

Structural Reform, Stabilization, and Growth in Turkey

By George Kopits



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The following symbols have been used throughout this paper:

- . . . to indicate that data are not available;
- to indicate that the figure is zero or less than half the final digit shown, or that the item does not exist;
- between years or months (e.g., 1984–85 or January–June) to indicate the years or months covered, including the beginning and ending years or months;
- / between years (e.g., 1985/86) to indicate a crop or fiscal (financial) year.

“Billion” means a thousand million.

Minor discrepancies between constituent figures and totals are due to rounding.

Prefatory Note

This paper was prepared by George Kopits, Senior Economist in the Fund's European Department. He received useful comments from several Fund colleagues, and in particular from Peter Hole, Mohsin Khan, Donald Mathieson, Thomas Mayer, Jayanta Roy, and Rüşdü Saracoglu. Lan Pham and Peter Woo provided computational assistance, and Joslin Landell-Mills provided editorial assistance. The views expressed are those of the author and do not purport to represent those of the Turkish authorities or of the International Monetary Fund.

It should be noted that the term "country" used in this document does not in all cases refer to a territorial entity that is a state as understood by international law and practice. The term also covers some territorial entities that are not states but for which statistical data are maintained and provided internationally on a separate and independent basis.

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I Introduction

Following a severe balance of payments crisis in the late 1970s, in January 1980 Turkey embarked on a far-reaching stabilization and structural adjustment program. To support this effort, the International Monetary Fund, the World Bank, and the Organization for Economic Cooperation and Development (OECD), together with bilateral donors, provided substantial financial assistance in what was then one of the largest operations of its kind. Over the period 1980–85, the Fund made available SDR 1.7 billion (of which SDR 1.5 billion was utilized) under a series of stand-by arrangements and the Bank extended US\$1.6 billion in structural adjustment loans (SALs). In addition, large amounts of debt falling due over several years, as well as arrears to official and private creditors, were restructured.

The Turkish adjustment rested on policies to restrain the growth of domestic demand and on structural reforms to augment supply through an improved allocation of resources. The reforms, aimed at opening up the economy and promoting its reliance on market forces, consisted primarily of the following: broad-based price liberalization, including flexible determination of exchange and interest rates; trade liberalization; liberalization of the exchange and payments system; financial sector reform; streamlining of non-financial public enterprises; and tax reform. Thus, besides moving toward external and domestic stability, Turkey underwent an outward- and market-oriented transformation.

Notwithstanding a substantial deterioration in its terms of trade and generally weak import demand in industrial country markets, Turkey experienced an export-led economic recovery. The external current account deficit, which was equivalent to nearly 6 percent of gross national product (GNP) in 1980, had fallen to 2 percent of GNP by 1985, as the share of merchandise exports more than tripled to reach an unprecedented 15½ percent of GNP. The rate of inflation (measured in year-to-year changes in wholesale prices) decelerated from almost 120 percent in the first quarter of 1980 to 34 percent in the first quarter of 1986. The adjustment appears to have entailed only small costs in terms of forgone growth and employment. Following a two-year contraction of output,

during 1981–85 annual real GNP growth averaged 4½ percent and more than 0.8 million nonagricultural jobs (net) were created.

While the Turkish experience is widely seen as a successful case of economic liberalization and stabilization, the adjustment process has not yet been completed. The international community is particularly interested in how far the Turkish adjustment record justifies the financial assistance provided, in part through substantial use of Fund resources. This and other issues, involving the nexus between economic policies and results, comprise the focus of this study. The paper examines the policy measures adopted between 1980 and 1985, the context in which they were implemented, and the performance that ensued during that period. It concludes with a broad assessment of the adjustment effort and discusses some tentative lessons for policy formulation.

However, the subject under scrutiny transcends the case of Turkey. On the one hand, following the initiative of U.S. Treasury Secretary Baker at the 1985 Annual Meetings of the Board of Governors of the Fund and the World Bank in Seoul, there has been an evolving consensus about the need to provide large-scale financial support by multilateral institutions and commercial banks to heavily indebted countries which are ready to adopt economic programs—similar to the one implemented in Turkey—aimed at the twin objectives of equilibrium and growth. On the other hand, in the wake of comparable, albeit less successful, experiments conducted elsewhere—particularly in the Southern Cone of Latin America in the second half of the 1970s—some observers have become increasingly disillusioned with various aspects of liberalization programs. Apart from those who question such programs on philosophical grounds, there are those who are concerned about the magnitude, order, and mix of liberalization and stabilization measures, and the attendant external financing. Drawing on the case of Turkey, this paper seeks to shed light on the appropriate sequence and content and the suitability of such policy packages for developing economies. The reasons that set the Turkish case apart from less successful adjustment experiences should provide a useful input for future liberalization-cum-stabilization efforts.

II Background

For half a century, from the advent of the great depression through the end of the 1970s—except for a short-lived liberalization in 1950–53—Turkey followed an inward-looking economic strategy with heavy reliance on government intervention. Besides erecting barriers to trade and financial flows, the Government assumed a leading role in the economy by creating public enterprises, both to alleviate the problems created by the world crisis and to accelerate Western-style industrialization.¹

The inward-oriented approach was formalized under the first two five-year plans (1963–72) setting ambitious targets for industrial growth to be achieved through stepped-up capital formation and import substitution. Nonfinancial public enterprises (known in Turkey as state economic enterprises or SEEs), which accounted for a large share of productive capacity, were primarily responsible for realizing these targets and had virtually unlimited access to financial resources and protection from foreign competition. The trade regime had become, in fact, a major instrument of industrial development; restrictions proliferated in the form of import and export licensing, quotas, and high customs duties, supplemented with numerous surcharges and advance import deposit requirements. As partial relief for these levies and domestic indirect taxes, rebates were granted on selected exports. The exchange rate was fixed and multiple rates were provided for certain basic imported inputs.² The emergence of a balance of payments crisis in 1968–70—much like the preceding one in 1954–58—was met with a tightening of quantitative import restrictions, followed by a devaluation of the Turkish lira. The subsequent easing of the foreign exchange shortage again led to some relaxation of restrictions.

Broadly in accordance with the plan, Turkey entered the 1970s with rapid economic growth, a low rate of inflation, and an external current account surplus. This

performance was interrupted in 1974 by the first oil crisis, as Turkey persevered with its growth strategy during the third five-year plan (1973–77) through continued high, albeit increasingly less efficient, rates of capital formation and a refusal to pass the deterioration in the terms of trade onto domestic prices of energy and other key SEE products. During 1973–76 real GNP growth rate averaged 7.2 percent and real fixed investment increased 16.2 percent yearly, but at the cost of progressively severe internal and external imbalances over the rest of the decade. The deterioration in public finances was particularly acute by 1977 when the public sector borrowing requirement was estimated to have reached the equivalent of 11.3 percent of GNP (Table 1), compared with 2.0 percent of GNP in 1973.³ Excess demand, fueled by expansionary fiscal and monetary policies, contributed to a considerable weakening in the balance of payments and to rising inflationary pressures. The current account of the balance of payments moved from a surplus of US\$0.7 billion in 1973 to a deficit of US\$3.1 billion (6.5 percent of GNP) in 1977, reflecting a sharp rise in the oil import bill coupled with stagnation in exports and workers' remittances. The deficits were financed mainly with short-term borrowing in part under the convertible Turkish lira deposit (CTLD) scheme.⁴ With rapidly falling external reserves, Turkey was not able to meet mounting import and debt service payments, which resulted in the accumulation of arrears and a virtual drying up of normal sources of financing. At the end of 1977, the stock of external debt totaled US\$11.3 billion (more than three times the amount outstanding

¹ Unlike in many other countries where modern economic nationalism emerged in reaction to the world depression, in Turkey it also reflected a much deeper feeling of mistrust toward foreigners, rooted in the capitulations established during the Ottoman Empire. See, for example, Okyar (1979).

² For an analysis of Turkey's trade policies until the early 1970s, see Krueger (1974).

³ An exact measure of the public sector borrowing requirement is not available at this time because of uneven accounting practices and coverage. In principle, it encompasses the consolidated financing requirement, on a cash basis, of the Central Government (consolidated budget, revolving funds and extrabudgetary funds), the local governments, and nonfinancial SEEs.

⁴ Between 1975 and 1977, international banks extended substantial short-term credits to the Central Bank, as well as commercial banks, mainly for trade financing. The most popular form of foreign borrowing was the CTLD scheme which authorized Turkish commercial banks to accept deposits from foreign banks and Turkish nationals working overseas under an exchange rate guarantee provided by the Central Bank. The local banks, in turn, used these deposits largely for medium-term domestic lending.

Table 1. Turkey: Selected Domestic Economic Indicators, 1977–85

	1977	1978	1979	1980	1981	1982	1983	1984	1985
<i>(Annual percentage change, unless otherwise noted)</i>									
Real GNP	3.9	2.9	−0.4	−1.1	4.1	4.6	3.3	5.9	5.1
Real domestic demand	4.5	−5.4	−2.2	−1.2	1.6	2.8	4.7	5.5	4.5
Real private fixed investment	−1.5	−6.1	−11.6	−17.3	−8.7	5.5	4.7	8.8	7.8
Real foreign balance ¹	−1.4	9.2	2.0	0.2	2.5	1.7	−1.3	0.3	0.5
Nonagricultural employment	4.2	2.4	—	—	2.5	2.2	2.4	3.7	3.3
Unemployment rate (percentage of domestic civilian labor force) ²	12.1	12.4	13.6	14.8	15.2	15.6	16.1	16.1	16.3
Broad money (M2)	25.3	32.5	53.7	57.8	72.5	69.7	37.7	49.8	61.5
Expanded broad money (M2X) ³	56.7	71.9
Quasi-money	8.0	19.5	65.0	73.8	248.4	154.4	33.8	81.3	78.0
Domestic bank credit ⁴	57.4	49.3	62.1	89.0	87.1	54.5	30.9	33.0	56.5
Reserve money	33.5	41.2	55.1	47.4	47.8	48.7	38.3	46.9	54.2
Central Bank credit to the public sector ⁵	53.5	41.0	40.6	46.4	35.3	16.1	6.0	6.9	23.0
Reserve money multiplier with respect to M2 (average annual ratio)	1.82	1.71	1.69	1.81	2.11	2.41	2.40	2.45	2.56
Income velocity (GNP with respect to M2)	3.2	11.5	11.0	27.8	−14.3	−21.4	−4.0	6.1	−6.5
Interest rate (average annual rate) ⁶	4.8	6.6	9.0	10.8	34.5	37.5	30.0	44.8	45.9
Implicit GNP deflator	24.5	43.8	71.1	103.8	41.9	27.5	28.0	50.1	43.6
<i>(In percentage of GNP)</i>									
Gross domestic investment	25.0	18.5	18.3	21.4	21.4	20.1	19.7	19.5	20.0
Gross national savings	18.5	16.1	16.2	15.6	18.1	18.4	16.0	16.7	18.1
Central government operations ⁷									
Tax revenue	17.3	18.9	18.4	16.9	18.1	17.9	16.7	12.9	13.9
Expenditure	24.7	26.3	27.0	24.2	22.9	21.6	21.9	20.3	19.2
Overall balance	−5.3	−4.0	−4.0	−5.3	−2.7	−2.1	−3.3	−4.9	−2.2
Fiscal impulse ⁸	1.3	−1.0	−0.5	0.3	−2.2	−0.6	0.8	2.1	−1.5
Public sector borrowing requirement ⁹	11.3	10.5	8.5	10.2	6.5	6.1	6.4	8.1	5.2

Sources: Undersecretariat of Treasury and Foreign Trade, State Institute of Statistics, State Planning Organization, Central Bank; and Fund staff estimates.

¹ Contribution to real GNP growth.

² Includes disguised unemployment in agriculture, which averages some 4 percentage points.

³ M2 plus foreign exchange deposits with commercial banks—virtually nonexistent prior to 1984.

⁴ Calculated in reference to M2 in the preceding year.

⁵ Calculated in reference to reserve money in the preceding year.

⁶ After-tax six-month time deposit rate.

⁷ Consolidated budget, excluding extrabudgetary and revolving funds. Prior to 1982, fiscal year data (from March through February of the following year); for 1982 original data (March through December) has been multiplied by 1.2; from 1983 onward, calendar year data—on an accrual basis.

⁸ Calculated by the annual change in the difference between the cyclically neutral budget balance and the actual budget balance. The cyclically neutral budget balance is equivalent to the difference between revenue that bears a constant proportion to actual nominal GNP and expenditure that bears a constant proportion to potential (trend) GNP at current market prices; the proportions are measured in reference to 1982, the base year.

⁹ Estimate of the consolidated borrowing requirement of the Central Government, local governments, and nonfinancial SEEs—on a cash basis.

three years earlier), one half of it in short-term obligations, and including US\$1.7 billion in payments arrears (Table 2).

From early 1978 onward the authorities made several attempts to arrest the deterioration in economic conditions, relying mostly on stricter demand management. Also, devaluations (of 23 percent in March 1978 and 44 percent in June 1979) and increased export tax rebates were intended to improve the country's export competitiveness. These policies were supported by

two consecutive stand-by arrangements with the Fund, under which purchases totaled SDR 310 million in 1978–79.⁵ Subject to implementation of the second arrangement, at the January 1979 summit meeting of major Western government leaders in Guadalupe,

⁵ In April 1978, a two-year stand-by was approved for SDR 300 million (150 percent of quota), which was replaced in July 1979 by a one-year arrangement for SDR 250 million (125 percent of quota). Neither of the two arrangements was fully utilized.

Table 2. Turkey: Selected External Economic Indicators, 1977–85

	1977	1978	1979	1980	1981	1982	1983	1984	1985
<i>(Annual percentage change, unless otherwise noted)</i>									
Merchandise exports, f.o.b. ¹	-10.6	30.5	-1.2	28.7	61.6	25.2	0.3	25.1	11.7
Merchandise imports, f.o.b. ¹	13.0	-20.7	10.2	56.0	14.0	-0.6	4.4	16.1	8.7
Export volume	-19.0	26.1	-20.1	-0.8	61.2	24.0	14.6	23.6	10.1
Import volume	4.3	-35.2	-13.1	14.7	20.7	-0.1	12.1	15.4	8.4
Terms of trade ¹	-0.6	-7.0	-0.3	-22.7	-8.6	-0.6	-6.0	0.6	1.2
Real effective exchange rate ²	1.1	-3.8	12.7	-22.8	1.9	-11.4	-1.9	-2.1	-0.1
Real GNP/GDP of partner countries ³	5.1	3.5	3.4	2.1	1.1	0.6	1.4	2.6	1.6
Share of Turkish exports in exports of non-oil developing countries to (percentage of total):									
Industrial countries	1.1	1.1	1.0	0.9	1.1	1.2	1.3	1.3	1.6
Middle Eastern countries ⁴	2.6	3.7	3.7	4.0	9.9	14.6	14.8	19.0	20.3
<i>(In billions of U.S. dollars, unless otherwise noted)</i>									
External current account balance	-3.1	-1.3	-1.4	-3.4	-1.9	-0.9	-1.9	-1.4	-1.0
Merchandise exports, f.o.b.	1.8	2.3	2.3	2.9	4.7	5.9	5.9	7.4	8.3
Workers' remittances	1.0	1.0	1.7	2.1	2.5	2.1	1.5	1.8	1.7
Other receipts from invisibles	0.5	0.5	0.7	0.8	1.3	2.0	2.0	2.4	3.1
Balance of payments assistance ⁵									
IMF	—	0.3	0.1	0.6	0.5	0.3	0.4	0.2	—
IBRD (SALs)	—	—	—	0.2	0.3	0.3	0.2	0.4	0.1
Other official	—	—	0.2	0.2	—	0.6	0.2	0.3	0.1
External debt at year-end	11.3	14.7	15.8	16.2	16.9	17.6	18.4	21.3	25.4
Of which: Emigrants' deposits	} 6.1	7.2	1.0	0.9	0.9	1.4	2.0	2.4	3.4
Other short-term debt			2.6	1.6	1.3	0.8	1.0	2.1	3.2
Payments arrears at year-end	1.7	2.0	2.3	1.6	—	—	—	—	—
Gross foreign exchange reserves (in weeks of imports)	6.8	10.7	8.6	9.1	9.5	11.4	12.3	15.6	12.1
<i>(In percentage of GNP, unless otherwise noted)</i>									
External current account balance	-6.5	-2.4	-2.0	-5.8	-3.3	-1.7	-3.7	-2.8	-1.9
External debt at year-end	23.2	27.6	22.2	25.0	28.6	32.8	35.9	43.1	48.1
Debt service ratio (in percentage of foreign exchange earnings) ⁶	23.3	26.2	23.5	24.0	22.4	25.2	28.0	24.8	29.3

Sources: Undersecretariat of Treasury and Foreign Trade, State Institute of Statistics, State Planning Organization, Central Bank; and Fund staff estimates.

¹ Including transit trade, valued in U.S. dollars, on a balance of payments basis.

² Weighted by the geographic distribution of Turkey's 1980 merchandise exports to major industrial countries. An increase indicates appreciation.

³ Weighted by the geographic distribution of Turkey's 1980 total merchandise exports.

⁴ Islamic Republic of Iran, Iraq, Libya, and Saudi Arabia.

⁵ Gross disbursement of general purpose balance of payments loans from official sources.

⁶ Amortization of medium- and long-term debt plus interest payments, after debt relief.

OECD member countries pledged US\$1.0 billion in economic assistance. In addition, in the course of the year, US\$2.7 billion in short-term obligations (of which US\$2.3 billion consisted of CTLDs) to foreign banks and US\$2.5 billion in official debt in various maturities were restructured under OECD auspices, contingent on arrangements with the Fund; commercial banks also extended a syndicated loan of US\$0.4 billion.

These efforts met with little success owing to inadequate restraint on domestic demand and severe

limitations on supply. In spite of some SEE price adjustments⁶ and a reduction in the fiscal deficit, the public sector borrowing requirement remained at 8.5 percent of GNP in 1979. The high level of public sector borrowing was accompanied by excessive wage settlements. In 1979, in certain cases collective bargaining resulted in wage increases in excess of 100 percent for

⁶ Prices of all important product categories were subject to regulation by the Price Control Commission, established in 1978.

the first year of two-year contracts—considerably above the rate of inflation—in addition to improvements in fringe benefits and bonus payments. The devaluations and small adjustments in selected interest rate ceilings were insufficient to compensate for the rapid acceleration in the rate of inflation. As deposit rates became highly negative in real terms, financial disintermediation proceeded apace. The competitiveness of exports was quickly eroded, and the reduction in the current account deficit to less than one half of its 1977 level was accomplished chiefly through the

curtailment of imports (compensated to some extent by unrecorded imports entering through an active parallel market), as payments arrears accumulated further to US\$2.3 billion. Widespread shortages of essential imports and domestic commodities led to a drop in industrial output and exacerbated the rate of inflation. In the fourth quarter of 1979, wholesale prices were almost 80 percent above their level a year earlier, while real GNP fell for the first time in more than a decade.

III Context of Adjustment

In order to evaluate the impact of the 1980–85 adjustment program on economic performance, it is necessary to examine the external conditions, as well as the assistance provided during the program period.⁷

External Environment

In 1980, with the doubling of the price of oil, Turkey suffered a considerable deterioration in its terms of trade, followed by smaller losses in 1981–83 due mainly to a softening in commodity export prices. The cumulative loss in the terms of trade through 1985 was more than 30 percent, two thirds of which took place in 1980. Meanwhile, international interest rates peaked in 1981, declining steadily thereafter. This development was relatively less significant since a large portion of Turkey's liabilities had been contracted on concessional terms. More recently, however, with increasing recourse to commercial sources, and including short-term financing partly in the form of high-interest emigrants' foreign currency deposits, the actual cost of external funds has fallen less than international market rates.

External demand conditions provided a generally unfavorable environment for Turkey's merchandise exports and labor outflow. Real GNP growth in trading partner countries slowed in the wake of the second oil crisis from a yearly average of 3.5 percent in 1977–80 to 1.5 percent in 1981–85 (Table 2).⁸ As a further indication of overall market conditions, the annual increase in the value of imports of industrial and oil-exporting Middle Eastern countries—Turkey's largest trading partners—from non-oil developing countries was 2.4 percent in 1981–85; in contrast, the corresponding increase was 20.4 percent in 1977–80. Thus, while Middle Eastern markets increased more or less at the same pace as those in industrial countries, the

growth rates in both regions were considerably lower during the adjustment program than in the pre-program period. Furthermore, owing to domestic recession as well as to the success of the Turkish export drive, several European countries and the United States imposed quantitative restrictions on specific imports (principally textiles, and iron and steel products) from Turkey. Although difficult to quantify, the impact of these restrictions on Turkey's trade performance is believed to have been significant.

Cyclical developments in Europe and the Middle East also had an adverse effect on Turkish labor migration. In response to the rise in unemployment, several European countries, which had been major importers of labor from the Mediterranean region since the 1960s, began to restrict the inflow of workers and their dependents and induce them to return home.⁹ This trend was only partly offset by the increase in the demand for labor in several neighboring countries in the Middle East, where many Turkish workers were employed on construction contracts. The net stock of Turkish labor abroad, determined principally by demand conditions in host countries, increased 3.8 percent yearly in 1981–85 (with reductions recorded in both 1982 and 1985), as opposed to a yearly growth rate of 6.5 percent in 1977–80.¹⁰

Balance of Payments Assistance

The bulk of balance of payments support loans was provided by the Fund and the World Bank. Turkey also received sizable official assistance from OECD member countries, Saudi Arabia, and the European Resettlement Fund. Additional indirect financing was provided through a number of debt restructuring agreements. The financial package did not involve any concerted commercial bank lending, but voluntary

⁷ Although the policy measures adopted between 1980 and 1985 were not components of a formal program, they are treated here as parts of the same program for presentational convenience.

⁸ Weighted by each country's share in the value of Turkey's 1980 merchandise exports.

⁹ In particular, Germany provided cash incentives for workers returning to Turkey.

¹⁰ The actual deceleration in the yearly increase was probably much more pronounced as data on the net stock of workers abroad are biased upward due to incomplete coverage of returning workers.

syndicated balance of payments financing has been forthcoming since 1983.¹¹

In June 1980, the Fund approved a three-year stand-by arrangement for SDR 1,250 million (625 percent of quota)¹² which succeeded the one-year arrangement extended a year earlier and was fully utilized. The arrangement was provided in connection with the adjustment program launched at the beginning of the year. It buttressed structural policies that were already under way or planned for the arrangement period, specifically: flexible pricing, including exchange rate and interest rate determination, trade and payments liberalization, SEE reform, and tax reform. Consistent with macroeconomic targets, underlying policies, and external forecasts, the arrangement contained the following quantitative performance criteria: quarterly limits on the net domestic assets of the Central Bank and on net Central Bank credit to the nonfinancial public sector; annual limits on short-term external debt and on the contracting of nonconcessional public and publicly guaranteed medium-term and long-term external debt; and an understanding about the maintenance of a flexible exchange rate policy.¹³ These criteria were supplemented by annual limits on budgetary transfers to the SEEs from 1981 onward.¹⁴

In June 1983, an additional one-year follow-on stand-by arrangement was approved for SDR 225 million (75 percent of quota). Since the latter was viewed in essence as a continuation of the previous arrangement, it endorsed further adjustment measures, and in particular, import liberalization. Hence, in addition to the above performance criteria, it provided for: reduction of import licensing in the context of a five-year phase-out period to begin at the end of 1983; shift of a substantial number of imported commodities from less liberalized to more liberalized lists; and elimination of advance import deposit requirements. However, at the end of 1983, the newly elected Government announced several major policy changes, and requested cancellation of the existing arrangement—under which a single initial purchase, equivalent to one fourth of the total, had taken place.

In April 1984, a final one-year arrangement was approved for SDR 225 million (52 percent of quota) to replace the cancelled arrangement. Following the substantial import liberalization undertaken at the beginning of the year, the trade-related performance criteria incorporated in the previous arrangement were substituted by one that envisaged the elimination of import deposit requirements by the end of 1984. All other quantitative criteria were calibrated to the annual program assumptions and objectives. Purchases amounting to three fourths of the total value were made under the arrangement.

Between 1980 and 1985, the World Bank extended—besides sizable project lending—five consecutive one-year SALs totaling US\$1.6 billion to promote a wide range of structural measures at the macroeconomic as well as sectoral levels. SAL I provided support for studies on the rationalization of industrial protection, external debt management and accounting, and financial sector restructuring, laying the groundwork for future policies in these areas. SALs II and III focused mainly on public finance issues: adjustment of income tax rates; introduction of a value-added tax; reform of SEE operations, investment and employment, on the basis of market principles; and rationalization of the public investment program. SALs IV and V concentrated on financial sector reform, including elimination of the transactions tax; improved accounting standards and development of financial markets; trade liberalization, notably elimination of quantitative import restrictions and rationalization of the tariff structure; improvement of resource allocation in the agricultural and energy sectors through the phase-out of subsidies and initiation of medium-term action programs; and adoption of a medium-term macroeconomic policy framework.

Because of their structural nature—which made their implementation institutionally and technically more complex—these measures often did not lend themselves to the same form of conditionality as the performance criteria contained in Fund stand-by arrangements. However, the disbursement of SALs was contingent on broad compliance with declared policy intentions and with certain quantitative targets (such as the magnitude and number of projects included in the public investment program, the reduction of taxes affecting financial intermediation costs, and the phase-out of quantitative import restrictions) which were continuously monitored by the Bank staff.¹⁵

During the adjustment period, Turkey also received

¹¹ See page 22 below. However, the 1979 syndication—extended prior to this package—can be regarded as concerted lending.

¹² Calculations in percent of quota relate to Turkey's quota at the time of approval of each arrangement: SDR 200 million prior to December 1980; SDR 300 million between December 1980 and December 1983; and SDR 429 million since December 1983.

¹³ Other criteria included: unchanged legal liquidity and reserve requirements applicable to commercial banks; settlement or elimination of existing payments arrears, and avoidance of new arrears; avoidance of new multiple currency practices, bilateral payments agreements with Fund members, and payment and import restrictions for balance of payments reasons; and prevention of broken cross exchange rates.

¹⁴ All criteria were set six to twelve months in advance and modified when warranted by changing circumstances.

¹⁵ Close collaboration between the Bank and the Fund ensured compatibility of the policy content of the SALs and the stand-by arrangements. Besides cross-participation of staff members in missions, the two institutions jointly sponsored technical assistance for the installation of a computerized external debt management system.

concessional balance of payments loans totaling about US\$1.5 billion from official sources under OECD auspices, and from the Saudi Arabian Monetary Agency. Between 1980 and 1985, balance of payments assistance from the Fund, the World Bank, and bilateral sources amounted to about US\$5.1 billion.

Debt Relief

In addition to the above disbursements, Turkey was granted debt relief under the OECD consortium and by private creditors. The OECD agreement concluded in July 1980 covered obligations to official creditors due through June 1983 as well as maturities restructured in 1978–79 and related arrears. Under the agreement, involving about US\$3.0 billion in principal and interest, 10 percent of previously nonrestructured obligations were repayable during a five-year grace period, and the remainder in the following five-year period. The previously restructured debt, originally repayable over five years after a three-year grace period, was further restructured by allowing two additional years of grace, with 10 percent repayable during the grace period. In effect, the agreement provided for a multiyear debt restructuring with five-year grace and ten-year final maturity from the initial due dates.¹⁶

¹⁶ Although formally not a multiyear agreement, effectively it covered a consolidation period of several years beyond the date of the agreement, subject to compliance with policy understandings reached with the Fund under the three-year stand-by arrangement.

Commercial claims were settled under three separate agreements. The most important one was the March 1982 agreement to improve the maturity profile of the US\$2.7 billion debt restructured, as well as the US\$0.4 billion loan contracted, in 1979. The original grace period of these obligations was extended from three to five years, and the maturity from seven to ten years. In addition, in August 1981 third-party reimbursement claims amounting to US\$0.1 billion were restructured over three years. Finally, nonguaranteed supplier arrears for a total of US\$1.4 billion at the end of 1979, accumulated due to the inability of the Central Bank to make foreign exchange transfers on behalf of importers, were settled in early 1980 by offering claimants two currency options that could be exercised until February 1984. Suppliers who chose to be paid in Turkish lira could use the proceeds to make various current payments or investments in Turkey. Claims of suppliers who opted for repayment in foreign currency, amounting to less than US\$0.4 billion, would be repaid over ten years with four and a half years' grace. Interest rates on most restructured commercial obligations were set 1.75 percent above LIBOR (the London interbank offered rate), except for currency specific rates on nonguaranteed trade arrears restructured under the foreign currency option.

Overall, during the adjustment period, Turkey received more than US\$6.5 billion in multilateral debt relief, covering short-term obligations as well as medium-term and long-term debt—some of it consolidated previously—including interest payments. However, starting in 1985, Turkey faced a bunching of external debt payments.

IV Structural Reform

Beginning in 1980 Turkey embarked on a fundamental economic transformation, breaking with the inward-looking statist strategy of the past. Although by no means exhaustive, this section focuses on the main areas of structural reform: prices, foreign trade and investment, exchange and payments, the financial sector, nonfinancial public enterprises, and taxation. The measures under scrutiny were, for the most part, mutually reinforcing and often overlapping.¹⁷

Commodity and Factor Prices

In line with the market orientation of the adjustment program, the Turkish authorities adopted flexible commodity and factor pricing.¹⁸

Commodity prices. Faced with mounting shortages and erosion of supply incentives, in early 1980 the Government freed private sector prices and sharply adjusted the prices of basic commodities and services produced by the SEEs and state monopolies.¹⁹ Except for a few items whose prices continued to be controlled and subsidized (in particular, bread, coal, fertilizer, and sugar), SEEs were instructed to adjust prices on the basis of cost developments. This policy has been broadly followed since 1980, with the exception of a temporary slowdown in SEE price adjustments prior to the November 1983 elections. The market-oriented approach was applied increasingly to agricultural support prices as well. In a departure from previous agricultural pricing policies involving relatively high

subsidization of input and output prices, agricultural support prices were to be determined on the basis of the following considerations: world commodity prices, input prices, cross-price elasticity of supply of substitutes, and the domestic inflation rate.²⁰ In all, the authorities made an effort to reduce the subsidization of agricultural products and inputs (notably fertilizer and diesel fuel), to keep within budgetary constraints.

Interest rates. To arrest the pervasive financial disintermediation that had taken place in previous years, due to unrealistically low ceilings on interest rates on bank deposits (for example, 12 percent before-tax annual rate on 6-month to 12-month deposits) while inflation had reached triple-digit rates, the authorities lifted the ceilings in July 1980. Following decontrol, time deposit rates were determined through a "gentlemen's agreement" among commercial banks, which permitted a rise in nominal rates that, in combination with rapidly falling inflation rates, resulted in positive real time deposit rates between late 1981 and mid-1983.

Owing to intense competition among banks as well as brokers in the unorganized financial market, rates offered on time deposits and on newly introduced certificates of deposit (CDs) often exceeded the rates (50 percent on 6-month to 12-month deposits) sanctioned under the agreement. To avoid such excesses, during 1983 the nine largest commercial banks were legally bound to observe agreed-upon time deposit rates, while the others were allowed to pay a small premium above these rates—which led again to depressed real deposit rates. In view of the reluctance of major banks to reinstate positive real rates, from December 1983 onward the Central Bank was authorized to review and to determine ceilings on deposit rates at least every three months, taking into account fluctuations in the rate of inflation and other relevant economic developments. Immediately, interest rate ceilings on time deposits (including commercial time deposits, which until then had been treated like com-

¹⁷ A number of policy changes under discussion can be viewed as involving either structural or stabilization measures. In principle, a policy change intended to increase supply by altering the allocation of resources, or the incentives to produce, work, save, or invest, can be regarded as a structural measure; in contrast, a change undertaken to achieve better balance between domestic demand and supply can be treated as a stabilization measure.

¹⁸ For a general discussion of the role of prices, including the exchange rate, in adjustment programs, see Loser (1983).

¹⁹ The Price Control Commission was abolished and the prices of major commodities were increased as follows: gasoline by 45 percent; cigarettes, beverages, and cement by 55 percent; steel and telecommunications by 75 percent; fuel oil, coal, lignite, rail transport, shipping, and textiles by 100 percent; electricity by 120 percent; paper by 300 percent; and fertilizer by 400 percent.

²⁰ For some export crops, support prices have been adjusted to reflect fully world prices (cotton and raisins); others (such as hazelnuts) were removed from the support list altogether.

mercial sight deposits and yielded no interest) were raised above the prevailing rate of inflation; however, the interest rate increases proved to be insufficient against the reacceleration of inflation during 1984. Higher interest rates were set for faster maturing time deposits than long-term deposits on the assumption that the actual inflation rate would decline toward the official target rate. As this assumption failed to materialize, in July 1985 a more traditional yield structure was reinstated, with higher rates allowed on long-term maturities (56 percent on one-year deposits). Since mid-1985, most time deposit rates have been positive in real terms.

On the lending side, until the middle of 1980 interest rates were also subject to very low ceilings, circumvented in part by the obligation imposed on the borrower to hold interest-free commercial sight deposits with the lending bank. In 1980 nonpreferential lending rates were raised substantially, often surpassing 70 percent in nominal effective cost—including various taxes and bank charges—while preferential credit schemes proliferated. Since 1984, commercial banks have been allowed to set nonpreferential rates freely and preferential rates were raised significantly, but with a relatively small impact on average effective borrowing costs.²¹

Wages. Wage negotiations had become increasingly confrontational in the late 1970s and through most of 1980. In many sectors, agreements were reached only after lengthy collective bargaining (often involving prolonged strikes and lockouts), and many contracts, when finally agreed, were made substantially retroactive. In September 1980, the authorities reinstated labor discipline and effectively introduced an incomes policy to be enforced by the High Arbitration Council. Since then, at the national level, wage determinations by the Council have been mandatory for the public sector and were to be used as guidelines in the private sector.²² The Council sets annual wage increments taking into account fringe benefits and dependency allowances, as well as income tax changes (such as reduction in marginal rates and introduction of tax rebates). In effect, wage increases are determined in

reference to the official annual inflation target; in the course of the year, wages are only partially adjusted for the actual inflation rate, as contracts can be renegotiated if the actual inflation rate significantly exceeds the target rate. While general wage increases thus tend to fall short of price rises, private enterprises are allowed to exceed the guidelines to reflect gains in labor productivity.

Foreign Trade and Investment

By the end of the 1970s, the acute foreign exchange scarcity had led to an intensification of import restrictions. Foremost among them was a complicated system of quantitative barriers. Under annual import programs, commodities were classified in the Quota List (imports subject to user-specific semi-annual quantitative limits), Liberalization List I (freely imported), or Liberalization List II (subject to license), supplemented by less important specialized lists. Importation of goods not enumerated in any of these lists was prohibited. In fact, only a fraction of imports—less than one sixth of the total value—was exempt from quantitative restrictions. Importers were further required to place an interest-free advance deposit guarantee with an authorized commercial bank to obtain a six-month import permit. In 1979, deposit requirement rates were set at 20 percent on the value of imports for industrial uses and 40 percent for commercial purposes. In addition, most imports were subject to tariffs and tariff-like charges (averaging about three fourths of the basic tariff rate) comprised of a municipal tax, stamp duty, wharf charge, and production tax. For the manufacturing sector, the weighted average nominal rate (tariffs plus tariff-like charges) of protection was about 50 percent and the effective rate of protection was 68 percent.²³ However, given the intensity of quantitative restrictions, the relatively high level of tariffs had in fact become redundant.²⁴ The import regime was instrumental in limiting not only imports but also, indirectly, export activity. By artificially raising the rate of return in import-competing industries, import restrictions were biased against exports; this bias was exacerbated by a grossly overvalued exchange rate and to an extent compensated for unevenly by tax rebates, preferential credits, and foreign exchange allocation and retention schemes. Meanwhile, export price controls and licensing were

²¹ The increase in nominal lending rates was at least partly offset by large cuts in the financial transactions tax rate on interest payments on nonpreferential credits, and in the contribution to the Interest Rate Rebate Fund paid by banks on interest income from nonpreferential credits.

²² At the enterprise level, the Council acts as a court of law in the settlement of labor disputes. About one third of wage negotiations have been refereed by the Council whose decisions are legally binding. Arbitration could be initiated by either party (usually done so by the employees) to a negotiation, by applying to the Council for a decision. Since the beginning of 1985, when the collective bargaining process was liberalized, the arbitration role of the Council has been limited to areas where work stoppages are forbidden by law.

²³ Nominal rates averaged 53 percent under the general tariff schedule and 44 percent under the EEC tariff schedule; average effective rates were 75 percent and 58 percent, respectively. See World Bank (1982), pp. 53–59.

²⁴ See the analysis by Yagci (1984), chapter 5.

imposed on most primary commodities and various industrial products.

Import regime. In 1980, in conjunction with a substantial depreciation of the lira and the adoption of a flexible exchange rate policy (discussed below), the authorities engaged in a concerted effort to dismantle trade restrictions. As a first step, advance deposit requirement rates were cut to 10–15 percent for industrial and 20–30 percent for commercial imports. Import regulations were simplified and commercial banks were allowed to retain a higher proportion of foreign exchange receipts. Exporters were granted tariff exemptions on imported inputs and increased foreign exchange allocations. In January 1981 the Quota List was abolished and a large number of items was transferred from Liberalization List II (including one third of those previously subject to quotas) to List I. The value of liberalized imports (shifted from List II to List I and from the Quota List to the other lists) was equivalent to 18 percent of the value of restricted imports or 12 percent of total imports in the preceding year.²⁵ Deposit requirement rates were lowered further to 10 percent and 20 percent for industrial and commercial imports, respectively. However, in 1982 and 1983 import liberalization slowed down considerably. The effect of a negligible reduction in the number of items subject to import licensing was more than offset by delays in the issuance of licenses. Deposit requirement rates were reduced to 7.5 percent and 10 percent for the respective categories of imports, and customs duties on a dozen or so commodities were reduced or eliminated, but a new commodity-specific import surcharge was also introduced.

At the beginning of 1984 import liberalization was resumed. The two principal lists were abolished and three new lists created: the Prohibited List (enumerating explicitly the banned import categories), the List of Imports Subject to Permission (replacing former List II), and the Fund List (covering luxury goods imported upon payment of a specific levy in addition to tariffs). Commodities not contained in these new lists were automatically imported freely provided tariffs had been paid. Roughly 60 percent of imports previously subject to licensing, or 45 percent of the total value of imports, was transferred to the Fund List or became freely importable.²⁶ The reduction in quantitative restrictions was accompanied by cuts in the

rates of customs duties and production taxes affecting about one fifth of the total value of imports. The average nominal tariff rate of affected imports is estimated to have dropped from 39 percent to 23 percent. During 1985, the Prohibited List was phased out, narrowing down the number of banned commodities from 500 to 3 items (narcotics, weapons, and ammunition) whose importation is prohibited under specific laws, and the number of import items on the Permission List was reduced from 1,000 to 245. In addition to some additional tariff rate cuts, by the end of 1985, deposit requirement rates were reduced to 1 percent for industrial uses and 3 percent for commercial uses.

Export regime. In the initial years of the program both the scope and magnitude of incentives were increased while existing restrictions were maintained. This process reached a turning point in early 1984 with the elimination of the export licensing requirement and export price controls, and the beginning of the gradual phase-out and rationalization of most incentive schemes. After an increase in export tax rebates from a 9 percent average rate (calculated as a proportion of eligible exports) in 1980 to 23 percent in 1984, rates were cut back significantly, parallel to the introduction of the value-added tax, in 1985. At the beginning of 1986, rebate rates on most eligible commodities averaged 8 percent, while the rebate was abolished for textiles. Subsidized export credits, much of which leaked into domestic operations, grew rapidly until 1984 when they were ended. In their place, in January 1985, a direct subsidy (of up to 4 percent of the value of realized exports) was established.²⁷ Foreign exchange allocation and retention schemes, which were important instruments in the early phase of the program, were later trimmed with the increased supply of foreign exchange. A variety of tariff and income tax preferences, however, have been retained for exporters. In sum, as Turkey came to rely increasingly on the exchange rate as a major external policy instrument, quantitative trade restrictions were dismantled, while tariffs and export incentives were reduced and rationalized.

Foreign investment regulations. In principle, virtually all economic sectors in Turkey had been open to foreign investment since 1954. However, a restrictive application of the relevant statutes, including controls over the transferability of profits, combined with overall economic and political instability in the late 1970s, brought direct investment inflows to a

²⁵ This, of course, is not a reliable indication of the liberalizing impact of the removal of quantitative restrictions, which—partly because of highly discretionary and variable enforcement of such restrictions—does not lend itself to direct measurement.

²⁶ Excluding petroleum, imported exclusively by the State Petroleum Enterprise, about one fourth of licensed imports was liberalized.

²⁷ This scheme is cross-subsidized, with an interest premium charged on nonpreferential lending, through the Resource Utilization Support Fund (replacing the former Interest Rate Rebate Fund) administered by the Central Bank.

trickle.²⁸ In recognition of the need to attract foreign capital, one of the first steps undertaken under the adjustment program was the creation of a Foreign Investment Department under the jurisdiction of the State Planning Organization. The Department was authorized to approve foreign investment projects of up to US\$50 million, with foreign equity participation limited to less than 50 percent. Besides this requirement, foreign investors were obliged to meet specific minimum export requirements, set according to industrial activity. Applications for investments that were outside these limits required approval by the Council of Ministers. The Department was also responsible for streamlining administrative procedures and for granting to foreign investors the same fiscal incentives that are available to domestic investors.

In December 1983, decrees were introduced expanding the authority of the Foreign Investment Department and ensuring the repatriation of earnings. Since then, Turkey has negotiated with the competent authorities of a number of industrial countries bilateral investment treaties that provide for national treatment, settlement of disputes, and protection against convertibility and expropriation. At the beginning of 1986 there was a major relaxation of foreign investment regulations; for most activities, the limit on foreign ownership was abolished and the minimum export requirements could be waived.

Foreign Exchange and Payments

In addition to domestic price liberalization, the authorities decided that the key price for international transactions, namely the exchange rate, should reflect market conditions as well. As a first step, the lira was devalued by 33 percent in January 1980. Thereafter, the exchange rate was adjusted with increasing frequency to offset relative rates of inflation at home and in major industrial partner countries. From May 1981, the authorities institutionalized the policy of broad maintenance of an unchanged real effective exchange rate through daily changes in the nominal rate.

With the easing of the foreign exchange crisis and the elimination of payments arrears, most multiple currency practices introduced during the 1970s were phased out in the first couple of years of the program.²⁹ Bilateral payments agreements with non-Fund mem-

bers were terminated and the permissible foreign exchange position of commercial banks was increased during 1982. From the following year onward, exporters were permitted to hold a portion of their earnings as foreign exchange sight deposits with commercial banks.

In January 1984, the exchange and payments system was liberalized in several important respects: domestic commercial banks were allowed to engage in foreign exchange operations within certain limits in proportion to their foreign exchange liabilities; the surrender requirement was reduced on export earnings and eliminated on invisibles; foreign exchange deposits, yielding market interest rates, could be opened and used without limits; and restrictions on foreign travel and investment from abroad were eased and simplified. The flexible determination of the exchange rate, effective since 1981, was further liberalized by permitting banks to set their own rates within a specified band (of up to 8 percent in either direction) around the Central Bank rate; the band was removed altogether in July 1985.

In early 1986, partly in response to some pressures in the foreign exchange market, a number of measures were taken which tended in the opposite direction to earlier measures. In particular, commercial banks were obliged to sell 20 percent of their foreign exchange receipts to the Central Bank, a requirement that in March 1986 was reduced to 15 percent, while a band of 1 percent was reinstated around the Central Bank exchange rate on a temporary basis.

Financial Sector

Until the beginning of the 1980s, Turkey experienced a high degree of financial repression, with disequilibrium interest rates, credit rationing, segmented capital markets, and excessive intermediation costs. At the same time, there were no effective institutional safeguards against unsound financial practices and to protect bank deposits. In this environment, and against the backdrop of a tight monetary policy, the deregulation of interest rates and the introduction of CDs led to a financial crisis. The crisis, which emerged as an increasing part of the excess demand for credit was met by brokerage firms trading in CDs and corporate bonds in the unorganized market, culminated in mid-1982 with the collapse of Turkey's largest brokerage firm and strained the liquidity position of the entire banking system.³⁰ This development was met with

²⁸ For a discussion of the reasons behind Turkey's past unwillingness or inability to attract direct investment from abroad, see Erdilek (1982).

²⁹ The preferential rate applied to study abroad ended in August 1981 and those rates applied to imports of fertilizer and related products were abolished in November 1981. Free determination of rates on sales of foreign exchange obtained under the retention scheme was eliminated in December 1982.

³⁰ Banks issued CDs which were purchased wholesale at a discount by unregulated brokers who retailed them to the public at par, offering higher interest rates than the nominal deposit rate. Similarly, brokers also bought corporate bonds at a discount for resale to

some relaxation in the monetary stance,³¹ as well as changes in monetary control and in banking and capital market regulations.

Monetary control. In order to reduce the vulnerability of the financial sector, to remove inefficiencies in the allocation of financial resources, and to enhance the effectiveness of instruments of monetary control, the authorities adopted a wide range of structural measures—in addition to the flexible interest rate determination already discussed. Major steps were taken in January 1983 to simplify the legal liquidity and reserve requirement system. Liquidity requirement ratios, which until then had ranged between 10 percent and 15 percent according to bank size, and were inspected once a month, were unified at 10 percent and subject to daily monitoring.³² Reserve requirement ratios, differentiated for sight and time deposits (35 percent and 30 percent, respectively), along with preferential ratios on deposits earmarked for special-purpose credits, were replaced by a single 25 percent ratio. Following the temporary reinstatement of two preferential ratios during 1984 (20 percent on deposits channeled to export credits and 15 percent on those used for certain investment credits), reserve requirements were unified again in March 1985. In addition, the compliance lag was shortened from six to two weeks and it was announced that the ratio would be subject to gradual reduction while interest payments on reserves would be phased out. At the end of the year, legal reserve requirements were extended to foreign exchange deposits; however, unlike the required domestic currency reserves which no longer accrued interest, the Central Bank paid market interest rates on required foreign currency reserves. By March 1986, the unified legal reserve requirement ratio stood at 15 percent—with a lower effective ratio on foreign currency deposits since the reserves held against these deposits accrue interest.

As a further step to strengthen monetary instruments, in 1984, the Central Bank restricted access to the rediscount window and phased out preferential credit facilities for exports and investment. In addition, since 1985 the authorities have adopted a policy of financing an increasing portion of the fiscal deficit through weekly auctions of government paper (ranging

from six-month to two-year maturities) to commercial banks and other financial institutions. Further, in March 1986 an interbank money market was activated under the auspices of the Central Bank. This step, along with an overall decline in intermediation costs, was made possible in part by substantial cuts in tax rates affecting financial transactions.

Banking regulations. Major banking reform legislation, begun in July 1983, was completed in April 1985. The new banking law contains provisions on capital requirements, contingency reserves, accounting and reporting standards, and deposit insurance. The law prescribes a minimum equity contribution for commercial banks, to be adjusted periodically for inflation. All banks are required to set a specified proportion of before-tax profits in contingency reserves until reaching an amount equivalent to paid-up capital. Both of these requirements have been met. From 1986, banks are required to conform to uniform accounting rules and to prepare detailed periodic reports on their operations to the Central Bank. All deposit money banks are obliged to buy minimum insurance coverage for savings deposits from the Saving Deposit Insurance Fund, established under Central Bank supervision. Other regulations included in the banking law involve: limitations on branch banking, rules governing foreign banking, external audit requirements, minimum professional qualifications for bank managers, treatment of nonperforming loans, and limitations on bank credits to any single borrower and to related entities.

Capital markets. Although the banking system remains the central vehicle of financial intermediation in Turkey, some steps have been taken toward developing capital markets. In July 1981 a law was enacted establishing the Capital Market Board and providing the institutional framework for financial deepening. The Board is responsible for regulating, supervising, and promoting primary and secondary private securities markets; it is also authorized to give permission for the issuance of corporate securities, as well as to examine the financial position of corporations and nonbank financial institutions participating in the market. The law further includes provisions regarding the capital structure and ownership concentration of widely held corporations, the denomination of shares issued, limitations regarding the total value of bonds issued by a corporation,³³ and the capital structure and asset holdings of nonbank financial institutions.

However, high rates of inflation, in combination with such impediments as insufficient public disclosure of financial statements by closely held corporations,

investors promising them attractive interest yields. The brokers invested the proceeds of the sales in high-risk ventures. For a while, the public was attracted by the yield and repurchase guarantee provided on CDs and bonds; however, when faced with a sudden loss of confidence, brokers, as well as some banks, were unable to meet the claims of depositors.

³¹ See page 18 below.

³² Besides maintaining regular required reserves with the Central Bank, commercial banks are obliged to comply with liquidity requirements by holding a specified ratio of their deposits in cash, free reserves with the Central Bank, and government securities. On average the latter constitute more than one half of total holdings.

³³ Interest rates on corporate bonds are subject to a ceiling set by the Central Bank, which is currently equivalent to 1.3 times the interest rate on one-year time deposits—also determined by the Central Bank.

have slowed down the development of equity and bond markets. To contain the damaging effects of the 1982 financial crisis, brokerage houses have been subject to special regulations and their activities closely monitored. Brokers are barred from lending without a license and from issuing their own paper or guaranteeing the repurchase of bonds at predetermined prices. Measures were also taken to strengthen the liquidity position of brokers.³⁴ Moreover, in an effort to revive the secondary securities market, a decree was issued in 1983 providing a new legal framework for the creation of a stock exchange, which led to the re-opening of the Istanbul Stock Exchange in 1985.

The public sector bond market has become increasingly active in recent years. In 1984, a law was enacted authorizing the Government to issue income-sharing certificates entitling the owner to receive a fixed interest plus an additional yield related to earnings on public investment projects (such as hydroelectric dams and bridges) financed by such certificates. These issues have been well received, and sometimes oversubscribed, by the public. The Treasury has also relied increasingly on commercial banks—particularly through the weekly auctions—and to a lesser extent on the nonbank public, for the placement of government securities. The yields on government paper and income-sharing certificates are tax exempt.³⁵

Nonfinancial Public Enterprises

The nonfinancial public enterprise sector was a major source of the disequilibria experienced by Turkey in the 1970s.³⁶ During the pre-program period, the SEEs, sheltered from market forces, had become a conduit for consumer subsidies. Overstaffed and overinvested, and with practically free access to financing from the banking system and the government budget,³⁷ many of them pursued an ill-defined and often confusing mix of economic, social, and political objectives.

More fundamental structural changes entailed a lengthy process of technical preparation, legislative

action, and changes in attitudes of management and the work force. Yet, from the outset of the program, without awaiting completion of this process, the authorities acted swiftly to adjust SEE prices toward covering production costs (as discussed above) and to enforce strict control over investment and personnel expenditures—through a hiring freeze and slowdown of wage increases. The concomitant reduction in financing needs permitted sharp cuts in commercial bank lending and budgetary transfers to SEEs. Central Bank credits were limited to one SEE (the Soil Products Office), for seasonal financing of grain purchases, while transfers from the budget were to be reduced and limited to compensate SEEs only for losses incurred because of government-mandated below-cost pricing of explicitly subsidized items.

In October 1983, the legal basis for the reform of the SEEs was established. The reform legislation differentiated between SEEs proper, to be operated according to commercial criteria, and Public Economic Establishments, including state monopolies that produce basic goods and services not normally provided by the private sector. The law formalized the principle of flexible market pricing and stipulated that the Government reimburse the SEEs for any deviations from that principle. SEEs are required to build up reserves through the retention of a specified proportion of their earnings before distributing dividends. The law prescribes standards concerning the composition, qualifications, and responsibilities of the boards of directors and management of enterprises. Authority to appoint managers has been transferred from the Council of Ministers to the SEE boards. Managers are rated and remunerated on the basis of performance and are given flexibility in determining wages, salaries, and bonuses. Employees are to be hired on a contract basis and are no longer subject to the personnel regime applicable to government employees. Annual investment and financing programs of SEEs are ultimately decided by the Council of Ministers on the recommendation of the State Planning Office and the Treasury, taking into account the enterprises' internal resources.

Although full implementation of some of these provisions requires several years, progress has been made already in improving the efficiency of SEE operations, in essence through greater managerial autonomy and accountability, and increased exposure to competition from the private sector. By the end of 1984, SEEs had lost almost completely the preferential treatment accorded previously through taxes, tariffs, and credits.³⁸

³⁸ The principle of equal treatment of public and private enterprises was enforced, for example, at the end of 1985, when failure to comply with income tax obligations led to the dismissal of the managers and the freezing of bank accounts of two SEEs.

³⁴ The Securities Regulation Fund was established allowing brokers and securities dealers to exchange securities for cash with a repurchase agreement.

³⁵ The certificates have the added advantage, from the investor's point of view, of not identifying the holder.

³⁶ The quantitative importance of this sector in the Turkish economy is illustrated by the fact that SEEs generate nearly one fifth of industrial value added, employ about one tenth of the nonagricultural labor force and contribute approximately one third of fixed capital formation. They are engaged in a broad range of activities, enjoying a monopoly position not only in traditional public utilities, such as rail transport, electricity, postal and telephone services, but also in manufacturing such commodities as basic metals, paper, petroleum refining, and until recently, tobacco.

³⁷ Operating, in effect, under a soft budget constraint, the SEEs' behavior closely resembled that of enterprises in a centrally planned economy, analyzed by Kornai (1980).

Free pricing by certain enterprises (railways, hard coal), formerly subject to governmental review, was confirmed by statute. As a further step toward subjecting SEEs to the market test, a master plan for privatizing a number of SEEs has been completed and, in May 1986, the Government obtained legislative authorization to sell SEEs to the private sector.

Taxation

Under the effect of rapid inflation, compounded by a weak administrative apparatus, Turkey's tax revenue had become increasingly inelastic with respect to nominal output and income. As a result of large increases in wages and salaries, most taxpayers were placed into income brackets subject to very high marginal tax rates. This development contributed to a steady erosion of work and savings incentives,³⁹ in particular for wage earners—accounting for two thirds of personal income taxpayers—who had their taxes withheld at source, and more generally to widespread tax avoidance and evasion.⁴⁰ Failure to adjust rates sufficiently and to broaden the base of taxes on goods and services, and the excessive use of quantitative restrictions on imports, had resulted in a sharp drop—equivalent to nearly 4 percent of GNP between 1976 and 1980—in the share of indirect taxes in economic activity. In order to restore the progressivity of the income tax, minimize interference with an efficient and externally oriented allocation of resources, and strengthen incentives to work and to save, the authorities launched a major tax reform as part of the adjustment program.

In 1981 personal income tax brackets (including the zero rate bracket) and tax rates were adjusted upward sharply;⁴¹ subsequently, rates were reduced over several years. Following an immediate increase in statutory marginal rates from 10–68 percent to 40–75 percent for brackets up to the penultimate one, and from 60 percent to 66 percent for the top open-ended bracket in 1981, the rates were reduced gradually to 25–63 percent and 55 percent, respectively, by 1985. In 1986 there was a further cut in most marginal rates to a

continuous 25–50 percent range, combined with an upward adjustment of brackets.⁴² As partial relief for individuals whose wages and salaries are subject to withholding tax, since 1984 wage earners have been granted a tax refund in proportion to expenditures on certain basic commodities and services (upon proof of purchase) up to a monthly limit determined by taxable income.⁴³

The corporation income tax was unified in 1981 at a 50 percent general rate (replacing three levies with a combined rate of 43 percent), with SEEs either subject to a 35 percent rate or exempt. In the following year, the general rate was adjusted to 40 percent for all corporations, including SEEs previously taxed at the preferential rate. Other SEEs lost their tax exemption at the end of 1984. To correct for the inelasticity of income tax revenue from corporations and noncorporate entities, including self-employed taxpayers, stemming from lengthy collection lags during periods of high inflation, quarterly advance income tax payments were phased in during 1986.⁴⁴ At the same time the corporate tax rate was increased to 46 percent.

Following the example of most European countries, in January 1985, Turkey substituted a 10 percent value-added tax (VAT) for nine production taxes and other duties that had been imposed at various rates on specific groups of commodities and services. Border tax adjustment is applied in accordance with the destination principle: the tax is levied on merchandise imports and refunded on exports—obviating export tax rebates that are being phased out. The VAT covers a wide range of goods and services, with relatively few exceptions, the major one involving food items which are exempt on a transitional basis.

The allocative efficiency goal pursued in the real sector by the introduction of the VAT has been complemented by a parallel effort in the financial sector through substantial cuts in the rates of withholding taxes imposed on financial income and transactions. Effective May 1981, the banking and insurance transactions tax rate was cut from 25 percent to 15 percent. In January 1984, the latter was reduced further to 3 percent, the contribution to the Interest Rate Rebate Fund (the Resource Utilization Support Fund since January 1985) payable on nonpreferential credits was

³⁹ For a general review of this issue, see Kopits (1983).

⁴⁰ A popular form of tax avoidance was the increase in nontaxable remuneration, such as allowances for clothing and housing for employees.

⁴¹ In 1980, the tax exempt bracket amounted to LT 3,600 for wage earners (unchanged since 1967) and ten taxable income brackets ranged up to LT 1 million, with the highest one subject to a 68 percent marginal rate; taxable income in excess of LT 1 million was taxed at a 60 percent marginal rate. In 1981, the tax exempt bracket was raised to LT 61,200 and taxable incomes were grouped into seven brackets, with the lowest one of up to LT 1 million, and the top one starting at LT 25 million.

⁴² The lowest bracket was raised to LT 3 million and the highest bracket to LT 48 million.

⁴³ The tax refund scheme is regarded as a potential tool (through proof of purchase) to induce compliance among business taxpayers.

⁴⁴ A system of advance income tax payments, based on estimated income during the year and determined by local tax commissions, was introduced for self-employed taxpayers in 1981 but had to be abandoned shortly thereafter because of administrative difficulties. Under the new system, corporations and noncorporate taxpayers not subject to withholding tax are required to make quarterly income tax payments equivalent to one half of their value-added tax liability.

halved from 15 percent, and the withholding tax on interest income was reduced from 30 percent on CDs and 20 percent on other bank deposits (both of which were 25 percent until January 1983), to a unified 10 percent rate. Further, the 25 percent dividend withholding tax was abolished and accompanied by the

increase in the corporate income tax rate as of January 1986.

On balance, Turkey's overall tax structure shifted during 1980–85 to primary reliance on indirect taxation, raising the share of the latter from roughly one third to more than one half of global tax revenue.

V Stabilization Policies

The structural measures discussed above were underpinned by a marked tightening of demand management policies at the outset of the program. Beyond the initial years of the adjustment, however, it proved increasingly difficult to maintain the desired financial policy restraint.

Fiscal Policy

In spite of some corrective measures implemented in the late 1970s, public sector finances continued to deteriorate through 1980. As a result of expenditure restraint in combination with some rise in tax effort, the ratio of the consolidated central government budget deficit to GNP was more than halved from 5.3 percent in 1980 to 2.1 percent in 1982. In the following two years, failure to take adequate compensatory action (with non-SEE transfers more than doubling in real terms) to offset a poor revenue performance led to a rebound in the deficit to 4.9 percent of GNP by 1984. These slippages were corrected to an extent in 1985, chiefly through the introduction of the VAT combined with some expenditure restraint, resulting in a deficit equivalent to 2.2 percent of GNP. Analysis of these developments in reference to a cyclically neutral balance reveals for both 1981 and 1982 a contractionary fiscal impulse—albeit with declining intensity—totaling almost 3 percent of GNP.⁴⁵ This was fully reversed by an expansionary impulse of the same magnitude in 1983 and 1984, which was followed by a contractionary impulse equivalent to 1.5 percent of GNP in 1985 (Table 1).

The principal objectives of the tax reform were to increase the elasticity of the tax system and to restore

supply-side incentives, thereby enhancing government revenue. From the perspective of these goals, the results of the tax reform so far have been somewhat disappointing. Following a 12 percent real growth of tax receipts in 1981 that reflected the impact of the initial income tax rate increments, the supply-side revenue response to subsequent rate cuts in both direct and indirect taxes did not materialize. In 1984, central government tax revenue was equivalent to 12.9 percent of GNP, that is, more than 5 percentage points below the tax ratio in 1981 and the lowest ratio in more than a decade. This development was partially reversed in 1985 on the strength of VAT collections—some of which were earmarked for newly created extrabudgetary funds⁴⁶—raising the tax ratio by 1 percentage point. Meanwhile, nontax revenue maintained a relatively stable relationship to aggregate activity, fluctuating around 2 percent of GNP.

As a consequence of the downward trend in tax buoyancy, the stabilization burden fell chiefly on the expenditure side. Except for 1983, budgetary outlays fell more or less continuously by an average of 1 percent of GNP yearly, to 19.2 percent of GNP in 1985. The principal elements of budgetary restraint consisted of a freeze on government employment, containment of public sector wage adjustments below the rate of inflation, and sharp real cuts in transfers to the SEEs. Interest payments, other transfers (including tax rebates for exporters and wage earners, and pensions), and investment outlays, by contrast, continued to increase rapidly in real terms over the adjustment period.

The SEEs made an important contribution to the stabilization effort. Largely reflecting the initial effect of structural measures, the operating surplus of SEEs

⁴⁵ The fiscal impulse is calculated by the annual change in the difference between the cyclically neutral budget balance and the actual budget balance. In turn, the cyclically neutral balance is equivalent to the difference between budget revenue that bears a constant proportion to actual nominal GNP and expenditure that bears a constant proportion to potential (trend) GNP at current market prices; these proportions have been measured in reference to 1982, the base year. For a survey of the methodology, see Heller, Haas, and Mansur (1986).

⁴⁶ In 1984, several extrabudgetary funds were created for special-purpose lending (for housing and infrastructure projects) and expenditures (in agriculture, tourism, and education). Although operating within the Central Government, these funds are outside the normal budgetary appropriation and implementation process. Their resources are composed of earmarked tax revenue (mainly VAT-related), operating revenue from dams and bridges, interest income from housing loans, and proceeds from the sale of income-sharing certificates.

(before budgetary transfers and taxes) rose steadily from virtually nil in 1980 to 3.9 percent of GNP in 1985—notwithstanding a setback in 1983 due to insufficient price adjustments to cover cost increases. The rise in profits permitted an increasing degree of internal financing of SEE fixed investment which grew by almost one third in real terms, while a net inflow from the consolidated budget (that is, transfers less direct taxes) equivalent to 4.5 percent of GNP in 1980 turned into a net outflow of 0.4 percent of GNP by 1985.

Developments in the consolidated budget and the SEE operations were reflected in the public sector borrowing requirement which is estimated to have fallen from 10.2 percent of GNP to 5.2 percent over the program period, interrupted by a significant deterioration in 1983–84 (Table 1). While about one third was financed with credits from abroad (except in 1985 when net foreign financing had dropped considerably due to an increase in amortization of external debt), the bulk of the borrowing requirement was monetized, as domestic nonbank purchases of public sector bonds and bills were modest.

Monetary Policy

During the 1970s monetary policy was for the most part accommodating. Central Bank credit to the public sector and access to rediscount facilities for various economic activities expanded rapidly, while interest rates on such credits as well as bank deposits were negative in real terms. Consequently, the income velocity of broad money (M2) rose by almost two thirds during 1976–80.

Monetary policy was assigned a prominent role in the stabilization effort. The two principal operational instruments were quantitative limits on Central Bank credit—set in accordance with targets for broad money—and interest rates on bank deposits. However, several technical difficulties prevented an effective application of these tools. First, the reserve money multiplier with respect to broad money drifted upward (above the values implied by the agreed credit limits) because of a shift from currency holdings to bank deposits, a decline in the effective reserve requirement ratio, and increased efficiency in the utilization of reserves by commercial banks—under the influence of ongoing financial innovations. Second, successful external performance resulted (as it often does) in an injection of liquidity in general and of reserve money in particular, which was difficult to sterilize without an adequate cutback in credit to the public sector. Third, time deposit rates could not be calibrated precisely with fluctuations in inflationary expectations; for the most part, adjustment of ceilings on time deposit rates lagged

behind changes in the rate of inflation—resulting in an unanticipated decline in real money demand in periods of accelerating inflation.

Between 1980 and 1982, the combination of lower public sector borrowing and interest rate decontrol resulted in a tight monetary stance. The contribution to reserve money growth of Central Bank credit to the public sector decelerated from about 46 percentage points in 1980 to 16 percentage points in 1982 (Table 1). However, in 1982 there were incipient pressures, that continued to be felt throughout the rest of the program, to relax the monetary stance. Improvement in the external payments position led to a larger-than-anticipated buildup in net foreign assets of the Central Bank. More importantly, in the aftermath of the financial crisis, there was widespread nonobservance of legal reserve requirements and the Central Bank extended assistance to banks in difficulty along with more liberal access to the rediscount window. Subsequently, in light of the deceleration in the rate of inflation and to help ease the apparent liquidity squeeze, in 1983 the authorities encouraged banks to reduce after-tax time deposit rates by up to 10 percentage points in various maturities (from 37.5 percent in 1982).

At the end of 1983, confronted with a reacceleration in the rate of inflation, the new Government sought to reinstate monetary tightness again by setting relatively high ceilings on after-tax deposit rates, especially on shorter maturities (44 percent on three-month deposits), and by reducing sharply rediscount operations. However, in the course of 1984 the rapid accumulation of the newly opened foreign exchange deposits contributed to a buildup of liquidity outside the scope of monetary control. Furthermore, the Central Bank, aiming to bolster its international reserve position, began to purchase foreign exchange from commercial banks at a premium, contributing to a 47 percent increase in reserve money compared with 38 percent in 1983. Reluctant to allow further adjustments in time deposit rates that would reverse the heavy concentration in more liquid bank deposits and the decline in real money demand, in the second half of 1984 the authorities took several measures to contain the pace of monetary expansion. The liquidity requirement ratio was raised by 5 percentage points, supplemented by a 10 percent marginal liquidity ratio, while part of the increase in the consolidated budget deficit was to be financed through sales of relatively high-yield government paper to commercial banks, in fulfillment of the increment in the liquidity ratio, and to the nonbank public.

In 1985, the effectiveness of monetary control was eroded by a large increase in Central Bank credit to the public sector—contributing 23 percentage points to reserve money growth, compared with 6 to 7

percentage points in the two preceding years—mainly to refinance government securities issued to commercial banks in the previous year and those that had not been absorbed by weekly auctions. There was also a further accumulation of net foreign assets by the Bank. A reduction in the effective reserve requirement ratio, meanwhile, contributed to an increase in the reserve money multiplier, magnifying the impact of a 54 percent reserve money growth on the expansion of M2, which rose almost 62 percent. Against this, the restructuring of interest rates (raising the one-year after-tax rate from 43.2 percent to 50.4 percent) in June 1985 led to increased holdings of quasi-money, especially in less liquid form, and was reflected in a 6.5 percent fall in the income velocity of M2 back to its level in 1983. However, given the continued rapid increase in the value of foreign exchange deposits with commercial banks, stemming in part from currency substitution,⁴⁷ the growth of broad money inclusive of such deposits (M2X) was 72 percent.

External Policies

From the very beginning of the program, the exchange rate was used as a central stabilization instrument, not only for restraining domestic demand, but also for inducing a switch of demand from tradables to nontradables and of supply from nontradables to tradables. Technically, it was difficult to gauge with any precision the extent of the exchange rate action that was needed—at a time when the trade and payments regime was being overhauled and the terms of trade deteriorated—to maintain the competitiveness of the lira. Moreover, at times, the use of the exchange rate for external stabilization purposes was tempered

by concern over its inflationary repercussions. Further, with the liberalization of the exchange and payments system in 1984, it became increasingly apparent that the ensuing financial openness of the economy made it difficult for the authorities simultaneously to exercise monetary control and to manage the exchange rate.

After the substantial January 1980 devaluation, the exchange rate was depreciated more or less continuously against major industrial trading partner country currencies to offset relative price developments and to ensure that the lira remained sufficiently competitive. In real effective terms, the exchange rate was depreciated by 23 percent in 1980 and by about 3 percent a year on average in the following five years (Table 2). From a short-term perspective, the real effective rate displayed relatively wide swings, especially after the first quarter of 1984. In the course of the year ending in the first quarter of 1985, the authorities allowed the lira to appreciate almost 19 percent in real terms in order to dampen the continued acceleration in the rate of inflation. During the year that followed, with the turnaround in inflation, the real effective rate depreciated by a larger magnitude—falling 6 percent below the rate that prevailed at the beginning of 1984.

To maintain a sustainable debt service ratio over the medium term, and to improve the maturity structure of the external debt stock, the authorities observed strict limits on the contracting of nonconcessional medium-term and long-term obligations by the public sector and on the net inflow of short-term credits—which they enforced through the establishment of centralized control of public sector access to the international financial market. However, the restraint on foreign indebtedness had to be balanced against the authorities' desire to build up official reserves and the need to bridge a repayment hump following the end of debt relief in 1984. In 1982 Turkey resumed syndicated borrowing from the international market, to allow a gradual phase-out of financing from official multilateral and bilateral sources. Also, commercial banks have been encouraged, within certain limits, to utilize short-term credits and to attract foreign exchange deposits to support the rapid expansion of trade that resulted from the liberalization.

⁴⁷ Although the degree of currency substitution in Turkey is an unsolved empirical question, it appears that the bulk of foreign currency deposits with commercial banks—held for the most part by workers abroad who maintain their affinity to Turkey—constitutes an added source of liquidity. At the beginning of 1986, foreign exchange deposits comprised about 15 percent of the stock of M2X.

VI Economic Performance

The economic situation continued to deteriorate well into 1980. For the year as whole, real GNP and fixed investment fell 1 percent and 10 percent (private fixed investment falling by 17 percent), respectively, while the price level more than doubled, reflecting in part the price adjustments and exchange rate depreciation that had taken place since the beginning of the year. Also, export volume continued to deteriorate through the third quarter of 1980. The external current account worsened, recording a deficit of US\$3.4 billion (equivalent to 5.8 percent of GNP), chiefly because of the sharp rise in the price of imported oil and a sizable import volume growth financed with assistance from abroad.

However, restrictive demand management led to a rapid deceleration of the inflation rate—measured by the yearly change in the implicit GNP deflator—from 104 percent in 1980 to 42 percent in 1981 and further to 28 percent in 1982 (Table 1). The decontrol of time deposit rates and downturn in the rate of inflation contributed to a slowdown in the accumulation of inventories and a sharp rise in real broad money. Positive real interest rates on time deposits and CDs brought about a remarkable shift from currency, sight deposits, and especially inflation hedges (nonfinancial assets and foreign currency), into quasi-money.⁴⁸ Between 1980 and 1982, quasi-money increased four times and broad money increased by two thirds in real terms, as the income velocity with respect to M2 dropped by one third. The revival of financial intermediation and a nearly 3 percentage point increase in the average propensity to save (from 15.6 percent of GNP in 1980) facilitated a significant recovery of fixed capital formation and output. The rate of real GNP growth exceeded 4 percent in both 1981 and 1982 and real fixed investment rose 3.5 percent (5.5 percent in the private sector) by 1982 (Chart 1).

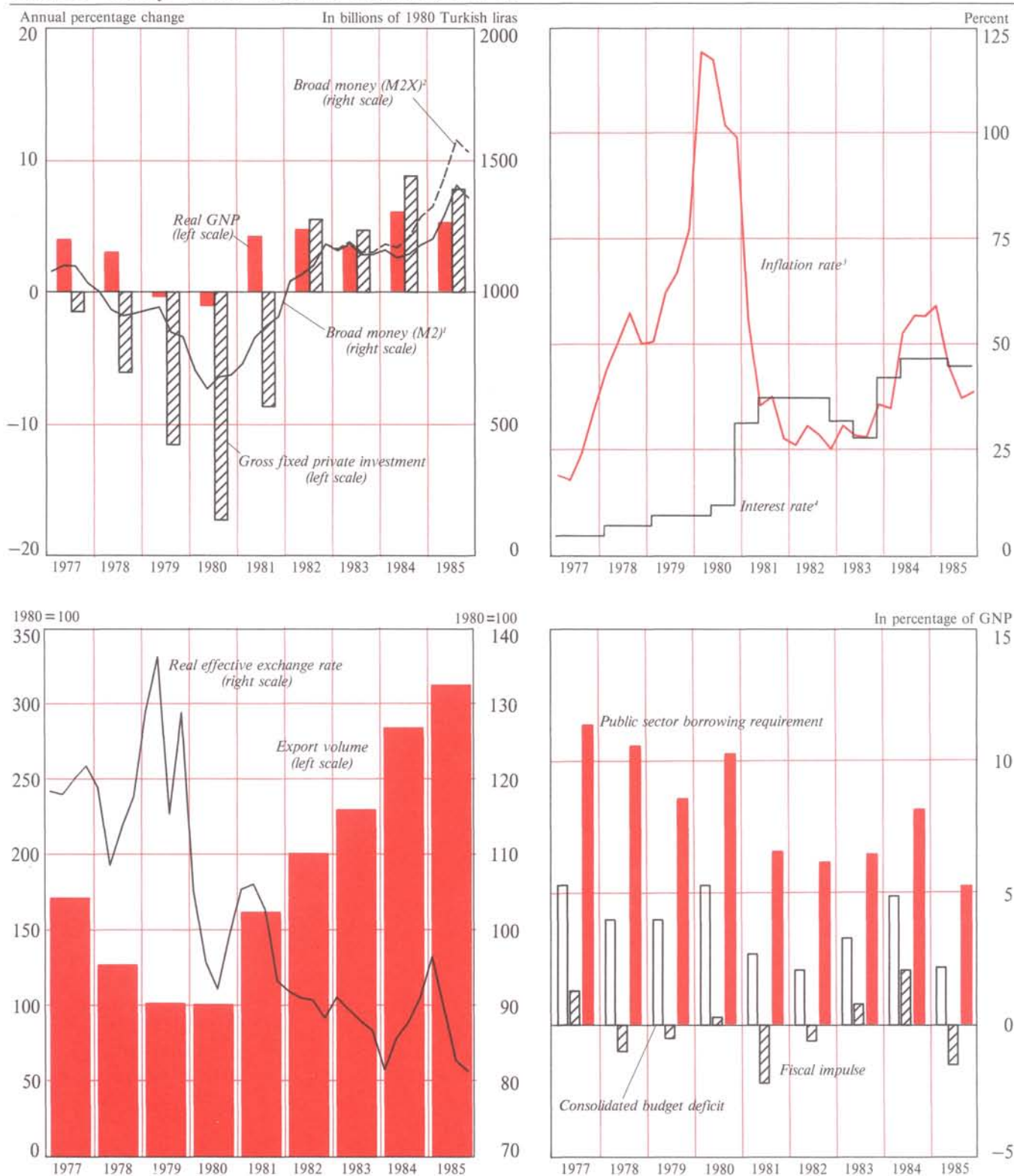
Domestic economic recovery was associated with a marked strengthening in the balance of payments, made possible above all by the flexible exchange rate

policy.⁴⁹ In 1982, despite continued deterioration in the terms of trade, world recession, and some rise in interest payments on foreign debt, the current account deficit was cut to US\$0.9 billion (1.7 percent of GNP), as export volume more than doubled over the period 1980–82 (Table 2). By 1982 merchandise exports accounted for 11 percent of GNP, as against only 5 percent two years earlier. Workers' remittances and other income from services increased significantly (by 44 percent) in response to positive real interest rates and a more realistic exchange rate. All told, the real foreign balance contributed almost one half of real GNP growth in 1981 and 1982.

In 1983 there was a considerable setback in overall performance. Real GNP growth fell to 3.3 percent and the external current account deficit rose by US\$1.0 billion. In part, this stemmed from a decline in agricultural production (reflecting adverse weather conditions) and a weakening of export prices. More fundamentally, a relaxation of financial policies and an increase in real wages contributed to the acceleration in the growth of domestic demand in excess of the rise in aggregate production. Concomitantly, the savings ratio dropped by more than 2 percentage points. Given rising inflationary expectations and cuts in time deposit rates, as well as a slowdown in GNP growth, real demand for broad money stagnated during most of the year. Although inflationary pressures were not fully reflected in prices because of incomplete SEE price adjustments prior to the November elections, by the end of 1983 wholesale prices had risen 40 percent above their level a year earlier. Delayed price adjustments, in combination with stepped-up depreciation of the lira in the first quarter of 1984, removal of export restrictions, and sustained domestic demand—due to a continued expansionary fiscal and monetary stance—resulted in an inflation rate in excess of 50 percent during 1984. Real GNP growth meanwhile increased

⁴⁸ For an analysis and estimates of the effect of interest rate liberalization on money demand, see Appendix I.

⁴⁹ Ordinary least-squares estimates of quarterly trade equations confirm the responsiveness of Turkey's exports and non-oil imports to exchange rate changes. Long-run price elasticity estimates were 2.1 percent for export supply and -2.0 for non-oil import demand over the period 1977–84; the price elasticity of demand for petroleum imports was found to be not significantly different from zero.

Chart 1. Turkey: Selected Economic Indicators, 1977–85

Sources: Secretariat of Treasury and Foreign Trade, State Institute of Statistics, State Planning Organization, Central Bank, and Fund staff estimates.

¹ M2, quarterly centered seasonally adjusted.

² M2 plus foreign exchange deposits with commercial banks, quarterly centered seasonally adjusted.

³ Change in wholesale price index over corresponding quarter of previous year.

⁴ After-tax six-month time deposit rate.

to nearly 6 percent reflecting in part a renewed export-led expansion of industrial output.

Largely as a consequence of the enhanced competitiveness of the lira and the liberalization of the trade regime, in 1984 the external current account deficit fell by US\$0.5 billion to US\$1.4 billion (2.8 percent of GNP). The liberalization of the exchange and payments system seems to have had a mixed impact; while contributing to a further surge in merchandise exports (24 percent in volume), it apparently inhibited a rebound in workers' remittances to the 1982 level—as market-yield foreign currency deposits with commercial banks had become a more attractive vehicle for repatriating income from abroad. Capital inflows increased and the gross foreign exchange reserves of the banking system reached an unprecedented level of US\$3.1 billion, equivalent to almost four months of imports at the end of 1984.

In 1985—the first year without debt relief and without a stand-by arrangement with the Fund since 1978—Turkey made further progress toward adjustment. While real growth in consumption fell from 5.3 percent to 3.2 percent and the national savings ratio bounced back to 18.1 percent, fixed investment increased by 10.9 percent (7.8 percent for private investment). The slowdown in consumption growth was based on a combination of some fiscal restraint and a tightening in monetary policy, including the re-emergence of positive real interest rates on longer maturing time deposits. Inflation continued to surge in the first quarter as the introduction of the VAT led to a year-on-year increase in the wholesale price level of 57 percent. However, reflecting initially an abundant crop of fresh fruits and vegetables and later the softening of petroleum prices, and supported by some moderation in financial policies, the rate of wholesale price inflation fell to 34 percent during the year ended in the first quarter of 1986.

In 1985, particularly after the first quarter, the external performance was equally encouraging, buoyed by a rise in merchandise exports and tourism. The current account deficit was reduced by a further US\$0.4 billion to US\$1.0 billion (1.9 percent of GNP). While the renewed real depreciation of the lira was instrumental in promoting export growth, currency substitution in favor of higher-yield (and, in the perception of depositors, less risky) foreign exchange accounts seems to have been detrimental to the conversion of workers' earnings abroad into Turkish lira deposits.⁵⁰ At the end of the year, Turkey's external debt out-

standing stood at US\$25.4 billion, of which US\$6.6 billion constituted short-term obligations, including emigrants' deposits totaling US\$3.4 billion.⁵¹

Perhaps the single most successful element of the Turkish recovery has been the dramatic growth of exports of goods and certain services (such as construction, transport, and, more recently, tourism). The tripling of merchandise export volume between 1980 and 1985 (Chart 1) was accompanied by considerable diversification in industrial products. In 1980, agricultural goods accounted for 58 percent and industrial products for 36 percent (consisting largely of processed food and textiles) of total export value. By 1985, the share of industrial products had reached 75 percent of export value (with hides and leather products, chemicals, iron and steel products, petroleum products, and machinery and metal products, as well as processed food and textiles, each accounting for more than 3 percent of the total). Although aided to an extent by Turkey's geographical location, the growth in exports reflected a striking penetration of foreign markets after 1980 that can be ascribed chiefly to the application of appropriate policies. This point is illustrated best by the increase in the share of Turkish exports in total exports of non-oil developing countries to industrial countries from 0.9 percent to 1.6 percent and to Middle East partner countries from 4.0 percent to 20.3 percent between 1980 and 1985 (Table 2). During the pre-program period, the respective shares stagnated, at a time when the growth of non-oil developing country exports to these regions increased about eight times faster than in the program period.⁵²

International capital markets reacted favorably to Turkey's external performance and to the underlying policies. In addition to substantial project-related borrowing and trade credits since 1982, Turkey obtained syndicated medium-term loans for balance of payments support totaling US\$1.0 billion over the period 1983–85 from commercial banks abroad, at increasingly favorable terms. The shift from official financial assistance to commercial borrowing can be interpreted as evidence of Turkey's return to a normal standing in the international economic community. However, this improved market perception does not appear to have taken hold among multinational firms who so far have not expanded operations significantly in Turkey, in part because most measures to promote foreign direct investment have been adopted relatively re-

⁵⁰ Depositors have become increasingly sensitive to relative risk and return, given the availability of a wider portfolio selection particularly for workers living abroad (including deposits with commercial banks abroad, Dresdner Bank deposits held with the Central Bank, and foreign currency and Turkish lira deposits with Turkish commercial banks). The removal of a small interest rate

premium (5 percentage points) previously offered to workers abroad, in January 1985, probably also contributed to the drop in workers' remittances.

⁵¹ As a significant part of the debt is denominated in currencies other than the U.S. dollar, most of the 1985 increase in the dollar value of outstanding obligations reflects the depreciation of the dollar against other major currencies.

⁵² See page 6 above.

cently. In fact, since 1980 direct investment inflows have barely totaled US\$0.4 billion, of which at least one half represents utilization of funds under the Turkish lira option pursuant to the 1980 settlement of nonguaranteed supplier arrears.

The impact of the adjustment effort on employment and income distribution is more difficult to assess, as available data are less than satisfactory in this area. In Turkey, the combination of an average yearly growth of 1.5 percent in the civilian labor force and structural stagnation of agricultural employment—representing around 60 percent of civilian employment—has imposed a heavy burden on economic development to absorb the available labor supply. Through the mid-1970s, both strong demand for labor abroad coupled with a rapid rise in public sector employment provided a ready outlet for excess labor. As this outlet had become narrower and output contracted, the rate of unemployment—according to official estimates—rose to 14.8 percent of the domestic civilian labor force by 1980 from 12.1 percent in 1977. During the program period, the recorded rate of unemployment increased further to 16.3 percent. However, the latter increment can be attributed mainly to a decline in agricultural employment and a marked deceleration in the growth of foreign demand for Turkish workers. It is arguable that, excluding these factors, unemployment would not have increased above the 1980 rate.⁵³ Indeed,

⁵³ The underlying assumption is that during the program, employment in the agricultural sector and abroad remained on the pre-program trend.

during the program period, the annual growth in nonagricultural employment averaged some 2.8 percent, compared with a 1.9 percent annual average increase prior to the program.

Changes in the distribution of income during the adjustment are less clear, given data limitations. Average gross real wages are estimated—on the basis of data covering one eighth of total employment⁵⁴—to have fallen about 3.4 percent yearly since 1980. However, the drop in gross wages was mitigated by successive cuts in marginal income tax rates and by tax rebates to wage earners. Taking into account the reduction in effective income tax rates, it appears that the take-home pay of workers increased during the program period. In the private sector, the average net real wage rate is estimated—on a limited sample of the work force⁵⁵—to have increased 2.8 percent yearly, while for public sector workers it rose 4.7 percent yearly. In any event, it cannot be concluded unambiguously that the program has affected adversely the population as a whole in terms of real income growth and employment opportunities.

⁵⁴ Based on information collected by the Social Insurance Institute on workers covered by social insurance, including some private wage contracts.

⁵⁵ Official data relating to wage settlements by the High Arbitration Council (accounting for one third of wage negotiations) calculated with regard to a married worker with two children.

VII Lessons for Policy

The adjustment process that began in Turkey in 1980 has not yet been completed, nor has enough time elapsed since key policies were implemented to gauge their full repercussions. However, a number of tentative lessons may be drawn from that effort, particularly when assessed vis-à-vis comparable liberalization-cum-stabilization programs undertaken elsewhere. In this regard, the Southern Cone of Latin America offers a particularly rich experience that has been thoroughly documented and has been subject to extensive analysis in recent years. It should be useful, therefore, to summarize that evidence and its interpretation, as well as to identify features which the Turkish case may have in common with, or which differentiate it from, those earlier adjustment efforts.

Experience in the Southern Cone⁵⁶

In the second half of the 1970s, Argentina, Chile, and Uruguay launched almost contemporaneously a remarkable combination of liberalization and stabilization policies. Just like in Turkey, these policies were introduced to correct serious external and internal imbalances, against a background of deep-rooted import-substitution and government intervention. However, in comparison with Turkey, they were undertaken with less financial assistance from the Fund⁵⁷ or other official sources.

In broad terms, the adjustment strategy followed in the Southern Cone can be separated into two distinct stages—each of about three years in duration. In the first stage, a major objective was to curb domestic demand through fiscal and monetary restraint, while commodity prices and interest rates were decontrolled and real wages were permitted to decline. On the external front, an important component of the package

was trade liberalization, consisting of the removal of nontariff barriers and phased tariff cuts—executed most ambitiously by Chile, with reductions in tariffs from an average rate near 100 percent to a uniform 10 percent rate over a six-year period. Also, following substantial devaluations, the exchange rate was depreciated roughly by the amount of the differential rate of inflation at home and abroad.

In the second stage, the exchange rate became the central anti-inflationary instrument. The nominal rate was depreciated according to a pre-announced schedule covering up to six months—which would have left the real rate unchanged only if the underlying inflation target materialized. (Eventually Chile moved even farther, to a nominal rate pegged to the U.S. dollar.) This approach rested on the assumption that the declining rate of nominal depreciation would lead to a drop in the rate of inflation not only through its direct impact on the price of tradables, but also through its influence on inflationary expectations as regards non-tradables. In addition, most restrictions on international capital flows were removed. Interest rate ceilings were abolished, various restrictions on the domestic financial system were eased, and reserve requirement ratios were reduced sharply.

In other respects, the approach during the second stage differed among countries. In contrast to Chile, where the fiscal stance continued to be restrictive while state ownership in the real sector and banking had been considerably trimmed, Argentina was unable to reduce significantly the public sector deficit. In both Argentina and Uruguay the pace of trade liberalization slowed down, while Chile completed the tariff reform on schedule. As opposed to the other two countries where partial labor market liberalization continued, Chile instituted full indexation of wages to consumer price changes.

Initially, the adjustment was successful in moderating the rate of inflation and in narrowing or eliminating the current account deficit, despite weakened export prices in the case of both Chile and Uruguay. The growth and employment record was less encouraging; output growth, except in Uruguay, remained low and the rate of unemployment rose significantly,

⁵⁶ This overview draws heavily on the discussion in Dornbusch (1982), McKinnon (1982), Frenkel (1982), Sjaastad (1983), Barletta, Blejer, and Landau (1984), Khan and Zahler (1985), Corbo and de Melo (1985), and Diaz Alejandro (1985).

⁵⁷ All three countries began the liberalization process with the support of stand-by arrangements, which were abandoned after the initial years of adjustment.

notwithstanding a marked drop in real wages. In the second stage, the deterioration in public finances in Argentina, and rebound of real wages in Chile, resulted in a sharp rise in domestic demand that was not matched by the acceleration in output growth. Although the exchange rate policy was marginally helpful in dampening inflationary pressures that stemmed from excess demand, it did so at the cost of a rapidly worsening external payments position. Indeed, the loss in export competitiveness, due to real exchange rate appreciation—at a time when the terms of trade deteriorated—compounded the adverse impact of excess domestic demand on the foreign balance.

The deterioration in the current account balance was financed with a large amount of borrowing from abroad, much of it in the form of short-term inflows to the private sector (under the perception of at least an implicit government guarantee), made attractive by the combination of an overvalued exchange rate and the effects of domestic financial liberalization—including domestic real interest rates of up to 40 percent, lack of effective supervision of financial institutions in the presence of market imperfections, and unrestrained international capital transactions. The emerging balance of payments crisis was accompanied by currency substitution and a domestic financial crisis, where the bankruptcy of several financial intermediaries was largely averted with public sector assistance and a relaxation of monetary policy. In the early 1980s, as foreign commercial banks were no longer willing to increase their credit exposure, the situation became unsustainable and all three countries were forced to abandon or suspend the liberalization. In addition to the foreign exchange crisis, each economy was beset by a deep recession and a high external debt burden.

The failure of liberalization experiments in the Southern Cone has been attributed above all to inconsistencies between exchange rate policies and demand management, and to premature and excessive financial liberalization. The shift in the exchange rate policy from a passive crawling peg (with the rate set to compensate for the actual inflation differential with trading partners) to an active downward crawling peg (based on the inflation target) or a fixed nominal rate, was incompatible with either the lack of fiscal restraint or the downward rigidity in real wages implied by full wage indexation—with the result that the real effective exchange rate appreciated. In addition, complete removal of interest rate ceilings on all financial instruments, large cuts in reserve requirements, and elimination of restrictions on international capital flows, were implemented without first ensuring macroeconomic control, effective regulation of the operations of financial intermediaries, and sufficient progress in trade liberalization. This sequence contributed sub-

stantially to the domestic financial crisis and the external imbalance—largely because financial markets tend to adjust much faster than goods markets to liberalization. An additional factor held responsible for the collapse of the liberalization was the increased vulnerability to external shocks (losses in terms of trade, weak external demand, high foreign interest rates) during the opening-up process, in the absence of an adequate macroeconomic policy response.

A major lesson from the experience in the Southern Cone is that a significant and sustained cut in the size of the fiscal deficit is a necessary—yet not sufficient—condition for successful liberalization in a developing economy. As regards exchange rate policy, it would seem desirable to follow a passive crawling peg,⁵⁸ but without a similar passive crawl for wage determination. Full and credible control over public finances would be required before shifting to an active downward crawl for the exchange rate, while retaining an active downward crawl for wages as well. Alternatively, it may be desirable to introduce a freely floating exchange rate during a period of significant changes in the international environment and of trade liberalization or other reform measures affecting the domestic price structure. Domestic financial liberalization may need to proceed gradually, while ensuring satisfactory regulation of intermediation practices and allowing for adequate—though not excessive—positive real interest rates particularly on longer-term bank deposits. Also, most analysts agree that opening up the capital account should come later, and certainly after liberalizing the current account of the balance of payments. Furthermore, disillusionment with some of the policies followed in the Southern Cone prompted a well-known advocate of liberalization to argue that the liberalizing country should abstain from capital inflows—especially of a short-term nature—including official financial assistance from abroad.⁵⁹

Turkish Experience in Perspective

There are striking similarities between the experience in the Southern Cone and that in Turkey; yet the

⁵⁸ However, under certain conditions—notably, in the presence of sticky inflationary expectations due, for example, to a lack of sustained improvement in fiscal performance—prolonged reliance on a passive crawling peg can lead to a loss of control over the inflationary process. See Adams and Gros (1986).

⁵⁹ McKinnon (1984) recommends that “At the very minimum, official agencies such as the World Bank or the International Monetary Fund should not try to buy a trade liberalization by giving aid. Never try to bribe someone into liberalizing, because you inject capital at the time the liberalization occurs, and you make that liberalization much harder to sustain. . . . Because private lenders often magnify any such official injection by the World Bank or IMF, free inflows of foreign financial capital should only be allowed at the tail end of an otherwise successful program of liberalization.”

two cases differ in several crucial respects. The experiences resemble each other very closely in terms of both the background of economic repression and the initial crisis. Also, the Turkish policy package included measures similar to those introduced during the first stage of the Southern Cone adjustment. Through 1982, Turkey combined a tight fiscal and monetary stance with nearly full decontrol of commodity prices and time deposit rates, and took important steps toward trade liberalization. The exchange rate was set more or less according to a passive crawl, while wage determination was in effect based on an active downward crawl.

Although in Turkey the adjustment program cannot be divided as neatly into two stages as in the Southern Cone, the external liberalization was clearly stepped up at the end of 1983, and a number of important domestic structural measures were introduced in 1984–85. Partly because of some of these measures and partly in response to the 1982 domestic financial crisis, there were difficulties in exercising macroeconomic management and thus in lowering the rate of inflation and preventing some deterioration in the external current account thereafter. Indeed, the weakness in demand management at a time when a tighter stance would have been desirable to support structural changes—in particular financial liberalization and tax reform—contributed to the slippages that had taken place after 1982. Nevertheless, in Turkey there was no fundamental shift in the exchange rate and wage determination in the course of the program—except for a brief experimentation with real exchange rate appreciation to contain inflationary pressures in the course of 1984—thus avoiding the policy inconsistencies that characterized the second stage of the adjustment in the Southern Cone. Another difference with the latter is that in Turkey the financial crisis was followed not only by monetary and fiscal ease, but also by the enactment of banking reform and the adoption of flexible interest rate ceilings aimed at maintaining positive real time deposit rates which obtained except for some intervals between mid-1983 and early 1985.

The removal of most exchange and payments restrictions at the beginning of 1984, prior to completion of trade liberalization and given some weakness in public finances, resembles developments in the Southern Cone. However, although the external financial liberalization, in the presence of continued inflationary expectations, has contributed to currency substitution, it has not had such detrimental consequences on the balance of payments and external indebtedness, apparently for two reasons. For one thing, interest and exchange rate policies did not provide such a strong incentive to capital inflows. For another, both domestic

and foreign commercial banks were far more cautious in intermediating short-term credits to Turkey than to the Southern Cone countries—without even implicit government guarantees and given live memories of the experience with the CTLD scheme in the late 1970s. Nonetheless, there was a sizable accumulation of short-term obligations, partly in the form of emigrants' deposits with domestic commercial banks.

The Turkish case, in terms of its strengths as well as its weaknesses, corroborates the principal lessons derived from the liberalization experience in the Southern Cone. These may be summed up as the need for: tight demand management, mainly through steady and credible fiscal restraint; consistent passive exchange rate crawl and active downward wage crawl; effective regulation of financial intermediation practices and introduction of a deposit insurance scheme, while allowing for adequate positive real interest rates; and trade liberalization to be followed by gradual elimination of restrictions on external capital movements, with controls on short-term capital movements to be removed last. Only after a successful and convincing decline in domestic demand pressures and in inflationary expectations, is it likely to be appropriate to permit more direct market determination of the exchange rate, interest rates, and wages.

Apart from these general lessons, in common with experience accumulated elsewhere, the Turkish experience provides for some specific lessons as well. Reductions in the income tax burden for supply-side reasons, which contributed to a short-run shortfall in government revenue, should have been matched by cuts in government outlays, to prevent an unintended fiscal expansion in the course of the adjustment. In addition, lifting restrictions on foreign currency deposits should have been paralleled by a convergence in the treatment (in terms of interest rate determination, taxation, and effective reserve requirements) of comparable maturity deposits regardless of currency denomination, so as to ensure extension of effective monetary control over foreign currency deposits. Likewise, financial innovations, such as reduction in the effective reserve requirement ratio and activation of an interbank money market, should have been accompanied by stronger compensatory slowdown in reserve money growth. In brief, structural adjustment in various areas of potential conflict can be made compatible with the stabilization goal through appropriate compensatory measures.

Finally—contrary to a view expressed in connection with other less successful adjustment attempts⁶⁰—external assistance to support the Turkish program

⁶⁰ See footnote 59.

provided by the Fund, the World Bank, and other official sources, and including restructuring of foreign obligations, ensured a minimum level of resource inputs for viable export-led growth. It is plausible to argue that, by easing supply bottlenecks arising from previous import compression, the financial assistance provided in the initial years of the adjustment, in combination with appropriate policies, laid the foundation for rapid export growth and permitted the economy to withstand external shocks. Over time, an increasing portion of official transfers has been replaced by spontaneous medium-term borrowing from private sources—which should not pose a danger to

the adjustment effort as long as it serves to enhance the foreign exchange earning capacity of the country. As of yet, there has been a relatively small inflow of equity finance, as both legal and administrative restrictions to direct investment have been phased out only gradually. Elimination of restrictions is a necessary condition to induce such flows; a sufficient condition, that has yet to be fulfilled, is the creation of market perceptions of a sufficiently stable economic environment. Direct investment presupposes a much deeper commitment and involvement in the local environment by the foreign investor than does lending on the part of the foreign lender.

VIII Conclusion

The structural reform and economic stabilization program undertaken in Turkey since 1980 suggests—in spite of some slippages and the fact that the program has not yet been completed—a strategy for the difficult transition from economic repression toward equilibrium and growth. Following a severe balance of payments crisis, sustainable economic growth can be attained within a reasonable period of time through an adjustment effort that combines high export performance and revival of domestic financial intermediation, supported by adequate capital inflows from abroad—in a stable social and political environment.

Based on the Turkish experience, the most important measures for inducing high export growth consist of a flexible exchange rate and the removal of restrictions, first on foreign trade and later on capital movements, to shift the productive structure of the economy toward the supply of tradables, and domestic demand toward nontradables. Equally important instruments are a restrictive fiscal stance to assist in releasing resources for export production, and an effective incomes policy to underpin export competitiveness. Restoration of financial intermediation—to facilitate fixed capital formation—involves maintenance of positive real interest rates on bank deposits. Together, flexible exchange rate and interest rates, in the context of economy-wide market pricing and accompanied by a phased external liberalization, are integral parts of

an adjustment package aimed at sustainable economic growth.

The Turkish experience suggests that the effectiveness of these policies can benefit greatly from prompt and sizable external financial assistance especially during the initial period of the adjustment. It also gives reason to look for such support to be followed, as the country regains its credit standing in the international marketplace, by spontaneous medium-term and long-term private lending. It is only at a later stage, however, that an increasing portion of capital inflows can be expected to take place in the form of foreign direct investment—a development that has yet to materialize in Turkey.

While the foregoing are for the most part critical ingredients of a recovery program, additional broad-based structural measures—including institutional reform of the banking system, development of capital markets, strengthening of nonfinancial public enterprises, and tax reform—that are conducive to a more efficient allocation of real and financial resources, should speed up the attainment of, and add permanence to, the development goal. On the basis of the Turkish case at least, it appears that there are relatively few instances of potential conflict between stabilization and structural reform that could not be avoided or minimized through appropriate sequencing of measures or compensatory policy action.

Appendix I

Interest Rate Liberalization and the Demand for Money

In recent years there has been a growing recognition among analysts and policymakers of interest rate policy as a major instrument for mobilizing financial resources in developing countries. Proponents of this view argue that market determined interest rates, in combination with appropriate external and domestic macroeconomic policies, are necessary for channeling—initially through the banking system—financial resources from savers to investors, which in turn should lead to increased economic growth.⁶¹ Developments in Turkey following the introduction of the 1980 adjustment program appear to support the hypothesized complementarity between the growth of real money balances and fixed capital formation, as well as its contribution to output growth, in response to, *inter alia*, interest rate liberalization.⁶²

Full examination of such linkages lies beyond the scope of this analysis, which focuses on the determinants of money demand in Turkey since the late 1970s, with particular emphasis on the role of the rate of interest.⁶³ The usefulness of studying the Turkish experience is underscored by the difficulties often encountered in empirically documenting the influence of interest rates on money demand or financial savings in developing countries.⁶⁴ Moreover, a quantitative explanation of the demand for money is an important ingredient in the formulation of monetary policy.

Model of Money Demand

It is customary to postulate the demand for money as a function of the level of income (or some other

scale variable) and the opportunity cost of money, which in turn is determined by the market rate of interest and the expected rate of price inflation. Thus, the determination of the equilibrium stock of money in time t can be expressed in exponential form:

$$m_t^* = e^{\alpha_0} y_t^{\alpha_1} e^{\alpha_2 r_t} e^{\alpha_3 \pi_t} \quad (1)$$

where m^* denotes the demand for real money balances, y the level of real income or output, r the rate of interest, and π the expected rate of inflation.

The value of each parameter is contingent largely on the definition of the dependent variable. The transactions demand for money is reflected in a positive income elasticity, that is, $\alpha_1 > 0$, but this tends to be larger for narrow money than quasi-money. On account of the speculative motive for holding money, the rate of interest on time deposits has a positive effect on the demand for quasi-money, $\alpha_2 > 0$, particularly if there are few alternative interest-bearing financial assets. By the same token, the time deposit rate acts as a depressant on the demand for narrow money (whose nominal yield is closer to zero) so that $\alpha_2 < 0$, as portfolios are adjusted toward larger holdings of interest-bearing assets in response to a rise in the interest rate. Hence, the elasticity of demand for broad money with respect to the time deposit rate is theoretically ambiguous.⁶⁵ Meanwhile, the expected rate of inflation exercises a negative influence on all forms of money holdings, $\alpha_3 < 0$, regardless of the definition of money; in other words, expected inflation affects the allocation of wealth between money and real assets, as well as other inflation hedges such as foreign and indexed domestic financial assets.

Over the long run, actual money balances adjust fully to the desired level of money balances. However, in a shorter time horizon, there is usually a lagged

⁶¹ For an early statement of this view, see McKinnon (1973). Yet resistance to decontrolling interest rates is still strong in most developing countries as well as many developed ones; for a discussion of reasons underlying such resistance, see International Monetary Fund (1983).

⁶² See page 20 above.

⁶³ For a description of interest rate policy in Turkey, see pp. 9–10. Fluctuations in bank deposit rates are shown in Chart 3.

⁶⁴ The main obstacle for estimating this relationship is the prevalence of rigid interest rate ceilings in many of these countries. See, for example, the estimates of money demand by Khan (1980) and

of savings behavior by Kopits and Gotur (1980). An exception is the attempt by Mathieson (1982) at measuring the effect of interest rates during financial reform in Argentina.

⁶⁵ By contrast, the elasticity of broad money holdings in countries with well-developed capital markets, estimated with respect to the interest rate on nonmonetary financial assets, is negative. See the survey by Laidler (1977), chapter 7.

response of actual money holdings to changes in the desired stock. This partial adjustment mechanism can be described as:

$$m_t/m_{t-1} = (m_t^*/m_{t-1})^\lambda \quad (2)$$

where $0 < \lambda \leq 1$ stands for the coefficient of adjustment of real money balances to changes in the equilibrium level of real balances. The faster the adjustment, the closer is the value of λ to unity.

Substituting equation (1) into (2), taking natural logarithms and adding the stochastic term u , results in the following linear relationship:

$$\ln m_t = \lambda\alpha_0 + \lambda\alpha_1 \ln y_t + \lambda\alpha_2 r_t + \lambda\alpha_3 \pi_t + (1 - \lambda) \ln m_{t-1} + u_t \quad (3)$$

where real money balances are determined by real income, the rate of interest, the expected rate of inflation, and the past level of money holdings. Equation (3) is sufficiently general to accommodate any definition of money. However, for estimation purposes, it is necessary to incorporate two further modifications.

First, as the expected rate of inflation cannot be measured directly, inflationary expectations must be specified in terms of observed price fluctuations. Broadly stated, the expected rate of inflation in period t is generated by actual price changes in the previous periods $k = 0, 1, 2, \dots, n$:

$$\pi_t = \sum_{k=0}^n \gamma_k \Delta \ln p_{t-k} \quad (4)$$

where $0 \leq \gamma \leq 1$ is the distributed lag weight and p is the price level. The actual form of the distributed lag (4) adopted for estimation purposes is discussed in the following section.

Second, equation (3) ignores structural shifts that take place in an economy undergoing financial reform. Indeed, liberalization of interest rates constitutes a structural shift that may affect the stability of the demand for money function. In order to capture the impact of this shift, the interest rate variable is truncated into separate variables r_1 and r_2 which stand for the time deposit rates prevailing before and after decontrol, respectively. Accordingly, equation (3) is expanded as follows:

$$\ln m_t = \lambda\alpha_0 + \lambda\alpha_1 \ln y_t + \lambda\alpha_{21} r_{1t} + \lambda\alpha_{22} r_{2t} + \lambda\alpha_3 \sum_{k=0}^n \gamma_k \Delta \ln p_{t-k} + (1 - \lambda) \ln m_{t-1} + u_t \quad (5)$$

where α_{21} and α_{22} represent interest semi-elasticities of money demand prior to and following decontrol, respectively.

Data and Estimation

Besides broad money (M2) itself, three components of broad money were selected as alternative measures of the dependent variable in equation (5) on the basis of certain distinguishing characteristics. The first component, adjusted narrow money, consists of currency in circulation plus personal sight deposits (excluding commercial sight deposits) which are highly liquid and have traditionally yielded a very low nominal interest rate. The second, comprised of commercial sight deposits, differs from other forms of narrow money in that borrowers have been required to hold a large part of them as compensatory balances against credits outstanding. The third and remaining component of broad money is quasi-money, made up of time deposits and certificates of deposit. (Data description and sources are given in Table 3.)

The wholesale price index was used for deflating the dependent variable and for measuring the rate of inflation. The choice of this index is justified on grounds that it is probably Turkey's most reliable nationwide price index covering the period of estimation. Moreover, in comparison with consumer price changes, movements in wholesale prices can be regarded as a better measure of the opportunity cost of money inasmuch as they reflect the capital gains that accrue on inventories of basic commodities and inputs (excluding services), which constitute a major alternative to holding money balances in developing countries.⁶⁶

The effect of the rate of inflation in equation (5) was estimated through a polynomial distributed lag of the second degree without end-point restrictions. Clearly, this approach does not permit estimation of parameter α_3 separately from lag weights γ_k . Instead, it yields estimates of the product $\beta_k = \alpha_3 \gamma_k$ which stands for the semi-elasticity of the demand for money in time t with respect to the actual rate of inflation in $t - k$ rather than the expected rate of inflation in t .

The interest rate was measured by the nominal yield on 6-month to 12-month personal time deposits—considered the typical interest rate on quasi-money balances—net of withholding tax. The interest rate variable was split in the middle of 1980 when interest rates on quasi-money were decontrolled. Thus, r_1 is measured by the after-tax time deposit rate through the second quarter of 1980 and r_2 by the deposit rate from the third quarter onward.⁶⁷

As only annual time series of real GNP were available for quantifying the income variable, it was

⁶⁶ See, for example, McKinnon (1973), pp. 96 ff.

⁶⁷ This approach is equivalent to applying slope dummies to the rate of interest.

Table 3. Turkey: Definitions and Sources of Data for Appendix I

Variable	Data	Definition	Source
m	M2/WPI, M1A/WPI, CSD/WPI, QM/WPI	Broad money, adjusted narrow money, commercial sight deposits, quasi-money, in billions of 1980 Turkish liras	See below
	$M2 = M1A + CSD + QM$	Broad money, in billions of Turkish liras	Central Bank
	M1A	Adjusted narrow money: currency in circulation plus savings sight deposits, in billions of Turkish liras	Central Bank
	CSD	Commercial sight deposits, in billions of Turkish liras	Central Bank
	QM	Quasi-money: time deposits (including commercial time deposits) plus certificates of deposit, in billions of Turkish liras	Central Bank
p	WPI	General wholesale price index (1980 = 100), prior to 1982 calculated on 1963 base, and subsequently on 1981 base	State Institute of Statistics
y	Benchmark (GNP, ELC)	Quarterly estimate of GNP at market prices, in billions of 1980 Turkish liras	See below
	GNP	Annual GNP at market prices, in billions of 1980 Turkish liras	State Planning Organization
	ELC	Electricity output per quarter, in millions of kilowatt hours	State Planning Organization
r	INT(1-TAX)	After-tax interest rate on 6-month to 12-month deposits, in percent per annum ¹	See below
r_1	D_1 INT(1-TAX)	After-tax interest rate on 6-month to 12-month deposits through second quarter of 1980, in percent per annum	See below
r_2	D_2 INT(1-TAX)	After-tax interest rate on 6-month to 12-month deposits beginning in the third quarter of 1980, in percent per annum ¹	See below
	INT	Interest rate on 6-month to 12-month personal time deposits, in percent per annum ¹	Central Bank
	TAX	Rate of withholding tax on interest income from time deposits	Ministry of Finance
	D_1	Dummy variable: 1 through second quarter of 1980 and 0 thereafter	—
	D_2	Dummy variable: 0 through second quarter of 1980 and 1 thereafter	—

Note: Quarterly variables m , p , and y are seasonally adjusted. Data on monetary aggregates, the price index and the interest rate, are centered in the middle of the quarter—necessary in particular to remove the influence of year-end “window dressing” accumulation of deposits by commercial banks, on the measurement of monetary aggregates.

¹ From the first quarter of 1984 onward, the three-month deposit rate was used for forecasting purposes as the bulk of time deposits shifted to the shorter maturity.

necessary to search for an appropriate quarterly indicator of economic activity. In the absence of a suitable production index on a broad sectoral basis, quarterly data on electricity output were grafted onto the annual GNP at constant prices. The high correlation between annual GNP and annual electricity output

suggests that the quarterly series of electricity output is an adequate proxy for quarterly variations in overall activity.⁶⁸

⁶⁸ The coefficient of correlation between annual electricity output and GNP at constant prices is 0.98 over the 1975–84 period.

Estimation Results

Ordinary least-squares estimates of the money demand function on quarterly data over the period 1977–82 are shown in Table 4. The table contains a pair of estimates for each definition of money: with a single interest rate variable and with partitioned interest rate variables. The fits are excellent, as reflected by the closeness of the predicted and actual values of the dependent variable over the estimation period (Chart 2). The relevant tests for autocorrelation reveal serial independence of residuals—after appropriate correction of the estimates for adjusted narrow money. On the whole, the model provides a greater explanatory power for adjusted narrow money and quasi-money than for broad money, capturing more fundamental demand behavior separately for active and idle balances. The fit for commercial sight deposits is weaker because of the largely compulsory nature of such deposits.

The evidence confirms that in the late 1970s Turkey experienced a severe crisis of financial disintermediation. Real money holdings declined in response to rising inflationary pressures and lack of adequate return—increasingly negative in real terms—on idle balances. This development was reversed since 1980, as the reorientation of financial policies and falling rates of inflation led to a marked rise in the demand for money. Whereas fluctuations in real income—which reached a trough in 1980—dominated the demand for narrow money, as reflected in the size and significance of the income elasticity estimate, the introduction of more realistic interest yields on quasi-money encouraged a substantial shift from currency and sight deposits (including commercial sight deposits), as well as nonfinancial assets and assets held abroad, into interest-bearing deposits. (Interest rates on bank deposits and the inflation rate are shown in Chart 3.)

On balance, therefore, the negative effect of time deposit rates on the demand for narrow money seems to have been more than offset by their positive effect on quasi-money, implying a positive overall effect on the demand for broad money, even though the coefficient of the interest rate variable turned out to be insignificant in direct estimates of the demand for broad money. The results for broad money components indicate that on average the negative impact of the inflation rate was transmitted in less than two quarters on equilibrium narrow money and less than one quarter on desired quasi-money holdings; for broad money the mean lag is closer to three quarters. However, the adjustment of actual money balances to their equilibrium level is much slower for adjusted narrow money and quasi-money than for commercial sight deposits;

for the latter, apparently the adjustment is realized fully within one quarter.

For more meaningful quantitative evidence on the determination of the demand for money it is necessary to turn to Table 5, which displays the elasticities of the demand for broad money with respect to each exogenous variable. It shows the percentage change in money holdings, within one quarter, one year, and over the long run, given a 1 percent rise in real income, in the rate of interest, or in the rate of inflation.⁶⁹ Two separate sets of elasticities are presented: one is based on direct regression estimates for broad money, while the other set is derived from the sum of estimates for the components of broad money—weighted by their relative shares therein.

Both approaches result in similar long-run income and inflation elasticities, of about 1.2 to 1.7 and of -0.3 , respectively. These values are comparable to long-run elasticities of demand for broad money obtained for other developing countries.⁷⁰ However, in other respects, the two approaches reveal considerable differences. The one-year income elasticity based on direct estimates is almost as high as the long-run elasticity, while the one-year elasticity based on the sum of estimates for components, of 1, is lower than the corresponding long-run elasticity. This difference is in part attributable to the unusually rapid adjustment to the equilibrium stock of broad money reflected in the direct estimates (completed virtually in one year), as against the separate estimates for narrow money and quasi-money (with about three fourths of the adjustment taking place within the year).

Much more critical, however, is the different response of broad money holdings to a marginal change in the time deposit rate under each estimation approach. Whereas direct estimates of the effect of the interest rate are statistically insignificant, the sum of estimates for components provides interest elasticities that are both positive and relatively large, ranging from about 0.1 for one quarter to nearly 0.4 over the long run, following decontrol—in contrast to those calculated for the preceding period.⁷¹ The principal explanation for the difference in elasticity estimates lies in the probable aggregation bias present in direct

⁶⁹ Since for both the interest rate and the inflation rate the regression coefficients are semi-elasticities, the latter were multiplied by mean values of the rates of interest and inflation in order to obtain the corresponding elasticity estimates.

⁷⁰ See, for example, Khan (1980).

⁷¹ Notwithstanding the similarity of the interest rate coefficients in each equation before and after decontrol, shown in Table 4, the implied interest elasticities are very different because of the sharp increase in interest rates following decontrol. In contrast to the interest elasticities in Table 5, calculated for the period beginning in the third quarter of 1980, the sum of estimates for components during the preceding period are: 0.013 for one quarter, 0.057 for one year, and 0.083 over the long run.

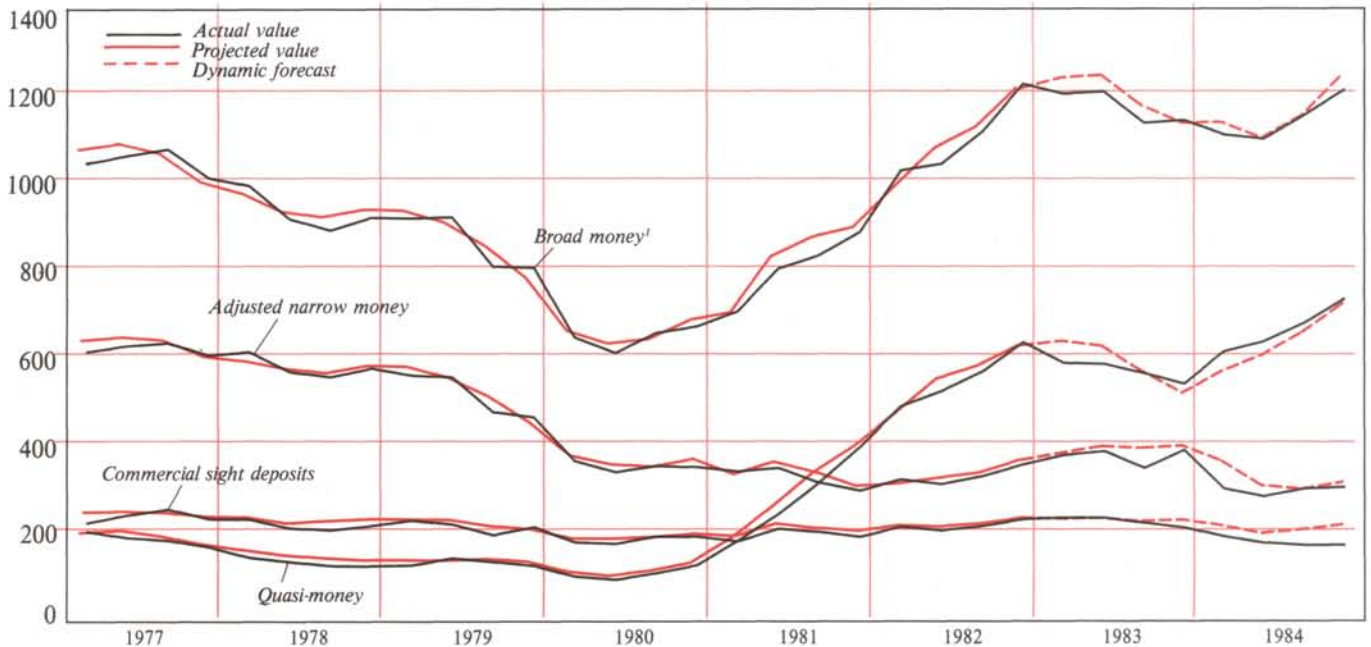
Table 4. Turkey: Estimates of the Demand for Money, First Quarter 1977–Fourth Quarter 1982

Equation	Dependent Variable	Regression Coefficients							Summary Statistics				
		$\lambda\alpha_0$	$\lambda\alpha_1$	$\lambda\alpha_2$	$\lambda\alpha_{21}$	$\lambda\alpha_{22}$	$\lambda\sum_{k=0}^n\beta_k$	$1 - \lambda$	k	ρ	H	DW	\bar{R}^2
1.	Broad money	-4.604 (1.69)	1.068 (2.79)	-0.051 (0.40)			-2.677 (5.98)	0.394 (2.66)	2.64 (3.06)		-0.51		0.975
2.		-4.451 (1.63)	1.080 (2.82)		0.338 (0.82)	0.259 (0.02)	-2.874 (5.10)	0.356 (2.32)	2.60 (3.18)		-0.40		0.975
3.	Adjusted narrow money	-7.735 (3.84)	1.161 (4.53)	-0.876 (4.65)			-1.392 (6.87)	0.710 (8.87)	1.06 (2.21)	-0.54 (3.00)	-1.28		0.984
4.		-7.214 (3.29)	1.129 (4.23)		-0.631 (1.62)	-0.912 (4.53)	-1.553 (5.11)	0.670 (6.69)	1.01 (2.14)	-0.49 (2.69)	-1.18		0.984
5.	Commercial sight deposits	-3.702 (1.28)	1.108 (3.22)	-0.607 (6.25)			-1.669 (8.52)		1.67 (3.80)			2.19	0.846
6.		-3.791 (1.28)	1.119 (3.15)		-0.751 (1.43)	-0.628 (5.00)	-1.644 (7.46)		1.72 (3.72)			2.25	0.837
7.	Quasi-money	0.873 (0.23)	0.080 (0.18)	1.298 (10.03)			-1.767 (6.82)	0.705 (18.86)	0.73 (2.63)		0.68		0.993
8.		0.692 (0.18)	0.101 (0.22)		1.097 (1.57)	1.262 (6.93)	-1.713 (5.29)	0.707 (18.04)	0.75 (2.40)		0.64		0.993

Note: The figures in parentheses are absolute values of t-statistics. The summary statistics include: k, the mean lag of the distributed lag coefficients β ; the first-order autoregressive term ρ ; Durbin's H statistic; the Durbin-Watson statistic; and \bar{R}^2 , the coefficient of determination adjusted for degrees of freedom.

Chart 2. Turkey: Monetary Aggregates, First Quarter 1977–Fourth Quarter 1984

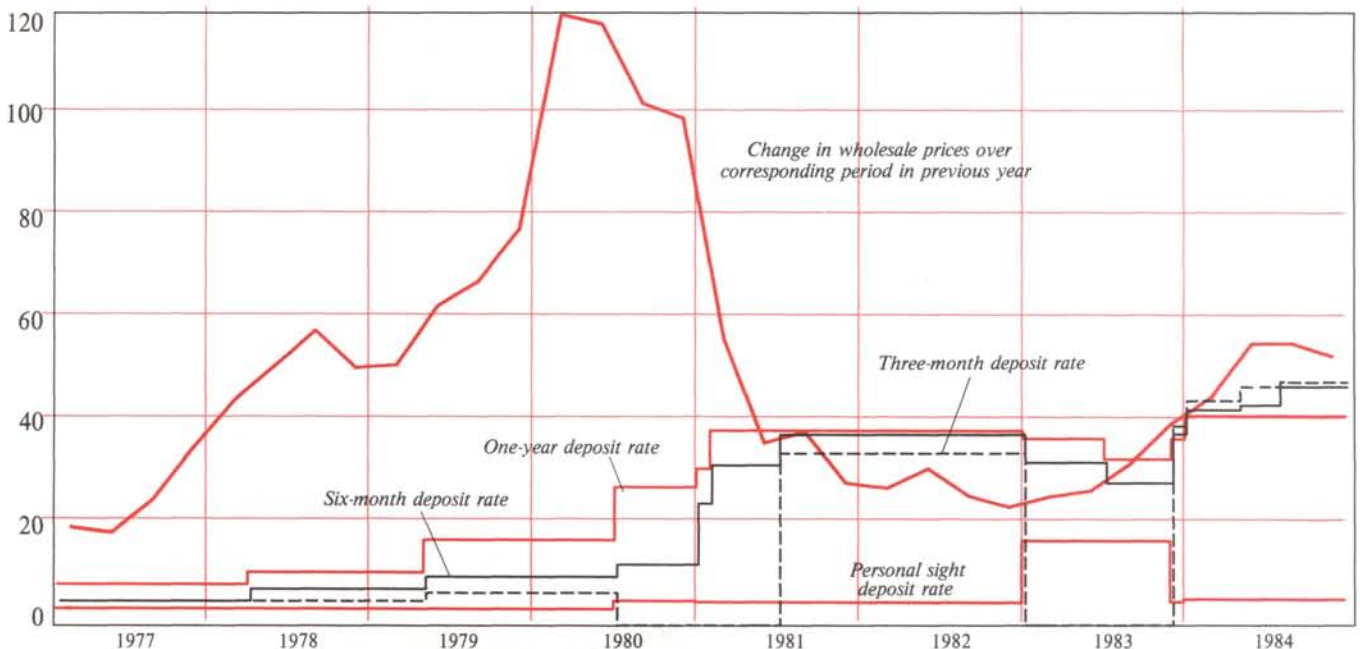
(In billions of 1980 Turkish liras, seasonally adjusted)



Sources: Central Bank; equations (4), (6) and (8), Table 4; and Table 6.

¹ Broad money is calculated from sum of components.**Chart 3. Turkey: Inflation Rate and After-Tax Bank Deposit Rates, First Quarter 1977–Fourth Quarter 1984**

(Percent per annum)



Sources: State Institute of Statistics and Central Bank.

Table 5. Turkey: Elasticities of Demand for Broad Money, First Quarter 1977–Fourth Quarter 1982

Independent Variable	Short-Run Elasticity		Long-Run Elasticity
	One quarter	One year	
Direct estimates ¹			
Real income	1.080	1.650	1.677
Interest rate	— ²	— ²	— ²
Inflation rate	−0.040	−0.175	−0.295
Sum of estimates for components ³			
Real income	0.563	1.043	1.250
Interest rate	0.072	0.258	0.374
Inflation rate	−0.041	−0.209	−0.308

Note: The one-quarter elasticity with respect to the i th independent variable is $\lambda\alpha_i$; the one-year elasticity is $\lambda\alpha_i\sum_{j=0}^{\infty}(1-\lambda)^j$; and the long-run elasticity is α_i . The interest elasticity is based on parameter estimates for the period 1980 III through 1982 IV. Elasticities with respect to the interest rate and inflation rate are calculated at their mean values during that period.

¹ Based on parameter estimates from equation (2) in Table 4.

² Not significantly different from zero.

³ Based on the sum of parameter estimates from equations (4), (6), and (8) in Table 4, weighted by the 1982 share of each component in broad money.

estimates. In all, the elasticities based on the weighted sum of estimates for broad money components are far more credible.

Forecasts

Forecasts of money demand in Turkey were necessary to provide the basis for setting final and intermediate targets on various monetary aggregates. Hence, it is appropriate to investigate the forecasting properties of the model and to ascertain its usefulness for policy purposes, particularly during a time period when interest rates varied considerably in both nominal and real terms. To this end, quarterly dynamic forecasts were computed for 1983 and 1984 by applying parameter estimates to data on exogenous variables and forecast values of lagged endogenous variables. Forecasts and actual values of broad money and of each major component, along with goodness-of-forecast statistics, are shown in Table 6 and Chart 2.

In general, the model performs well for individual components of broad money beyond the estimation period; with few exceptions, forecasts fluctuate broadly in the same direction as actual values. In 1983, quasi-money balances fell in response to declining real interest rates, while the increase in adjusted narrow money, under the influence of interest rate cuts, was dampened by the slowdown in economic growth. The subsequent increase in real time deposit rates led in

1984 to a shift from narrow to quasi-money holdings. The model tracks the major turning points, albeit without fully capturing the apparently accelerated adjustment of portfolios to the restructuring of interest rates.

Whereas the forecast F-statistic is not statistically significant for quasi-money (indicating close forecast of actual values), it is significant for narrow money. However, within the latter aggregate, with the notable exception of a sharper downturn of actual than predicted values—reflecting unusually strong substitution of new high-yield three-month deposits for demand deposits—in the first quarter of 1984, the model forecasts rather accurately adjusted narrow money. The prediction of commercial sight deposits is less successful; the increasingly significant forecast errors as well as the significant F-statistic imply that since the beginning of 1984 commercial sight deposit holdings have been determined by a different structure than postulated by the model. This structural change reflects primarily the effect of a substantial rise in commercial time deposit rates—from a zero rate—resulting in a shift from commercial sight deposits to commercial time deposit holdings (included in quasi-money) which had been negligible until the end of 1983. Indeed, if commercial time deposits are removed from quasi-money and aggregated with commercial sight deposits, the goodness-of-forecast statistics improve significantly for both commercial sight deposits and quasi-money thus adjusted.⁷²

Upon aggregation of its components, broad money forecasts are very close to the observed values. For the entire two-year period, the forecast error never exceeds 2.6 percent of the actual value, and the root-mean-square error is less than 2 percent. These findings indicate that even when the model fails to forecast precisely shifts between active and idle balances in response to abrupt changes in the structure of interest rates, especially as regards commercial sight and time deposits, the forecast errors (with opposite signs) for broad money components tend to cancel out each other. In any event, broad money forecasts based on the sum of the forecasts of its components are statistically superior than those performed with direct parameter estimates.⁷³

⁷² The maximum deviation of forecast from actual value in any single quarter in 1984 drops from 23.1 percent of the actual value (Table 6) to 5.9 percent for commercial sight deposits, and from 8.6 percent to 5.2 percent for quasi-money. The F-statistic for both aggregates falls below one and is insignificant.

⁷³ Compared with the RMS error of 1.9 percent for broad money, shown in Table 6, the RMS error of forecasts based on equation (2) in Table 4 is 3.3 percent. Nevertheless, both sets of estimates yield better forecasts than the naive approach based on an assumed constant income velocity of money; extrapolation of the 1982 average velocity results in an RMS error of 4.9 percent for 1983–84.

Table 6. Turkey: Forecasts of Monetary Aggregates, First Quarter 1983–Fourth Quarter 1984

	1983				1984				Forecast Statistics	
	I	II	III	IV	I	II	III	IV	RMS	F
<i>(In billions of 1980 Turkish liras, seasonally adjusted; deviations as a percentage of actual values are shown in parentheses)</i>										
Broad money ¹										
Forecast	1,234	1,239	1,168	1,130	1,131	1,095	1,147	1,240		
Actual	1,205	1,211	1,138	1,145	1,111	1,101	1,156	1,214		
Deviation	29	28	30	-15	20	-6	-9	26	22	...
	(2.4)	(2.3)	(2.6)	(-1.3)	(1.8)	(-0.5)	(-0.8)	(2.1)	(1.9)	
Adjusted narrow money										
Forecast	376	392	387	393	357	302	294	310		
Actual	379	388	349	391	302	284	302	305		
Deviation	-3	4	38	2	55*	18	-8	5	25	4.55
	(-0.8)	(1.0)	(10.9)	(0.5)	(18.2)	(6.3)	(-2.6)	(1.6)	(7.9)	(8, 17)
Commercial sight deposits										
Forecast	226	227	220	224	210	193	201	213		
Actual	237	236	224	213	193	178	173	173		
Deviation	-11	-9	-4	11	17	15	28*	40*	20	5.00
	(-4.6)	(-3.8)	(-1.8)	(5.2)	(8.8)	(8.4)	(16.2)	(23.1)	(11.2)	(8, 18)
Quasi-money										
Forecast	631	620	561	513	563	600	652	718		
Actual	589	587	565	542	616	639	681	736		
Deviation	42	33	-4	-29	-53	-39	-29	-18	34	1.45
	(7.1)	(5.6)	(-0.7)	(-5.4)	(-8.6)	(-6.1)	(-4.2)	(-2.4)	(5.5)	(8, 17)

Note: Forecasts based on equations (4), (6), and (8) in Table 4. The symbol * indicates that the deviation of forecast from actual value (forecast error) is more than three times as large as the corresponding standard error of the estimate. RMS is the root-mean-square forecast error (percentage error shown in parentheses) and the F-statistic is the ratio of the sum of squared errors of forecast to the sum of squared errors of estimate, adjusted for degrees of freedom.

¹ Sum of adjusted narrow money, commercial sight deposits, and quasi-money.

Summary and Conclusion

The above analysis provides an insight into the evolution of the demand for money in a developing country that adopted interest rate liberalization as part of an adjustment program. It supports the view that interest rates, along with inflationary expectations, play an important role in determining the size and composition of the demand for money even in the absence of well-developed financial markets.

Disaggregated estimates for the major components of broad money on 1977–82 quarterly data for Turkey indicate that the positive effect of the increase in time deposit rates on quasi-money holdings outweighs the negative impact on narrow money balances, resulting in a sizable positive interest elasticity of demand for broad money. Further, estimates of the model with the interest rate partitioned in mid-1980, when the determination of time deposit rates was liberalized, reveal a shift in the interest elasticity of money demand. The magnitudes of the income and inflation elasticities,

as well as of the adjustment parameter, obtained from separate estimates for broad money components are comparable to those found in other developing countries. As opposed to the disaggregated estimates, direct estimation of the demand for broad money masks completely the role of the interest rate, and exaggerates the speed of adjustment of actual to desired money balances and the size of the income elasticity.

The model's forecasting power was tested successfully for 1983–84, that is, outside the estimation period. Whereas forecasts of quasi-money and adjusted narrow money track rather closely the effect of interest rate changes, the forecasts of commercial sight deposit holdings exceed significantly the corresponding actual levels in the second half of 1984 because of a sharp adjustment in commercial time deposit rates not anticipated during the estimation period. More importantly, as forecast errors for its components tend to offset each other, the resulting broad money forecasts are remarkably good during most of the prediction period.

Appendix II

Statistical Tables

Table 7. Turkey: National Expenditure and Product, 1980–85

	1984	1980	1981	1982	1983	1984	1985
	<i>(Percentage of GNP)</i>		<i>(Percentage change in constant prices)</i>				
Consumption	83.2	−3.4	0.6	3.9	4.7	5.3	3.5
Public	8.8	8.8	0.9	2.0	1.7	3.0	3.2
Private	74.4	−5.2	0.6	4.2	5.0	5.5	3.6
Fixed investment	18.1	−10.0	1.7	3.5	3.0	4.7	10.9
Public	10.0	−3.7	9.4	2.2	1.9	1.8	13.3
Private	8.1	−17.3	−8.7	5.5	4.7	8.8	7.8
Change in stocks ¹	1.4	3.9	0.8	−1.0	0.2	0.4	−0.5
Domestic demand	102.8	−1.2	1.6	2.8	4.7	5.5	4.5
Foreign balance ¹	−2.8	0.2	2.5	11.7	−1.3	0.3	0.5
GNP at market prices	100.0	−1.1	4.1	4.6	3.3	5.9	5.1
Agriculture, forestry, and fishing	18.5	1.7	0.1	6.4	−0.1	3.5	2.4
Industry	27.8	−5.9	7.4	4.9	8.0	10.1	6.3
Manufacturing	22.9	−5.4	9.5	5.4	8.7	10.2	5.5
Mining	2.1	−11.1	−7.3	−5.5	7.5	7.9	11.9
Electricity, gas, water	2.8	4.5	7.0	11.7	2.2	11.1	7.8
Construction	3.8	0.8	0.4	0.5	0.6	1.9	2.9
Services	44.3	−0.3	4.1	4.0	4.4	5.8	4.1
Transport and communications	9.7	−3.6	0.9	2.2	3.2	7.7	4.9
Trade	17.1	−4.2	7.4	4.6	6.9	8.0	4.6
Public services	5.7	5.8	4.0	5.4	4.2	2.6	3.3
Other services	11.8	1.6	3.2	3.3	2.6	4.5	3.7
GDP at factor cost	94.4	−1.0	3.6	4.5	3.9	6.0	4.2
Net factor income from abroad	0.9	−24.1	−15.4	−47.4	−87.4	401.2	−10.9
Indirect taxes less subsidies	4.7	2.5	13.4	10.4	1.7	2.7	15.3
GNP at market prices	100.0	−1.1	4.1	4.6	3.3	5.9	5.1

Sources: State Institute of Statistics and State Planning Organization.

¹ Contribution to GNP growth.

Table 8. Turkey: Central Government Operations, 1980–85¹

	1980	1981	1982	1983	1984	1985
<i>(In billions of Turkish liras)</i>						
Revenue and grants	838	1,330	1,424	2,157	2,831	4,691
Direct taxes	471	768	826	1,149	1,381	1,838
Indirect taxes	279	423	479	785	988	2,019
Nontax revenue	88	139	119	223	405	736
Grants	—	—	—	—	57	98
Current expenditure	903	1,193	1,231	2,070	3,048	4,209
Personnel	321	390	440	667	877	1,277
Other goods and services	176	255	280	390	595	815
Interest payments	28	67	77	180	375	674
Transfers to SEEs	213	214	233	292	239	181
Other transfers	165	267	201	541	962	1,262
Capital expenditure	170	310	344	463	683	1,104
Overall balance, accrual basis	–235	–173	–151	–376	–900	–622
Increase in accounts payable	15	87	–30	131	–56	–150
Overall balance, cash basis	–220	–86	–181	–245	–956	–772
Financing	220	86	181	245	956	772
Foreign financing, net	74	41	–18	26	319	–250
Domestic financing, net	151	127	162	181	611	1,024
Medium- and long-term, net	8	50	56	207	137	514
Central Bank advances, net	103	39	32	72	190	266
Treasury bills, net	40	38	74	–98	284	244
Other ²	–5	–82	37	38	26	–3
<i>(In percentage of GNP)</i>						
Revenue and grants	18.9	20.2	19.5	18.7	15.4	16.9
Of which:						
Direct taxes	10.6	11.7	11.3	9.9	7.6	6.6
Indirect taxes	6.3	6.4	6.6	6.8	5.4	7.3
Current expenditure	20.4	18.2	16.9	17.9	16.6	15.2
Of which:						
Personnel	7.3	5.9	6.0	5.8	4.8	4.6
Interest payments	0.6	1.0	1.1	1.6	2.0	2.4
Transfers to SEEs	4.8	3.3	3.2	2.5	1.3	0.7
Other transfers	3.7	4.1	2.8	4.7	5.2	4.6
Capital expenditure	3.8	4.7	4.7	4.0	3.7	4.0
Overall balance, accrual basis	–5.3	–2.7	–2.1	–3.3	–4.9	–2.2
Foreign financing, net	1.7	0.6	–0.2	0.2	1.7	–0.9
Domestic financing, net	3.4	1.9	2.2	1.5	3.3	3.7

Source: Undersecretariat of Treasury and Foreign Trade.

¹ Consolidated budget, excluding extrabudgetary and revolving funds. For 1980 and 1981, data are for fiscal year (March–February); for 1982, data refer to ten-month period March–December; and since 1983, fiscal year data coincide with calendar year. For 1982, data expressed in percentage of GNP have been multiplied by 1.2 for comparative purposes.

² Including errors and omissions.

Table 9. Turkey: Operations of Nonfinancial State Economic Enterprises, 1980–85

(In billions of Turkish liras)

	1980	1981	1982	1983	1984	1985
Operating revenues	1,176	1,841	2,726	3,704	6,483	9,567
Sales of goods and services	1,146	1,787	2,650	3,596	6,310	9,319
Subsidies	30	74	76	108	173	248
Operating expenses	1,169	1,759	2,583	3,630	5,845	8,486
Wages and salaries	238	314	370	464	719	965
Other goods and services	898	1,390	2,135	2,973	4,845	7,113
Depreciation	23	23	48	155	240	375
Other operating expenses	10	32	30	38	41	33
Operating surplus or deficit	7	82	143	74	638	1,081
Net transfers from Government	198	173	176	166	122	– 101
Government transfers	213	214	233	292	239	181
Less: direct taxes	15	41	57	126	117	282
Income after taxes	205	255	319	240	760	980
Net investment	436	593	636	759	1,476	1,754
Gross fixed investment	281	406	533	769	1,171	1,604
Increase in stocks	178	210	151	145	545	525
Less: depreciation	23	23	48	155	240	375
Financing requirement	231	338	317	519	716	774
Foreign financing, net	68	122	140	138	177	399
Domestic financing, net	163	216	174	381	539	375
Central Bank, net	50	32	31	– 5	– 56	80
Other	113	184	143	386	595	295

Source: Undersecretariat of Treasury and Foreign Trade.

Table 10. Turkey: Labor and Employment, 1980–85

	1980	1981	1982	1983	1984	1985
<i>(In thousands of persons 15 years of age and over)</i>						
Civilian labor force	17,951	18,250	18,476	18,779	19,099	19,338
Workers abroad	888	953	943	1,006	1,083	1,069
Domestic civilian labor force	17,063	17,297	17,533	17,773	18,016	18,269
Domestic civilian employment	14,531	14,668	14,801	14,912	15,111	15,289
Agricultural employment	8,820	8,812	8,816	8,785	8,755	8,725
Nonagricultural employment	5,711	5,856	5,985	6,127	6,356	6,564
Industry	1,771	1,822	1,855	1,911	1,984	2,052
Construction	581	582	584	586	606	623
Transportation	480	491	498	507	523	541
Trade	628	656	675	697	730	763
Other services	2,251	2,305	2,373	2,426	2,513	2,585
<i>(In percentage of domestic civilian labor force)</i>						
Unemployment rate ¹	14.8	15.2	15.6	16.1	16.1	16.3

Source: State Planning Organization.

¹ Including disguised agricultural unemployment and discouraged workers not seeking employment.

Table 11. Turkey: Monetary Survey, 1980–85

	1980	1981	1982	1983	1984 ¹	1985
<i>(In billions of Turkish liras at end of period)</i>						
Net foreign assets ²	–326	–227	–208	–455	–1,490	–3,560
Domestic credit	1,206	1,854	2,446	3,046	5,646	8,991
Public sector, net	542	669	709	704	2,523	3,828
Private sector	665	1,185	1,737	2,341	3,123	5,163
Other items, net	2	10	317	698	1,023	2,714
Broad money (M2) ²	882	1,637	2,554	3,288	5,179	8,146
Narrow money	704	972	1,342	1,941	2,253	3,209
Quasi-money ³	178	665	1,212	1,347	2,926	4,937
<i>(In percentage change)⁴</i>						
Domestic credit	95.2	73.5	36.1	23.5	...	64.6
Public sector, net	42.0	14.5	2.4	–0.2	...	25.2
Private sector	53.1	59.0	33.7	23.6	...	39.4
Broad money (M2) ²	67.1	85.6	56.0	28.7	57.5	57.3

Source: Central Bank.

¹ Data on net foreign and domestic assets, or their components, are not comparable to those for previous years because of revaluation foreign assets and liabilities and assumption of certain private sector liabilities by the public sector on December 31, 1984.² Net of liabilities (to residents and emigrants) denominated in foreign currency.³ Time deposits plus certificates of deposit.⁴ Change as a percentage of M2 at the end of the preceding year.**Table 12. Turkey: Exchange Rates, Inflation Rate, and Interest Rate, Fourth Quarter 1979–First Quarter 1986**

Year/Quarter	Turkish Liras Per U.S. Dollar	Real Effective Exchange Rate ¹	Inflation Rate	Interest Rate ³
		<i>(1980 = 100)</i>	<i>(Annual percentage change)²</i>	<i>(Percent per annum)</i>
1979 IV	35.4	128.9	76.8	9.6
1980 I	61.6	105.2	118.8	9.6
II	75.5	95.9	116.9	9.6
III	80.1	92.3	101.5	12.0
IV	86.9	99.6	98.6	12.0
1981 I	94.6	105.5	55.3	31.5
II	102.8	106.2	35.1	31.5
III	118.9	102.8	37.2	37.5
IV	128.6	93.4	27.2	37.5
1982 I	142.2	91.9	25.7	37.5
II	153.3	91.1	30.3	37.5
III	171.9	90.8	28.1	37.5
IV	182.9	88.4	24.8	37.5
1983 I	194.2	91.2	30.4	32.0
II	212.1	89.6	28.0	32.0
III	235.0	88.0	27.6	28.0
IV	260.5	86.7	35.4	28.0
1984 I	310.0	81.5	34.4	42.3
II	347.9	85.7	52.3	42.3
III	387.3	87.9	56.5	46.8
IV	421.6	91.1	56.3	46.8
1985 I	470.6	96.6	57.3	46.8
II	518.7	89.7	43.8	46.8
III	539.4	82.8	36.9	45.0
IV	559.3	81.4	38.4	45.0
1986 I	603.6	76.5	33.6	45.0

Sources: State Institute of Statistics, Central Bank, and Fund staff estimates.

¹ Export-weighted rate, adjusted for relative wholesale price changes. An increase indicates appreciation.² Percentage change in wholesale prices over the corresponding quarter in previous year.³ After-tax interest rate on six-month deposits.

Table 13. Turkey: Balance of Payments, 1980–85

(In millions of U.S. dollars)

	1980	1981	1982	1983	1984	1985
Current account	-3,408	-1,916	-935	-1,898	-1,407	-1,013
Merchandise trade ¹	-4,603	-3,864	-2,638	-2,990	-2,942	-2,975
Exports, f.o.b.	2,910	4,703	5,890	5,905	7,389	8,255
Imports, f.o.b.	-7,513	-8,567	-8,518	-8,895	-10,331	-11,230
Services, net	-976	-627	-601	-693	-579	-36
Travel	222	277	224	292	271	770
Interest payments	-1,138	-1,442	-1,565	-1,511	-1,586	-1,753
Other	-60	538	740	526	736	947
Transfers, net	2,171	2,560	2,294	1,785	2,114	1,998
Private ²	2,153	2,559	2,189	1,549	1,885	1,762
Official	18	1	105	236	229	236
Capital account	2,045	1,197	1,165	1,382	1,195	1,725
Direct investment	18	95	55	46	113	99
Other long-term capital	2,029	998	1,029	303	1,046	-24
Resident official sector	1,554	425	230	-136	245	-780
Drawings	1,660	795	1,083	792	1,214	783
Debt relief	1,450	850	750	1,000	580	—
Principal	980	600	650	930	580	—
Interest	470	250	100	70	—	—
Repayments	-1,556	-1,220	-1,603	-1,928	-1,549	-1,563
Deposit money banks	-72	-69	45	-15	187	-148
Other sectors	547	642	754	454	614	904
Short-term capital	-2	104	87	1,033	36	1,650
Resident official sector	226	287	-2	844	-189	352
Deposit money banks	2	-36	69	93	66	1,137
Other sectors	-230	-147	14	96	159	142
Net errors and omissions	1,436	647	-75	507	317	-808
Counterpart items	19	68	13	161	-171	370
Overall balance	91	-4	168	152	-66	275
Total change in reserves	-91	4	-168	-152	66	-275
Net use of Fund resources	422	268	133	112	-141	-255
Other ³	-513	-264	-301	-264	207	-20

Source: Central Bank.

¹ Including transit trade.² Including imports with waiver.³ Including changes in short-term assets of deposit money banks through 1983; for subsequent years, the latter are included under short-term capital flows.

Table 14. Turkey: Direction of Trade, 1980–85

(In millions of U.S. dollars)

	1980	1981	1982	1983	1984	1985
Merchandise exports, f.o.b. ¹	2,910	4,703	5,746	5,728	7,134	7,958
European Community	1,251	1,503	1,755	2,010	2,732	3,204
France	164	216	195	181	201	215
Germany, Fed. Rep. of	604	643	707	838	1,280	1,391
Italy	218	246	327	423	501	502
United Kingdom	105	148	189	247	261	539
Other countries	160	250	337	321	489	557
Middle East and North Africa	654	1,964	2,754	2,629	2,929	3,338
Iran, Islamic Rep. of	84	234	791	1,088	751	1,079
Iraq	135	559	610	320	934	961
Libya	60	442	235	184	142	59
Saudi Arabia	44	187	358	365	378	430
Other countries	430	542	760	672	724	809
United States	127	268	252	232	368	506
Japan	37	35	43	37	37	43
Switzerland	125	262	324	286	358	128
U.S.S.R.	169	194	124	89	239	100
Other countries	547	475	494	445	570	640
Merchandise imports, c.i.f. ¹	7,909	8,933	8,843	9,235	10,757	11,344
European Community	2,268	2,519	2,466	2,596	2,974	3,547
France	377	400	263	218	243	514
Germany, Fed. Rep. of	837	940	1,006	1,053	1,172	1,369
Italy	300	372	415	510	629	658
United Kingdom	317	434	434	441	443	468
Other countries	437	373	345	374	487	538
Middle East and North Africa	3,024	3,568	3,665	3,654	3,827	3,658
Iran, Islamic Rep. of	803	515	748	1,222	1,548	1,265
Iraq	1,237	1,564	1,309	947	944	1,137
Libya	778	789	919	793	661	621
Saudi Arabia	106	410	477	269	216	226
Other countries	102	290	212	423	458	409
United States	442	589	814	695	1,073	1,149
Japan	113	206	357	349	405	507
Switzerland	348	533	330	266	234	187
U.S.S.R.	181	164	107	238	313	221
Other countries	1,533	1,354	1,104	1,437	1,931	2,075

Source: State Institute of Statistics.

¹ Excluding transit trade.

Table 15. Turkey: Commodity Composition of Exports, 1980–85

(In millions of U.S. dollars; percentage of total in parentheses)

	1980	1981	1982	1983	1984	1985
Agricultural products	1,672 (57.5)	2,219 (47.2)	2,141 (37.3)	1,881 (32.8)	1,749 (24.5)	1,719 (21.6)
Cereals and pulses	181	326	337	376	267	255
Fruits and vegetables	754	795	649	591	646	624
Cotton	323	348	297	197	168	170
Tobacco	234	395	348	238	216	330
Other crops	49	70	96	97	108	75
Livestock	131	285	414	382	344	265
Mining and quarrying products	191 (6.6)	194 (4.1)	175 (3.1)	189 (3.3)	240 (3.4)	245 (3.1)
Industrial products	1,047 (36.0)	2,290 (48.7)	3,430 (59.7)	3,658 (63.9)	5,145 (72.1)	5,996 (75.3)
Processed agricultural products	190	412	568	670	808	647
Textiles and clothing	440	803	1,056	1,299	1,875	1,788
Hides and leather	50	82	111	192	401	484
Forestry products	8	20	33	15	24	106
Chemicals	76	94	148	120	173	266
Rubber and plastics	16	72	61	77	97	108
Petroleum products	39	107	344	232	409	372
Glass and ceramics	36	102	104	108	146	190
Cement	40	198	207	81	56	44
Iron and steel products	34	100	362	407	576	969
Nonferrous metals	18	30	45	79	86	116
Machinery and metal products	30	85	143	123	134	450
Electrical equipment and products	12	26	75	69	100	119
Motor vehicles	50	117	110	126	134	147
Other	8	42	63	60	126	190
Total ¹	2,910	4,703	5,746	5,728	7,134	7,958

Source: State Institute of Statistics.

¹ Merchandise exports, f.o.b., excluding transit trade.

Table 16. Turkey: Commodity Composition of Imports, 1980–85

(In millions of U.S. dollars; percentage of total in parentheses)

	1980	1981	1982	1983	1984	1985
Agricultural products	50 (0.6)	125 (1.4)	176 (2.0)	138 (1.5)	417 (3.9)	375 (3.3)
Mining and quarrying products	4,006 (50.6)	4,099 (45.9)	3,960 (44.8)	3,864 (41.8)	3,908 (36.3)	3,917 (34.5)
Crude oil	2,952	3,258	3,527	3,242	3,373	3,321
Oil products	910	621	221	423	264	290
Others	144	220	212	199	213	306
Industrial products	3,759 (47.5)	4,640 (51.9)	4,658 (52.7)	5,177 (56.1)	6,338 (58.9)	7,052 (62.2)
Processed agricultural products	301	229	176	203	432	487
Chemicals	727	946	839	1,031	1,211	1,200
Fertilizers	395	253	51	120	127	95
Rubber and plastics	181	240	237	251	358	343
Textiles	79	78	103	98	117	146
Glass and ceramics	35	40	34	57	62	63
Iron and steel	462	605	592	675	859	1,060
Nonferrous metals	87	141	122	195	220	224
Machinery and metal products	865	1,246	1,346	1,462	1,630	1,588
Electrical appliances	270	336	374	398	563	664
Motor vehicles	222	356	594	478	468	813
Other	135	170	190	209	291	369
Imports with waiver	95 (1.2)	69 (0.8)	49 (0.6)	56 (0.6)	94 (0.9)	... (...)
Total ¹	7,910	8,933	8,843	9,235	10,757	11,344

Source: State Institute of Statistics.

¹ Merchandise imports, c.i.f., excluding transit trade.**Table 17. Turkey: International Reserves, 1980–85**

(In millions of U.S. dollars at end of period)

	1980	1981	1982	1983	1984	1985
Total reserves	1,463	1,726	2,027	2,253	3,899	3,655
Foreign exchange	1,308	1,571	1,873	2,098	3,099	2,615
Central Bank	1,077	928	1,080	1,253	1,239	1,020
Deposit money banks	231	643	793	845	1,860	1,595
Gold ¹	155	155	155	155	800	1,040

Source: Central Bank.

¹ Official holdings, valued at US\$42 per ounce through the end of 1983, US\$217 per ounce at the end of 1984, and US\$277 per ounce at the end of 1985.

Table 18. Turkey: Outstanding External Debt, 1980–85¹

(In millions of U.S. dollars at end of period)

	1980 ²	1981	1982	1983	1984	1985
Total outstanding disbursed debt	16,227	16,861	17,619	18,385	20,273	25,366
By lender:						
Medium- and long-term debt	13,722	14,667	15,455	15,346	16,767	18,749
Multilateral agencies	3,242	3,857	4,531	4,916	5,494	6,157
IMF	1,054	1,322	1,455	1,572	1,426	1,326
IBRD, IDA, IFC	1,438	1,783	2,115	2,488	3,044	3,490
European Investment Bank	447	427	420	393	391	449
European Resettlement Fund	253	287	384	399	554	815
Islamic Development Bank	35	23	117	22	35	35
OPEC Fund	15	15	40	40	40	35
Other	—	—	—	2	4	7
Bilateral lenders	6,026	6,712	7,115	6,560	7,200	7,955
OECD countries	5,253	5,901	6,146	5,607	5,983	6,528
OPEC countries	392	449	587	535	603	640
Other countries	381	362	382	418	614	787
Commercial banks	3,436	3,257	3,229	3,262	3,723	4,372
Other private lenders	1,018	841	580	608	350	265
Short-term debt	2,505	2,194	2,164	3,039	4,506	6,617
Islamic Development Bank	25	45	73	94	65	30
Bilateral lenders	620	459	68	—	—	30
Commercial banks	608	184	146	392	941	1,465
Deposits of citizens abroad	908	946	1,402	1,981	2,383	3,420
Other private lenders	334	560	475	572	1,117	1,702
By type of credit:						
Medium- and long-term debt	13,722	14,667	15,455	15,346	16,767	18,749
Project and program credits	9,268	10,238	11,321	11,244	12,224	13,616
Eurocurrency loans	763	651	720	902	1,737	2,617
Rescheduled debt	3,473	3,206	2,859	2,710	2,419	2,020
CTLDS	2,137	2,077	1,996	1,886	1,669	1,440
Bankers' credits	429	429	429	429	400	315
TPRCs	107	100	84	45	—	—
Suppliers' arrears	800	600	350	350	350	265
Private credits	218	572	555	490	387	496
Short-term debt	2,505	2,194	2,164	3,039	4,506	6,617
Public sector	1,473	1,161	1,104	1,737	2,663	3,755
Bankers' credits	10	—	—	65	195	432
Overdrafts	254	69	48	164	417	376
Dresdner Bank scheme	365	473	817	1,251	1,778	2,678
Petroleum credits	620	459	68	—	—	—
Other	224	160	171	257	273	269
Private sector	1,032	1,033	1,060	1,302	1,843	2,862
CTLDS	543	473	585	647	61	18
Acceptance credits	377	230	276	318	703	1,093
Pre-export financing	112	330	199	254	414	609
Fixed deposit accounts	—	—	—	83	544	724
Other	—	—	—	—	121	418

Sources: Undersecretariat of Treasury and Foreign Trade, and Central Bank.

¹ Excluding military debt, as well as obligations incurred under bilateral arrangements with certain Eastern European countries.² Data for certain categories may not be fully comparable with those shown in subsequent years.

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