to 2010

	Year-end balance			Change in balance during the year		Rate of change during the year		Distribution of balances		
	2008	2009	2010	2009	2010	2009	2010	2008	2009	2010
	(NIS million)					(Percent)				
Indexed assets										
Cash and deposits at banks[c]	5,023	2,971	2,354	-2,052	-617	-41	-21	2	1	1
Securities	17,353	24,844	20,937	7,490	-3,907	43	-16	8	12	10
Securities that were lent or purchased under short sale agreements	0	0	159	0	159	0	0	0	0	0
Credit to the public	189,136	178,120	186,375	-11,016	8,256	-6	5	88	85	88
Credit to the government	1,748	1,787	1,812	39	25	2	1	1	1	1
Investments in equity-basis investees	48	56	57	8	1	17	2	0	0	0
Other assets	1,620	1,389	1,017	-232	-371	-14	-27	1	1	1
Total assets[d]	**214,928**	**209,166**	**212,712**	**-5,762**	**3,546**	**-3**	**2**	**100**	**100**	**100**
Indexed liabilities										
Deposits of the public	101,302	99,822	95,056	-1,480	-4,765	-1	-5	59	56	53
Deposits of banks	5,141	3,127	2,473	-2,014	-654	-39	-21	3	2	1
Deposits of the government	2,357	2,069	1,640	-288	-429	-12	-21	1	1	1
Securities that were lent or sold under repo agreements	972	0	0	-972	0	0	0	1	0	0
Bonds and subordinated notes	56,140	66,999	69,664	10,859	2,665	19	4	33	37	39
Other liabilities	6,108	7,906	10,281	1,798	2,375	29	30	4	4	6
Total liabilities[d]	**172,019**	**179,923**	**179,114**	**7,904**	**-808**	**5**	**0**	**100**	**100**	**100**
Surplus of assets (+)/liabilities (-)	**42,909**	**29,243**	**33,598**	**-13,666**	**4,354**					
Total effect of derivative instruments	**-35,559**	**-25,843**	**-20,672**	**9,715**	**5,171**					
Total surplus of assets (+)/liabilities (-)	**7,351**	**3,400**	**12,925**	**-3,951**	**9,525**	**-54**	**280**			

[a] On a consolidated basis. The five largest banks (Leumi, Hapoalim, Discount, First International and Mizrahi-Tefahot), Union Bank, Bank of Jerusalem and Dexia Bank. Not including branches of foreign banks operating in Israel.

[b] Indexed to the consumer price index.

[c] Including deposits at the Bank of Israel.

[d] Due to the existence of non-monetary items (mostly premises and equipment) in the balance sheet which are not classified by indexation segment, the amount of these items in this table and in Table A.2.1 and A.2.3 is not necessarily the same as the amount of those items in Table 2.1 (Total balance sheet).

SOURCE: Published financial statements.

Table A.2.3
Balance sheet of the Israeli banking system[a], foreign-currency indexed segment[b], 2008 to 2010

	Year-end balance			Change in balance during the year		Rate of change during the year		Distribution of balances		
	2008	2009	2010	2009	2010	2009	2010	2008	2009	2010
	(NIS million)					(Percent)				
Foreign-currency and foreign-currency indexed assets										
Cash and deposits at banks[c]	69,284	48,992	33,955	-20,293	-15,037	-29	-31	20	17	13
Securities	67,385	67,993	58,311	609	-9,682	1	-14	19	24	23
Securities that were lent or purchased under short sale agreements	76	0	16	-76	16	-100	0	0	0	0
Credit to the public	183,024	156,804	150,904	-26,220	-5,900	-14	-4	53	55	59
Credit to the government	524	1,183	547	659	-636	126	-54	0	0	0
Investments in equity-basis investees	11	7	7	-4	0	-36	0	0	0	0
Other assets	26,670	12,393	11,881	-14,277	-512	-54	-4	8	4	5
Total assets[d]	**346,974**	**287,372**	**255,620**	**-59,602**	**-31,751**	**-17**	**-11**	**100**	**100**	**100**
Foreign-currency and foreign-currency indexed liabilities										
Deposits of the public	305,572	301,215	277,826	-4,357	-23,390	-1	-8	86	90	90
Deposits of banks	8,517	7,874	7,408	-643	-466	-8	-6	2	2	2
Deposits of the government	493	483	711	-10	228	-2	47	0	0	0
Securities that were lent or sold under repo agreements	7,606	8,502	7,857	896	-645	12	-8	2	3	3
Bonds and subordinated notes	4,755	3,032	2,356	-1,722	-676	-36	-22	1	1	1
Other liabilities	29,184	13,883	13,781	-15,301	-102	-52	-1	8	4	4
Total liabilities[d]	**356,126**	**334,989**	**309,939**	**-21,137**	**-25,050**	**-6**	**-7**	**100**	**100**	**100**
Surplus of assets (+)/liabilities (-)	**-9,152**	**-47,617**	**-54,319**	**-38,465**	**-6,702**					
Total effect of derivative instruments	**236**	**41,500**	**46,617**	**41,264**	**5,117**					
Total surplus of assets (+)/liabilities (-)	**-8,917**	**-6,117**	**-7,702**	**2,799**	**-1,585**					

[a] On a consolidated basis. The five largest banks (Leumi, Hapoalim, Discount, fsn and Mizrahi-Tefahot), Union Bank, Bank of Jerusalem and Dexia Bank. Not including branches of foreign banks operating in Israel.

[b] Foreign-currency denominated and indexed.

[c] Including deposits at the Bank of Israel.

[d] Due to the existence of non-monetary items (mostly premises and equipment) in the balance sheet which are not classified by indexation segment, the amount of these items in this table and in Table A.2.1 and A.2.2 is not necessarily the same as the amount of those items in Table 2.1 (Total balance sheet).

SOURCE: Published financial statements.

Table A.2.4
Distribution of credit to the public[a], commercial banks only, on a bank basis, 2008 to 2010

	Year-end balance			Real change compared with end of previous year		Average balance		Real change in average balances	Distribution of average balances	
	At Decemember 2009 prices					At December 2009 prices			Averages	
	2008	2009	2010	2009	2010	2009	2010	2010	2009	2010
	(NIS million)					(NIS million)		(Percent)	(Percent)	
Total credit to the public	585,340	580,851	624,463	-1	8	585,030	600,389	3	100	100
Total local currency credit	475,168	487,752	534,841	3	10	479,827	506,490	6	82	84
Unindexed local currency	329,455	347,230	387,101	5	11	336,905	365,025	8	58	61
Revolving credit lines and overdrafts[b]	44,789	38,462	35,676	-14	-7	38,941	38,158	-2	7	6
Other term credit[b]	237,289	278,555	321,793	17	16	261,889	296,519	13	45	49
On-call credit	47,376	30,213	29,631	-36	-2	36,075	30,348	-16	6	5
CPI-indexed local currency	145,713	140,522	147,740	-4	5	142,922	141,465	-1	24	24
Total local currency credit	110,172	93,099	89,623	-15	-4	105,203	93,899	-11	18	16
Total foreign currency credit to residents	86,084	73,030	70,817	-15	-3	82,522	74,132	-10	14	12
Of which: Indexed to foreign currency	3,442	3,807	4,210	11	11	3,743	4,060	8	1	1
Total foreign currency credit to nonresidents	24,088	20,068	18,805	-17	-6	22,680	19,767	-13	4	3

[a] The credit includes credit to the public from earmarked deposits.

[b] Includes credit at the bank's risk only and does not include credit to specialized banks.

Table A.2.5.

Average effective rates of return on selected assets and liabilities in the different indexation segments, annualized, 2009 and 2010

	Annual average		2010				Annual average		2010			
	2009	2010	I	II	III	IV	2009	2010	I	II	III	IV
	(Nominal rates)						(Expected real rates)[g]					
Unindexed local currency segment												
Demand deposits[a]	0.1	0.2	0.2	0.2	0.3	0.3	-1.7	-2.6	-2.6	-2.5	-2.5	-2.7
SRO[a]	0.4	1.0	0.7	0.9	1.0	1.3	-1.3	-1.8	-2.0	-1.8	-1.8	-1.7
Time deposits[a]	1.1	1.6	1.2	1.5	1.7	1.9	-0.7	-1.3	-1.6	-1.2	-1.2	-1.1
Total unindexed deposits	**0.8**	**1.2**	**0.9**	**1.2**	**1.3**	**1.5**	**-1.0**	**-1.6**	**-1.8**	**-1.5**	**-1.5**	**-1.5**
Term credit[a]	3.7	4.5	4.2	4.4	4.5	4.8	1.9	1.6	1.3	1.6	1.7	1.7
Revolving credit lines and overdrafts[a]	8.0	9.2	8.8	9.1	9.3	9.7	6.1	6.2	5.8	6.2	6.3	6.4
Total unindexed credit (term, revolving and overdrafts)	8.0	9.2	8.8	9.1	9.3	9.7	6.1	6.2	5.8	6.2	6.3	6.4
Makam[b]	1.4	1.9	1.8	2.2	1.3	2.4	-0.5	-0.9	-1.0	-0.6	-1.5	-0.6
Total unindexed credit (term, revolving and overdrafts)	**4.2**	**5.0**	**4.7**	**4.9**	**5.0**	**5.3**	**2.4**	**2.0**	**1.8**	**2.1**	**2.1**	**2.2**
Total unindexed credit												
Effective declared Bank of Israel interest rate[c]	**0.8**	**1.6**	**1.3**	**1.5**	**1.5**	**2.0**						
CPI-indexed local currency segment												
Saving plans[d]							0.4	0.2	0.2	0.2	0.2	0.2
CPI-indexed bonds[e]							1.6	1.1	1.3	1.1	0.7	.
CPI-indexed credit[f]							3.6	3.1	3.2	3.5	2.7	3.0

Table A.2.5 (contd.)

Average effective rates of return on selected assets and liabilities in the different indexation segments, annualized, 2009 and 2010

	Annual average		2010				Annual average		2010			
	2009	2010	I	II	III	IV	2009	2010	I	II	III	IV
			(In dollar terms)[g]						(Expected real rates)[h]			
Foreign-currency denominated and indexed segment												
Patzam	0.1	0.0	0.0	0.0	0.0	0.1	8.7	-7.5	-12.0	-7.6	-3.6	-6.7
Foreign-currency denominated deposits[i]	0.3	0.4	0.3	0.5	0.4	0.6	8.8	-7.1	-11.7	-7.2	-3.2	-6.3
Foreign-currency indexed credit	2.9	2.6	2.5	2.6	2.6	2.5	11.8	-5.1	-9.8	-5.2	-1.1	-4.4
Foreign-currency credit to residents	2.2	2.3	2.2	2.3	2.2	2.3	11.0	-5.4	-10.0	-5.5	-1.5	-4.7
Deposits at banks abroad[j]	0.6	0.2	0.1	0.3	0.3	0.2	9.2	-7.3	-11.9	-7.3	-3.4	-6.6

[a] Effective return/cost according to returns from the seven largest banks.

[b] Yield on 2-month Makam (in the market).

[c] The annual effective interest rate on monetary loan tenders and on deposit tenders at the Bank of Israel. These interest rates are usually equal to the effective declared Bank of Israel interest rate plus or minus a number of percentage points. The banks bid at the Bank of Israel tenders (deposit and monetary loan tenders) in accordance with their liquidity requirements. Accordingly, there is not a demand for loans or supply of deposits at every tender.

[d] Average interest rate on saving plans.

[e] Gross average yield to maturity of 5-year (or approximately 5-year) CPI-indexed bonds in the market.

[f] According to the credit costs report issued during the month.

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

[h] The expected real interest rates were calculated via the public's inflation expectations as derived from the capital market, and the expected exchange rate was calculated as the actual rate of depreciation in the previous 12 months.

[i] Including Patach, Patam and Patam-restitutions of residents and nonresidents.

[j] The 3-month LIBOR rate.

SOURCE: Returns to the Banking Supervision Department.

TableA.2.6

Distribution of problem loans and their components, five largest banking groups. 2008 to 2010

	Year	Leumi	Hapoalim	Discount	Mizrahi Tefahot	First International	Five groups
Non-performing	2008	2,012	4,108	2,347	1,145	713	10,325
	2009	1,846	3,976	2,430	908	643	9,803
	2010	1,364	3,632	2,140	1,142	545	8,823
Rescheduled	2008	405	848	366	194	324	2,137
	2009	679	767	1,497	1,079	215	4,237
	2010	906	1,493	1,827	455	109	4,790
Due to be rescheduled	2008	558	1,884	231	307	3	2,983
	2009	410	2,419	266	126	26	3,247
	2010	482	1,028	91	-	-	1,601
In temporary arrears	2008	562	703	832	1,034	153	3,284
	2009	534	765	644	746	106	2,795
	2010	297	499	485	781	92	2,154
Under special supervision	2008	14,545	6,075	4,427	3,275	2,430	30,752
	2009	12,399	5,924	3,703	1,766	1,928	25,720
	2010	9,921	5,418	3,433	1,153	1,503	21,428
Of which: Debts for which a specific provision exists	2008	7,373	3,919	622	682	301	12,897
	2009	6,313	4,206	903	50	230	11,702
	2010	5,946	3,857	403	19	145	10,370
Of which: Housing loans for which there is a loan-loss provision according to the depth of the arrears	2008	505	460	178	615	100	1,858
	2009	439	453	156	539	125	1,712
	2010	383	407	133	470	112	1,505
Total balance-sheet credit to problem borrowers	**2008**	**18,082**	**13,618**	**8,203**	**5,955**	**3,623**	**49,481**
	2009	**15,868**	**13,851**	**8,540**	**4,625**	**2,918**	**45,802**
	2010	**12,970**	**12,070**	**7,976**	**3,531**	**2,249**	**38,796**

Table A.2.6 (contd.)

Distribution of problem loans and their components, five largest banking groups.
2008 to 2010

	Year	Leumi	Hapoalim	Discount	Mizrahi Tefahot	First International	Five groups
				(NIS million)			
Off-balance-sheet credit to problem borrowers	2008	3,482	2,040	1,359	941	407	8,229
	2009	3,065	2,591	872	688	315	7,531
	2010	2,634	2,653	807	655	370	7,119
Bonds of problem borrowers	2008	506	358	64	112	38	1,078
	2009	683	144	12	-	31	870
	2010	465	102	172	-	42	781
Other assets related to derivatives of problem borrowers	2008	-	-	-	-	-	-
	2009	252	9	24	-	-	285
	2010	48	70	2	-	-	120
Total exposure to problem borrowers	**2008**	**22,682**	**16,028**	**9,835**	**7,008**	**4,068**	**59,621**
	2009	**19,868**	**16,595**	**9,448**	**5,313**	**3,264**	**54,488**
	2010	**16,117**	**14,895**	**8,957**	**4,186**	**2,661**	**46,816**
Total credit risk of problem banks	2008	108	57	6	12	-	183
	2009	190	41	11	42	-	284
	2010	6	-	14	26	-	46
Total credit risk in respect of problem borrowers and banks	**2008**	**22,790**	**16,085**	**9,841**	**7,020**	**4,068**	**59,804**
	2009	**20,058**	**16,636**	**9,459**	**5,355**	**3,264**	**54,772**
	2010	**16,123**	**14,895**	**8,971**	**4,212**	**2,661**	**46,862**

SOURCE: Published financial statements.

Table A.2.7

Distribution of outstanding credit to the public[a] by borrower size at the five largest banking groups, 2009 and 2010

Credit to borrower	Outstanding credit to the public and off-balance-sheet credit risk		Number of borrowers		Average outstanding credit		Cumulative share of total outstanding credit		Cumulative share of borrowers	
	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010
(NIS thousand)	(NIS million)				(NIS thousand)		(Percent)		(Percent)	
Up to 10	18,019	13,527	3,732,259	3,749,045	5	4	100.00	100.00	100.00	100.00
Above 10 to 20	18,643	18,379	1,072,045	1,196,598	17	15	98.30	98.80	51.38	54.39
Above 20 to 40	30,400	34,674	931,933	1,163,453	33	30	96.60	97.20	37.41	39.84
Above 40 to 80	47,442	52,446	804,741	928,434	59	56	93.70	94.20	25.27	25.69
Above 80 to 150	51,695	53,208	476,592	498,215	108	107	89.30	89.60	14.79	14.40
Above 150 to 300	66,124	64,533	317,305	310,752	208	208	84.50	84.90	8.58	8.34
Above 300 to 600	82,891	87,816	198,542	208,362	417	421	78.30	79.20	4.45	4.56
Above 600 to 1,200	73,090	88,408	91,274	108,824	801	812	70.60	71.50	1.86	2.03
Above 1,200 to 2,000	32,357	39,908	21,568	26,612	1,500	1,500	63.80	63.80	0.67	0.71
Above 2,000 to 4,000	35,344	39,499	12,842	14,501	2,752	2,724	60.80	60.30	0.39	0.39
Above 4,000 to 8,000	37,760	39,875	6,744	7,126	5,599	5,596	57.50	56.80	0.22	0.21
Above 8,000 to 20,000	65,814	66,099	5,283	5,343	12,458	12,371	54.00	53.30	0.13	0.12
Above 20,000 to 40,000	69,332	66,532	2,511	2,429	27,611	27,391	47.90	47.50	0.06	0.06
Above 40,000 to 200,000	198,538	203,366	2,473	2,563	80,282	79,347	41.40	41.70	0.03	0.03
Above 200,000 to 400,000	82,908	98,097	297	354	279,152	277,110	22.90	23.80	0.00	0.00
Above 400,000 to 800,000	70,320	85,858	125	155	562,560	553,923	15.20	15.20	0.00	0.00
Above 800,000 to 1,200,000	43,059	38,031	45	39	956,867	975,154	8.60	7.70	0.00	0.00
Above 1,200,000 to 1,600,000	22,549	15,071	16	11	1,409,313	1,370,091	4.60	4.40	0.00	0.00
Above 1,600,000 to 2,000,000	8,513	19,530	5	11	1,702,600	1,775,455	2.50	3.00	0.00	0.00
Above 2,000,000 to 2,400,00	8,676	2,130	4	1	2,169,000	2,130,000	1.70	1.30	0.00	0.00
Above 2,400,000 to 2,800,000	5,250	2,666	2	1	2,625,000	2,666,000	0.90	1.10	0.00	0.00
Above 2,800,000 to 3,200,000		2,900		1		2,900,000	0.40	0.90	0.00	0.00
Above 3,200,000	4,521	7,387	1	2	4,521,000	3,693,500	0.40	0.70	0.00	0.00
Total	**1,073,245**	**1,139,940**	**7,676,607**	**8,222,832**	**140**	**139**	**100.00**	**100.00**	**100.00**	**100.00**

[a] Including outstanding credit to the public after deduction of specific provisions for loan losses, plus fair value of derivative instruments, and credit risk in off-balance-sheet financial instruments calculated for the purpose of borrower indebtedness restrictions.

SOURCE: Published financial statements.

Table A.2.8

Securities portfolio of the five largest banking groups, 2009 and 2010[a]

		Bank Leumi				Bank Hapoalim				Bank Discount			
		2009		2010		2009		2010		2009		2010	
		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 maturitiy	Government bonds	793	1.4	-	-	80	0.3	53	0.2	1,561	4.3	4,785	12.9
	Other Bonds	59	0.1	-	-	713	2.5	740	2.3	428	1.2	1,967	5.3
	Total bonds held to maturity	852	1.5	-	-	793	2.8	793	2.5	1,989	5.5	6,752	18.2
Securities available for sale	Government bonds	24,529	42.7	27,483	49.3	17,445	62.2	21,740	68.8	18,937	52.1	17,430	46.9
	Other Bonds	19,752	34.3	16,774	30.1	5,069	18.1	4,430	14.0	12,554	34.5	10,120	27.2
	Total bonds available for sale	44,281	77.0	44,257	79.3	22,514	80.2	26,170	82.8	31,491	86.7	27,550	74.1
	Total shares available for sale	2,490	4.3	2,859	5.1	1,476	5.3	2,221	7.0	703	1.9	681	1.8
	Total securities available for sale	46,771	81.3	47,116	84.5	23,990	85.5	28,391	89.8	32,194	88.6	28,231	75.9
Securities for trading	Government bonds	7,428	12.9	6,538	11.7	3,096	11.0	1,800	5.7	2,033	5.6	2,063	5.5
	Other Bonds	2,357	4.1	1,860	3.3	132	0.5	556	1.8	112	0.3	118	0.3
	Total bonds for trading	9,785	17.0	8,398	15.1	3,228	11.5	2,356	7.5	2,145	5.9	2,181	5.9
	Total shares for trading	97	0.2	277	0.5	44	0.2	64	0.2	10	-	12	-
	Total securities for trading	9,882	17.2	8,675	15.5	3,272	11.7	2,420	7.7	2,155	5.9	2,193	5.9
	Total government bonds	32,750	57.0	34,021	61.0	20,621	73.5	23,593	74.7	22,531	62.0	24,278	65.3
	Total other bonds	22,168	38.5	18,634	33.4	5,914	21.1	5,726	18.1	13,094	36.0	12,205	32.8
	Total bonds	54,918	95.5	52,655	94.4	26,535	94.6	29,319	92.8	35,625	98.0	36,483	98.1
	Total shares	2,587	4.5	3,136	5.6	1,520	5.4	2,285	7.2	713	2.0	693	1.9
	Total securities	57,505	100.0	55,791	100.0	28,055	100.0	31,604	100.0	36,338	100.0	37,176	100.0
	Of which: Total other securities	24,755	43.0	21,770	39.0	7,434	26.5	8,011	25.3	13,807	38.0	12,898	34.7

Table A.2.8 (continued)

Securities portfolio of the five largest banking groups, 2009 and 2010[a]

		Mizrahi-Tefahot				First International				Five largest banking groups			
		2009		2010		2009		2010		2009		2010	
		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 millon)	Distribution (Percent)
Bonds held to maturity	Government bonds	-	-	-	-	57	0.4	594	3.8	2,491	1.7	5,432	3.7
	Other Bonds	-	-	-	-	268	1.9	390	2.5	1,468	1.0	3,097	2.1
	Total bonds held to maturity	-	-	-	-	325	2.3	984	6.2	3,959	2.8	8,529	5.8
Securities available for sale	Government bonds	5,993	78.4	6,126	82.2	6,197	43.3	7,127	45.1	73,101	50.8	79,906	54.1
	Other Bonds	1,307	17.1	953	12.8	6,110	42.7	4,755	30.1	44,792	31.1	37,032	25.1
	Bonds available for sale	7,300	95.5	7,079	95.0	12,307	86.0	11,882	75.2	117,893	82.0	116,938	79.1
	Total shares available for sale	86	1.1	81	1.1	206	1.4	917	5.8	4,961	3.4	6,759	4.6
	Total securities available for sale	7,386	96.6	7,160	96.1	12,513	87.4	12,799	81.0	122,854	85.4	123,697	83.7
Securities for trading	Government bonds	251	3.3	285	3.8	1,361	9.5	1,676	10.6	14,169	9.8	12,362	8.4
	Other Bonds	6	0.1	4	0.1	102	0.7	313	2.0	2,709	1.9	2,851	1.9
	Total bonds for trading	257	3.4	289	3.9	1,463	10.2	1,989	12.6	16,878	11.7	15,213	10.3
	Total shares for trading	-	-	-	-	8	0.1	30	0.2	159	0.1	383	0.3
	Total securities for trading	257	3.4	289	3.9	1,471	10.3	2,019	12.8	17,037	11.8	15,596	10.6
	Total government bonds	6,244	81.7	6,411	86.1	7,615	53.2	9,397	59.5	89,761	62.4	97,700	66.1
	Total other bonds	1,313	17.2	957	12.8	6,480	45.3	5,458	34.5	48,969	34.0	42,980	29.1
	Total bonds	7,557	98.9	7,368	98.9	14,095	98.5	14,855	94.0	138,730	96.4	140,680	95.2
	Total shares	86	1.1	81	1.1	214	1.5	947	6.0	5,120	3.6	7,142	4.8
	Total securities	7,643	100.0	7,449	100.0	14,309	100.0	15,802	100.0	143,850	100.0	147,822	100.0
	Of which: Total other securities	1,399	18.3	1,038	13.9	6,694	46.8	6,405	40.5	54,089	37.6	50,122	33.9

[a] In this table, mortgage backed securities (MBS) issued by US government agencies (FNMA, FHLMC and GNMA) are included in the "Bonds of others" item, whether or not a government guarantee exists for them.

SOURCE: Published financial statements.