

Chapter 4

External Financial Stability

In 2001, as in the two previous years, Israel's financial stability in terms of its external and forex activity improved perceptibly, as reflected in less sensitivity of the NIS-forex market to shocks. Israel's external financial stability is evidenced in an analysis of long-term developments on the basis of main indicators of economic vulnerability in various aspects of financial activity with the rest of the world and in forex. The analysis shows that since 1999, corresponding to Israel's increasing global integration—as manifested in an uptrend in its external assets and liabilities, which exacerbates its exposure to external events—the country's external financial vulnerability has been declining. This is due to the improvement in indicators of external debt and of the business sector's susceptibility to currency depreciation; it also reflects greater efficiency in the NIS-forex market and an improvement in main underlying conditions. However, the analysis points to a distortion in the perception of the economy's exchange-rate risk, as reflected in unexpectedly low volatility due to distorting direct and indirect effects of the policies and activities of the Government and the Bank of Israel.

1. INTRODUCTION

Financial stability reflects the ability of financial systems and markets to perform efficient, uninterrupted financial intermediation and to withstand financial and other shocks. Generally speaking, the term 'financial stability' denotes a low probability of financial crisis, i.e., a material blow to the performance of the financial markets—such as the allocation of credit and the pricing of financial assets—and of the collapse of payment and clearing systems.

This chapter focuses on only one aspect of financial stability, one related directly to Israel's external financial and forex activity and, especially, the stability of its NIS-forex market. This aspect is called 'external financial stability.'

To monitor external financial stability, a basic array of indicators that can help to identify focal points of risk and vulnerability has been devised. The indicators at issue measure levels of exposure to risks associated with external and forex activity and gauge trends in underlying variables that may affect these levels.

The indicators of external financial vulnerability are divided into three fields. The first is the economy's risk exposure in its external financial activity, on both the liabilities side and the assets side. The risks on the liabilities side are related to an increase in the value and liquidity of external liabilities and the menace of capital flight; assets-side risks are related mainly to adverse developments in foreign financial markets that may impair the value and liquidity of assets. The second field concerns the nonbanking private sector's exposure to exchange-rate changes; the risk examined is that of changes in both directions (appreciation/depreciation) and the damage such changes would inflict on the nonbanking private sector and the economy at large. The third field relates to structural flaws in the NIS-forex market that diminish market efficiency and/or dislodge the exchange rate from its long-term equilibrium; the focus is on risks related to inefficiencies in the NIS-forex market, e.g., the ability to conduct trading, market depth, market tradability, and distortions occasioned by public-sector involvement. In addition to these three fields, indicators that illuminate the underlying conditions of external financial activity in various respects are used.

Since this is an innovative subject, it is very important to analyze vulnerability from a long-term perspective. Thus, Section 2 analyzes Israel's external financial vulnerability trend in 1995–2001, with special reference to 2001. Additionally, it is the conventional practice, especially in reference to developing and emerging economies, to separate one cluster of external financial vulnerability indicators from the aggregate—that related to external debt and credit risk—and analyze it alone. A focused analysis of this kind, relating to the trends in Israel's external debt in 2001 in the context of financial vulnerability, is presented in Section 3.

2. DEVELOPMENTS IN ISRAEL'S EXTERNAL FINANCIAL VULNERABILITY, 1995–2001

An analysis of the entire 1995–2001 period reveals contrasting developments in various fields of external financial vulnerability: Israel's external vulnerability on the assets and liabilities sides increased, whereas vulnerability in net external activity decreased. In the middle of the period reviewed, the nonbanking private sector crossed over from depreciation vulnerability to appreciation vulnerability in its forex activity, whereas the business sector's exposure to depreciation risk declined appreciably in 1998–2001. Vulnerability flowing from inefficiencies in the forex market decreased, although there were signs of a distortion in the exchange-rate risk, as reflected in lower-than-expected volatility of the exchange rate.

In the course of 2001, Israel's external financial vulnerability decreased in several respects, foremost net external liabilities and inefficiencies in the NIS-forex market. In contrast, the economy became more vulnerable in its external financial activity on the liabilities and assets sides.

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a. Vulnerability in external activity

(1) Vulnerability regarding external liabilities

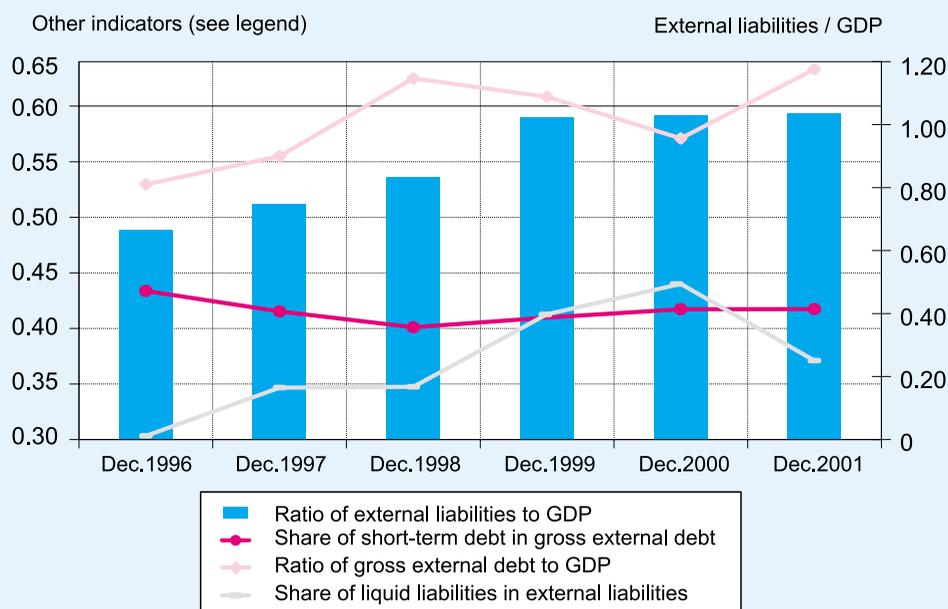
Most indicators point to an increase in vulnerability during the period reviewed (Figure 4.1). The external liabilities/GDP ratio suggests that the economy is increasingly dependent on external players, mainly due to the large increase in equity issues abroad. The share of liquid liabilities that are sensitive to rapid capital outflow has increased over the past three years. However, the external debt/GDP ratio and the share of short-term debt in total debt have developed in contrasting directions and at different velocities during the period of the analysis.

Israel became more vulnerable in 2001 due to an increase in its external liabilities and its gross external debt. This vulnerability, however, was mitigated by a decrease in the liquidity of its liabilities.

(2) Net external liabilities

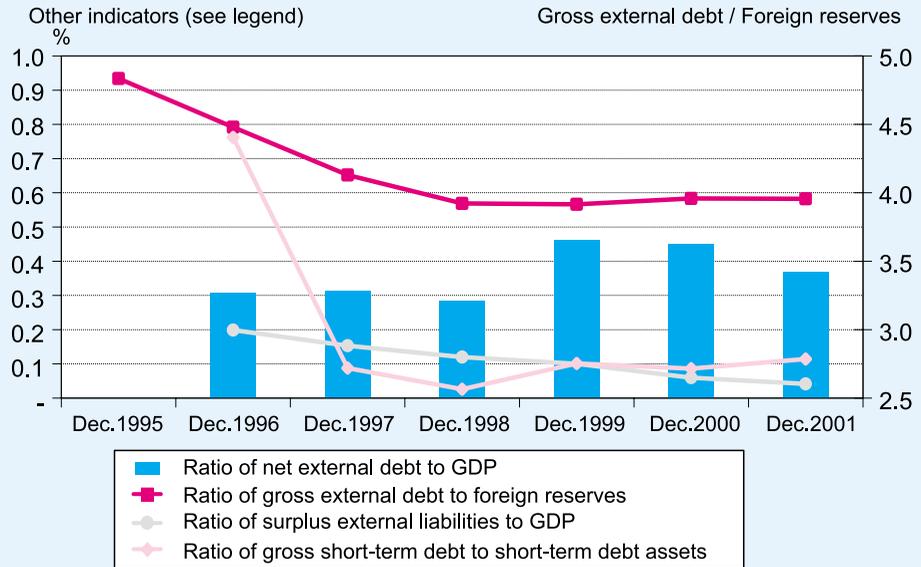
The ratio of surplus external liabilities to GDP, which reflects the economy's overall exposure to externalities, increased in 1995–2000 (Figure 4.2). In contrast, the ratio of net external debt to GDP declined because of a strong upturn in financing from equity sources. Two risk indicators—the ratio of short-term debt to short-term debt assets, and the share of gross external debt that is covered by foreign reserves—attest to an improvement in Israel's external liquidity.

Figure 4.1
Indicators of Financial Vulnerability - External Liabilities, 1996-2001



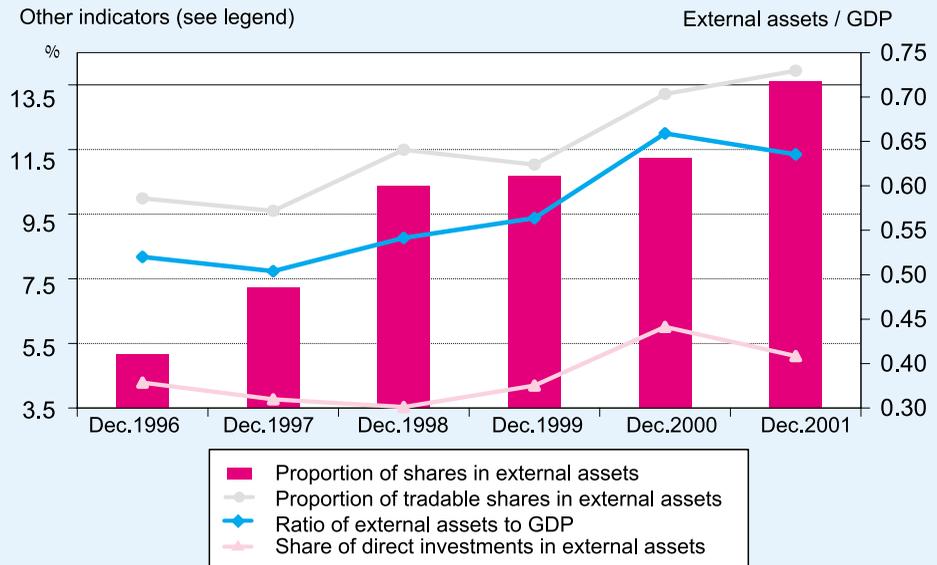
SOURCE: Central Bureau of Statistics, processed by Controller of Foreign Exchange.

Figure 4.2
Indicators of Financial Vulnerability - Net External Liabilities, 1995-2001



SOURCE: Central Bureau of Statistics, processed by Controller of Foreign Exchange.

Figure 4.3
Indicators of Financial Vulnerability - External Assets, 1996-2001



SOURCE: Central Bureau of Statistics, processed by Controller of Foreign Exchange.

Vulnerability declined in 2001 due to decreases in surplus liabilities and external debt, notwithstanding a decrease in foreign-exchange liquidity.

(3) Vulnerability regarding external assets

All vulnerability indicators trended upward during the analysis period (Figure 4.3). The increase in the external assets/GDP ratio, a reflection of the upturn in external economic activity, makes the economy more susceptible to various kinds of externalities, foremost erosion of the value and liquidity of assets. The rise in share indices in recent years also reflects an increase in the proportion of investments that involve two kinds of risk: bankruptcy and price volatility. The increase in the share of direct investments reflects a decline in the liquidity of Israel's assets.

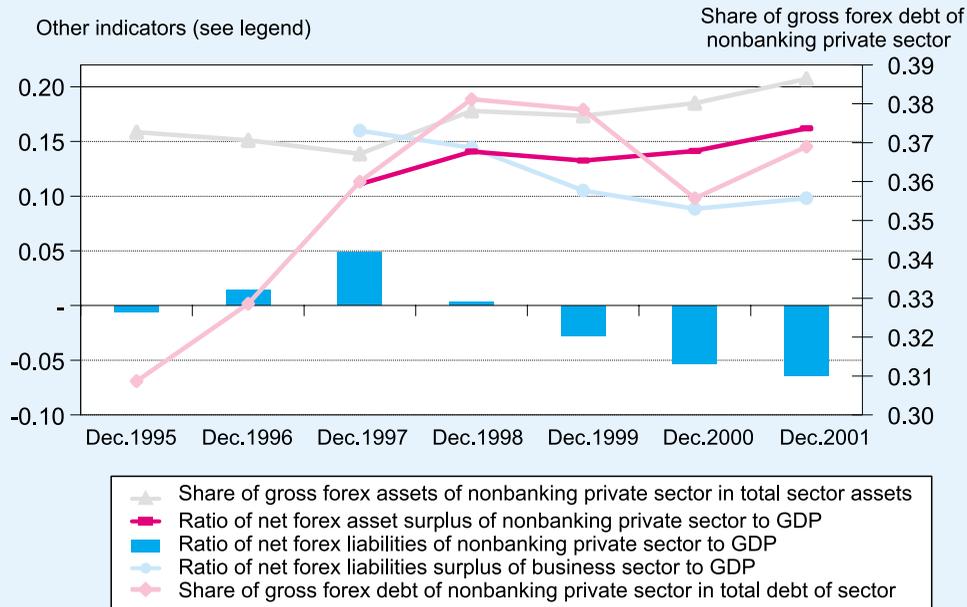
Vulnerability increased in 2001 due to growth in external assets coupled with a decline in their liquidity. However, the vulnerability associated with exposure to price changes decreased this year, as reflected in a proportional decline in investments in equity instruments, especially tradable ones.

b. Vulnerability of the nonbanking private sector in forex activity

This type of vulnerability (Figure 4.4) concerns the risk of abrupt bidirectional changes in the exchange rate. The vulnerability trend changed in the middle of the analysis period: the nonbanking private sector crossed over from depreciation exposure to a

The vulnerability trend was reversed in 1997 due to the decline of the business sector's exposure to depreciation risk, which had increased rapidly beforehand.

Figure 4.4
Indicators of Financial Vulnerability - Forex Activity of the Nonbanking Private Sector, 1995-2001



SOURCE: Reports from banks, processed by Controller of Foreign Exchange.

similar level of appreciation exposure. The share of forex assets in total assets increased during most of the period; the share of forex debt increased at first and declined later on. Analysis of the exposure by subsectors shows that the change in vulnerability trend was occasioned by a rapid increase in the business sector's susceptibility to depreciation until 1997 and a decrease in its exposure afterwards.

In 2001, the nonbanking private sector became more vulnerable for two reasons: greater exposure to currency appreciation and an increase in the share of forex in its debt. Examination at the level of subsectors shows that the business sector became more vulnerable to depreciation and the non-business sector to appreciation.

c. Vulnerability due to inefficiencies in the NIS-forex market

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Three indicators attest to greater efficiency in the NIS-forex market (Figure 4.5): broadening of the exchange-rate band, larger trading volumes, and the entry of foreign financial institutions. Two additional other indicators—the distance of the exchange rate from the lower limit of the band and the standard deviation of the NIS-USD exchange rate—were unchanged (except in 1998) and were small, seemingly due to the direct and indirect effects of policies and actions of the Government and the Bank of Israel. Notably, the standard deviation of the NIS-USD exchange rate is also low relative to other currencies' exchange rates against the dollar.

Vulnerability declined in 2001 because fears of central-bank intervention in trade subsided and because tradability in the forex market increased. However, there were rising indications of a distortion in the market's perception of the exchange rate-risk: the risk continued to contract even though the trading band widened, as evidenced by the implicit standard deviation in NIS-USD options.

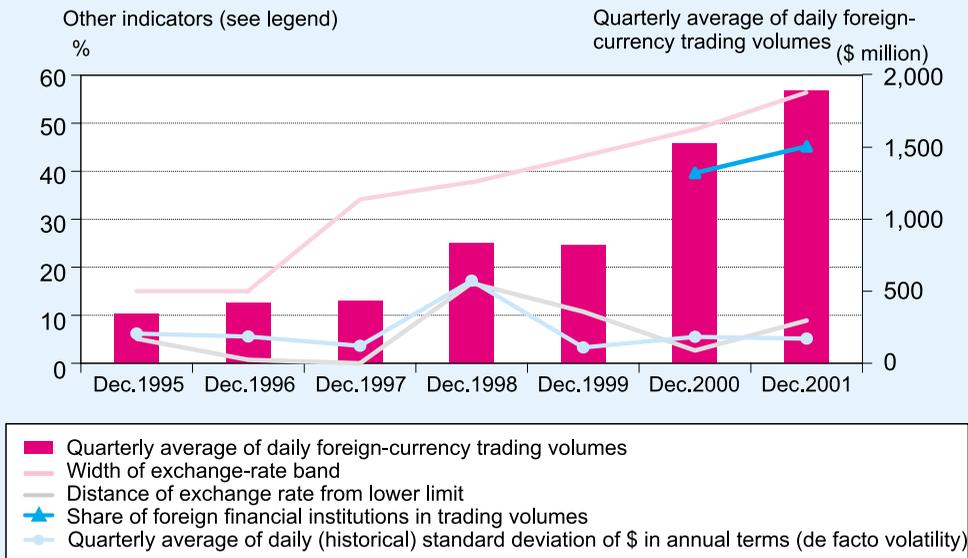
Apart from the three aforementioned types of vulnerability, we examine, as stated, developments in the market's underlying variables (Figures 4.6 and 4.7¹). Although the trends were uneven, most indicators pointed to an improvement since 1998. Thus, the Israel-U.S. inflation spread narrowed and the interest spread between Israel and the rest of the world has been declining since 1996; both trends mitigate the incentive to engage in speculative activity. The ratio of M2 to reserves declined until 1998 and, although it increased afterwards, it did not return to its level at the beginning of the period. This points to an improvement in the adequacy of reserves. Finally, Israel's country risk rating improved steadily.

In 2001, the underlying variables moved in contrasting directions. The inflation spread narrowed but the interest spread widened. The ratio of M2 to reserves was unchanged, the country risk rating worsened (according to some indicators; according to others, it was unchanged), but the risk premium declined.

It is problematic if not misleading to create a single general index of external financial vulnerability on the basis of the diverse indicators. Thus, to provide a general picture one must use estimates and subjective insights about the relative importance of each indicator and keep the underlying conditions in mind. In a long-term analysis, it seems

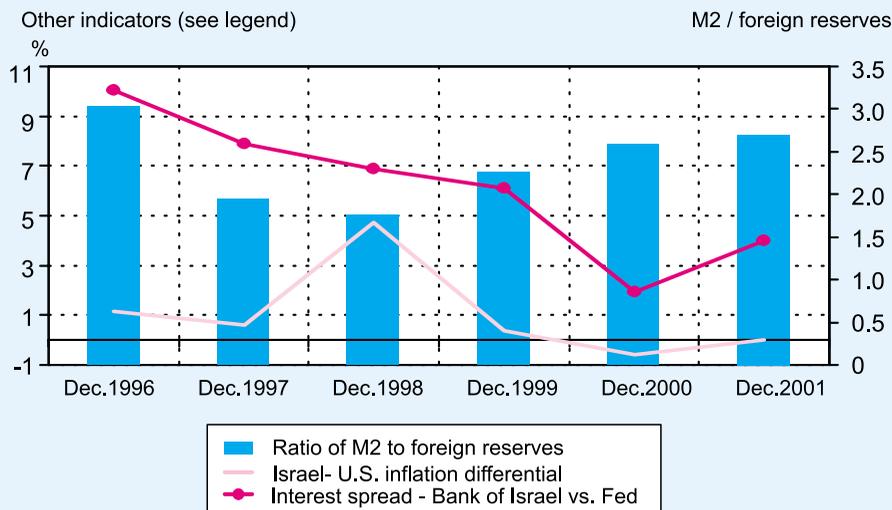
¹ In Figure 4.7, an increase in the index reflects a decrease in vulnerability.

Figure 4.5
Indicators of Financial Vulnerability - Greater Perfection in
NIS-Forex Market, 1995-2001



SOURCE: Reports from banks, processed by Controller of Foreign Exchange.

Figure 4.6
Indicators of Financial Vulnerability - Selected Underlying
Variables, 1996-2001



SOURCE: Reports from banks, processed by Controller of Foreign Exchange.

that greater importance should be attributed to indicators related to net external debt, business-sector exposure to currency depreciation, and the elimination of inefficiencies in the NIS-forex market. These indicators point to a decline in vulnerability since 1998. The upturn in external exposure indices should be considered less important, since this increase reflects Israel's integration into the global economy.

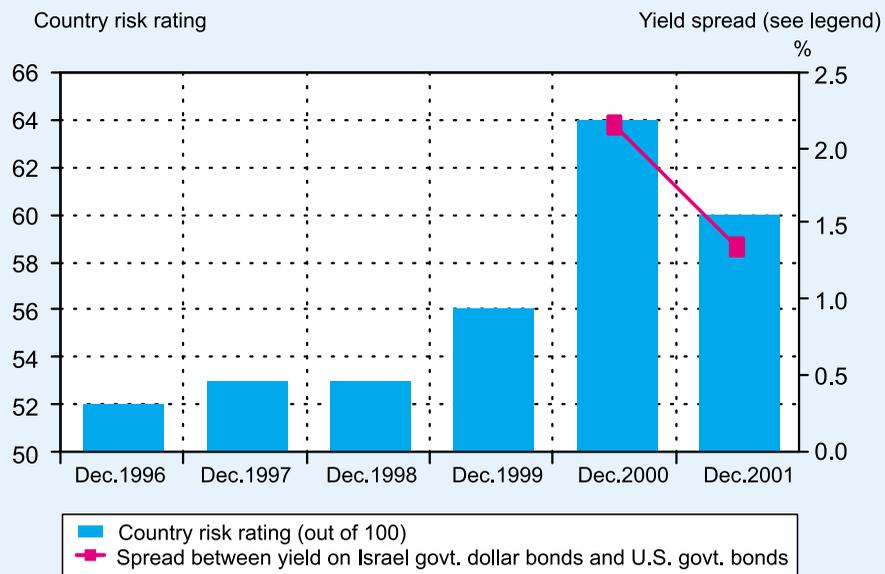
Thus, as the long-term analysis shows, Israel's financial stability from the standpoint of external and forex activity has improved perceptibly in the past three years, as reflected in a downtrend in the sensitivity of the NIS-forex market to shocks relative to previous periods.

3. BEHAVIOR OF THE EXTERNAL DEBT IN 2001 FROM THE STANDPOINT OF EXTERNAL FINANCIAL STABILITY

Comprehensive analysis of developments in the indicators of external debt shows that Israel's financial stability improved in 2001, pursuant to the uptrend in previous years.

Comprehensive analysis of developments in the indicators of external debt (Table 4.1) shows that Israel's financial stability improved in 2001, pursuant to the uptrend in previous years. The improvement was reflected in the continued decline of gross external debt relative to GDP and a slight decrease in the share of external debt covered by foreign reserves. The improvement in the external debt indicators is reflected in Israel's country risk rating, which most rating services left unchanged, and in the risk premium, which declined. (We express a reservation about this below.) A detailed analysis of these indicators follows.

Figure 4.7
Indicators of Financial Vulnerability - Selected Underlying Variables, 1996-2001



SOURCES: Bloomberg and *Institutional Investor*.

Table 4.1
Indicators of Financial Stability of External Debt, 1994–2001

	(percent)							
	1994	1995	1996	1997	1998	1999	2000	2001
1. Gross debt/GDP	59	57	53	56	63	61	57	63
2. Assets abroad/GDP	32	32	33	40	50	51	51	59
3. Net debt/GDP	26	25	20	15	12	10	6	4
4. Short-term debt/total gross external debt	44	46	44	42	40	41	42	42
5. Short-term assets/total assets abroad	88	87	88	88	88	86	81	78
6. Total short-term assets/total short-term external debt	110	107	126	153	176	177	174	174
7. Reserves/short-term external debt	35	37	52	89	97	89	86	83
Israel's credit rating								
8. Standard & Poor's	BBB+	A–						
9. Moody's		A3	A3	A3	A3	A3	A2	A2
10. Fitch	BBB+	A–						
11. Institutional Investor ^a	47	49	52	53	53	56	64	60
12. Euromoney	72	76	76	77	76	71	73	72
13. Difference between yield on Israel government bonds over corresponding yields of U.S. government bonds							2.2	1.4

^a Score: relative to maximum of 100 points.

SOURCE: Bank of Israel, Central Bureau of Statistics, and Bloomberg.

The *external debt/GDP ratio* (Figure 4.1) is used to measure the burden of external debt—the economy's ability to pay back its debts and its possibilities of raising capital in the future. The gross external debt/GDP ratio climbed from 57 percent at the end of 2000 to 63 percent in December 2001, after two years of decline. The sizable upturn in 2001 was due mainly to the real depreciation of the NIS against the dollar (7.4 percent) and an increase in the debt in dollar terms (2.8 percent), amidst a contraction of about 0.5 percent in real GDP. The share of debt due in the short term in total gross external debt has been stable at 42 percent in recent years.

The increase in *external assets* and the real depreciation led to a steep increase in the ratio of external assets to GDP—from 51 percent at the end of 2000 to 59 percent a year later. The rapid increase in assets caused net debt to decline swiftly and, as a result, the *net external debt/GDP ratio* continued to decline—from 26 percent at the end of 1994 to 6 percent at the end of 2000 and only 4 percent in December 2001 (Figure 4.2). The share of short-term assets in total external assets is relatively high and has been in the vicinity of 80 percent for the past two years.

Israel's long-term forex credit rating was unchanged in 2001 at A– by S&P and Fitch and A2 by Moodys (the latter corresponds to A at S&P). In response to the security deterioration, S&P revised its credit-risk forecast from 'positive' to 'stable' in October 2000 and Fitch changed its estimation from 'positive' to 'negative' in May 2001. Notably, however, two additional risk indicators pointed to a decline this year. One may attribute

Favorable long-term trends in Israel's economic structure outweigh the past year's events in setting Israel's country risk rating, for the time being.

the fact that Israel's credit rating was not reduced, despite the negative economic and security developments, to the favorable long-term trends in Israel's economic structure, which outweigh the past year's events for the time being.

Israel's average *credit risk premium* declined in 2001 (Figure 4.7) but rose shortly after the September 2001 terror attacks in the United States in a reflection of their global impact. The risk premium reflects the extra price that a country has to pay for its debt issues. The premium is measured in terms of the spread over the interest rate on U.S. Treasury notes. The extent of the spread is affected by several factors, such as country rating and changes in risk due to externalities and domestic factors. Importantly, the increase in resident investments in Israeli bonds issued abroad in 2001 may distort the country risk premium as derived from the spread, because such investors, for whom these bonds do not carry an Israel country risk, are willing to accept a smaller spread than that required by nonresidents.