The Unseen Crash: Why Israel's Economic Forecasts Failed

Shmuel Even

The indicators regarding the state of the Israeli economy, published by the Central Bureau of Statistics on 31 December 2001, surpassed even the most pessimistic forecasts then to date. Contrary to previous projections, 2001 ended in negative growth (-0.5%) for the Israeli economy, against 6.4% growth the year before. The GDP per capita in 2001 fell by 2.9%.

How can we explain the failure of Israeli economic forecasters to accurately predict the direction that the economy was taking? This article will put forth the claim that the erroneous projections regarding 2001 were not a result of mistakes in identifying the strength of various tendencies that affected the domestic economy, but rather were due to an erroneous evaluation of their direction. This failure obligates a reassessment of the methods used in economic forecasting.

Two principal factors have led to the economic difficulties that began in late 2000. The first is the declining political/security situation, which since October 2000 has dealt a hard blow to the tourism and construction sectors and, to some extent, to commerce and industry. The second factor lies in the global economic slowdown, which began in late 2000 and gained strength over the first two quarters of 2001. The collapse of the high-tech sector had an extremely adverse effect on Israel's technology and communications industries, having a dual effect. First, exports were hurt, in a sector which is mainly export-oriented. Second, it became difficult for Israeli companies to attract funds on foreign stock exchanges. The damage sustained to the economy by the Palestinian-Israeli violence that began in September 2000 is estimated to have equaled some 3% of the GDP; the damage that may be attributed to the global economic slowdown equaled roughly 2% of the GDP.

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The events of September 11 2001 constituted an additional external factor affecting the economy. However, their direct influence on Israel was limited when compared with their impact on the economies of the US and Europe, inasmuch as Israel was already suffering from the ramifications of Palestinian terror. Damage resulting from the events of September 11, which dealt an additional blow to the tourism sector in Israel, may be estimated at approximately 0.5%-1.0% of the GDP. In September-October 2001, the number of tourists dropped by a further 29% when compared to previous months, affecting the costs of air traffic and insurance. Furthermore, technology companies were affected once again, due to the additional drop on world stock exchanges and reduced business activity overseas. In sum, all of these factors (Israel's security situation, the global economic slowdown, and the events of September 11) led to GDP losses estimated at 23 billion New Israel Shekels (NIS).

While this loss to the GDP can be attributed in part to outside events, it was also affected by domestic economic policy, and the control wielded by the country's economic leadership. Simply put, not much was done to ameliorate a situation that was clearly becoming problematic. Reactions to external events were sluggish, and remained so until December 2001. Only then did the economic leadership take measures, which by then took on drastic proportions: the state budget was slated for a NIS 6.15 billion cut in 2002, and the Bank of Israel (BOI) reduced interest rates by a full 2%. The magnitude of the cut in interest rates was particularly noteworthy when considering that interest rate cuts in the recent past had been limited to 0.2%-0.3%. The scope of these steps seemed to indicate that economic policymakers and officials had erred in their assessments of the severity of the economic situation, despite long-standing prior knowledge of changes in the economy's leading economic indicators.

Economic Forecasts: Inadequate?

Contrary to preliminary forecasts made in late 2000, which had predicted a 4.5% growth rate, 2001 ended with a growth rate of -0.5%. The forecasts of other economic parameters were similarly off the mark, including state revenues for 2001, which fell far short of expected. The budget deficit in 2001 ultimately totaled 4.6% of the GDP, against an estimated 2.75% in October 2001 and 1.75% in the original planning. The magnitude of the difference between the planned deficit and the actual shortfall could be attributed to reduced tax revenues, which were NIS 6.7 billion below what was projected.

Inflation forecasts for 2001 also proved erroneous. The inflation rate for 2001 came in at roughly 1.4%, against a target of 2.5%-3.5% – a significant divergence. This was not the first time: 2001 was the third year in a row in which interest rates were significantly lower than targets set by the government and the BOI (the latter, it should be recalled, is responsible for using interest rates to limit inflation). At the end of 2000, the BOI predicted a 2.5%-3% inflation rate for 2001; in the first half of 2001 the estimated inflation rate was adjusted to 2%, in September 2001 it was adjusted again, this time to 3% (Bank of Israel: *General Survey* (10th ed.), December 2001).

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Despite the gravity of Israel's security situation, in July 2001 the Ministry of Finance (MOF) structured the national budget for 2002 based on an estimated growth rate of 4%. In mid-October 2001, MOF Director-General Ehud Marani admitted that there was a "low probability" of such a growth target being met, but it was not until December 2001 that the MOF lowered its official growth projection to 2%. In doing so at so late a date, the MOF was the last of the economic policy organs to scale back its growth projections for 2001. By contrast, Bank of Israel Governor David Klein had already called for the growth projection for 2002 to be scaled down to 2% four months before, in August 2001 (as reported in *Ha'aretz*, 17 August 2001). For its part, the International Monetary Fund issued several updates of its projected growth rates for Israel in 2002. Its original forecast of 4.5% was lowered to 4% in September 2001; to 2.8% in October 2001; and finally to 1.7% in December 2001.

Explaining the Errors in Israel's Economic Forecasts

How can we explain the lackluster results of Israeli economic forecasts? First, the country's economic leadership, and the bodies charged with making economic forecasts, ignored substantive changes, chief of which was the deterioration of Israel's strategic environment beginning in October 2000. At the time, many economic analysts may have estimated that the conflict would not continue for long, ignoring intelligence estimates to the contrary.

Nor can there be any doubt that such estimates existed: towards the end of 2000, IDF Intelligence warned that Palestinian violence was likely to increase and persist over time. Then-OC IDF Intelligence, Maj. Gen. Amos Malka, noted that unless an early agreement was reached between Israel and the Palestinians, an ongoing low-intensity confrontation was to be anticipated in the coming months, which would escalate in the spring of 2001. He also warned of terror attacks mounted by the Islamic Jihad, Hamas, and the Tanzim (*Ha'aretz*, 27 December 2000). Similar estimates were given several months later, this time by General Security Service Head Avi Dichter in April 2001. Dichter stated that Arafat had no interest in enforcing a cease-fire, fearing that this would weaken his position, and that Israel had no partner in the Palestinian Authority with a vested interest in thwarting acts of terror (*Ha'aretz*, 16 April 2001).

Similarly, in a meeting of the Knesset's Foreign Affairs and Security Committee (May, 2001), an unnamed senior IDF Intelligence officer reportedly noted that Arafat was prepared for a conflict that was likely to drag on for an extended period of time. Notwithstanding the reassuring messages that Arafat had relayed to Israeli visitors, the officer noted, the strategic messages that he was sending to Palestinian audiences indicated that the conflict was set to continue for some time. (*Ha'aretz*, 15 May 2001). Finally, in June, 2001 Malka noted that "eight months of confrontation have passed, but the end is not in sight. Arafat is preparing his people for a lengthy confrontation, which could last for as long as one hundred years" (*Ha'aretz*, 8 June 2001).

In the wake of the deteriorating security situation, and in light of the worsening global economy, economic leaders found it difficult to acknowledge the changes that had already taken place, and to analyze their full impact on the domestic situation. In other words, the mistakes in forecasting affected not only future planning, but also ongoing efforts to track the economic situation over the year. Economic policy-makers ignored numerous economic indicators that were pointing to changing economic trends in real time.

An example of this can be seen in indicators relating to the health of the tourism sector. By October 2000 (the first month of the Israeli-Palestinian violence), it was already obvious that incoming tourism had dropped by 40% when compared to the same month of the previous year. In October 2001, the drop was greater still: 58% when compared to October 2000, due to both the Israeli-Palestinian conflict and the attacks in the US. Yet it was only *after* the impact of external events had been clearly felt in the decline of revenues into state coffers – such as the 22% drop in tax revenues in October 2001 – that an orderly process of updating the national budget was undertaken.

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From a methodological standpoint, the early economic forecasts seem to have been excessively based on linear extrapolation, effectively assuming that existing tendencies would continue. Since 2000 had been a good year for Israel's economy (the GDP, as noted, had risen by some 6%), the extrapolations upon which the forecasts were based predicted another year of growth. Only slight adjustments we made, even after significant external changes had taken place.

Finally, it is possible that overly narrow organizational perceptions also contributed to biases in economic forecasts. For example, until December 2001 the BOI, which is responsible for restraining inflation, kept the lending rate very high, which ultimately led to inflation rates significantly lower than those targeted by the government. It is reasonable to assume that the Bank of Israel was inclined to overestimate the potential for inflation, as its inflation-fighting role encouraged it to err on the side of safety. Its interest in doing so was that such a policy would certainly ensure price stability – the Bank's primary responsibility. Had the BOI taken a less risk-averse approach, and had inflation risen substantially as a result, the Bank would have failed to uphold what was essentially its sole mandate. Thus, interest was lowered substantially only when the Governor realized that the Bank's high-interest policy was having grave macro-economic effects. For its part, the Finance Ministry's policy orientation

Table 1:
Domestic Economic Development Forecasts for 2002
(by forecasting agency/organization; updated to November 2001)

	2000	2001 (Note: based on preliminary data)	Forecasts for 2002 (updated to November 2001) Finance Ministry	Bank of Israel	Industrialists' Union (Pessimistic/ Optimistic)	Bank Leumi
Change in GDP (%)	6.5	-0.5	4*	1.9	1.1/-0.6	1.9
Change in industrial output (%)	6.3	-2.1	4.6	1.8	0.6/-1.8	1.9
Change in private-sector consumption (%)	6.5	3.1	4.1	3.1	1.7/2.5	3.2
Change in public-sector consumption (%; w/o defense imports)	1.1	3.2	2.5	2.6	3.0/3.0	3.0
Change in exports (goods and services; %)	23.9	-13.1	5.4	1.7	-1.8/-6.6	2.3
Change in imports (goods and services; %)	12.2	-6.4	2.3	0.5	n/a	2.8
Change in investments (durable assets; %)	0.4	-8.9	1.8	-6.3	-3.7/-5.2	1.1
Unemployment rate (%)	8.8	9.0	8.9	9.6	10.0/10.3	9.6

**In December, growth forecast was lowered to 2% (no data on other parameters available).*

was exactly opposite – ensuring growth, rather than restraining inflation – and was therefore overly inclined to optimism with regard to estimating prospects for such growth. It presumably also dragged its feet in updating the growth forecasts for 2002, because doing so would have forced it to admit that discussions on the state budget should be reopened – and this only a short time after the budget had ostensibly been completed.

The Cost of Erroneous Forecasts

The mistakes made in the aforementioned economic projections have exacted a heavy price, both economically and organizationally, since these projections formed the operational basis for both economic policy-makers and those charged with implementing those policies. From here the potential for harm is clear: bad forecasts are likely to result in poor policies. The erroneous inflation forecasts, for example, were of far-reaching economic significance in 2001: if the Bank of Israel was consistently predicting inflationary trends that exceeded those that actually prevailed, it follows that the interest rate was likely kept too high. The result was a negative effect on economic growth, for a number of reasons. First, high interest rates reduce the return on capital investment, reducing the motivation of manufacturers to invest in job-creating capital improvements. Second, high interest rates contribute to a stronger shekel exchange rate, and reduce the cost of foreign currency on the local market – resulting in both reduced profitability for exports and lower prices on imported goods. Given the low prices of imported goods and the high cost of capital, numerous local plants found it difficult to compete with imported products, and were compelled to cut production and lay off workers. The Bank's high-interest policy was therefore an added burden to the economy, contributing to the rise in unemployment.

Israel's low inflation rate, and the drop in interest rates worldwide, provided an extraordinary window of opportunity to stimulate economic growth through interest rate cuts. However, this opportunity was not put into practice until December 2001, when interest was cut sharply by 2%. Such sudden moves render Israel's economy vulnerable to risks of having to seesaw: should external incidents change the financial scene in the coming months, the BOI would be obliged to raise the interest rate again.

Likewise, errors in forecasting GDP growth and state revenues also affect the efficacy of national resource allocations, for the following reasons:

a. A shortfall in tax revenues could force the government to undertake unplanned cuts in government expenditures, which could adversely affect the planned activities of government ministries. Alternatively, such a shortfall could force the government to seek additional sources of revenue in order to cover state expenditures.

b. The need to update the budget inevitably results in renewed wrangling between elected officials and officials working in the affected ministries.

c. Updating the budget is accompanied by the pressure of having to take emergency measures, including sizeable reductions in expenditures, tax hikes to cover the shortfall, or a combination of the two. These actions can result in long-term damage to the economy.

How to Deal with Erroneous Forecasts

- Planners at the national level should avail themselves of estimates made by IDF Intelligence, the GSS and the Mossad – all of whom make regular estimates *vis-à-vis* the security and political situation – and factor the implications of these estimates into their economic forecasts. While relying on the evaluations of the Israeli intelligence community would not guarantee the accuracy of economic forecasts, their information regarding political or security related developments is likely to be more reliable than predications made by other bodies.

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- Tools for making economic projections should be improved, and linear extrapolation of economic data should not be over-emphasized. Methods of tracking early warning signals should be adopted, to enable decisions to be made in advance of full-blown crises.

- The use of economic scenarios should be considered. Such a methodology would allow for economic planning in accordance with three possible scenarios: an "optimistic" scenario, a "reasonable" scenario, and a "pessimistic" scenario. When planning the state budget, the government should use the "reasonable" scenario as its default basis for planning, but with a rider that defines – in advance and in keeping with the national priorities – what should and should not be done in circumstances where resources are either smaller or larger than projected. Such an approach would facilitate taking appropriate responses to changes in the economic situation in a more timely fashion. A prior

Table 2:
IMF Forecasts for Growth, 2002 (Israel and elsewhere)
(November-December 2001 estimates)

	%
Israel	1.7
World	2.4
United States	0.7
Europe	1.4
Japan	1.3

determination could be made, for example, to channel any budget surpluses into paying off the national debt, which is extremely difficult to do once such surpluses are discovered and different interest groups begin haggling over how to divide them.

- Erroneous projections derive partly from the manner in which they are undertaken. In order to improve the management of the economy, there is a need to devise a comprehensive economic strategy for Israel, for which all policy-oriented bodies would have joint responsibility. Thus, for example, if the Governor of the Bank of Israel were to shoulder part of the responsibility for ensuring economic growth (in addition to his/her responsibility for fighting inflation), he or she would include considerations of economic growth, in addition to inflation, when setting interest rates.

Conclusion

Experience shows that it is impossible to guarantee accuracy when predicting human behavior, whether forecasting economic, security-related, or political developments. It would therefore be unfair to criticize those whose economic forecasts failed to predict the outbreak of Palestinian-Israeli violence, or the global economic slowdown. However, once these events had become widely known, it was a mistake to belittle their overall impact on the economy.

Improvements should therefore be made in the ability of the state's economic forecasts to cope with uncertain situations; to maintain an appropriate level of awareness *vis-à-vis* economic and political changes; to factor the influence of external events into economic assessments; to study forecasts submitted by other bodies (such as IDF Intelligence); and to adopt improved tools for projection and decision-making.

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