FOR AGENDA

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CONTAINS CONFIDENTIAL INFORMATION

September 26, 1990

To: Members of the Executive Board

From: The Secretary

Subject: Korea - Market Liberalization and Macroeconomic Policies

This paper provides background information to the staff report on the 1990 Article IV consultation discussions with Korea, which was circulated as SM/90/184 on September 18, 1990.

Mr. Dicks-Mireaux (ext. 7308) is available to answer technical or factual questions relating to this paper prior to the Board discussion

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INTERNATIONAL MONETARY FUND

KOREA

Market Liberalization and Macroeconomic Policies

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Approved by the Asian Department

September 21, 1990

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Basic Data

Area:	99,208 square kilometers
Population (1989)	42.4 million
Annual rate of population increase (1989)	1.0 percent
Population density	427 per square kilometer
GNP per capita (1989)	SDR 3,868

	1985	1986	1987	1988	1989
	(Change in percent)				
National accounts (1985 constant prices)					
GNP by expenditure	7.0	12.9	13.0	12.4	6.7
Consumption	6.3	8.4	8.1	9.7	9.5
Private	6.4	8.0	8.3	9.8	9.8
Government	5.6	10.8	6.9	9.4	7.9
Gross capital formation	3.8	10.9	17.7	15.2	23.7
Exports of goods and nonfactor services	4.5	26.1	21.6	12.5	-4.0
Imports of goods and nonfactor services	-0.6	17.8	19.4	12.8	16.3
GNP by industrial origin					
Agriculture, forestry, and fisheries	3.8	4.6	-6.8	8.0	-0.7
Mining and manufacturing	7.0	18.0	18.2	13.1	3.5
Construction and utilities	6.7	10.4	12.6	9.6	13.8
Services	8.9	12.9	14.0	12.8	8.5
Government and private nonprofit institutions	4.4	4.9	4.3	6.2	5.9
Prices, wages, and employment (annual averages)					
Wholesale prices	0.9	-1.5	0.5	2.7	1.5
Consumer prices	2.5	2.8	3.0	7.1	5.7
GNP deflator	4.2	2.7	3.4	5.9	4.7
Nominal wages in manufacturing	9.9	9.2	11.6	19.6	25.0
Real wages in manufacturing	7.3	6.2	8.3	11.8	18.1
Unit labor costs in manufacturing	1.8	-5.0	--	5.8	15.6
Total employment	3.7	3.6	5.5	3.2	3.8
Unemployment (in percent)	4.0	3.8	3.1	2.5	2.6
External sector					
Terms of trade	0.5	8.8	2.4	2.8	7.6
Nominal effective exchange rate (December-December)	-16.0	-6.9	-4.6	15.5	6.8
Real effective exchange rate (December-December)	-15.9	-6.9	-1.6	19.3	7.9
Relative unit labor costs 1/ (December-December)	-4.3	-25.1	-3.4	13.9	23.9

Korea

Basic Data (concluded)

	1985	1986	1987	1988	1989
Money, credit, and interest rates (December-December)					
Net domestic assets	20.9	7.9	2.0	-0.6	18.1
Credit to private sector	19.0	16.2	18.7	14.9	25.7
Net credit to public sector 2/	0.2	0.6	-4.7	-5.2	-4.0
Money and quasi-money 3/	16.8	18.5	19.3	20.5	19.3
Interest rate (end-of-period, one-year savings deposit in percent)	10.0	10.0	10.0	10.0	10.0
Public sector (in percent of GNP)					
Central Government					
Revenue	17.8	17.5	17.9	18.1	18.4
Expenditure	19.0	17.6	17.2	16.5	18.2
Consolidated central government					
Revenue	18.6	17.5	17.9	18.3	18.6
Expenditure	19.5	17.6	17.6	17.0	18.6
Balance	-0.9	-0.1	0.2	1.3	--
Balance of payments (in billions of US$)					
Exports, f.o.b.	26.4	33.9	46.2	59.6	61.4
Imports, f.o.b.	-26.5	-29.7	-38.6	-48.2	-56.8
Trade balance	--	4.2	7.7	11.4	4.6
Current account	-0.9	4.6	9.9	14.2	5.1
Overall balance	-2.5	2.6	6.8	12.2	2.4
External debt 4/	46.8	44.5	35.6	31.2	29.4
Gross international reserves	8.4	8.6	10.2	20.9	24.3
Selected financial ratios (in percent of GNP)					
Gross domestic investment	30.3	29.2	30.1	31.1	34.8
Gross national savings	29.5	33.2	36.8	38.7	36.5
Foreign savings 5/	1.0	-4.5	-7.6	-8.2	-2.4
External current account	-1.0	4.5	7.6	8.2	2.4
External debt 4/	52.2	43.3	27.6	18.1	14.0
Debt service ratio 4/ 6/	23.8	24.8	32.2	15.5	11.4
Debt service ratio (excluding prepayments) 4/ 6/	23.8	21.9	16.2	10.2	8.6
Interest payments ratio 4/ 6/	11.1	8.8	5.8	3.8	3.5
Short-term debt/total external debt	23.0	20.8	26.1	31.4	37.3
International reserves/imports of goods and services (in months)	2.9	2.6	2.6	4.3	4.2
International reserves/short-term debt	78.1	93.2	110.2	213.6	222.1

1/ Ratio of Korea's unit labor costs (seasonally adjusted manufacturing wage index divided by the seasonally adjusted labor productivity index) to average unit labor costs of 10 industrial countries and Taiwan Province of China.

2/ As a percentage of previous year's stock of money and quasi-money (M2 plus certificats of deposit).

3/ Including certificates of deposit.

4/ Including use of Fund credit. Includes public, publicly guaranteed, and private sector bank and nonbank debt of all maturities.

5/ Includes net transfers from the rest of the world.

6/ Includes interest on short-term debt; as percent of exports of goods and services.

Introduction 1/

Korea's economic performance during the 1980s is a remarkable example of successful development combining growth and adjustment. This economic progress was founded on the authorities' commitment to restrained financial policies as well as to structural policies designed to enhance the role of market forces in the economy.

This paper provides background material to the 1990 staff report for Korea (SM/90/184), and examines some of the authorities' efforts to liberalize domestic markets during the 1980s. In the first two sections, developments in trade and financial liberalization are discussed. A third section describes developments in the Korean labor market, focusing on the considerable changes that commenced in 1987. A statistical appendix contains supplementary tables. The paper also includes annexes on the empirical estimates of trade equations, demand for money, and on recent changes in the exchange and trade system.

1/ It should be noted that the term "country" used in this report 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.

I. Trade Policy In Korea

1. Introduction and summary

Korea's economic progress over the last decade has been founded upon the authorities' commitment to liberalize and internationalize its markets. Amongst the several reform programs undertaken to achieve this goal, the most comprehensive and significant was that of trade liberalization.

Trade liberalization in Korea was carried out gradually through preannounced programs, which together with government support for structural adjustment, helped domestic industries adapt to changes that occurred in the trade regime. The credibility of the liberalization programs was strengthened by the appropriate use of macroeconomic policies which helped to avoid the need for recourse to emergency trade restrictions for balance of payments purposes. Trade liberalization programs lowered both tariff and nontariff barriers to imports, with the pace of liberalization faster in the manufacturing sector than in the agricultural sector.

The liberalization programs implemented during the 1980s increased the transparency of the trade system and tilted the incentive structure away from production for import substitution. They also increased competition in the domestic market, resulting in a more efficient allocation of resources, and stimulated technological development. Furthermore, the liberalization of the trade regime enhanced the flexibility of markets in reacting to changes in relative prices and therefore, facilitated the process of external adjustment that took place during the 1980s. Despite sustained liberalization efforts, however, trade tensions between Korea and its trading partners continued.

Looking to the future, with the disinvocation of Article XVIII:B of the GATT (on trade restrictions for balance of payments purposes) on January 1, 1990, Korea undertook to phase out, or bring into GATT conformity, all remaining restrictions on imports by July 1, 1997. The remaining restricted import items comprise mainly agricultural, forestry, and fishery products, and their liberalization will involve a considerable adjustment in Korea's rural sector. The implementation of structural reforms in the rural sector will be key to facilitating this adjustment process. International attention is now being focused on opening up markets for services to foreign participation, particularly in the framework of the Uruguay Round of Trade Negotiations, and, in line with this, discussions between Korea and its major trade partners are also being increasingly directed to this issue.

This paper reviews the major developments during the 1980s in Korea's trade policies and international trade relations and discusses the trade policy issues for the 1990s. In Section 2, which deals with developments during the 1980s, the market opening measures are first

described, followed by a discussion of Korea's international trade relations and an assessment of the impact of such trade policies. In Section 3, which focuses on issues and policies during the 1990s, future liberalization programs and constraints to such efforts are first described, and then, Korea's international trade relations are discussed in light of the Uruguay Round negotiations.

2. Developments during the 1980s

a. Market opening measures

(1) Imports

Korea undertook substantial and sustained import liberalization during the 1980s. This process benefited from the authorities' appropriate use of macroeconomic policies which helped avoid the need to resort to direct controls at the micro-level for balance of payments purposes. At the same time, trade policies facilitated effective macroeconomic management by making the economy more responsive on the supply side to changes emanating from the external environment.

Market opening for imports was carried out through preannounced trade liberalization programs. Knowledge that the liberalization of specific items would be undertaken at designated times, together with government support for structural adjustment, facilitated the adjustment of domestic industries to the substantial changes that took place in the trade regime. The Government adhered to the preannounced liberalization schedules (in fact, accelerated them in the late 1980s), thereby confirming its commitment to, and strengthening the credibility of, the liberalization program.

The import liberalization program was comprehensive and addressed four important barriers to imports: quantitative restrictions, tariffs, safeguard procedures, and regulatory laws.

(a) Quantitative restrictions

All imports to Korea require licenses but approval is automatic for items that are not on the restricted list. The number of items on this list has been reduced gradually through a series of liberalization programs, the first of which was prompted by the emergence of a small external current account surplus in 1978 that was accompanied by inflationary pressures, as well as by signs of industrial inefficiency. Under this program, the number of items on the restricted list, which amounted to about 50 percent of the total at the beginning of 1978, was reduced to about 23 percent of the total in 1982 (Table 1).

Subsequently, the Government embarked on a five-year liberalization program for 1984-88. Following the emergence of large trade surpluses and with the object of promoting more harmonious relations with its trading partners, Korea accelerated the liberalization process during 1987-88. As a result, the number of items on the restricted list was

Table 1. Korea: Import Liberalization, 1982-90 1/

	Dec. 31		July 1						
	1982	1983	1984	1985	1986	1987	1988	1989	1990
Restricted items	1,769	1,482	1,203	970	668	504	361	465	376
Items on surveillance list	...	165	142	111	106	59	34	--	--
Total items subject to import restrictions	...	1,647	1,345	1,081	774	563	395	465	376
Liberalized items excl. items on surveillance list	...	6,078	6,712	6,945	7,243	7,408	7,550	9,776	9,865
Liberalized items incl. items on surveillance list	...	5,913	6,570	6,834	7,137	7,349	7,516	9,776	9,865
Total CCCN items	7,560	7,560	7,915	7,915	7,911	7,911	7,911	10,241	10,241
					(In percent)				
Liberalization ratio excl. items on surveillance list	76.6	80.4	84.8	87.7	91.6	93.6	95.4	95.5	96.3
Liberalization ratio incl. items on surveillance list	...	78.2	83.0	86.3	90.2	92.8	95.0	95.5	96.3

Source: Data provided by the Korean authorities.

1/ Figures for 1983-88 are based on the 8-digit Customs Cooperation Council Nomenclature (CCCN). The total number of 8-digit items was changed from 7,560 in 1983 to 7,915 in 1984, owing to a reclassification of the CCCN; and to 7,911 in 1986. In 1988, Korea adopted the 10-digit Harmonized System (HS) classification. Figures for 1989 are based on the 10-digit HS classification which includes 10,241 items. Under this classification, the number of restricted items declined from 534 in 1988 to 463 in 1989, and the liberalization ratio rose from 94.7 to 95.5.

reduced from 1,482 (19.6 percent of the total) in 1983 to 361 (4.6 percent of the total) in 1988. 1/ The reduction of quantitative restrictions was primarily concentrated on nonagricultural goods. The proportion of these goods remaining subject to restrictions declined from 17 percent to less than 2 percent, with restrictions on imports of steel and metal products, machinery, electrical appliances, and electronic items being completely eliminated (Table 2). The number of imported agricultural items subject to quantitative restrictions declined from 26 percent to 20 percent of the total during the same period. The current liberalization program for 1989-91 concentrates on removing restrictions on imports of agricultural, forestry, and fishery products. By the end of this program, some 284 import items, mostly agricultural, will still be restricted. Since the beginning of the 1989-91 program, 265 agro-fishery products have been taken off the restricted list, and by mid-1990, the share of unrestricted items in total imports had increased to 96.3 percent.

(b) Tariffs

Average tariff rates on imports were also reduced during the 1980s. The first tariff reform program in Korea, which aimed at increasing the competitiveness of industry by lowering tariff rates, was implemented effective January 1, 1979. Under the program, the average unweighted tariff rate was reduced from 41 percent in 1978 to 24 percent in 1982.

A second tariff reform program was implemented during 1984-88 as part of a comprehensive liberalization package which, in addition to lowering tariff rates, aimed at restricting and reducing the industry-specific use of tariff exemptions or rebates as a tool of industrial policy. Under this program, the average unweighted tariff rate was reduced from 24 percent in 1983 to 18 percent in 1988 and the dispersion of tariff rates was narrowed substantially (Table 3). The proportion of tariffs exceeding 20 percent declined from 38 1/2 percent to 8 percent over the same period. Under the program, the average unweighted tariff rate on agricultural goods declined from 31 1/2 percent in 1983 to 25 percent in 1988 and those on nonagricultural goods from 23 percent to 17 percent. In December 1988, the current five-year tariff reform program was put in place. Under this program, the average tariff rate on all items was lowered to 11 1/2 percent by mid-1990, with the rate on agricultural products amounting to 20 percent and on nonagricultural

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1/ Figures based on the 8-digit Customs Cooperation Council Nomenclature (CCCN). In 1988, Korea adopted the 10-digit Harmonized System (HS) classification. Under the 10-digit HS classification, the number of restricted items in 1988 declined to 534, 5.2 percent of the total of 10,241 items.

Table 2. Korea: Import Liberalization Schedule by Industry, 1983-91 1/

	Total items 2/	1983	1984	1985	1986	1987	1988	Total items 3/	1989	1990	1991
		Number of restricted items							Number of restricted items		Scheduled
Dairy products, food, and beverage	1,386	363 (73.8)	336 (75.8)	302 (78.2)	280 (79.8)	278 (79.9)	278 (79.9)	1,785	426 (76.1)	351 (80.4)	275 (84.9)
Chemical products	2,182	117 (94.6)	109 (95.0)	94 (95.7)	49 (97.8)	21 (99.0)	5 (99.8)	2,777	-- (100.0)	-- (100.0)	-- (100.0)
Steel and metal products	797	68 (91.5)	58 (92.7)	35 (95.6)	5 (99.4)	4 (99.5)	-- (100.0)	965	-- (100.0)	-- (100.0)	-- (100.0)
Machinery	1,414	421 (70.2)	311 (78.0)	240 (83.0)	149 (89.5)	91 (93.6)	-- (100.0)	1,760	-- (100.0)	-- (100.0)	-- (100.0)
Electrical and machinery applicances and electronics	494	204 (58.7)	186 962.3)	129 (73.9)	64 (87.0)	17 (96.6)	-- (100.0)	635	-- (100.0)	-- (100.0)	-- (100.0)
Textiles and leather garments	1,089	210 (80.7)	105 (90.4)	75 (93.1)	42 (96.1)	27 (97.5)	23 (97.9)	1,346	8 (93.4)	7 (99.5)	6 (99.6)
Other	553	99 (82.1)	98 (82.3)	95 (82.8)	79 (85.7)	65 (88.3)	54 (90.3)	973	31 (96.8)	18 (98.2)	4 (99.6)
Total	7,911	1,482 (81.3)	1,203 (84.8)	970 (97.7)	668 (91.6)	504 (93.6)	361 (95.4)	10,241	465 (95.5)	376 (96.3)	285 (97.2)

Sources: Data provided by the Korean authorities; and staff estimates.

1/ Figures in parentheses indicate share of unrestricted items in total at the end of the year.

2/ Items in the 8-digit classification of the Customs Cooperation Council Nomenclature (CCCN). The total number of CCCN 8-digit items was changed from 7,560 in 1983 to 7,915 in 1984 owing to the reclassification of CCCN, and to 7,911 in 1986.

3/ Based on the 10-digit HS classification.

Table 3. Korea: Tariff Rates and Dispersion, 1980-93

(In percent)

	1982	1983	1984	1988	1989	1990	1991	1992	1993		
Averaged weighted tariff rates											
Agricultural	31.4	31.4	24.6	25.2	20.6	19.9	18.5	17.8	16.6		
Nonagricultural	22.6	22.6	20.6	16.9	11.2	9.7	8.4	7.2	6.2		
Raw materials	15.5	15.5	11.9	9.8	8.9	3.9	3.3	3.2	2.8		
Intermediate	25.4	25.4	21.5	17.1	11.7	10.7	2.3	7.8	7.0		
Finished	33.1	33.1	26.4	10.1	13.3	11.2	9.4	7.9	9.1		
All products	23.7	23.7	21.9	18.1	12.7	11.4	10.1	8.9	7.9		
	1982	1983	1984	1988	1989				1993		
Dispersion of tariff rates											
Ten percent or less	21.1	21.1	24.2	25.8	40.0				92.6		
Less than 20 percent	32.3	32.3	29.3	29.7	86.7				92.6		
Equal to 20 percent	29.6	29.6	41.9	461.8	7.2				1.5		
Greater than 20 percent	38.1	37.6	28.4	8.1	5.3				5.1		
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Memorandum items:											
Import duties											
As share of total imports, f.o.b.	8.2	7.2	7.9	9.4	8.3	7.6	8.9	10.0	8.8	7.1	
As share of total central government tax revenue	17.2	16.1	15.4	17.6	17.3	16.1	16.9	19.2	15.5	12.4	
Number of items on which:											
Tariff quotas are in effect	135	126	61	62	7	21	51	114	649	233	293
Tariff concessions are granted	...	...	...	...	...	...	...	406	1,423	1,478	666
Adjustment tariffs are applied	--	--	--	--	14	17	7	5	--	--	--

Sources: Data provided by the Korean authorities; and staff estimates.

products to 10 percent. The percentage of items with tariffs exceeding 20 percent was 5 percent. 1/

Revenue collections from tariffs were lower than implied by the statutory rates, largely because of the duty drawback system, by which there are no tariffs on imported raw materials used in the production of exports. Although tariff rates were reduced, the effective tariff rate did not decline during the 1980s reflecting the lowering of the refund ratios for import duties and, probably, a shift in the composition of imports toward those with high tariffs following the removal of quantitative restrictions. The importance of import taxes as a source of fiscal revenue declined only marginally, on account of the high rate of growth of imports during most of the 1980s.

In addition to five yearly tariff reform programs, which are approved by the National Assembly, Korea has implemented tariff cuts through tariff quotas and tariff concessions. Tariff quotas are used to stabilize commodity prices (usually of raw materials and semi-processed goods) through temporary reductions of tariffs on specific quantities of imports. Tariff concessions are extended for an indefinite period and have primarily been introduced in response to specific bilateral trade tensions. Tariff reductions under both schemes are not binding as defined by the GATT. At present, tariff quotas are in effect on 293 items (3 percent of the total) and tariff concessions are granted for 666 items (13 percent of the total).

(c) Safeguard procedures

Korea relied on two kinds of safeguard procedures while liberalizing imports. First, newly liberalized selected items were put on an import surveillance list to limit any surge in their imports. The issuance of import licenses for items on this list required approval from the Association of Foreign Trading Agents in Korea. Second, temporary adjustment tariffs of up to 100 percent beyond the basic tariff could be applied on newly liberalized items. These tariffs were renewable every six months for up to three years. Substantial use of these procedures was made in the mid-1980s. For example, in 1984 adjustment tariffs were in effect on 14 newly liberalized items and 142 items were on the surveillance list. With the adoption of the Foreign Trade Act in July 1987, new safeguard procedures were established, all adjustment tariffs were eliminated, and the number of items on the surveillance list was reduced substantially to only 34 items in 1988. Subsequently, on January 1, 1989, the surveillance list was abolished.

1/ The lowest tariff rates are on raw materials that are not produced domestically (1-2 percent) and the highest on fruits and liquor (50 percent).

The safeguard provisions of the 1987 Foreign Trade Act are more comprehensive but less restrictive than that of an import surveillance list and adjustment tariffs. A five-member Trade Commission is empowered to investigate cases of possible injury to domestic industries caused by an import surge or subsidized imports. 1/ If substantial damage is ascertained, the Trade Commission recommends appropriate remedial measures to the Ministry of Trade and Industry which then decides if and when to put corrective measures into effect. 2/

(d) Regulatory laws

Some imports are also subject to other individual acts or "special laws" whose purpose is not to restrict imports per se, but to address domestic policy concerns such as quality, health, and safety standards. However, the procedures involved in administering these laws have often resulted in considerable restrictions on imports. The Government began to streamline these laws in 1987 in order to minimize their import-restricting effects, and by the end of 1988, 10 of the 40 laws had been modified. A special interministerial Task Force was established in December 1988 to identify and remedy potential trade barriers resulting from the application of these laws, and to review the remaining 30 laws covering 1,500 items.

The Task Force recommended four changes: a reduction in the number of products subject to import-specific restrictions under these laws; the elimination of traders' licensing requirements; the simplification of inspection and approval procedures; and the elimination of import-related fees. Since January 1989, 25 laws have been revised in line with the recommendations of the Task Force and the import-restrictive elements in them removed. 3/

(2) Export promotion and import substitution

As part of its external adjustment strategy in the second half of the 1980s, Korea substantially reduced the scope of export promotion measures which comprised largely of export financing facilities and tax preferences. Under the export financing facilities, exporters are entitled to an allocation of bank credit for the financing of exports up

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1/ The Commission initiates an investigation based on a petition filed by concerned parties, including industrial associates, labor unions, individual firms, or a relevant Government minister.

2/ Since its establishment, 13 petitions for investigation were made to the Trade Commission. Of these, 7 were withdrawn; 2 are still under investigation; the finding was affirmative in 4 cases; and relief measures were granted for 3 other cases. Relief measures included emergency tariffs and quantitative restrictions.

3/ Changes in these laws were implemented through amendment of the Consolidated Public Notice published by the Minister of Trade and Industry (March 8, 1989, July 1, 1989, and January 1, 1990).

to a certain proportion of exports. Following the emergence of external current account surpluses, export financing for large firms was abolished in 1988 and the limit on export loans for small and medium-sized firms was reduced to about 60 cents per U.S. dollar of exports (from 80 cents per U.S. dollar at the beginning of 1987). In addition, the refund ratio for import duty drawbacks for exporters was lowered from 100 percent to 70 percent in 1987. There are also provisions for export-related tax-free reserves; the major ones are for overseas market development, price fluctuations, and export goods inventory.

The policy of reducing the preferential availability of bank loans to the export sector was reversed toward the end of 1989. The loanable amount per U.S. dollar of exports was raised to about 85 cents for small and medium-sized firms and to 55 cents for large companies not affiliated to major conglomerates. Recently, however, the Government has concentrated its export promotion efforts on improving the nonprice competitiveness of Korean exports through supporting private sector initiative to increase productivity and upgrade technology.

Korea has established several programs to encourage the reduction of bilateral trade imbalances while fostering technological development and structural adjustment. Through the localization program, in effect since 1986, the Government supports the import substitution of machinery parts that contribute to domestic technological development. The Government includes a product in the localization list only on request from the private sector and if the product is normally imported from a country with which Korea has a substantial trade deficit. Enterprises that wish to develop eligible parts and components obtain financial support through commercial banks at market-related interest rates. 1/ The Special Foreign Currency Loan Program aims at containing bilateral trade surpluses through assisting restructuring in troubled export industries, such as textiles, footwear, and toys, by means of foreign currency loans 2/ to finance imports of capital goods from countries with which Korea has a trade surplus. The amount available under the program was $2 billion in 1987 and 1988, $5 billion in 1989, and $7 billion in 1990. 3/ Under the diversification program, importers are encouraged to shift imports of designated items from countries with which Korea has a trade deficit to countries with which Korea has a trade surplus. The number of designated items was reduced from 632 at end-1987 to 258 in mid-1990.

1/ Two of Korea's industry-specific laws (Pharmaceutical and Technology Development and Promotion Law) include provisions for localization. Revisions of the two laws abolishing these provisions have recently been presented to the National Assembly for consideration.

2/ At internationally competitive interest rates.

3/ The maximum lending limit per company is $200 million.

(3) Services

Korea also progressively liberalized restrictions on trade in services during the second half of the 1980s. 1/ As a result, the remaining restrictions on foreign access to domestic services markets are those on local establishment of foreign firms and regulations governing their operations in Korea.

In the financial services area, foreign banks may be set up as branches or representative offices, but not as subsidiaries. Since 1984, the Government has been moving toward a national treatment approach to the regulation and supervision of foreign bank branches, but they are still treated differently in certain respects. 2/ Foreign securities firms have been allowed to establish only representative offices, but with effect from 1983 were allowed to acquire up to 10 percent of the equity ownership of the large domestic securities companies. Since January 1989, this ceiling has been raised to 40 percent. The life insurance market has been opened to foreign branch offices since 1987, and to joint ventures since January 1988.

Liberalization measures were also undertaken in several other service sectors. The advertising market has been partially open since 1987, and foreigners are now allowed to enter joint ventures with an equity share of up to 99 percent. Foreigners have been permitted to obtain licenses to establish trading companies since 1988, and the scope of their participation in wholesaling and retailing has been expanded. As of July 1990, restrictions in foreign investment in wholesaling remain in only 7 sectors 3/ and in retailing in only 15 sectors 4/ out of a total of 114 sectors. After the revision of the Maritime Transportation Business Act in 1988, foreign maritime transportation companies have been allowed to establish branch offices and agents in Korea. The Korean market for telecommunications services was partially opened with effect from July 1, 1990, when foreign companies were permitted to invest in data base and data processing areas.

1/ Korea formally accepted the obligations of Article VIII of the Fund's Articles of Agreement as from November 1, 1988 and removed the main foreign exchange restrictions on current account transactions, including those on border transactions in services.

2/ There are limitations on the establishment of branches, real estate ownership, and lending based on a local branch's equity capital.

3/ Grain, meats, fruits and vegetables, alcoholic beverages, fertilizers, pesticides, and books and newspapers.

4/ Tobacco, antiques and arts, grains, meats, fruits, vegetables not elsewhere classified, foods and beverages, drugs, cosmetics, books, oil stations, gas stations, coal briquettes, fuel oil, and bottled gas.

b. International trade relations

(1) Multilateral trade issues

Korea has received the treatment accorded to developing countries in the international trading system since its accession to the GATT in 1967. Under GATT's most-favored nation (MFN) provisions, Korea enjoyed enhanced access to the markets of the developed countries as a result of various rounds of multilateral trade negotiations. In addition, it was provided preferential access to the markets of developed countries under the Generalized System of Preferences (GSP).

Korea had maintained trade restrictions for balance of payments reasons under GATT Article XVIII:B. But with the improvement of its balance of payments situation and reserve position in the latter half of 1980s, Korea disinvoked Article XVIII:B effective January 1, 1990 and undertook to eliminate all remaining restrictions, or otherwise bring them into conformity with GATT provisions, by July 1, 1997.

In 1988, disputes were initiated through the GATT concerning Korean restrictions on imports of beef from Australia, New Zealand, and the United States. In late 1989 and early 1990, agreements were reached on an increase in beef import quotas for 1990-92 (to apply on a MFN basis), on the establishment of a joint study team to examine the structural weakness of the Korean livestock industry, and on a time schedule for phasing out remaining restrictions.

(2) Bilateral trade issues

With the widening of Korea's current account surplus in the second half of the 1980s, trade tensions between Korea and its trading partners intensified. Trading partners pressed for equal access to domestic markets and an acceleration in the implementation of Korea's announced liberalization program. Effective from January 1, 1988, the EC suspended Korea's preferential access to its member country markets, and effective from January 1, 1989, the United States withdrew GSP privileges for Korean exports.

Korea and the United States began discussions on Korea's external policies in mid-1986, and consultations on trade issues are now held on a regular basis between the two countries. Three rounds of bilateral negotiations were completed under the 1988 U.S. Omnibus Trade and Competitiveness Act. These negotiations resulted in the following measures in the trade areas: (1) Tariff rates on 39 items of interest to the United States were lowered effective July 1, 1989; (2) the scheduled liberalization of imports of agricultural products in 1990 and 1991 was advanced from July 1 of 1990 and 1991 to January 1 in each of these years; and (3) Korea agreed to revise its Special Law to be consistent with GATT safeguard provisions. Also in the context of the Omnibus Trade and Competitiveness Act, Korea was designated a "priority foreign country" with regard to telecommunications trade practices in

February 1989, and was put on a "priority watch list" for possible violations of intellectual property rights in May 1989. Since the beginning of 1988, agreements were also reached with the United States on the following trade issues: the further liberalization of the import and screening of motion pictures; an increase in the quota for beef imports; the liberalization of the import and distribution of wine and cigarettes; and the liberalization of foreign participation in certain service sectors, including insurance and telecommunications.

Trade frictions with other industrial countries were largely related to Korean exports to these markets rather than exports to Korea. Numerous restrictions were imposed by trading partners on Korean exports in addition to those on textiles and clothing, which were regulated by a series of international Multi-Fiber Agreements (MFA). The restrictions on Korean exports have included voluntary export restraints (VERs), anti-dumping and countervailing duties, unilateral and tariff quotas, and administrative and technical barriers (Table 4). These restrictions covered a broad range of manufactured goods, and as of mid-1990, were imposed by 20 countries. 1/

VERs have restricted Korea's exports since the mid-1970s, but the coverage of exports affected and the trading partners involved expanded in the 1980s. 2/ There was also an increase in protectionism against Korean exports in the 1980s on the grounds of unfair trade practices. Most of these unfair trade cases led to the imposition of anti-dumping duties. The number of countervailing duties imposed declined reflecting the reduction of subsidies for Korean exports. 3/ More recently, restrictions for patent infringement have increased.

1/ Australia, Austria, Canada, EC member countries (12), Finland, Japan, Norway, Sweden, and the United States.

2/ Various iron and steel products to the United States have been restricted under VER agreements since 1984. Other trading partners with whom VERs are in effect include: (1) Japan for exports of tuna since 1976, and of knitwear since 1989; (2) the United Kingdom for exports of cutlery since 1977; (3) The Federal Republic of Germany for exports of cutlery since 1978; and (4) France, Ireland, and Italy for exports of footwear since 1988. Agreements affecting steel and tuna and footwear are between governments and the remaining ones are between the industries concerned.

3/ Currently, six anti-dumping cases initiated by the EC countries are under investigation in the areas of textiles, chemicals, electronics and gaslighters. Also dumping investigations initiated by Australia for exports of of surbitol and maleable cast iron fittings are going on. Anti-dumping duties are levied on Korean exports of electronic goods by the United States and EC countries, of steel products by Canada and Australia and of various other products by the United States, EC countries, Canada, and Australia.

Table 4. Korea: Frequency of Nontariff Barriers on Korea's Exports to Developed Country Markets by Type, 1986-90 1/

(Number of reported cases)

	1986	1987	1988	1989	1990 1/
Quantitative restrictions	51	49	52	50	49
Multi-fiber agreements (MFA)	10	10	11	11	11
Residual import restrictions 2/	11	13	13	13	13
Safeguards (SG) 3/	30	20	28	26	25
Price restrictions	40	35	30	31	31
Anti-dumping duty (AD)	37	32	29	30	30
Countervailing duty (CVD)	--	--	--	--	--
AD and CVD	3	3	1	1	1
Other restrictions	1	1	2	3	3
Intellectual property rights	--	--	1	2	2
Administrative restrictions	1	1	1	1	1
Total	92	85	84	84	83

Source: Data provided by the Korean authorities.

1/ As of end-June 1990.
2/ Includes tariff quotas.
3/ Includes unilateral quotas, bilateral quotas outside the MFA, and voluntary export restraints.

c. The impact of trade policies of the 1980s

Through consecutive liberalization programs, both tariff and nontariff barriers have been reduced substantially and domestic access to imports has expanded. The reduction of nontariff barriers has increased the transparency of the trade system, and together with the decline in tariffs, has tilted the incentive structure away from production for import substitution. The effects of liberalization measures on different industries varied depending on the competitiveness of the individual industries. However, in general, market opening measures increased competition, improved the allocation of resources, stimulated technological development, and led to increased productivity. In doing so, the liberalization of the trade regime enhanced the responsiveness of domestic markets to changes in international prices and, thereby, facilitated the process of external adjustment. The impact of the market-opening measures on the current account balance would, however, depend on how they affected the underlying behavior of savings and investment.

The impact of trade liberalization on the volume of trade flows is difficult to assess quantitatively. Nevertheless, there is some indication that during the second half of the 1980s, the intensification of market-opening efforts did contribute to the rapid expansion of imports (Chart 1). Forecasts of import growth using an import demand equation based on (relative price and domestic activity variables) underpredict the level of imports by 7-8 percent on average during 1987-89 (see Annex I). 1/ This forecast error may reflect the impact of market opening measures. An analysis of imports at a disaggregated level shows that both the ratios of manufactured goods imports to manufacturing GDP and of capital goods imports to gross fixed investment, in nominal terms, have increased during the 1980s (Chart 2). Reflecting the relatively gradual liberalization of agricultural imports, the ratio of agricultural imports to consumption of agricultural goods by households, however, remained flat during this period.

VERs may have slowed the growth of Korean exports, as well as increasing incentives for overseas investment in order to maintain access to foreign markets. During 1988-89, the number of overseas investment projects were about 3 times that undertaken in 1980-81, and the amounts invested about 12 times greater. Part of this increase was motivated by the desire to ensure adequate supplies of raw materials and, more recently, to benefit from lower labor costs abroad. But during 1980-89, almost half of overseas investments were directed toward North America and Europe, and some part of this may reflect protectionist measures initiated in these markets.

1/ The long-run elasticity of imports to real GDP is estimated to be about 1, and the long-run elasticity with respect to relative prices, 0.8.

3. Issues and policies during the 1990s

a. Market opening measures

Korea's trade policy environment now is substantially different from what it was at the beginning of the 1980s. With respect to exports, Korea's preferential access to developed countries' markets has declined. As regard imports, Korea has agreed to phase out all remaining restrictions on imports (by mid-1997) that are covered by the balance of payments provisions under GATT Article XVIII:B. Moreover, the markets--agricultural and services--now being opened are ones in which the liberalization process is likely to involve substantially greater adjustment difficulties than in the markets that were liberalized in the 1980s. From a macroeconomic perspective, however, Korea is now in a considerably stronger position than before to absorb the adjustment costs and any possible balance of payments difficulties resulting from the liberalization process. Korea's external position and outlook are strong, while foreign reserves are high, and external debt and debt service are low.

Under the present 1989-93 five-year tariff reform program, the average tariff rate will be reduced to 8 percent in 1993, comparable to that in industrial countries. In terms of commodity composition, tariff rates will be reduced to 17 percent on agricultural products, 3 percent on raw materials, and 7 percent on intermediate and finished goods. Under the present 1989-91 three-year import liberalization program, the number of restricted items will be reduced to less than 3 percent of total by 1991. In terms of commodity composition, the remaining restricted import items will comprise mainly agricultural and fishery products. 1/

Upon disinvoking Article XVIII:B of the GATT, Korea agreed to phase out the remaining restrictions on imports by July 1, 1997 under two consecutive three-year programs following the expiration of the current liberalization program in 1991. 2/ Most of the remaining restrictions apply to imports of agricultural and fisheries products, and their liberalization will require substantial efforts to mitigate the sizable adjustment difficulties in the agricultural sector that this process will entail. Adjustment in the agricultural sector is already taking

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1/ Items that would remain restricted include: staples such as rice, barley, some fruits and juices and certain meats, poultry, and dairy products.

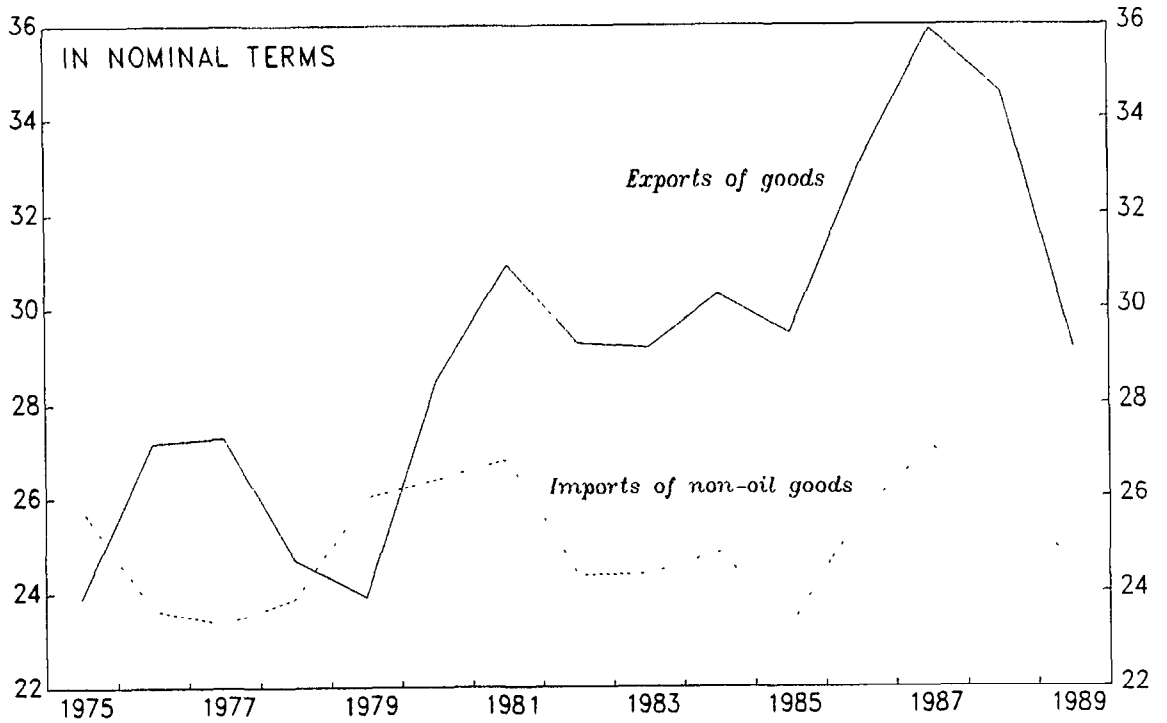
2/ Korea will notify GATT of its three-year programs by March of the calendar year before their introduction and inform the GATT Council annually of its progress in liberalizing trade measures. Other contracting parties, in turn, agreed to exercise due restraint in respect to legal actions with regard to any of the items being liberalized.

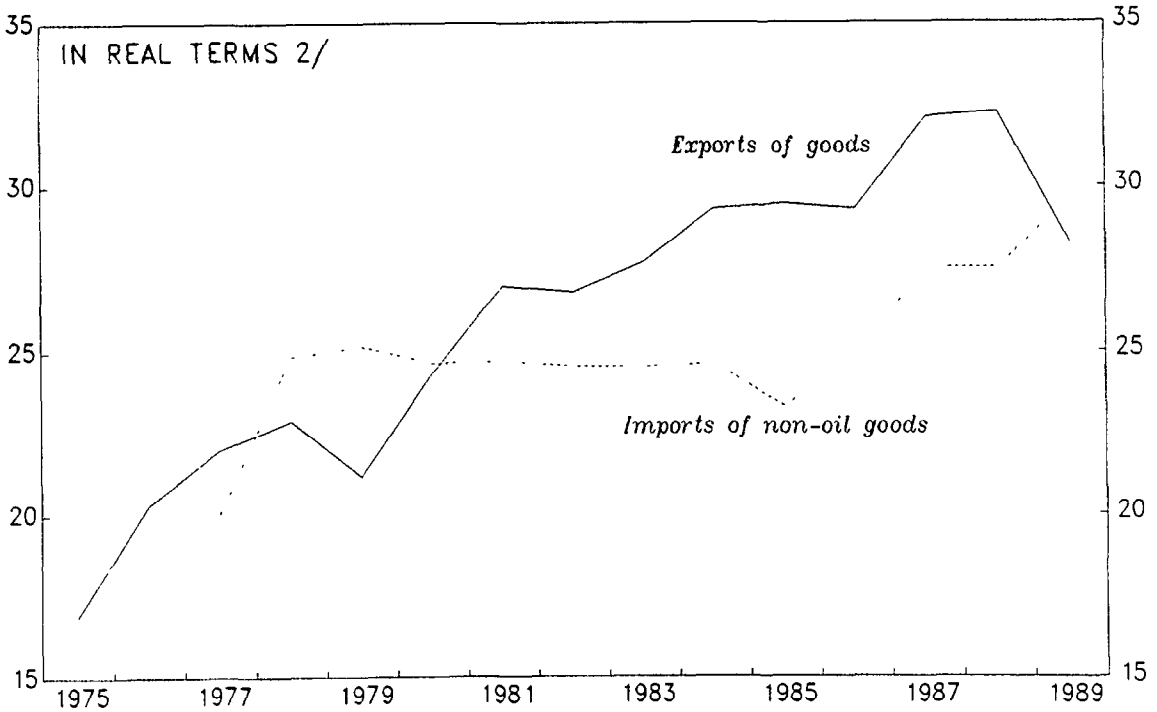
CHART 1

KOREA

TRADE DEVELOPMENTS, 1975-89 1/

(In percent of GNP)





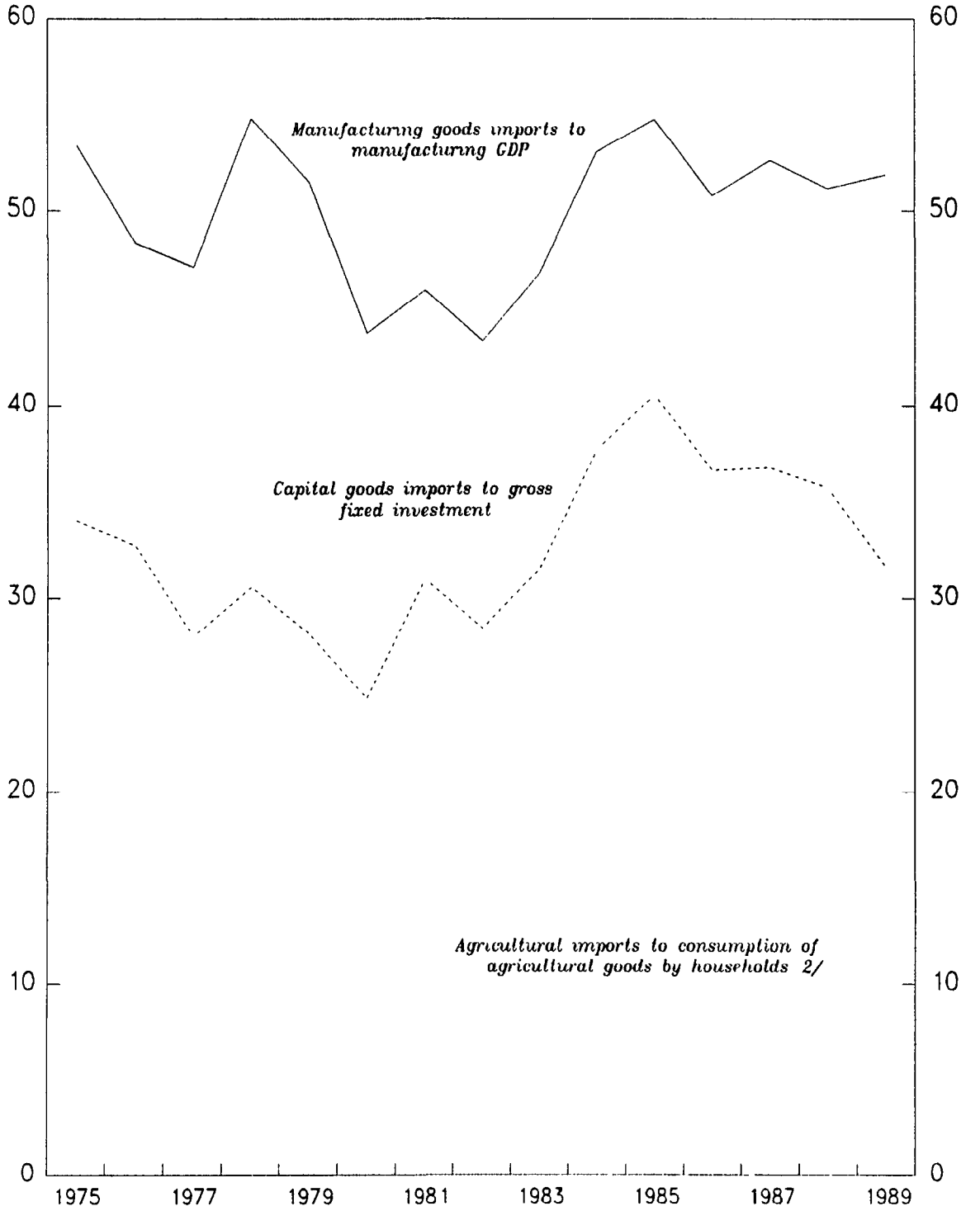
Sources: The Bank of Korea, Monthly Statistical Bulletin, and IMF, International Financial Statistics.
1/ Exports and imports are on f.o.b. basis
2/ In constant 1985 prices.

CHART 2

KOREA

IMPORT PENETRATION RATIOS, 1975-89 1/

(In percent)



Sources. The Bank of Korea, Monthly Statistical Bulletin and National Accounts, various issues

1/ In nominal terms

2/ Agricultural imports include food, live animals, beverages and tobacco and consumption of agricultural goods by households include foodstuffs, beverages and tobacco

place partly under the pressure of demographic factors 1/ and partly with the support of government policies. In April 1989, the authorities announced the Comprehensive Rural Development Plan which aims to improve agricultural efficiency by increasing farm size and mechanization, restructure production, and encourage the diversification of rural income sources. Under this plan, the Government enacted the Special Measures Act and the Farmland Management Fund Act to strengthen the development of rural industrial sites and the process of farm consolidation.

Foreign access to services markets remains more restricted than to goods markets in Korea. A major impediment to entry into the services market is government regulation, some of which apply equally to domestic and foreign firms. Improved access to the Korean services market is being taken up by trading partners in the context of bilateral discussions, but the authorities are also waiting for the outcome of related negotiations in the Uruguay Round of Trade Negotiations.

b. International trade relations

Korea has been an active supporter of the Uruguay Round of Trade Negotiations since its early stages. This stance reflects various concerns on the part of the Korean authorities. First, they are concerned that the multilateral trading system would continue to weaken with the proliferation of "gray area" measures. Second, they hope that multilateral discussions and the strengthening of the trading system would help reduce bilateral trade pressures. Finally, the Uruguay Round may provide opportunities for Korea to receive some concessions from the developed countries. At the same time, Korea has, through commitments to further liberalize imports, been able to accede to requests for concession on its part. Issues of particular interest to Korea in the Uruguay Round include textiles and agriculture in the area of market access, anti-dumping in the area of rule making, and services and intellectual property rights in the area of new issues.

As discussed earlier, trade tensions between Korea and its trading partners have been related to Korean exports as well as to domestic market opening issues. Korean exports other than textile and clothing, which are under the MFA, have been subjected to restrictions such as voluntary export restraints and anti-dumping and countervailing duties. There is a close link between the issues under consideration in the Uruguay Round of Trade Negotiations and these bilateral trade issues, and the outcome of the Uruguay Round will clearly influence future developments in this area.

1/ With the migration of younger workers to urban areas, the farm population has declined, resulting in a steady rise in the share of population aged 50 and over in rural areas, from 20 percent in 1980 to 33 percent in 1988.

KRC: creOkrII 9/19/90

II. Financial Liberalization in the 1980s

1. Introduction

In the early 1980s, in the context of a prolonged adjustment effort aimed at restoring economic and financial stability, the Korean authorities embarked upon a program of financial liberalization that has been sustained to the present day. The reforms implemented under this program were designed to enhance efficiency through a greater reliance on market forces as well as improving the effectiveness of monetary policy, marking an important shift from the policy of government intervention in the financial sector in the preceding decade. The key reforms were aimed at enhancing competition in the financial system, introducing new financial instruments, relaxing controls on interest rates, and reducing the Government's role in credit allocation. Hand-in-hand with these reforms, efforts were made to develop and improve indirect instruments of monetary policy and to reduce the emphasis on direct credit controls. The financial liberalization process was gradual, and the authorities were successful in avoiding any major episodes of financial turbulence. This owed in part to the restrained stance of financial policies as well as the presence of extensive external capital controls.

The reforms led to the reintermediation of financial transactions; reduced the compartmentalization of the roles of financial institutions; promoted the development of money and bond markets; widened the array of assets with market-determined interest rates; changed the nature of corporate financing; and enhanced the effectiveness and flexibility of monetary policy. Nevertheless, several factors still continue to distort the flow of funds and hinder the efficient allocation of resources. Informal direct controls on bank credit exist; interest rates do not fully reflect market forces; some compartmentalization within the domestic financial system remains; and the role of international market forces in the Korean financial system is limited.

Since the late 1980s, the liberalization process has been extended to external capital flows in order to integrate more the domestic and international financial markets. Looking ahead, the liberalization of capital flows is planned to progress in line with, as well as complement, further efforts to increase the role of market forces in the domestic financial and foreign exchange markets.

This paper traces the evolution of Korea's financial system during the 1980s. Section 2 briefly outlines the Korean financial system during the 1970s and discusses the reform measures that were implemented in the 1980s. Section 3 analyzes the impact of these reforms on the conduct of monetary policy, financial institutions, money and bond markets, corporate financing, and capital flows. Section 4 concludes

with a summary and a discussion of further liberalization of financial markets in the context of a liberalization of capital flows and the exchange rate system.

The present structure of the Korean financial system is outlined in Annex II. Characteristics of money markets and instruments are described in Annex III and those of bond markets and instruments in Annex IV. A chronology of financial sector reforms since 1980 is provided in Annex V.

2. Financial reforms

a. Financial system in the 1970s

In the 1970s, the financial system consisted of a heavily regulated formal sector, composed of government-owned deposit money banks and nonbank financial institutions (NBFIs), and an informal unorganized money market (UMM). The formal financial sector itself was highly segmented with the entry of new institutions and the type of financial services provided subject to extensive regulation. Under government guidance, the formal sector supplied credit at low, controlled, interest rates to the larger industrial firms. The limits on interest rates, however, restricted the fund-raising capacity of this sector. Interest rates and asset management of NBFIs were less tightly regulated than those of banks. By contrast the UMM, which offered substantially higher rates and met the needs of smaller firms and households, grew rapidly.

Credit policy was primarily used to achieve industrial policy goals, with preferential credit at relatively low rates of interest provided to designated industrial sectors. These policies encouraged many firms to undertake projects with low rates of return and to accumulate high debt-to-equity ratios. Reflecting this, corporate financing was characterized by a high dependence on domestic bank loans and foreign debt.

The emphasis on industrial policy goals in credit policy constrained the use of monetary policy to achieve price stability. Moreover, it resulted in a misallocation of resources; weakened the financial viability of the banking system; and led to excessive credit expansion and high rates of inflation. In response to these developments, and the needs of an increasingly sophisticated economy, the Government began to implement reforms designed to improve the allocation of resources and increase the flexibility of monetary policy through expanding the role of market forces in the financial system. Thus, reforms were undertaken that reduced compartmentalization and increased competition in the financial system; improved indirect instruments of monetary policy; and enhanced the development of money and capital markets.

b. Reforms in the financial system

(1) Increased competition in the financial system

In order to enhance competition in the financial system, the Government divested itself of all nationwide commercial banks at the beginning of the 1980s and granted banks greater managerial autonomy; the extent of directed credit was also reduced. Subsequently, the Government lowered the entry barriers to the formal financial sector and expanded the scope of business activities of financial institutions.

Banks were authorized to undertake new activities to improve their profitability and their competitive position vis-a-vis the NBFIs. These activities included the sale of government securities and public bonds with repurchase agreements; the issuance of certificates of deposit (CDs), the discounting of commercial bills, and the dealing in trust business and pre-export bills. Within the banking sector, mutual installment savings and housing loans, which had been the exclusive business of specialized banks, could now be extended by all commercial banks. Restrictions on the activities of foreign banks were eased and they were permitted to expand their network and to engage in trust business and were given greater access to rediscount facilities of the Bank of Korea. At the same time, the scope of activities of the NBFIs was expanded. Investment and finance companies were allowed to open cash and bond management accounts and to enter into repurchase agreements and factoring business, while large security companies were permitted to deal in commercial paper. 1/

(2) Introduction of new financial instruments

Along with the objective of enhancing competition in the financial system, the authorities also aimed to increase the role of the formal sector in financial intermediation, to encourage corporations to make greater use of direct financing through financial markets, and to enhance the effectiveness of indirect instruments of monetary policy. In order to achieve this goal, the authorities introduced new financial instruments and made existing ones more flexible during the 1980s.

Certificates of deposit were reintroduced in 1986 with interest rates above those on ordinary time deposits to promote the mobilization of short-term funds by the banking sector. In the nonbank financial sector, various asset management accounts, such as cash management accounts (CMAs) and bond management accounts (BMAs), were introduced through short-term finance companies and merchant banking corporations. Trade bills, as well as a commercial paper (CP) market, were introduced to provide firms with easier access to money markets. The

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1/ Among NBFIs, only mutual savings institutions and credit unions can issue liabilities in their own names, but they can deal only with members.

use of repurchase agreements (RPs) on bond transactions was allowed for a broad range of financial institutions to facilitate the adjustment of short-term funds among them and as an alternative interest-bearing deposit instrument. As a result, the share of marketable financial instruments, such as CDs, RPs, CPs, and CMAs, in total financial assets increased from 23 percent at the end of 1980 to 35 percent at the end of 1988.

c. Interest rate liberalization

In the early 1980s, the Government began to liberalize interest rates, but the approach was gradual because of concerns about the possible disruptive effects in financial markets. In the first half of the 1980s, the interest rate differential between general bank loans and preferential directed loans was reduced and some preferential low interest rates were eliminated. Also, banks were allowed to vary their lending rates within a narrow band according to customers' creditworthiness. Furthermore, the ceiling on the interbank call rate was lifted and the interest rate on new issues of corporate bonds was liberalized except for those guaranteed by banks.

As a result of the above reform measures, the funding costs of different industries, which had diverged substantially depending on whether or not they had access to the preferential government-controlled funds, started to converge. 1/ The reduced disparity in the cost of credit in turn contributed to the reduction in the variance of rates of returns across different sectors. 2/ During the first half of the 1980s, the share of directed policy loans in total domestic credit of banks declined from about 50 percent to 40 percent. Furthermore, the difference between the interest rates in the formal and unorganized money markets declined (Chart 3).

o The authorities further liberalized interest rates in the second half of the 1980s. Various factors were instrumental in this regard. First, the authorities started encountering difficulties in controlling the money supply after the balance of payments began registering surpluses in 1986. To improve the effectiveness and flexibility of monetary policy, emphasis was placed on indirect instruments for controlling broad money. Second, there was a reduction in the financial deficit of the corporate sector and, hence, its need for loans from financial institutions. Third, the liberalization of interest rates was an integral part of the authorities' goal to internationalize Korea's capital markets and liberalize foreign exchange transactions.

1/ A test of variance of the average cost of borrowing of 68 manufacturing industries shows that the variance was significantly reduced during the first half of 1980s (from 21 percent in 1980 to below 6 percent by mid-1980s). See Soon Poong, Park (1989).

2/ The variance in rate of return of 26 manufacturing industries declined from 24 percent in 1980 to about 7 percent by mid-1980s, ibid.

In December 1988, the authorities implemented a comprehensive interest rate reform. With the exception of interest rates on government-subsidized loans, bank lending rates (covering about 80 percent of loans), and NBFI loan rates (covering 99 percent of all loans) were liberalized. Interest rates on money market instruments, such as CDs, commercial paper, financial debentures, as well as yields on fund-type instruments such as cash management accounts, bond management accounts, corporate money trusts, household money trusts, and pension trusts were also liberalized. Interest rates on bank and nonbank deposits with long-term maturities were deregulated and, at the same time, the term structure of controlled interest rates were realigned according to maturity and type of financial institution.

Short-term deposit rates, however, remained controlled. Thus, in order to discourage a major shift of funds between the liberalized and regulated financial assets, certain restrictions were maintained. Interest rates on commercial paper of small denominations and shorter maturities were not liberalized. Restrictions on the minimum denomination of CDs were maintained and amounts of CDs and cash management accounts that could be issued were limited.

d. Internationalization of capital markets

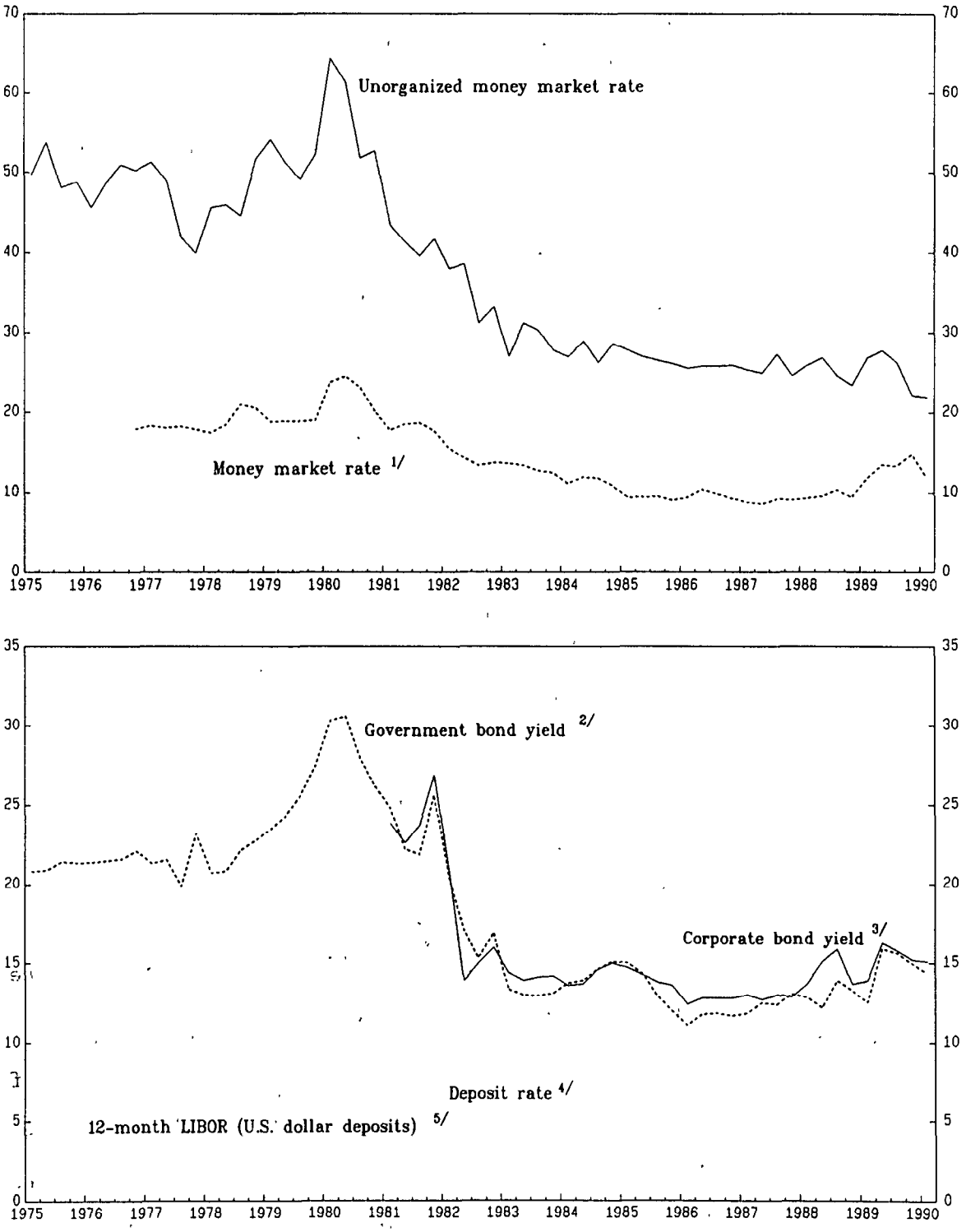
The internationalization of Korea's capital markets was initiated in 1981 on the basis of a long-range program and has since been carried out at a cautious pace. During the first half of the 1980s, limited indirect investment in the Korean stock market by foreigners was permitted through special international investment funds. 1/ Foreign security firms were allowed to make limited investments in domestic security firms and to open representative offices in Korea; they were not, however, allowed to conduct domestic business. At the same time, Korean security firms were allowed to establish representative offices abroad. In 1985, the Government allowed certain Korean companies to issue equity-linked bonds and depository receipts in international capital markets within specified limits.

The market internationalization effort began to slow in 1986 as the large liquidity inflows from the external sector gave rise to monetary control problems and raised concerns about inflationary pressures. In 1988, the authorities announced a new plan for the internationalization of the capital market during 1989-92, which aims at expanding sources of financing for domestic firms both in domestic and in international capital markets, as well as encouraging domestic financial institutions to adopt more competitive financial and management techniques. This plan is part of an overall strategy of internationalizing and deregulating the domestic economy and is being undertaken in conjunction with the liberalization of trade, foreign exchange, and other financial markets.

1/ The Korea Fund and Korea-Europe Fund were established in 1984.

CHART 3

KOREA
DEVELOPMENTS IN INTEREST RATES, 1975-90
(Percent per annum)



Sources: IMF, International Financial Statistics; and data provided by Korean authorities.
1/ Average weighted daily rate on call money.
2/ Average of yields, by maturity on Type 1 Housing Bonds.
3/ Composite corporate bond yield.
4/ Maximum rate on time

The liberalization of capital transactions is being carried out cautiously to prevent large and volatile capital flows from creating a high degree of instability in the foreign exchange and capital markets. In accordance with the 1989-92 internationalization plan, the authorities have permitted direct transactions among foreigners of Korean stocks acquired through equity-related bonds and the creation of three matching equity funds to promote equity in- and outflows. 1/ Also, restrictions on some inward and outward direct investment have been eased. Furthermore, the limit on foreign shareholding in domestic securities companies has been relaxed and a greater number of foreign securities companies have been allowed to open representative offices in Korea. Looking ahead, the internationalization plan envisages limited direct investment by general foreign investors in Korean securities markets in 1992.

3. The impact of financial reforms

a. Conduct of monetary policy

In the 1980s, the Government placed greater emphasis on the goal of price stability in the conduct of monetary policy and changed the scope and relative importance of instruments used to influence credit and monetary conditions. The effectiveness and flexibility of monetary policy and greater use of indirect policy instruments were enhanced by the financial reforms that were implemented during this period. The use of indirect instruments of monetary control in turn facilitated the implementation of financial reforms.

Indirect instruments such as reserve requirements, the monetary stabilization account (MSA), rediscount conditions, and open market operations through sales of monetary stabilization bond (MSBs), were increasingly used to affect banks' reserve positions. In particular, the rediscount facility, which was previously utilized to pursue industrial policy objectives, was now primarily used to control monetary expansion. Furthermore, emphasis was placed on the use of the monetary stabilization account rather than non-interest-bearing reserve requirements. At the same time, formal direct controls on credit were periodically dropped. The Government also promoted the development of the money market so as to improve the effectiveness and flexibility of monetary policy. This was done through diversifying and liberalizing the instruments that were traded and expanding the number of participants in the market by including NBFIs.

During the first half of the 1980s, indirect monetary control instruments proved to be effective in containing the rate of monetary expansion, even while the money multiplier was increasing, owing to

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1/ Three matching funds worth $100 million each.

declines in reserve requirements 1/ and increases in interest rates associated with the financial reforms (Table 5). In 1983-85, when the Government extended credits to banks to forestall a financial crisis in the banking system because of potential bankruptcies in certain industries, this was not allowed to lead to an acceleration in the rate of monetary expansion. Despite the expansion of credit to banks, the authorities used open market operations and the MSA to decelerate reserve money expansion.

During the second half of the 1980s, the focus of monetary policy shifted toward absorbing the monetary impact of the balance of payments surplus. To this end, the scope of preferential discounting, especially for export industries, was reduced; rediscount rates on most bank loans were raised; reserve requirements were increased; and, in 1989, marginal reserve requirements were introduced on most bank deposits. Although the increase in reserve requirements led to a fall in the money multiplier, the main burden of monetary control during this period fell on open market operations, namely sales of MSBs.

The large size of external liquidity inflows, however, complicated the task of monetary management. The interest bill on the outstanding stock of MSBs was, by 1988, in itself becoming a source of reserve money expansion. At the same time, the issuance of MSBs started hampering the progress in financial reform as NBFIs were compelled to purchase them at yields below secondary market rates. The large scale of open market operations also inhibited the development of the primary bond market by crowding out corporate borrowers. In these circumstances, the authorities, toward the end of the 1980s, intermittently resorted to informal direct controls on credit, and in 1989 substantially reduced open market operations through issues of monetary stabilization bonds so as to ease monetary conditions.

b. Role of financial institutions

The formal financial sector grew rapidly during the 1980s with the ratio of total domestic liabilities to GNP rising from about 50 percent in 1980 to 106 percent in 1989. This growth was mainly attributable to the rapid expansion of the operations of the NBFIs. 2/

Within the formal sector, the institutional demarcation of banking and nonbanking remained significant in the early 1980s. Financial repression in the banking sector continued because government-directed loans to financially troubled firms absorbed a large share of total bank

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1/ The reserve requirements were gradually reduced from 20-27 percent in the late 1970s to 4 1/2 percent in 1984.

2/ Although the financial liberalization process was accompanied by marked shifts in the composition of the financial sector, the demand for broad money appears to have remained stable (see Annex VI).

Table 5. Korea: Factors Affecting Reserve Money, 1980-89 1/

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
	(End-of-period stock; in billions of U.S. dollars)									
Autonomous factors	759	909	2,047	1,549	384	1,065	3,283	7,793	16,358	16,873
Net foreign assets 2/	1,509	688	1,092	-110	-328	-1,003	1,161	6,869	15,123	16,720
Net claims on Government	606	1,468	1,685	1,928	1,524	1,457	1,183	-677	-3,533	-3,987
Net other items 3/	-1,356	-1,247	-730	-269	-812	611	939	1,601	4,768	4,140
Policy factors	2,485	1,892	1,778	2,546	3,864	3,254	1,659	-324	-6,630	-4,055
Open market operations 4/	-530	-1,660	-927	-2,497	-2,496	-1,900	-4,285	-10,489	-17,286	-19,403
Monetary Stabilization Account	-50	-274	-1,611	-377	-920	-4,185	-3,826	-3,001	-3,072	-39
Claims on banks 5/	3,065	3,826	4,317	5,420	7,280	9,339	9,770	13,166	13,728	15,387
Reserve money	3,244	2,802	3,825	4,095	4,248	4,319	5,017	7,469	9,728	12,818
Currency outside banks	1,856	2,025	2,574	2,874	3,109	3,286	3,679	4,443	5,133	6,140
Bank reserves	1,322	734	1,198	1,133	1,128	1,019	1,311	3,020	4,560	6,630
Other deposits	65	42	54	88	11	14	27	7	36	48
	(Change as a percent of reserve money at beginning of period)									
Autonomous factors	-23.3	4.6	40.6	-13.0	-28.4	16.0	51.4	89.9	146.7	5.3
Net foreign assets 2/	4.0	-25.3	14.4	-31.4	-5.3	-15.9	50.1	137.7	105.1	16.4
Net claims on Government	3.8	26.6	7.7	6.4	-9.9	-1.6	-6.3	-37.1	-38.2	-4.7
Net other items 3/	-31.1	3.4	18.4	12.0	-13.3	33.5	7.6	13.2	42.4	-6.4
Policy factors	16.8	-18.3	-4.1	20.1	32.2	-14.4	-36.9	-39.5	-84.4	26.5
Open market operations 4/	0.1	-34.9	26.2	-41.0	--	14.0	-55.2	-123.7	-91.0	-21.8
Monetary Stabilization Account	-1.4	-6.9	-47.7	32.3	-13.3	-76.9	8.3	16.4	-1.0	31.2
Claims on banks 5/	18.2	23.5	17.5	28.8	45.4	48.5	10.0	67.7	7.5	17.1
Reserve money	-6.5	-13.6	36.5	7.1	3.7	1.7	16.2	48.9	30.2	31.8
Currency outside banks	7.3	5.2	19.6	7.9	5.7	4.1	9.1	15.2	9.2	10.4
Bank reserves	-14.4	-18.1	16.6	-1.7	-0.1	-2.6	6.8	34.1	20.6	21.3
Other deposits	0.6	-0.7	0.4	0.9	-1.9	0.1	0.3	-0.3	0.4	0.1

Source: Data provided by the Bank of Korea.

1/ Positive sign indicates increase in assets or decline in liabilities, that is, an expansionary factor; negative sign indicates decrease in assets or increase in liabilities, that is, a contractionary factor.

2/ Including swaps with nondeposit money banks and Bank of Korea's foreign currency deposits with deposit money banks.

3/ Including interest payments on monetary stabilization bonds.

4/ Monetary stabilization bonds.

5/ Including claims on private sector.

credit. The authorities maintained a less regulated environment for NBFIs both with respect to their asset and liability management and interest rate policies so as to encourage a rechanneling of transactions to the formal market. These differences in regulatory treatment resulted in rapid changes in market shares.

To reduce the loss of banks' competitiveness vis-a-vis NBFIs, the authorities permitted more banks to engage in trust business; revived the market for CDs; and liberalized lending rates (except those subsidized by the Government) as well as longer-term deposit rates. These changes, however, had only a limited effect on arresting banks' declining market share in the formal market. The market share of banking institutions in terms of total deposits contracted from about 70 percent in 1980 to 42 percent in 1989 (Table 6). During the same period, the market share of banking institutions in terms of loans and discounts declined from 65 percent to less than 53 percent.

c. Developments in money markets

Short-term money markets expanded rapidly during the last decade. Outstanding balances in these markets increased from W 3 trillion at the end of 1980 to W 52 trillion at the end of 1989, a compound annual growth rate of 36 percent (Table 7). This rapid growth reflected various factors: (1) the introduction of new money market instruments; (2) the gradual liberalization of interest rates on money market instruments; (3) the easing of restrictions on participation in these markets; (4) the emergence of financial surpluses in the corporate sector which allowed enterprises to invest in money market instruments; and (5) the large issues of MSBs.

Among the above-mentioned factors, the issuance of short-term government securities (primarily MSBs) was the most important factor underlying the growth of the money market, especially in the second half of the 1980s. Outstanding balances of short-term government securities increased from W 2 trillion in 1985 to W 22 trillion in 1989, accounting for about half of the total outstanding balances in the money markets. The commercial paper market also developed very rapidly with outstanding balances increasing from W 2 trillion in 1980 to W 18 trillion in 1989, making it the second largest money market instrument. The volume of activity in the call market until recently had been comparatively small, partly because of liberal discount policies by the Bank of Korea to financial institutions requiring liquid assets. In 1989, the legal separation of the two sectors of the call market (the interbank market and the over-the-counter market for NBFIs) was abolished. However, transactions between the two sectors have been limited, reflecting, in part, the different regulatory environments of the two sets of institutions.

Table 6. Korea: Trends in the Market Share of Financial Institutions, 1970-89 1/

(In percent)

	1970	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Deposits												
Commercial banks	55.3	54.6	43.8	44.0	39.9	36.4	34.4	31.4	28.5	27.2	26.9	23.9
Specialized banks	30.5	24.3	26.4	24.8	24.7	24.4	22.8	22.3	21.6	20.4	18.8	18.3
Nonbank financial institutions	14.2	21.1	29.8	31.2	35.4	39.2	42.8	46.3	49.9	52.4	54.3	57.8
Loans and discounts	46.8	47.2	39.6	38.9	37.9	35.9	32.8	34.4	33.3	30.2	28.6	29.4
Commercial banks	29.2	25.9	25.0	24.1	25.0	25.9	24.6	24.4	24.3	24.5	24.5	23.1
Specialized banks	22.2	26.9	35.4	37.0	37.1	38.2	41.6	41.2	42.4	45.3	46.9	47.5
Nonbank financial institutions												

Source: Data provided by the Bank of Korea.

1/ End of period.

Table 7. Korea: Expansion of Money Markets, 1980-89 1/

(In billions of won)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Call market 2/	179	167	220	417	428	565	535	639	829	1,824
Commercial paper	2,083	3,475	4,463	5,926	7,606	7,283	8,924	9,432	12,331	19,208
Short-term government securities	153	98	25	156	564	504	3,459	10,655	17,493	20,629
Treasury Bills	150	68	20	--	--	--	200	1,000	1,130	1,924
Monetary stabilization bonds	3	30	5	156	564	504	3,259	8,175	15,374	17,305
Foreign exchange equalization bonds	--	--	--	--	--	--	--	1,480	989	1,400
Certificates of deposit	--	--	--	--	684	1,081	1,308	1,655	1,753	1,848
Commercial bills	744	1,350	1,844	2,065	2,293	2,672	2,916	3,411	4,476	5,843
Repurchase agreements	130	187	570	1,032	1,772	2,563	2,619	2,724	2,380	2,146
Total	3,289	5,277	7,122	9,596	13,347	14,668	19,761	28,516	39,262	51,498

Source: Data provided by the Korean authorities.

1/ Outstanding balances at end of period except for call market.
2/ Average of daily amounts from December 23 to January 7 of the following year.

Most of the money market instruments were in the form of depository instruments for savings purposes and were held by investors until maturity. Issuing or underwriting entities used the market usually as a source of funds rather than for trading or arbitrage purposes. Also, as regards short-term government securities, their relatively low issue rates compared with their yields in the secondary market made trading in them unattractive. Therefore, the size and the depth of the secondary market for money market instruments remained small and amounted to less than one tenth of the outstanding issues in the primary market at the end of 1989. 1/

d. Developments in bond markets

Bond markets also experienced rapid growth during the past decade with issues in the primary market increasing from W 1 trillion in 1980 to W 18 trillion in 1989, a compound annual growth rate of 42 percent. The outstanding amount of bonds during the same period increased almost eightfold from W 6 trillion to W 47 trillion (Table 8).

During the first half of 1980s, the share of corporate bonds in the total outstanding amounts of bonds increased from about 32 percent to over 49 percent. Various factors led corporations to meet their financing needs increasingly through the bond market. First, the unorganized money market, an important source of loans for smaller corporations, declined. Second, as part of its tight money policy, the Government curtailed bank credit expansion. Third, the introduction of bonds with guarantees from financial institutions made it possible for corporations with low credit status to issue bonds. Fourth, equity linked bonds, such as convertible bonds, provided a cheaper source of financing for corporations.

During the second half of the 1980s, although the issue of corporate bonds more than doubled, their share in total bond issues began to shrink rapidly. This owed to the rapid growth of the stock market which enhanced the attractiveness of equity issues, and the increasingly large issues of government bonds which crowded out corporate borrowers from the bond market. By the end of 1989, the share of corporate bonds in the total outstanding amount of bonds declined to less than 35 percent.

Alongside the growth of bond issues in the primary market, the size of the secondary market also expanded. The value of transactions in the Korea Stock Exchange amounted to W 5 1/2 trillion in 1989, five times the level of transactions at the beginning of 1980s. The relatively slower growth of the secondary market, as well as its small size compared with the primary market for bonds, is partly related to the

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1/ In 1989, trading volume of short-term government securities in the Korea Stock Exchange was about 20 percent of outstanding issues.

Table 8. Korea: Expansion of Bond Markets, 1980-89 1/

(In billions of won)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Government bonds	3,237.9	2,400.1	3,540.5	3,827.0	3,667.4	3,699.5	3,468.5	6,495.3	7,838.8	10,688.7
(Of which: FEEFB)	--	--	--	--	--	--	--	1,500.0	988.8	1,400.0
Public bonds										
Municipal bonds	703.5	1,785.6	2,113.4	4,844.9	6,326.3	3,879.7	6,554.8	11,060.7	17,988.0	19,457.9
Public corporation bonds	75.6	104.4	149.0	198.4	246.1	295.0	340.8	401.3	482.3	618.2
Specialized bank debentures	98.2	438.2	992.1	1,286.5	1,621.7	1,684.8	1,928.8	1,052.7	1,208.5	836.6
(Of which: MSB)	529.7	1,243.0	972.3	3,360.0	4,458.5	1,899.0	4,285.2	9,006.7	16,297.2	18,003.1
Corporate bonds	1,840.7	2,576.3	3,411.8	4,518.6	5,493.8	7,395.6	8,747.0	10,116.1	11,885.5	16,320.6
Total	5,782.1	6,762.0	9,065.7	13,190.5	15,487.5	14,974.8	18,770.3	27,672.1	37,712.3	46,467.2

Source: Data provided by the Bank of Korea.

1/ End of period.

nature of the secondary bond market. It is mostly an institutional market; individual investors generally participate in the market indirectly by buying units in investment trusts. During 1988-89, the secondary market was dominated by MSBs sold by institutional investors seeking to improve their liquidity positions at a cost of taking capital losses. 1/

e. Changes in corporate financing

The reforms that occurred in the financial sector during the 1980s have encouraged corporations to diversify their sources of finance (Table 9). First, in an attempt to reduce the debt-equity ratio of large companies, the authorities regulated the share of bank credits going to them. As this regulation did not extend to lending by NBFIs, the large corporations shifted their indirect financing from banks to NBFIs.

Second, the securitization of financial assets and the Government's efforts to encourage debt-equity corporations to lower their debt-equity ratios resulted in a shift from indirect to direct financing by the corporate sector. The introduction of commercial paper and equity linked bonds, which reduced financing costs, was also instrumental in this regard. Furthermore, the large balance of payments surpluses after 1986 and large flow of funds into the capital market facilitated financing in the securities market by issuing corporate bonds and stocks. As a result, direct financing by corporations through the securities markets doubled during the past decade and amounted to 31 percent in 1988. With the Government increasingly allowing Korean firms access to international financial markets during the 1980s, issues of equity linked securities, such as convertible bonds and bonds with warrants, in the international capital markets also increased. 2/

Finally, Korea's remarkable economic growth in the second half of the 1980s and the changes in tax regulations enabled firms to increase their internally generated funds and strengthen their financial positions. As a result, the share of internal financing (comprising dividends, depreciation, and retained earnings) in total corporate financing increased from about 18 percent in 1980 to 41 percent in 1988. Greater internal and equity funding placed the general financial structure of corporations on a sounder basis.

1/ During 1988-89, about 70 percent of the trading transactions in the Korea Stock Exchange was accounted for by MSBs.

2/ However, issues of equity linked securities in international financial markets remain relatively small, with total issues up to mid-1990 amounting to $370 million.

Table 9. Korea: Sources of Corporate Financing, 1975-88

(In percent of total)

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988
External financing	80.9	82.3	80.2	74.8	67.6	65.1	63.7	61.3	58.3	59.0
Domestic borrowing (indirect)	17.1	28.4	23.5	26.8	22.7	34.1	30.9	23.8	21.1	14.3
Banks	11.8	16.4	11.9	14.7	10.3	12.2	19.5	17.8	10.0	10.1
Nonbank financial institutions	5.3	12.0	11.6	12.1	12.5	21.9	11.4	6.0	11.0	4.2
Securities (direct)	16.1	18.1	21.5	29.9	24.2	18.9	16.7	19.2	19.2	31.0
Commercial paper	1.0	3.9	5.5	3.1	4.5	-0.4	0.2	5.4	-1.1	3.2
Bonds	1.2	5.6	7.3	10.7	7.2	7.7	9.3	5.6	4.5	6.7
Stocks	13.9	8.6	8.7	16.1	12.4	11.6	7.1	8.2	15.7	21.1
Foreign borrowing	18.4	13.1	3.4	0.8	4.9	-2.9	0.4	3.1	-0.3	3.3
Other	29.4	22.6	31.8	17.4	15.9	15.0	15.7	15.2	18.3	10.4
Internal financing	19.1	17.7	19.8	25.2	32.4	34.9	36.3	38.7	41.7	41.0

Source: Data provided by the Korean authorities.

f. Capital flows

The liberalization of controls on cross-border capital flows during the 1980s was very limited. Following the emergence of current account surpluses during the second half of the 1980s, the authorities, while maintaining a wide range of controls on capital inflows, put in place measures to promote capital outflows in order to contain the external pressures on liquidity. These measures, however, did not lead to a marked rise in outflows because underlying financial incentives were in favor of domestic as against external assets. Expectations regarding exchange rate appreciation, together with high domestic interest rates, discouraged outflows and created incentives for capital inflows.

4. Summary and conclusions

The Korean financial system underwent substantial changes during the 1980s. The highly regulated system of the 1970s, composed of highly specialized financial institutions and dominated by a banking sector in which interest rates and the quantity and distribution of credit were subject to controls, evolved into one in which market forces play a greater role.

Financial reforms during the 1980s were implemented gradually in an environment of restrained financial policies and controls on cross-border capital transactions. These reforms benefited from and contributed to favorable macroeconomic developments during this period. Furthermore, they led to the reintermediation of financial transactions, contributed to the development of money and bond markets, and altered the transmission mechanism of monetary policy. They also reduced the compartmentalization of the roles of financial institutions, provided investors with a wider array of assets with market-determined interest rates, and changed the nature of corporate financing.

Despite significant progress in the liberalization of domestic financial markets, there is scope for further action in this area. Informal direct controls on bank credit still exist; interest rates on short-term deposits are controlled; the financial system remains somewhat compartmentalized; yields on some financial market instruments are kept below market rates; and the opening of domestic financial and capital markets has been limited. These factors continue to distort the flow of funds and hinder the efficient allocation of resources. A fuller role for market forces in the domestic financial, capital, and foreign exchange markets will require further complementary actions in all three areas.

III. Labor Market Developments in the 1980s

The 1980s were marked by considerable and eventful changes in the Korean labor market, which had significant consequences for the economy in general. During the first half of the decade, employment growth was relatively weak, wage growth decelerated, and the rate of increase of unit labor costs fell substantially in the manufacturing sector. In sharp contrast, since 1986, Korea experienced a period of full employment which, together with the onset of political democratization, contributed to a sharp rise in wages and trade union militancy. This, in turn, led to a sizable deterioration in the competitive position of Korea's manufacturing sector.

Developments in the labor market played an important role in the process of external adjustment in Korea. In the first half of the 1980s, a moderation of wage growth, together with strong productivity gains, supported the substantial improvement in Korea's external competitiveness which helped correct the sharp deterioration in the external current account at the end of the 1970s. Subsequently, since 1986, when Korea embarked on an unprecedented economic boom, wage growth quickly outstripped increases in productivity. The resulting sharp increase in unit labor costs, in conjunction with the substantial appreciation of the won, played an important role in the rapid adjustment to the large external surpluses experienced during 1986-88, and the accompanying abrupt slowdown in output growth in 1989.

At the start of the 1980s, labor market conditions eased considerably in line with a severe weakening of economic activity (Table 10 and Chart 4). Although output growth subsequently strengthened, overall employment expanded sluggishly. At the same time, the rate of labor force participation declined and the unemployment rate fell steadily from a peak of over 5 percent in 1980 to about 4 percent by the mid-1980s. Even though labor market conditions were gradually tightening, the rate of nominal wage increase declined in line with the rate of inflation. 1/ Since 1981, however, wage increases in the

---

1/ The following wage equation provides a simple decomposition of the influence of labor market conditions and prices on nominal wages:

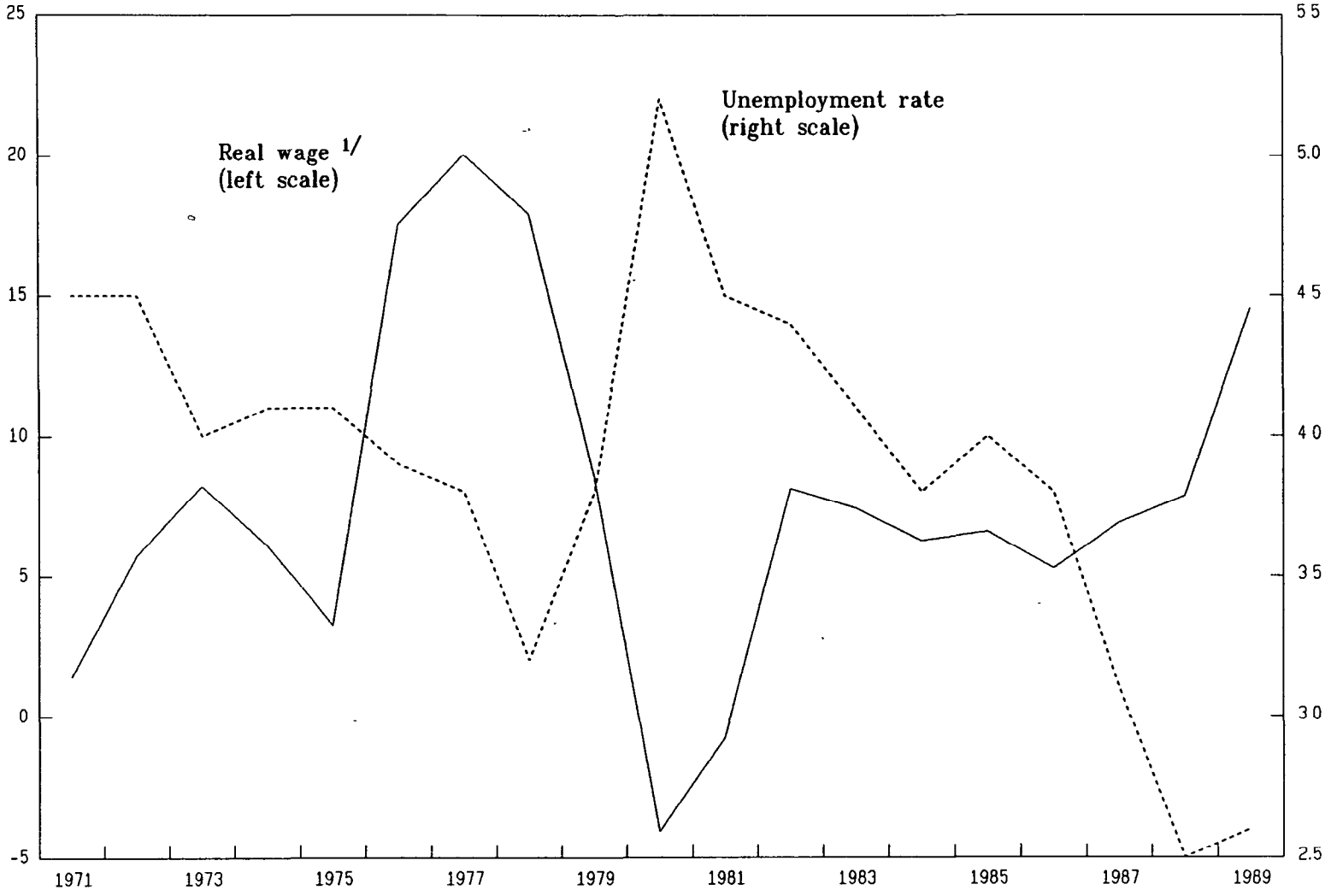
$$W = \underset{(3.1)}{7.52} - \underset{(4.1)}{13.21} * (U-AU) + \underset{(6.5)}{1.04} * P$$

$R^2 = 0.74$ D.W. = 1.54 (.) = t statistics

where W is the percentage change in average nominal earnings in nonagricultural industries, P is the percentage change in the consumer price index, U is the percentage rate of unemployment and AU denotes the average unemployment rate during the sample period. The equation was estimated with annual data for the period 1971-86.

CHART 4

KOREA
UNEMPLOYMENT AND REAL WAGE GROWTH, 1971-89
(In percent))



Sources: Economic Planning Board, Monthly Statistics of Korea; and staff estimates.
1/ Average monthly earnings in non-agricultural industries, deflated by the consumer price index.

Table 10. Korea: Selected Labor Market Indicators, 1980-89

(In percent)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Labor force growth	1.6	1.7	2.4	0.6	-0.8	4.0	3.4	4.7	2.6	3.9
Overall employment growth	0.3	2.5	2.7	0.6	-0.5	3.7	3.6	5.5	3.2	3.8
Of which:										
Agriculture	(-4.7)	(3.2)	(-3.8)	(-6.7)	(-9.3)	(-4.6)	(-1.9)	(-2.2)	(-2.7)	(-1.8)
Manufacturing	(-4.9)	(-3.4)	(6.1)	(7.2)	(2.5)	(4.7)	(9.2)	(15.4)	(5.7)	(3.7)
Social overhead capital and services 2/	(7.4)	(5.0)	(6.4)	(2.6)	(3.1)	(7.9)	(3.3)	(4.4)	(5.0)	(6.8)
Labor force participation rate	59.0	58.5	58.6	57.7	55.8	56.6	57.1	58.3	58.5	59.6
Unemployment rate	5.2	4.5	4.4	4.1	3.8	4.0	3.8	3.1	2.5	2.6
Memorandum item:										
Real GNP growth	-3.7	5.9	7.2	12.6	9.3	7.0	12.9	13.0	12.4	6.7

Source: Economic Planning Board, Monthly Statistics of Korea.

1/ Seasonally adjusted.
2/ Social overhead capital comprises electricity, gas and water, and construction.

manufacturing sector exceeded the rate of inflation, and real wages rose by 7 percent a year on average between 1981 and 1986. At the same time, annual labor productivity growth in the manufacturing sector fluctuated around 10 percent, and unit labor costs were broadly unchanged for the period 1981-86 as a whole. However, at the end of this period unit labor costs declined by 5 percent, primarily because of a cyclical improvement in productivity. With the depreciation of the won during 1985 and 1986, Korea's external competitiveness in terms of relative unit labor costs improved sharply by 25 percent (Table 11 and Chart 5).

In 1986, as the effects of this sizable improvement in external competitiveness took hold, Korea embarked upon an unprecedented three years of rapid export-led growth. The economic boom led to a sustained period of full employment, which placed strong upward pressure on wages. During 1986-88, overall employment increased by an average rate of 4 percent, more than double the pace recorded during the period 1980-85. Although the rate of labor force participation increased steadily since 1985, the rate of unemployment fell to a historically low level of 2 1/2 percent in 1988 which was sustained even during the abrupt slowdown in output growth in 1989. At the same time, the rate of nominal wage growth in manufacturing almost tripled to 25 percent between 1986 and 1989. Labor productivity growth, however, remained strong at around 10 percent, preventing an increase in unit labor costs until 1988. However, in 1989, unit labor costs rose sharply, on account of the downturn in output growth in the manufacturing sector and the very high level of wage settlements. After taking into account the appreciation of the won, Korea's external competitiveness measured in terms of unit labor costs fell by 41 percent between 1987 and 1989, reversing most of the gains registered during 1985-86.

Industrial relations in Korea underwent a profound change in 1987, following major democratic reforms announced by President Rho Tae Woo on June 29, 1987. In October 1987, Article 33.1 of the Constitution of the Republic of Korea was amended to read "to enhance working conditions, workers shall have the right to independent association, collective bargaining, and collective action." In the spirit of this constitutional reform, the National Assembly passed several important amendments to the Trade Union Law and the Labor Dispute Adjustment Law. These amendments relaxed the requirements and procedures governing the setting up of a trade union; gave trade unions greater freedom in their actions; and allowed unions to strike without Government approval. 1/ By contrast, before 1987, the establishment of a trade union required an application to the Government endorsed by at least 30 employees or 20 percent of all workers at the workplace. 2/ To be validated, the application had to be approved by the Government within ten days. 3/

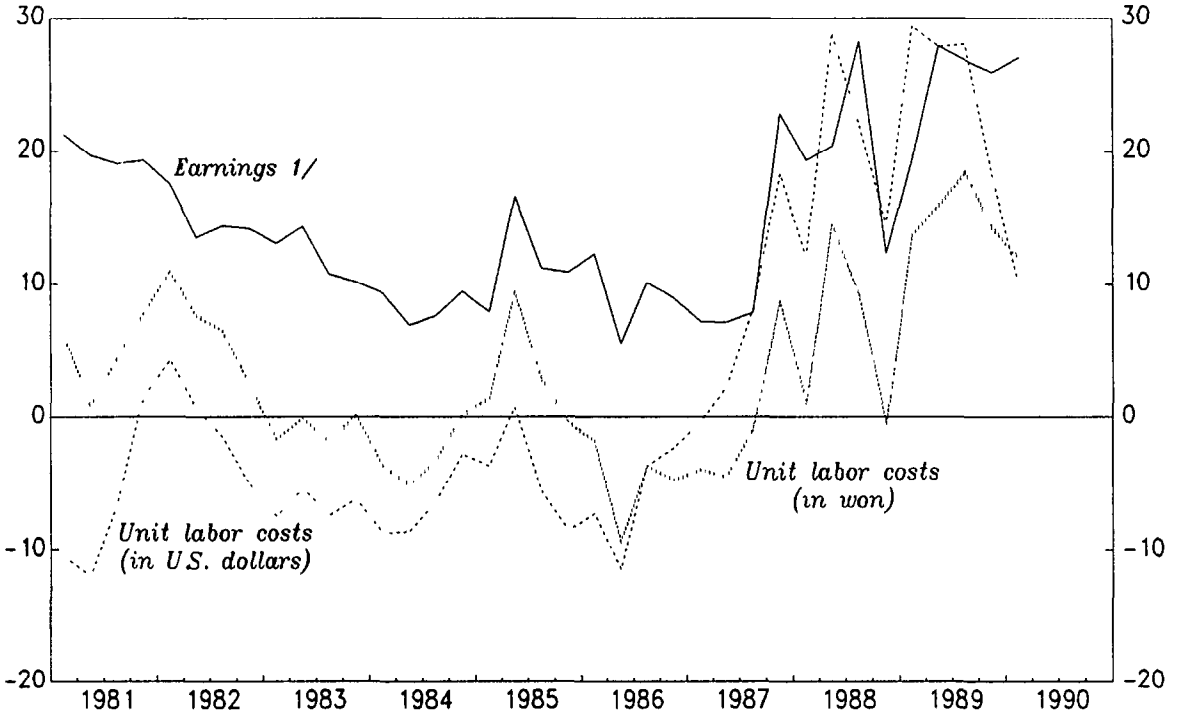
1/ Labor Dispute Adjustment Law, Article 16.2, deleted October 1987.
2/ Trade Union Law, Article 13.1.
3/ Trade Union Law, Article 15.1.

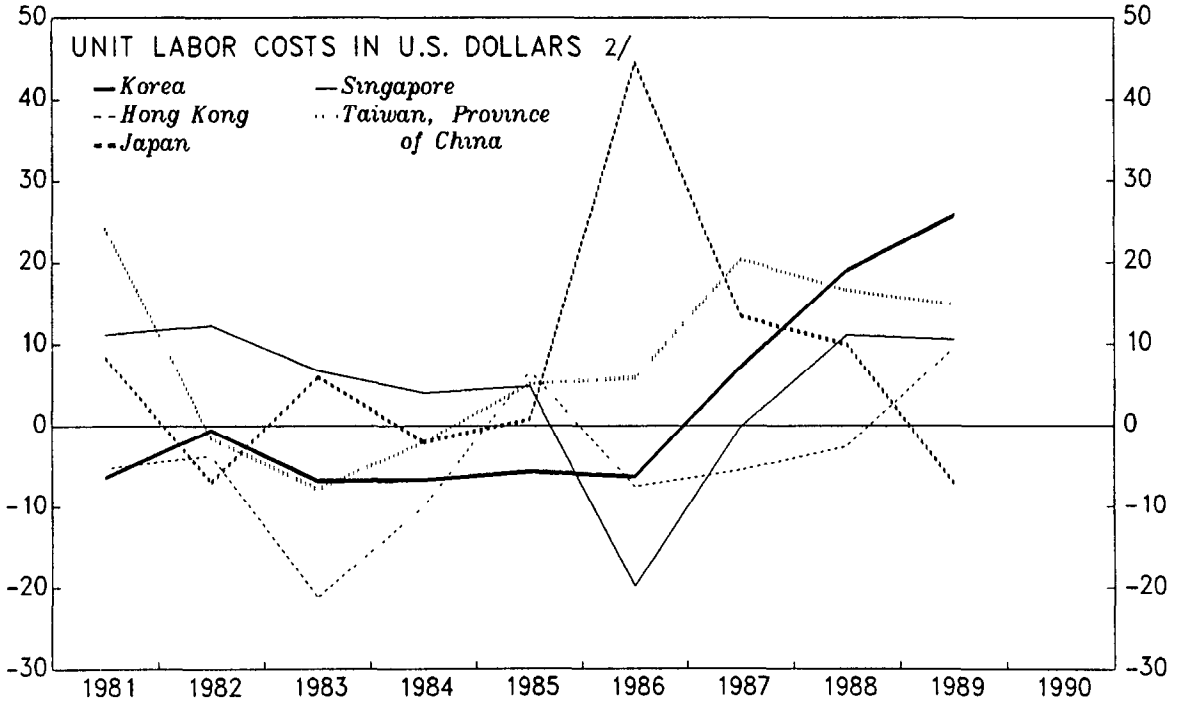
CHART 5

KOREA

EARNINGS AND UNIT LABOR COSTS IN MANUFACTURING, 1981-90

(Percentage change from a year earlier)





Sources: Data provided by the Korean authorities; official sources; andstaff estimates.
1/ Includes bonuses.
2/ On a value-added basis; adjusted for hours worked except in Korea.

Table 11. Korea: Indicators of Wages, Costs, and Competitiveness in Manufacturing, 1980-89

(Percentage change)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Monthly earnings	22.7	20.1	14.7	12.2	8.1	9.9	9.2	11.6	19.6	25.0
Consumer price index	28.7	21.3	7.3	3.4	2.3	2.5	2.8	3.0	7.1	5.7
Real wage 1/	-4.6	-1.0	6.9	8.6	5.7	7.3	6.2	8.3	11.7	18.3
Labor productivity 2/	8.6	14.5	7.5	13.4	11.6	8.0	15.0	11.6	13.0	8.2
Unit labor costs (in won)	13.0	4.9	6.7	-1.0	-3.1	1.8	-5.0	--	5.8	15.6
Unit labor costs (in U.S. dollars)	-9.9	-6.4	-0.6	-6.7	-6.7	-5.7	-6.3	7.2	19.0	25.9
Memorandum items:										
U.S. dollar per won	-20.3	-10.8	-6.8	-5.8	-3.8	-7.4	-1.3	7.2	12.5	8.9
Effective exchange rate adjusted for unit labor costs 3/	-17.4	-10.3	2.8	-4.2	-0.7	-4.3	-25.1	-3.4	13.9	23.9

Sources: Bank of Korea, Monthly Statistical Bulletin; Economic Planning Board, Monthly Statistics of Korea; and staff estimates.

1/ Deflated by the CPI.
2/ On a value-added basis, for production workers in manufacturing.
3/ Ratio of Korea's unit labor costs (seasonally adjusted manufacturing wage index divided by the seasonally adjusted labor productivity index) to average unit labor costs of ten industrial countries and Taiwan Province of China.

This procedure gave the employees considerable opportunity to block an application, for example, by dismissing prospective members of the union, or by setting up their own compliant union--once a union was in place, another could not be established at the same workplace. 1/ Since 1987, any two persons at a workplace may submit an application to establish a union, and the request must be certified within three days. Also, trade unions can no longer be dissolved or its officers be disqualified by the Government. 2/ In addition, the "cooling-off" period legally required before going on strike was halved to 10 days (20 days in the case of public utilities). 3/

Within this new environment, and against the backdrop of very tight labor market conditions, Korean workers became more organized and militant (Table 12). The number of unions increased from less than 3,000 in 1986 to almost 8,000 in 1989, while their membership nearly doubled to some 2 million. Strike activity rose markedly in support of high wage claims and changes in working conditions, resulting in considerable disruption to production. In response to this outburst of strike activity, several initiatives have been introduced to improve industrial relations. In 1989, the Government established the Korea Labor-Management Education Center to conduct seminars and training programs for workers and management. In 1990, the labor union movement launched the National Economic and Social Committee (NESC), comprising representatives from the Korea Federation and Trade Unions and the Korea Employers' Federation as well as public interest groups. The focus of the NESC is primarily on issues of working conditions and workers' welfare.

In the first half of 1990, labor-management relations calmed: 235 labor disputes lasting 13 days on average took place, compared with more than 1,000 with an average duration of 16 days in the first half of 1989. This development owed in part to the large wage settlements obtained in the past two years, the marked slowing of economic activity in 1989 and increased uncertainty about future prospects, as well as the Government's efforts to improve workers' welfare. In 1988, the Government established national pension and medical insurance schemes, and introduced a minimum wage scheme; 4/ embarked on a program to build 2 million low-rental housing units by 1992; and introduced several progressive tax reform measures. Also, in 1989 the Government raised the level of basic working conditions covered under the Labor Standards

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1/ Trade Union Law, Article 3.5.
2/ Trade Union Law, Article 32.
3/ Labor Dispute Adjustment Law, Article 14, amended October 1987.
4/ The coverage of the medical insurance schemes was extended to urban areas in July 1989, and the minimum wage scheme was extended to mining and construction industries in 1989, and to all industries in 1990.

Table 12. Korea: Indicators of Union Organization and Labor Disputes, 1980-89

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Union organization										
Number of unions	2,618	2,142	2,194	2,238	2,365	2,574	2,658	4,086	6,142	7,883
Number of union members (in thousands)	948	967	984	988	1,010	1,004	1,024	1,267	1,707	1,932
Labor force unionization 1/	6.6	6.6	6.6	6.7	6.7	6.4	6.4	7.5	9.9	10.8
Labor disputes										
Number of strikes	206	186	88	98	114	265	276	3,749	1,873	1,616
Workers involved (in thousands)	49	35	9	11	16	29	47	935	...	...
Workdays lost (in thousands)	61	31	12	9	20	64	72	6,948	...	...

Sources: Ministry of Labor; and staff estimates.

1/ Union members as a percentage of total labor force.

Law. 1/ At the same time, reflecting growing concerns about Korea's industrial productivity and external competitiveness, the Government adopted a firmer stance against union militancy.

1/ The Labor Standards Law guarantees workers' basic working conditions and, inter alia, details procedures concerning labor contracts, wages, working hours, protection of women and minors, and industrial compensation. In April 1989, the scope of this law was extended to cover workplaces with five or more permanent workers (previously ten). In case of company liquidation, priority was no longer to be given only to wage claims, but also to retirement allowance and industrial accident compensation claims. Moreover, basic working hours were shortened from 48 hours to 44 hours per week.

Korea: A Model of Trade Flows

This note presents empirical estimates of demand functions for the volume of exports and imports, as well as an export unit value equation. The estimated parameters suggest that conventional activity and relative price variables explain the behavior of trade volumes well, while standard cost and competitiveness variables together with the capital stock explain movements in export prices. 1/

1. Export volume and price

The demand for export volumes is modeled as a log-linear function of the ratio of Korean export prices relative to those of its major foreign competitors, and an index of the GDP of Korea's major trading partners:

$$\text{Log}(X) = \underset{(-5.29)}{-7.18} - \underset{(-1.84)}{0.79}\,\text{Log}\,(PX/PCPX) - \underset{(-3.62)}{1.21}\,\text{Log}\,(PX(-1)/PCPX(-1)) + \underset{(12.58)}{3.79}\,\text{Log}(PCY)$$

$R^2 = .9970$ D.W. = 1.53 Rho = .79 Standard error = 0.065

Sample period: 1966 to 1989; t-statistics in parentheses.

Where:

X = export volume, exclusive of ships and containers.
PX = export unit value, in U.S. dollars, exclusive of ships and containers.
PCPX = partner country export value, in U.S. dollars, export weighted.
PCY = partner country real GDP, export weighted.

The equation was estimated with instrumental variables and a correction for first order auto-correlation. The parameter estimates yield a long-run (two year) price elasticity of -2.0 and a foreign activity elasticity of 3.8 which has effect within one year; see Chart 6 for a plot of the actual and predicted values of export volumes. Alternative

---

1/ For examples of similar approaches to estimating trade equations see Deppler and Ripley (1978), Spencer (1984), and Haas and Turner (forthcoming).

specifications resulted in similar fits and elasticities; some equations indicated that the relative price effect might work through in one year. 1/

Export prices are modeled as a log linear function of the costs of production--wages and commodity prices--and the price of foreign goods that compete with Korean exports. The capital stock was also used as an explanatory variable; increases in the capital stock increase labor productivity and hence competitiveness.

$$\text{Log(PX)} = \underset{(2.07)}{2.55} + \underset{(2.53)}{0.41}\,\text{Log(W/ER)} + \underset{(3.01)}{0.27}\,\text{Log(PMCOM)}$$

$$\underset{(1.72)}{0.37}\,\text{Log(PCPX)} - \underset{(-1.30)}{0.26}\,\text{Log(K)}$$

R^2 = .9931 D.W. = 1.97 Rho = .63 Standard error = 0.031

Sample period: 1966 to 1989; t-statistics in parentheses.

Where:

W = manufacturing wages, in Korean won.
ER = won-U.S. dollar exchange rate.
PMCOM = index of non-oil commodity import prices, in U.S. dollars.
K = gross capital stock, derived from data in Pyo (1989).

The equation was estimated with instrumental variables and a correction for first order auto-correlation. If Korea was a price maker in export markets, domestic cost considerations would dominate the pricing process, and the sum of coefficients on the first two terms of the price equation will be close to one. Alternatively, if Korea was a price taker, foreign prices would dominate and the coefficient on the foreign price term will be near unity. The estimated coefficients indicate that Korea's export pricing behavior lies between that of price taking and price making; see Chart 6 for a comparison of actual and predicted values of export prices.

2. Import volume

The demand for non-oil imports in Korea was modeled as a log-linear function of domestic activity and relative price variables;

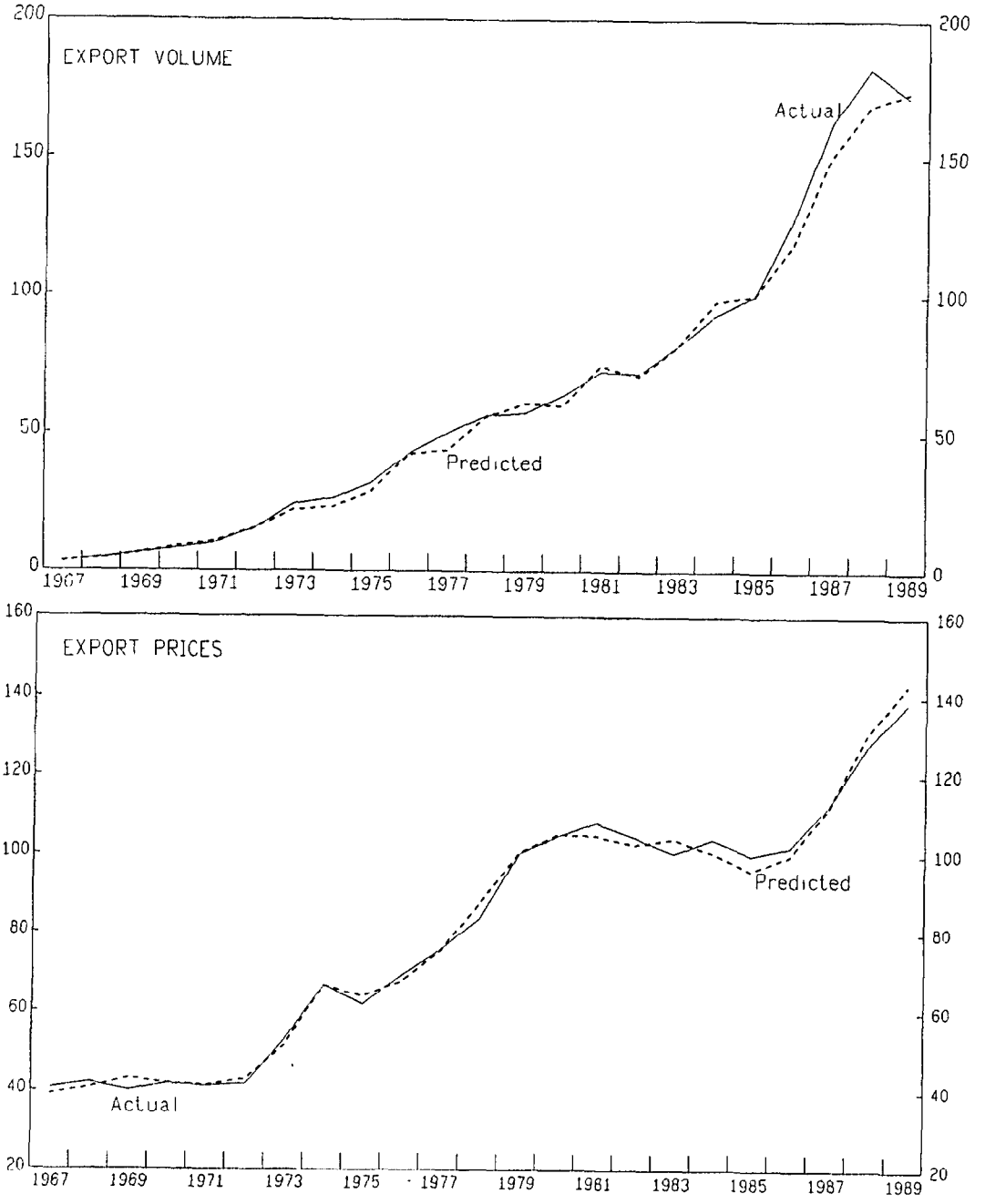
1/ An alternative model of the type suggested by Moran (1988) was also tested. In this model the export volume equation is specified as a supply function, while the export price equation is a re-normalized export demand function. This model also fits the data reasonably well, indicating rapid responses to price and activity changes.

CHART 6

KOREA

EXPORT VOLUME AND PRICES, 1967-89

(Indices, 1985=100)



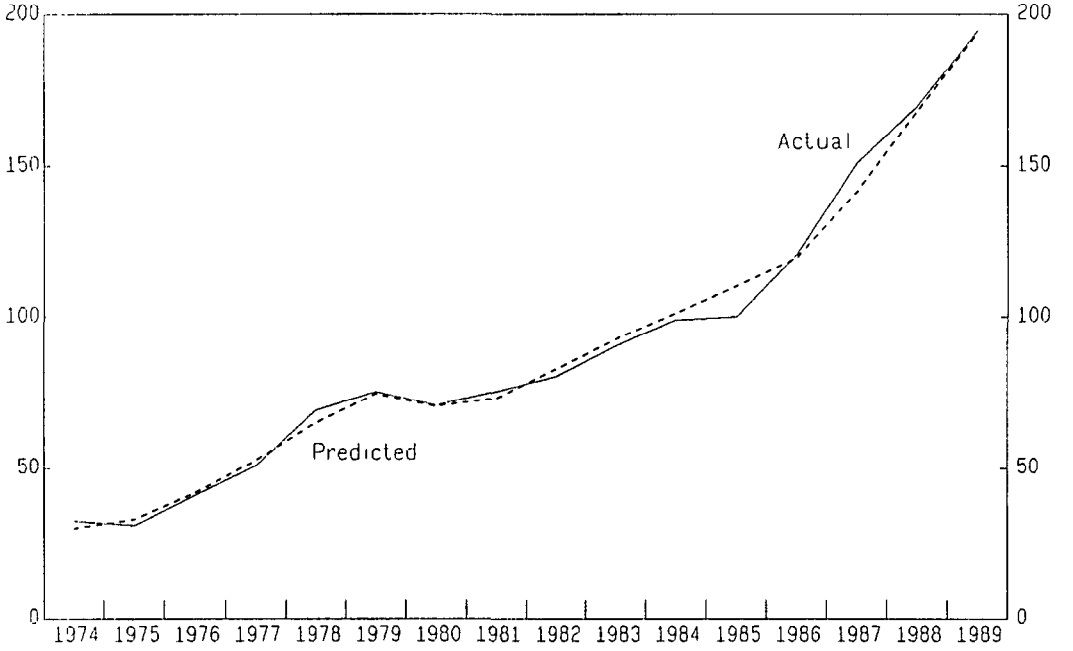
Sources: IMF, International Financial Statistics, and staff estimates

CHART 7

KOREA

IMPORT VOLUME, 1974-89

(Index, 1985=100)



Sources IMF, International Financial Statistics; and staff estimates

$$\text{Log}(M) = \underset{(-5.05)}{-5.78} - \underset{(-4.61)}{0.60}\,\text{Log}(PM/PGDP) + \underset{(5.93)}{0.83}\,\text{Log}(GDP) + \underset{(2.11)}{0.23}\,\text{Log}(M(-1))$$

$R^2 = 0.9913$ D.W. = 1.91 Standard error = 0.051

Sample period: 1974 to 1989; t-statistics in parentheses.

Where:

M = volume of non-oil imports.
PM = non-oil import unit value, in Korean won.
PGDP = GDP deflator.
GDP = real gross domestic product.

A Koyck specification fit the data slightly better than alternatives, and yielded a short-run price elasticity of -0.6 and a short-run activity elasticity of 0.8. The long-run price and activity elasticities are -0.8 and 1.1, respectively. The actual and predicted values of import volumes are shown in Chart 7.

Korea: Structure of the Financial System

Financial Institutions

Central bank

Nonbank Financial Institutions

1. Development institutions
2. Savings institutions
3. Investment companies
4. Insurance companies
5. Supplementary financial institutions 1/

Banking institutions

1. Commercial banks
2. Specialized banks

Financial Markets

Money Market

1. Call Market
   - Won call market
   - U.S. dollar call market
2. Commercial paper
3. Short-term government securities
4. Negotiable certificates of deposit
5. Commercial bills
6. Repurchase agreements
7. Trade bills

Stock Market

1. Korea Stock Exchange
2. Over-the-counter market

Foreign Exchange Market

1. Spot transactions
2. Forward transactions
3. Currency futures, options, and swaps

Bond Market

1. Government bonds
2. Public bonds
   - Municipal bonds
   - Public corporation bonds
   - Specialized bank debentures
3. Corporate bonds
   - Fixed coupon bonds
   - Equity linked bonds

Source: Korea Exchange Bank, Monthly Review, various issues.

1/ Securities Companies, Credit Guarantee Funds, Leasing companies and Venture capital companies.

Korea: Money Markets and Instruments

1. Call market

Participants: All financial institutions. Transactions take place through the seven brokers, as well as directly between each participant.

Maturities of transactions: 1, 3, 5, 7, 9, 11, and 15 days.

Amounts of transactions: No restrictions.

Interest rates: Freely determined.

2. Commercial paper

Participants: Qualified firms chosen by investment and finance companies (IFCs) and merchant banking corporations (MBCs) can issue CPs. IFCs and MBCs are dealers in CP.

Maturities of transactions: Issued with maturities of 1-180 days.

Amounts of transactions: Minimum denominations of W 5 million.

Interest rates: Discount rate freely fluctuates.

3. Short-term government securities

a. Treasury bills

Maturities of transactions: Issued with maturities of 30, 35, 60, 91, and 118 days.

Amounts of transactions: Face values of 1, 5, and 10 million won.

Interest rates: Issues on a discount basis; discount rates are freely determined.

Underwriting: By financial institutions that either sell them to investors or hold them as their assets.

b. Monetary stabilization bonds (MSBs)

Maturities of transactions: Issues with maturities of 63, 91, 182, and 364 days; and 2 years.

Amounts of transactions: Issued with face values of 1, 5, 10, 50 and 100 million won.

Interest rates: Issues on a discount basis. Interest rate of the bond is set below the free market rate.

Underwriting: By banks, security companies and insurance companies, investment and finance companies.

c. Foreign exchange equalization fund bonds (FEEFB)

Maturities of transactions: Issued with maturities of 63, 91, 182, and 364 days; and 3 years.

Amounts of transactions: Issued with face values of 1, 10, and 100 million won.

Interest rates: Available at maturity or discounted forms. Interest rate of the bond is set equal to that of the MSB.

Underwriting: By banks, investment trust companies, securities companies, and insurance companies.

4. Negotiable certificates of deposit (CDs)

Participants: Issued by nationwide commercial banks, local banks, and the Korea Exchange Bank.

Maturities of transactions: Issued with maturities of 91-180 days and in interbank transactions, from 30-180 days.

Denomination: Face value of W 50 million.

Interest rate: Liberalized but rates are set around the rate of time deposits plus 2 percent.

5. Commercial bills

Terms and conditions: Nonstandardized.

Discounting: At deposit money banks.

Interest rate: Discount rate fluctuates freely.

Other: Banks can rediscount these bills at the central bank.

6. Repurchase agreements (RPs)

Participants: Securities companies, the Korea Securities Finance Corporation (KSFC), banks, post offices, Bank of Korea, individual investors, and corporations.

Instruments: Government bonds, public bonds, and corporate debentures.

Maturities of transactions: 7 days to 1 year.

Amount of transactions: Above W 0.1 million.

Interest rate: Regulated.

Other restrictions: Securities companies and the KSFC can buy and sell government bonds as well as corporate debentures. Banks and post offices can only handle the sale of government and public bonds (banks, only those they have underwritten) in repurchase agreements.

7. Trade bills

Participants: Trade bills after being accepted by financial institutions, including IFCs and MBCs, can be discounted at financial institutions.

Maturities of transactions: Fewer than 180 days.

Amount of transactions: Minimum value of W 5 million.

Interest rates: Freely determined.

Korea: Bond Markets and Instruments

I. Primary Bond Market

1. Government bonds

Issues: Within prescribed amounts approved annually by the National Assembly to finance public works and public funds; FEEFBs are issued in order to manage the money supply.

Maturity: 2-5 years; also long-term of 20 years.

Interest rates: Most are set at some margin above the interest rate of one-year time deposits in accordance with market conditions.

Underwriting: Most of these bonds are underwritten by a captive syndicate made up of banks, securities houses, and other financial institutions; some are issued by tender offer, public sale, and compulsory sales to individuals in connection with administrative registration or permits.

2. Public bonds

a. Municipal bonds

Issues: For financing of public works or refunding outstanding debt subject to central government regulations.

Maturity: 1-5 years.

Interest rates: Usually set equal to the interest rates of government bonds.

Underwriting: Banks, securities companies, investment and finance companies.

b. Public corporation bonds

Issues: To finance quasi-governmental works; the issuing volume and terms are under the control of the Government.

Maturity: 2-5 years.

Interest rates: Usually set equal to the interest rates of guaranteed corporate bonds.

Underwriting: By a syndicate made up of securities houses and banks.

c. Bank debentures

(1) Monetary stabilization bonds

Issues: By the Bank of Korea as an instrument for open market operations.

Maturity: 63-546 days.

Interest rates: Issued on a discount basis; discount rates tend to reflect market forces, although they are not allowed to rise above the established ceiling.

Underwriting: By a captive syndicate made up of banks, securities houses, and other financial institutions. Also direct sales of MSBs to retail investors have been introduced.

(2) Specialized bank debentures

Issues: Only by six specialized banks (Korea Exchange Bank, Korea Development Bank, Industrial Bank of Korea, Korea Housing Bank, Korea Long-Term Credit Bank, and Export-Import Bank of Korea).

Maturity: 1-5 years.

Amounts issued: Ceiling on issue amounts is subject to approval of the Ministry of Finance.

Interest rates: Freely determined; available in interest-bearing or discounted forms.

Underwriting: Most sold directly by the issuing bank to institutions and individuals.

3. Corporate bonds

Kinds: Fixed coupon rate bonds and equity linked convertible bonds.

Issues: Within a level up to twice the paid-in capital plus reserves of issuing company.

Maturity: 3-4 years.

Interest rates: Freely determined.

Underwriting: Mostly issues through public offerings that are underwritten by a syndicate made up of securities companies, merchant banks, investment trust companies, and other financial institutions.

II. Secondary market

This market is mostly an institutional one. Individual investors participate in the market indirectly by buying units in investment trusts that contain substantial amounts of bonds as part of their portfolios.

1. Bond exchange

Bond transactions in the exchange floor are limited to bonds listed on the Korea Stock Exchange (KSE). Only KSE trading members may trade in the bond exchange market.

2. Over-the-counter market

Most secondary bond trading takes place in the over-the-counter market. The securities companies act as dealers and brokers in the over-the-counter market, which is a telephone market.

Korea: Chronology of Financial Sector Reforms, 1980-89

1980 February - Security companies were permitted to buy and sell bonds on repurchase agreements.

1981

1. Investment and finance companies were permitted to handle commercial paper.

2. Commercial banks were allowed to engage in additional retail banking services, including household checking accounts, automatic deposits of monthly salaries, credit cards, and payment of public utility charges through automatic transfers and automatic teller services, and were allowed to accept mutual savings deposits and to engage in factoring.

3. Two new types of commercial paper were introduced forming the "new" commercial paper market.

4. June - Interbank call rate and discount rate on commercial paper of large firms with high ratings were substantially liberalized.

1981-84 Limited indirect investment in the Korean stock market by foreigners was permitted through special international investment funds. Foreign security companies were allowed to make limited investments in domestic security firms (up to 10 percent of total equity) and were allowed to open representative offices in Korea. Korean security firms were allowed to establish representative offices overseas.

1982

1. Some preferrentially low rates on export financing loans were abolished.

2. The General Banking Act was revised to provide the denationalized banks with more autonomy in dealing with their own managerial affairs.

September - banks were permitted to participate in the repurchase market.

1983 March - Post Offices were permitted to participate in the repurchase market.

1984

1. The Foreign Capital Inducement Act was revised. As a result, the negative list system was modified and the automatic approval system was adopted for manufacturing projects that have less than 50 percent foreign equity, do not seek tax incentives, and whose amount is less than $3 million.

2. Banks were allowed to vary their interest rates autonomously within a given margin according to a borrower's creditworthiness.

3. Large security companies were permitted to handle commercial paper.

4. June - the nationwide commercial banks, local banks, and the Korea Exchange Bank were once again allowed to issue CDs.

5. November - Interest rates on nonguaranteed bonds were liberalized.

1985 1. Korean companies were allowed to issue convertible bonds, bonds with warrants and depository receipts in international capital markets under guidelines set by the Government. The maximum issue was restricted to 15 percent of the outstanding shares of the issuing company, and an individual foreign investor was limited to acquiring, at most, 3 percent of any company's outstanding shares through the exercise of bond conversion or subscription rights.

2. May - Interest rates on mortgages and convertible bonds were liberalized.

1985-86 Restrictions on activities of foreign banks were eased; foreign banks were granted access to the rediscount window of the Bank of Korea on the same terms as local banks and were permitted to engage in trust business.

1986 Exchange Equalization Bonds were introduced.
March - The issuing rate for CDs was liberalized.

1987 The minimum denomination of CDs was lowered.

1988 1. July - The Government permitted domestic institutional investors to invest in foreign stock markets (up to $30 million by securities companies and $10 million by insurance and investment trust companies) only for their own account.

2. December:

- Interest rates on loans from banks and nonbank financial intermediaries, other than interest rates on loans subsidized by government funds, were fully liberalized.

- A prime rate system was introduced.

- In order to activate price mechanisms in the financial market, interest rates on CDs, repurchase agreements, commercial paper 1/, financial debentures, and corporate bonds were fully deregulated.

- Yields on fund-type instruments, such as cash management accounts, bond management accounts, corporate money trusts, household money trusts, and pension trusts, were liberalized.

- Interest rates on time deposits with maturities of more than two years at banks, postal savings, and credit unions, and on mutual time and savings deposits with maturities of over one year at mutual savings and finance companies were liberalized.

- The "new" commercial paper and conventional commercial paper were merged into one, creating a consolidated CP.

- The Government announced a detailed plan for the internationalization of the capital market during 1989-92. According to the plan, during 1989-90 the Government would continue to expand indirect investment opportunities with the enlargement of the foreign investment funds and an increase in overseas security issues by domestic corporations; relax restrictions on trading in converted stocks; relax limitations on foreign shareholdings in domestic securities companies; and allow a greater number of foreign security companies to open representative offices in Korea. In 1991, foreign securities companies will be permitted to open branch offices in Korea on a reciprocal basis. In 1992, direct foreign investment in the domestic market will be allowed to a limited extent and restrictions on investment in foreign securities and entry into the overseas securities business by Koreans will gradually be relaxed.

1989

1. January - The limit on equity investment by foreign securities firms was increased to 40 percent.

2. February - The minimum percentage of ownership of foreign firms required for approval of overseas investment by Koreans was reduced from 50 percent to 20 percent.

3. August - A bankers' acceptance market for trade bills was established.

1/ Only when the face value of the commercial paper exceeds W 30 million and the maturity is more than 91 days.

August - Restrictions on overseas real estate investment by domestic companies and individuals were eased to facilitate the establishment of foreign operations.

4. October - Legal barriers for the integration of the two call markets (the interbank market and the over-the-counter market for nonbank financial institutions) were removed.

October - Foreign banks were allowed to engage in individual trust business.

October - The minimum maturity of CDs issued by banks to other banks, including development institutions, was reduced from 91 days to 30 days, in order to make CDs an effective instrument in the interbank market.

5. December - A U.S. dollar call market opened.

1990

1. January - The limit on equity investment in advertising was increased to 99 percent.

2. March - The Bank of Korea introduced direct sales of MSBs to retail investors and changed the minimum trading unit of MSBs from W 10 million to W 1 million.

March - The "market average exchange rate "(MAR) system was adopted. Under the new system, the won/dollar exchange rate is based on the weighted average of interbank rates for Korean won-U.S. dollar spot transactions of the previous day. During each business day, the Korean won-U.S. dollar interbank rate is permitted to fluctuate within a band of plus/minus 0.4 percent.

March - The limit on foreign exchange holdings for investment in foreign securities by domestic securities firms authorized to handle international business was raised from $30 million to $50 million, and the limit on foreign exchange holdings for such purposes by insurance and investment trust firms, from $10 million to $30 million.

3. June - The maturity period of MSBs was extended to two years.

   June - Ceilings on CD issues were increased from 120 percent to 150 percent of net worth for specialized banks and to 150 percent of net worth or W 10 billion, whichever is greater for foreign banks.

4. A "matching fund" of $100 million was established that provided Korean individuals with the opportunity, for the first time, to invest in foreign securities.

Korea: An Error Correction Model of the Demand for Money

An error correction specification was used to estimate a model of money demand in Korea. This specification was chosen in order to avoid the possibility of spurious regression results in the presence of trended time-series data, as well as to provide a flexible model of the short-run dynamics of money demand. 1/

As a first step, data series for M2, real GNP, the GNP deflator--all seasonally adjusted by the X11 procedure--and an interest rate series constructed to capture the opportunity cost of money were tested for stationarity. 2/ The tests indicated the presence of strong trends in the data implying that conventional statistical analysis would be inappropriate. Instead, an error correction model was estimated using a two-stage procedure suggested originally by Engle and Granger (1987). The first stage involves establishing the long-run relationship between money, income and interest rates through an ordinary least squares regression that does not take into account the short-run behavior of money demand. 3/ Engle and Granger show that, even if the data series are highly trended, a linear combination of them might nevertheless be stationary. Furthermore, the stationary linear combination has the economic interpretation of the underlying long-run equilibrium or steady state demand function. 4/ Therefore, if the first stage regression results can be shown to produce a stationary linear combination of money, income and interest rate, the regression is a legitimate candidate to represent the long-run demand-for-money function. The errors generated by this long-run relationship can then be used in a second stage regression to model the short-run dynamics of money demand.

1/ See Hendry (1986) for an accessible discussion of the error correction methodology. Some issues in the application of this methodology to money demand are discussed in Boughton (1990).

2/ The opportunity cost series is the difference between the rate in the unregulated informal money market and a weighted sum of interest rates on M2 liabilities.

3/ OLS is sufficient to insure super-consistency. The properties of super-consistency dominate the potential problems of simultaneous equation bias and simultaneous equation techniques are not required. See Stock (1988) on this point.

4/ Strictly speaking, if there are n series, then there may be up to n-1 such independent linear combinations of the series. Thus a long-run money demand function of the type presented in this paper may not be unique. The relationship selected here is based on economic as well as statistical criteria. See Johansen (1988) on this point.

In the first stage of estimation, the level of nominal M2 balances was modeled as a function of the level of real GNP, the GNP deflator, all expressed in logarithms, and the opportunity cost of money. The estimation results were as follows:

$$\log(M2) = \underset{(-11.14)}{-4.29} + \underset{(43.35)}{0.976} \log(PGNP) + \underset{(22.37)}{1.027} \log(GNP) - \underset{(-6.62)}{0.071} R \quad (1a)$$

$\bar{R}^2 = 0.9985$ D.W. = 0.700 SEE = 0.050 Sample period 1970:Q1 to 1989:Q4
(t statistics in parentheses)

Where:

M2 = end of period stock of M2
GNP = real GNP
PGNP = GNP deflator
R = the informal money market rate less the effective deposit rate on M2 liabilities.

The equation fits the data very well. In particular the freely estimated coefficients on the GNP deflator and real income variables are both close to unity, suggesting that the demand for nominal balances is homogenous of degree one in prices, and real income. 1/

The equation was then re-estimated imposing both of these restrictions such that velocity depended on the interest rate variable alone. The estimated equation is given below. Tests indicated that this relationship has stationary properties, lending support to its legitimacy as the true long-run money-demand function.

$$\log(M2) - \log(PGNP) - \log(GNP) = \underset{(25.44)}{0.46} - \underset{(-12.17)}{0.0067} R + ECTERM \quad (1b)$$

$\bar{R}^2 = 0.6505$ D.W. = 0.653 SEE = 0.0503 Sample period 1970:Q1 to 1989:Q4
(t statistics in parentheses)

In the second stage of the estimation procedure, the short-run dynamics of money demand were modeled as a function of changes in statistically significant contemporaneous and lagged changes in the explanatory variables used in the first stage, as well as the lagged residuals, ECTERM, of equation 1b (that is, the deviations from long-run equilibrium). The inclusion of this latter term ensures that, after short-run influences on money demand have disippated, money demand tends toward the long-run relationship given by equation 1b.

1/ An income elasticity greater than one would imply that income velocity asymptotically approaches zero in the steady state.

$$\Delta\log\left(\frac{M2}{PNGP}\right) = \underset{(9.51)}{0.0439} + \underset{(1.75)}{0.1556}\,\Delta\log(GNP) - \underset{(-8.10)}{0.7691}\,\Delta\log(PNGP) \qquad (2)$$

$$\underset{(-1.80)}{-0.0013}\,\Delta R - \underset{(-2.75)}{0.1365}\,ECTERM(-1)$$

$\bar{R}^2 = 0.54$ D.W. = 1.46 SEE = 0.021 Sample period 1970:Q2 to 1984:Q4
(t statistics in parentheses)

A conventional Chow test between the first and second half of the sample period supported parameter stability. Thus, equation 2 is a stable money demand function with the appealing theoretical properties of long-run price and income homogeneity. The coefficient on the error correction term indicates the speed of adjustment; the low estimated value indicates a relatively slow adjustment process. Chart 8 shows that equation 2 can explain developments in M2 quite well.

The estimated error correction model yields several implications. First, a stable demand for a broad money aggregate can be identified over a period when Korean financial markets were developing and deepening and private savings were increasing rapidly. Under these circumstances, it might prove difficult to isolate a stable demand-for-money function. However, the opportunity cost variable appears to have captured the structural change in financial markets that was taking place in Korea.

Second, the finding of long-run price and income homogeneity contrasts with the results of other researchers who have estimated the income elasticity at greater than one. 1/ In these studies, an income elasticity greater than one reflects the historical downward trend in the income velocity of money that is typically ascribed to the process of monetization. Here, the process of monetization is effectively modeled by relating it to the steady decline in interest rates in the informal money market relative to the return on monetary assets.

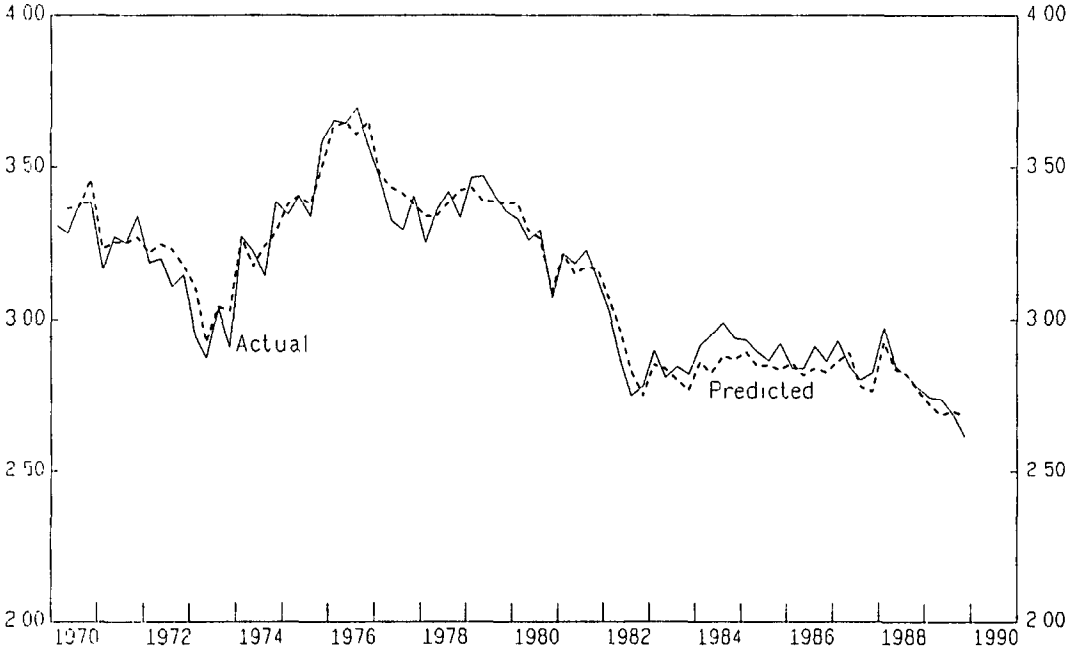
1/ For recent empirical work on the demand for money in Korea see the error correction model of Park (1989), the demand for money equation included in the Korean Development Institute model Shim (1990), and the velocity functions estimated by Kim et al. (1990).

CHART 8

KOREA

M2 INCOME VELOCITY, 1970-90

(Percent per annum)



Sources: IMF, International Financial Statistics; and staff estimates

Changes in the Exchange and Trade System

Korea has progressively liberalized exchange restrictions on current and capital account transactions during the 1980s and formally accepted the obligations of Article VIII, Sections 2, 3, and 4 of the Fund's Articles of Agreement, effective from November 1, 1988. A detailed description of Korea's exchange and trade system and changes during 1989 is contained in the 1990 Annual Report on Exchange Arrangements and Exchange Restrictions (IMF). Listed below are the changes in the exchange and trade system that took place in the first seven months of 1990.

1. Changes during 1990

a. Exchange arrangement

March 2. A new market average exchange rate system was introduced (EBS/90/71, 3/1/90). Under the new system, the Korean won-U.S. dollar exchange rate (the market average rate (MAR)) is based on the weighted average of previous days' interbank rates for Korean won-U.S. dollar spot transactions. The exchange rate of the won against other currencies is determined in accordance with U.S. dollar exchange rates in the international foreign exchange markets. During each business day the Korean won-U.S. dollar exchange rate in the interbank market is allowed to float within margins of ± 0.4 percent against the MAR rate. Against other currencies, the Korean won is allowed to float within daily margins of ± 0.8 percent.

b. Import and import payments

January 1. A total of 98 items, mostly agricultural products, were liberalized in accordance with the 1989-91 import liberalization plan.

January 1. Under the second phase of the 1989-93 Five-Year Tariff Reduction Program, tariff rates on a large number of products were lowered, reducing the average unweighted tariff rate on total imports from 12.7 percent to 11.4 percent.

January 1. Tariffs were lowered on 50 items through the establishment of temporary tariff quotas, which are to expire at the end of 1990.

March 1. The requirement of advance import deposits, ranging from 5 percent to 10 percent when usance (deferred payment) or sight letters of credit are opened, was eliminated.

May 19. Tariff quotas were established on 2 items, with effect through the end of 1990.

July 1. Tariff quotas were established on 9 items, lowering their tariff rates by an average 4.3 percentage points. Tariff quotas on 7 items, which were to expire at the end of July 1990, were extended until the end of 1990.

c. Payments for invisibles

May 1. Foreign exchange banks were required to register all foreign exchange purchases by Korean residents in connection with overseas travel in passports.

d. Capital

January 1. The limit on foreign equity investment in domestic advertising enterprises was increased to 99 percent.

March 2. The limits on foreign exchange holdings for investment in foreign securities by domestic securities firms authorized to handle international business were increased from US$30 million to US$50 million, and by insurance and investment firms, from US$10 million to US$30 million.

July 1. The wholesale of toiletries and cosmetics was opened to foreign investors.

Table 1. Korea: Changes in Real GNP by Expenditure and Industrial Origin, 1985-90 1/

(In percent)

	1985	1986	1987	1988	1989	1990 First half 2/ prel.
Real GNP	7.0	12.9	13.0	12.4	6.7	9.9
GNP deflator	4.2	2.7	3.4	5.9	4.7	...
GNP by expenditure:						
Final consumption	6.3	8.4	8.1	9.7	9.5	10.5
Private consumption	6.4	8.0	8.3	9.8	9.8	11.0
Public consumption	5.6	10.8	6.9	9.4	7.9	6.8
Gross capital formation	3.8	10.9	17.7	15.2	23.7	25.7
Fixed investment	4.7	12.0	16.5	13.4	16.2	27.3
Of which:						
Construction	4.9	3.1	14.0	13.8	19.8	...
Equipment	4.9	24.4	19.8	13.2	12.1	...
Stockbuilding 3/	-0.2	-0.2	0.5	0.7	2.6	-0.2
Aggregate domestic demand	5.5	9.1	11.0	11.5	14.2	15.4
Foreign balance 3/	1.9	3.2	1.6	0.5	-7.9	-6.1
Exports (goods and services)	4.5	26.1	21.6	12.5	-4.0	3.5
Imports (goods and services)	-0.6	17.8	19.4	12.8	16.3	17.6
Net factor income from abroad 3/	-0.2	0.1	0.6	0.7	0.6	0.3
GDP by industrial origin:						
Agriculture, forestry, and fishing	3.8	4.6	-6.8	8.0	-0.7	-3.5
GDP excluding agriculture, forestry, and fishery	7.4	13.5	14.6	11.9	7.0	10.1
Mining and manufacturing	7.0	18.0	18.2	13.1	3.5	7.7
Of which:						
Manufacturing	(7.1)	(18.3)	(18.8)	(13.4)	(3.7)	(8.1)
Construction and utilities	6.7	10.4	12.6	9.6	13.8	26.4
Services	8.9	12.9	14.0	12.8	8.5	9.5
Government and private nonprofit institutions	4.4	4.9	4.3	6.2	5.9	5.4

Sources: Bank of Korea, Monthly Statistical Bulletin; and data provided by the Korean authorities.

1/ At 1985 prices.

2/ Change from a year earlier.

3/ Change as percent of GNP in the base period.

Table 2. Korea: Gross National Product by Expenditure and Industrial Origin at Constant Prices, 1985-90

(In billions of won at constant 1985 prices)

	1985	1986	1987	1988	1989	1990 First half prel.
Expenditure on GDP						
Consumption	56,011	60,726	65,657	72,058	78,902	40,723
Private	47,875	51,712	56,020	61,520	67,537	35,327
Government	8,136	9,014	9,637	10,538	11,365	5,395
Investment	23,673	26,247	30,893	35,583	43,999	22,502
Gross fixed capital formation	22,837	25,569	29,800	33,806	39,281	21,827
Change in stocks	837	679	1,093	1,777	4,718	675
Aggregate domestic demand	79,684	86,973	96,550	107,641	122,901	63,225
Exports of goods and services	27,937	35,239	42,849	48,209	46,283	23,009
Goods	23,018	28,947	35,806	40,819	38,684	...
Services	4,919	6,292	7,043	7,390	7,599	...
Imports of goods and services	26,919	31,714	37,871	42,732	49,698	27,294
Goods	24,505	29,225	35,106	39,428	45,066	...
Services	2,415	2,489	2,765	3,304	4,632	...
Statistical discrepancy	145	370	277	374	942	611
Gross domestic product	80,847	90,868	101,804	113,492	120,429	59,550
Net factor income from abroad	-2,759	-2,694	-2,192	-1,512	-894	-381
Gross national product	78,089	88,174	99,612	111,980	119,535	59,169
GDP by industrial origin						
Agriculture, forestry, and fishing	10,352	10,830	10,098	10,903	10,825	2,032
Mining and quarrying	791	856	845	840	784	343
Manufacturing	24,530	29,018	34,460	39,086	40,522	21,127
Electricity, gas, and water	2,267	2,841	3,190	3,504	3,858	2,161
Construction	6,251	6,560	7,394	8,097	9,343	5,105
Wholesale and retail trade, restaurants, and hotels	9,834	11,466	13,177	14,634	15,114	7,570
Transport, storage, and communication	6,155	6,757	7,633	8,530	9,368	5,038
Financing, insurance, real estate, and business services	9,509	10,621	12,307	14,322	16,036	8,672
Community, social, and personal services	3,332	3,700	3,991	4,364	4,890	2,637
Producers of government services	5,847	6,045	6,249	6,530	6,823	3,532
Other 1/	1,979	2,174	2,461	2,682	2,866	1,335

Sources: Bank of Korea, Monthly Statistical Bulletin; and data provided by the Korean authorities.

1/ Includes producers of private nonprofit services, import duties, and imputed bank service charges (offset).

Table 3. Korea: Gross National Product by Expenditure at Current Prices, 1985-89

	1985	1986	1987	1988	1989
	(In billions of won)				
Consumption	56,011	61,687	68,697	78,955	90,218
Private	47,875	52,286	57,989	66,468	75,625
Government	8,136	9,401	10,709	12,487	14,593
Investment	23,673	26,486	31,944	39,211	49,121
Gross fixed capital formation	22,837	25,994	31,131	37,356	44,778
Change in stocks	837	492	813	1,857	4,342
Exports of goods and services	27,937	36,034	45,051	51,101	48,714
(Less) Imports of goods and services	26,919	30,365	36,356	40,567	44,791
Statistical discrepancy	145	-415	-908	-738	-995
Gross domestic product	80,847	93,426	108,428	127,963	142,267
Net factor income from abroad	2,759	-2,827	-2,404	-1,732	-1,201
Gross national product	78,088	90,599	106,024	126,231	141,066
Of which: Domestic demand	79,684	88,173	100,641	118,166	139,339
	(Percentage change)				
Memorandum items:					
Nominal GNP	11.4	16.0	16.7	19.5	11.8
Domestic demand	10.5	10.8	13.2	18.2	17.9

Sources: Bank of Korea, Monthly Statistical Bulletin; and data provided by the Korean authorities.

Table 4. Korea: Investment and Saving, 1985-89

	1985	1986	1987	1988	1989
	(In billions of won at current prices)				
Gross domestic capital formation	23,673	26,486	31,944	39,211	49,121
a. Composition					
Gross fixed investment	22,837	25,993	31,131	37,354	44,778
Of which:					
Dwellings	3,431	3,977	4,493	5,968	7,770
Nonresident buildings	3,651	3,880	5,081	6,672	8,859
Other construction	4,930	4,478	4,700	5,578	7,307
Transport equipment	2,958	3,127	3,619	4,195	4,683
Machinery and other equipment	6,662	9,257	11,470	13,250	14,323
Changes in stocks	837	492	813	1,857	4,343
b. Sectors					
Private sector 1/	20,016	22,817	27,841	34,096	43,419
General government 2/	3,657	3,669	4,103	5,115	5,701
National saving	23,038	30,091	39,045	48,683	51,360
Private sector 1/	18,036	24,371	31,685	38,237	39,925
General government 2/	5,002	5,720	7,360	10,446	11,435
Foreign saving equal to net borrowing from the rest of the world 3/	781	-4,021	-8,009	-10,210	-3,234
Discrepancy (saving-investment)	145	-558	-589	-738	-955
	(In percent of GNP)				
Gross capital formation	30.3	29.2	30.1	31.1	34.8
Gross fixed investment	29.2	28.7	29.4	29.6	31.7
Change in stocks	1.1	0.5	0.8	1.5	3.1
National saving	29.5	33.2	36.8	38.6	36.4
Private sector 1/	23.1	26.9	29.9	30.3	28.3
General government 2/	6.4	6.3	6.9	8.3	8.1
Foreign saving 3/	1.0	-4.4	-7.6	-8.1	-2.3
Discrepancy (saving-investment)	0.2	-0.6	-0.6	-0.6	-0.7
Sectoral balances (saving-investment)					
Private sector 1/	-2.5	1.7	3.6	3.3	-2.5
Government sector 2/	1.7	2.3	3.1	4.3	4.1
External sector 3/	-1.0	4.4	7.6	8.1	2.3
Memorandum item:					
GNP (in billions of won)	78,088	90,599	106,024	126,231	141,066

Source: Bank of Korea, Monthly Statistical Bulletin.

1/ Including public enterprises.

2/ Central and local government and social security funds.

3/ Equivalent to the current account balance (including net transfers).

Table 5. Korea: Agricultural and Fishing Output, 1985-90

(In thousands of metric tons)

	1985	1986	1987	1988	1989	1990 Proj.
Grains	6,375	6,197	6,163	6,739	6,547	6,440
Rice	5,626	5,607	5,493	6,053	5,898	5,815
Barley and wheat	584	459	521	565	517	491
Other	147	131	149	120	132	134
Pulses	274	251	266	302	303	290
Potatoes	359	325	258	259	310	276
Vegetables	7,543	8,496	7,224	7,651	7,935	...
Fruits	1,464	1,475	1,583	1,714	2,108	...
Fish catch 1/	3,101	3,660	3,332	3,209	3,319	3,450
Memorandum item:						
Percentage change in agriculture, forestry, and fishing output (national accounts)	3.8	4.6	-6.8	8.0	-0.7	...

Source: Ministry of Agriculture and Fisheries.

1/ About one half of the catch is from coastal fishing and about one fourth each is from aquaculture and deep-sea fishing.

Table 6. Korea: Grain Management Fund Operations, 1985-90

	Years ending September 30					
	1985	1986	1987	1988	1989	1990 Proj.
	(In thousands of metric tons)					
Rice						
Opening stock	1,247	1,428	1,249	1,101	1,061	1,263
Domestic purchases 1/	1,216	1,090	891	788	967	1,728
Imports	--	--	--	--	--	--
Other	-5	-28	--	--	--	--
Available supplies	2,457	2,518	2,140	1,889	2,028	2,991
Domestic sales	1,029	1,269	1,039	828	765	1,420
Exports	--	--	--	--	--	--
Other	--	--	--	--	--	--
Closing stock	1,428	1,249	1,101	1,061	1,263	1,571
Barley						
Opening stock	495	187	91	95	114	118
Domestic purchases	236	167	124	117	104	104
Other	-16	--	--	--	--	--
Available supplies	715	354	215	212	218	222
Domestic sales	529	263	120	99	100	97
Other	--	--	--	--	--	--
Closing stock	187	91	95	114	118	125
	(In won; end-of-period)					
Memorandum items:						
Rice (80 kilogram bag)						
Purchase price	57,650	60,530	64,160	73,140	84,840	95,020
Selling price	54,260	49,000	55,120	49,610	47,770	53,520
Barley (76.5 kilogram bag)						
Purchase price	34,460	36,360	39,070	41,020	45,120	49,630
Selling price	31,430	33,150	35,640	36,640	35,640	39,930

Source: Data provided by the Korean authorities.

1/ Purchases are mainly in October-December; therefore procurement from the current year crop takes place in October-December of the previous year.

Table 7. Korea: Industrial Production by Sector, 1988-90

(Seasonally adjusted, 1985=100, percent)

		Index							Growth rate (from previous period)						
				1989							1989				
	Weights	1988	1989	Q1	Q2	Q3	Q4	1990	1988	1989	Q1	Q2	Q3	Q4	1990
Total index	10,000.00	163.1	167.8	164.8	162.7	172.2	171.4	177.9	13.6	2.9	-2.1	-1.3	5.8	-0.4	3.8
Mining	293.2	107.8	97.1	104.6	94.1	94.7	95.3	90.1	-0.6	-9.9	-1.1	-10.0	0.6	0.6	-5.5
Manufacturing	9,048.3	166.1	170.5	167.3	165.2	175.2	173.9	180.6	13.8	2.6	-2.5	-1.3	6.1	-0.7	3.8
Food, beverages and tobacco	1,041.3	133.5	142.1	138.8	141.5	144.9	142.9	143.4	11.1	6.4	2.9	1.9	2.4	-1.3	0.3
Textile, wearing apparel, and leather industries	1,693.5	139.2	134.1	134.6	133.2	132.9	135.5	132.4	1.2	-3.7	-3.1	-1.1	-0.2	1.9	-2.3
Wood and wood products including furniture	148.5	141.8	149.5	140.8	144.8	156.1	155.9	152.1	15.5	5.4	-2.6	2.9	7.8	-0.1	-2.4
Paper and paper products, printing and publishing	448.2	151.9	170.2	161.9	167.6	167.2	183.3	175.5	11.3	12.0	3.2	3.5	-0.3	9.6	-4.3
Chemicals petroleum, coal, rubber, and plastic products	1,767.9	150.7	154.8	152.3	149.5	157.4	159.7	167.5	18.4	2.7	—	-1.8	5.2	1.5	4.9
Nonmetal industries	382.6	144.1	150.7	148.7	146.2	151.7	156.3	164.0	11.4	4.6	1.1	-1.7	3.8	3.1	4.9
Basic metal industries	532.4	137.3	149.9	140.2	147.9	153.0	158.3	160.6	8.1	9.2	3.8	5.5	3.4	3.5	1.4
Fabricated metal products, machinery and equipment	2,835.0	216.6	222.8	217.6	211.8	236.9	224.4	241.8	20.4	2.9	-5.5	-2.7	11.8	-5.3	7.8
Others	198.9	151.9	133.1	141.2	132.9	131.1	127.8	129.5	-1.4	-12.4	-5.0	-5.9	-1.3	-2.5	1.3
Electricity	658.5	147.3	162.9	156.7	158.3	165.2	170.7	180.1	15.4	10.6	1.7	1.0	4.4	3.3	5.5
Memorandum items:															
Producer goods	5,334.5	162.4	168.3	159.9	164.2	173.1	175.4	182.2	15.4	3.6	-4.0	2.7	5.4	1.3	3.9
Finished products	1,290.4	168.7	180.3	158.6	171.6	195.6	192.5	213.9	13.7	6.9	-9.5	8.2	14.0	-1.6	11.1
Raw materials	4,044.1	160.4	164.5	161.1	160.8	166.2	169.5	173.3	16.0	2.6	-1.5	-0.2	3.4	2.0	2.2
Consumer goods	3,713.8	171.3	173.6	175.8	170.2	177.0	171.4	175.6	11.7	1.3	-1.2	-3.2	4.0	-3.2	2.5
Durable goods	986.3	243.9	241.5	255.4	226.8	261.3	225.0	242.4	16.8	-1.0	-2.4	-11.2	15.2	-13.9	7.7
Nondurable goods	2,727.5	145.4	149.3	148.2	147.9	148.9	151.9	152.2	9.0	2.7	0.4	-0.2	0.7	2.0	0.2

Source: Bank of Korea, Monthly Statistical Bulletin.

Table 8. Korea: Domestic Construction Orders, 1985-90

	1985	1986	1987	1988	1989	1990 1/
	(In billions of won at current prices)					
By purchaser	5,389	5,981	7,250	7,292	13,453	22,669
Public sector	3,460	3,046	3,833	2,988	5,939	7,127
Central government	(748)	(728)	(971)	(736)	(1,508)	(1,810)
Local government	(1,115)	(793)	(1,112)	(779)	(1,376)	(1,651)
Public enterprises	(1,386)	(1,337)	(1,460)	(1,285)	(2,828)	(3,394)
Other	(211)	(186)	(290)	(188)	(226)	(272)
Private sector	1,830	2,838	3,301	4,235	7,482	15,452
Manufacturing	563	1,108	1,324	1,641	2,043	(3,269)
Nonmanufacturing	1,267	1,730	1,976	2,588	5,439	(12,183)
Foreign organizations	98	96	116	70	33	90
By type of construction	5,299	5,981	7,250	7,292	13,453	22,669
Buildings	[illegible]944	3,704	3,962	4,776	8,330	14,161
Dwellings	([illegible],205)	(1,402)	(1,583)	(1,900)	(3,556)	(6,400)
Other	([illegible],739)	(2,302)	(2,379)	(2,876)	(4,774)	(7,761)
Civil engineering works	[illegible].355	2,174	3,113	2,324	4,943	8,308
Special trade works	90	103	175	202	180	200
	(In thousand square meters of floor area)					
Memorandum items:						
Permits issued	38,215	43,543	47,982	59,767	88,615	113,473
Dwellings	20,606	22,518	21,639	29,136	47,510	58,641
Commercial	9,498	10,321	13,375	16,328	26,061	36,783
Industrial	4,139	5,932	7,995	9,413	9,034	11,975
Other	3,972	3,511	4,973	4,890	6,012	6,074

Sources: Economic Planning Board, Monthly Statistics of Korea; and data provided by the Korean authorities.

1/ Forecasts as of end-May.

Table 9. Korea: Overseas Construction, 1985-90

	1985	1986	1987	1988	1989	1990
			(In millions of U.S. dollars)			
New contracts	4,691	2,239	1,711	1,602	2,412	5,359 1/
Middle East	4,283	1,242	1,314	1,251	1,442	5,014
Other countries	406	997	397	351	970	345
			(Number of agreements)			
Work agreements	170	109	92	70	76	17 1/
Middle East	132	54	44	29	29	6
Other countries	48	55	48	41	47	11
			(Number of workers at end of period)			
Korean labor force overseas	96,016	58,917	42,543	28,952	18,315	15,510 2/
Middle East	91,013	56,260	39,658	26,823	16,395	13,856
Other countries	5,003	2,657	2,885	2,129	1,920	1,654

Source: Ministry of Construction.

1/ As of June 12, 1990.
2/ Through end-March, 1990.

Table 10: Korea: Sources and Uses of Energy, 1985-95

	1985	1986	1987	1988	1989 Prel.	1995 Proj.
			(Share in percent)			
Sources of primary energy						
Oil	48.5	46.7	44.3	47.4	49.6	50.4
Coal	38.8	37.5	34.2	32.9	30.0	29.2
Hydroelectricity	1.6	1.7	2.0	1.2	1.4	0.8
Nuclear	7.5	11.6	14.4	13.4	14.5	12.8
Firewood	3.6	2.4	2.0	1.6	1.3	1.9
LNG	--	0.1	3.1	3.6	3.2	4.9
Total	100.0	100.0	100.0	100.0	100.0	100.0
Uses of final energy						
Transport 1/	14.3	15.3	17.5	18.1	18.7	23.9
Industry	42.8	43.3	44.6	46.3	46.9	47.8
Residential and commercial	38.3	36.6	33.6	31.5	30.4	24.6
Public and other	4.5	4.7	4.3	4.1	4.0	50.4
Total	100.0	100.0	100.0	100.0	100.0	100.0
		(In million tons of oil equivalent) 2/				
Memorandum items:						
Primary energy consumption	56.0	61.1	67.1	74.9	81.7	113.4
Percentage change	(5.0)	(9.1)	(9.9)	(11.6)	(9.1)	(...)
Final energy consumption	46.7	50.1	54.3	60.3	65.8	90.9
Percentage change	(4.3)	(7.3)	(8.3)	(11.0)	(9.1)	(...)
Primary energy/GNP in constant 1980 prices (in percent)	1.06	1.03	1.01	1.01	0.94	0.94

Source: Data provided by the Korean authorities.

1/ International bunkering included.
2/ One ton oil equivalent equals 7.33 barrels of oil.

Table 11. Korea: Domestic Prices of Electricity, 1985-90

(In won/KWH; end-of-period)

	1985	1986	1987	1988	1989	1990 May
Residential service	73.42	71.33	71.47	71.94	67.32	64.92
Public/commercial service	137.54	132.31	125.78	109.53	78.80	78.80
Industrial service	56.23	54.54	52.59	48.91	45.58	43.30
Street lighting service	83.20	82.02	72.79	55.60	47.92	47.92
Average domestic prices	67.92	65.51	63.43	59.49	53.51	51.55

Source: Data provided by the Korean authorities.

Table 12. Korea: Retail Prices of Petroleum Products, 1985-90

(In won per liter; end-of-period)

	1985	1986	1987	1988	1989	1990 March
Gasoline (regular)	660	570	515	402	373	373
Diesel	277	230	207	179	182	182
Kerosene	291	240	215	186	186	186
Memorandum item:						
Import price of crude oil (won/kl)	152,276	83,718	92,337	82,329	70,598	80,966

Source: Data provided by the Korean authorities.

Table 13. Korea: Wages and Prices, 1985-90

(Percentage changes)

	1985	1986	1987	1988	1989	1990 Q1
Wages in manufacturing, averages						
Nominal earnings 1/	9.9	9.2	11.6	19.6	25.0	27.1
Real earnings 2/	7.3	6.2	8.3	11.8	18.1	19.2
Labor productivity 3/	8.0	15.0	11.6	13.0	8.2	13.5
Unit labor cost	1.8	-5.0	--	5.8	15.6	12.0
Prices 4/						
Wholesale prices (100), average	0.9	-1.5	0.5	2.7	1.5	1.8
Food (23)	3.8	1.3	-1.3	9.3	3.6	5.8
Nonfood (77)	-0.2	-3.2	1.0	0.7	0.8	0.4
Of which: Petroleum and related products (9)	-0.4	-18.8	-6.7	-20.7	-10.6	-1.0
Consumer prices (100), average	2.5	2.8	3.0	7.1	5.7	6.5
Food (38)	3.7	2.4	3.0	10.3	6.9	6.1
Nonfood (62)	1.5	3.0	3.0	5.2	5.0	6.7
Of which:						
Housing (13)	4.0	4.1	3.1	6.1	6.9	6.8
Fuel, light, and water (8)	2.8	-0.2	0.9	-1.0	-1.2	-0.3
Clothing (7)	-1.9	2.3	3.5	8.0	13.1	11.7
Education and recreation (11)	1.8	3.5	4.3	7.1	6.6	9.3
Transport and communication (6)	2.6	3.3	1.7	4.2	-0.7	4.2
Medical care (7)	-0.1	3.8	3.5	6.5	2.7	6.9

Sources: Data provided by the Korean authorities; and staff estimates.

1/ Total monthly earnings, including bonuses and overtime pay, of regular workers in establishments employing more than ten people.

2/ Nominal earnings deflated by the consumer price index.

3/ As calculated by the Korea Productivity Center, for production workers in manufacturing, on a value-added basis.

4/ Figures in parentheses denote weights.

Table 14. Korea: Wages and Labor Productivity, 1986-89

(Index, 1985 = 100)

	Nominal wages			Real wages			Labor productivity 1/		
	All industries	Mining	Manufacturing	All industries	Mining	Manufacturing	All industries	Mining	Manufacturing
1986	108.2	109.3	109.2	105.3	107.0	102.1	115.2	102.8	115.2
Q1	100.8	101.1	99.5	98.3	97.9	111.6	105.3	83.7	105.5
Q2	104.7	109.1	106.0	101.7	106.0	103.0	117.4	116.9	117.4
Q3	112.5	111.9	113.8	108.8	108.4	110.3	115.8	105.8	115.1
Q4	114.8	116.2	117.3	112.0	113.4	114.4	121.7	104.7	122.0
1987	119.2	118.4	121.9	112.6	111.8	115.1	127.4	99.6	128.3
Q1	108.3	112.7	106.7	105.0	109.2	103.5	116.8	85.5	117.8
Q2	116.6	118.2	113.6	105.9	112.1	107.8	130.3	113.2	131.8
Q3	120.6	115.0	122.8	113.0	107.5	115.1	124.5	94.4	125.4
Q4	136.0	127.6	144.1	125.8	118.0	133.3	136.5	105.0	137.8
1988	137.6	137.5	145.8	121.4	121.2	128.5	143.5	105.2	145.0
Q1	133.2	133.2	127.3	112.5	120.2	114.8	136.8	91.2	139.0
Q2	129.6	134.9	136.8	114.7	119.4	121.1	137.7	115.9	138.6
Q3	140.6	140.6	157.5	128.6	130.0	137.8	146.3	103.4	147.3
Q4	149.3	141.7	161.9	129.4	122.6	140.3	153.7	110.9	155.5
1989	166.7	163.1	182.3	139.0	136.0	152.1	156.5	122.3	156.9
Q1	144.1	142.7	152.2	123.1	121.9	130.0	141.2	107.5	141.7
Q2	158.8	158.8	175.0	133.0	133.0	146.6	152.4	122.5	153.9
Q3	179.9	168.7	199.8	148.1	138.8	164.4	158.5	130.7	157.8
Q4	183.7	183.5	203.9	150.2	150.0	166.7	170.5	135.3	171.4

Source: Economic Planning Board, Monthly Statistics of Korea and Korea Productivity Center, Value-added Labor Productivity Indexes.

1/ Value-added basis, production workers.

Table 15. Korea: Balance of Payments, 1985-90

(In millions of U.S. dollars)

	1985	1986	1987	1988	1989	1990 Jan.-June
Current account	-887	4,618	9,854	14,161	5,055	-1,585
Trade balance	-19	4,206	7,659	11,445	4,597	-1,385
Exports, f.o.b.	26,442	33,913	46,244	59,648	61,409	29,215
Imports, f.o.b.	-26,461	-29,707	-38,585	-48,203	-56,812	30,600
Services, net	-1,446	-627	977	1,267	211	-230
Receipts	6,664	8,052	10,010	11,252	12,642	6,567
Payments	-8,110	-8,679	-9,033	-9,985	-12,431	6,797
Transfers (net)	578	1,039	1,218	1,448	247	31
Capital account	-736	-1,468	-4,258	-1,335	-2,950	853
Debt-related flows	604	-667	-4,787	-1,843	-1,545	596
Medium- and long-term capital	1,090	-264	-4,780	-3,176	-1,958	-280
Nonbank and financial institutions 1/	423	328	-2,321	-1,320	-656	-152
Net foreign borrowing	1,672	-578	-3,906	-1,382	-652	-152
Swaps with the Bank of Korea	-1,249	906	1,585	62	-4	—
Public sector (net)	320	-126	-1,397	-1,129	-1,075	-500
Private sector (net)	347	-466	-1,085	-727	-227	372
Short-term capital	-486	-403	2	1,332	413	876
Other asset transactions	-1,340	-601	543	508	-1,405	257
Medium- and long-term capital	-1,238	-812	543	505	1,052	262
Export suppliers' credits 2/	-940	-406	426	253	-143	358
Foreign direct investment 3/	233	435	602	871	758	455
Overseas investment 4/	-34	-110	-183	-173	-305	-473
Overseas subsidiaries 5/	-524	-1,042	-319	-446	-257	-78
Other	27	311	27	—	-1,105	—
Short-term capital	-102	11	—	4	-353	-5
Allocations of SDRs	—	—	—	—	—	—
Errors and omissions	-880	-544	1,191	-589	344	126
Overall balance	-2,503	2,606	6,787	12,237	2,449	-606
Financing	2,503	-2,606	-6,787	-12,237	-2,449	606
Assets (increase in reserves -)	-12	-226	-1,193	-10,855	-3,419	-111
Liabilities	2,515	-2,380	-5,594	-1,382	970	717
Use of Fund credit	-235	-126	-1,223	-492	—	—
Swaps with non-DMBs	1,249	-906	-1,585	-62	4	—
Other 6/	1,501	-1,348	-2,786	-828	966	717
Medium and long term	(1,681)	(50)	(-2,601)	(-526)	(-1,077)	(-693)
Short term	(-180)	(1,398)	(-185)	(-302)	(2,043)	(1,410)
Memorandum item:						
Current account/GNP (in percent)	-1.0	4.5	7.6	8.2	2.4	...
Gross international reserves	8,383	8,627	10,240	20,892	24,311	...
(In months of imports of goods and services)	(2.9)	(2.6)	(2.6)	(4.3)	(4.2)	(...)

Sources: Bank of Korea, Monthly Statistical Bulletin; and data provided by the Korean authorities.

1/ Comprises mainly loans to the Korean Development Bank (KDB), the Export-Import Bank of Korea (KEXIM), Korea Long-Term Credit Bank, and merchant banks; excludes the amount of swaps with the Bank of Korea, which is shown under financing.

2/ Export credits minus sales of promissory notes.

3/ Net foreign investment in Korea by nonresidents.

4/ Net direct investment abroad by Korean residents.

5/ Liabilities of overseas subsidiaries of Korean companies.

6/ Includes valuation adjustments.

Table 16. Korea: External Trade Developments, 1985-89

(Annual percentage changes, unless otherwise indicated)

	1985	1986	1987	1988	1989
Exports					
Value (U.S. dollars) 1/	-1.1	28.0	36.2	28.4	2.8
Volume	2.8	25.4	23.7	13.0	-6.4
Unit value	-3.8	2.1	10.1	13.6	9.8
Imports					
Value (U.S. dollars) 1/	-1.2	13.5	29.9	26.3	18.6
Volume	3.1	21.0	20.9	14.3	16.2
Oil	-0.7	16.0	-6.0	20.7	13.5
Non-oil	4.1	22.2	27.2	13.2	16.7
Unit value	-4.2	-6.2	7.5	10.5	2.1
Oil	-2.8	-48.2	17.8	-17.5	13.0
Non-oil	-4.6	3.8	3.9	14.0	0.6
Terms of trade	0.5	8.8	2.4	2.8	7.6
Real effective exchange rate 2/	-5.7	-15.6	-0.6	10.9	11.7
Foreign market growth 3/	5.0	9.0	8.1	11.6	8.1
Export volume growth minus market growth	-2.2	16.4	15.6	1.4	-14.5
Letter of credit arrivals	0.9	29.7	37.2	23.0	6.4
Real GNP	7.0	12.9	13.0	12.4	6.7
Real domestic demand	5.5	9.4	10.8	11.5	14.2

Sources: The Bank of Korea, Monthly Statistical Bulletin; World Economic Outlook database; data provided by the Korean authorities; and staff estimates.

1/ Customs clearance basis; excluding ships for repair.
2/ Trade-weighted (INS) ratio of domestic to foreign consumer price indexes adjusted for exchange rate movements; period average.
3/ Export-weighted average of growth in real non-oil imports in Korea's trading partner countries.

Table 17. Korea: Exports by Major Commodity Groups, 1985-89 1/

	1985	1986	1987	1988	1989
	(In millions of U.S. dollars)				
Traditional exports 2/	10,315	12,579	16,437	20,261	21,263
Apparel and clothing	4,450	5,483	7,537	8,695	9,096
Textile products	2,106	2,699	3,383	3,890	4,360
Steel products	1,720	1,815	2,158	3,049	3,421
Footwear	1,534	2,059	2,756	3,801	3,588
Chemicals and fertilizer	505	523	603	826	798
Nontraditional exports 3/	4,731	7,903	12,976	17,782	17,290
Electronic machinery 4/	1,660	2,459	3,648	5,662	6,402
Electronic equipment 5/	1,964	3,109	4,981	6,210	6,078
Office machines	588	992	1,599	2,574	2,762
Automobiles	519	1,343	2,748	3,336	2,048
Ships and floating structures (excluding ships for repair)	1,877	1,815	1,138	1,760	1,789
Other exports	10,197	12,418	16,730	20,893	22,035
Total exports	27,120	34,715	47,281	60,696	62,377
	(In percent)				
Traditional exports 2/	38.0	36.2	34.8	33.4	34.1
Apparel and clothing	16.4	15.8	15.9	14.3	14.6
Textile products	7.8	7.8	7.2	6.4	7.0
Steel products	6.3	5.2	4.6	5.0	5.5
Footwear	5.7	5.9	5.8	6.3	5.8
Chemicals and fertilizers	1.9	1.5	1.3	1.4	1.3
Nontraditional exports 3/	17.4	22.8	27.4	29.3	27.7
Electric machinery 4/	6.1	7.1	7.7	9.3	10.3
Electronic equipment 5/	7.2	9.0	10.5	10.2	9.7
Office machines	2.2	2.9	3.4	4.2	4.4
Automobiles	1.9	3.9	5.8	5.5	3.3
Ships and floating structures (excluding ships for repair)	6.9	5.2	2.4	2.9	2.9
Other exports	37.6	35.8	35.4	34.4	35.3
Total exports	100.0	100.0	100.0	100.0	100.0

Source: Bank of Korea, Monthly Statistical Bulletin.

1/ Customs clearance basis; excluding ships for repair.
2/ Exports which accounted for more than 3 percent of total exports in 1980.
3/ Exports which accounted for less than 3 percent of total exports in 1980 and whose shares have increased rapidly.
4/ Electric power machinery, household electrical equipment, and thermionic valves.
5/ Radios, televisions, sound recording and reproducing equipment, and telecommunications equipment.

Table 18. Korea: Composition of Imports by End Use, 1985-89 1/

	1985	1986	1987	1988	1989
	(In millions of U.S. dollars)				
Consumer goods, except grains	1,473	1,954	2,682	3,460	4,388
For re-export	600	905	1,371	1,034	1,345
For domestic consumption	873	1,049	1,311	2,426	3,044
Grains	1,180	1,138	1,247	1,467	1,778
Industrial raw materials	17,402	17,165	22,539	27,877	32,928
Petroleum	5,572	3,346	3,702	3,688	4,933
For export production	725	555	943	1,014	1,235
For domestic use	4,847	2,791	2,759	2,674	3,698
Other	11,830	13,819	18,837	24,182	27,996
For export production	6,232	7,333	9,836	11,562	12,930
For domestic use	5,598	6,486	9,001	12,620	15,065
Capital goods	11,081	11,327	14,552	19,033	22,370
For export production 2/	5,937	3,927	5,657	7,302	7,042
Of which: ships for repair 3/	(3,297)	(--)	(--)	(--)	(--)
For domestic use	5,144	7,400	8,895	11,712	15,327
Total	31,136	31,584	41,020	51,811	61,465
	(In percent of total) 4/				
Consumer goods, except grains	5.3	6.2	6.5	6.7	7.1
For re-export	2.2	2.9	3.3	2.0	2.2
For domestic consumption	3.1	3.3	3.2	4.7	5.0
Grains	4.2	3.6	3.0	2.8	2.9
Industrial raw materials	62.5	54.3	54.9	53.8	53.6
Petroluem	20.0	10.6	9.0	7.1	8.0
For export production	2.6	1.8	2.3	2.0	2.0
For domestic use	17.4	8.8	6.7	5.2	6.0
Other	42.5	43.7	45.9	46.7	45.5
For export production	22.4	23.2	24.0	22.3	21.0
For domestic use	20.1	20.5	21.9	24.4	24.5
Capital goods	28.0	35.9	35.5	36.7	36.4
For export production	9.5	12.4	13.8	14.1	11.5
For domestic use	18.5	23.5	21.7	22.6	24.9
Total 4/	100.0	100.0	100.0	100.0	100.0
Memorandum items:					
Imports for export production	36.7	40.3	43.4	40.4	36.7
Of which: non-oil imports	(34.1)	(38.5)	(41.1)	(38.4)	(34.7)
Imports for domestic use	63.3	59.7	56.6	59.6	63.3
Of which: non-oil imports	(45.9)	(50.9)	(49.9)	(54.5)	(57.3)

Source: Ministry of Trade and Industry.

1/ Customs data. Includes imports of products for final assembly and re-export.

2/ Components for export products; does not include capital goods used to produce exportables.

3/ Beginning 1986, no longer includes ships for repair.

4/ Excludes ships for repair.

Table 19. Korea: Direction of Exports, 1985-89

(In percent of total)

	1985	1986	1987	1988	1989
Industrial countries	70.0	75.4	77.7	75.2	74.2
Of which:					
Australia	1.2	1.5	1.3	1.4	1.6
Canada	4.2	3.6	3.1	2.8	3.0
European Community	10.4	12.4	14.0	13.4	11.9
Japan	15.5	15.6	17.8	19.8	21.6
United States	36.2	40.0	38.7	35.3	33.6
Oil-exporting countries 1/	6.2	5.1	4.5	4.6	4.0
Of which:					
Saudi Arabia	3.3	2.5	2.2	1.9	1.4
Non-oil developing countries	20.1	16.9	16.0	18.2	19.6
Africa	2.0	1.1	0.9	1.1	1.4
Asia	12.6	11.9	11.6	13.6	14.8
Other Europe	1.4	0.3	0.3	0.4	0.4
Middle East	1.0	0.8	0.7	0.6	0.4
Western Hemisphere	3.2	2.8	2.5	2.5	2.6
Other	3.7	2.6	1.8	2.0	2.2
Total	100.0	100.0	100.0	100.0	100.0

Sources: IMF, Direction of Trade Statistics Yearbook; and data provided by the Korean authorities.

1/ The group of oil-exporting countries comprises: Algeria, Indonesia, Iraq, Kuwait, Libya, Nigeria, Oman, Qatar, Saudi Arabia, United Arab Emirates, and Venezuela.

Table 20. Korea: Imports by Country of Origin, 1985-89

(Percent of total)

	1985	1986	1987	1988	1989
Industrial countries	64.5	73.4	73.5	75.1	73.5
Of which:					
Australia	3.6	3.4	3.1	3.5	3.6
Canada	2.0	2.2	2.3	2.3	2.7
European Community	9.5	10.2	11.2	11.7	10.6
Japan	25.3	34.4	33.3	30.7	28.4
United States	21.5	20.7	21.4	24.6	25.9
Oil-exporting countries 1/	11.2	7.1	8.1	5.9	7.9
Of which:					
Saudi Arabia	2.5	2.0	2.6	1.6	1.7
Non-oil developing countries	18.1	14.7	15.1	11.9	13.8
Africa	0.9	0.6	0.5	0.1	0.4
Asia	9.8	8.8	8.6	8.8	8.7
Other Europe	1.2	0.2	2.2	1.9	1.8
Middle East	0.6	0.7	0.9	0.9	0.4
Western Hemisphere	5.5	4.4	2.9	0.2	2.5
Other	6.3	4.8	3.3	7.2	4.8
Total	100.0	100.0	100.0	100.0	100.0

Sources: IMF, Direction of Trade Statistics Yearbook; and data provided by the Korean authorities.

1/ The group of oil-exporting countries comprises: Algeria, Indonesia, Iraq, Kuwait, Libya, Nigeria, Oman, Qatar, Saudi Arabia, United Arab Emirates, and Venezuela.

Table 21. Korea: Invisibles Account, 1985-90

(In millions of U.S. dollars)

	1985	1986	1987	1988	1989	1990 Jan.-June
Receipts	6,664	8,052	10,010	11,252	12,642	6,567
Freight and insurance	1,324	1,464	1,796	2,079	2,184	1,072
Other transportation	758	709	904	964	1,341	724
Travel	784	1,548	2,213	3,116	3,311	1,539
Investment income	794	812	765	1,029	1,680	1,014
Of which:						
Direct investment	(44)	(52)	(46)	(86)	(130)	(...)
Overseas construction	985	635	1,004	361	239	140
Other	2,019	2,884	3,328	3,703	3,887	2,078
Payments	8,110	8,679	9,033	9,985	12,431	6,797
Freight and insurance	522	670	840	988	1,143	607
Other transportation	1,346	1,556	1,953	2,148	2,619	1,532
Travel	606	613	518	1,205	2,356	1,365
Investment income	3,977	4,020	3,553	3,048	2,945	1,406
Of which:						
Direct investment	(116)	(166)	(134)	(179)	(208)	(...)
Overseas construction	214	185	197	110	84	53
Other	1,445	1,636	1,908	2,486	3,284	1,834
Invisible balance	-1,446	-627	977	1,267	211	243
Memorandum item:						
Net receipts on overseas construction	771	450	807	251	155	87

Source: Ministry of Finance.

Table 22. Korea: Approval of Foreign Direct Investment by Home Country and Industry, 1985-89

(In millions of U.S. dollars during period)

	1985	1986	1987	1988	1989	Cumulative approvals at end-1989	Cumulative effected amounts at end-1989
By home country	532	354	1,060	1,283	1,090	7,067	6,045
Japan	364	138	494	696	462	3,554	3,059
United States	109	125	255	284	329	1,941	1,565
Europe	40	63	210	240	212	1,009	928
Other	19	28	101	63	87	563	493
By industry	532	354	1,060	1,283	1,090	7,067	6,045
Chemicals	45	32	153	237	173	1,019	822
Foodstuffs	4	44	50	13	41	249	217
Pharmaceuticals	11	13	34	43	37	210	199
Metal	3	8	17	13	13	165	111
Machinery	51	30	88	65	100	426	340
Electronics	56	67	308	268	116	1,123	975
Financial services	17	10	16	90	154	431	105
Hotels and tourism	312	62	249	419	101	1,681	1,535
Construction	16	--	--	--	--	55	1
Other	17	90	245	135	345	1,708	1,740

Source: Ministry of Finance.

Table 23. Korea: Foreign Direct Investment - Eligibility by Industry

	Before July 1, 1984		Under the Amended Capital Inducement Act				
				Industries eligible for foreign investment			
	Total number of industries	Industries eligible for foreign investment	Total number of industries	Eff. from 7/1/84 to 10/13/85	Eff. from 10/14/85 to 4/5/87	Eff. from 4/6/87 to 12/31/89	Eff. from 1/1/90 to present
Agriculture	12	8	40	5	8	8	8
Mining	25	23	26	12	21	21	21
Manufacturing	400	381	522	449	483	509	510
Electricity, gas, and water	4	2	6	3	3	3	3
Construction	18	10	31	29	31	31	31
Wholesale and retail trade	113	68	139	90	105	105	106
Transport and communication	47	7	53	9	16	16	16
Finance, insurance, and business services	64	11	75	21	31	31	31
Community and social services	152	11	106	42	63	63	63
Other	—	—	1	—	1	1	1
Total	855	521	999	660	762	788	790
(Percent share)	(100.0)	(60.9)	(100.0)	(66.1)	(76.3)	(78.9)	(79.1)

Source: Ministry of Finance.

Table 24. Korea: Foreign Borrowing Requirements, 1985-90

(In millions of U.S. dollars)

	1985	1986	1987	1988	1989	1990 Jan.-April
Gross financing requirements	7,660	4,854	5,684	4,383	4,649	1,896
Current account deficit	887	-4,617	-9,854	-14,161	-5,055	1,171
Amortization 1/	3,468	5,796	14,068	7,451	5,099	1,035
Export suppliers' credits	1,788	970	-220	-125	188	-209
Reserve increase	99	207	1,238	8,837	2,867	-797
Errors and omissions	880	543	-1,191	589	-701	-21
Other	548	1,955	1,643	1,792	2,251	717
Nondebt financing	1,088	1,042	822	1,047	876	317
Direct investment inflows 2/	250	478	625	920	831	305
Sales of P/Ns	838	564	197	127	45	12
Gross borrowing requirements	6,572	3,812	4,862	3,336	3,773	1,579
Short-term borrowing	-693	-1,476	35	490	1,039	963
Private sector	-486	-351	6	668	181	88
Financial institutions	-207	-1,125	29	-178	858	874
Medium- and long-term borrowing	7,265	5,306	4,827	2,846	2,734	616
Public loans	1,024	880	1,124	891	475	128
Commercial loans	964	1,620	1,558	988	-860	30
Financial institutions	4,333	1,725	1,230	356	440	13
Bank loans	2,368	640	795	25	--	--
Bonds	1,219	523	6	100	259	--
FRCDs	370	10	39	41	46	--
Other foreign banks A-account	376	552	390	190	135	13
IMF facilities	132	139	--	--	--	--
Other borrowing	812	924	915	611	959	445
Medium-term import credit	292	293	241	223	780	255
Cash borrowing	--	10	31	20	2	1
Private bonds	238	151	279	162	45	102
Trade bills--other debt	250	--	-97	64	7	-7
Swaps	--	--	--	--	--	--
Others	32	470	61	142	125	94
Memorandum items:						
Export credits, net of P/N sales 3/	940	406	-417	-253	143	-221
Credits extended	1,778	970	-220	-135	188	-209
P/N sales	838	564	197	128	45	12

Source: Ministry of Finance.

1/ Excluding amortization in the A-accounts of local branches of foreign banks.

2/ Gross inflows.

3/ Net of amortization payments received on promissory notes held by Korean residents.

Table 25. Korea: Foreign Assets and Liabilities of the Banking System, 1985-90

End of period	1985	1986	1987	1988	1989	1990 March
	(In millions of U.S. dollars)					
Foreign assets	8,384	8,627	10,240	21,139	23,413	22,249
Bank of Korea	2,794	3,263	3,542	12,378	15,245	13,893
Gold	31	32	32	32	32	32
SDRs	40	18	6	6	2	4
Reserve position in Fund	--	--	1	1	234	271
Foreign exchange	2,722	3,212	3,493	12,339	14,977	13,586
Rest of banking system 1/	5,590	5,364	6,698	8,761	8,168	8,356
Domestic banks	4,956	4,692	5,651	7,304	6,930	6,958
Foreign banks	634	672	1,047	1,457	1,238	1,398
Foreign liabilities	17,334	16,049	12,694	10,883	10,258	10,774
Bank of Korea	1,511	1,548	524	6	7	7
Of which:						
Use of Fund credit	1,508	1,545	520	--	--	--
Rest of banking system 1/2/	15,823	14,501	11,170	10,877	10,251	10,767
Short-term refinancing	3,903	2,066	796	415	403	299
Medium-term loans	5,087	4,831	2,664	1,933	1,214	1,181
Inter-office "A" accounts	4,843	5,665	6,105	6,017	5,491	5,066
Deposits	919	560	436	294	144	127
Other	1,071	1,378	2,169	2,218	2,999	4,094
Net foreign assets	-8,950	-7,422	-2,454	10,256	13,155	11,475
Memorandum items:						
Net foreign assets	-8,951	-7,228	-2,285	10,504	13,354	11,661
Bank of Korea	1,282	1,715	3,018	12,372	15,238	13,886
Rest of banking system 1/	-10,233	-8,943	-5,303	-1,868	-1,884	-2,225
Interoffice "A" accounts of foreign branches of Korean banks 3/	300	324	327	349	341	335
Net foreign assets, including "A" accounts of foreign branches of Korean banks	-8,651	-6,904	-1,958	10,853	13,695	11,996
	(In months of imports of goods and services)					
Gross foreign assets	2.9	2.7	2.6	4.4	4.1	3.7
Bank of Korea	1.0	1.0	0.9	2.6	2.6	2.3
Rest of banking system 1/	1.9	1.7	1.7	1.8	1.5	1.4

Source: Ministry of Finance.

1/ Defined to include deposit money banks, KEB, KDB, KEXIM, and KLCB.

2/ Excluding long-term borrowing of KDB, KEXIM, and KLCB.

3/ Not included in gross reserves.

Table 26. Korea: Outstanding External Debt by Maturity and Borrower, 1985-90

(In millions of U.S. dollars)

End of period	1985	1986	1987	1988	1989	1990 March
Medium- and long-term debt	36,030	35,254	26,277	21,370	18,423	17,766
Maturity over three years	33,684	33,568	24,884	20,037	16,420	15,784
Financial institutions	(14,367)	(14,048)	(8,867)	(6,816)	(5,105)	(4,870)
Nonbank financial institutions	7,139	7,083	3,685	2,242	1,583	1,394
Commercial banks	7,228	6,965	5,182	4,574	3,522	3,476
Of which:						
Interoffice "A" account	(1,500)	(1,678)	(2,284)	(2,532)	(2,254)	(2,254)
Public sector	(11,376)	(11,250)	(9,852)	(8,717)	(7,646)	(7,393)
Private sector	(6,433)	(6,725)	(5,644)	(4,504)	(3,669)	(3,521)
Use of Fund credits	(1,508)	(1,545)	(521)	—	—	—
Maturity over one and up to three years	2,346	1,686	1,393	1,333	2,003	1,982
Nonbank financial institutions	(48)	(36)	(8)	(6)	(3)	(3)
Commercial banks	(1,033)	(1,273)	(970)	(821)	(604)	(491)
Of which:						
Interoffice "A" account	863	1,213	946	821	604	491
Other	(1,265)	(377)	(415)	(506)	(1,396)	(1,488)
Short-term debt	10,732	9,256	9,291	9,780	10,948	11,512
Private nonbank sector	3,640	3,289	3,295	3,963	4,143	4,135
Trade credit	(2,727)	(2,445)	(2,436)	(2,879)	(2,817)	(2,808)
Loans for oil imports	(637)	(498)	(492)	(538)	(660)	(628)
Advance receipts of exports, and others	(276)	(346)	(367)	(545)	(666)	(699)
Banking sector	7,092	5,967	5,996	5,818	6,805	7,377
Interoffice "A" account	(1,737)	(2,105)	(2,593)	(2,560)	(2,603)	(2,296)
Refinance	(3,903)	(2,066)	(796)	(415)	(403)	(299)
Nonresident deposits	(298)	(223)	(215)	(185)	(91)	(87)
Other	(1,154)	(1,573)	(2,392)	(2,658)	(3,708)	(4,695)
Total	46,762	44,510	35,568	31,150	29,371	29,278
Memorandum items:						
Trade-related short-term debt 1/	7,267	5,009	3,724	3,832	3,880	3,735
Nontrade-related short-term debt	3,465	4,247	5,567	5,948	7,068	7,777
Borrowings of nonresident Korean entities 2/	6,076	5,619	6,402	7,258	8,653	8,733 3/
Trade financing	(2,175)	(2,534)	(3,386)	(4,054)	(4,838)	(4,887)
Construction financing	(3,560)	(2,722)	(2,238)	(1,928)	(1,688)	(1,690)
Other	(341)	(363)	(778)	(1,276)	(2,127)	(2,156)

Source: Ministry of Finance.

1/ Comprises trade credit, loans for oil imports, and refinances.

2/ External borrowing of Korean branches or subsidiaries residing abroad, not included in total external debt.

3/ End of February 1990.

Table 27. Korea: Debt Service, 1985-89 1/

(In millions of U.S. dollars)

	1985	1986	1987	1988	1989
Interest 2/	3,687	3,686	3,236	2,678	2,556
Medium- and long-term debt	(2,692)	(2,913)	(2,568)	(2,001)	(1,657)
Short-term debt	(995)	(773)	(668)	(677)	(899)
Amortization 3/	4,192	6,700	14,850	8,323	5,861
Payments due	4,192	5,491	5,896	4,539	3,821
Financial institutions	(810)	(996)	(1,262)	(245)	(178)
Public sector	(704)	(898)	(1,025)	(1,043)	(971)
Private sector	(1,128)	(1,412)	(1,922)	(1,522)	(1,280)
Other 4/	(1,550)	(2,185)	(1,687)	(1,729)	(1,392)
Prepayments	--	1,209	8,954	3,784	2,040
Financial institutions	(--)	(987)	(5,809)	(1,208)	(955)
Public sector	(--)	(108)	(1,496)	(978)	(572)
Private sector	(--)	(114)	(672)	(638)	(404)
Other 4/	(--)	(--)	(977)	(960)	(109)
Total debt service	7,879	10,386	18,086	11,001	8,417
Debt service ratio 5/	23.8	24.8	32.2	15.5	11.4
Interest payments ratio 5/	(11.1)	(8.8)	(5.8)	(3.8)	(3.5)
Amortization payments ratio 5/	(12.7)	(16.0)	(26.4)	(11.7)	(7.9)
Of which: prepayments	(--)	(2.9)	(15.9)	(5.3)	(2.8)
Memorandum items:					
Average interest cost (percent per annum)	8.2	7.9	8.2	8.3	8.3
Three-month LIBOR (percent per annum)	8.4	6.8	7.1	8.0	9.3
Exports of goods and services	33,106	41,965	56,254	70,900	74,050

Source: Ministry of Finance.

1/ Includes IMF.

2/ Estimates of interest payments exclude management fees and charges on new commitments; interest payments on rediscounted export credit; promissory notes are included on a net basis.

3/ On medium- and long-term debt only.

4/ Includes bonds, foreign currency deposits, IMF, medium-term trade credits, and estimated amortization on medium- and long-term items in the A-accounts of local branches of foreign banks.

5/ In percent of exports of goods and services.

Table 28. Korea: Monetary Survey, 1985-90

(In billions of won)

End of Period	1985	1986	1987	1988	1989	1990 June
Net foreign assets	-7,697	-6,128	-1,605	7,251	9,104	9,336
Assets	8,122	8,332	8,647	14,901	16,155	16,704
Liabilities	15,819	14,460	10,252	7,650	7,051	7,368
Swaps with nondeposit money banks	-2,333	-1,566	-145	-113	-90	--
Net domestic assets	39,669	42,805	43,651	43,369	51,230	53,621
Domestic credit	42,561	48,320	56,485	62,639	77,159	79,733
Public sector	(2,013)	(2,183)	(549)	(-1,637)	(-3,635)	(-8,905)
Private sector	(40,548)	(47,137)	(55,936)	(64,276)	(80,794)	(88,638)
Net other items	-2,892	-6,515	-12,834	-19,270	-25,929	-26,112
Of which:						
Monetary Stabilization Bonds	(-528)	(-3,088)	(-7,399)	(-14,833)	(-14,804)	(-14,451)
Exchange Equalization Fund Bonds	(--)	(--)	(-1,461)	(-918)	(-1,181)	(-587)
Broad money plus CDs	29,639	35,110	41,900	50,508	60,244	62,957
Narrow money	7,558	8,809	10,107	12,151	14,329	12,812
Quasi-money	21,007	25,024	30,172	36,787	44,309	47,658
CDs 1/	1,074	1,277	1,621	1,570	1,606	2,487
Memorandum item:						
M2, average stock 2/	28,029	32,870	40,261	47,721	56,905	60,317

Source: Data provided by the Korean authorities.

1/ Certificates of deposit issued by commercial banks.
2/ Average December stock for annual observations.

Table 29. Korea: Reserve Money, 1985-90

(In billions of won)

End of period	1985	1986	1987	1988	1989	1990 April
Net foreign assets	1,289	1,464	2,372	8,437	10,352	9,954
Assets	(2,983)	(3,404)	(3,441)	(9,078)	(10,756)	(10,340)
Liabilities	(-1,694)	(-1,940)	(-1,069)	(-641)	(-404)	(-386)
Swaps with nondeposit money banks	-2,333	-1,566	-145	-113	-90	-41
Bank of Korea foreign currency deposits with deposit money banks	41	1,263	4,642	6,799	6,458	6,410
Net claims on government	887	613	-1,247	-4,103	-4,557	-7,911
Claims	(2,066)	(2,060)	(2,162)	(1,663)	2,727	2,447
Deposits	(-1,179)	(-1,447)	(-3,409)	(-5,766)	(-7,284)	(-10,358)
Net claims on other official entities	570	570	570	570	570	570
Claims on deposit money banks	9,167	9,659	9,246	9,176	9,711	9,865
General loans and rediscounts	(6,784)	(7,404)	(8,758)	(8,268)	(8,501)	(8,469)
Specialized loans and rediscounts 1/	(2,287)	(2,179)	(1,430)	(877)	(1,210)	(1,369)
Other	(96)	(76)	(58)	(31)	(--)	(--)
Claims on private sector	172	186	2,920	4,552	5,676	5,872
Monetary stabilization bonds	-1,900	-4,285	-10,489	-17,286	-19,403	-18,795
Monetary stabilization account (DMB)	-4,185	-3,826	-3,001	-3,072	-39	-63
Other items	611	939	1,601	4,768	4,140	4,803
Reserve money	4,319	5,017	7,469	9,728	12,818	10,665
(Percent change)	(1.7)	(16.2)	(48.9)	(30.2)	(27.9)	(20.1)

Source: Data provided by the Korean authorities.

1/ Includes rediscounted directed export credit (up to the rediscountable amount).

Table 30. Korea: Directed Credit Outstanding by Banking and Financial Institutions, 1985-90

(In billions of won)

	1985	1986	1987	1988	1989	1990 April
Loans with banking funds	6,339	7,377	6,453	5,487	5,468	6,409
Export loans by DMBs	(3,130)	(3,445)	(2,420)	(1,202)	(1,382)	(1,718)
Loans for equipment for export industries by DMBs	(595)	(1,867)	(2,416)	(2,726)	(2,905)	(2,736)
Special equipment loans by DMBs	(174)	(125)	(78)	(45)	(30)	(30)
KEXIM loans for export on credit	(2,440)	(1,940)	(1,539)	(1,514)	(1,331)	(1,925)
Loans with government funds	1,680	1,412	1,430	1,705	1,981	1,643
Loans for medium-sized industries by DMBs	(30)	(29)	(64)	(90)	(201)	(204)
Foreign loan funds by DMBs	(325)	(344)	(235)	(232)	(230)	(233)
Korea Development Bank loans	(1,325)	(1,039)	(1,131)	(1,383)	(1,550)	(1,206)
Loans with NIF funds	2,938	2,827	2,615	2,451	2,326	2,062
Loans by DMBs	(966)	(1,055)	(1,067)	(1,076)	(1,053)	(1,052)
Loans by Korea Development Bank	(1,448)	(1,389)	(1,248)	(1,121)	(1,024)	(976)
Loans by KEXIM	(524)	(383)	(300)	(254)	(249)	(249)
Total	10,957	11,616	10,498	9,643	9,955	10,114
Total directed credit as a percent of total domestic credit to the private sector by banking and financial institutions	14.5	12.9	9.9	10.5	8.6	7.2

Source: Data provided by the Bank of Korea.

Table 31. Korea: Financial Survey, 1985-90 1/

(In billions of won)

End of Period	1985	1986	1987	1988	1989	1990 March
Net foreign assets	-14,828	-13,150	-5,604	4,873	7,356	4,086
Assets	8,465	8,487	8,766	15,146	16,775	16,240
Liabilities	23,293	21,637	14,370	10,273	9,419	12,154
Domestic credit	75,379	89,576	104,235	119,737	154,862	163,191
Government (net)	-920	-881	-1,921	-4,144	-5,192	-7,628
Official entities	570	570	570	570	570	570
Private sector	75,729	89,887	105,586	123,311	159,489	162,076
Other items	-7,033	-9,250	-11,503	-12,897	-19,323	-15,560
Debentures issued	-1,103	-1,240	-1,775	-2,265	-3,164	-3,474
Monetary stabilization bonds	-97	-683	-1,499	-2,463	-3,903	-2,980
Other	-5,833	-7,327	-8,229	-8,169	-12,256	-9,106
Total liquidity	53,518	67,176	87,128	111,713	142,895	151,717
Money	7,558	8,809	10,107	12,151	14,329	13,348
Quasi-money	21,007	25,024	30,172	36,787	44,309	45,107
Certificates of deposit	926	1,046	1,464	1,416	1,422	2,036
NBFI deposits	25,575	34,061	47,204	63,732	86,392	94,253
(Less inter-institution deposits)	(1,548)	(1,764)	(1,819)	(2,373)	(3,557)	(3,027)
Memorandum item:						
Total liquidity (percentage change) 2/	21.7	25.5	29.7	28.2	27.9	30.7

Sources: Data provided by the Korean authorities; and staff estimates.

1/ The financial survey covers the banking system and the nonbank financial institutions (NBFIs).

2/ Change from same period in previous year.

Table 32. Korea: Selected Interest Rates on Deposits, 1985-90

(In percent per annum)

End of period	1985	1986	1987	1988	1989	1990 May
Deposit money banks						
Household checking deposits	6.0	6.0	6.0	4.0	4.0	4.0
Time deposits						
Over 3 months	6.0	6.0	6.0	6.0	6.0	6.0
Over 6 months	6.0	6.0	6.0	6.0	6.0	6.0
Over 1 year	10.0	10.0	10.0	10.0	10.0	10.0
Savings deposits 1/	6.0	6.0	6.0	5.0	5.0	5.0
Installment savings deposits 1/	10.0	10.0	10.0	10.0	10.0	10.0
Property formation deposits 2/						
2 years	15.3	15.3	15.3	15.3	12.7	12.7
5 years	16.9	16.9	16.9	16.9	14.5	14.5
Certificates of deposit (CDs) 3/	11.00	10.75	10.75	11.00	11.0	11.0
Nonbank financial institutions						
Money in trust (2 years) 4/	10.6	10.6	10.6	12.0	12.0	12.0
Investment and finance companies						
Bills resold: 8-29 days	7.5	7.0	7.0	4.5	4.5	4.5
60-90 days	8.5	8.0	8.0	6.5	6.5	6.5
Mutual credit cooperatives						
Time deposits (1 year)	11.0	11.0	11.0	11.0	11.0	11.0
Memorandum items:						
Yield on corporate bonds 5/	12.8	12.8	12.8	13.7	15.2	16.1
(differential over 1-year time deposits)	(2.8)	(2.8)	(2.8)	(3.7)	(5.2)	(6.1)

Sources: Bank of Korea, Monthly Statistical Bulletin; and data provided by the Korean authorities.

1/ From April 1985, savings deposits and preferential installment savings deposits for household were introduced. The maximum interest rates on these deposits are 12 percent and 13 percent, respectively.

2/ These rates include only the interest paid by banks and the government subsidy. In addition, employers are encouraged to contribute to the yield on these assets.

3/ From March 1986, the selling rate of CDs was liberalized.

4/ This rate was liberalized in December 1988.

5/ Period average composite bond rate.

Table 33. Korea: Selected Interest Rates on Loans, 1985-90

(In percent per annum)

End of period	1985	1986	1987	1988	1989	1990 May
Bank of Korea						
Rediscount on prime commercial bills	5.0	7.0	7.0	8.0	7.0	7.0
Rediscount on exports	5.0	7.0	7.0	8.0	7.0	7.0
Commercial banks						
Discounts on bills	10.0-11.5	10.0-11.5	10.0-11.5	11.0-13.5	10.0-12.5	10.0-12.5
Loans for exports	10.0	10.0	10.0	11.0-13.5	10.0-12.5	10.0-12.5
Overdrafts	10.0-11.5	10.0-11.5	10.0-11.5	11.0-13.5	10.0-12.5	10.0-12.5
Loans on installment savings deposits	10.0-11.5	10.0-11.5	10.0-11.5	11.0-13.5	10.0-12.5	10.0-12.5
Term loans						
1-3 years	10.0-13.0	10.0-12.0	10.0-12.0	11.0-13.5	10.0-12.5	10.0-12.5
3-8 years	10.0-13.0	10.0-12.0	10.0-12.0	11.0-13.5	10.0-12.5	10.0-12.5
8-10 years	10.0-12.0	10.0-12.0	10.0-12.0	11.0-13.5	10.0-12.5	10.0-12.5
Other financial institutions						
Korea Development Bank						
Equipment for key industries 1/	10.0-13.0	10.0-13.0 (10.0-11.0)	10.0-13.0 (10.0-11.0)	11.0-13.0	11.0-13.0	11.0-13.0
Using government funds	10.0	10.0	10.0	10.0	10.0	10.0
Using foreign funds	10.4-12.7	LIBOR+2.0	LIBOR+2.0	LIBOR+2	LIBOR+2	LIBOR+2
Korea Housing Bank	10.0-11.5	10.0-11.5	10.0-11.5	11.0-13.5	11.0-13.5	11.0-13.5
Mutual savings and finance companies	18.0	15.0-16.5	14.5-16.0	14.5-17.5	14.5-17.5	14.5-17.5
Mutual credit cooperatives	14.5	14.5	14.5	14.0	14.0	14.0
Agricultural cooperatives 2/	10.0	8.0	8.0	8.0	8.0	8.0
National Investment Fund (NIF)	10.0-11.5	10.0-11.5	10.0-11.5	10.0-11.5	10.0-11.5	10.0-11.5
National Housing Fund (NHF) 3/	10.0	10.0	10.0	10.0	10.0	10.0

Sources: Bank of Korea, Monthly Statistical Bulletin; and data provided by the Korean authorities.

1/ The figures in parenthesis are applied to the manufacturing sector.
2/ Applies also to loans for Fishery.
3/ National housing construction.

Table 34. Korea: Capital Market Statistics, 1985-90

End of period	1985	1986	1987	1988	1989	1990 Q1
Stock market						
Number of listed companies	342	355	389	502	626	...
Number of holders (thousands)	772	1,411	3,102	8,541	19,014	...
Market value (billions of won)	6,570	11,994	26,172	64,544	95,477	...
Composite Price Index						
(January 4, 1980 = 100)	163.4	272.6	525.1	907.2	909.7	840.9
			(In billions of won)			
Securities turnover 1/						
Stocks value	3,621	9,598	20,494	58,121	81,200	17,314
Bonds sales value	3,578	3,167	7,238	8,545	5,149	993
Corporate financing 1/						
Total	3,471	3,570	5,088	12,014	21,628	3,913
Stocks	295	841	1,899	7,770	14,670	918
Public offerings	(35)	(43)	(244)	(1,049)	(3,545)	(76)
Offering to shareholders	(260)	(798)	(1,655)	(6,721)	(11,125)	(842)
Bonds, public offerings	3,177	2,729	3,190	4,244	6,959	2,995
			(Annual percentage change)			
Memorandum items:						
Stock price index	14.7	66.9	92.6	72.8	0.3	-8.3 2/
Corporate financing	52.0	2.8	42.5	136.1	80.0	-6.7 2/

Source: Data provided by the Korean authorities.

1/ Transactions during period.
2/ Percentage change from a year earlier.

Table 35. Korea: Operations of the Central Government and Consolidated Central Government, 1985-90 1/

	1985	1986	1987	1988	1989 Budget	1989 Actual	1990 Budget
			(In billions of won)				
Central government							
Revenue	13,922	15,840	18,860	22,890	22,229	25,962	26,817
Expenditure and net lending	14,867	15,927	18,180	20,881	23,620	25,677	27,907
Overall balance	-945	-87	680	2,009	-1,391	285	-1,090
Consolidated central government 2/							
Revenue	14,505	15,856	18,882	23,101	22,402	26,187	27,309
Expenditure and net lending	15,218	15,921	18,622	21,458	24,285	26,206	28,971
Overall balance	-713	-65	260	1,643	-1,883	-19	-1,662
Financing	713	65	-260	-1,643	1,883	19	1,662
Domestic	273	211	-270	-928	1,992	623	1,894
Bank	(319)	(591)	(-670)	(-1,136)	(1,768)	(98)	(1,356)
Nonbank	(-46)	(-380)	(400)	(208)	(224)	(525)	(538)
Foreign	440	-146	10	-715	-109	-604	-232
			(In percent of GNP)				
Central government							
Revenue	17.8	17.5	17.9	18.1	15.8	18.4	17.6
Expenditure and net lending	19.0	17.6	17.2	16.5	16.7	18.2	18.3
Overall balance	-1.2	-0.1	0.6	1.6	-1.0	0.2	-0.7
Consolidated central government 2/	18.6	17.5	17.9	18.3	15.9	18.6	17.9
Revenue	19.5	17.6	17.6	17.0	17.2	18.6	19.0
Expenditure and net lending	-0.9	-0.1	0.2	1.3	-1.3	--	-1.1
Overall balance							
Financing	0.9	0.2	-0.3	0.7	0.7	0.4	1.2
Domestic	0.3	0.7	-0.6	-0.9	-0.9	0.1	0.9
Bank	(0.4)	(-0.4)	(0.4)	(0.2)	(0.2)	(0.3)	(0.3)
Nonbank	(-0.1)	(-0.2)	(--)	(-0.6)	(-0.1)	(-0.4)	(-0.1)
Foreign	0.6						
			(Percentage changes)				
Consolidated central government 3/							
Revenue	11.2	9.3	19.1	22.3	12.7 3/	13.4	21.9 3/
Expenditure and net lending	9.0	4.6	17.0	15.2	13.3 3/	22.1	19.3 3/
Memorandum item:							
GNP (In billions of won)	78,088	90,544	105,630	126,231	141,066	141,066	152,630

Sources: Data provided by the Korean authorities; and staff estimates.

1/ The central government comprises the General Account, Special Accounts, and Special Budgetary Funds.

2/ Comprises central government and Public Enterprise Special Accounts and Funds.

3/ Budget over previous year's budget.

Table 36. Korea: Central Government Revenue, 1985-90

	1985	1986	1987	1988	1989 Budget	1989 Actual	1990 Budget
	(In billions of won)						
Tax revenue 1/	12,105	13,882	16,690	20,389	19,555	22,394	23,262
Taxes on net income, profits, and capital gains	3,475	3,967	5,134	6,844	7,260	8,864	8,917
Company, corporate, or enterprise	(1,630)	(1,731)	(2,439)	(3,163)	(3,795)	(4,374)	(4,818)
Individuals	(1,845)	(2,236)	(2,695)	(3,681)	(3,465)	(4,490)	(4,099)
Social security contributions	207	250	314	863	1,101	1,112	1,287
Taxes on property	80	102	176	413	418	677	759
Taxes on goods and services	5,933	6,709	7,256	8,411	7,411	8,252	8,793
General sales taxes	(2,901)	(3,272)	(3,650)	(4,205)	(4,687)	(5,260)	(5,734)
Selective excises on goods and services	(2,082)	(2,328)	(2,561)	(3,090)	(2,709)	(2,974)	(3,059)
Profits of fiscal monopolies 2/	(950)	(1,109)	(1,045)	(1,116)	(15)	(18)	(--)
Taxes on international trade	1,950	2,349	3,205	3,168	2,811	2,772	2,778
Other taxes	460	505	605	690	554	717	728
Nontax revenue	1,632	1,839	1,904	2,169	2,271	3,108	2,988
Capital revenue	185	119	266	332	403	460	567
Total revenue	13,922	15,840	18,860	22,890	22,229	25,962	26,817
	(Percentage change)						
Tax revenue	9.3	14.7	20.2	22.2	-4.1	9.8	3.9
Of which: Corporate income tax	(21.2)	(6.2)	(40.9)	(29.7)	(20.0)	(38.3)	(10.2)
Individual income tax	(21.2)	(21.2)	(20.5)	(36.6)	(-5.9)	(22.0)	(-8.7)
Taxes on goods and services	(5.4)	(13.1)	(8.2)	(15.9)	(-11.9)	(-1.9)	(6.6)
Taxes on international trade	(1.5)	(20.5)	(36.4)	(-1.2)	(11.3)	(-12.5)	(0.2)
Nontax revenue	13.9	12.7	3.5	13.9	4.7	43.3	-3.9
Capital revenue	98.9	-35.7	123.5	24.8	21.4	38.6	23.3
Total revenue	10.5	13.8	19.1	21.4	-2.9	13.4	3.3

Source: Data provided by the Korean authorities.

1/ Includes defense surtax and education tax allocated to individual categories as appropriate.
2/ Beginning 1989, tobacco-related revenues were transferred to the jurisdiction of the local tax administration with the creation of a local tobacco consumption tax.

Table 37. Korea: Functional Classification for Central Government Expenditure and Net Lending, 1985-90 1/

	1985	1986	1987	1988	1989 Budget	1989 Actual	1990 Budget
			(In billions of won)				
General public services	1,401	1,597	1,703	1,885	2,348	2,276	2,700
Defense 2/	3,958	4,376	4,632	5,226	6,028	5,925	6,778
Education	2,462	2,713	3,114	3,696	4,134	4,402	5,156
Health	192	232	401	432	514	475	586
Social security and welfare	779	968	1,133	1,504	2,023	2,047	2,624
Housing and community amenities	719	615	663	885	1,146	2,047	2,075
Other community and social services	147	168	409	129	167	169	163
Economic services 1/	3,251	2,886	3,212	4,054	4,012	4,854	4,536
Unallocable (includes interest and transfer to local government)	1,958	2,372	2,913	3,030	3,248	3,482	3,293
Total expenditure and net lending	14,867	15,927	18,180	20,881	23,620	25,677	27,908
			(Percent of total)				
General public services	9.4	10.0	9.4	9.0	9.9	8.9	9.7
Defense	26.6	27.5	25.5	25.2	25.5	23.1	24.3
Education	16.6	17.0	17.2	17.7	17.5	17.1	18.5
Health	1.3	1.5	2.2	2.1	2.1	1.9	2.1
Social security and welfare	5.2	6.1	6.2	7.2	8.6	7.9	9.4
Housing and community amenities	4.8	3.9	3.6	4.3	4.9	7.9	7.4
Other community and social services	1.0	1.0	2.2	0.6	0.7	0.7	0.6
Economic services	21.9	18.1	17.7	19.4	17.0	18.9	16.3
Unallocable (includes interest and transfers to local government)	13.2	14.9	16.0	14.5	13.8	13.6	11.7
Total expenditure and net lending	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Sources: Data provided by the Korean authorities; and staff estimates.

1/ Includes National Investment Fund loans and net lending from foreign borrowing directly on-lent to nonfinancial public enterprises and the private sector. Almost all of these funds are classified in economic services, although some appear in general research, health, and community development.

2/ Includes foreign military sales credits from foreign governments.

Table 38. Korea: Economic Classification of Central Government Expenditure and Net Lending, 1985-90

(In billions of won)

	1985	1986	1987	1988	1989 Budget	1989 Actual	1990 Budget
Current expenditure	11,523	12,830	14,325	16,746	18,777	20,025	22,267
Expenditure on goods and services	5,419	5,990	6,656	7,479	8,785	8,478	10,227
Wages and salaries	(1,892)	(2,060)	(2,246)	(2,593)	(3,030)	(3,002)	(3,787)
Other purchases of goods and services 1/	(3,527)	(3,930)	(4,410)	(4,886)	(5,755)	(5,476)	(6,440)
Interest payments	993	1,135	1,134	1,158	1,123	814	1,088
Domestic	(527)	(571)	(579)	(649)	(654)	(458)	(765)
Foreign	(466)	(564)	(555)	(509)	(469)	(356)	(323)
Subsidies and other current transfers	5,111	5,705	6,535	8,109	8,865	10,733	10,953
To Public Enterprise funds	(469)	(383)	(312)	(586)	(251)	(1,032)	(508)
To local governments	(3,375)	(3,875)	(4,555)	(5,277)	(5,600)	(6,377)	(7,063)
To financial institutions	(34)	(20)	(67)	(158)	(360)	(195)	(238)
To households, nonprofit institutions, and others	(1,198)	(1,387)	(1,562)	(2,050)	(2,618)	(3,089)	(3,104)
To abroad	(34)	(38)	(39)	(38)	(40)	(40)	(40)
Capital expenditure	1,814	2,119	2,618	2,708	3,502	3,751	4,009
Acquisition of new and existing fixed capital assets	976	1,226	1,331	1,208	1,711	1,389	1,528
Purchases of land and intangible assets	80	98	112	209	370	399	617
Capital transfers	720	809	1,078	1,094	1,256	1,711	1,598
To enterprise funds	(...)	(22)	(25)	(26)	(17)	(76)	(9)
To other	(720)	(787)	(1,053)	(1,068)	(1,239)	(1,635)	(1,589)
Purchases of inventories	37	86	97	197	165	253	267
Net lending 2/	1,530	978	1,237	1,427	1,341	1,901	1,631
To enterprise funds	42	69	32	123	30	199	...
To others	1,488	909	1,205	1,304	1,311	1,702	...
Total expenditure and net lending	14,867	15,927	18,180	20,881	23,620	25,677	27,907
Memorandum item:							
Total expenditure and net lending as a percent of GNP	19.0	17.6	17.2	16.5	16.7	18.2	18.3

Source: Data provided by the Korean authorities.

1/ Includes foreign military sales credits from foreign governments.

2/ Includes foreign borrowing directly on-lent to the private sector and to nonfinancial public enterprises classified as "other."

Table 39. Korea Financing by Type of Holder of Consolidated Central Government Operations, 1986-90 1/

(In billions of won)

	1986	1987	1988	1989 Budget	1989 Actual	1990 Budget
Domestic financing 2/	211	-270	-928	1,992	623	1,894
From monetary authorities	-151	-1,113	-2617	-291	105	516
Net borrowing	-8	--	-655	-600	529	-5
Change in deposits	-143	-1,113	-1,962	309	-424	521
From deposit money banks (net)	742	443	1,481	2,059	-138	840
Other	-380	400	208	224	656	538
Financing abroad 3/	-146	10	-715	-109	-604	-232
From international development institutions (net)	44	253	-378	-111	-334	-166
From foreign governments (net) 4/	14	-27	-94	78	-164	15
Other (net)	-204	-216	-243	-76	-106	-81
Total financing	65	-260	-1,643	1,883	19	1,662
Memorandum items: 5/						
Net credit from banking system to public sector in fiscal accounts	591	-670	-1,136	1,768	-33	1,356
Less: Government loans to DMBs 6/	375	578	829	670	629	688
Less: Complimentary period transactions 7/	39	-244	-69	--	467	--
Plus: Carryover from previous year 8/	--	--	--	--	--	--
Plus: Net credit from BOK to Fertilizer Fund 9/	--	--	--	--	--	--
Plus: Net credit from BOK to Fund for Wage & Salary Earners Fortune Formation Saving 10/	--	103	156	175	16	318
Less: Treasury Bill	153	713	446	891	886	-288
Equals: Net credit from banking system to public sector in monetary accounts	24	-1,634	-2,186	382	-1,999	1,274

Sources: Data provided by the Korean authorities; and staff estimates.

1/ Includes: General Account, Special Accounts, Government Funds, and Public Enterprise Funds.

2/ Includes highway construction bonds, industrial reconstruction bonds, Reimbursement Securities Claim Fund, borrowing of the National Investment Fund, NIF bonds, Grain Management Fund grain purchase certificates, grain bonds, and telephone bonds. It excludes deferred payments for rice producers that carry over to a subsequent fiscal year.

3/ Includes foreign borrowing directly on-lent to the private sector and to nonfinancial public enterprises.

4/ Includes foreign military sales credits from foreign governments.

5/ The fiscal and monetary accounts in this report use, as do the authorities, different definitions for the position of the public sector with the banking system: (1) government lending funds in deposit money banks are treated as net lending in the fiscal accounts at the time they are placed in deposit money banks, whereas the monetary data include these funds in government deposits (netted out against claims on the Government) until they are drawn down, (2) the fiscal year runs from January 1 to December 31, but includes a complimentary period in the following January, prior to 1983 this period was January 1-20, since 1983, January 1-15, and (3) bank borrowing by the Fertilizer Fund, a government-directed agency in the private sector, is included in the monetary accounts as net credit to the public sector.

6/ Includes government lending funds channeled through DMBs to third parties. Differs from IFS, line 26f, in that government's holdings of DMB bonds are excluded in IFS, but included here, and IFS deletes all extrabudgetary fund accounts of less than W 5 billion, while all funds are included here.

7/ The January 1-20 complementary period for the fiscal year was abolished in 1982. However, the fiscal year still includes settlement of certain tax payments during January 1-15 in the following year made through small bank branches and rural post offices of the Ministry of Communications' exchange office.

8/ Carry-over items appear only in budgets; they disappear on settlement.

9/ Net credit to the Fertilizer Fund is included in the monetary definition, but the Fertilizer Fund is not defined as part of the public sector in the fiscal accounts.

10/ Net credit to Fund for Wage & Salary Earners Fortune Formation Saving is included in the monetary definition, but the Fund for Wage & Salary Earners Fortune Formation Saving is not defined as part of the public sector in the fiscal accounts.

Table 40. Korea: Grain Management Fund Operations, 1985-90 1/

(In billions of won)

	1985	1986	1987	1988	1989 Budget	1989 Actual	1990 Budget
Operating receipts	1,029	1,018	733	685	672	585	750
Rice sales	469	573	328	334	275	250	373
Barley sales	61	44	29	23	32	24	28
Sales to central government	204	191	246	252	280	266	307
Other grains	148	193	117	52	63	27	32
By-products 2/	147	17	13	24	22	18	10
Operating expenditures	1,368	1,371	1,145	1,542	1,744	1,884	1,444
Domestic rice purchases 3/	1,010	970	797	1,011	1,269	1,473	943
Rice imports	--	--	--	--	--	--	--
Domestic barley purchases	121	92	77	69	124	86	83
Other grains	--	--	--	--	--	--	--
Other grain imports	6	1	--	--	--	--	--
Handling and storage charges 4/	119	92	81	81	100	99	100
Interest payment	100	98	163	357	208	184	255
Other 5/	12	64	27	24	43	42	63
Operating deficit (-)	-339	-299	-412	-857	-1,072	-1,299	-694
Financing	339	299	412	857	1,072	1,229	694
Domestic	341	320	453	900	1,110	1,336	730
Bank of Korea	-79	50	48	-498	-617	-665	-542
Net borrowing	(--)	(--)	(--)	(-500)	(-600)	(-600)	(-542)
Use of cash balances	(-79)	(50)	(48)	(2)	(-17)	(-55)	(--)
Deposit money banks 6/	-30	-49	150	857	1,540	1,040	1,042
Borrowing	(750)	(650)	(800)	(1,447)	(2,700)	(2,200)	(2,642)
Amortization	(800)	(699)	(650)	(590)	(1,160)	(1,160)	(1,600)
Nonbank sources 6/	--	-31	-20	3	3	--	--
Government subsidy	450	350	275	538	190	951	230
Foreign	-2	-21	-41	-43	-38	-37	-36
Borrowing	--	--	--	--	--	--	--
Amortization to government fund financing subaccounts	2	21	41	43	38	37	36

Source: Data provided by the Korean authorities.

1/ Calendar-year basis.
2/ Includes miscellaneous revenue.
3/ Includes previous-year rice and rice purchases financed by deferred payment.
4/ Includes management expenses of Grain Management Special Account.
5/ Includes transfers to GMSA.
6/ Represents Grain Bonds. Beginning in 1984, data for deposit money banks include sales of grain bonds nonbank sources.

Table 41. Korea: Operations of Local Governments, 1985-90

	1985	1986	1987	1988	1989 Budget	1990 Budget
			(In billions of won)			
Revenue and grants	7,194	8,172	9,971	11,819	12,897	17,629
Revenue	3,476	3,883	4,658	5,837	6,727	13,760
Current revenue	3,339	3,681	4,491	5,552	6,383	13,405
Tax	(1,655)	(1,810)	(2,192)	(3,099)	(3,946)	(5,158)
Nontax	(1,684)	(1,871)	(2,299)	(2,453)	(2,438)	(8,248)
Capital revenue	137	202	168	285	344	355
Grants	3,718	4,289	5,313	5,982	6,170	3,869
Expenditure and net lending	7,521	8,198	9,324	11,103	13,411	17,629
Expenditure	7;202	7,888	9,081	10,881	13,073	17,178
Current expenditure	4,104	4,591	5,396	6,282	8,032	7,549
Capital expenditure	3,098	3,297	3,685	4,598	5,041	9,629
Net lending	319	310	243	222	368	451
Overall balance	-327	-26	647	716	-544	--
Financing	327	26	-647	-716	544	--
Domestic	327	26	-647	-716	544	--
Domestic money banks	(103)	(83)	(48)	(61)	(-30)	(--)
Other	(224)	(-57)	(-695)	(-77)	(574)	(--)
			(In percent of total)			
Revenue and grants	100.0	100.0	100.0	100.0	100.0	100.0
Revenue	48.3	47.5	46.7	49.4	52.2	78.1
Current revenue	46.4	45.0	45.0	47.0	49.5	76.0
Tax	23.0	22.1	22.0	26.2	30.6	29.3
Nontax	23.4	22.9	23.1	20.8	18.9	46.8
Capital revenue	1.9	2.5	1.7	2.4	2.7	2.0
Grants	51.7	52.5	53.3	50.6	47.8	21.9
Expenditure and net lending	100.0	100.0	100.0	100.0	100.0	100.0
Expenditure	95.8	96.2	97.4	98.0	97.5	97.4
Current expenditure	54.6	56.0	57.9	56.6	59.9	42.8
Capital expenditure	41.2	40.2	39.5	41.4	37.6	54.6
Net lending	4.2	3.8	2.6	2.0	2.7	2.6
Financing	100.0	100.0	100.0	100.0	100.0	...
Domestic	100.0	100.0	100.0	100.0	100.0	...
Domestic money banks	31.5	319.2	-7.4	-8.5	-5.5	...
Other	68.5	-219.2	107.4	108.5	105.5	...

Source: Data provided by the Korean authorities.

Table 42. Korea: Operations of General Government, 1985-90

	1985	1986	1987	1988	1989	1990 Budget
			(In billions of won)			
Consolidated central government 1/						
Total revenue and grants	14,505	15,856	18,882	23,101	26,187	27,309
Total expenditure and net lending	15,218	15,921	18,622	21,458	26,206	28,971
Overall balance	-713	-65	260	1,643	-19	-1,662
Consolidated local governments						
Total revenue and grants	7,194	8,172	9,971	11,819	12,897	17,629
Total expenditure and net lending	7,521	8,198	9,324	11,103	13,411	17,178
Overall balance	-327	-26	647	716	-544	451
General government						
Total revenue and grants	17,911	19,739	23,540	...	...	...
Total expenditure and net lending	18,794	19,707	22,560	...	...	...
Overall balance	-883	32	980	...	...	...
			(In percent of GNP)			
Consolidated central government 1/						
Total revenue and grants	18.6	17.5	17.9	18.3	18.6	17.9
Total expenditure and net lending	19.5	17.6	17.6	17.0	18.6	19.0
Overall balance	-0.9	-0.1	0.2	1.3	--	-1.1
Consolidated local governments						
Total revenue and grants	9.2	9.0	9.4	9.4	9.1	11.6
Total expenditure and net lending	9.6	9.0	8.8	8.8	9.5	11.3
Overall balance	-0.4	--	0.6	0.6	-0.4	0.3
General government						
Total revenue and grants	22.9	21.8	22.3	...	...	...
Total expenditure and net lending	24.1	21.8	21.4	...	...	...
Overall balance	-1.2	--	0.9	...	...	...
GNP (in billions of won)	78,088	90,544	105,630	126,231	141,066	152,630

Source: Data provided by the Korean authorities.

1/ Comprises Central Government and Public Enterprise Special Accounts and Funds.

Table 43. Korea: Summary of the Operations of the Government-Invested Enterprises, 1985-90

	1985	1986	1987	1988 1/	1989 Budget	1989 Actual	1990 Budget
			(In billions of won)				
Korea Electric Power Corporation							
Operating revenue	3,425	3,649	4,006	4,421	4,497	4,568	4,823
Current expenditure	2,048	1,706	1,894	2,048	2,559	2,482	2,982
Operating surplus	1,377	1,943	2,112	2,373	1,938	2,086	1,841
Investment	1,729	1,476	1,348	1,282	1,805	1,558	2,197
Net financing requirement	352	-467	-764	-1,091	-133	-528	356
Korea Telecommunications Authority							
Operating revenue	1,826	2,085	2,487	2,598	2,893	2,905	3,508
Current expenditure	1,046	816	960	1,001	1,243	902	1,070
Operating surplus	780	1,269	1,527	1,597	1,650	2,003	2,438
Investment	1,141	1,113	1,200	1,297	1,387	1,745	2,200
Net financing requirement	361	-156	-327	-318	-263	-258	-238
Total							
Operating revenue	7,364	8,114	9,333	12,987	13,551	13,925 2/	15,830 2/
Current expenditure	5,302	4,722	5,771	8,781	10,214	9,423	11,013
Operating surplus	2,062	3,392	3,562	4,206	3,337	4,502	4,817
Investment	3,504	3,096	3,091	3,060	3,947	3,957	5,242
Net financing requirement	1,442	-296	-471	-1,146	610	-545	425
Financing							
Domestic bank	(626)	(-328)	(896)	(-228)	(246)	(190)	(414)
Domestic nonbank	(567)	(305)	(-125)	(-190)	(880)	(-88)	(187)
Foreign	(249)	(-274)	(-1,242)	(-728)	(-516)	(-647)	(-176)
			(In percent of GNP)				
Total							
Operating revenue	9.4	9.0	8.8	10.3	9.6	9.9	10.4
Current expenditure	6.8	5.2	5.5	7.0	7.2	6.7	7.2
Operating surplus	2.6	3.7	3.4	3.3	2.4	3.2	3.2
Investment	4.5	3.4	2.9	2.4	2.8	2.8	3.4
(In percent of gross capital formation)	(14.8)	(11.5)	(9.8)	(7.8)	(8.0)	(8.1)	(...)
Net financing requirement	1.8	-0.3	-0.4	-0.9	0.4	0.4	-0.3
Financing							
Domestic bank	-0.8	-0.4	0.8	-0.2	0.2	0.4	0.3
Domestic nonbank	-0.7	0.3	-0.1	-0.2	0.6	-0.1	0.1
Foreign	-0.3	-0.3	-1.2	-0.6	-0.4	-0.5	-0.1

Sources: Data provided by the Korean authorities; and staff estimates.

1/ In 1988, two new enterprises, the Korea Tobacco and Ginseng Corporation and the Korea Security Printing and Mining Corporation, were created. The addition of these enterprises contributed the equivalent of 1 3/4 percent of GNP to operating revenues and total (current and investment) expenditures of the nonfinancial government-invested enterprises. The overall net financing requirement was not, however, affected.

2/ Excludes Korea Broadcasting System, which was reclassified as a private enterprise in 1989.

Table 44. Korea: Operations of the Government-Invested Enterprises, 1985-90

(In billions of won)

	1985	1986	1987	1988	1989 Budget	1989 Actual	1990 Budget
Korea Electric Power Corporation							
Operating revenue	3,425	3,649	4,006	4,421	4,497	4,568	4,823
Total expenditure	3,777	3,182	3,242	3,330	4,364	4,040	5,179
Net financing requirement	352	-467	-764	-1,091	-133	-528	356
Korea Telecommunications Authority							
Operating revenue	1,826	2,085	2,487	2,598	2,893	2,905	3,507
Total expenditure	2,187	1,929	2,160	2,280	2,630	2,647	3,269
Net financing requirement	361	-156	-327	-318	-263	-258	-238
Korea Tobacco and Ginseng Corporation							
Operating revenue	--	--	--	2,080	1,985	2,323	2,311
Total expenditure	--	--	--	2,045	1,978	2,184	2,219
Net financing requirement	--	--	--	-35	-7	-139	-92
Korea National Housing Corporation							
Operating revenue	468	661	655	1,089	827	1,238	1,706
Total expenditure	909	767	852	1,289	1,023	1,348	1,917
Net financing requirement	3	219	197	200	196	110	211
Korea Land Development Corporation							
Operating revenue	414	348	380	484	793	723	1,080
Total expenditure	456	415	426	544	1,414	1,037	1,179
Net financing requirement	42	67	46	60	621	314	99
Industrial Sites and Water Resource Development Corporation							
Operating revenue	298	318	437	588	745	664	739
Total expenditure	320	343	499	581	775	659	742
Net financing requirement	22	25	62	-7	30	-5	3
Korea Broadcasting System							
Operating revenue	259	253	266	313	383	... 1/	... 1/
Total expenditure	262	235	251	287	335	...	...
Net financing requirement	3	-18	-15	-26	-48	...	...
Korea Gas Corporation							
Operating revenue	15	6	312	394	322	346	355
Total expenditure	157	143	370	373	296	293	330
Net financing requirement	142	137	58	-21	-26	-53	-25
Daihan Coal Corporation							
Operating revenue	189	198	200	213	251	197	244
Total expenditure	201	195	222	219	261	240	239
Net financing requirement	12	-3	22	6	10	43	-5
Korea Highway Corporation							
Operating revenue	171	246	187	225	264	364	415
Total expenditure	174	241	361	301	461	427	548
Net financing requirement	3	-5	174	76	197	63	133
Korea Security Printing and Mining Corporation							
Operating revenue	--	--	--	128	94	88	100
Total expenditure	--	--	--	132	74	40	48
Net financing requirement	--	--	--	4	-20	-48	-52

Bibliography

Bognanno, M.F., "Korea's Industrial Relations at the Turning Point," Korea Development Institute, Working Paper No. 8815 (1988).

Boughton, James M., "Money Demand in Five Major Countries: Estimating and Interpreting Error-Correction Models," manuscript, International Monetary Fund, Washington, D.C. (1990).

Deppler, Michael C. and Duncan M. Ripley, "The World Trade Model: Merchandise Trade," Staff Papers, International Monetary Fund Washington, D.C., Vol. 25 (March 1978), pp. 147-206.

Engle, Robert F., and C.W.J. Granger, "Cointegration and Error Correction: Representation, Estimation and Testing," Econometrica, Vol. 55, No. 2 (March 1987), pp. 251-76.

Haas, Richard D. and Anthony G. Turner, "The World Trade Model: Revised Estimates," Journal of Policy Modeling, (forthcoming).

Hahm, Jeong-Ho, and Woon-Gyu Choi, "The BOK89 Model of the Korean Economy," Bank of Korea Quarterly Economic Review, (December 1989), pp. 17-62.

Hendry, David F., "Econometric Modelling with Cointegrated Variables: An Overview," Oxford Bulletin, Vol. 48, No. 3 (1986), pp. 201-13.

Johansen, Soren, "Statistical Analysis of Cointegration Vectors," Journal of Economic Dynamics and Control, Vol. 12 (June/September 1988), pp. 111-63.

Kim, C.S., "Labor Market Developments of Korea in Macroeconomic Perspectives," Korea Development Institute, Working Paper No. 8909 (1989).

Kim, Jae Chun, Jae Sung Hur and Ki Bong Kim, "Structural Changes in the Velocity of Money," Bank of Korea Quarterly Review, (March 1990), pp. 18-37.

Kim, Kyeong-Su, "Korea's Capital Market Internationalization Plan for 1989-1992," Korea Exchange Bank, Monthly Review (February 1989), pp. 3-14.

Kim, Wang-Woong, "Recent Interest Rate Liberalization in Korea," Korea Exchange Bank, Monthly Review (December 1988), pp. 3-13.

Kwon, Il-Min, "Bond Market in Korea," Korea Exchange Bank, Monthly Review (February 1990), pp. 3-12.

Korea Employers' Federation, Industrial Relations in Korea (1990).

Ministry of Labor, Labor Administration (1990).

_____, Labor Laws of Korea (1989).

_____, Labor-Management Relations in Korea (1989).

Moran, Christian, "A Structural Model for Developing Countries' Manufactured Exports," The World Bank Economic Review, Vol. 2. No. 3, (1988), pp. 321-40.

Park, Dong-Soon, "Money Demand Function Based on Error Correction Mechanism," Bank of Korea Working Paper, No. 1, July 1989.

Park, Soon Poong, "Financial Repression and Liberalization in Korea," Korea Exchange Bank, Monthly Review (October 1989), pp. 3-23.

Peck, J.K., "Ramifications of the 1987 Labor Uprising in Korea," Law and Policy in International Business, Vol. 20 (1988), pp. 331-45.

Pyo, Hak, "Measures of the Capital Stock in Korea," Manuscript, (1989).

Roh, Choong-Hwan, "Korean Corporate Financing," Korea Exchange Bank, Monthly Review (April 1990), pp. 3-13.

Roh, Choong-Hwan, "The Money Market Development in Korea," Korea Exchange Bank, Monthly Review (December 1989), pp. 3-15.

Spencer, Grant, "The World Trade Model: Revised Estimates," Staff Papers, International Monetary Fund Washington, D.C., Vol. 27 (June 1984), pp. 285-319.

Shim, Song-Dal and Yoonha Yoo, "The Korea Development Institute Quarterly Model of the Korean Economy," Manuscript (March 1990).

Stock, James H., "Asymptotic Properties of Least Squares Estimators of Cointegrating Vectors," Econometrica, Vol. 55, No. 5 (1987), pp. 1035-56.

Table 44 (Concluded). Korea: Operations of the Government-Invested Enterprises, 1984-89

(In billions of won)

	1985	1986	1987	1988	1989 Budget	1989 Actual	1990 Budget
Agricultural Promotion Corporation							
Operating revenue	110	121	125	155	165	163	162
Total expenditure	116	127	128	158	169	130	148
Net financing requirement	6	6	3	3	4	-33	-14
Korea National Tourism Corporation							
Operating revenue	44	64	70	88	104	93	122
Total expenditure	39	62	71	88	105	94	123
Net financing requirement	5	-2	1	--	1	1	1
Korea Mining Promotion Corporation							
Operating revenue	28	27	23	24	25	28	31
Total expenditure	32	30	58	37	28	60	31
Net financing requirement	4	3	35	13	3	32	--
Korea Petroleum Development Corporation							
Operating revenue	8	10	12	19	13	25	14
Total expenditure	9	27	45	42	17	31	55
Net financing requirement	1	17	33	23	34	6	41
General Chemical Co., Ltd.							
Operating revenue	5	6	32	30	26	31	34
Total expenditure	-1	2	-26	3	6	6	8
Net financing requirement	-6	-4	-58	-27	-20	-25	-26
Agricultural and Fisheries Development Corporation							
Operating revenue	28	34	57	42	53	51	58
Total expenditure	93	50	71	43	55	53	69
Net financing requirement	65	16	14	1	2	2	11
Korea Overseas Development Corporation							
Operating revenue	3	4	3	4	4	3	4
Total expenditure	3	4	3	4	4	3	4
Net financing requirement	--	--	--	--	--	--	--
Korea Trade Promotion Corporation							
Operating revenue	26	30	31	34	36	36	38
Total expenditure	26	30	32	35	37	36	38
Net financing requirement	--	--	1	1	1	--	--
Korea Labor Welfare Corporation							
Operating revenue	24	32	27	31	10	47	52
Total expenditure	24	15	22	20	57	18	72
Net financing requirement	--	-17	-5	-11	17	-29	20
National Textbook Co., Ltd.							
Operating revenue	24	23	23	27	31	32	35
Total expenditure	24	21	22	30	41	34	37
Net financing requirement	--	-2	-1	3	10	2	2
Total operating revenue	7,364	8,114	9,333	12,987	13,550	13,925	15,830
Total expenditure	8,806	7,818	8,862	11,841	14,160	13,380	16,225
Net financing requirement	1,442	-296	-471	-1,146	690	-545	425

Source: Data provided by the Korean authorities.

1/ Effective from 1989, Korea Broadcasting System was reclassified as a private enterprise.

Table 45. Korea: Composition of the Consolidated Central Government, 1990

Central government			Public enterprises
General Account	Special Accounts	Special Budgetary Funds	Special Accounts 1/
	1. Fiscal Investment and Financing	1. Forestry Development	1. Grain Management 2/
	2. National University Hospital	2. Military Personnel Pension	2. National Railroad
	3. National Forestry Management	3. Defense Industry Development	3. Communication
	4. Military Personnel Pension	4. Agricultural Mechanization	4. Supply 2/
	5. Reformatory Operation	5. Operation of Agricultural Price Stabilization	
	6. Industrial Workers' Accident Insurance	6. Seed Revolving	
	7. Military Establishment Transfer	7. Potential Farmer-Fisherman	Funds
	8. Judicial Building Construction	8. Agricultural Industry and University Cooperation	1. Grain Management
	9. National Medical Center	9. Fishery Promotion	2. Supply
	10. Postal Insurance	10. Industrial Development	
	11. License Management	11. Food Promotion	
	12. Road Construction and Management 3/	12. Coal Industry 4/	
		13. Social Welfare	
	Other Accounts	14. Vocational Training Promotion	
	1. Disposal of Previous Years' Surplus	15. Industrial Workers' Accident	
	2. Foreign Borrowing on-lent to the Private Sector	16. Tourism Promotion	
	3. FMS Credit	17. Veterans' Relief	
		18. Patriots Supporting	
		19. National Pension	
		20. National Housing	
		21. National Investment	
		22. Science Education	
		23. Pneumoconiosis	
		24. Small Business Promotion	
		25. Overseas Economic Development	
		26. Rural Community Development	
		27. National Pension 5/	
		28. Youth Fostering 3/	

Source: Data provided by the Korean authorities.

1/ The Monopoly Special account was abolished effective 1988, and its operations were taken over by the newly-created Korea and Tobacco Ginseng Corporation.
2/ The administrative costs of the Grain Management Fund and the Supply Fund are channeled through these accounts.
3/ Established effective 1989.
4/ Effective 1990 the Coal Storage Fund was abolished, and its operations were taken over by the newly-created Coal Industry Fund.
5/ Established effective 1988.