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GENERATING A SHARP DISINFLATION:
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ABSTRACT

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This paper deals with the background to the acute crisis of the Israeli economy and the conceptual underpinnings of the stabilization plan and with the first six months of its implementation. Apart from the more conventional fiscal and monetary policy measures, with partial deindexation, special emphasis is put on stabilization of the exchange rate, as a central nominal anchor for the price system, along with a wage policy package. Further budget restraint as well as wage moderation are considered the key for continued success of the stabilization effort. Both of these conditions will be tested in the new fiscal year starting April 1986.

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GENERATING A SHARP DISINFLATION: ISRAEL 1985

By mid-1985 Israel's economic crisis reached a new high. Earlier partial attempts at stabilization had failed. Israel was losing foreign exchange reserves very rapidly, due to capital flight, in spite of a recent improvement in the trade balance, and inflation was up to monthly rates of 10-15 percent. On July 1 the government adopted a comprehensive emergency program for stabilization and recovery which has had dramatic consequences, at least in the very short-run. Within a few months inflation was down to 1-2 percent a month, foreign exchange reserves were rising rapidly and in spite of rather harsh contractionary fiscal and monetary policy measures average unemployment did not rise by more than 2 percentage points above the pre-July level.¹

This paper deals with the background to the acute crisis of the Israeli economy and the conceptual underpinnings of the stabilization plan and with the first six months of its implementation. Apart from the more conventional fiscal and monetary policy measures, with partial deindexation, special emphasis is put on stabilization of the exchange rate, as a

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1. For the developments of key indicators see Table 1.

central nominal anchor for the price system, along with a wage policy package. Further budget restraint as well as wage moderation are considered the key for continued success of the stabilization effort. Both of these conditions will be tested in the new fiscal year starting April 1986.

1. THE NATURE OF ECONOMIC CRISES IN THE PAST DECADE

The prolonged economic crisis manifested itself in three major areas:

1. Stagnation in real growth of product and productivity for almost an entire decade.
2. Rising private and public consumption in face of stagnant output led to a reduction in investment, growing dependence on foreign debt, and ever increasing balance-of-payments difficulties which recently bordered on a serious liquidity crisis.
3. Step-wise acceleration of inflation in which each price shock due to external causes or deliberate government action (such as devaluations or other government-induced price hikes) translates into a higher inflation-rate plateau.

Figure 1 summarizes the developments in these main areas over the past twenty years. The middle panel (1b) measures the economy's external dependence in terms of the civilian external deficit (imports of goods and services excluding direct defense imports minus exports of goods and services) as a percentage of gross national product. The upper panel (1a) gives annual inflation (within the year) in terms of the consumer price index. The lower panel (1c) gives the rate of growth in terms of domestic product in the business sector. The figures show the sharp transition from

the period of relative prosperity, 1965-72, to the crisis of 1973-75 (rising fuel prices and the Yom Kippur war) as a steep decline in the rate of growth (from an annual average of 8.7 percent in 1965-72 to 2-4 percent and less in recent years). Finance Minister Rabinowitz's 1975-77 stabilization program brought about a dramatic improvement in the balance of payments and considerable restraint of inflation in 1977 (point 77I in the figure refers to January-May 1977), but at the cost of a further slowdown in growth. Nonetheless, it left behind a persistent structural problem: the large size of the public sector (its share rose from 20 to 30 percent of the labour force over the past decade), and in particular the size of the public-sector deficit relative to GDP (which reached 12-17 percent).²

Throughout the past decade we observe clear cycles of deterioration and improvement in the current account of the balance of payments, which can be related to the policies of respective Finance Ministers: an improvement during Rabinowitz's term of office (1975-77), deterioration under Ehrlich (1977-79), temporary improvement with Hurwitz (1979-80), considerable deterioration and slowdown of growth under Aridor (1981-83), and a notable correction towards the end of Cohen-Orgad's term of office and the new National Unity government with finance minister Moda'i (1984 to the present).

Improvements in the balance of payments were usually accompanied by an acceleration in the rate of inflation on account of the type of corrective budgetary measures adopted (subsidy cuts and rising indirect taxation) and the exchange-rate adjustments. The most recent example is a 9

2. For an analysis of the macroeconomic responses to the external shocks and the substitutability between growth, balance of payments, and inflation, see Bruno (1984).

percent devaluation and subsidy cuts introduced upon the entry of the Unity government (note the leap in inflation during the period August-October 1984 - Figure 2). We shall say more on these price shocks and inflationary inertia in the subsequent discussion.

In the past two years it became evident that balance-of-payments and foreign reserve difficulties may arise even when the current account improves, due to problems associated with the capital account. In part, at least, these problems stem from loss of public confidence in the government's ability to control the economic system, leading to massive private purchases of foreign currency and capital flight.

Figure 3 presents Israel's official foreign-currency reserves together with the current repayable debt (which includes short-term credit and medium- and long-term credit due within a year, less exporters' credit). The figure also gives the import surplus, excluding direct defense imports.³ Two central points stand out:

1. The deterioration in the economy's foreign liquidity position started while official reserves were still increasing (1980-82); in 1983-84 the current debt gradually exceeded foreign reserves.⁴
2. This deterioration persisted in spite of the improvement in the current account during 1984 and the first half of 1985,⁵ which explains the forebodings of imminent crisis just before the new economic plan was implemented.

3. The data for 1980-84 are based on Bank of Israel, Annual Report, 1984, Table VII-21.

4. This phenomenon, familiar from the experience of several Latin American countries, often signals an imminent liquidity crisis.

5. The figure presents the surplus for 1985 as a whole, but an improvement had already occurred in the first half of this year while the liquidity situation, reflected in the net current debt, worsened.

1.1. Theoretical Background: Real and Nominal Factors in the Inflationary Process

A glance at the profile of the inflationary process (see Figure 1a) suggests something close to a step function - a series of jumps in the inflation rate (1973-74, 1977II, 1979, 1983-84) followed by periods of relatively stable, high inflation, plateaus, the most remarkable of which is the four year period 1979-83 (the 1983 jump occurred in the last quarter, after the bank share crisis and large devaluation). In trying to account for this pattern of inflation two major avenues of theoretical explanation offer themselves.

One line of argument puts the emphasis on the series of 'flats' and asks - what, in theory, are the components of steady state inflation and what could make an economy shift from one to another, higher steady state inflation? Concentrating on that part of the budget deficit which is financed by the inflationary erosion of the money stock (the inflation tax), a shift in steady state inflation could occur for any one of the following reasons:

- a. A permanent increase in the government deficit, relative to GDP, causing an increase in the required inflation tax, and thus an increase in the inflation rate.
- b. A permanent reduction in the growth rate of the economy, causing a fall in the noninflationary transaction demand for money, thus requiring more inflation to acquire the same inflation tax.
- c. A fall in the demand for base money due to institutional changes, such as the appearance of new, inflation-proof, substitutes for money. As

the public moves out of money holdings higher inflation is required to finance the same given budget deficit.

Unfortunately, the most common explanation of rising inflation due to an increase in the government deficit (argument a) can at best account for a rise in Israel's inflation rate in the early 1970's but not in subsequent periods. The step-wise leaps in inflation from 30-40 percent in 1973-76 to nearly 500 percent annually in 1984-85 (point 85I in Figure 1a refers to January-July 1985) occurred while the budget deficit, though large, was more or less stable at 12-15% of GDP (see Table 2).⁶

However, argument b (the drop in the growth rate) could be invoked to account for the step rise in inflation after 1972 (see Melnick and Sokoler, 1984) and argument c could be applied to the large step after 1978, as the financial opening up reform⁷ introduced a new foreign exchange-linked money substitute ("PATAM" accounts) the demand for which increased very rapidly, while the demand for base money plummeted.

An alternative and somewhat complementary line of argument to that of the inflation tax explains the step-wise nature of the inflationary process in terms of price level shocks (which account for the jumps) coupled with full monetary accommodation (which explains why a price level shock translates into a jump in the rate of inflation). The price shocks may be

6. See also note d in Table 2 concerning the inflation correction of public lending.

7. In October 1977 a major reform measure ("Mahapach") was undertaken by Ehrlich, Finance Minister of the new incoming Likud government. Controls on capital flows were lifted, a new foreign-exchange-linked, highly liquid domestic bank deposit ("PATAM") was introduced, and the exchange rate regime moved (temporarily) from a crawling peg to a float. All of this was accompanied by a large devaluation at full employment and no budget cut.

entirely exogenous (e.g. oil and raw material price increases in 1973 and 1979 or the shock introduced with the October 1977 reform) or may be induced by balance of payments difficulties (leading to devaluations and price increasing fiscal measures such as subsidy cuts, as in 1974, 1983, 1984).⁸

Monetary accommodation has taken the form of automatic linkage of liquid financial assets (such as the PATAM accounts, guaranteed price on outstanding government indexed bonds and for a time, up to 1983, also government supported commercial bank shares). Such accommodation was further enhanced by an exchange-rate adjustment policy that, more or less, followed a Purchasing Power Parity rule. With money and exchange rates closely linked to the price level we are left with the third key nominal variable for which indexation (COLA) arrangements have been well established for a long time. Wages do not appear to have had an autonomous effect on accelerating inflation - Israel has known decades of COLA agreements when inflation was no more than 5-7 percent annually and increases in wages usually followed price changes rather than vice versa. Nonetheless the COLA agreements, and in particular the shortening of the indexation lag (from a year to 6 months, than to 3 months and most recently to one month lag only) have contributed to the persistence of high inflation 'flats', after price level shocks. Then, on top of all these components of inflationary inertia there is the reinforcing role of expectations which take the accommodating fiscal and monetary policy into account.

8. For an analysis of the relationship between balance-of-payments problems and jumps in inflation see Liviatan and Piterman (1984); for a general characterization of the inflationary process in 1970-1984 see Shiffer (1982), and Bruno and Fischer (1984).

Why, under this view, has inflation almost always only gone up and not down ? one reason may be that positive and negative price shocks are not symmetric in their effects on the dynamics of inflation. When the general thrust of fiscal and monetary policy is expansionary and there is a temporary unexpected downward shift in the inflation rate expectations will not be revised downward. The effect of such asymmetries is to make a sequence of positive and negative shocks of zero mean impart an upward thrust to the inflation rate.⁹

Finally, what is the main role of the government budget under this 'shocks and accommodation' view of the inflationary process? Obviously the role of the budget deficit is not merely confined to the direct relationship between the excess domestic aggregate demand that it causes and the resulting pressures on market prices. In fact, based on the apparent lack of correlation of the size of deficit with the accelerating inflation 'steps' one could argue (and this has sometimes led to a wrong diagnosis) that this relationship is of no importance whatsoever. The principal mechanisms are more indirect - first, a budget deficit contributes directly to a deficit in the balance of payments, as the government's negative savings widen the gap between savings and investment, which is the obverse of the deficit in the current account of the balance of payments. The need to respond to a deterioration in the balance of payments and an increase in foreign debt requires measures that by their very

9. For a formal representation of the inflationary dynamics see Bruno and Fischer, 1985. The asymmetry argument could be applied to the failure of Finance Minister Aridor's attempt to extricate the economy from inflation by reducing the cost of imports and slowing down the rate of devaluation; the worsening balance of payments situation ultimately led to a large devaluation and another price jump in October 1983.

nature tend to raise prices [this is the main argument raised by Liviatan and Piterman (1984)].

The other indirect effect of a deficit is reflected in the large internal national debt stemming from sizable deficits accumulated over time. The need to recycle this debt, which is among the highest in the world in relative terms (a ratio of 1.4-1.5 to product), and especially the liquid part of that debt, has limited the government's freedom of action in both fiscal and monetary policy. Hence, the prevention of an increase in the internal and external debt had to constitute a key element in a program designed to stabilize the economy.

To sum up - the various arguments all converge to the view that the inflationary process and the balance-of-payments difficulties originated from two major sources:

1. A large real government deficit that persistently increased the internal and external debt.
2. Loss of monetary anchor by a system that accommodated to inflation mainly by the automatic supply of linked liquid assets and almost automatic adjustment of the exchange rate. Since, however, the various nominal magnitudes (money, exchange rates as well as wages) are never perfectly synchronized asymmetries in adjustment to price shocks will impart an upward bias to the inflationary outcome.

Broadly speaking, then, the inflationary process stems from a primary real cause (the large budget deficit) and from a nominal problem, the absence of a "nominal anchor". According to this view, it does not suffice to deal with only one of these two major causes - a necessary condition for achieving economic stability is to tackle both issues simultaneously. Adherents of a standard economic approach to inflation would have no

difficulty in believing that a drastic reduction in the budget deficit is necessary for stabilization (though here, too, some dissenting voices have recently been heard in Israel, owing to the apparent lack of correlation mentioned above). It is harder to convince followers of the conservative approach that the inflation of the past decade also incorporated a very powerful nominal inertia component - the need to synchronize wages, prices, credit, and exchange rates across various economic sectors. It is entirely conceivable that the real budget deficit could be substantially reduced by some drastic government action, while inflation persists by sheer inertia because the nominal aggregates in the economy are not properly synchronized. A stabilization program that fails to come to grips with this problem of synchronization is bound to fail, at least in combating inflation. Our argument is that such failure will rapidly manifest itself also in real terms, because unsynchronized changes in nominal magnitudes will bring about serious changes in relative prices (real wages, real credit, real exchange rates) which lead to deep unemployment, or a drain on foreign reserves, or both.

Another question related to these issues, and one that has occupied economists in Israel in recent years, is whether it is possible to extricate the economy from such inflation gradually. Adherents of the gradualist approach could find support in the claim that before attempting stabilization one should cut the budget, and that this step should precede the implementation of any social contract ("package deal" in local parlance) designed to cope with incomes policy and the synchronization problem. As for the gradual synchronization of rates of change - this appears at first glance to be more palatable from a socio-political point of view. The counterargument maintains that the inflationary process is a vicious

circle in which the budget deficit, inflation, and cessation of growth reinforce one another (see, e.g., the breakdown of the tax system in 1984 and the decline in productivity throughout the past decade). Moreover, a gradual, perfectly synchronized reduction in inflation is a practical impossibility because of inertia, natural leads and lags, etc.¹⁰

There is no doubt that synchronization around a "zero" rate (i.e., a complete freeze on exchange rates, credit, wages, and prices) is far simpler for the public to grasp; consumers may monitor increases in price levels of goods but are less inclined to compute rates of change. But the clinching argument against gradualism and in favour of drastic action is a political-economy consideration. Even a strong government is not likely to be capable of more than one determined effort centering on an "emergency" plan. One may add considerations related to public confidence and government credibility and reputation, and these too are more in tune with the case for a sharp and comprehensive program for ridding the economy of inflation in which the Prime Minister and Finance Minister mobilize the political system and the public for a concerted effort to restore control over the economic system. Strange as it may seem at first glance, even the avoidance of deep, persistent unemployment would appear to have a better chance of success under a program that attempts to eradicate inflation sharply and decisively with a strong impact on the public's expectations. In this manner the strict limitations on credit and demand need not be

10. It is not quite clear whether the "Aridor Experiment" of 1982-83 is a good example: on the one hand, the reduced pace of devaluations was not accompanied by a similar slowdown in the rate of wage and price increases; but on the other hand, there was also no monetary restraint. At any rate, the second and third "package deals" of early 1985 attest to the difficulty entailed in attempting to synchronize rates of change, quite apart from the lack of accompanying budget cuts.

expected to last more than six to twelve months.

As matters turned out, the debate between these conflicting approaches could not be given a chance to be settled on a theoretical level; the pace of events in the first half of 1985 in both inflation and foreign currency movements thwarted the gradualist line and eventually dictated a drastic move.¹¹

2. FORMATION AND MAIN POINTS OF THE ECONOMIC PROGRAM

Although the broad terms of reference of the economic program were laid out in earlier discussions and deliberations, its detailed preparation started only in the beginning of June 1985. The professional team¹² appointed jointly by the Minister of Finance and the Prime Minister was given three weeks in which to submit the program to the government on June

11. The formulation of a combined real-nominal approach as well as alternative ways out of the inflationary process were discussed in a series of staff seminars held at the Hebrew University Department of Economics at the end of 1983 and throughout 1984, as well as in various studies prepared at the Bank of Israel Research Department. An article by Liviatan (1984) on the dollarization plan and a memorandum by the present author with an alternative proposal for monetary reform (1984) represented two suggestions for drastic action. [My own views on the special nature of the high inflation process and the need for a sharp exit were expressed in an interview in a local monthly ("Migvan") already in 1981. Learning the experience of the great European hyperinflations (see Sargent, 1982), and in particular that of Germany in 1923, was very helpful.] A study by Sokoler, Piterman and Fraenkel (1984), detailing a plan prepared by the Bank of Israel, also presented a combined real-nominal approach, but preferred implementation in stages.

12. The team, headed by Emanuel Sharon, Director General of the Finance Ministry, included Eitan Berglas (Tel Aviv University), Michael Bruno (The Hebrew University of Jerusalem), Mordecai Fraenkel (Head of the Bank of Israel's Research Department) and Amnon Neubach (the Prime

30, 1985. The team relied mainly on studies conducted at the Ministry of Finance, the Bank of Israel, and the Ministry of Commerce and Industry.

The team's work proceeded against a background of a growing crisis in foreign currency outflow and loss of control over the inflationary process. An attempt was made to learn the lessons of various tripartite package-deal agreements that formed the basis of stabilization policy during the period October 1984 - May 1985. Ostensibly, both the planned budget for 1985/6 and the current account of the balance of payments were conducive to further stabilization measures. But inflation was getting out of hand. On the eve of the new program there were sizable deviations from the new budget that had just been approved, especially on account of commodity subsidies and submission to pressure from the expenditure side. The continued improvement in the external trade account (which had already begun in 1984) was nullified by considerable foreign currency outflow. As for the inflation process itself, a 3-month tripartite agreement on a wage-price freeze (the first "package deal," started November 1984) seemed to signify a considerable political-social success in rapidly (if only temporarily) stemming price increases. The main drawbacks were the lack of its incorporation into a more comprehensive stabilization program - the absence of an accompanying cut in the budget, the continuation of (delayed) COLA adjustments in wages (thus raising real wages), and in particular the continuation of devaluations. Higher import prices made it

Minister's Economic Advisor). Nissan Liviatan (The Hebrew University) was an active participant in various internal discussions prior to the team's appointment.

An earlier team which included, in addition to Berglas and Bruno (and Neubach as secretary), Yoram Ben-Porath, Haim Ben-Shahar, and David Golan, submitted the broad outline of a very similar plan to the Prime Minister in July 1984.

necessary to introduce a one-time price level correction ("seam" in local parlance) between this agreement and the next, in effect 'blowing up' the package deal in January 1985. The main shortcomings of the next two package deals were largely related to the inability to control rates of price increases rather than freezing the price level (as was done in the first package deal).

To sum up, as far as the budget, the balance of payments, and certainly the inflationary process were concerned, the period immediately preceding the new economic plan was ripe both in terms of background conditions and in terms of the need felt for a drastic new tack.

The aim of the new economic stabilization program was to reduce inflation at once from a monthly rate of around 15-20 percent to virtually nil. Given some inertia and tail-end effects, this would in effect imply a reduction of inflation at first to no more than 2-3 percent a month and, within a few months, to even lower rates. The program was also designed to permit a significant improvement in the balance of payments. Tackling both inflation and the balance of payments simultaneously would also lay the foundations for subsequent renewed growth and structural change in the economy.

In line with our analysis of the origins of the crisis such program would have to be comprehensive and drastic in its effects on public expectations and confidence. It would have to tackle simultaneously both the real source of difficulty, namely the government budget, as well as establish a nominal anchor or, rather, several synchronized nominal anchors.

A central feature of the program was the announced reduction of the budget deficit by \$1.5 billion (7.5 percent of GDP) below the 1984 budget. Simultaneously, the Israel shekel was devalued by about 20 percent to

ISh.1,500/\$1 together with partial reduction of existing import duties and export subsidies.

At the time the program was announced the government declared its intention to freeze all shekel-denominated aggregates - wages, prices, exchange rates, and credit (after an initial adjustment) - with the freeze on exchange rates dependent on preserving the required level of nominal wages. The latter, including the temporary cessation of the COLA agreement, remained to be determined through negotiations with the Federation of Labor and the employers. The Bank of Israel undertook to restrict the nominal size of bank credit, and the Ministry of Commerce and Industry remained responsible for price controls. The government also announced its intention to limit the nominal budget level planned for the quarter July-September 1985.

As for the capital market, the operative principle here was to clearly ensure the preservation of long-term (indexed) saving while at the same time reducing the liquidity of linked assets, in a clear departure from the previous regime. Current PATAM (dollar-linked) deposits would henceforth be "one-way" only - withdrawals were permitted, but deposits would be accepted only for periods exceeding one year. Furthermore, the government would gradually make all its bonds fully tradable (with the exception of pension funds), so as to widen the base for open market operations.

The time span set for the stabilization program was one year, whose first three months were declared as an economic emergency period.

In what follows I shall dwell in greater detail on several elements of the program.

2.1. Pruning the Public Sector

At the core of the "real" part of the program, initially, was the desire to reduce the budget deficit up to the point at which "the government's internal and external debt would no longer grow in absolute real magnitude" (with subsequent GDP growth this would entail a gradual slow fall in the debt/GDP ratio). This would have required a cut of \$2.0-2.5 billion (10 percent of GDP) in the budget compared with 1984. A top-level decision barring substantial cuts in (among other things) defense expenditures brought the planned reduction of the deficit to \$1.5 billion in the hope that the complementary cut would be introduced in the 1986 budget. The reductions included a cut in subsidies to basic commodities and additional direct and indirect taxes with only 20 percent of the total cut coming from reduced real government activity. The limited size of reduction in expenditures introduces a constraint on another central aspect of the program, namely, the ability to moderate the erosion of net wages by tax concessions (see below).

As we shall see, the government's real excess demand in 1985 dropped by more than the planned cut, and it is very likely that the government's internal and external debt will not have grown in the budget year ending March 1986. Remember, too, that the emergency aid from the US government of \$750 million (3.0-3.5 percent of GDP) in each of the years 1985-1986 will help bridge over the stabilization period without having to effect the full budget cuts required in order to achieve long-term balance (the domestic deficit including interest payments and subsidies to credit in 1984 was \$3.6 billion, or about 16 percent of GNP).

A second important element in reducing the size of the public sector was the decision to cut its manpower by 3 percent (some 10,000 persons,

counting also local government and other publicly-financed institutions). This step was not, in itself, of any immediate major budgetary significance (as it calls for expenditures on severance pay, etc.); its importance lay mainly in signaling the government's intentions concerning the structural change required in the economy.

2.2. Devaluation

The Israel shekel was devalued by 18.8 percent on the day the program was introduced (in addition to a devaluation of about 6 percent towards the end of June 1985), and set at ISh.1,500¹³ per dollar. As part of the partial unification of effective exchange rates in the trade accounts VAT was reduced by 2 percent, the excise on fuel was reduced, and import deposits were lowered. Subsidized shekel credit for exports was abolished, as was the special subsidy for preserving the profitability of exports; the existing export exchange-rate insurance was replaced by an equivalent arrangement guaranteeing an effective 11 percent subsidy for value added in exports. This arrangement no longer depends on changes in the consumer price index in relation to the exchange rate (which was an integral part of the insurance scheme), and thus eliminates a distortion that had increased inflationary pressures in recent years.

The exchange rate was set at less than the level required to permit

13. In a pure change of numeraire, a shift from Old Shekels to New Shekels (1 New Shekel = 1,000 Old Shekels) was announced in August 1985 and fully implemented on January 1, 1986, when the exchange rate became INSh.1.5 = \$1.

the total abolition of export subsidization¹⁴ so as to limit the size of the price shock immediately upon implementation of the program. A price shock of at least 15 percent was inevitable, due to the devaluation, the subsidy cuts, and the partial increase in controlled price ceilings and it was considered too dangerous to go beyond that, mainly on account of the implied size of real wage erosion.

2.3. Stabilization of the Exchange Rate and the Setting of Nominal Anchors

As we have seen, an important part of the plan to achieve rapid price stabilization is the determination of one or more nominal anchors and the need to secure them in social agreements and appropriate policy measures. The quantity of money (M_1 or M_2) often serves as such an anchor, and its preservation by the central bank ensures stable prices. Under conditions of rapid inflation, and especially in the transition to disinflation, the demand for means of payment is extremely unstable (the demand for money can be expected to increase substantially, but one cannot tell by how much) and therefore cannot serve as an anchor. It is thus preferable to rely in the monetary field on the overall volume of bank credit, which is closely related to nominal GDP. However, control over the level of credit in Israel is indirect (in the recent past the Bank of Israel controlled the price of credit rather than its quantity), and it would have been hazardous to rely solely on credit for this purpose. Given the importance

14. Such abolition, combined with a desire to preserve the profitability of exports, would have required a devaluation of around 30 percent. The smaller size of devaluation therefore substantially limited the scope of effective exchange-rate unification in both imports and exports.

of the cost side in the inflationary process of recent years, the best combination of central nominal anchors appeared to be the dollar exchange rate and the nominal wage. The dollar exchange rate has for a long time served as a widely quoted price index, at a time in which the regular CPI index was published only monthly and at a considerable time lag.¹⁵ Setting the exchange rate in dollar terms¹⁶ in the early stages of stabilization was therefore deemed extremely important. On the other hand, the program did not call for reliance on continued real appreciation. Specifically, it would have been inconceivable that the exchange rate be set for prolonged periods unless nominal wages were also frozen, because the dollar wage (the nominal wage divided by the exchange rate) is a central factor in determining the cost and profitability of exports. Hence the publicly announced guiding principle of the program - a freeze in the exchange rate was made conditional upon a freeze in nominal wage costs (beyond an initial compensation - see below),¹⁷ with the combined freeze of both guaranteeing that production costs for both exports and the domestic market do not rise.

Price controls permitted the completion of the system of nominal anchors for the duration of the stabilization period (besides, it was

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15. One could ask for no better example than the index for July 1985, announced on August 15; most of the price increase represented by this index (27.5 percent) had taken place some six weeks earlier, when the new program was introduced.
 16. Foreign trade stability would call for linking the shekel to a basket of currencies reflecting the composition of Israel's trade. Once the first stabilization phase is over, it will therefore make sense to link the (new) shekel to such a basket.
 17. The bilateral monopoly of a labour federation fixing the nominal wage and the government fixing the exchange rate, with each made conditional on the other, raises some interesting game-theoretic credibility considerations, recently discussed by Horn and Persson (1985)

always one of the conditions stipulated by the federation of labour unions for entering into a package-deal agreement).¹⁸ After several months have elapsed, gradual decontrol was to be considered (this process in fact commenced in January 1986, six months after the start of the program, and was expected to end by June 1986).

2.4. Wage and Incomes Policy

Formal wage indexation (COLA) agreements are helpful in avoiding undue erosion of real wages during high inflation processes, but are anathema to a sharp disinflation effort. Even with a minimal wage adjustment lag of one month (which has been the case in Israel in the recent past) a sharp deceleration in inflation will be thwarted by the immediate steep rise in the real wage in the first month or two of stabilization. There is no escape, therefore, from a temporary suspension of the COLA agreement and at least a temporary reduction in the real wage. On the assumption that the net real take home pay prior to the program had already been eroded to the 'right' level all that the plan had stipulated is that the further reduction in the net real wage be temporary (though not in wage costs to the employer - see below) and could be corrected by the end of the 1985

18. Theory has it that overall general equilibrium determines relative prices in the economy. Anchoring one of the nominal variables (such as the exchange rate, wages, credit, or prices) would then suffice to determine the nominal levels of all other variables under equilibrium. But what we have here is a disequilibrium situation. The notion of "multiple anchors" is suggested by analogy, securing a ship with several lines so as to distribute the strain in case of rough weather, with at least one of the lines taking the pressure at any point in time. Should one of the lines fail, the others can take up the strain, but it is nonetheless important to coordinate the lengths of the different lines ahead of time. (The analogy is based on a discussion with Mordecai Fraenkel some two years ago.)

budget year (March 1986). Given the relatively strong position of the trade union federation (Histadrut) in the wage bargaining process and the relatively weak starting point of a government that has to deliver price stability from a base of rather poor past performance it was clear that the workers would ask for initial compensation as well as some kind of additional insurance in return for the temporary suspension of the COLA agreement.

The initial price impact of the program was calculated by the planning team as well as the level of wage compensation that would be required as a substitute for suspending the COLA agreement for three months. The immediate compensation was set at 14 percent of the gross wage. One proposal considered was to grant additional compensation to net wages by bringing forward the adjustment of tax brackets set for October and giving some additional compensation at a later stage. Finally, on July 15, after some tough bargaining, a wage agreement was signed between workers and employers in the private sector¹⁹ that included the following items:

1. Compensation of 14 percent of the July wage, payable on August 1.
2. A one-time 12 percent increase on September 1.
3. Projected wage increases of 4, 4, and 3.5 percent on January 1, February 1, and March 1, respectively. Employers in the industrial sector undertook to absorb these increments within the existing price ceilings and the agreed-upon export subsidies.

19. In Israel the government is formally not a partner to the COLA agreement, which is traditionally signed by the employers' association and the Histadrut and then adopted by the government in the public sector. This may explain why the contract had some obvious drawbacks for stabilization policy (see below).

4. The COLA arrangement (80 percent of last month's rise in the consumer price index) would be renewed on December 1 (November's wage) according to the price rise in October, with a minimum inflation threshold of 4 percent (instead of the 12 percent threshold before the stabilization period).

The extension of this arrangement to the public sector was eventually secured by the Histadrut from the government during September in return for the postponement of certain agreed-upon wage increases due in October 1985 (for engineers, teachers, and some other groups in the public sector) until after March 1986.

Clearly the succession of projected monthly wage increases, at the end of six months (item 3) and, in particular, renewal of monthly COLA adjustment with a very low threshold (item 4) seemed very problematic but were, presumably, the insurance costs required for achievement of the crucial temporary suspension. The impact of these arrangements on real wage behaviour will be discussed below (see also Figure 5 and Table 5).

The public debate over wage policy brought up many issues pertaining to social justice and the sharing of the burden. The main declared objective of the stabilization program was the elimination of the most serious economic, as well as social, distortion in the economy - inflation. (Inflation, for example, eroded the tax paid by the self-employed more than that paid by wage earners and thus had a relatively more damaging effect on the disposable income of wage earners, in addition to the problem of tax evasion). Beyond that, the program did not propose to improve the income distribution. It attempted to reduce as a much as possible the impact of price increases of basic commodities on low income brackets through compensation via the social security system. It also included a

tax on luxury housing (to be collected by the local authorities) in addition to an extra property tax on vehicles and equipment imposed earlier.²⁰ But here, too, as in the case of distortions caused by multiple exchange rates, the basic idea was to abolish inflation first, and only then turn to renewed growth and to an attempt to rectify other distortions in the economy, including social ones.

With regard to unemployment - which will be mentioned again later - it seemed clear from the outset that the stabilization program would cause a rise thereof, at least temporarily, and the main problem was to prevent unemployment from exceeding a level of 8-9 percent (on the eve of the program unemployment had declined from 6 to approximately 5 percent).

3. DEVELOPMENTS IN THE FIRST THREE MONTHS

Six months may be too short a period for evaluation of a disinflation program merely on the basis of immediate actual price performance but a glance at the key price indicators in Table 1 already shows a considerable measure of success even on this score, with consumer price inflation down from 14-15 percent to an average monthly rate of 2.6 percent (and wholesale prices to a rate of 2 percent). Once special seasonal elements are taken account of (in particular, prices of fruits and vegetables and

20. One major proposal on a general capital levy (including financial capital) had to be shelved early on because of a Law for the Protection of Savings that the Knesset had adopted prior to the July 1984 elections, a law that could only be revoked by a 2/3 majority.

seasonal change in clothing) the monthly rate was more like 1-2 percent, which, in fact, was the case at the end of 1986. This was the rate also projected into the early months of 1986. However, a longer period has to elapse before one knows whether the sharp deceleration in inflation will indeed persist. At this stage one has to make do with an evaluation of the key background variables that should support the sharp disinflation effort and the conditions for their sustenance into the future.

A central ingredient determining the success of a stabilization program is the public's attitude toward it. This attitude can be measured by opinion polls, which indicated an improvement from the beginning of July into August.²¹ The first weeks of July were marked by considerable confusion. The vehement debates between the Histadrut and the government, the strikes, and the lack of clarity as to the government's intentions cast the very beginning of the program in doubt. The wage agreement eventually signed in the private sector on July 15 served as an important signal in the process of creating a nominal anchor for the price system. Public debates, grassroots pressure on the trade unions, and a general perception that with all the skepticism (fed by past failures) the Unity Government should be given another chance, may all have helped to bring the wage agreement about. The fact that the exchange rate remained stable during the early weeks of the program (as did the black market rate - see Table 1) and that foreign exchange reserves started rising are not surprising, as both were expected immediately after a sizable devaluation and a

21. A poll taken by "Dahaf" for the "Yedi'ot Aharonot" newspaper shows an increase in the number of respondents in favour of the program from 45 percent in the beginning of July to 64 percent in the beginning of August, whereas the number of those opposing it declined from 51 to 31 percent in the same period ("Yedi'ot Aharonot," August 9, 1985).

price freeze, but that, too, helped.

An interesting measure of public confidence is represented by expectations of inflation as indicated by the public's behaviour in the indexed bond market - this indicator revealed a gradual decline in expected inflation. For example, according to these calculations, the monthly price increase forecast three months ahead dropped from about 18 percent in June to 11-12 percent in July-August and gradually declined in the course of the following months to 1.7 percent by the end of 1986 [see Table 4, column (8)].²² Hence, the credibility of the program grew in its first months of operation.

We now turn to some more "real" aspects - first and foremost the implementation of the budget. Figure 4 shows data on the government's revenues and expenditures, in constant prices,²³ from the first quarter of 1983 to the fourth quarter of 1985. Note the decline in real spending (including subsidies) in the more recent period and the systematic decrease in excess demand until it turns into a slight surplus by the 85:3 quarter.

Table 2 presents annual data (including interest) as percentages of GDP. The deficit in the first eight months of the 1985 budget year was smaller than expected. In fact, if the first 2/3 of the budget year 1985 were representative of the year as a whole, the reduction of the deficit (including interest payments) compared with 1984 would reach \$1.8 billion

22. This series does not change much when the time horizon is taken to be 6 or 12 months instead of 3 [see Yariv (1985)], probably because at a given point in time the public evaluates the program's overall chances of success in reducing inflation rather than a changing profile of inflation over time. 1.7 was the end-of-December figure.

23. For comparison, the monthly data in Figure 4 can be translated into dollars at ISh.610/\$1. These data, unlike the annual data of Table 2, do not include interest payments.

instead of the planned \$1.5 billion. This would mean that the deficit as a share of GNP dropped from 15 percent in 1984 (or around 10-12 percent on a longer-term average) to only 6 percent in 1985 (4 percent in the months July-December). Returning to Figure 4, and comparing the developments so far in the budget year 1985 with the corresponding quarters of 1984, we see that the improvement in April-June (85:2 as against 84:2) was due entirely to an increase in taxes and not to a reduction in spending, whereas the further improvement since the implementation of the program (July-September) stems in increasing part from the expenditure side. This reduction was brought about mainly through subsidy cuts and only in small part by cutbacks in real government activity; it is also too early to tell whether the government will manage to reduce its activity during the rest of the budget year and in the next (1986) budget. At any rate one should emphasize that so far, at least, budgetary restraint did support the attempt to effect rapid stabilization of prices and exchange rates.

This brings me to the second facet of the real system - the balance of payments. Here, no less than for the budget, the picture for 1985 as a whole shows substantial improvement, and not only in terms of the import surplus. The current account as a whole (including unilateral transfers) got "into the black" for the first time since many years.²⁴ The improvement in liquidity for the end of 1985 can be observed in Figure 3 - reserves rose considerably while the current debt leveled off. This

24. The preliminary estimates for 1985 put the net current account (including unilateral transfers) at a surplus of close to \$600 million in 1985 compared with deficits of \$1,500 million and \$2,300 million in 1984 and 1983, respectively. Even without the unilateral transfers this would constitute a further improvement of over a billion dollars in 1985.

improvement is related to the continued decline in imports, a further (though not dramatic) increase in exports, and the \$750 million emergency grant from the U.S. government.

The import surplus developments clearly continue trends that started before the emergency plan was implemented. The program can, in the short run, reinforce these trends, especially in restraining imports, but its major immediate effect has been on the capital account - in arresting the wave of speculative foreign currency purchases (in July-August the private sector even started selling foreign currency; overall repatriation of private capital in the second half of 1985 may have been of the order \$500 million). The main point is that the balance-of-payment developments strongly support the possibility of continued exchange-rate stabilization.

Finally, Table 3 indicates a high real exchange rate (in terms of relative wholesale prices) not only relative to the dollar but also vis-a-vis a basket of European currencies, in a process that has been going on for over a year. (With the shekel/dollar rate kept stable there followed, in the second half of 1985, an effective devaluation of about 1 percent a month against the basket.) The average index of the real exchange rate vis a vis a basket of five major countries for the third and fourth quarters of 1985 was close to the highest levels ever achieved since 1972. Naturally, this index may suffer a setback if the price level in Israel continues to rise relative to the rate of inflation in competing countries while the nominal exchange rate remains unchanged. But considerable "breathing space" has been gained, which makes it possible to place the main emphasis in exchange-rate policy on stabilization of the price level - provided, of course, that the restraining budget, credit, and wage policies persevere.

Let us now turn to monetary considerations. The shift from rapid inflation (including a high rate of devaluation) to a stable exchange rate is very dramatic and usually fraught with great difficulties, especially in an economy that has widely used dollar-linked along with nominal and real shekel assets. The effective monthly rate of interest on dollar assets was 17 percent (in shekel terms) just before the program was introduced, dropping the following day to 3 percent; the monthly shekel borrowing rate was 18-20 percent, and 11-14 percent on time deposits [see Table 4, columns (9) and (10)]. A sharp change in inflationary expectations causes the real rate of interest to leap upward. Concern was voiced in public about "the danger of a monetary flood that would sweep away the economic program" owing to the different liquidity ratios applying to dollar as against shekel deposits in commercial banks.

The data presented in Table 4 reveal that the monetary system stood firm throughout the first six months of stabilization. As expected, there was an immediate steep drop in PATAM deposits (which has moderated since August) and a dramatic increase in short-term shekel deposits and the quantity of money; total liquid assets declined by 11 percent in real terms in July, remained more or less stable in August, and dropped again in September [compare columns (4)-(6) in Table 4 with column (7)]. The slowdown in nominal credit, both "directed" and free [columns (1)-(3)] was in line with the aims of the stabilization program. Total bank credit in the economy decreased in real terms by 9 percent in July, rose slightly in August, and did not change much in September-December. Without data on credit in the "gray" market (which is claimed to have dropped sharply) not too much can be said on this matter, but there were no evident excesses in credit issues in spite of the lowering of interest rates. During the first

six months of the program the marginal borrowing rate declined in stages, reaching 5 percent in December, while the deposit rate sank to 2 percent per month. Even with inflationary expectations of 1-2 percent a month the real borrowing interest rate remained substantially higher than the level that would encourage production and employment. But the speed at which this pressure is relieved must take into account considerations that have to do with the continued effort to stabilize the exchange rate.²⁵

Finally, one should mention the problem of real wage erosion that elicited considerable debate when the stabilization program was announced. Table 5 (see also Figure 5) summarizes the gross and net wage data in constant prices over the budget years 1980 to 1984, and includes a forecast for the end of the 1985 budget year (April 1986). Several facts stand out:

1. In 1984 real gross wages were about 16 percent higher than in 1980 although product per employee had not risen and may even have declined.
2. Immediately before the program was put into effect (June 1985) gross wages had already been eroded slightly compared with the average for 1984.²⁶ The average erosion of another 15 percent in 1985 should have restored real gross wages in the economy as a whole to approximately their 1980 level, which is believed to accord with the economy's equilibrium conditions with respect to both productivity and

25. Extremely high real interest rates in the early stages of stabilization are a familiar phenomenon encountered in the historical experience of many countries [see, for example, the developments in Germany in 1923 as described in Dornbusch (1985) and similar events in present-day Argentina].

26. At the time of preparation of the program the wage index for June was estimated at 101 (1980 = 100), an estimate that has since been corrected by over 10 percent!

the trade balance.

3. Erosion of gross wages in the course of the stabilization program was compensated for by inflation adjustment of the tax brackets (and the sharp slowdown in inflation) so that by the end of the budget year net wages are expected to have regained their pre-stabilization level - i.e., 10 percent higher than in 1980. Note that the real erosion between June and October (and onward) is smaller because we are comparing a high-inflation month (June), when wages were eroded, to low-inflation months.²⁷

4. PROBLEMS AND OPEN QUESTIONS

The developments in the first six months after implementation of the stabilization program appear to support the continuation of the stabilization effort in the coming months and may contribute to the achievement of its major objectives. But one should also emphasize the difficulties and dangers ahead. First, the danger of deviations from the budget. Subsidies have indeed been cut, but the scope of reduction in real government activity is as yet not clear. Demands for expansion of the budget by ministries that fail to carry out the cuts required and firms in financial straits seeking government assistance are not likely to decrease. The same

27. This is a "tail-end effect" - calculation of real wages by dividing nominal wages by average monthly prices although wages are paid at the end of the month. This effect reduces the erosion of real wages (or overstates its increase) in times of accelerated inflation and exaggerates it during the transition to stability. Correcting for this bias reduces the wage erosion relative to the inflationary base period by 5-8 percent (estimates by S. Amir, Bank of Israel).

applies to the planned framework for the 1986 budget, over which a fierce internal debate has taken place. It is too early to say whether it will sustain a permanent reduction in the rate of inflation, which requires a sizable further reduction in government expenditures.

A potentially serious problem could arise in connection with growing unemployment. The rate of unemployment by the eve of the year was estimated at 7-8 percent. A rise in unemployment is inevitable in a stabilization program of the sort presented here but could take on proportions leading in the case of Israel (with a long high employment tradition) to a social and political reaction that might thwart the successful completion of the program. The sooner it is felt that the economy has really moved onto a new path of relative price stability, the easier it is to relax the constraints and to permit a gradual revival of economic activity.

The question of agreed-upon wage increases that were anticipated at the beginning of 1986 is also relevant in this context. Although the employers undertook to absorb the wage increases, the very fact that wages were to increase by 4 percent a month during three consecutive months (on top of the COL allowance for October, which was paid on December 1, when the October index fortuitously exceeded the 4 percent threshold) could bear with it the seeds of renewed inflation. The renewal of wage contract negotiations towards April 1986 and the government's ability to throw further tax concessions into the bargain seemed critical. Once again, this highlights the paramount importance of a further reduction in government expenditure.

The system still lacks the robustness that can prevent the future translation of price level shocks into renewed accelerated inflation. One important further step in this connection could be the total abolition of

all subsidies for basic commodities, and their substitution by a system of direct agricultural support. This could immunize the system against government induced price shocks of the type that characterized the inflationary process in the past.

Since the inflationary process was deeply rooted, the process of price increases could also be renewed as a result of errors in judgement on the part of some sector or other, or a fortuitous price increase that exceeds the 4-percent threshold for COL allowances. For this reason it was considered important to exercise caution and discretion in the gradual removal of price controls. While the prices of many tradable goods can, in principle, be controlled via the market - by exposure to competing imports - this is not true in the case of nontradable goods and services, especially when markets are far from competitive. At the time of writing, in January 1986, the removal of price controls was commenced in a process due to end by June 1986.

Another issue that requires a great deal of discretion is the easing of credit restrictions and reductions in interest rates. A high rate of interest may affect output and employment. On the other hand, it helps maintain the stability of exchange rates. The rate of reduction of interest depends on how rapidly inflationary expectations decline which, in turn, depends on budget and wage developments. The greater the restraint in government spending, the easier it is to relax restrictive monetary policies. At the time of writing real interest rates on borrowing still remained quite high.²⁸

28. Both these last two issues (price decontrol and monetary policy) are examples that throw light on the importance of the close monitoring of a stabilization program on an almost day-by-day (or week-by-week)

Finally there is the longer term issue - when will the economy start growing again? Price stabilization is a necessary precondition for renewed growth and here, too, the sooner the price system stabilizes the sooner it will be possible to shift the major effort to the program's third objective - renewed economic growth. In returning to renewed growth there may be several years in which the import surplus will rise again owing to the need for greater investment. Such a temporary increase in external dependence, from a position of strength, designed to finance productive investment, differs entirely from the state of disinvestment that has plagued the economy for close to ten years. At the time of writing, however, the main hurdle - extricating the economy from the vicious circle of inflation and balance-of-payments crises - was still demanding the major attention. Restoration of control over economic policy enables greater leeway, but does not, in itself, guarantee safe passage to journey's end.

basis. An important institutional tool in this connection has been a follow-up committee of experts (headed by E. Sharon, who also led the original planning team). This has been meeting weekly ever since July 1985, monitoring the program on a regular basis and reporting directly to the Minister of Finance and to the Prime Minister.

Table 1. Key Indicators, 1980-84 and 1985, Before and After Stabilization
(Monthly rates of change)

	Mean 1980-84	1984 (During year)	1985	
			January- July	August- December
a. <u>Prices, exchange rates and wages</u>				
Consumer prices	8.7	15.2	14.0	2.6
Wholesale prices (manufacturing)	8.9	13.3	12.4	2.0
\$ exchange rate (official)	8.8	15.9	13.6	0.0
Black market \$ rate	-	16.1	13.3	0.0
Nominal wage	9.0	16.5	11.0	2.1
Interest rate (end- of-period level)		16.1	20.3	5.4
b. <u>Relative prices</u>				
Real exchange rate (basket) ^a	-0.5	0.1	2.8	-0.6
Real wage (gross)	0.3	1.1	-2.7 (-0.3) ^b	-0.5 (-3.1) ^b
Real wage (after tax)	0.2	0.8	-1.8 (0.4) ^b	0.8 (-1.4) ^b
c. <u>Money and credit</u>				
Means of payment (M ₁)	8.0	13.4	10.6	11.9
Quasi-money (M ₃) ^c	10.7	15.9	13.0	3.0
Total bank credit	9.1	16.8	13.9	3.9
d. Budget deficit (% of GDP)	10.2 ^d	15.0	(12.0) ^b	(4.0) ^b
e. Unemployment rate (%)	4.9 ^d	5.9	6.0	7.5
f. Balance-of-payments basic balance (m.\$)	-210 ^d	-480	+340	

Notes on following page.

- a. Relative wholesale price of major trading partners (basket of 5 - see Table 3).
- b. Figures in brackets refer to the periods January-June, June-December, respectively.
- c. Money and liquid assets, including PATAM (see Table 4).
- d. 1980-83 average.

Table 2. Government Expenditure and Revenues, Domestic Deficit, and its Finance, 1977-1985

(Fiscal years,* percentage of GDP)

	Domestic expenditure	Revenues	Deficit (1)-(2)	Deficit incl. interest	Deficit finance		
					Change in money base	Net debt increase	Foreign exchange sales
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1977	45	38	7	13			
1978	40	36	4	8			
1979	43	38	4	9			
1980	40	35	5	9	2	6	1
1981	45	35	9	14	2	8	3
1982	44	40	4	9	2	5	2
1983	43	39	4	9	2	1	6
1984	43	36	8	15	3	4	8
1984 April to November	42	34	8	15	4	2	9
1985 April to November	39	38	1	6	11	-7	3

* The fiscal year extends from April 1 to March 31.

Source: Columns (1), (3), (5), (6) and (7) - Bank of Israel, Research Department, and the Accountant General's Office.
Col. (2) - Internal Revenue Administration and calculations of the Bank of Israel Research Department.

Notes:

- a. Domestic expenditure - civilian and defense expenditure, transfers and subsidies, investment, miscellaneous expenditures and reserves.

(cont.)

- b. Interest payments - budget division estimates of domestic interest excluding interest paid to the Bank of Israel and social security.
- c. Forecast for 1985/6 was made on basis of rates of change of respective items in published budget.
- d. The expenditure and deficit estimates are not corrected for the inflationary erosion of unindexed loans to the private sector - these amounted to an additional 5-8 percent of GDP in the years 1978-82 and fell to 1-2 percent in 1983-84.

Table 3. Relative Wholesale Prices of Selected Trading Partners, 1977-1985 (indices, 1972 = 100)

	U.S.A.	European basket	Basket of 5 currencies
<u>Annual average</u>			
1977	91	96	94
1978	106	121	116
1979	98	118	111
1980	101	122	114
1981	107	105	106
1982	105	95	99
1983	101	86	81
1984	108	84	93
1985	123	97	106
<u>Quarterly</u>			
1984	106	87	93
1	107	87	94
2	108	82	91
3	111	81	92
4			
1985	120	83	96
1	124	94	104
2	128	106	114
3	119	106	111
4			

Notes:

Data refer to manufacturing wholesale prices relative to Israeli index multiplied by representative exchange rate. The "Basket of 5" refers to the U.S., U.K., Germany, France, and the Netherlands weighted by Israel's trade with these countries.

Source: Bank of Israel Research Department.

Table 4. Bank Credit, Liquid Assets, and Interest Rates: April-December 1985

	(Monthly rates of change)									
	Credit		Means of payment & shekel time deposits (4)	PATAM (in \$) (5)	Total liquid assets (6)	Inflation rate		Interest rate (monthly)		
	Free ^a Dir-ected	Total				Actual	Expected	Bank lending	Time deposits	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
Relative weight, end of 1984	(49)	(51)	(100)	(18)	(82)	(100)				
April	11	17	14	20	-2	11	19.4	11.3	18.4	11.1
May	17	8	13	4	-0	9	6.8	10.3	18.8	11.3
June	18	16	17	7	-1	16	14.9	18.1	20.4	14.4
July	13	23	18	64	-14	17	27.5	10.9	20.3	11.2
August	13	1	8	14	-3	4	3.9	11.7	15.7	6.7
Sept.	10	-1	5	14	-2	4	3.0	7.9	12.2	4.9
Oct.	4	2	3	9	-4	2	4.7	6.0	9.2	3.9
Nov.	2	-1	1	11	-2	4	0.5	3.9	6.9	2.7
Dec.	5	-1	3	-0	-2	-1	1.3	2.2	5.4	2.3

a. Excluding fuel, shipping and aircraft, and savings accounts.

b. Yariv (1985), average expected inflation over next three months, based on the market for indexed bonds.

Source: Bank of Israel Research Department.

Table 5. Product per Employee, Gross and Net Real Wage, 1980-1985
(fiscal years, 1980 = 100)

	Product per emp- loyee	Real gross wage			Total net real wage
		Business sector	Public sector	Total	
1980	100	100	100	100	100
1981	101	111	108	110	113
1982	101	113	107	111	114
1983	99	112	107	110	110
1984	99	116	116	116	112
1985	99	103	91	100	104
<u>Selected months, 1985/6</u>					
June 1985		113	114	114	112
July 1985		98	93	96	96
October 1985		92	81	89	96
December 1985		99	83	94	101
February* 1986		104	88	99	108
March* 1986		107	92	103	110

* Forecast, assuming 1.5 percent monthly inflation during January-April 1986.

Source: Economic Advisor, Ministry of Finance, based on National Insurance Institute data.

Figure 1. Inflation, External Dependence, and Growth

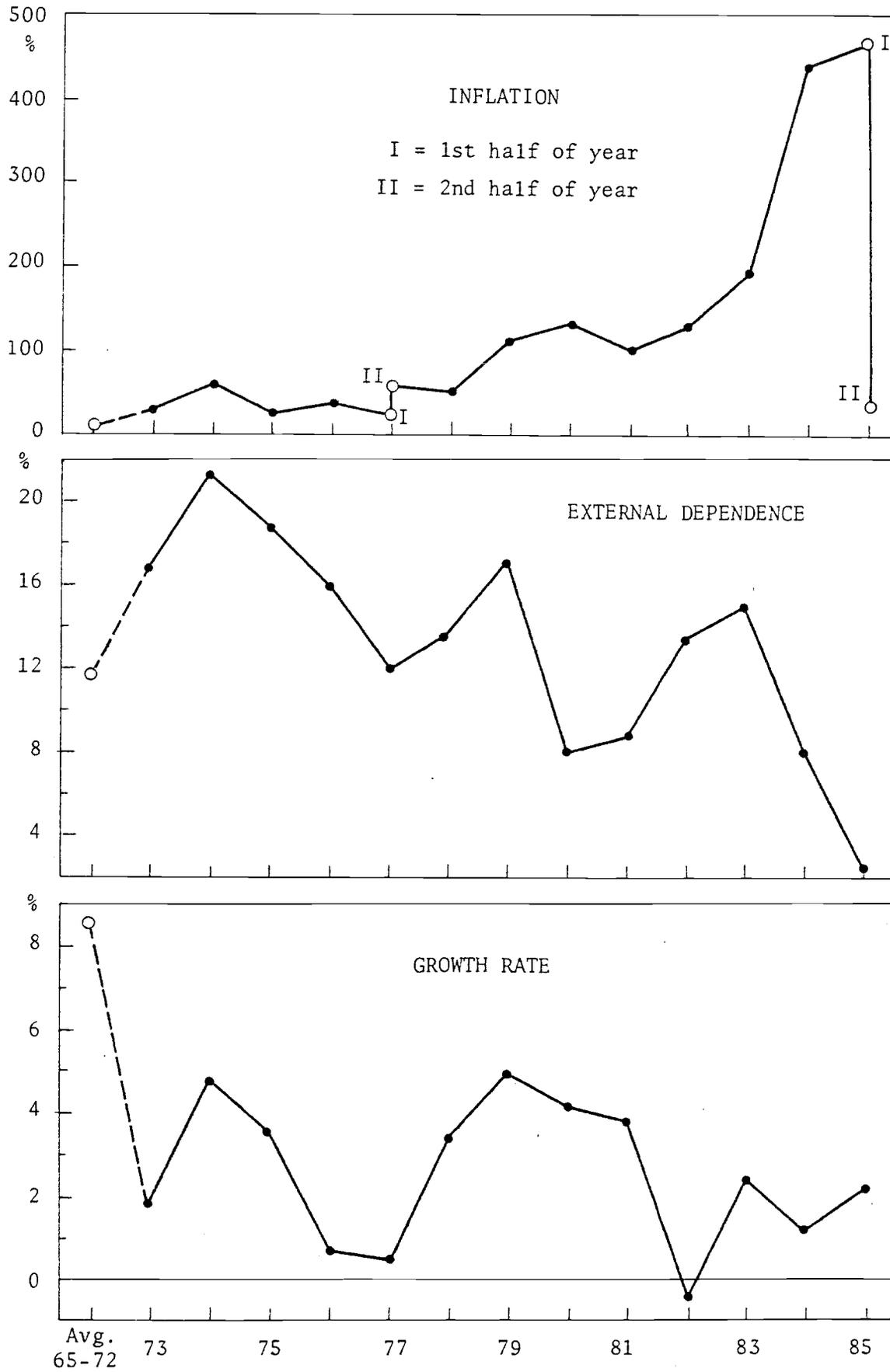


Figure 2. Monthly Inflation Rates, 1983-1985

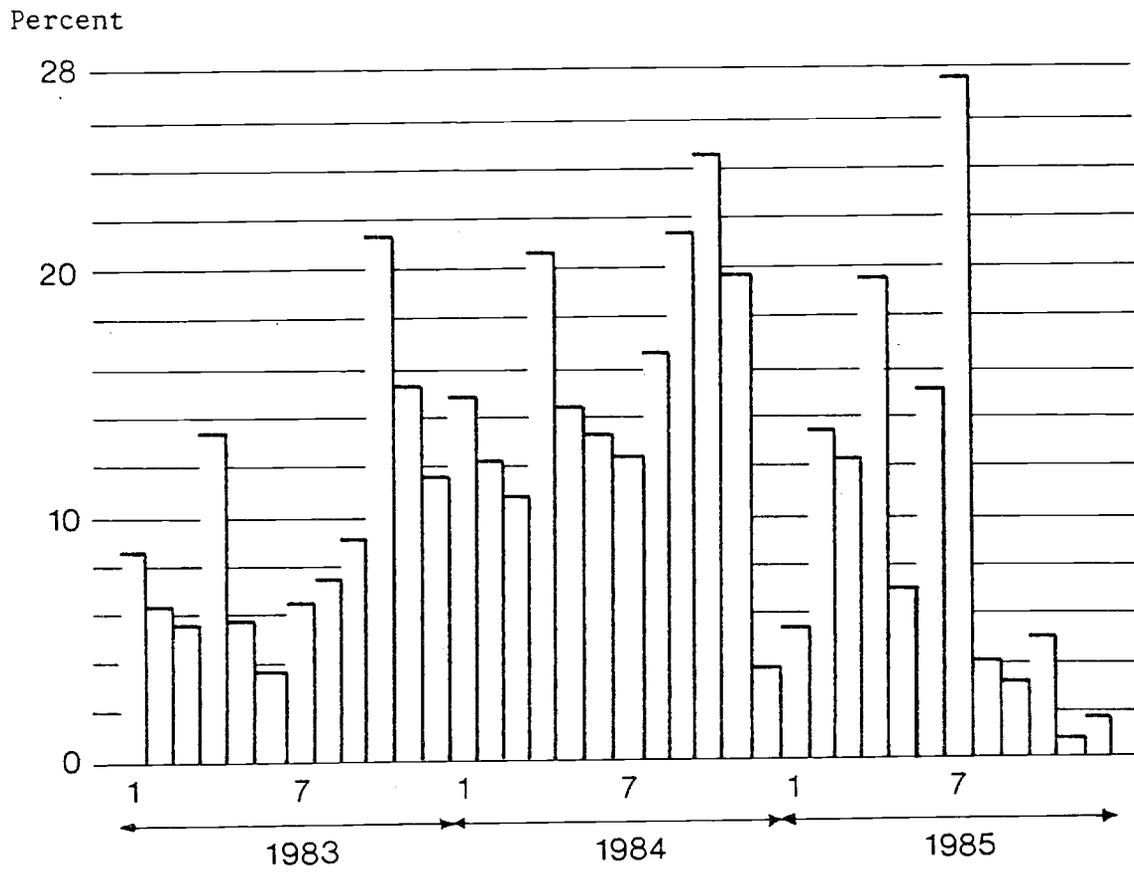


Figure 3. Current Account, Exchange Reserves, and the Current Debt
1980-1985

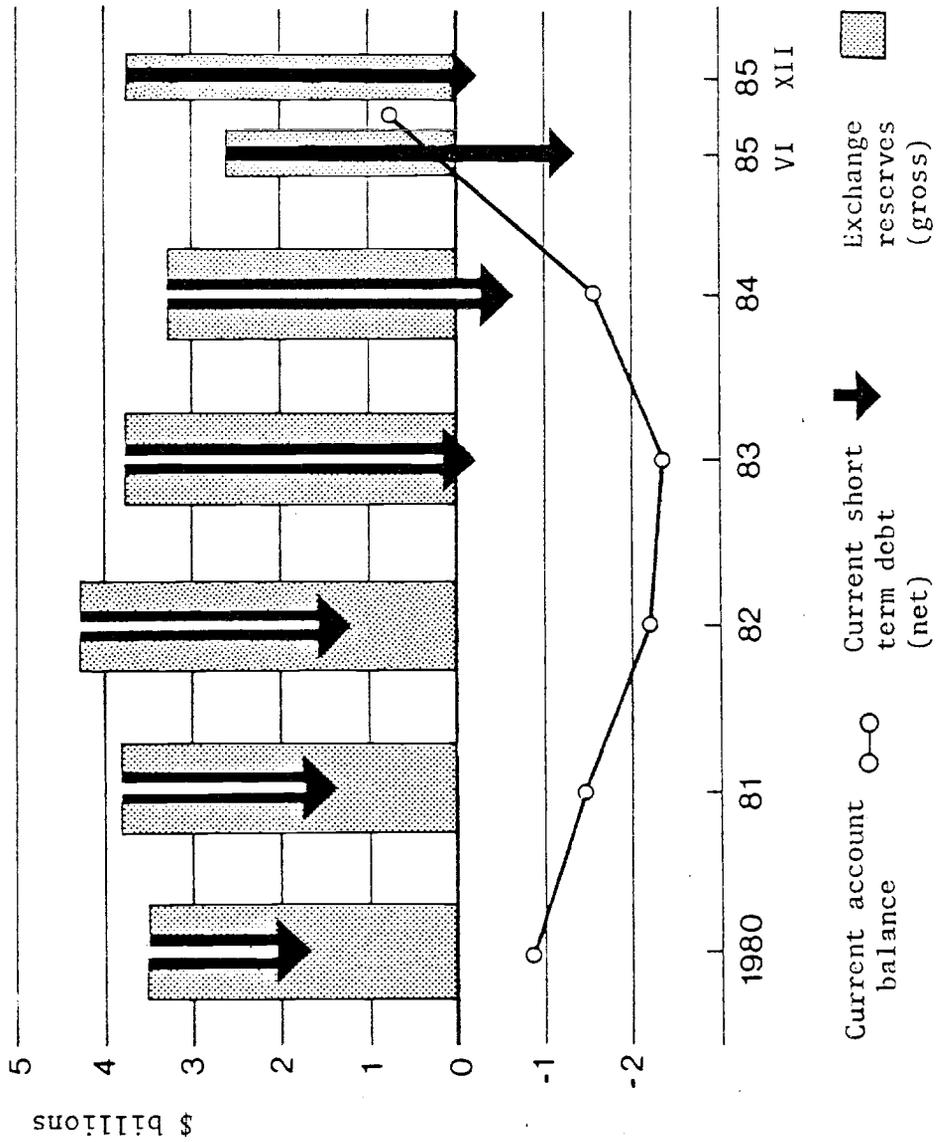


Figure 4. Real Expenditure, Revenues, and Excess Domestic Demand of the Public Sector, Quarterly, 1983:1 to 1985:4

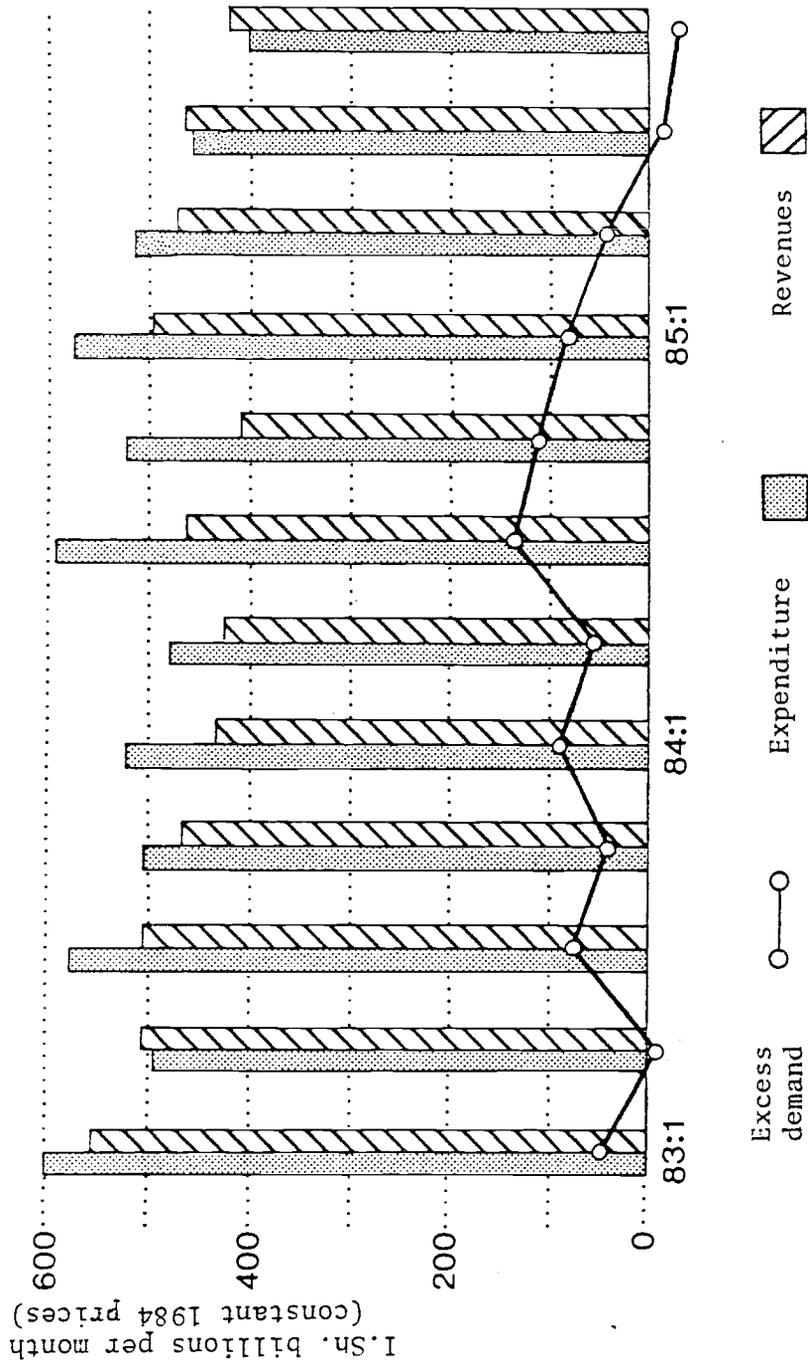
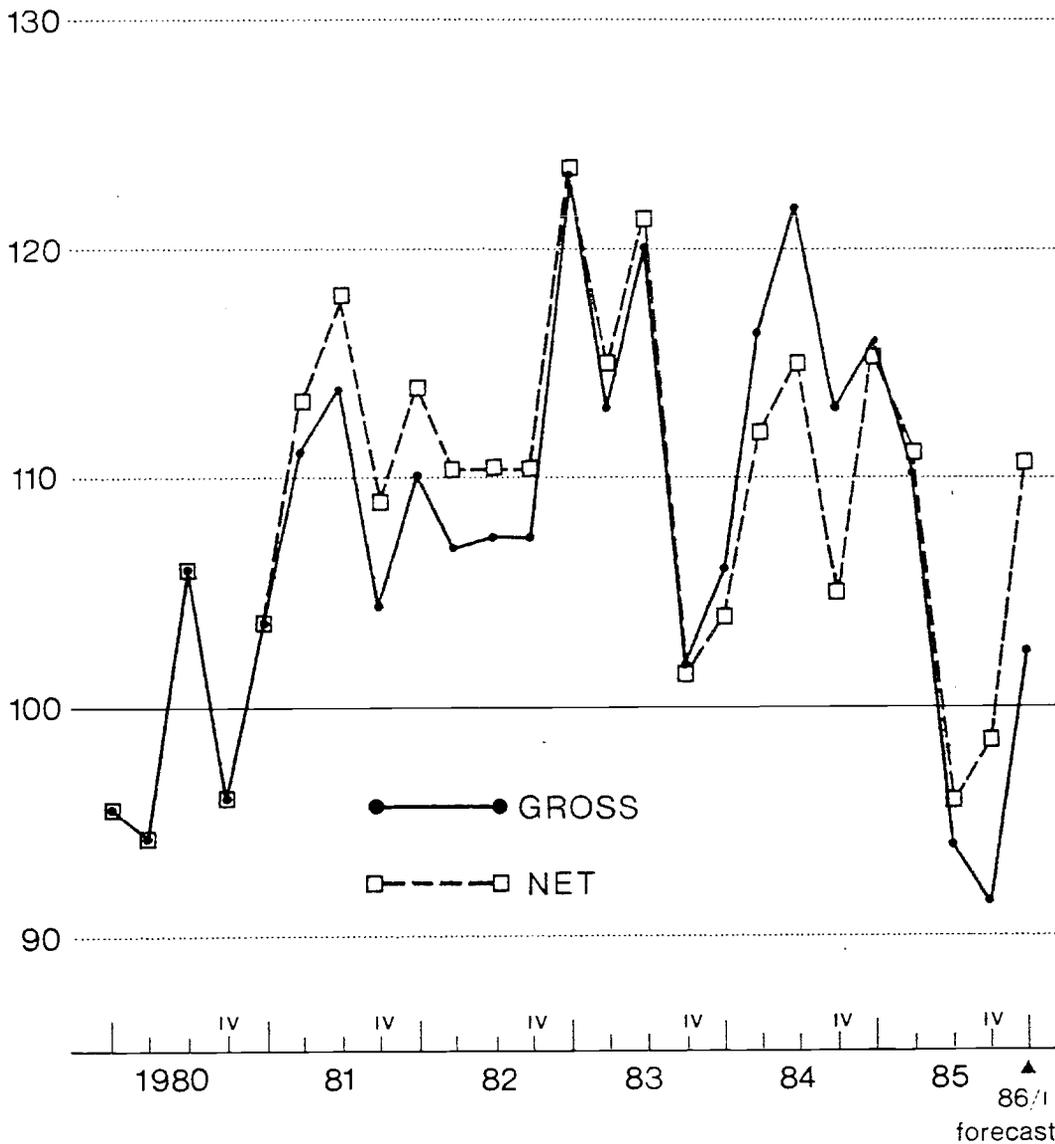


Figure 5. Gross and Net Real Wage Movements, 1980/I-1986/I
(Indices: 1980 = 100)



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