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STAFF APPRAISAL REPORT

MEXICO

FOURTH INDUSTRIAL EQUIPMENT FUND (FO

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Projects Department
Latin America and the Caribbean Regional Office

CURRENCY EQUIVALENT

Currency Unit = Peso (Mex$)

US$1 = Mex$22.70
Mex$1 = US$0.044

GLOSSARY OF ACRONYMS

ACF	Average Cost of Funds to Financieras
ATA	Average Total Assets
CEDI	Indirect tax rebate certificates
EDI	Economic Development Institute
ERR	Economic Rate of Return
FIDEIN	Fideicomiso de Conjuntos, Parques y Ciudades Industriales, y Centros Comerciales
FIRA	Fondo Instituido en Relacion con la Agricultura
FOGAIN	Fondo de Garantia y Fomento a la Industria Mediana y Pequena
FOMEX	Fondo para el Fomento de las Exportaciones de Productos Manufacturados
FOMIN	Fondo Nacional de Fomento Industrial
FOVI	Fondo de Operacion y Descuento Bancario a la Vivienda
FOGA	Fondo de Garantia y Apoyo a los Creditos para la Vivienda
FRR	Financial Rate of Return
IFC	International Finance Corporation
IMIT	Instituto Mexicano de Investigaciones Tecnologicas
NAFINSA	Nacional Financiera, S.A.
SARH	Secretaria de Agricultura y Recursos Hidraulicos
SMI	Small and Medium Industries
SSA	Secretaria de Salubridad y Asistencia
SSMA	Subsecretaria de Mejoramiento del Ambiente

FISCAL YEAR

January 1 - December 31

MEXICO

FOURTH INDUSTRIAL EQUIPMENT FUND (FONEI) PROJECT

STAFF APPRAISAL REPORT

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This report is based on the findings of an appraisal mission which visited Mexico in January/February, 1979. The mission comprised Messrs. N. Santiago, N. Hughes (LCPI2); G. Castaneda, D. Sarfaty and J. Baranson (Consultants). Mr. I. Baskind assisted in the preparation of this report, and Ms. A. Velarde, in the preparation of statistical tables.

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I. THE INDUSTRIAL SECTOR

A. Recent Performance

1.01 Since 1974, the Mexican economy has undergone sharp fluctuations. Prior to that year the country had experienced two decades of virtually uninterrupted economic expansion with GDP growth rates averaging 7% annually (Annex 9, T-1), levels of inflation generally in line with international price movements and only moderate balance of payments pressures. The four-year period 1974 through 1977, on the other hand, was marked by considerably reduced GDP growth rates, averaging 3.5% p.a., high inflation rates exceeding 20% p.a. and substantial fiscal and balance of payments deficits.

1.02 In 1978 the situation was radically reversed once again and there were indications of the initiation of a new period of accelerated development. Far outstripping the expectations held at the beginning of the year, GDP rose by an estimated 8-9% while inflation was reduced, falling to around 18% from 29% in 1977. Moreover, expanding exports, increased tourism revenues and substantial capital inflows permitted exchange accumulation in spite of a record level of imports.

1.03 These developments occurred in a changed policy framework established by the government which took office at the end of 1976, stressing efficient allocation of resources. These policies are characterized by (i) measures to achieve levels of real interest rates conducive to increasing the mobilization of private savings; (ii) a realistic exchange rate policy; (iii) further liberalization of imports; and (iv) renewed efforts at export promotion. This was further buttressed by increasing knowledge of the extent of the country's hydrocarbon resources which may virtually eliminate foreign exchange restraints on development policy in the future.

1.04 Manufacturing. From 1960 through 1973 manufacturing output increased at an annual rate exceeding 8%, its share of GDP rising from 19.2% to 22.8% (Annex 9, T-2). During the four-year period 1974-77, the growth rate decreased more than 50%, averaging less than 4% p.a. The recovery in 1978 caused output expansion to rise to record rates, the preliminary estimate being 10-11%.

1.05 Since 1960, structural changes associated with growing population and incomes have emerged within the sector. The share of the traditional consumer goods industries in manufacturing value added (i.e. food, beverages and tobacco, textiles, clothing and shoes) has fallen somewhat from 54% in 1960 to 51% in 1977, while those of intermediate goods and engineering industries have risen (Annex 9, T-3). The engineering industries have experienced a particularly rapid expansion, with the share rising from 12.8% in 1960 to 18.3% in 1977. However, a substantial portion of this output is accounted for by durable consumer goods; production of capital goods remains at a relatively low level. As a consequence, to meet increasing investment requirements the country has had to rely heavily on imported capital goods (Annex 9, T-5) and this now has become the largest import category, representing more than a third of total imports.

1.06 Exports of manufactured goods 1/ have risen sharply since 1970, reflecting the efforts initiated at that time to develop this trade (Annex 9, T-8). The measures have included indirect tax rebates (CEDI), 2/ credit on concessionary terms and institutional support for external promotion. Between 1970 and 1974 the value of these external sales 3/ rose almost fourfold, and their share in total merchandise exports rose from about 20% at the end of the 1960s to over 40%. While their share in the gross value of industrial output also rose, their contribution has remained at relatively low levels not much above 5%.

1.07 Domestic inflation and recession abroad made themselves felt in 1975, when manufactured exports fell to US$1,069 million, 13.5% below the 1974 level of US$1,236 million. The subsequent recovery abroad resulted in some increase in the value of these exports in 1976 (to US$1.191 million) but the failure to adjust the exchange rate in line with the difference between domestic and foreign inflation rates continued to influence external sales; as a result, the 1976 level was almost 20% below the 1974 peak in real terms. The massive peso devaluation in September 1976 restored a substantial degree of competitiveness to Mexican exports of manufactured goods, and in 1977 the value of those exports rose to a new peak level of US$1,391 million, although still some 10-15% below the 1974 volume in real terms. This expansion continued into 1978, with the exports value rising to about $1,800 million, exceeding the 1974 level in real terms by about 10%. Moreover, this sharp rise occurred at a time when growing domestic demand was putting increasing pressure on exportable supplies.

1.08 The government's incentive programs have continued to support the turnaround in exports. Export transactions receiving CEDIs and CEDI-related sales in 1978 were twice the level of the preceding year, which had been affected by the suspension of the CEDI program immediately after devaluation (Annex 9, T-9). A modified system was reintroduced, however, in mid-1977. The percentage of the taxes rebated to sales remained virtually at the same level in 1977 and 1978--6.77% and 6.87%, respectively. The CEDI program in its present form is scheduled to terminate beginning in 1980, when the Value Added Tax takes effect. The government intends, however, to continue the export incentive program, and procedures to this effect are under review.

1.09 Another element which has aided exports has been the availability of resources to finance both working capital needs for production of export orders and longer-term credits for these sales, through FOMEX, the special

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1/ Excluding assembly ("maquila") industries.

2/ Indirect tax rebate certificates.

3/ This discussion also excludes exports of sugar, which are included in the category of manufactured products in most Mexican sources. In 1970 sugar represented some 22% of manufactured exports, declining to about 11-13% during 1973-75. Since 1976, sugar exports have virtually disappeared.

trust fund of the Banco de Mexico created in 1964 (Annex 9, T-10). While the value of FOMEX export operations rose in 1978, the increase was less than the rise in the value of eligible exports. This reflected the upward adjustments made during 1978 in the interest rate charged by FOMEX for its operations, in line with the government's policy to achieve positive real interest rates. 1/

1.10 Import liberalization. A key element in the goal of the present authorities to open the Mexican economy further is to liberalize import policy. In the past the import substitution approach to industrial development depended heavily on import controls, with generally moderate tariff levels. Nonetheless, internal competition, made possible by the relatively large market, the relatively open borders and various investment incentives, contributed to the growth of a reasonably efficient industrial sector with the exception of a few branches. With increasing emphasis being given to further improvements in international competitiveness, which would lead to higher levels of exports of manufactured products, the government began to liberalize imports at the end of 1977, reducing the number of products subject to prior licenses. Further products were freed in June and December 1978. Thus, by the beginning of 1979, slightly more than two-thirds of the items in the customs nomenculature were no longer subject to prior licenses. Nevertheless, the items still subject to controls accounted for about 65% of total imports in 1978. The inter-ministerial committee which is responsible for commercial policy is currently undertaking studies of effective protection and actual tariff levels, in order to develop the program for further liberalization integrated with moderate tariff levels appropriate for the industrial strategy which Mexico is now elaborating.

B. The National Industrial Development Plan

1.11 With substantial progress having been achieved in meeting the short-term goals of stabilization, reviving economic growth and restoring investor confidence, attention is now being focussed on medium- and longer-term elements affecting the growth of the economy and the industrial sector. After considerable preparation and detailed discussions within the government, the Secretaria de Patrimonio y Fomento Industrial (SEPAFIN) published in March 1979 the National Industrial Development Plan, 1979-1982. The quantitative aspects of the Plan document are presented in a simulation over the time span 1979-1982 of a number of important economic variables, based mainly upon historical experience. However, it takes into account the considerably higher rate of public investment and imports which are made possible by the exports of hydrocarbons. Thus, the Plan is not allocative but rather indicative of growth potential. Moreover, the aggregates which are extrapolated are already obsolete due to GDP growth higher in 1978 than expected, the continuation of that growth in 1979 again above the expected level, and the recent increases in international oil prices. Nevertheless, the Plan represents a fundamental document in that it sets out basic sectoral objectives of the Mexican Government and provides the rationale for using specific policy tools.

1/ See discussion of the financial sector, para. 2.06.

1.12 The overall growth strategy of the Plan integrates certain key objectives, including (a) accelerating the generation of employment opportunities; (b) increasing real income of the population; (c) promoting industrial growth in accordance with the human and natural resources available in the country; (d) promoting industrial investment in accordance with regional and sectoral priorities; (e) orienting industrial production towards external markets; and (f) providing impetus to indigenous technological growth in industry. To achieve these objectives, it is proposed to use a wide-ranging set of policy instruments, including substantial public investment in economic and social infrastructure, with emphasis on the new geographical areas for industrial growth, and in certain directly productive subsectors such as petroleum and petrochemicals, procurement practices for public sector institutions which would favor efficient local production of capital goods, and fiscal and other incentives for the private sector to channel investment into the priority geographic zones and the priority subsectors and to promote employment. A significant element in the Plan is the critical role assigned to the private sector. While private fixed capital formation (including agriculture, mining, tourism and commerce as well as manufacturing industry) is expected to decline as a share of total fixed capital formation, this change in relative shares reflects basically the expected sharp increase in public sector investment made possible through the increased financial resources from exploitation of the hydrocarbon resources. The rate of growth of private investment, in fact, is expected to rise sharply from the 7% p.a. level achieved in 1970-75 to 10% p.a. in the period 1977-82, with a peak of 14% in 1982.

1.13 The major policy tools affecting the private sector have already been put in place through the issuance of five presidential decrees. Regional priorities were defined in a decree published in the Diario Oficial of February 2, 1979 and sectoral priorities were set out in a decree published March 9, 1979. The specific fiscal incentives in accordance with those priorities were contained in a decree published on March 6, 1979. This decree included additional fiscal incentives to achieve other objectives, including promotion of small industry and generation of additional employment opportunities through better utilization of existing capacity. Promotional pricing for certain inputs for new industries in the highest priority zones, especially export-oriented secondary petrochemicals, was provided for in a decree published on December 29, 1978. Finally, a decree establishing an interministerial committee to oversee the implementation of the Plan, and which outlined the general objectives, was published on March 19, 1979.

1.14 In terms of general economic magnitudes, industrial growth over the last 20 years averaging 8% p.a. has been able to provide an employment increase of no more than 3% p.a., about equal to the annual percentage increase in the labor force. Based on the increased import capacity provided by the hydrocarbon resources, the Plan considers it possible to achieve 10-12% annual increases in industrial output with increases in employment of the order of 5%. In addition, considerable emphasis will be given to the development of agro-industries, which will have important backward linkages to the agricultural sector, generating demand for those products and consequently offering further employment and income opportunities to those employed in agriculture and distribution.

1.15 Among the industrial branches highest priority is given to expansion of capital goods producing industries and of output of certain intermediates critical to the rest of the economy (steel and cement), as well as to the development of agroindustries. Capital goods currently represent the largest category of imports and their production is characterized by relatively low investment costs over new jobs created. Anticipated demand for these branches of industry indicate the ability to reach levels of output which will be technically efficient for a number of key product lines; however, appropriate commercial policies will also have to be designed to ensure economically efficient levels.

1.16 Along with the focus on employment opportunities, the main objective of the regional decentralization effort is to achieve a better spatial distribution of industry and to control the growth in the main cities, in particular Mexico City, where the burgeoning population has already created serious social, economic and ecological problems. Top priority is given to the development of four "industrial ports" (Zone IA), embracing the areas around Lazaro Cardenas, Salina Cruz, Coatzacoalcos and Tampico, and selected other areas (Zone IB) whose development has been considered important within the nationwide Urban Plan. The second group of areas (Zone II), which are considered state priorities, are still to be specified in agreements to be reached between the federal and state authorities. Growth in the Federal District and its immediate environs (Zone IIIA) and other nearby regions (Zone IIIB) is to be controlled 1/ and investment in those areas is practically excluded from receiving incentives, except for expansions of existing enterprises in Zone IIIB. Finally, as regards the rest of the country (i.e., the areas not specifically included in Zones I, II or III), the incentives to be offered to investment are lower than for the two priority areas (Zones I and II).

1.17 The zonal and subsectoral priorities are reflected in the varying amounts of fiscal incentives which are to be granted. These will be given in the form of certificates which can be used for practically any federal tax payment. The main characteristics of the incentives are summarized in Table 1.1. The basic incentives refer to the value of investment (either new or expansions, as appropriate) and to the number of jobs which that investment will create. The value of the latter, on which the tax incentive depends, is computed by multiplying the number of jobs by the annual minimum legal wage, which varies among the geographic zones. By this means it is expected to offset any tendency for investment incentives to encourage inappropriate capital intensive production processes.

1/ The intention of the Plan is to channel 70% of new industrial investment away from this area of concentration which currently accounts for about 50% of manufacturing output.

TABLE 1.1: SUMMARY OF PRINCIPAL FISCAL INCENTIVES FOR INDUSTRIAL INVESTMENT a/

Geographic Location of Investment	Priority Sectors				All Industrial Activities	
	Small Enterprises b/	Activity Category 1 c/	Activity Category 2 d/	Other Industries	Purchase of Local Equipment	Employment Generated by Additional Shifts
Zone I Preferential	25% Investment	20% Investment 20% Employment	15% Investment 20% Employment	- -	5%	20% Additional Employment
Zone II State Priorities	25% Investment	20% Investment 20% Employment	10% Investment 20% Employment	- -	5%	20% Additional Employment
Rest of the Country	25% Investment e/	20% Investment 20% Employment	10% Investment e/ 20% Employment e/	-	5%	20% Additional Employment
Zone III						
A. Controlled growth	-	-	-	-	5%	-
B. Consolidated growth	25% Investment e/	20% Investment e/ 20% Employment e/	10% Investment e/ 20% Employment e/	- -	5%	20% Additional Employment

a/ Geographic zones are defined in the decree published in Diario Oficial, February 2, 1979. Fiscal credits can be used for the payment of any federal tax which is not imposed for a specific use. The percentages shown in the table for investment are applied to the total value of construction and installations and the purchase of new machinery and equipment directly related to the production process; it is granted at the time of undertaking of the expenditure. In the case of employment, the percentage is applied for a period of two years on the new employment valued at the annual minimum wage.

b/ Enterprises with fixed assets not exceeding 200 times the annual minimum salary in the Federal District.

c/ Includes agroindustries, capital goods producing industries and strategic inputs for the industrial sector (e.g. steel, cement)

d/ Includes non-durable consumer goods, durable consumer goods and intermediate products specified in decree published in Diario Oficial, March 9, 1979.

e/ Applied only to expansions of productive capacity in the same industrial activity.

Source: Secretaria de Patrimonio y Fomento Industrial, Plan Nacional de Desarrollo Industrial, 1979-1982 (Mexico, 1979) p. 181.

1.18 Fiscal incentives are also given in accordance with other criteria. Small industries, 1/ irrespective of product and location (except for the Federal District), receive higher fiscal incentives as regards investment than any other type of industry. Also, enterprises of all sizes which employ an additional shift will receive tax credits in proportion to the new employment generated (again with the exception of those located in the Federal District); the eligibility conditions for those credits are defined in the decree. Finally, as a means to promote the sale (and consequently the production) of domestically produced machinery and equipment, all enterprises investing in such items get a 5% tax credit of the value of the purchase.

1.19 In addition to the fiscal incentives, special prices for inputs provided by public sector entities are to be offered to favor investment in industries in the four industrial ports (cited in para. 1.16). All new industries established in those areas are to receive a 30% discount on the prices of energy supplied to them (in the form of electricity, natural gas or fuel oil). Moreover, new enterprises producing specific secondary petrochemicals will receive a 30% discount on the prices of their requirements of basic petrochemicals, provided that they export at least 25% of their output.

1.20 Finally, the magnitudes of the public investment which will be undertaken both in infrastructure and the directly productive sectors are now being analyzed and are expected to be reflected in the annual budgets prepared by the federal government. Closely linked to this will be the investment of the state governments which are to be spelled out in agreements reached between officials of those areas and of the federal government.

C. Major Issues Facing Implementation

1.21 Given these overall objectives, a complex network of questions remains to be confronted: reviewing production-consumption balances for critical materials to avoid future shortages (beyond those already apparent); adapting the incentive programs to the revised spatial and sectoral priorities (for exports, import substitution, new industries, small industry, rural development, etc.); establishing the targets for increasing the production of capital goods, particularly the requirements of the petroleum industry and of electricity generation; integrating the procedures for eliminating the quantitative restrictions on imports and substituting them for flexible tariff systems; organizing for the procurement of technical assistance; and the formulation of procedures for monitoring the progress achieved. One of the major issues to be solved concerns the provision of adequate professional and technical personnel that will be needed by each sector. In this connection, the Bank would finance under the proposed loan a study to

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1/ These are defined as enterprises whose fixed assets do not exceed 200 times the annual minimum salary for the Federal District, equivalent to approximately US$400,000 at the present time. In this connection, the program of assistance to SMI supported by Bank Loan 1552-ME is expected to play an important role in providing that sector with required financial and technical assistance.

assess the requirements of human resources, and technical and vocational training for the industrial development of the country.

1.22 While it is evident that the government and the private sector are facing the future with optimism, there are several potential bottlenecks that could impede the expected progress. Many of them represent the types of short-term problems that face an economy experiencing a period of rapid recovery and expansion. The recent surge in industrial output, combined with reduced levels of fixed investment during the mid-70s, has led to relatively high rates of capacity utilization. Utilization of capacity in 1978 is estimated to have exceeded 80% for the manufacturing sector as a whole, with the rate approaching 90% for nondurables, and is expected to rise further in 1979. Industrialists interviewed by the appraisal mission in early 1979 reported some shortages of intermediate goods and construction materials, and there have been cases of congestion in ports as well as shortage of railway facilities. Although substantial capacity expansion has been undertaken since the end of 1977, normal lags in bringing these projects into full operation suggest that these shortages may persist for some time. In addition, firms which export important shares of output were having difficulty in meeting these deliveries, as domestic demand was absorbing an increasing share of their production.

1.23 In these circumstances, control of inflation, its effects on the real exchange rate, and the competitiveness of Mexican exports of manufactured products remain high on the agenda of priorities. Recent performance has demonstrated the wide range of products which the Mexican manufacturing sector can export with appropriate exchange rate policy. Official forecasts indicate a further drop in the rate of inflation from the 18% rate in 1978 to about 15% in 1979, thus bringing Mexico's rate close to external inflation. Attaining this objective will be particularly difficult. Increasing revenues from petroleum production will enable the Mexican Government to proceed quickly with urgently needed infrastructure and social programs. Shortages of materials and skilled labor, as well as capacity limitations, are already being experienced in various sectors and geographical areas. However, failure to achieve the desired inflation target will make the export program for manufactured goods difficult to attain, unless compensating changes take place in the foreign exchange rate. Furthermore, continuation of the existing level of inflation (not to mention any aggravation of it) would undoubtedly bring forth demands for substantial adjustments in wage rates, and this would complicate further the matter of export competitiveness. The government is well aware of the interconnections between the rate of inflation and export competitiveness, between an appropriate scale of production and competitiveness in national and international markets, and the crucial role of the exchange rate in the whole strategy. Since resort to price controls is seen as the less desirable alternative, the government may have to exercise spending restraint to avoid feeding the inflationary process. At the same time, import liberalization can be effective in helping to reduce inflationary pressures as well as in easing short-term supply bottlenecks for critical intermediate goods.

1.24 The objectives of pushing ahead with export promotion, with all that this entails in terms of opening the economy further and of increasing employment, still must be regarded as being of the highest importance. In this regard, the results of the decree published with respect to the automobile and automotive parts industries (1977) are encouraging. Under this system, manufacturers are offered the choice of conserving foreign exchange by raising the national content of domestic production and/or of increasing the value of exports on a programmatic basis, leaving the specific decision to the firm. Similar systems may be appropriate for other industries, such as capital goods.

D. Outlook for Industrial Growth

1.25 The annual rate of growth of total industrial production through 1981 is expected to reach the government's target levels of 10-12%. The relatively strong sectors will be petroleum, petrochemicals, electricity, and manufacturing industries. Petroleum production is expected to reach and possibly exceed its first-stage target of 2-1/4 million b/d in 1980 and will show further growth in 1981. Electric energy generation is expected to record annual increases of 8%, but could grow faster as capacity will increase at an annual rate of 10%. For manufacturing output to meet the goal of 10-11% annual growth rates, it will be necessary to solve certain physical problems--start-up problems with the incoming new capacity, materials shortages, transport, and availability of additional trained workers. Not to be overlooked is the time required for the physical/economic decisions to be made with respect to new product lines and production levels for combined domestic-and-export markets. While for the immediate future there appears to be an adequate pipeline of projects ready for financing in both the public and private sectors, in the longer run there may be a need to strengthen project preparation mechanisms, particularly in view of the more complex nature of the new product lines to meet the needs of the rapidly expanding economy.

II. THE FINANCIAL SYSTEM

A. The Banking System

2.01 Institutional structure. Mexico's banking system consists of Banco de Mexico (the Central Bank), 22 public banks, and 132 institutions of private and mixed ownership (Annex 9, Table 12). Traditionally, the institutions were specialized as deposit and savings banks, financieras or investment banks, and mortgage banks. In recent years, however, the authorities have encouraged a large number of mergers which reduced the number of banks by 66 over a period of about 1-1/2 years. The dominant type of institution is now the multipurpose bank (multibank), which is able to offer a full range of financial services through branch offices. Despite the sharp drop in the number of banking institutions, the number of branch offices increased somewhat from 3,540 in September 1977 to 3,770 at year-end 1978, and as of mid-1978 banking services were offered at 726 centers, providing a fairly broad regional coverage of the country.

2.02 Relative to Mexico's level of economic development, its banking sector is not yet well developed. Although the system experienced a period of rapid deepening from 1967 to 1972 when the ratio of private sector deposits 1/ to disposable income increased from about 0.28 to 0.36, this trend was reversed when the economic uncertainties that ultimately led to the massive peso devaluation in 1976 began to manifest themselves, leading to significant capital flight. The ratio now stands at about 0.28 (Annex 9, Table 13). Other structural weaknesses in the financial sector have also become increasingly apparent. One is excessive traditionalism in credit allocation, with collateral requirements normally far in excess of the credit amount being asked for. The system is also highly concentrated, with about 80% of the banking system's assets being accounted for by 12 of the largest banking groups. Furthermore, administrative expenses of banks are rather high, and exceed 5% of liabilities on average. 2/ Finally, due in part to the liquidity preference of savers, liabilities of the banking system are highly skewed towards short-term obligations and have forced the intermediaries into a high degree of term transformation to finance investment projects.

2.03 Amendments to the Banking Law. The financial crisis experienced in 1976-77, when the public made massive withdrawals of funds from the banking system, convinced the authorities of the urgent need to strengthen the sector. Thus, they introduced major changes in the operation and organization of the financial system that could have significant effects on its future development. In December 1978 the government passed a series of amendments and additions to the Banking Law, 3/ which are the most substantial since the original law was enacted in 1941. Several of the amendments complete a series of steps that have been taken since 1970 to favor the grouping of specialized banks into multibanks. This move is expected to raise the efficiency of the system by increasing competition through the increased financing capacity of the smaller banks, by lowering administrative costs of the system through economies of scale, by facilitating the implementation of monetary and credit policies, and by improving access to the full range of financial services for clients outside of the biggest cities. As of year-end 1978, 26 multibanks had been formed. The capital requirements for banks were also changed, with the requirements now being linked to the risk classification of assets instead of to liabilities. Under this system, loans made using FONEI and other trust fund resources are classified as having relatively low risks.

2.04 The amendments, which include elimination of the 133% minimum collateral requirements, establish clearly the principles that loans should be granted taking into account the economic feasibility of the project being considered, and that repayment periods should be set on the basis of a project's expected cash flow. This new policy fully coincides with the lending principle

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1/ With private and mixed banks.

2/ This figure would increase if taken as a percentage of risk assets.

3/ Ley General de Instituciones de Credito y Organizaciones Auxiliares.

promoted by FONEI since its establishment in 1971. The new legislation also includes some measures to limit excessive concentration of bank ownership and protect the interest of minority shareholders. Some overall exposure limits per client have also been set to avoid excessive concentration of portfolio risks of individual banking institutions. These measures should go a long way towards increasing the efficiency of the Mexican banking system and have been well received by the financial community.

B. The Trust Funds

2.05 The government, through the years, has set up a number of trust funds to promote the economic and social development of the country, by allocating credit on appropriate terms to priority activities. These funds derive their resources principally from the legal reserves of the banking system. While as of September 1978 there were a total of 204 government trust funds, few of them are of great significance. The most important among them are the trust funds managed by Banco de Mexico and those administered by Nacional Financiera (NAFINSA). The group administered by Banco de Mexico includes FONEI, FOMEX (industrial export promotion), FIRA (agriculture) 1/ and FOVI FOGA (housing), and NAFINSA administers FOGAIN (credit to small and medium industries), FOMIN (equity to small and medium industries) and FIDEIN (industrial parks). The Bank has made three loans to assist FONEI. A separate Bank project (Loan 1552-ME) supports the objectives and operations of the three trust funds administered by NAFINSA. 2/ A summary description of the most important trust funds (other than FONEI) designed to support industrial development follows. FONEI's operations are described in detail in Chapter III of this report.

2.06 The main objective of FOMEX (Fondo para el Fomento de las Exportaciones de Productos Manufacturados) is to contribute to the improvement of Mexico's balance of trade through the promotion of manufactured exports and import substitution activities, principally by providing trade financing. It rediscounts post-export commercial banks' credit at rates of 6-8% p.a. in US dollars to the final borrower. FOMEX also provides pre-export credits (up to 180 days) and promotes import substitution by financing the production and sale of locally produced capital goods; these credits are granted in local currency at floating interest rates, 2 points above the ACF index (Average Cost of Funds to Financieras, see Annex 1). In addition, it grants export credit guarantees and finances the commercialization of consumer goods in border towns and free trade areas. In 1977 FOMEX granted export credits in the amount of Mex$17,461 million, 32% of which went to finance pre-exports and 68% to

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1/ FIRA has received six Bank loans for agricultural credit, and has participated in three other Bank projects.

2/ For a more detailed description of these trust funds, see Report No. 1811b-ME dated April 3, 1978.

finance exports (Annex 9, Table 10). FOMEX supported 39% of Mexico's manufactured exports during the year. While the value of FOMEX export operations rose in 1978 (to Mex$20,447 million), the increase was less than that of eligible exports. Import substitution credit reached only a small fraction of export financing. Of the Mex$309 million total in 1977, Mex$184 million went to the production of capital goods and Mex$125 million for the commercialization of consumer goods. FOMEX also granted Mex$2,431 million in export credit guarantees.

2.07 FOGAIN (Fondo de Garantia y Fomento a la Industria Mediana y Pequena), which was created in December 1953, is the oldest development-oriented trust fund in Mexico and Latin America. Its main function is to supply term financial resources to small and medium size industrial firms (SMI), for working capital, fixed assets and debt restructuring. It rediscounts up to 100% of credits granted to SMI enterprises by financial intermediaries, including credit unions established by groups of small enterprises. FOGAIN policies favor industrial decentralization, employment creation, manufacturing exports, and import substitution; its main purpose is to lay the basis for future growth of small enterprises. In 1978 FOGAIN approved 5,380 operations to 4,363 enterprises for a total amount of Mex$4,278 million, and disbursed 4,050 loans to 3,545 enterprises for a total of Mex$2,858 million. The interest rates charged were concessional and varied according to the regions where the loans were made, 14% p.a. in Zone 1, 13% p.a. in Zone 2, and 12% p.a. in Zone 3. 1/ Sixty percent of the loans were granted to firms in Zones 2 and 3.

2.08 FOMIN (Fondo Nacional de Fomento Industrial) was created in 1972 to help in the creation and expansion of SMI firms by contributing equity, on a temporary basis, up to one-third of each firm's share capital requirements. FOMIN's operations are still rather limited. From 1973 to year-end 1978 FOMIN invested Mex$413 million in 108 firms. In 1978 alone it invested Mex$133 million in 17 enterprises, of which 8 involved new projects and 9 were expansions. FOMIN's investment operations are carried out directly with the enterprises concerned.

C. The Securities Market

2.09 Mexico's securities market is relatively small and has not yet developed into a sufficiently important mechanism to finance industrial firms. In 1975 the government initiated, with the passing of the Securities Market Law, a series of reforms aimed at accelerating the development of this market, 2/ which has been retarded by a series of factors. As in many other

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1/ Zone 1 comprises Mexico City, Guadalajara and Monterrey; Zone 2, the areas adjacent to Zone 1 and several intermediate cities near Mexico City; and Zone 3, the rest of the country. As noted in Chapter I, this system was recently modified in connection with the new National Industrial Development Plan. FOGAIN is expected to raise its interest rate level in connection with Loan 1552-ME and to take the system under the new Plan into account.

2/ IFC has given technical assistance to the authorities to improve this market mechanism.

developing countries, firms in Mexico resist going public, so as to minimize outside interference and to avoid the information disclosures required for publicly traded securities. On the other hand, savers had found share yields in the past less attractive than those of fixed return securities, which had lower risks and par value redemption on demand. In addition, some fiscal and legal considerations tended to hamper the development of an active market.

2.10 Responsibility for control and supervision of the security exchanges, which in the past involved the Banking Commission, now rests solely with the National Securities Commission (Comision Nacional de Valores). The Mexican Security Exchange was created in 1894 as a private institution, and until 1976 two other exchanges, one each in Monterrey and in Guadalajara, existed. The authorities decided to close these two exchanges as part of a strategy to develop a central exchange, capable of giving efficient service. The new law also authorized the creation of brokerage houses, which are better organized and capable of delivering the required service to the market, to supplement the existing individual broker agents. As of December 1978, 30 brokerage houses had been established, several of them associated with the largest banks. The Institute for the Deposit of Securities has also been created to expedite the rapid and efficient transfer of securities in the market. Other measures taken by the government to stimulate the development of the securities market include the introduction of exemptions from taxation of capital gains arising from securities traded in the exchange, and the authorization to enterprises to deduct, for tax purposes, the losses arising from operations in the securities market.

2.11 The measures taken to promote the securities exchange appear to have had positive results. Although the volume of securities traded fell from Mex$167.8 billion in 1977 to Mex$95.3 billion in 1978, the trading of stocks registered an impressive increase, rising from Mex$5.8 billion to Mex$30.3 billion (Annex 9, Table 17). The significant reduction in the fixed return securities traded has been due to the July 1977 abolition of financial and mortgage bonds, which had liquidity on sight and tended to distort the market. It is expected that the papers of this type still in circulation will be withdrawn by October 1979. While the security exchange price index also recorded an impressive increase of more than 128% from December 1977 to December 1978 (Annex 9, Table 18), industrial stocks registered the largest increase in the volume traded between 1977 and 1978, growing from 45% of all shares traded in 1977 to nearly 63% in 1978. In 1978 the National Securities Commission authorized the placement of a record number of 23 new share issues, and nearly all of them were placed well above their nominal prices. There were 10 issues of "obligaciones quirografarias," 1/ most of them at 7 years and carrying a net interest rate between 16.5% and 17.5% (Annex 9, Table 19). Other factors that had contributed to the boom in the stock exchange included the acceleration of inflation up until 1977, which forced many investors to look for better alternative investments than bonds and bank deposits yielding negative real returns, and the high profits generated by firms in 1977 in

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1/ Medium and long term obligations of firms, which no longer carry repurchase guarantees on sight, and now bear an adjustable interest rate.

the wake of industrial recovery. The supply of securities also increased due to the number of firms which were forced to go public and issue equity after the peso devaluation which weakened the financial structure, particularly of enterprises that had large foreign currency liabilities.

2.12 The prospects for the continuation of securities market growth are good. In January 1979 a new record was set in trading with an increase of more than 22% in the price index. The Mexican Security Exchange is preparing a training program and carrying out a promotional campaign to increase investor interest in the market. A similar promotional campaign is being considered for the near future, aimed at the potential issuing firms. All in all, these measures, combined with the earlier policy changes instituted by the government, should make the security market a more significant source of investment funds for industries in the future.

D. Credit Availability and Interest Rate Policy

2.13 Industrial credit, which reached Mex$162 billion in September 1978, accounted for about 26% of the credit granted by the banking system. Within the industrial sector, manufacturing accounts for two-thirds of credit granted (Annex 9, Table 20). Like industrial value added, industrial credit (Annex 9, Table 21) was also very heavily concentrated in the Mexico City area (about 67% of industrial credit in September 1978), in the state of Nuevo Leon, which contains Monterrey (about 13%), and in the state of Jalisco, including Guadalajara (4%).

2.14 Loans are heavily concentrated in the short to medium term range, due to the excessively short maturity structure of the banking system's liabilities. Only about 40% of the loans granted by the private and mixed banks exceed a term of one year (Annex 9, Table 22). However, the uncertainties which prevailed in 1976-77 aggravated this situation even further, as massive withdrawals of funds by savers caused considerable difficulty for banks that had made loans on much longer terms than would have been indicated by the term structure of their liabilities. In this situation the trust funds, such as FONEI, have been playing an increasingly crucial role in solving these shortcomings of the system. Foreign savings also considerably complement internal savings (Annex 9, Table 23). It is estimated 1/ that US bank loans to Mexico reached US$13 billion at year-end 1976, equivalent to about 45% of the outstanding credits of Mexican banks. In addition, other industrialized economies had estimated credit claims on the Mexican economy of about US$4.9 billion. 2/ The share of foreign loans in domestic credit has probably decreased since then in percentage terms but has remained an important source of funds.

1/ Donald Baer, "Caribbean Basin Economic Survey," Atlanta Federal Reserve USA, June-July 1977.

2/ BIS, "Eurocurrency and Other International Banking Developments," fourth quarter, 1976, quoted by Donald Baer.

2.15 To boost domestic savings, improve the term structure of the banks' liabilities and reverse capital flight, the Mexican authorities raised the ceilings on time deposit interest rates in the second quarter of 1977. These rates range from 7% for call money to 18.5% on 2-year certificates of deposit 1/ (Annex 9, Table 24). The authorities also increased the interest rate premium, relative to US$ or Eurodollar rates, to reverse the capital flight being experienced by the system (Annex 9, Table 25), but US banks still registered an increase in short-term obligations to Mexican residents in the amount of US$770 million in 1977. Total non-monetary liabilities of the financial system, which had reached 32% of GDP in 1972, fell to about 21% in 1976 and even further to 19% in 1977 (Annex 9, Table 26). The development achieved up to the early 1970s was encouraged by relatively low inflation rates, sound interest rate policies, a long period of exchange rate stability and an open financial system which allowed free movement of funds, but this upward trend was interrupted by the problems which became evident in the mid-1970s. However, the above-mentioned actions by the Mexican authorities have helped to improve the situation, and non-monetary peso liabilities of the financial system inched up to 21% of GDP in 1978. The authorities have stated their intention to continue to adjust interest rates if necessary, to sustain a healthy growth in financial savings.

2.16 Since 1974, financial institutions in Mexico have been adopting increasingly a variable interest rate system for term lending operations. The change from the previous practice of fixed rate lending came when inflation accelerated after 1973 and after the aforementioned raising of deposit interest rates by Banco de Mexico. By 1977 practically all term loans were made at variable interest rates, using as an index the average cost of funds (ACF) to investment banking departments of intermediaries (Annex 1). This is a weighted average of interest rates paid on bonds, notes and certificates of deposit and excludes checking and savings deposits. The monetary authorities encouraged the development of this system as a way of preventing an even more rapid contraction of the financial system in response to the uncertainties created by inflation, and it was adopted readily by banks as a way of avoiding a possible severe profit squeeze on term-transformed resources. Borrowers who wanted to avoid being locked into existing high interest rates in nominal terms also accepted the idea readily.

2.17 Between the last quarter of 1977 and January 1979, the ACF index increased from 14.30% to 16.25%. Part of this increase reflects the increased weight of medium term instruments, which in turn reflects the increased willingness of savers to hold longer term deposits. The margins that banks charge their clients over ACF generally range from less than 2 to about 7 points, implying interest rates ranging from about 18% to 23%. The number of points charged to a particular client varies principally in relation to the "reciprocity" obtained by the bank, or compensating balances and other business offered by the borrower. The aforementioned rates are somewhat above the rate of inflation, which was estimated at 18% in 1978 and is expected to decrease gradually to world levels by 1982 (para. 3.14).

1/ Gross of taxes.

E. Prospects

2.18 As noted in Chapter I, the industrial sector has now recovered and is expected to grow at 10-11% p.a. in the next few years, compared to less than 4% p.a. from 1974 to 1977. However, the banking system is not yet in a position to properly allocate and provide significant long-term financial resources, and the securities market, although growing at a fast rate, has not yet developed into an important source of finance for industrial firms. In this situation, the trust funds have a crucial role to play in supplementing and guiding industrial credit provided by the financial system. The proposed Bank loan to FONEI would contribute to the institutional development of participating financial intermediaries and help finance efficient projects during a period of long-term credit scarcity in Mexico.

III. THE INDUSTRIAL EQUIPMENT FUND (FONEI)

A. Background

3.01 FONEI was established in 1971, following extensive discussions between Mexican authorities and the Bank on the design of appropriate mechanisms to address industrial inefficiency and inappropriate structure of industrial financing, and to help improve the country's balance of payments. FONEI was set up as a trust fund of Banco de Mexico, to provide supplemental term financing through commercial banks for efficient industrial projects, which would have a positive impact on the balance of payments through higher exports or import substitution. Additional operational objectives were emphasized as FONEI became a more mature institution, the most important being for it to contribute to efficient allocation of resources through the financial system by inducing banks to make their lending decisions increasingly on the basis of comprehensive project appraisal, and to promote industrial efficiency by encouraging enterprises to prepare detailed feasibility studies. To help achieve these objectives, the Bank has made three loans to FONEI totalling US$185 million. The first Bank loan (824-ME), for US$35 million, was signed in June 1972 and was fully committed in September 1975, a year behind schedule due to some start-up delays. The second loan (1205-ME), for US$50 million, was signed in April 1976 and except for a small remaining amount is fully committed. The third loan (1598-ME), for US$100 million, presented to the Board in May 1978, was signed in September and is expected to be almost fully committed by FONEI by mid-1979, about a year ahead of schedule.

B. Organization and Management

3.02 FONEI's highest decision-making body is its Technical Committee, which is composed of high level government officials. Its chairman is the Director of Public Credit of the Ministry of Finance, and other members include representatives of the Ministries of National Patrimony and Industrial Development, and of Commerce, Banco de Mexico, Nacional Financiera, Instituto Mexicano

de Investigaciones Tecnologicas (IMIT), 1/ and two representatives of the private sector nominated by the chambers of commerce and industry. The Committee, which takes an active interest in FONEI's activities, meets once a month to decide on all proposals for FONEI financing above Mex$15 million. Decisions for credits below this amount are delegated to FONEI's director to help speed up loan processing.

3.03 Banco de Mexico, as trustee, provides FONEI with the required staffing, office facilities and administrative services. Thus, FONEI's staff is subject to Banco de Mexico's regulations and salary scales, which are generally competitive. FONEI's chief executive is its director, and it has had three since inception. Mr. Villasenor, who has held this position since December 1976, is well qualified, dynamic and has paid particular attention to expanding FONEI's activities, promoting FONEI's operations throughout Mexico, and more recently, to developing subproject appraisal and supervision capabilities of participating intermediaries as far as possible. Heading a staff of 19 professionals, Mr. Villasenor is assisted by three subdirectors--Mr. Rodriguez, who has overall responsibility for the technical department, Mr. Acevedo, who has overall responsibility for loan administration and financial matters, and Mr. Romero, who heads the promotions department (organization chart, Annex 2).

3.04 FONEI has a streamlined organization with relatively low administrative costs. Following the change in the presidential administration in Mexico in late 1976, FONEI experienced substantial staff turnover. This has declined significantly since then and, although second-level management and staff are relatively young, they have adequate experience. However, due to rapidly expanding operations and FONEI's desire to open some small offices in the interior to broaden its regional coverage of Mexican industry, there is a need to increase staff significantly. Plans have already been made to increase professional staff to 32 within one year, which would enable FONEI to cope with the expected growth in operations. FONEI is also planning to further strengthen its project evaluation and supervision capabilities by providing appropriate training for its staff (para. 3.22). These plans, which are reflected in FONEI's Strategy Paper (para. 3.38), would deserve full Bank support through funding under the proposed loan and through Bank-sponsored training programs including EDI courses.

C. Operating Regulations and Policies

3.05 Nature of projects eligible for financing. The policies and procedures which govern FONEI's operations are set forth in its Operating Regulations (Annex 3), which may be modified by FONEI's Technical Committee in consultation with the Bank. They define the types of projects that may be

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1/ IMIT is a semi-public research and development institution partially financed by Banco de Mexico, and is frequently used by FONEI for project appraisals.

financed by FONEI, terms and limits of subloans, interest rates, criteria for project selection, responsibilities of the intermediaries and final beneficiaries, and procedures for FONEI's authorization of financing. These Operating Regulations specify that in the selection of each project for financing FONEI should consider, inter alia, the following economic criteria: (i) the project's foreign exchange generation or savings; (ii) its economic rate of return; (iii) its utilization of labor and its value added; and (iv) industrial decentralization aspects.

3.06 The Operating Regulations permit FONEI to support projects involving the production of industrial goods as well as service activities. Although FONEI has financed only the production of industrial goods in the past, last year the government assigned to it the task of promoting and assisting selected projects designed to expand exports of services from the northern border zone. In this connection, FONEI may now finance projects involving the construction of factory buildings for lease to foreign assembly plants, setting up of car repair centers and similar building complexes for the purpose of selling services and replacement parts to visitors, and the construction of large-scale commercial centers designed principally to sell Mexican goods and services to foreign visitors. Since FONEI has limited experience with this type of activity, it is approaching service projects cautiously and to date has presented only one such project for Bank financing.

3.07 Technology development projects. FONEI's management has been searching for new and innovative ways of broadening FONEI's impact on industrial development, particularly high priority industries such as capital goods production. In this connection, FONEI recently introduced modifications to its Operating Regulations to permit it to finance technology development projects. To date it has supported a prototype development project for an oil well pumping system and a pilot plant facility for a building materials project. Technology development will become increasingly important for Mexican industry in the future, as it has now reached a relatively high degree of sophistication and has a substantial pool of well-developed engineering and technical skills. To further increase local value added and compete efficiently in world markets, there is a need to broaden efforts aimed at stimulating industrial growth through the development of new or improved products, of more efficient production methods, and of new technology to exploit available raw materials on a cost-efficient basis.

3.08 Recognizing the importance of technology issues, Mexican authorities have introduced in recent years various policies and institutional support to reinforce the technological development of Mexican enterprises (Annex 4). Several institutions have been formed to formulate and implement relevant national policies, to provide technical information as well as research and development (R&D) facilities, and to review foreign licensing agreements. The government also allows preferential tax treatment of research and development expenditures, permitting firms to apply accelerated depreciation schedules to R&D-related fixed asset investments and to consider current R&D expenditures as normal business expenses. However, despite all these measures, very

few opportunities exist in Mexico for enterprises to finance technology development projects. FONEI could help to fill this gap by concentrating on financing those technology development projects relatively close to commercialization and sponsored by enterprises with the capability to implement problem-specific technical solutions, with either internal resources or some external help. FONEI's technology development activities would be supported through an experimental component which would be included under the proposed loan.

3.09 FONEI also instituted recently a guarantee mechanism through which it would cover up to 90% of the credit (principal and interest payments) granted by an intermediary for technology development projects and prefeasibility studies. Intermediaries wishing to avail themselves of the guarantee mechanism would pay a one-time charge of 0.5% of the credit granted. The guarantee scheme is designed for loans made to smaller enterprises unable to offer adequate collateral to banks.

3.10 Pollution control projects. Aided by the experience of Bank DFC operations elsewhere (in particular the most recent Colombian financiera loan No. 1598-CO), FONEI would finance, for the first time, industrial pollution control subprojects under the proposed operation. Industrial pollution, coupled with pollution caused by extremely rapid growth in vehicular traffic, has become a problem in almost all industrial areas in Mexico, and has reached critical levels in cities with high population density and industrial concentration, such as Mexico City and Monterrey. A Law for the Prevention and Control of Environmental Pollution was enacted in 1971, and further laws were passed in 1972 and 1973 establishing responsibilities for formulating and implementing specific detailed regulations (reglamentos) for controlling pollution (Annex 5). At present, legislation has been implemented only through the establishment of appropriate reglamentos covering atmospheric pollution caused by smoke and dust. A draft reglamento dealing with gaseous emissions is being prepared. Two agencies, which would cooperate with FONEI under the proposed project, have primary responsibility for establishing, implementing and monitoring compliance with pollution control legislation. The Secretaria de Salubridad y Asistencia (SSA), through its Subsecretaria de Mejoramiento del Ambiente (SSMA), is responsible for air pollution control, while the Secretaria de Agricultura y Recursos Hidraulicos (SARH) is responsible for water pollution control.

3.11 A component would be included under the proposed loan covering the purchase of industrial pollution control equipment and technical assistance required in the design and/or selection of such equipment. If included in new plants or expansions of existing plants, pollution control equipment would be financed as part of the increase in production facilities of a particular enterprise, since such enterprises would, in any case, need to meet the environmental impact standards established under Mexican law. The purpose of establishing a separate project component would be to provide, through FONEI, financial assistance and technical expertise particularly to those firms with existing pollution problems. Experimental pollution control financing through FONEI would also permit the Bank to gain valuable experience, which may lead to much more extensive Bank involvement in efforts to cope with industrial pollution control problems in the greater Mexico City area.

3.12 Terms and limits of financing. Under its Operating Regulations, the maximum amount of financing FONEI could provide to a single investment project is Mex$100 million. In addition, to facilitate significant participation in relatively large projects considered of high priority by the government, such as capital goods and petrochemicals, FONEI can approve financing in excess of the above amount provided prior authorization is obtained from the Ministry of Finance. FONEI's minimum loan size is Mex$4.5 million, which matches the upper limit of financing for fixed asset loans of FOGAIN, which specializes in small and medium industry financing (para. 2.07). FONEI's subloans have maximum maturities of 13 years, including up to 3 years of grace.

3.13 FONEI's Operating Regulations require FONEI's funds to be complemented by funds from clients and financial intermediaries. To ensure that projects are adequately capitalized, final borrowers are required to finance at least 25% of fixed asset costs of new investment projects and 20% of expansion projects. The intermediaries are required to finance at least 15% of FONEI's financing for new projects, which in turn is limited to 65% of project cost, and 11% in the case of expansion projects where FONEI could provide up to 72% of project cost. In addition, the intermediary is required by FONEI to ensure that projects have adequate working capital financing. In practice, FONEI finances about 40% of project costs on average. For technology development projects and prefeasibility studies, up to 80% of total costs could be financed by FONEI, as an additional incentive to client firms.

3.14 Interest rates. Under the first Bank loan FONEI charged a fixed interest rate of 11% p.a. in pesos to final borrowers, including a spread of two percentage points to the intermediary bank. Although initially positive in real terms, this interest rate became significantly negative as the rate of inflation rose in 1973. As a result of this experience, and after several months of discussions between FONEI and the Bank, FONEI decided to modify its onlending rate under the second loan in two stages towards the use of variable interest rates based on the ACF index (Annex 1). This adjustable interest rate mechanism has been implemented successfully and FONEI lending for standard investment subprojects 1/ is now made at the ACF index plus 2% to final borrowers. In January 1979 the ACF index was at 16.25%, resulting in a lending rate for FONEI of 18.25% compared to an estimated 18% 2/ rate of inflation for Mexico in 1978 and to rates in the financial system ranging from about 18% to 23% (para. 2.17). The rate of inflation, which reached 22% in 1976 and 29% in 1977, is expected to decline progressively to 15% in 1979, 12% in 1980, and to international levels by 1982. As the inflation rate decreases, FONEI's onlending interest rate is expected to rise gradually in real terms. In the unlikely event that inflation rises, the ACF should

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1/ Excluding lending for prefeasibility studies, technology development or pollution control.

2/ Average annual rate.

still be a suitable yardstick for determining FONEI's lending interest rates, given the government's announced intention of maintaining borrowing interest rate levels which would permit adequate resource mobilization in the financial system.

3.15 FONEI's interest rate for technology improvement projects is five points below its regular rate (i.e., ACF less 3%). This relatively small subsidy appears reasonable, considering that technological adjustments of the kind likely to be financed by FONEI can be highly beneficial to the Mexican economy but generally involve relatively high commercial risks, and is consistent with interest rate policies adopted in connection with Bank operations elsewhere (e.g., Colombian financiera loans 1223-CO and 1598-CO). Loans granted for pollution control projects would be made to final borrowers at an interest rate of between two points above and three points below the ACF. Only subprojects involving existing plant and equipment would be eligible for subloans at interest rates below FONEI's regular rate (para. 4.05). In many cases these investments would require important cost outlays for the respective firms, which in effect are being penalized for having purchased equipment at a time when specific laws or regulations governing admissible pollution levels had not yet been promulgated. In addition, pollution control investments benefit the welfare of vast segments of the population and, consequently, some degree of cost sharing would appear justifiable to encourage firms to utilize the proposed component.

D. Operating Procedures

3.16 Division of responsibilities. When FONEI was first established, few if any Mexican banks had the technical skills or the inclination to carry out detailed project appraisals. Also, since the volume of FONEI's projects channeled through individual intermediaries had been low in the past, financial intermediaries were reluctant to set up in-house appraisal units. Thus, FONEI had to assume responsibility for the full appraisal and supervision of virtually all projects, while the intermediaries which carry the full credit risk focussed on evaluating the financial plan and risk of projects and on securing adequate collateral. Since FONEI felt it was best to maintain a streamlined staff and not use a large portion of staff capacity in carrying out detailed appraisals or to incur the excessive costs of acquiring full technical in-house capacity for a wide variety of product lines, it adopted a system of using outside consultants for detailed appraisal work, principally utilizing the skills of IMIT. FONEI's staff could thus concentrate on selecting and guiding the work of consultants paid for by FONEI, on reviewing the results obtained, and on making appropriate recommendations for FONEI financing.

3.17 Although clients may approach FONEI directly for preliminary credit applications, most of them are referred by participating intermediaries. Potential clients and financial intermediaries are encouraged to consult FONEI at a relatively early stage of project preparation, and to prepare prefeasibility studies of their projects along FONEI's suggested guidelines. This enables FONEI to review the preliminary information and

determine if the project meets the basic eligibility criteria, and if so, to indicate which areas should be covered in depth by the feasibility study. Once the feasibility study is received, FONEI proceeds with a full evaluation of the project, usually through a consultant or through the financial intermediary. In some instances FONEI has used its own staff to carry out full project evaluation, due to the large volume of projects to be processed. When completed, the evaluation is reviewed by FONEI's technical department, and, if the project is found adequate, it is then submitted for consideration and decision by the Technical Committee or FONEI's director.

3.18 In connection with the second Bank loan, FONEI agreed to place greater emphasis on increasing the role of intermediary banks in project appraisal in order to introduce them to appraisal banking techniques. To achieve this, the responsibility for coordination between final borrowers and consultants during project appraisal was to be transferred gradually to the intermediaries, and they were to be encouraged to set up in-house appraisal units. To induce intermediaries to do so, FONEI agreed to reimburse them for the cost of consultants' appraisals or pay them a fee for their in-house appraisal efforts. The intermediaries were also assigned the responsibility for coordinating the work of consultants for projects requiring subloans in excess of Mex$30 million.

3.19 Although a few subprojects were appraised by intermediaries along the above lines, FONEI had little success in transferring appraisal responsibility to intermediaries, mainly because the number of FONEI operations per intermediary had not yet grown to the point where even small permanent appraisal units could be fully occupied. Consequently, the scheme of reimbursement of expenses could not be expected to provide sufficient incentive to intermediaries, and there also appears to have been a lack of a clear commitment and proper publicity of FONEI's willingness to reimburse intermediaries for costs incurred in appraising projects. The process of project evaluation, which took about seven to eight months on average, 1/ also diminished the value of the appraisal as a critical input to the banks' decision-making process regarding the loan to be granted.

3.20 In the context of the third Bank loan, FONEI took several steps to address more effectively the above-mentioned problems. FONEI's Operating Regulations were revised to allow an additional 0.50% spread for intermediaries appraising projects requiring subloans up to Mex$30 million and 0.25% for projects requiring subloans in excess of this amount, in effect making it attractive for banks to undertake project appraisal. FONEI has also taken several measures to pare down processing time, including encouraging prequalification of projects and the delegation of authority to FONEI's director to approve loans of up to Mex$15 million, although, due to rapid growth in the volume of projects, these measures have had marginal results so far. To facilitate the preparation of detailed appraisals, FONEI also encouraged client companies to undertake prefeasibility studies, using FONEI's subloans

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1/ From the date of preliminary application to the date of approval by FONEI.

at preferential rates of interest. As a result of these measures, 4 subprojects were appraised by intermediaries in 1978 (out of 63 projects) and 6 prefeasibility studies were financed. Only 2 projects had been evaluated by intermediaries prior to this.

3.21 Additional measures would be introduced under the proposed project to increase the role of intermediaries in the appraisal process. Although difficult to achieve immediately, FONEI's goals of inducing intermediaries to take responsibility for project appraisal and to set up core units for project lending are now more likely to bear fruit in the medium to long run, for several reasons. In addition to the introduction of differential spreads, which have been accepted with enthusiasm by banks, FONEI's volume has now grown to the point of enabling small core appraisal units in several banks to be kept fully occupied. Whereas only 2 banks processed more than 4 FONEI projects in 1977, 4 banks presented 5 or more projects in 1978 (Annex 9, Table 27). With the rapid growth in FONEI's approvals, the number is expected to increase in the future. FONEI is also planning to offer intermediaries an additional spread of 0.25%, to be determined annually on the basis of a specific program to induce intermediaries to undertake full subproject supervision (para. 3.25), thus assuring fuller utilization of intermediaries' project evaluation and supervision units. The recently promulgated revised Banking Law (para. 2.03) also abolished the existing legal minimum collateral requirements and encourages intermediaries to lend on the basis of a thorough appraisal of projects. Thus, as much as one-third of subprojects presented in 1979 may be evaluated by intermediaries, using either consultants or their own staff.

3.22 While the process of delegation should prove beneficial in the medium term, in the short run little manpower savings would accrue to FONEI, as the intermediaries undergo the time-consuming learning process to develop acceptable procedures, requiring close cooperation from FONEI's staff. In addition to the intermediaries, the increasing number of new consultants and FONEI's new staff would all need to have intensive training in project evaluation and supervision and to familiarize themselves with the particulars of the FONEI system. Although IMIT and FONEP (a trust fund of NAFINSA financing principally feasibility studies) provide courses in project evaluation, additional efforts in this respect would be required from FONEI. These activities deserve full Bank support, and under the proposed loan funds would be available for technical assistance to support FONEI's training programs.

3.23 In the past, IMIT evaluated most of FONEI's subprojects and, as a consequence, there was little need for FONEI to develop its own engineering skills. With the increasing number of evaluations carried out by intermediaries and consultants other than IMIT, FONEI needs to develop access to specialized technical skills in order to enable it to fully evaluate the appraisals as a genuine second-tier institution. For this purpose, FONEI is considering an increase in the use of Banco de Mexico's engineers and other technical specialists to give summary reviews of evaluations, focussing on the appropriateness of processes chosen, capacity of equipment to perform at the production volume indicated and product quality required, cost competitiveness and similar aspects. FONEI's institutional plans, including its

intention to develop project appraisal and supervision capabilities in participating intermediaries as far as possible, and its promotional and training plans were discussed during negotiations and incorporated in its Strategy Paper.

3.24 Project appraisal and supervision performance. In FONEI's early years of operation, the quality and depth of its appraisals were uneven, reflecting the lack of experience of consultants and of FONEI's own staff. During a long period FONEI had limited success in trying to impress on the consultants the need to focus their evaluations on key issues of individual projects. The quality of appraisals has since evolved satisfactorily and evaluations now generally include an adequate analysis of the organizational, marketing, technical, environmental, and financial and economic aspects of projects, including the calculation of the financial and economic rates of return. In the context of the third Bank loan, FONEI's free limit vis-a-vis the Bank was raised from US$750,000 to US$1.5 million. In recognition of the improvement in FONEI's project appraisal capabilities, the free limit for FONEI would be increased to US$2 million for standard investment subprojects under the proposed loan. This will enable the Bank to review about 40% of these subprojects which would account for about 60% of the loan amount. Distinct free limits would be set for pollution control and technology improvement subloans (para. 4.08).

3.25 Project supervision. By law, intermediaries are required to supervise term loans to ensure that funds are utilized for the purposes intended. In this regard, intermediaries normally carry out regular supervision visits to a project during the construction period, but tend to forego supervision once the project is in operation. Under its loan contracts, FONEI could require intermediaries to submit periodic reports on the progress of FONEI-financed projects. However, FONEI has not rigidly enforced reporting requirements but rather has attempted to conduct its own field supervision visits to selected projects, and these are done in depth and with reports of generally good quality. However, due to FONEI's rapid operational growth, it has been forced to devote its own manpower resources to evaluations, and only about 10% of clients with projects in operation were visited in 1978. All in all, about 40% of FONEI's clients have submitted periodic reports covering financial performance and, in most instances, balance of payments and employment impact of individual projects. FONEI realizes that it needs more extensive operational feedback on a regular basis and recognizes that, given the large number of clients it now has and the expected sharp increases in the future, it can visit only a limited number of enterprises. Therefore, FONEI is planning to grant intermediaries an additional margin of 0.25% to undertake supervision of projects, involving annual or more frequent visits to client enterprises and the submission of comprehensive reports. In addition, it is now requiring intermediaries to become formally responsible for the submission of summary reports from clients, involving financial statements and a few operational indicators. FONEI's own direct supervision efforts would be planned to supplement the results of the measures described above. The aforementioned plans have been incorporated in FONEI's revised Strategy Paper and would be included in its Operating Regulations prior to loan effectiveness.

3.26 Promotion. FONEI recently established a promotions department to help achieve an even wider geographical dispersion of FONEI-financed projects than has been the case thus far (para. 3.32), and to reach more medium-sized

and less established enterprises. The department is headed by a subdirector who would be directly involved in promotional activities and at the same time would oversee the few small FONEI offices that it intends to establish in the northern border areas and in the interior of the country. FONEI intends to open two such promotional offices this year, each with one or two professionals, and depending on the results, more may be opened in the future. Members of the promotional offices are expected to pay frequent visits to groups of bankers and industrialists in their respective regions to help them to identify and formulate projects, and to provide some assistance to intermediaries and clients experiencing minor project processing problems.

3.27 Participating intermediaries. All of Mexico's more than 150 financial intermediaries are eligible to participate as channels for FONEI's financing. However, the financial system is relatively highly concentrated, and most institutions are quite small and do not have clients with suitable projects (Annex 9, Table 14). Thus, as of year-end 1978, only 23 intermediaries had obtained financing from FONEI, with 5 of them having accounted for about 70% of cumulative commitments (Annex 9, Table 27). The distribution of FONEI's approvals is shown below:

Table 3.1: DISTRIBUTION OF FONEI'S OPERATIONS

	Rank among banks in terms of asset size	Credit Amount (1978)				Cumulative Amount (1973-78)			
		No.	%	Mex$ mil.	%	No.	%	Mex$ mil.	%
Somex/Banco Mexicano	5th	11	17	587	26	31	16	1,205	23
Banco Nacional de Mex.	2nd	15	24	302	13	51	26	1,091	21
Banco Comercial Mexicano	4th	5	8	285	12	20	10	589	11
Banpais	7th	5	8	232	10	14	7	377	7
Banco del Comercio	1st	7	11	185	8	16	8	397	8
Financiera Innova	n.a.	4	6	167	7	8	4	337	7
Banca Serfin	3rd	3	5	137	6	12	6	273	5
Other institutions	-	13	21	394	17	42	22	865	17
		63	100	2,288	100	194	100	5,134	100

Somex/Banco Mexicano, which accounts for almost a quarter of FONEI's total approvals, is a financial group majority owned by the government but with a strong private sector representation. Banco Nacional de Mexico and all other institutions shown above are private banks. Among the other institutions which have participated are Banco Internacional (3.2% of total approvals) and NAFINSA (2.1%), both government-owned intermediaries. The six intermediaries shown in Table 3.1 above (excluding Financiera Innova) account for

about 70% of the banking system's assets. In this context, the discussion in Chapter II and the tables on the financial sector (Annex 9; Tables 12, 14, 15, 21, 22, 23, 24 and 26) provide some background on the intermediaries' characteristics, including the sectoral distribution of their lending portfolios, lending terms, revenues and expenses, liabilities, and domestic resource mobilization performance. By and large these institutions to date have been efficient channels for FONEI funds. As previously noted (paras. 3.16 to 3.25), the role of the principal participating intermediaries would be greatly enhanced in the future.

3.28 The government's efforts in the recent past to encourage a large number of institutions, particularly small ones, to merge to form multibanks would tend to increase competition in the financial system in general and probably result in a slight increase in the number of medium size banks availing themselves of FONEI's facilities. FONEI's promotional efforts would help in this regard. As shown above, some medium size institutions already have begun to emerge as important channels of FONEI financing.

3.29 Procurement and disbursement procedures. In the course of appraisal of projects, FONEI verifies that goods and services procured under the project are competitive in price and quality, and are appropriate for the purpose intended. In addition, FONEI ensures through documentation requirements, direct visits, and visits by intermediaries that proceeds of financing are used only for the goods and services authorized by FONEI at the time of loan appraisal. Overall, disbursement procedures are thorough and have resulted in smooth disbursement of the proceeds of the Bank loans to FONEI.

E. Past Operations and Impact 1/

3.30 Sectoral distribution. As of year-end 1978 FONEI had financed a total of 142 2/ investment projects involving Mex$14.8 billion in total costs and Mex$5.1 billion in FONEI financing (Annex 9, Table 28). Although FONEI's total portfolio amounted to only about 2.2% of total banking system credit to private manufacturing industry, it accounted for a significant percentage of long-term loans to the sector, roughly in the order of 15%. FONEI's portfolio growth rate is expected to exceed that of banking system credit for the next few years. FONEI's financing has been concentrated in the industries producing metal and electrical products, including a substantial number of capital goods industries, which are considered high priority by the government. These industries accounted for about half of FONEI's cumulative approvals up to year-end 1978, compared to their value-added share in the manufacturing sector estimated at 18% in 1977. Chemicals and petrochemicals accounted for

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1/ Details will be presented in the Project Performance Audit Report for Loans 824-ME and 1205-ME, now under preparation.

2/ Excluding feasibility studies; some subprojects also received two subloans.

about a quarter of FONEI's approvals (8% of manufacturing value added) and paper for 8% (3% of value added). Other industries financed included cement (6% of approvals), textiles (4%), and other industries (4%). To date, one subloan has been committed for a service industry project amounting to 3% of total approvals.

3.31 Balance of payments impact. Subprojects financed by FONEI have had a substantial favorable balance of payments impact. Of the total number of projects financed to date, about 30% were export projects, another 28% involved both import substitution and exports, and 42% were pure import substitution projects. To qualify as an export project, the borrowing enterprise must demonstrate to FONEI that the foreign exchange earnings generated by the project in the first five years of its operation will cover at least all investment and operating costs in foreign exchange. A similar criterion involving foreign exchange savings applies to import substitution projects. For projects financed by FONEI up to year-end 1978, the total discounted foreign exchange earnings and savings 1/ to be generated over the first five years of operation are projected to reach Mex$41 billion (about US$1.8 billion equivalent at the current exchange rate), which is reasonable compared to total investment costs of Mex$14.8 billion. About 20% of the foreign exchange amount mentioned above would come from exports. An ex post evaluation of enterprises previously financed by FONEI under the first two Bank loans showed satisfactory export and import substitution performance relative to projections in 1977 (Annex 9, Tables 29 and 30), as shown in Table 3.2 below.

Table 3.2: EXPORT AND IMPORT SUBSTITUTION PERFORMANCE OF A SAMPLE OF FONEI'S PROJECTS

	No. of Enterprises a/	1977	
		Projected	Actual
		(US$ millions)	
Exports	25	59.5	59.9
Import substitution	32	84.6	142.1

a/ Some projects involved both exports and import substitution.

3.32 Industrial decentralization. In addition to their substantial balance of payments impact, FONEI's subprojects have also contributed significantly to the geographic decentralization of Mexican industry (Annex 9, Table 28). The three principal urban areas of Mexico--Mexico City, Monterrey and

1/ Computed in equivalent present value terms, with a 16% discount rate.

Guadalajara--accounted for only 28% of the total subproject financing of FONEI as of year-end 1978, which compares very favorably with total value added for Mexican industry originating from these areas, estimated at about 70%. Industrial credit from the banking system was even more concentrated in these areas (80-85%). FONEI's increasing promotional efforts should result in even better geographical dispersion of activities in the future, and particularly towards the government-designated priority areas.

3.33 Employment impact. FONEI's operations have made a significant contribution to providing new industrial employment. For the 121 subprojects 1/ for which ex ante data were available, the average cost per job created was about US$29,600 equivalent, which is reasonable compared to corresponding figures for medium-to large-scale industry in countries at a similar stage of development. Since the bulk of FONEI's subprojects also utilize substantial domestic inputs, they would also be expected to have a substantial additional indirect employment creation impact. An ex post analysis of a sample of 41 enterprises financed by FONEI in the past showed very favorable employment creation performance relative to projections made at the time of subproject appraisal. New jobs created by these 41 FONEI subprojects amounted to 5,080 in 1978, compared to projections of 4,408 (Annex 9, Table 31).

3.34 Size of projects and enterprises financed. The average investment cost of projects financed by FONEI up to year-end 1978 was Mex$104 million or about US$4.5 million equivalent (Annex 9, Table 28). The average subloan size was about Mex$36 million or about US$1.6 million equivalent. Of the 142 projects financed by FONEI in this period, only 16 relatively small projects did not involve Bank financing. About 55% by number of the projects financed by FONEI were of comparatively moderate size and involved total investment costs of Mex$50 million or less.

3.35 Although some concentration of lending to larger and more financially solid enterprises occurred during FONEI's early years of existence when it still had a limited pipeline of projects and had yet to establish itself in the Mexican financial system, its present administration has pursued a policy of distributing FONEI's resources as widely as possible among industrial clients in Mexico. As a result, FONEI has supported an unusually high number of new enterprises, which accounted for about 36% of total enterprises financed as of year-end 1978. No single group 2/ of industrial enterprises has received more than 9% of the total value of loans granted by FONEI as of the same date, and its five largest client groups account for only 35% of total lending. The above figures are reasonable, taking into account the ownership distribution of Mexican industry, the tendency of financial intermediaries--who carry the

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1/ Of the 21 subprojects not included in this estimate, 19 were comparatively small expansions for which data were not available, and two subloans involved one unusually large and capital intensive chemical project for which FONEI financed only about 7% of total project cost.

2/ An informal and loose agglomeration of companies with some common shareholders.

credit risk--to favor better established enterprises, and the presence of FOGAIN (para. 2.07) which, as previously mentioned, finances smaller enterprises and is being supported by the Bank under a separate loan as part of a balanced strategy to finance efficient industrial enterprises of all sizes in Mexico. However, to make FONEI's policy of favoring medium size enterprises more explicit and to ensure that the distribution of its resources is as wide as possible among industrial firms, FONEI's management intends to amend its Operating Regulations to establish a normal limit of Mex$300 million (about US$13 million equivalent) for loans to a single enterprise. Also, not more than US$5 million of Bank funds would be onlent for a single subproject. To encourage intermediaries to reorient their lending somewhat towards medium size enterprises, defined as enterprises with total equity of less than Mex$50 million, FONEI is planning to revise its system of spreads to give an additional margin to intermediaries for loans to medium size and smaller enterprises. Specifically, it is proposing the system described below:

Table 3.3: SYSTEM OF SPREADS TO INTERMEDIARIES PROPOSED BY FONEI

Size of Enterprise	Spreads to Intermediaries	
	Project Evaluated by FONEI	Project Evaluated by Intermediary
Large a/	2.00%	2.25%
Medium	2.25%	2.50%

a/ Defined as an enterprise with total equity of more than Mex$50 million.

3.36 The measures described above, combined with an increasingly active promotional effort to reach medium size clients, particularly in areas outside of the three principal cities, should achieve favorable results. The amendment of FONEI's Operating Regulations to reflect the system of spreads and limitations mentioned above in a manner satisfactory to the Bank, would be a condition of effectiveness of the proposed loan.

3.37 Economic and financial rates of return. *Ex ante* economic rates of return (ERR) were calculated for 118 of the 142 FONEI-financed subprojects. Of these, 116 had very satisfactory ERRs of 15% and above and only 2 had between 10% and 15% (Annex 9, Table 28). The financial rate of return (FRR) was calculated for a total of 124 subprojects, 28 of which had FRRs of between 10% and 15%, while the rest had projected FRRs of more than 15%. With the exception of one firm, no serious financial difficulties are being encountered by the enterprises financed by FONEI. Most of the firms which experienced financial and market difficulties arising from the peso devaluation in late 1976 have recovered, and several of them are working at, or close to, full capacity and are in the process of preparing expansion projects.

F. Development Strategy Paper

3.38 In connection with the third Bank loan, FONEI prepared a Development Strategy Paper for the period 1978-80, focussing on its medium-term institutional and operational goals, and its strategy for achieving them. Since the negotiations of that loan (April 1978), FONEI has begun to institute some of the measures chosen for the achievement of its objectives, such as differential spreads for intermediaries. FONEI's management revised and updated its Development Strategy Paper (Annex 6) to take into account the various aspects of its operations discussed in the preceding sections and summarized below:

(a) FONEI's institutional plans, including, inter alia, its strategy to develop subproject appraisal and supervision capabilities in the participating intermediaries as far as possible, and training and development of the staff of FONEI, of the intermediaries, and of consulting firms (paras. 3.23 and 3.25);

(b) FONEI's operational priorities covering plans to induce intermediaries to increase lending to medium size enterprises, promotional efforts to support industrial decentralization measures, and pollution control and technology development activities (paras. 3.08, 3.11, 3.26 and 3.32); and

(c) FONEI's efforts to support priority sectors identified in national plans for industrial development, including capital goods and medium size chemical projects.

3.39 The Strategy Paper was presented to the Bank and discussed during negotiations of the proposed loan.

G. Financial Structure and Results

3.40 Sources of funds. At the time FONEI was established in 1971, the Mexican Government made an initial equity contribution of Mex$125 million (then US$10 million equivalent) to enable FONEI to start operations. Later, the government also undertook to repay the principal of three Bank loans to FONEI, amounting to US$185 million, in order to progressively capitalize FONEI. FONEI is responsible for servicing interest and other charges on these loans and is thus exposed to the foreign exchange risk to the extent that interest and other charges rise due to peso devaluation. Since Bank funds are available only to finance the foreign exchange costs of investment projects, the government, through Banco de Mexico, also made available to FONEI additional funds amounting to Mex$2.33 billion out of the reserves of the banking system in exchange for long-term bonds carrying interest rates of 9-12% p.a. (Annex 9, Table 32). In 1978, Bank funds covered about 37% of disbursements, and Banco de Mexico's counterpart resources about 40% (Annex 9, Table 33). In order to bridge the gap of resources prior to the availability of the funds from the third Bank loan, Banco de Mexico also made a short-term loan of

Mex$150 million (about 11% of disbursements) which FONEI would repay in 1979. Portfolio recoveries have also become an increasingly important part of FONEI's sources of funds, covering about 12% of disbursements in 1978.

3.41 Assets and liabilities. FONEI's assets have grown at an explosive rate of 64% in 1977, and 69% in 1978 when total assets reached Mex$2.9 billion (Annex 9, Table 32). About 94% of FONEI's assets are accounted for by its loan portfolio. At present, FONEI's equity is negative due to the accounting treatment of foreign exchange losses suffered at the time of the peso devaluation in 1976. Although the government has the obligation to repay the principal of the three existing Bank loans, in the external auditors' opinion the disbursed amounts under these loans should be shown in FONEI's financial statements to reflect the peso devaluation, and the corresponding exchange loss recorded as a reduction in FONEI's equity. As Bank loans are repaid by the government the exchange loss is reduced, and the difference shown as an increase in FONEI's equity. Thus, when the Bank loans are fully repaid, the exchange losses on account of the principal amounts of the loans will be eliminated and FONEI's paid-in capital will have increased by an amount equal to the peso equivalent of the Bank loans at the time of their disbursement. Under these circumstances and given the fact that FONEI, as a second-tier institution, does not incur credit risks in its operations (para. 3.43) and is not responsible for repaying the principal amount of Bank loans, the ratio of FONEI's total debt to its paid-in capital (16.8 at year-end 1978) is not a meaningful figure to consider in analyzing FONEI's financial situation. On balance, FONEI's financial position can be considered sound.

3.42 Profitability and costs. FONEI's operating results turned negative in 1976 and 1977 because of the higher interest charges it had to pay on Bank loans in pesos due to the currency devaluation, while most of its outstanding loans were made at fixed interest rates in pesos. The peso has since become a much stronger currency, and FONEI has raised its interest rates and now requires all borrowers to accept fully floating interest rates. These measures restored FONEI's profitability in 1978, when profits reached Mex$11 million (Annex 9, Table 34). With the growth in lending volume, FONEI's administrative expenses also declined markedly from 2.9% of average total assets (ATA) in 1974 to 0.91% of ATA in 1978. The latter figure, however, may prove to be rather low in the short to medium term, taking into account the need to increase FONEI's staff in anticipation of future growth and to provide more assistance to participating intermediaries.

3.43 Arrears and provisions. FONEI does not bear any credit risk in its operations, 1/ since all intermediaries are responsible for principal and interest payments due, whether or not they receive payment from their industrial clients. In practice, since FONEI is a trust fund of Banco de Mexico, repayments to FONEI are made directly out of the accounts maintained by the intermediary banks as part of the reserve system. Nevertheless, as part of

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1/ Except in connection with its small guarantee mechanism for technology development projects and prefeasibility studies (para. 3.09).

its supervision requirements, FONEI asks intermediaries to report on the status of client repayments and is prepared, in exceptional circumstances, to consider rescheduling the intermediaries' subloan repayments. To date this has been necessary only in the case of one project.

3.44 Auditing arrangements. FONEI's accounts have been audited for the past few years by Alonso Ochoa Ravize, a reputable Mexican auditing firm. In addition, Banco de Mexico's internal auditors also audit FONEI's accounts periodically. All the audit reports on FONEI's accounts since inception have been unqualified. The accounting procedures and auditing arrangements are satisfactory.

H. Future Operations and Resource Needs

3.45 Operations forecast and project pipeline. While Mexico's continuing rapid economic recovery and buoyant expectations created by the recent large oil discoveries have stimulated a sharp rise in manufacturing sector investment plans, the financial system lacks sufficient long-term resources to cover industrial financing needs. This situation, which is likely to continue for at least the next few years, as well as FONEI's good image with the private industrial and financial sectors, portends sharp increases in demand for FONEI funds. FONEI's total loan approvals doubled to about Mex$2,300 million in 1978 (from Mex$1,160 million in 1977) and are projected to reach Mex$3,500 million in 1979, an increase of about 50%. FONEI's rather conservative projections (Annex 9, Table 34) show the growth rate of approvals (by amounts) tapering off gradually to about 29% by 1980, 11% in 1981 and 9% in 1983. The summary figures are shown below:

Table 3.4: FONEI'S OPERATIONS PROJECTIONS

	Actual 1978	1979	1981	1983
Amount (Mex$ million)	2,288	3,500	5,000	6,000
No. of projects	63	102	146	176

The average subloan size (Mex$36 million in 1978) is projected to decline slightly in nominal terms (to Mex$34 million) and more sharply in real terms in view of FONEI's intention to reach a higher percentage of medium size enterprises. This implies that the number of projects would increase more rapidly (by 180%) than total amounts approved (162%) from 1978 to 1983. On the whole, the projected growth rate in approvals over the 1979-83 period of about 22% p.a. in nominal terms is quite conservative and could be exceeded easily, provided that sufficient additional resources will be made available to FONEI. The higher growth rate projected by FONEI for the first three years of the forecast period is also supported by its large project pipeline totalling Mex$4,200 million as of January 1979.

3.46 Resource requirements. Although the third Bank loan was approved only last May, FONEI would need additional resources for commitment by mid-1979. As of year-end 1978, FONEI had only about Mex$1,600 million 1/ left in uncommitted funds to cover its expected approvals for the first half of 1979. Over the period from mid-1979 to mid-1981, given the previously mentioned high level of expected approvals, FONEI would need total resources amounting to Mex$8,900 million (Annex 9, T-36 and T-37). About Mex$2,100 million of this could be covered by internal resources derived from rapidly rising portfolio recoveries and increasing profits. The rest of the gap would be filled principally by the proposed loan and by additional complementary funds to be made available by Banco de Mexico. Additional local and/or foreign resources are likely to be required towards the second quarter of 1981. 2/

3.47 During the negotiations of the third loan, Banco de Mexico requested the Bank to expand eligible expenditures under the loan to include the foreign exchange content of domestically manufactured fixed asset items financed by FONEI, estimated at about 25% of their cost (Annex 7). This, together with the Bank's financing of direct and off-the-shelf imports, was expected to result in the Bank's accounting for approximately 60% of FONEI's commitments (and subsequent disbursements) in 1978 and 1979, compared to close to 50% in the past. In practice, however, partly due to time lags arising from documentation requirements and the rapid growth rate of FONEI's operations, it appears unlikely that, even with the modifications mentioned above, the Bank would be able to cover more than about 55% of FONEI's disbursements. FONEI is also considering financing several types of projects (e.g., border service industries, technology development and pollution control projects) which tend to have high local cost components. Thus, a slightly higher amount relative to the Bank loan would be required from the government (through Banco de Mexico) in connection with the proposed loan. 3/ A Bank loan of US$175 million is being proposed, of which about US$173 million would be channelled to FONEI, to be committed as follows: US$40 million in 1979, US$100 million in 1980 and US$33 million in 1981. Counterpart funds of US$105 million equivalent would be required from Banco de Mexico. Since this would still leave a gap of about Mex$430 million, FONEI is likely to require additional resources before the end of the two-year period (i.e., by the second quarter of 1981) in the form of new borrowings from Banco de Mexico and other sources.

3.48 Projected financial results. Due to the rapid growth in approvals, FONEI's total portfolio and assets are expected to expand very rapidly over the forecast period. Assets would grow from Mex$2.9 billion at year-end 1978 to Mex$18.1 billion at year-end 1983, or at a compounded annual rate of close to 45% p.a. (Annex 9, T-32). Total liabilities would grow at a some-

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1/ Including projected portfolio recoveries and operating profits.

2/ Some of these resources could come from the government's prospective oil revenues or from bonds which FONEI is considering issuing in the future.

3/ Banco de Mexico's contribution would be equivalent to about 60% of the proposed loan, compared to about 85% of the first Bank loan, about 80% of the second loan, and 45% of the third loan.

what slower rate of about 38%, as equity would increase very rapidly due to the repayment by the government of the earlier Bank loans and to rapid growth in profits (para. 3.49). Thus, total equity would increase from a negative book value of Mex$87 million at year-end 1978 (para. 3.41) to a positive book value of about Mex$3.2 billion at year-end 1983. In sum, FONEI's financial structure would remain sound over the forecast period.

3.49 Net profits of FONEI are projected to rise rapidly within the next few years as the early subloans made at low fixed peso interest rates are repaid, and new loans made at more realistic (and floating) interest rates account for a much larger part of FONEI's portfolio (Annex 9, T-34). Reflecting this fact, total income as a percentage of average total assets (ATA) is projected to rise from 11.5% in 1978 to over 14% from 1981 to 1983. Interest expenses would correspondingly decline from about 10.1% of ATA in 1978 to 9.1% of ATA in 1981 and 8.1% by 1983, due to the increasing equity base of FONEI and the concomitant sharply decreasing debt/equity ratio over the forecast period. The somewhat lower interest rates to be charged for pollution control and technology improvement projects are not expected to affect significantly FONEI's profitability, which is projected to rise from 0.5% of ATA in 1978 to 4.9% in 1981 and 5.4% in 1983. Administrative costs would rise slightly in 1979 to a still very reasonable 0.94% of ATA, due to non-recurring costs associated with FONEI's transfer of offices, and then stabilize at a very low level of about 0.5-0.6% of ATA. However, much would depend on the degree to which project appraisal and supervision responsibility could be transferred by FONEI to participating intermediaries, which would have the effect of gradually decreasing FONEI's own administrative expenses, at the same time lowering somewhat total income due to the increased spread granted to intermediaries.

3.50 The above favorable profitability projections could be modified by significant exchange rate movements in the future to offset differences between Mexican and international inflation rates. However, given the projections of a declining rate of inflation in Mexico and the expectation that FONEI would adjust its interest rates as it did in 1977 should events contrary to projections occur, FONEI should be able to maintain a sound financial structure over the period up to 1983.

IV. THE PROJECT

A. Project Objectives

4.01 The proposed project would build and expand on the accomplishments of the past three Bank operations with FONEI. It is designed to:

(a) help finance efficient projects expected to have a substantial economic and employment impact, and increasingly those sponsored by medium-sized enterprises and enterprises located outside of Mexico's three principal cities;

(b) support FONEI's efforts to build up project appraisal and supervision capabilities in several of the participating intermediaries to improve resource allocation by the Mexican financial system and expand the appraisal and supervision capacity of the FONEI system; and

(c) help broaden FONEI's impact on Mexican industry through two new components to finance technology development and industrial pollution control projects.

B. The Proposed Loan

4.02 Loan amount and terms. The proposed loan of US$175 million would be available to cover the foreign exchange component of FONEI-financed subprojects, human resource studies and training activities. Up to US$5 million each would be allocated initially for technology development and for industrial pollution control subprojects, respectively, and not more than US$10 million may be utilized to finance service export projects. Up to US$250,000 would be available to finance FONEI's training activities. The proposed loan would be made to NAFINSA (as agent for the Mexican Government) which would make arrangements satisfactory to the Bank for the transfer of the proceeds of at least US$173 million of the Bank loan to Banco de Mexico for the account of FONEI for implementation of the project. In addition, the Mexican Government, as the Guarantor, would assure availability of at least US$105 million equivalent as counterpart resources to be provided through Banco de Mexico (as Trustee), for channeling to FONEI under conditions satisfactory to the Bank. Up to US$2 million of the loan would be available to help finance the cost of studies to assess the human resource and technical and vocational training needs for industry in the light of the government's industrial development strategy. These studies would be coordinated by the Ministry of Education, and the Bank would review the terms of reference. To help build up FONEI's resource base, as under prior Bank loans to FONEI, the Mexican Government would have the obligation to repay the principal amount of the loan and the interest and other charges on the US$2 million component for studies. FONEI would have the obligation to pay interest and other charges on the amount of the loan channelled to it. In view of the above arrangement, the loan will be repaid according to a fixed 17-year amortization schedule including 4 years of grace, which are the maximum Bank terms for Mexico under the current guidelines. The terminal date for submission of subprojects to the Bank would be June 30, 1981, and the closing date for disbursements would be June 30, 1984 (see estimated disbursement schedule, Annex 8).

4.03 Participating intermediaries. Any of the more than 150 financial intermediaries of public or private ownership assisting projects eligible for financing by FONEI could participate under the loan.

4.04 Subloans for investment projects. The terms and conditions of subloans made using the proceeds of the Bank loan would be consistent with FONEI's Operating Regulations. The funds would be available to final borrowers at the ACF index plus 2%, and subloans would have a maximum term of 13 years, including up to 3 years of grace. In order to spread Bank funds over a wide number

of recipients, a limit of US$5 million would be placed on Bank funds that could be provided to any single investment subproject. Exceptions to this limit could be made with the explicit approval of Banco de Mexico and the Bank for projects of high economic merit that do not have access to alternative sources of finance on adequate terms. As stated in FONEI's Operating Regulations, the economic rate of return would be calculated for all investment subprojects, except for service export industries and other industries with non-tradeable products, for which the financial rate of return, net balance of payments and employment impact would be calculated.

4.05 Subloans to finance industrial pollution control projects. Up to US$5 million would be included in the proposed project for pollution control subloans. Unused resources towards the end of the loan's commitment period would be available to finance other types of investment projects. On the other hand, should actual demand exceed expectations, the Bank would be prepared to consider increasing the US$5 million allocation. Preferential funds under the component would be available to firms which had entered into commitments to purchase production equipment prior to the date of issuance of the specific reglamento relevant to the pollution problem at hand. In those instances in which subprojects for plant modernization would result in no production increase, enterprises would also be eligible for financing at preferential rates of the cost incurred for pollution control activities under this component. Such eligibility, however, would be decided on a case-by-case basis, after consultation between FONEI and the Bank.

4.06 In addition, pollution control subloans would also be subject to the following special conditions:

(a) Subloans granted for the purchase of pollution control equipment, or for related technical assistance, would be made to final borrowers at an interest rate of between 2.0 points above and 3.0 points below the ACF. Only qualified enterprises as defined above would be eligible for funds at interest rates below FONEI's standard onlending rates.

(b) All subprojects submitted under this component would require (i) a full description of the firm's pollution problem; (ii) a detailed analysis and justification of the equipment and/or technical assistance required to meet government standards for controlling the type of pollution involved; and (iii) an analysis of the repayment capacity of the firm.

(c) As part of its subproject review, FONEI would obtain, as needed, the comments of SSA and/or SARH regarding the adequacy of solutions proposed by subborrowers to meet the standards set by the government.

FONEI's Operating Regulations would be amended prior to loan effectiveness to incorporate the conditions mentioned above and in para. 4.07 below.

4.07 Technology development subloans. A component of up to US$5 million to finance technology development projects would be included under the proposed loan. The principles established in para. 4.05 above would apply for any possible reallocation or increase in the loan allocation for technology

development subloans. Subloans would finance the development of new products and production processes, technical information searches and overseas training, visits by technical experts and related needs (Annex 4). In addition:

(a) Subloans would be made available to subborrowers in pesos at the ACF index less three points.

(b) Subproject evaluations would cover, inter alia, current sources of technology and their costs, a description of the technological adjustment needs, the objectives and scope of the proposed technology development program, expected results and benefits, and repayment capacity of firms.

4.08 Approval limits. FONEI's limit for subloans for investment subprojects not requiring prior Bank approval would be US$2 million. The free limit for subloans for pollution control subprojects would be US$750,000 and for technology development subprojects US$500,000, except that Bank approval would be required for the first three projects under each of these components. All subloans for service export projects would continue to be subject to prior review and approval by the Bank.

4.09 Spreads to intermediaries. Spreads to financial intermediaries under Bank subloans would be consistent with FONEI's operating regulations and would vary between 2.0% and 2.75%, depending on the size of the borrowing enterprise and the intermediary's assumption of responsibility for subproject appraisal and supervision. The full foreign exchange risk would be carried by the government on the principal of the loan, and by FONEI for interest payments and other charges.

4.10 Procurement and disbursement. Procurement procedures for goods and services financed under the proposed loan would be similar to those under the first three Bank loans and would follow the procedures customary for Bank IDF-type projects, with FONEI having the responsibility for ensuring the competitiveness, in price and quality, of items procured and their suitability for the purpose intended. FONEI would pay particular attention to analyzing procurement decisions in the exceptional case of subloans exceeding its maximum lending limits. Disbursement of funds from the loan would be on the following basis:

(a) 100% of foreign expenditures for directly imported items;

(b) 70% of total expenditures for imported items purchased off the shelf in Mexico;

(c) 25% of total expenditures for domestically manufactured machinery and equipment, and of the costs of installation and industrial construction;

(d) 40% of total expenditures for technology improvement projects;

(e) 50% of total expenditures for the training activities; and

(f) 47% of total expenditures for the human resources studies.

The disbursement percentages (b) through (f) above represent estimated average foreign exchange costs.

C. Benefits and Risks

4.11 Project benefits. The proposed project would help fill a gap in the financing of efficient industrial projects in Mexico at a time when the financial system lacks sufficient long-term resources to cover industrial investment needs. On the basis of experience with the past three Bank loans to FONEI, the proposed loan is expected to finance some 150-160 investment subprojects involving total investment costs of about Mex$16.8 billion (about US$740 million) in a wide range of industries which would increase output, employment and exports. Most subprojects are expected to have economic rates of return (ERR) in the range of 15-40%. The ERR would be calculated for all investment subprojects (para. 4.04), which would ensure the utilization of the loan for efficient projects. Based on past experience, the subprojects to be financed under the loan are expected to have a substantial employment impact, generating a total of 22,000 to 26,500 new jobs at an investment cost per job created of US$27,000 to US$34,000. A substantial indirect employment impact is also expected due to domestic linkages. 1/ The proposed loan is expected to contribute significantly to industrial decentralization and regional development, with about 60-70% of funds expected to go to projects located outside of Mexico City, Monterrey and Guadalajara. A substantial portion of the loan is expected to be utilized for medium size enterprises (about 40% by amount and over 50% by number), which are expected to have a higher employment creation impact. The investment projects to be financed by the proposed loan are expected to result in foreign exchange earnings and savings of about US$2 billion during the first five years of operation of subprojects. As in the past, about 20% of the above amount should derive from increased exports. The proposed loan would also help upgrade the competitiveness and efficiency of Mexican firms through technology development projects, and help lessen pollution from existing industrial plants and equipment. The human resource study to be financed under the loan is expected to improve the planning process to help ensure availability of adequate manpower in the future for Mexico's industrial development.

4.12 The project is expected to have a significant positive institutional development impact on the FONEI system and, to a lesser degree, on the project evaluation capacity of the Mexican financial system as a whole. It would support FONEI's efforts to build up project appraisal and supervision capabilities of participating intermediaries and encourage them to set up small

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1/ For a comparable analysis of the likely indirect employment generation, see Colombia: Special Study of Development Impact of Financiera-assisted Projects (Report No. 1027-CO), dated January 23, 1976.

in-house project lending units, in the process contributing to the government's goal of improving resource allocation by the Mexican financial system. About one-third of the subprojects financed under the loan are expected to be appraised by the financial intermediaries, compared to only 6% in 1978.

4.13 Risks. As the fourth Bank operation with FONEI, which is a reasonably efficient and mature financial institution, the project presents no special risk in respect of the soundness and efficiency of subprojects financed. On the other hand, the institutional goals of the project are likely to be more difficult to achieve. However, the combination of the lending policies for intermediaries enunciated in the new Banking Law, the new system of variable spreads to the intermediaries, FONEI's promotional efforts, and the training program to be undertaken by FONEI, involving intermediaries' staff and consultants, should increase greatly the chances that the institutional goals will be achieved.

4.14 On the sectoral side, should the government depart from its present policy of maintaining a realistic exchange rate, industrialists might be less willing to mount export and import substitution projects. However, this subject and its implications for achieving desired employment creation goals are discussed regularly between the Mexican Government and the Bank in the context of the Bank's economic work and will be followed closely. In this connection, the recently issued National Industrial Plan and the decrees to implement its key policy elements give priority to both of these objectives. Also, in the unlikely event that inflation rises, the ACF should continue to be a suitable yardstick for determining FONEI's lending interest rates, given the government's announced intention of maintaining interest rate levels which would permit adequate resource mobilization in the financial system. On the whole, the project presents a moderate level of risk.

V. AGREEMENTS REACHED AND RECOMMENDATION

A. Agreements Reached

5.01 During loan negotiations, the following agreements were reached:

(i) with the Mexican Government and Banco de Mexico on:

(a) the loan amount, and the provision by Banco de Mexico of the required counterpart resources to FONEI at satisfactory terms and conditions to complement the Bank loan and FONEI's internal resources (para. 4.02);

(b) the government's repayment of the principal of the loan and assurance of the availability of the required counterpart resources to Banco de Mexico (para. 4.02).

(ii) with the Mexican Government, Nacional Financiera and Banco de Mexico on:

(a) expenditures eligible for Bank financing (para. 4.10); and

(b) FONEI's onlending interest rates (paras. 3.14 and 3.15) for investment, pollution control and technology development projects, and its responsibilities for payment of interest and other charges on the Bank loan (para. 4.02).

(iii) with Banco de Mexico as trustee for FONEI on:

(a) the cumulative limit on the total Bank financing for service export projects (para. 4.02);

(b) the allocations, terms and conditions of lending for pollution control and technology development subprojects (paras. 3.15 and 4.05 to 4.07);

(c) the free limit arrangements for investment, service export, pollution control and technology development subprojects (para. 4.08); and

(d) the limit of US$5.0 million for the maximum amount of proceeds of the loan that could be onlent for a single investment subproject (para. 4.04).

(iv) with the Mexican Government and NAFINSA on the terms and conditions of the human resources study (para. 4.02).

5.02 A special condition of effectiveness of the proposed loan would be the amendment of FONEI's Operating Regulations to include, inter alia, measures to encourage a wide distribution of its resources among industrial enterprises (paras. 3.25, 3.36 and 4.06).

B. Recommendation

5.03 The proposed project would constitute a suitable basis for a loan of US$175 million with a maturity of 17 years including 4 years of grace on conditions as outlined in Chapter IV.

ANNEX 1

MEXICO

FOURTH INDUSTRIAL EQUIPMENT FUND (FONEI) PROJECT

Variable Interest Rates and the ACF Index

1. Since 1974 financial institutions in Mexico have been increasingly adopting variable interest rate schemes for term lending operations. The change from fixed rate lending, which had been the practice in the past, came after inflation had accelerated post-1973 to levels--20% and more p.a.--unknown in Mexico for twenty years and after Banco de Mexico had raised the maximum interest rate on deposits by almost 4 percentage points above the 1972 level. Variable rates were used for the first time on a large long-term loan from a group of banks and financieras (investment banks) to several large public enterprises, where it was agreed that the rate would be set several points above the average cost of funds to financieras 1/ and would vary as this base rate varied. Since that time, the use of variable interest rates has become more generalized and by 1977 practically no term loans were being made except at variable interest rates.

2. The average cost of funds to financieras (ACF) is a rate calculated monthly by Banco de Mexico in order to determine how much to pay the financieras for required reserves kept with Banco de Mexico. Thus, it is a ready-made indicator of financial costs. It is a weighted average (gross of tax) of interest rates paid on financial bonds and certificates, promissory notes, and certificates of deposit, instruments whose maturity varied from sight to three years. The ACF excludes checking accounts, savings deposits and mortgage bonds and certificates issued by commercial and mortgage banking departments, even though in practice the latter pay rates approximately equal to rates paid by the investment banking departments.

3. Banco de Mexico generally looked with favor upon the development of variable-rate lending, recognizing it as a way of preventing an even more rapid contraction in term lending activity of the financial system in response to the uncertainties created by inflation in the past. Banks favored the principle, since it could prevent a profit squeeze on deposits accepted at short term and re-lent at longer term. Borrowers accepted the idea, basically because the alternative would have been a considerably higher fixed rate, because of its similarity to a series of rolled-over short-term loans and because many were familiar with variable-rate Eurodollar loans.

4. Movements in the ACF are determined chiefly by the rates paid on various classes of deposit instruments and changes in the volume of savings attracted by different instruments. Maximum rates that banks can pay on each instrument are set by Banco de Mexico to avoid excessive fluctuations in rates and undesirable large movements in deposits between financial institutions or

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1/ The financieras are the term lending arms of banking conglomerates which now are becoming formally fused into multipurpose banks (multibanks), with commercial and mortgage banking departments as well. Resources mobilized by the financiera departments continue to be the main source of term loans from multibanks and to be subject to their own regulating regime.

between instruments with different term characteristics. Nevertheless, through 1972 rates were set high enough to attract substantial real increases in resources and the banking system was growing faster than GDP. During that time, the ACF, at around 10%, was 5-7 points greater than inflation (Appendix). During 1973-76, the inflationary period leading up to the abandonment of the fixed parity of the peso in relation to the US dollar in September 1976, the ACF rose to near 12% as deposit rates were raised several times but never by enough to exceed inflation (except for brief periods). Resource mobilization, consequently, suffered and the financial system shrank when measured in constant prices.

5. The new administration has set a policy of maintaining interest rates which, in relation to inflationary expectations, would permit adequate resource mobilization. The first step in this policy was taken in May 1977 when interest rates on the longest term deposits (2 years) were increased from 15.17% to 18.52% (12.75% to 16% after tax); the ACF reached about 16.25% by January 1979.

6. A secondary determinant of changes in the ACF is fluctuation in the relative amounts held in the various instruments. On at least two occasions changes in those relative amounts have importantly affected the ACF. In late 1976 deposit rates were raised but the ACF did not rise because the public, due to general uncertainty, shifted a larger portion of its deposits into financial bonds paying lower rates but withdrawable at sight. On the other hand, the effect on the ACF of the May increase, mainly in longer term deposit rates, was reinforced by a relative shift from shorter to longer term deposit instruments. The increase in deposit rates in May 1977, accompanied by a decline in inflation from the first to the second semester, led to an encouraging increase in the volume of peso-denominated financial savings.

7. If the annual rate of inflation decreases gradually as expected from about 18% in 1978 to international levels by 1982, and the recent rapid growth of deposits is sustained, the level of ACF over the next few years can be expected to be relatively stable, with only slow and gradual changes. If, however, the progress in controlling inflation were significantly less successful, the monetary authorities could be expected to adjust deposit rates accordingly.

MEXICO

FOURTH INDUSTRIAL EQUIPMENT FUND (FONEI) PROJECT

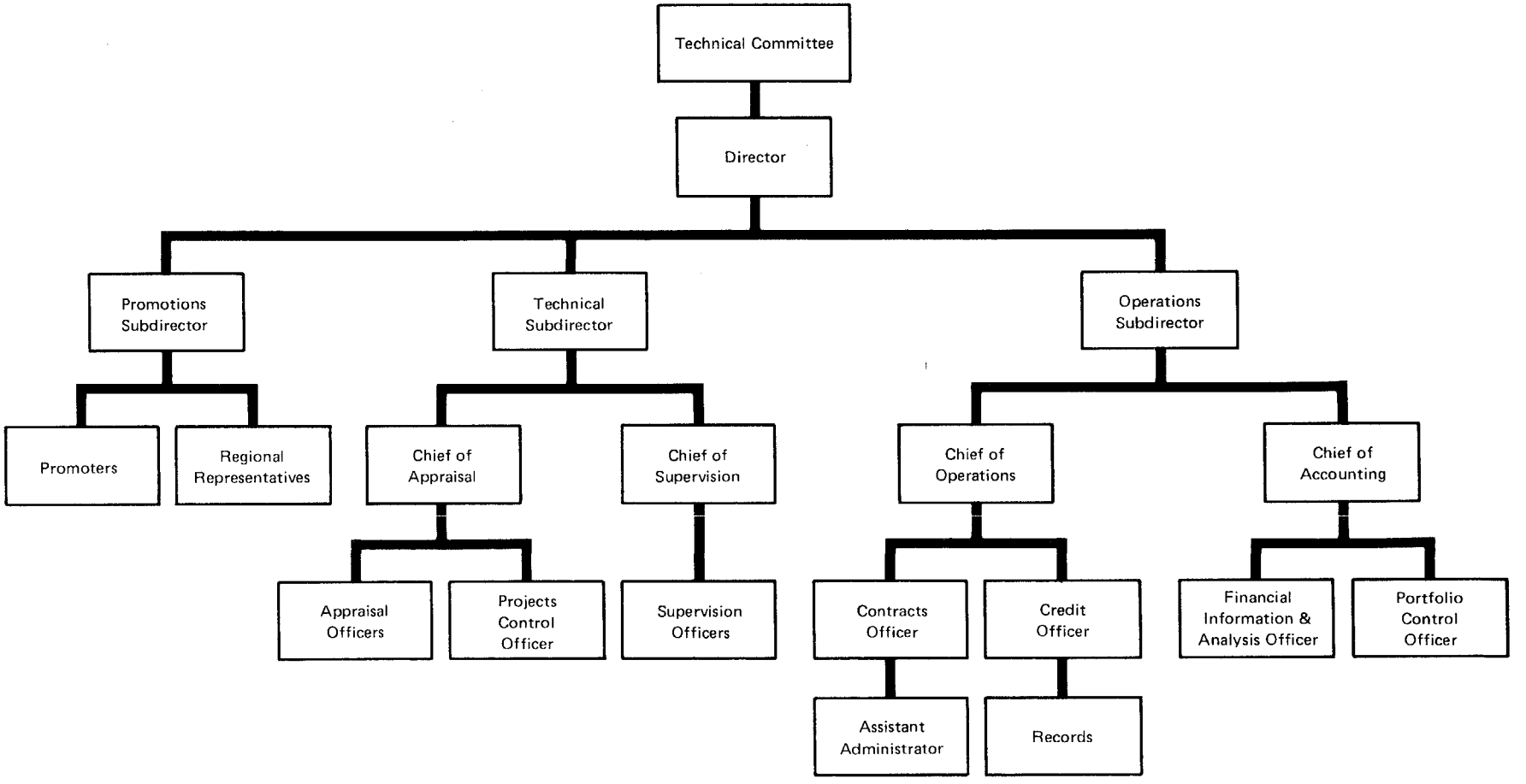
Table 1: Deposit Rates, the ACF and Inflation

Year	Quarter	Highest Deposit Rate	ACF	Inflation during quarter, annualized rate	Highest Rate to FONEI's Borrowers
1971	1	11.48	10.53	4.9	-
	2	11.11	10.41	3.9	-
	3	11.11	10.30	4.3	-
	4	11.11	10.19	4.2	-
1972	1	10.60	10.03	7.7	-
	2	10.60	9.97	4.1	-
	3	10.60	9.91	5.8	-
	4	10.60	9.90	4.6	-
1973	1	10.60	9.87	13.6	-
	2	10.88	9.87	14.6	-
	3	12.71	10.41	29.9	11.00
	4	12.71	10.65	28.5	11.00
1974	1	12.78	10.88	29.9	11.00
	2	13.74	11.35	13.1	11.00
	3	14.21	11.57	15.7	11.00
	4	14.21	11.88	24.5	11.00
1975	1	14.21	11.86	10.4	11.00
	2	14.21	11.89	16.7	11.00
	3	14.21	11.91	9.9	11.00
	4	14.21	11.97	8.3	12.00
1976	1	13.91	11.78	21.0	12.00
	2	13.91	11.76	7.4	12.00
	3	14.63	11.74	22.8	13.50
	4	15.17	11.99	64.0	13.50
1977	1	15.17	11.99	32.7	14.00
	2	16.28	12.59	15.4	14.50
	3	18.52	13.83	21.7	15.75
	4	18.52	14.30	13.9	16.25
1978	1	18.52	14.88	20.6	17.00
	2	18.52	15.47	14.8	17.50
	3	18.52	15.67	18.2a/	17.75
	4	18.52	16.25a/	17.7a/	18.25

a/ Estimates

LCPI2, March 1979

MEXICO
FOURTH INDUSTRIAL EQUIPMENT FUND (FONEI) PROJECT
Organization Chart



World Bank — 20307

MEXICO

FOURTH INDUSTRIAL EQUIPMENT FUND (FONEI) PROJECT

Operating Regulations of the Industrial Equipment Fund (FONEI) 1/
(Translation)

The Federal Government, represented by the Secetaria de Hacienda y Credito Publico, created in Banco de Mexico, S.A. a trust fund, Fondo de Equipamiento Industrial. The resources of this fund will be devoted to promoting the establishment and expansion or modernization of industrial or service firms whose scale and efficiency permit them to supply foreign markets or to substitute imports, thereby helping to strengthen the balance of payments and to raise the productivity of national industry.

In July 1978 the Technical Committee of FONEI approved new General Operating Regulations which appear below. These replace the ones approved in March 1978.

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1. The objectives of the Industrial Equipment Fund (FONEI) are:

(a) To promote the efficient production of industrial goods and services that generate or save foreign exchange, by making loans for export-oriented or import-substitution projects, with efficiency such that they have reasonable export prospects.

(b) To ensure that the auxiliary lending institutions and organizations of the country (financial intermediaries) evaluate such projects.

2. FONEI may undertake the following operations:

(a) To provide financing to auxiliary lending institutions and organizations of the country for loans that they grant for the purchase of fixed assets: machinery, industrial equipment and facilities; their installation and assembly; construction of buildings to install such fixed assets; and preoperating costs.

(b) To provide financing to financial intermediaries for loans that they grant to entrepreneurs or promoters for the preparation of preinvestment studies and for the adaptation, production, integration and development of technology, preferably for the design and development of capital goods, defined as machinery and equipment used in the production of goods and the provision of services, including spare parts and components, as well as special tools, attachments, dies and molds.

(c) To carry out financing operations related to those mentioned in the preceding subparagraphs.

1/ To be revised prior to effectiveness of the proposed loan.

(d) To extend its guarantee to protect financial intermediaries against risks of default in payment of the loans referred to in (b) above.

3. The operations mentioned in the preceding regulation shall relate to the following:

(a) The equipping of new industrial plants or the expansion or modernization of existing plants whose products have reasonable prospects of competing in foreign markets, or which substitute imports efficiently.

(b) The equipping, expansion or modernization of firms whose purpose is to provide services that generate or save foreign exchange.

(c) The development of technology and designs for capital goods that tend to generate or save foreign exchange, including the development of prototypes.

4. The following requirements must be met in order for FONEI to provide financing for industrial projects whose objective is import substitution:

(a) The products manufactured by the firm must be competitive in quality and price with identical or similar products manufactured abroad.

(b) The products manufactured as a result of the project must be of a priority nature.

5. FONEI may grant loans for preinvestment studies and technology development programs, on the following conditions:

(a) Up to 80% of the cost shall be financed in the case of projects eligible for financing by the Fund itself.

(b) The repayment period shall be up to ten years, in accordance with the nature and scale of the study or program.

(c) If the preinvestment study or the technology program results in the execution of a specific project, it shall be consolidated with the loan that may be granted by FONEI for the execution of that project.

6. The guarantee of FONEI referred to in sub-paragraph 2(b) of these General Operating Regulations may not exceed 90% of the loan amount, including principal and ordinary interest.

The financial intermediary or, if appropriate, the entrepreneur or promoter requesting the guarantee, shall pay a lump sum premium to the Trustee equal to 0.5% of the principal amount of the loan on the date of signing of the guarantee contract.

7. A lending institution acting as financial intermediary in loans made by FONEI shall be subject to the following basic requirements:

(a) It shall ensure that the borrowing enterprise will have sufficient resources to meet its working capital needs.

(b) The cost incurred in the evaluation of the project shall not be passed on to the borrower.

(c) The financial intermediary shall be obliged to service its debt punctually and in full, regardless of whether it has received payment from its borrower. In addition, it shall immediately pay to FONEI any sums received as advance payment of principal.

(d) The financial intermediary shall carry out preliminary and periodic supervision of the project during the life of the loan, covering periods not exceeding one year, and shall send the corresponding reports to FONEI.

8. In the selection of projects to be financed with resources of FONEI, the following general aspects, among others, shall be considered:

(1) Generation or saving of foreign exchange.

(2) Economic and financial rates of return.

(3) Value added.

(4) Utilization of labor.

(5) Industrial decentralization and regional development.

9. The lending operations of FONEI shall be denominated in Mexican currency.

10. The minimum amount of financing granted by FONEI shall be Mex$4.5 million and the maximum Mex$100 million in each case.

The lower limit shall not apply to financing for preinvestment studies or technology development programs. With the prior approval of the entity establishing the trust, having heard the opinion of the Trustee, the Committee may grant loans for amounts exceeding the maximum of Mex$100 million for high priority projects, such as the manufacture of capital goods.

11. Within the limits of the foregoing regulation, FONEI shall finance the purchase of fixed assets in the following proportions:

(a) For projects whose purpose is the establishement of new enterprises, up to 65% of the fixed assets. The financial intermediary shall provide funds equal to at least 15.4% of the FONEI loan from its own resources, and the final borrower shall finance at least 25% of the said assets.

(b) In the case of projects for the expansion or modernization of existing plants, FONEI may finance up to 72% of the fixed assets. The financial intermediary shall provide funds equal to at least 11.1% of the FONEI loan from its own resources, and the final borrower shall finance at least 20% of the said assets.

The contribution of the final borrower shall be made through increases in share capital, or through the internal generation of funds during the construction period of the project in the case of existing enterprises.

In the financing of projects supported by FONEI, other lending institutions, equipment suppliers, and in general any other source of funds may participate in addition to the financial intermediary.

12. In accordance with the nature of the project, the Technical Committee shall determine the amortization period and other conditions of each loan for the purchase of fixed assets granted from FONEI resources. The maximum period shall be 13 years, including a grace period of up to 3 years.

Within the limits set forth in the preceding paragraph, the loan amortization period may be extended for up to two years beyond that which the financial analysis indicates as necessary, to meet the costs of preinvestment studies incurred by the enterprise for the contracting of external consultants acceptable to FONEI.

13. The annual interest rate that financial intermediaries are authorized to charge their borrowers on loans from FONEI resources for the acquisition of fixed assets shall be calculated on the unpaid balances and shall not be greater than two percentage points above the average percentage interest rate charges and surcharges for the borrowing operations in Mexican currency of all private and mixed banking institutions of the country, on the basis of estimates prepared monthly by the Banco de Mexico. The average percentage cost shall be rounded to the nearest one-fourth of one percent.

The initial rate applied shall be that in effect for the month immediately preceding that of the contracting of the loan between the institution and its borrower and shall be modified semiannually if necessary, even though the amortization payments may be monthly or quarterly, as stipulated in the preceding paragraph.

14. The interest rate charged by FONEI to financial intermediaries on loans for the purchase of fixed assets shall be that estimated by the Banco de Mexico as indicated in the preceding paragraph. However, when the financial intermediary undertakes the evaluation of the project, using either its own technical staff or external consultants, in accordance with terms of reference established by FONEI and with its prior agreement, the Fund may reduce its rate by up to 0.5 percentage points when the loan is less than Mex$30 million and 0.25 points when it exceeds that amount.

15. The interest rates charged by the financial intermediaries and by FONEI on loans for preinvestment studies and technology development programs shall be five percentage points less than those indicated in the two preceding clauses.

16. FONEI shall charge the financial intermediaries a commitment fee of 1% per annum on the undisbursed balances, in accordance with the schedule of disbursements of the loan approved by FONEI. The financial intermediaries in turn may pass this fee on to the final borrowers.

17. FONEI shall not make loans for projects or programs for which adequate alternative sources of financing are available.

18. The contract signed by FONEI with the financial intermediary, and that signed by the latter with the final borrower, shall stipulate that FONEI is entitled at all times to obtain information it may consider necessary regarding the execution of the project or program and to require the final borrower to submit financial statements certified by external auditors.

19. FONEI may enter into coordination agreements with other trust funds or entities for the granting of integrated financial and technical assistance to firms, under the terms of its General Operating Regulations.

20. The approval of the Technical Committee or of the Trustee shall be required in accordance with the powers delegated to the latter by the former, for each and every one of the financial operations and guarantees of the Fund as provided in these regulations.

ANNEX 4

MEXICO

FOURTH INDUSTRIAL EQUIPMENT FUND (FONEI) PROJECT

Financing Technological Development at the Enterprise Level

Background

1. Industry in Mexico has now reached a relatively high degree of sophistication and there exists a substantial pool of important engineering and technical skills. If Mexican industry is to further increase local value added and compete efficiently in world markets, there is a need to focus increasingly on the technology factor in industrial development. There would be a need to develop indigenous capabilities for technological acquisition, adaptation and innovation in order to stimulate industrial growth through the development of new or improved products, of more efficient production methods, and of new processes to exploit on a cost-efficient basis, available raw materials. Recognizing the importance of technology issues, Mexican authorities have introduced various policies and institutional support to reinforce the technological development of the country, particularly of industrial enterprises.

2. The Instituto Mexicano de Investigaciones Tecnologicas (IMIT) was one of the pioneer institutions established in the area of industrial research and development, having been established in the fifties with the help of the Armour Research Foundation. IMIT is partly funded by the Mexican Government, through Banco de Mexico, and partly by revenues from industrial and banking clients for project preparation and evaluation. IMIT conducts research projects for enterprises for a fee, and also has a risk-sharing fund whereby 50% of the cost of a research project conducted by IMIT for an enterprise is written off and does not have to be paid by the enterprise if the project does not go forward, with some possibility for IMIT to share in the benefits of the project if implemented successfully.

3. More recently, in 1970 the government created the Consejo Nacional de Ciencia y Tecnologia (CONACYT) to formulate and implement national policies aimed at strengthening the links between research organizations and industrial enterprises. CONACYT has been instrumental in establishing regional technical support centers in the food processing, leather products, and jewelry handicraft areas. Included among the services of the centers are laboratory testing of raw materials and finished products, training of technical personnel and technical advisory functions.

4. The Servicio de Informacion Tecnologica (INFOTEC), a spin-off of CONACYT, provides technical information and related support services to Mexican firms of varying size and industrial sophistication. Among the services offered to clients are technology searches involving an analysis of world information sources for new products, processes and equipment developments relevant to a firm's product line. About 60% of INFOTEC's budget is

presently funded by contracts from over 250 firms which pay fees ranging from about US$1,000 equivalent for periodic technical information services to US$100,000 equivalent for complete technology audits and world market scanning on a continuing basis.

5. The National Registry for the Transfer of Technology (RNTT) was created in 1972 to review all foreign licensing of industrial technology to minimize the cost of acquired technology, eliminate restrictive or disadvantageous clauses in licensing agreements, and enhance the bargaining position of Mexican enterprises.

6. Since 1976, the government has also permitted accelerated depreciation for tax purposes on capital equipment used for R&D purposes. Moreover, current R&D expenditures are considered as normal business expenses for tax purposes.

The Enterprise Survey

7. As part of preparation of the proposed FONEI project, a limited survey was undertaken of Mexican enterprises to determine technology-related problems they were facing and to ascertain whether the Bank, through FONEI, could provide some assistance in connection with the proposed loan. On the basis of enterprise profiles prepared by FONEI, 14 firms located in Mexico City, Cuernavaca and Monterrey were selected for more detailed analysis. They represented a relatively broad range of industrial subsectors, company sizes, and stages of commercial and technical development (Appendix). The principal aim of the survey was to determine (a) their sources of industrial technology, (b) their technical needs, and (c) projects they would like to undertake.

Survey Results

8. The principal sources of industrial technology mentioned by surveyed firms were (a) comprehensive licensing and purchase agreements with various foreign industrial firms, (b) assistance from both foreign and domestic engineers and technicians, (c) training abroad of the company's technicians, and (d) in-plant research, design and engineering efforts (Appendix).

9. The cross-section of firms surveyed indicated that in terms of in-plant research, development and engineering capabilities, enterprises could be classified under three categories, viz:

(a) Firms that have at least a nucleus technical staff to diagnose problems, to carry out segments of technical solutions, and to find and negotiate for complementary foreign technical inputs where necessary.

(b) Firms that rely, to a substantial degree, on outside sources to diagnose and resolve their technological adjustment problems, but generally are able to contract for such services from Mexican or foreign sources.

(c) Inventors or small enterprises that have a technical innovation at a stage between laboratory and commercial prototype stage and need funding to bring the innovation to a stage where it can be considered by commercially oriented institutions.

Although very few opportunities exist in Mexico to finance all three types of projects, IMIT and INFOTEC have small funds to address needs in category (c) above. These projects generally involve an excessively high level of risk and uncertainty which should not be funded with credit resources, but rather with venture capital funds. Given the nature of FONEI as a second-tier credit institution working through the banking system, it appears that it could make the greatest contribution by concentrating on technology development projects fairly close to commercialization sponsored by enterprises in categories (a) and (b) above. Consideration should be given only to projects that develop capabilities in Mexico to diagnose and resolve technological adjustment problems rather than to those seeking package solutions from foreign sources.

Categories of Eligible Expenditures

10. On the basis of the needs cited by the surveyed firms and previous experience with Bank projects elsewhere (e.g., Turkey, Colombia and Israel), the following expenditure categories should be considered eligible for financing under a technology development component:

(a) Expenditures external to the firm for research, design, or engineering projects involving adjustments in product or component design, new or improved production methods or materials processing, new or improved equipment design, experimentation with new industrial materials, or other related RD&E activities, including pilot plant construction.

(b) Training of Mexican engineering or technical personnel abroad, in connection with actual or anticipated technical problems, including visits to industrial plants, research laboratories, or other industrial technical facilities, or for specialized training in applied research fields in foreign research institutes.

(c) Visits to Mexico by foreign technicians and engineers to advise on solutions to technical adjustment problems; to train research, design, or engineering personnel to find solutions to technical problems; or to provide other technical adjustment support services.

(d) Quality control or testing equipment; or other tangible hardware needed in the technical adjustment process.

(e) Technology audits and world market scanning services (for new product developments and equipment designs) of the type carried out by INFOTEC, and related to technical problems faced by the enterprise. FONEI may even suggest a technology audit in borderline cases involving firms with limited experience in diagnosing and resolving technological adjustment problems.

Project Appraisal and Review Procedures

11. A simple and straightforward procedure should be established to facilitate lending for technology improvement projects. Specifically, appraisals should include:

(a) summary information on the enterprise;

(b) previous technology sources and current R&D capabilities;

(c) objectives of the proposed technology development effort;

(d) expenditures to be covered with credit funds;

(e) expected results and benefits; and

(f) repayment capacity of firms.

Although FONEI has the core staff necessary to operate a line of credit for technology development projects, it would need the assistance of technical specialists to give summary reviews of evaluations. In a case where the firm appears to be inexperienced, FONEI may recommend, prior to evaluation of the project, that INFOTEC carry out a "technology audit" including, inter alia, an analysis of the firm's operational characteristics and a survey of alternative production processes and equipment.

Promotion and Monitoring

12. A new component to finance technology development projects would require special promotional efforts on the part of FONEI's staff to explain to participating financial intermediaries and to potential clients the nature of projects that may be financed, categories of expenditures eligible for financing, and terms and conditions of available resources. Once an application is received, it would probably be necessary in several cases to assist the intermediaries and clients in formulating credit requests. IMIT and INFOTEC, each with their unique network of contacts, could probably assist the intermediaries in identifying potential clients and in helping prepare proposals.

13. The proposed new component should be viewed as a structured pilot operation which may require further adjustments in the future. Based on the actual level of demand for funds and the nature of proposals submitted, some flexibility should be maintained in respect of total allocation within the proposed loan for this type of project, as well as cost categories covered. On the basis of this pilot operation, there may be a possibility of developing a "free standing" project in the future.

MEXICO

FOURTH INDUSTRIAL EQUIPMENT FUND (FONEI) PROJECT

ANNEX 4
T-1

Table 1: Survey of Mexican Firms' Technical Needs and Potential Demand for Funds

Main Product	Sources of Technology	Technical Adjustment Needs	Proposed Solution	Estimated Cost (million)	1978 Sales (Mex$ million)	1978 Employment	1978 Technical Personnel
1. Steel products	Has developed own direct reduction process for sponge iron.	Improved production of sponge iron and increased gas efficiency.	Purchase equipment and materials to improve production processes.	Mex$308.00 US$13.60)	13,900	19,500 c/	42
2. Equipment for oil well pumping a/	Manufacturing licenses from France.	Design of four new lines of oil well rigs, including drilling heads and mud pumping equipment.	Use own design and engineering group to design and construct first prototypes.	Mex$193.00 (US$8.50)	1,650	2,500	32
3. Paper	Intends to adapt original process developed by subsidiary of American parent company.	Design of an economically efficient small scale plant to process sugar cane bagasse into kraft paper, with modular design feature so facility can be enlarged when demand increases.	Use own engineering group to design facility. Purchase foreign equipment to build prototype plant.	Mex$100.00 (US$4.40)	--------new enterprise--------		
4. Machinery for glass production	Original technology from U.K., U.S., among others.	Design of higher volume and multipurpose glass and molding machinery; improved furnaces, materials, and special glass design.	Train Mexican technicians abroad to participate in new research, design, and engineering projects.	Mex$32.00 (US$1.40)	630	1,500	700
5. Cables	Know-how for first electric-mechanical cable from U.K.	Develop a new electri-mechanical cable for oil exploration. Improve production methods and quality control on existing product lines.	R&D project to include technical literature search, and visits by Mexican engineers to foreign facilities.	Mex$30.00 (US$1.32)	940	1,100	25
6. Conductors and Cables	Know-how, equipment, and materials from Canada and U.S.	Improved production technology in high-voltage, high-tension cables.	Negotiate new licensing agreement with Sweden or Japan.	Mex$15.90 (US$0.70)	1,560	1,100	2
7. Oil pumping systems	Original technology from U.S.	Develop a new type of hydrodynamic, deep, secondary oil recovery system.	Use own design and engineering team to carry out technical studies and to design and construct first prototypes.	Mex$13.00 (US$0.57)	115	140	27
8. Petroleum derivatives	Technical know-how from engineering training in two U.S. universities.	Machinery and know-how for the production of additional petrochemical products.	Use own staff to design-engineer processes and equipment for new product groups.	Mex$7.00 (US$0.30)	7	13	4
9. Building materials b/	Has own product, process, and equipment patents.	Develop commercial prototype product and pilot plant facility.	Contracts signed with IMIT to help design pilot plant facility.	Mex$7.00 (US$0.30)	--------new enterprise--------		
10. Automotive components	Production know-how from visits to American plants.	Adapt equipment and methods to new materials and component designs.	Visit U.S. and German plants. Hire foreign engineer for a year.	Mex$1.36 (US$0.06)	86	n.a.	35
11. Aromatics and spices	Developed own technology under technical services agreement with a Swedish company.	Improved methods for extracting raw materials. New processes for manufacturing food derivatives.	Technical information and foreign market search. Technical services agreement with foreign manufacturer.	Mex$1.13 (US$0.05)	310	250	n.a.
12. Packaging materials	Equipment and materials from France.	Design new families of packaging materials, e.g., plastic laminates.	Technical information search, possible visits and training of Mexican technicians abroad.	n.a.	400	520	n.a.
13. Frozen fruits	Process and equipment design from IMIT (Mexico); technical assistance from U.S.	Higher volume production methods, improved waste disposal and quality control; newly designed equipment for sorting fruit.	Use IMIT and local equipment firm technicians to redesign process and equipment.	(n.a.)	50	500	n.a.
14. Petroleum derivatives	Technical assistance from American and Japanese sources. Has an in-plant R&D facility.	Development of new products and materials processing technology.	Use own RD&E staff to design products, redesign process and equipment, supplemented possibly by Mexican technicians visiting foreign facilities and foreign expert visits to Mexico.	(n.a.)	1,050	1,000	35

n.a. = not available.

a/ A segment of this project previously funded by FONEI--for one of the oil well pumping system prototypes (Mex$1 million; US$44,000).
b/ Project already funded in part (Mex$1 million; US$44,000) by FONEI and completed. Now negotiating with U.S. firm for joint venture to manufacture in the U.S. or Mexico.
c/ For the total industrial group.

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FOURTH INDUSTRIAL EQUIPMENT FUND (FONEI) PROJECT

Federal Legislation Pertaining to Environmental Pollution

Basic Federal Law

1. On March 23, 1971, the Mexican Congress passed a "Ley Federal para Prevenir y Controlar la Contaminacion Ambiental," (Federal Law to Prevent and Control Environmental Pollution) which first defined pollution and what can be considered a pollutant. The law also specifies that its application is the responsibility of the Ejecutivo Federal as implemented by the Secretaria de Salubridad y Asistencia (SSA) for air pollution, in coordination with the Secretaria de Recursos Hidraulicos (SRH) 1/ for water pollution, the Secretaria de Agricultura y Ganaderia (SAG) 1/ for land pollution, and the Secretaria de Industria y Comercio (SIC) for industrial or commercial pollution. Coordination of the activities of the separate secretariats is not dealt with by the law. In addition, coordination with federal, district, state, and local governments is mentioned only in the context that they are autoridades auxiliares. Ultimately, the Ejecutivo Federal is held responsible for classifying and locating sources of contamination and for establishing the means to control and/or prevent it.

Smoke and Dust Pollution

2. Under its responsibility for controlling air pollution, SSA has as yet only dealt with smoke and dust regulation. On September 17, 1971, the "Reglamento para la Prevencion y Control de la Contaminacion Atmosferica Originada por la Emision de Humos y Polvos" (Regulation to Prevent and Control Air Pollution due to the Emission of Smoke and Dust) was issued, establishing a system of licensing of new industrial enterprises, in which the granting of a license depends upon compliance with air pollution standards. The reglamento also sets maximum emission standards for both new and existing industrial enterprises, as well as for new and existing equipment (e.g., stationary combustion equipment, mobile combustion equipment, incinerators); types of combustion processes (e.g., diesel, gasoline); amount of heat energy expended (kilocalories); and types of fuel (e.g. solid, liquid). It also provides for a monitoring system which includes on-site inspections and monitoring stations to sample air quality. Sanctions against existing polluters involve fines, which can range in amount assessed against particular code violations from Mex$50-50,000, the temporary closing of the offending plant, or even the permanent closure of a factory in cases of a grave and immediate threat to public health.

3. All enterprises which were not in compliance with the reglamento subsequent to its effectiveness were to be allowed six months to file a plan for pollution control and two additional years to implement the plan. Owners of individual vehicles or combustion equipment were given just six months to fall within emission standards.

1/ Both are now combined as the Secretaria de Agricultura y Recursos Hidraulicos (SARH).

4. A "Reglamento para la Prevencion y Control de la Contaminacion de Aguas" (Regulation to Prevent and Control Water Pollution) was promulgated on March 29, 1973, and established three stages in which the government would carry out its activities towards the prevention and control of water pollution throughout Mexico. In the first stage, the SARH was to register all discharges of residual waters from the municipalities, industries, agricultural activities, commercial entities and other sources throughout Mexico. However, discharges from individual households were not included in this survey. All existing discharges from the above sources were required to be registered with SARH within six months of the promulgation of the above regulation, and any new discharges were to be registered within four months of the start of their operations. Within 3-5 years of their registry, the discharges of residual waters had to be controlled or corrected through the installation of suitable equipment by the producers of the pollutants to comply with limits specified for five pollutant characteristics: (i) sedimentable solids; (ii) fats and oils; (iii) floating matter; (iv) temperature of the discharge; and (v) the pH value (hydrogenion concentration) of the discharge. The maximum concentrations allowed are the following:

Sedimentable solids:	1.0 ml/liter of the discharge
Fats and oils:	70 mg/liter
Floating matter:	Discharges to contain no floating matter that can be retained by a 3 mm x 3 mm sieve
Temperature of the discharge:	35° C
pH value of the discharge:	Between 4.5 and 10.0

5. During the second stage, SARH would ensure, through inspections, licensing procedures and appropriate fines, that the limitations on the five specific pollutant characteristics were complied with and that satisfactory arrangements had been made for primary treatment of the discharges as necessary for future compliance. In the third stage, SARH would undertake, in cooperation with SSA, a survey and detailed analysis of the state of water pollution in the different water bodies throughout Mexico, and use this information to establish, wherever necessary, conditions of waste water discharges (i.e. special physical, chemical and bacteriological characteristics) that should be met by water discharges in particular locations, and the time limits within which such conditions should be met.

Noise Pollution

6. The most recent federal legislation passed by Congress dealt with noise pollution. The "Reglamento para la Prevencion y Control de la Contaminacion Ambiental Originada por la Emision de Ruidos" (Regulation to Prevent and Control Environmental Pollution due to Noise) was promulgated

on January 2, 1976. The SSA is responsible for establishing a Comision Consultiva del Ruido in each city or urban neighborhood. All major political, industrial and commercial entities would be represented on the commissions. Maximum noise levels of 65 decibels from 10 p.m. to 6 a.m. and 68 decibels from 6 a.m. to 10 p.m. were established for existing fixed sources of noise, and a term of six months was established to allow noise polluters to comply with these levels. A formula based on age of equipment and weight was established for mobile sources of noise pollution, and specific regulations for controlling noise were established in the construction of new transportation terminals for airplane and railroad passengers. In addition, the installation of specific sound-producing equipment (i.e. whistles, bells, etc.) was prohibited on vehicles.

7. Although the reglamento mentions the need to establish acceptable levels of noise frequency, intensity and acoustic pressure, as well as decibel level, it has established explicit maxima only in regard to the latter. In addition, although the SSA has overall authority for implementing this reglamento, initial inspection and monitoring is the responsibility of local authorities working with the appropriate secretariat or subsecretariat. Once a possible source of noise pollution is identified, it is up to the SSA to establish whether a violation of the maximum allowable levels has occurred. Fines varying from Mex$50-50,000 can be levied for failure to comply with the regulations.

Sanitary Code

8. The maintenance of a clean environment is an explicit goal of the "Codigo Sanitario de los Estados Unidos Mexicanos," (Health Code of the United Mexican States) which was promulgated on March 13, 1973. The enforcement of the code is the primary responsibility of the President, the Consejo de Salubridad General and the SSA. The code devotes an entire chapter to the environment. While the Federal Law of 1971 emphasizes the coordinative relationship between the SSA and other secretariats, the code stresses the pre-eminent role of the SSA, in preventing and controlling not only atmospheric pollution, but also land and water pollution, and even pollution of the territorial seas. The focal point in assigning such direct overall responsibility to the SSA involves the determining of whether or not air, land, water and sea pollution injure or could injure the health of human populations. If this is the case, then it is the SSA's responsibility to prevent such pollution or keep it within acceptable levels.

Proposed Legislation

9. The SSA is presently preparing draft legislation covering gaseous emissions. It expects to submit this legislation for review by interested parties in the government, industry and commerce in the near future.

ANNEX 6

MEXICO

FOURTH INDUSTRIAL EQUIPMENT FUND (FONEI) PROJECT

FONEI's Declaration of Operational and Institutional Strategy

1. The dynamism that has characterized FONEI's operations during recent years, and the pipeline of projects that it currently has under study, justify the optimism that operational growth will be sustained although not necessarily at the same high rate as in the past. This experience is indicative of the suitability both of amendments made to the Operating Regulations and the criteria used in applying them. But it points also to the desirability of moving forward by widening FONEI's field of activity and also by proposing a number of changes with a view to qualitative improvement of its operations in general.

2. FONEI's main field of activity will continue to be that of providing financial support, through long-term loans, to projects for the efficient production of goods and services capable of replacing imports or with the capacity to export.

3. Among sectors with good export prospects, FONEI will give special attention to projects for processing agricultural, fishing or mining products. Among import-substitution projects, we intend to continue the support that FONEI has been providing to capital-goods manufacturers and to enlarge its participation in secondary petrochemicals. These have been designated as priority areas by the Authorities and, under the provisions of the Operating Regulations, could continue to receive FONEI loans in excess of Mex$100 million.

4. As regards services that generate or save foreign exchange, a growing response is expected on the part of frontier-area entrepreneurs promoting the construction of factory buildings for rent or lease to parts manufacturers (maquiladoras), automobile service centers, health centers, etc., large commercial centers and other service projects, not necessarily located on the country's frontiers (as in the case of the establishment of international air freight lines).

5. In accordance with the country's broad economic policy goals, we consider that FONEI should give greater attention than in the past to projects that create a substantial number of jobs, are located in areas where it is desired to promote industrial development, relate to priority areas or are of relatively small size. In parallel, we intend to refuse or restrict credit--depending on whether the projects concern the establishment of new or the expansion of existing enterprises--in the area at present designated Zone III and possibly also to set a ceiling, of perhaps Mex$300 million, on FONEI resources that can be committed to any one enterprise.

6. In view of the understandable lack of interest on the part of the commercial banks in promoting and financing projects of medium size and smaller enterprises, it seems appropriate to offer them an incentive of 0.25 percentage points in the margin for their intermediary services when they finance enterprises with capital of less than Mex$50 million.

7. One category of investment projects that is receiving increasing attention on the part of various Authorities in Mexico and which lacks financing on suitable terms is that of air and water pollution control, particularly in the large urban areas of the country with a high concentration of industry. From consultations with relevant Government Authorities, and with the World Bank, we conclude that FONEI could include in its financial program support for investment in anti-pollution equipment by enterprises already established in the major urban areas.

8. What could be called the spontaneous demand for FONEI's services comes from the larger enterprises and those located in the areas of high industrial concentration. This implies that the aim of diversifying FONEI's operations can be achieved through a promotional campaign that generates a large number of applications from which those of interest to FONEI can be selected.

9. As already indicated in FONEI's program of activities for the current year, it proposes to conduct the above-mentioned campaign by arranging visits to entrepreneurs by its staff, holding meetings, distributing leaflets and audio-visual material, and setting up regional agencies in the areas of highest potential outside Mexico City. Emphasis would be placed on the financing of technology development projects.

10. Since it was first established, FONEI has pursued the aim not only of financing Mexico's modern industrial development, and thereby providing balance of payments support, but also of persuading the banks to base their lending decisions on the feasibility of investment projects. This aim has already been embodied in the new Banking Law which entered into effect in January of this year.

11. Although FONEI was not successful in this aim in its initial years, the offering of a higher margin to intermediary banks that assume responsibility for appraising projects submitted to FONEI is yielding encouraging results.

12. It is felt that, in addition to maintaining the present margins, consideration could be given to FONEI's absorbing part of the cost of the appraisal when the latter turns out to be negative.

13. Because most of the entrepreneurs are not familiar with project-preparation techniques, nor the financial intermediaries with their appraisal, FONEI will step up its work of distributing guidelines and instructions.

14. In support of this, courses are being organized for entrepreneurs, financial intermediaries and consultants to familiarize them with the various aspects of investment-project formulation and appraisal.

15. Supervision of the projects after a loan has been granted has the following basic purposes:

(a) to ensure that the funds have been duly invested in accordance with the conditions of the agreement;

(b) to aid the enterprise in resolving any problems and unforeseen situations that arise during execution of the project;

(c) to compare the results of operation of the project with the estimates on which approval of the loan was based, with respect to, inter alia, generation and saving of foreign exchange, price levels, job creation, and economic and financial returns, to enable FONEI to introduce new criteria that can improve the impact of its operations in the future; and

(d) to familiarize the private banks with the purposes and procedures of project supervision, so closely related to the decision to grant loans on the basis of project feasibility.

16. Quite apart from the fact that supervision of all the projects supported by FONEI would mean that it would have to maintain a large staff, FONEI's aim is to act as a second-tier institution in all its fields of operation. For this reason, and in the light of the experience it is acquiring in persuading banks to appraise projects by offering them incentives, it is considering offering a margin of, perhaps, 0.25 percentage points on outstanding balances to intermediaries following submission to FONEI of supervision reports covering the financial, technical and economic aspects of the projects. The aim would be to obtain quarterly or semiannual reports during the stage of execution of the project and annual reports thereafter until the loan is repaid.

17. By persuading the banks to supervise the projects we would be able to involve them more in the concept of basing their decision on project feasibility, and they would be able to justify more readily the setting up of a technical team responsible for project appraisal and supervision.

18. In the medium term, as FONEI succeeds more and more in persuading banks to appraise and supervise FONEI-financed projects, the needed increase in FONEI's technical staff should lag behind the expansion of its operations. In the short run, however, the work of advising the enterprises, the consultants and the banks will place an additional burden on FONEI's staff.

19. As a specialized financial institution, FONEI is suffering high turnover among its technical staff, recognized to be well qualified. There is accordingly an urgent need to step up the training courses for the staff of other institutions, among other reasons, as a means of relieving the pressure on them to recruit already experienced personnel.

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FOURTH INDUSTRIAL EQUIPMENT FUND (FONEI) PROJECT

Estimation of the Foreign Exchange Component of Domestic Fixed Assets Financed by FONEI

1. This annex outlines the methodology used to estimate the foreign exchange component of domestic fixed assets financed by FONEI. It deals first with projects involving the establishment or expansion of capacity to produce manufactured goods, which are expected to account for about 91% of FONEI's financing over the next 2-3 years. It then examines briefly the foreign exchange component of service export projects, which are expected to account for about 9% of FONEI's financing.

Manufactured Goods Projects

2. By its Operating Regulations, FONEI is authorized to finance the cost to the investing company of procuring, and installing fixed assets including the cost of any associated civil works and construction. An analysis of the projects financed by FONEI over the past two years indicates that, on average, about 70% of FONEI financing of domestically supplied fixed assets has been for the procurement of machinery and equipment made in Mexico and about 30% for installation, civil works and construction.

3. In order to estimate the foreign exchange component of machinery and equipment manufactured in Mexico, the recent NAFINSA-UNIDO study of Mexican capital goods production has been used. Based on a survey of 72 producers, this study concludes that on the average, 24% of the production cost of locally manufactured capital goods is represented by directly imported production inputs. A further 42% of production cost is represented by locally produced parts, components and raw materials. These locally produced items themselves have an import content, which the study estimates at 13% of their cost, and use locally produced inputs accounting for a further 53% of their cost. 1/ Thus, to determine the overall direct and indirect foreign exchange component of capital goods production in Mexico it is necessary to take into account the foreign exchange component of the locally produced inputs by summing the following series:

$$\begin{aligned} \text{F.E. component of production cost} &= .24+.42\ (.13+.53\ (.13+.53\ (.13+\ldots\ldots \\ &= .24+.42\ (.13+.13\ (.53+.53^2+.53^3\ \ldots)) \\ &= .24+.116 \\ &= .356 \end{aligned}$$

Thus, the direct and indirect foreign exchange component of domestically manufactured machinery and equipment is estimated to be 35.6% of the production costs. Allowing for profit margins and distribution costs (of about 20%), this

1/ These local inputs in turn have an estimated foreign exchange content of 13%.

percentage would be equivalent to about 29.7% of the delivered price to the companies purchasing the machinery and equipment. It is on this delivered price that FONEI bases its financing.

4. The foreign exchange component of civil works, including construction and installation, has been estimated at 15%, based on statistics provided by Banco de Mexico for all such activities in Mexico and the results of a recent study of hotel construction costs undertaken by civil engineering consultants in connection with the Tourism Development Loan.

5. To determine the average foreign exchange component of domestically supplied fixed assets financed by FONEI, we have to take into account that 70% of such fixed assets are machinery and equipment with a foreign exchange component of 29.7%, and that the other 30% of the fixed assets are installation, civil works and construction having a foreign exchange component of 15%. On this basis, the average foreign exchange component of all domestically supplied fixed assets financed by FONEI would work out at about 25%.

Service Export Projects

6. FONEI has approved only one service export project to date. Therefore, it is not possible to estimate accurately the foreign exchange content of such projects at this time. However, an approximation should suffice, since service export projects are expected to account for only about 9% of FONEI's total financing.

7. The service export projects are likely to comprise mainly the construction of industrial buildings and construction and equipping of commercial centers and automotive repair shops. Consequently, a higher proportion of their domestically supplied fixed assets will be represented by civil works and construction than is the case for manufactured goods projects. Thus, one would expect their foreign exchange component to be lower. However, these projects will be located in the northern border zone where typically a higher proportion of imported inputs are used in civil works and construction than is the case for projects in the interior of the country. For example, hotel projects in the border area were estimated by the civil engineering consultants to have a foreign exchange component of 40%, compared with 20% for hotels built in the rest of the country. Consequently, it seems reasonable to use the same figure (i.e. 25%) for the foreign exchange component of domestic fixed assets used in service export projects as for the manufactured goods projects.

ANNEX 8

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FOURTH INDUSTRIAL EQUIPMENT FUND (FONEI) PROJECT

Estimated Quarterly Schedule of Bank Loan Disbursements
(US$ millions)

IBRD Fiscal Year and Quarter	Disbursements in Quarter	Cumulative Disbursements
1979-80		
March 31, 1980	2.00	2.00
June 30, 1980	3.00	5.00
1980-81		
September 30, 1980	4.00	9.00
December 31, 1980	8.60	17.60
March 31, 1981	15.00	32.60
June 30, 1981	28.00	60.60
1981-82		
September 30, 1981	30.00	90.60
December 31, 1981	23.80	114.40
March 31, 1982	18.00	132.40
June 30, 1982	14.00	146.40
1982-83		
September 30, 1982	12.00	158.40
December 31, 1982	8.80	167.20
March 31, 1983	3.00	170.20
June 30, 1983	2.00	172.20
1983-84		
September 30, 1983	1.00	173.20
December 31, 1983	1.00	174.20
March 31, 1984	0.60	174.80
June 30, 1984	0.20	175.00

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Table 1: Rates of Growth of GDP, By Sector of Origin

1965-1978

	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978 a/
Agricultural, Forestry & Fishing	1.8	2.5	2.8	0.8	5.0	2.0	0.3	2.2	2.8	0.7	-3.0	2.7	3.1
Mining	3.0	3.7	2.4	4.6	2.9	0.4	-0.2	10.6	14.6	-6.1	2.0	0.9	-2.0
Petroleum	5.9	14.8	10.2	6.5	9.9	3.4	8.8	2.5	14.8	7.9	10.6	16.4	15.3
Manufacturing	9.4	6.8	10.1	8.1	8.7	3.0	8.3	8.9	5.7	3.6	2.7	3.4	8.5
Construction	14.4	13.0	7.4	9.4	4.8	-2.6	17.6	15.8	5.9	5.9	-1.9	-2.0	12.5
Electricity	14.1	11.8	19.7	13.8	11.4	7.9	8.9	11.0	9.4	5.8	7.4	7.7	10.0
Commerce	7.5	5.5	8.5	7.0	6.5	3.0	6.9	7.6	5.2	3.4	-1.0	2.0	n.a.
Transport & Communication	8.3	4.9	10.8	7.3	7.9	7.5	9.9	14.3	9.2	8.9	5.1	5.2	n.a.
Government	7.7	8.0	9.6	3.3	9.7	9.0	13.4	11.2	8.2	10.9	8.2	1.8	n.a.
Other	4.7	5.4	6.4	5.9	5.1	7.3	5.6	4.9	3.6	2.6	2.3	2.1	n.a.
Total GDP	6.9	6.2	7.9	6.2	6.8	3.4	7.2	7.7	5.6	4.0	1.6	2.9	6,6

a/ Preliminary estimates.

Source: Bank of Mexico and IBRD staff estimates

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Table 2: Gross Domestic Product, By Sector of Origin
1965 and 1970-1977

	1965	1970	1971	1972	1973	1974	1975	1976	1977
Value (billions of current Mex$)									
Agriculture, Forestry & Fishing	36.5	47.4	48.5	52.9	67.8	83.4	99.9	118.9	164.5
Mining	3.3	5.6	5.2	5.6	7.0	10.3	10.7	13.8	21.5
Petroleum	9.1	13.3	13.3	14.9	15.7	25.3	31.3	37.4	64.6
Manufacturing	52.4	94.7	104.2	118.6	141.0	188.4	227.1	289.9	399.9
Construction	10.1	21.4	21.5	27.3	36.3	49.6	63.3	78.1	99.1
Electricity	3.4	6.2	6.6	7.2	8.3	9.9	11.2	14.9	24.2
Commerce	76.3	124.1	133.8	148.0	180.9	243.7	288.2	342.5	466.5
Transport & Communications	7.3	11.1	12.2	14.5	16.8	21.8	29.0	36.2	53.1
Government	13.7	26.0	29.3	35.6	46.1	61.5	85.1	118.2	154.2
Other Services	39.9	68.9	77.8	87.7	99.7	118.9	142.4	178.2	228.6
Total GDP	252.0	418.7	452.4	512.3	619.6	813.7	988.3	1,227.9	1,676.0
Shares (in percent of total)									
Agriculture, Forestry & Fishing	14.4	11.3	10.7	10.3	11.0	10.4	10.1	9.7	9.8
Mining	1.3	1.3	1.1	1.1	1.1	1.3	1.1	1.1	1.3
Petroleum	3.6	3.2	3.0	2.9	2.6	3.2	3.2	3.0	3.9
Manufacturing	20.8	22.6	23.0	23.2	22.8	23.6	23.0	23.6	23.9
Construction	4.0	5.1	4.7	5.3	5.8	6.1	6.4	6.4	5.9
Electricity	1.1	1.5	1.5	1.4	1.3	1.2	1.1	1.2	1.4
Commerce	30.3	29.6	29.6	28.9	29.2	29.5	29.2	27.9	27.8
Transport & Communications	2.9	2.6	2.7	2.8	2.7	2.7	2.9	2.9	3.2
Government	5.5	6.2	6.5	6.9	7.4	7.5	8.6	9.6	9.2
Other Services	15.8	16.5	17.2	17.2	16.1	14.6	14.4	14.6	13.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Bank of Mexico

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Table 3: Structure of Value Added in Manufacturing Selected Years, 1960-1977

(In Percentages of Total, Based on Current Mex$)

	1960	1965	1970	1972	1974	1976	1977
Food, Beverages and Tobacco	36.7	31.5	26.5	27.7	28.0	28.8	28.9
Textiles	9.3	9.5	10.2	9.2	8.3	7.9	7.7
Clothing & Shoes	8.1	9.0	13.5	14.2	13.6	13.5	14.0
Wood and Wood Products	3.1	2.3	1.9	1.6	1.5	1.6	1.6
Paper and Paper Products	2.4	3.1	2.5	2.6	3.4	3.2	3.2
Printing and Publishing	2.4	3.1	3.2	2.8	2.8	3.3	3.2
Leather and Leather Products	1.4	1.1	1.5	1.4	1.2	1.3	1.5
Rubber and Rubber Products	2.1	1.9	1.5	1.4	1.3	1.2	1.0
Chemicals and Pharmaceuticals	9.3	8.0	8.1	8.3	8.0	8.0	7.8
Non-metallic Minerals	4.2	4.6	5.1	5.4	5.3	5.6	5.7
Basic Metals	6.2	5.9	5.4	5.3	6.2	5.4	5.4
Engineering Products	12.8	17.7	18.5	17.6	18.7	18.6	18.3
Others	2.1	2.3	2.1	2.1	1.8	1.5	1.7

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Table 4: Indices of Industrial Production, 1970-77
(1970 = 100)

	1970	1971	1972	1973	1974	1975	1976	1977 P/
GENERAL 1/	100	102.1	112.4	123.8	132.8	139.1	142.9	147.9
Manufacturing	100	102.9	112.5	123.2	131.4	136.9	140.7	145.5
Sugar	100	102.8	108.0	115.4	119.3	109.8	115.0	120.0
Beer	100	87.2	102.4	119.9	135.4	136.0	132.7	148.9
Beverages	100	86.2	94.8	104.9	102.0	122.6	106.0	119.8
Tobacco	100	99.4	104.8	94.9	105.2	103.3	102.9	114.4
Textiles	100	127.8	159.9	205.2	215.7	237.5	238.7	269.4
Printing	100	103.7	113.9	104.0	92.4	111.6	117.1	99.5
Tires	100	110.5	124.1	130.8	136.5	151.2	179.7	164.5
Fertilizers	100	113.6	135.8	147.8	151.5	155.9	160.6	172.5
Chemicals	100	108.4	114.1	127.8	142.4	134.7	141.9	147.2
Artificial Fibers	100	125.5	153.0	184.3	194.7	222.9	242.3	261.6
Cement	100	102.6	119.8	136.3	147.5	161.7	175.2	184.2
Iron	100	104.5	118.8	123.0	142.6	131.3	152.2	191.6
Steel	100	99.4	115.2	122.6	133.6	136.9	137.9	144.5
Copper	100	109.1	117.0	113.1	135.7	128.0	152.3	144.3
Automobiles	100	112.0	115.1	140.3	172.0	166.1	150.7	139.8
Trucks	100	102.3	120.3	151.0	187.2	231.3	193.1	157.7
Petroleum and Related Industries	100	102.4	108.6	110.1	126.1	140.1	153.6	178.8
Petrochemicals	100	109.4	128.1	143.8	169.6	177.4	192.9	185.1
Mining	100	96.7	101.2	107.7	119.2	112.2	119.4	119.2
Electricity	100	109.8	121.4	131.7	145.6	156.7	169.2	184.9
Construction	100	97.4	113.9	133.9	142.0	150.4	147.5	143.9

P/ Preliminary.
1/ The general Index represents 60% of total industrial production in 1970 with the following (laspeyres) fixed weights: Manufactures (72.3%), Petroleum (6.6%), Petrochemicals (0.6%), Mining 3.2%), Electricity (2.6%), Construction (14.7%).

Source: Bank of Mexico

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Table 5: Import of Machinery and Equipment and Domestic Production of Machinery and Transport Equipment

	Imports of Machinery	Domestic Production of Machinery
	(US$ million)	(Mex$ million)
1971	866.9	8,272.3
1972	1,075.9	9,384.5
1973	1,326.2	12,463.6
1974	1,704.6	17,267.3
1975	2,360.8	19,047.6
1976	2,477.6	21,120.9
1977	1,953.0	28,608.0
1978 (10 months)	2,054.9	36,435.7

Source: Secretariat of Budgeting and Programming, Monthly Bulletin, November 1978

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Table 6: Gross Fixed Investment
(In Mex$ millions)

	TOTAL	Public	PRIVATE	
			TOTAL	% Total
1970	82,300	30,582	51,718	62.8
1971	81,600	28,538	53,062	65.0
1972	97,800	42,057	55,743	57.0
1973	126,400	57,606	68,794	54.4
1974	173,600	69,207	104,393	60.1
1975	221,700	99,053	122,647	55.3
1976	269,500	111,794	157,706	58.5
1977	339,400	170,925	168,475	49.6
1978	441,200	213,625	227,575	51.5
1979 (Estimate)	570,000	275,000	295,000	51.7

Source: Bank of Mexico (1970-1977); Confederacion de Camara Industriazes (CONCAMIN) for 1978 and 1979; and BANAMEX.

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Table 7: Indices of Employment in Manufacturing, 1970-1978

	Index 1970=100	Annual rate of change
1970	100.0	-
1971	100.4	0.4
1972	103.3	2.9
1973	108.1	4.6
1974	115.1	6.5
1975	118.1	2.6
1976	120.7	2.2
1977	119.7	-0.8
1978 (January-October only)	124.6	4.1

Source: Dirección General de Estadistica, Secretaría de Programación y Presupuesto.

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Table 8: Exports of Selected Manufactured Products, 1972-78
(US$ million)

	1972	1973	1974	1975	1976	1977	1978
Total, exports of manufactures[a/]	541.3	805.1	1,236.1	1,069.3	1,190.8	1,390.6	1,800.0[b/]
Cotton yarn	10.9	27.2	46.2	24.8	27.0	29.3	27.4
Shoes	5.9	7.7	13.8	12.7	12.0	13.6	26.7
Synthetic & artificial yarns	5.3	9.8	11.0	7.0	8.6	10.2	13.8
Henequen manufactures	2.7	4.2	74.1	31.3	35.2	36.5	35.7
Clothing	20.8	21.5	41.8	22.3	25.1	22.6	26.2
Cotton fabrics	13.5	43.3	57.4	41.0	46.5	31.5	18.0
Non-ferrous materials	74.1	70.6	169.0	135.7	123.9	129.4	117.2
Non-metallic minerals	33.5	39.0	43.5	37.9	62.3	99.8	96.0
Printing & publishing	14.9	20.7	27.1	32.8	37.7	50.1	55.4
Wood products	19.6	23.1	28.0	25.9	34.3	47.2	67.3
Industrial chemicals & pharmaceuticals[c/]	77.6	109.7	186.5	124.1	118.8	140.6	146.4
Auto, trucks and parts	47.4	107.2	158.7	83.3	45.8	65.9	163.3
Copper products	3.5	6.4	6.6	2.8	3.3	6.2	5.6
Iron and steel products	59.0	32.6	51.8	49.6	67.0	86.8	90.3

SOURCE: Based on data from Banco de Mexico and IMCE.

a/ Excluding processed foods, petrochemicals and assembly industry products.

b/ Preliminary estimate by appraisal mission.

c/ Including fertilizers.

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Table 9: CEDI's (Indirect Tax Rebate Certificates) 1973-78

	(1) Number	(2) Value of Exports	(3) Return of Indirect Taxes	(4) Return of General Import Tax	(5) Total Returns (3)+(4)	(6) Returns/ Export Sales (5) ÷ (2)
			(Million Pesos)			
1973		10,804	1,054	24	1,078	9.98
1974	15,925	17,839	1,723	23	1,746	9.79
1975	16,838	15,499	1,748	30	1,778	11.47
1976	19,456	16,823	1,935	11	1,946	11.56
1977	6,448	16,850	1,140	16	1,156	6.80
1978 (11 months)	29,764	33,087	2,205	38	2,243	6.77

Source: Secretary of the Treasury and Public Credit, Bureau of Revenues Policy

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Table 10: Credits Granted by FOMEX for Export Promotion and Import Substitution 1964-1978

(Mex$ million)

	TOTAL		EXPORTS				IMPORT SUBSTITUTION			
			PRE-EXPORTS		CREDIT SALES		CAPITAL GOODS		CONSUMER GOODS	
Years	Annual	Cumulative	Annual	Cumulative	Annual	Cumulative	Annual	Cumulative	Annual	Cumulative
1964	57	57	-	-	57	57	-	-	-	-
1965	127	184	-	-	127	184	-	-	-	-
1966	404	588	50	50	346	530	8	8	-	-
1967	640	1,228	165	215	470	1,000	5	13	-	-
1968	870	2,098	183	398	679	1,679	8	21	-	-
1969	1,504	3,602	234	632	1,166	2,845	104	125	-	-
1970	2,083	5,685	399	1,031	1,523	4,368	161	286	-	-
1971	2,421	8,106	500	1,531	1,900	6,268	21	307	-	-
1972	3,309	11,415	758	2,289	2,440	8,708	111	418	-	-
1973	4,526	15,941	1,245	3,534	3,152	11,860	129	547	-	-
1974	6,412	22,353	1,292	4,826	5,055	16,915	65	612	-	-
1975	6,645	28,998	1,302	6,128	5,193	22,108	114	726	36	36
1976	10,268	39,266	2,654	8,782	7,418	29,526	104	830	92	128
1977	17,770	57,036	5,174	13,956	12,287	41,813	184	1,014	125	253
1978(E)	20,930	77,966	n.a.	n.a.	n.a.	n.a.	483	1,497	n.a.	n.a.

Source: FOMEX

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Table 11: Structure of Manufacturing Industry
(in numbers and thousands of Mex$)

	Total Manufacturing Industry	Less than Small Industry		Medium and Small Industry		Large Industry	
		Quantity	%	Quantity	%	Quantity	%
Number of Establishments	120,274	26,290	21.86	93,293	77.57	691	0.57
Capital Invested (Mex$ '000)	245,514,183	725,391	0.30	149,529,142	60.90	95,259,650	38.80
Value of Production "	462,548,858	2,873,279	0.62	314,121,111	67.91	145,554,450	31.47
Value Added "	190,142,780	1,022,283	0.54	130,494,865	68.63	58,625,632	30.83
Inputs "	67,325,434	196,639	0.29	47,028,246	69.85	20,100,549	29.86
Fixed Assets "	161,560,448	697,658	0.43	92,977,572	57.55	67,885,218	42.02
Employment (number)	1,707,877	59,430	3.48	1,383,012	80.98	265,435	15.54
Wages & Salaries (Mex$ '000)	75,908,637	362,776	0.48	55,500,488	73.11	20,045,373	26.41

Source: Preliminary figures of 10th Industrial Census (1976) elaborated by FOGAIN.
Small and Medium firms have fixed capital assets ranging from Mex$25,000 to Mex$35,000,000.

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Table 12: Institutional Structure of the Financial Sector

	September 30, 1977		December 31, 1978	
	Number of Institutions	Number of Offices	Number of Institutions	Number of Offices
Public Banks a/	22	694	22	701
Private & Mixed Banks	198	2,841	132	3,073
Multibanks	14	1,245	26	2,324
Deposit Banks	93	1,456	52	667
Financieras	66	95	43	60
Mortgage Banks	14	28	3	7
Other Private Banks	11	17	8	15
TOTAL	220	3,535	154	3,774

a/ Does not include Banco de Mexico, S.A.

Source: Comision Nacional Bancaria y de Seguros

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Table 13: Financial Development

	Private Sector Deposits (D)	Percentage Change	Disposable Income (Y)	Percentage Change	D/Y
1967	75.4	28.9	284.2	9.2	0.27
1968	88.0	16.7	314.0	10.5	0.28
1969	105.3	19.7	346.9	10.5	0.30
1970	124.9	18.6	386.6	11.4	0.32
1971	143.0	14.5	416.4	7.7	0.34
1972	167.1	16.9	471.0	13.1	0.36
1973	189.6	13.5	568.6	20.7	0.33
1974	220.7	16.4	745.1	31.0	0.30
1975	276.3	25.2	897.0	20.4	0.31
1976	292.7	5.9	1,094.0	22.0	0.27
1977	393.3	34.4	1,477.1 2/	35.0	0.27
1978	508.8	29.4	1,809.4 3/	22.5	0.28

1/ In private and mixed banks as of December 31, except 1978 as of November 30.

2/ Preliminary figure.

3/ Mission estimate.

Source: Banco de Mexico

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Table 14: The 12 Largest Banks as of December 31, 1978

(Mex$ millions)

Institution	Assets	Percentage
Bancomer, S.A.	152,957.1	23.3
Banco Nacional de Mexico, S.A.	144,474.3	22.1
Banca Serfin, S.A.	61,239.4	9.3
Multibanco Comermex, S.A.	48,075.6	7.3
Banca Somex, S.A.	35,504.2	5.4
Banco Internacional, S.A.	21,351.6	3.3
Banpais, S.A.	13,694.2	2.1
Banco del Atlantico, S.A.	12,760.6	1.9
Banco B.C.H., S.A.	11,914.5	1.8
Banca Confia, S.A.	7,639.0	1.2
Multibanco Merc. de Mexico, S.A.	7,104.8	1.1
Banpacifico, S.A.	6,360.0	1.0
Others	132,155.7 a/	20.2
TOTAL	655,231.0	100.0

a/ Estimate

Source: Comision Nacional Bancaria y de Seguros, and mission estimates.

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Table 15: Financial Indicators of the Private and Mixed Banks[1/]
(in percentage terms)

Year	Net Income ÷ Equity	Net Income ÷ Liabilities[2/]	Gross Income ÷ Liabilities[2/]	Lending Income ÷ Loans	Total Expenses ÷ Liabilities[2/]	Administrative Expenses ÷ Liabilities [2/]	Financial Expenses ÷ Liabilities[2/]
1966	12.762	0.882	12.146	13.256	11.264	5.310	5.953
1967	12.217	0.778	12.088	13.419	11.310	5.178	6.132
1968	13.889	0.893	12.649	13.131	11.756	5.177	6.579
1969	13.972	0.871	13.226	13.145	12.355	5.252	7.103
1970	13.150	0.776	14.115	13.775	13.339	5.238	8.100
1971	12.955	0.737	14.425	13.751	13.688	5.317	8.371
1972	13.560	0.750	13.087	13.179	12.337	4.648	7.689
1973	13.029	0.708	12.755	13.550	12.047	4.511	7.535
1974	13.262	0.716	13.736	14.779	13.020	4.916	8.104
1975	19.001	0.920	14.366	16.079	13.446	5.029	8.418
1976	18.781	0.862	14.871	16.446	14.009	5.326	8.683
1977	22.957	0.921	15.264	16.930	14.343	5.881	8.462
1978[3/]	26.594	0.857	15.786	17.891	14.929	5.596	9.333

1/ Do not include Fiduciarias, Capitalizadoras, Savings and Loans, nor those under special legislation.
2/ Resources mobilized.
3/ January - October (annualized).

Source: Banco de Mexico.

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Table 16: Multibanks' Share of Operations of Private and Mixed Banks

	1977			1978		
	April	August	December	April	August	December
Credit Granted						
In local currency (%)	33.7	47.7	72.7	76.5	79.5	85.5
In foreign currency (%)	27.5	50.2	76.9	79.1	79.3	93.1
Resources Mobilized						
In local currency (%)	30.0	46.9	73.4	76.5	79.6	85.5
In foreign currency (%)	28.3	46.8	70.5	73.2	75.1	92.7
Number of Multibanks	7	14	16	19	21	24

Source: Banco de Mexico

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Table 17: Securities Traded Annually
(Million Mex$)

	1970		1971		1972		1973		1974		1975		1976		1977		1978	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
Total	33,752.5		38,864.8		55,620.8		75,389.2		96,342.8		113,612.6		136,699.7		167,760.3		95,323.2	
Shares	722.2	100.0	830.6	100.0	1,660.8	100.0	2,494.3	100.0	2,538.4	100.0	3,684.6	100.0	6,054.7	100.0	5,784.1	100.0	30,310.2	100.0
Industry	386.9	53.6	361.7	43.6	847.2	51.0	1,523.4	61.1	992.9	39.1	1,583.5	43.0	2,680.2	44.3	2,597.5	44.9	19,029.2	62.8
Services	164.8	22.8	292.6	35.2	361.8	21.8	421.3	16.9	452.3	17.8	876.7	23.8	1,492.5	24.7	1,346.0	23.3	3,561.6	11.8
Banking	79.9	11.1	87.1	10.5	156.9	9.4	272.7	10.9	406.1	16.0	629.5	17.1	1,191.0	19.7	1,047.7	18.1	5,391.8	17.8
Commerce	41.8	5.8	46.8	5.6	86.6	5.2	124.0	5.0	128.4	5.1	161.6	4.4	451.9	7.5	432.5	7.5	1,028.8	3.4
Mining	36.3	5.0	32.2	3.9	12.5	0.8	111.7	4.5	486.9	19.2	403.3	10.9	171.1	2.8	305.6	5.3	1,218.0	4.0
Insurance	11.2	1.5	8.6	1.0	190.6	11.5	40.6	1.6	71.7	2.8	28.9	0.8	61.1	1.0	51.3	0.9	40.4	0.1
Other	1.3	0.2	1.6	0.2	5.2	0.3	0.6	-	0.1	-	1.1	-	6.9	0.1	3.5	-	40.4	0.1
Fixed Return	33,030.3		38,034.2		53,960.0		72,894.9		93,804.4		109,928.0		130,645.0		161,976.2		65,013.0	
Bono Financiero	3,686.2		4,156.4		23,333.4		33,936.5		43,392.5		47,665.5		37,563.3		64,319.7		8,912.4	
Bono Hipotecario	12,601.3		17,384.2		21,845.6		28,213.6		37,045.2		42,670.7		56,237.5		57,105.8		26,693.9	
Cedulas Hipotecarias	8,602.9		6,862.6		2,647.7		1,269.0		2,016.5		2,857.9		8,173.5		7,482.1		909.9	
Obligaciones	126.9		150.7		149.9		240.1		196.2		275.5		1,257.1		3,523.2		4,937.2	
Titulos Financieros 1/	5,391.1		6,487.4		2,613.9		4,253.4		4,984.3		5,921.8		11,004.8		60.6		-	
Cert. de Participacion 1/	2,621.9		2,992.9		1,118.6		955.4		1,291.1		4,338.4		4,930.0		12,869.8		23,559.6	
Cert. de Participacion Inmobiliaria. 2/	-		-		2,250.9		4,026.9		4,878.6		6,198.2		11,478.8		16,615.0		-	

1/ Securities issued by NAFINSA
2/ Securities issued by Banco Nacional de Obras y Servicios Publicos.

Source: Comision Nacional d Valores.

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Table 18: Securities Exchange Price Index

Year	Month	Maximum	Minimum	Last
1967		154.00	145.59	151.66
1968		164.59	152.00	152.48
1969		170.50	147.14	147.28
1970		150.26	135.44	147.47
1971		155.17	127.27	139.74
1972		185.27	140.01	177.70
1973		207.01	178.81	184.74
1974		215.11	185.52	207.99
1975		215.02	194.75	213.65
1976		335.34	213.74	274.81
1977		392.15	266.99	388.37
	January	275.25	266.99	271.98
	February	285.48	270.36	225.48
	March	306.14	285.76	297.02
	April	296.94	291.97	294.83
	May	308.33	290.36	293.15
	June	300.16	291.14	291.72
	July	303.50	290.41	302.68
	August	310.09	299.31	310.09
	September	319.29	301.99	319.29
	October	339.16	318.77	339.16
	November	369.44	337.14	368.41
	December	392.15	367.14	388.37
1978		889.06	390.61	889.06
	January	457.61	390.61	455.21
	February	529.05	457.48	516.49
	March	548.77	511.03	548.77
	April	642.42	544.69	636.48
	May	699.92	639.22	699.92
	June	728.00	688.40	727.69
	July	757.65	724.03	728.87
	August	730.32	677.40	713.44
	September	749.19	732.85	749.19
	October	782.40	741.09	781.62
	November	788.71	758.93	785.42
	December	889.06	786.11	889.06
1979				
	January	1,090.60	879.03	1,090.60

Source: Bolsa Mexicana de Valores

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Table 19: Authorized Security Issues in 1978

Firm	Date of Placement	Amount (Million Mex$)	Number (thousand)	Placement Price	Nominal Value
		Shares			
Colanese Mexicana	3- 1-78	95.0	500.0	190.0	100.0
Industrias Nacobre	3-15-78	103.5	690.0	150.0	100.0
Hilera El Centenario	4-17-78	188.2	1,530.0	123.0	100.0
Organizacion Robert's	5-17-78	97.7	1,628.0	60.0	25.0
Industrias Purina	5-31-78	280.0	28,000.0	10.0	n.a.
Aurrera	7-11-78	318.5	4,899.9	65.0	10.0
Industrial Electrica	7-17-78	21.5	580.0	37.0	25.0
La Dominicia	7-19-78	55.1	2,754.0	20.0	n.a.
Empresa La Moderna	8- 7-78	307.2	3,613.9	85.0	50.0
Grupo Condumex	8- 3-78	186.8	795.0	235.0	100.0
Empresas Villarreal	8- 8-78	60.0	2,400.0	25.0	10.0
Grupo Industrial Alfa	8-14-78	600.0	2,000.0	300.0	100.0
Grupo Industrial Camesa	9-12-78	158.4	1,131.5	140.0	100.0
EPN	9-12-78	42.0	420.0	100.0	100.0
Valores Industriales	9-20-78	519.7	3,849.9	135.0	n.a.
Altro	10-23-78	56.3	1,125.0	50.0	10.0
Cydra	10-30-78	66.5	350.0	190.0	25.0
Texaco Mexicana	11-15-78	87.8	1,254.0	70.0	50.0
Kelsey Hayes de Mexico	11-24-78	120.0	2,400.0	50.0	n.a.
Ponderosa Industrial	12-14-78	500.0	5,000.0	100.0	100.0
Grupo Industrial Minero Mexico	11- 7-78	762.0	15,240.0	50.0	50.0
Telefonos de Mexico	n.a.	1,131.8	11,318.0	100.0	100.0
Bancomer	7-17-78	812.5	25,000.0	32.5	10.0
Multibanco Comermex	11- 1-78	173.3	5,500.0	31.5	10.0
Banco Internacional	12- 1-78	201.3	575.0	350.0	100.0
Total		6,945.1	122,554.2		

	Fixed Return Securities			Net Yield (%)	Period (years)
Securities Without Real Asset Guarantee					
Grupo Industrial Saltillo	2- 2-78	150.0	150.0	17.5	7
Cristales Mexicanos	3-15-78	150.0	150.0	17.5	7
Union Carbide Mexicana	5- 8-78	250.0	250.0	17.0	7
Vidriera Los Reyes	6-16-78	150.0	150.0	16.5	7
Vidriera Monterrey	8- 2-78	150.0	150.0	16.5	7
Cementos Tolteca	3- 2-78	400.0	400.0	16.5	8
Grupo Industrial Alfa	8-15-78	500.0	500.0	16.5	12
Industrias Nacobre	9- 2-78	300.0	300.0	17.0	7
Formex Ibarra	11-14-78	50.0	50.0	17.0	7
Eaton Manufacturera	12- 5-78	100.0	100.0	17.0	7
Mortgage Bonds					
Telefonos de Mexico "UU"	2- 2-78	300.0	300.0	12.0a/	20
Cannon Mills	11-20-78	60.0	60.0	17.0	7
Telefonos de Mexico "VV" y "WW"	11 - 78	600.0	600.0	12.0a/	15
Total		3,160.0	3,160.0		

a/ Gross.

Source: Comision Nacional de Valores.
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Table 20: Banking System Credit by Sectors 1970-78 1/

(outstanding balances in billions of Mex$)

Sectors	1970		1971		1972		1973		1974		1975		1976		1977		1978	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
Agriculture and cattle raising	17.7	13.6	21.3	13.8	23.5	13.5	26.2	13.6	33.9	14.6	46.8	16.1	44.8	11.4	63.7	12.0	80.1	13.1
Mining	0.8	0.6	1.0	0.7	0.9	0.5	1.2	0.6	1.3	0.6	1.9	0.7	2.6	0.7	3.3	0.6	3.0	0.5
Other Primary	0.3	0.2	0.4	0.3	0.5	0.3	0.8	0.4	1.5	0.7	1.9	0.7	2.4	0.6	2.9	0.6	3.6	0.6
Industry	33.3	25.6	38.5	25.0	40.0	23.1	42.6	22.1	55.4	23.9	71.0	24.4	98.1	25.0	136.5	25.6	162.4	26.6
Manufacturing	(23.2)	(17.8)	(27.0)	(17.5)	(29.5)	(17.0)	(31.4)	(16.3)	(41.2)	(17.8)	(50.8)	(17.3)	(66.0)	(16.8)	(92.0)	(17.3)	(106.5)	(17.4)
Non-metallic minerals	(2.6)	(2.0)	(2.4)	(1.6)	(2.3)	(1.3)	(2.1)	(1.1)	(2.6)	(1.1)	(2.6)	(0.9)	(3.3)	(0.8)	(4.0)	(0.7)	(4.9)	(0.8)
Steel and other metals	(5.3)	(4.1)	(6.1)	(4.0)	(5.5)	(3.2)	(6.0)	(3.1)	(7.6)	(3.3)	(13.4)	(4.6)	(22.3)	(5.7)	(32.6)	(6.1)	(40.6)	(6.7)
Machinery and electrical equipment	(2.2)	(1.7)	(3.0)	(1.9)	(2.7)	(1.6)	(3.1)	(1.6)	(4.0)	(1.7)	(4.7)	(1.6)	(6.5)	(1.7)	(7.9)	(1.5)	(10.4)	(1.7)
Petroleum	2.1	1.6	4.2	2.7	6.1	3.5	5.3	2.8	4.5	1.9	3.0	1.0	3.0	0.8	2.8	0.5	8.7	1.4
Electricity	7.8	6.0	9.6	6.2	11.8	6.8	12.4	6.4	11.9	5.1	13.0	4.5	16.0	4.1	16.9	3.2	20.6	3.4
Construction	11.7	9.0	13.3	8.6	16.9	9.7	18.3	9.5	21.2	9.1	27.8	9.6	32.9	8.4	39.0	7.3	46.2	7.5
Low income housing	3.7	2.8	4.4	2.9	4.8	2.8	5.8	3.0	6.3	2.7	7.5	2.6	9.1	2.3	18.7	3.5	23.1	3.8
Services	5.5	4.2	7.0	4.5	6.6	3.8	7.6	4.0	9.6	4.1	15.6	5.4	23.9	6.1	30.3	5.7	33.9	5.5
Transport	5.4	4.2	6.2	4.0	6.7	3.9	7.9	4.1	10.8	4.7	13.4	4.6	23.2	5.9	28.8	5.4	31.2	5.1
Communications	-	-	0.1	0.1	0.1	0.1	-	-	0.1	-	-	-	0.1	-	0.1	-	0.1	-
Entertainment	1.1	0.9	1.2	0.8	1.4	0.8	1.5	0.8	2.4	1.0	1.6	0.5	2.4	0.6	2.8	0.5	2.9	0.5
Commerce	20.3	15.6	25.3	16.4	27.4	15.8	27.9	14.5	35.8	15.4	42.1	14.5	48.1	12.3	68.5	12.9	83.8	13.7
Other activities	7.3	5.6	6.7	4.4	7.3	4.2	9.2	4.8	8.0	3.5	9.1	3.1	19.0	4.8	22.3	4.2	27.4	4.5
Government 2/	13.1	10.1	14.8	9.6	19.5	11.2	25.8	13.4	29.5	12.7	35.8	12.3	66.6	17.0	95.9	18.0	84.2	13.8
Total	130.1	100.0	154.0	100.0	173.5	100.0	192.5	100.0	232.2	100.0	290.5	100.0	392.2	100.0	532.5	100.0	611.2	100.0

1/ As of December 31, except 1978 as of September 30.
2/ Public enterprise are included in the sector of their principal activity.

Source: Banco de Mexico.

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Table 21: Regional and Sectoral Distribution of Credit
(Mex$ billions outstanding as of September 30, 1978)

Activities / States	Primary Activity		Petroleum & Electricity		Industry		Manufacturing		Non-Metallic Mineral		Steel & Other Metal		Machinery & Elec. Equipment		Construction		Services		Commerce		Government		Total	
	Amount	%	Amount	%	Amount	%	(Amount)	(%)	(Amount)	(%)	(Amount)	(%)	(Amount)	(%)	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
Coahuila	9.1	10.5	-	-	2.1	1.3	(1.2)	(1.1)	(0.1)	(2.0)	(0.6)	(1.5)	(0.2)	(2.0)	0.9	1.3	0.9	1.0	2.2	2.7	0.3	0.4	15.6	2.6
Federal District	4.7	5.4	27.3	98.9	98.6	60.7	(67.3)	(63.2)	(1.4)	(28.6)	(24.2)	(59.6)	(5.7)	(55.4)	45.1	65.0	63.8	70.2	28.1	34.4	78.2	92.9	345.8	57.4
Jalisco	4.9	5.7	0.1	0.4	6.3	3.9	(4.5)	(4.2)	(0.6)	(12.2)	(0.9)	(2.2)	(0.3)	(2.9)	3.3	4.8	2.4	2.6	6.4	7.8	0.6	0.7	23.9	4.0
Valle de Mexico	1.6	1.8	-	-	10.9	6.7	(6.6)	(6.2)	(0.7)	(14.3)	(2.0)	(4.9)	(1.6)	(15.5)	3.6	5.2	1.5	1.7	3.0	3.7	1.2	1.4	21.8	3.6
Michoacan	6.3	7.3	-	-	0.6	0.4	(0.6)	(0.6)	(-)	(-)	(-)	(-)	(-)	(-)	0.5	0.7	1.0	1.1	1.7	2.1	0.2	0.2	10.3	1.7
Nuevo Leon	2.0	2.3	0.1	0.4	20.4	12.6	(6.8)	(6.4)	(0.9)	(18.4)	(11.1)	(27.3)	(1.6)	(15.5)	3.5	5.0	7.4	8.1	4.4	5.4	0.6	0.7	38.5	6.4
Sinaloa	8.6	9.9	-	-	1.8	1.1	(1.7)	(1.6)	(-)	(-)	(0.1)	((0.3)	(-)	(-)	0.8	1.1	1.4	1.5	3.4	4.2	0.2	0.2	16.2	2.7
Sonora	12.4	14.3	-	-	1.9	1.2	(1.8)	(1.7)	(-)	(-)	(0.1)	(0.3)	(-)	(-)	0.6	0.9	1.1	1.2	3.6	4.4	0.3	0.4	19.9	3.3
Veracruz	4.4	5.1	-	-	2.1	1.3	(1.8)	(1.7)	(0.1)	(2.0)	(0.2)	(0.5)	(-)	(-)	0.6	0.9	1.0	1.1	4.0	4.9	0.3	0.4	12.3	2.0
Other States	32.7	37.7	0.1	0.3	17.6	10.8	(14.2)	(13.3)	(1.1)	(22.5)	(1.4)	(3.4)	(0.9)	(8.7)	10.5	15.1	10.4	11.5	24.8	30.4	2.3	2.7	98.4	16.3
Total 1/	86.7	100.0	27.6	100.0	162.3	100.0	(106.5)	(100.0)	(4.9)	(100.0)	(40.6)	(100.0)	(10.3)	(100.0)	69.4	100.0	90.9	100.0	81.6	100.0	84.2	100.0	602.7	100.0

1/ Does not include foreign loans.

Source: Banco de Mexico.

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Table 22: - Lending Terms of Financial Institutions in 1977 a/

(Percentage)

	Deposit Departments	Savings Departments	Financial Departments	Mortgage Departments	Total Private & Mixed Banks	Public Banks	Total
Up to 180 days	78.3	19.7	39.8	-	43.1	22.7	31.6
From 181 to 360 days	5.1	38.9	26.3	-	17.9	34.6	26.6
More than 360 days	16.6	41.4	33.9	100.0	39.0	42.7	41.8
	100.0	100.0	100.0	100.0	100.0	100.0 b/	100.0 b/

a/ Balances outstanding as of December 31.

b/ Excludes "Fondos Comunes de Nafinsa".

Source: Banco de Mexico

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Table 23: Liabilities of the Financial Intermediaries (end of year)
(Mex$ million)

	1967		1971		1975		1976		1977		1978 a/	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
1. Domestic Currency Liabilities	107,296.8	80.7 (100.0)	195,464.0	83.0 (100.0)	376,276.2	77.8 (100.0)	413,465.0	69.1 (100.0)	517,698.2	67.8 (100.0)	650,625.8	71.2 (100.0)
Banco de Mexico	16,286.6	(15.2)	23,917.4	(12.2)	55,260.0	(14.7)	96,405.0	(23.3)	103,283.9	(19.9)	104,911.7	(16.2)
Public Banks	18,920.7	(17.6)	31,614.7	(16.2)	53,843.1	(14.3)	56,701.6	(13.7)	73,308.2	(14.2)	97,205.4	(14.9)
Private Banks	72,089.5	(67.2)	139,931.9	(71.6)	267,173.1	(71.0)	260,358.4	(63.0)	341,106.1	(65.9)	448,508.7	(68.9)
2. Foreign Currency Liabilities	25,711.9	19.3 (100.0)	40,091.2	17.0 (100.0)	107,336.1	22.2 (100.0)	184,911.3	30.9 (100.0)	246,116.7	32.2 (100.0)	263,371.5	28.8 (100.0)
Banco de Mexico	121.2	(0.5)	153.5	(0.4)	68.6	(0.1)	2,072.3	(1.1)	4,527.6	(1.8)	7,040.0	(2.7)
Public Banks	19,760.1	(76.9)	32,886.0	(82.0)	92,449.5	(86.1)	144,050.9	(77.9)	179,199.5	(72.8)	190,975.7	(72.5)
Private Banks	5,830.6	(22.6)	7,051.7	(17.6)	14,818.0	(13.8)	38,788.1	(21.0)	62,389.6	(25.4)	65,355.8	(24.8)
3. Total (1 + 2)	133,008.7	100.0	235,555.2	100.0	483,612.3	100.0	598,376.3	100.0	763,814.9	100.0	913.997.3	100.0

a/ As of November 30.

Source: Banco de Mexico.

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Table 24: Financial System Interest Rates a/

(Annual Percentages)

Year	Quarter	Mortgage Bond b/	Financial Bond b/	Three Months Treasury Bills	One Month C.D. c/	Three Months C.D. c/	Six Months C.D. c/	One Year C.D. c/	Two Years C.D. c/
1972	I	7.52	7.92	-	-	-	-	9.01	9.01
	II	7.52	7.92	-	-	-	-	9.01	9.01
	III	7.52	7.92	-	-	-	-	9.01	9.01
	IV	7.52	7.92	-	-	-	-	9.01	9.01
1973									
	I	7.20	7.56	-	-	-	-	8.37	8.37
	II	7.34	7.72	-	-	-	-	8.66	8.66
	III	8.25	8.75	-	-	-	-	10.50	10.50
	IV	8.25	8.75	-	-	-	-	10.50	10.50
1974									
	I	8.25	8.75	-	-	9.50	10.50	10.58	10.58
	II	8.25	8.75	-	-	10.31	11.04	11.54	11.54
	III	8.25	8.75	- -	-	11.00	11.50	12.00	12.00
	IV	8.25	8.75	-	-	11.00	11.50	12.00	12.00
1975									
	I	8.25	8.75	-	-	11.00	11.50	12.00	12.00
	II	8.25	8.75	-	-	11.00	11.50	12.00	12.00
	III	8.25	8.75	-	-	11.00	11.50	12.00	12.00
	IV	8.25	8.75	-	-	11.00	11.50	12.00	12.00
1976									
	I	7.25	7.50	-	8.00	10.00	10.75	11.50	11.50
	II	7.25	7.50	-	8.00	10.00	10.75	11.50	11.50
	III	7.25	7.50	-	8.00	10.00	11.46	12.21	12.21
	IV	7.25	7.50	-	8.00	10.00	12.00	12.75	12.75
1977									
	I	7.25	7.50	-	8.00	10.00	12.00	12.75	12.75
	II	7.25	7.50	-	8.00	11.00	13.00	13.88	16.00
	III	7.25	7.50	-	8.00	11.00	13.00	15.00	16.00
	IV	7.25	7.50	-	8.00	11.00	13.00	15.00	16.00
1978									
	I	7.25	7.50	9.75	8.00	11.00	13.00	15.00	16.00
	II	7.25	7.50	9.67	8.00	11.00	13.00	15.00	16.00
	III	6.63	7.24	10.52	8.50	11.00	13.00	15.00	16.00
	IV	6.63	7.11	12.19	10.17	11.67	13.00	15.00	16.00
1979									
	January (2 - 15)	6.32	7.11	13.30	11.00	12.00	13.00	15.00	16.00

a/ Net of tax, including "sobretasa".
b/ Repurchasable at sight.
c/ Certificate of Deposit.

Source: Banco de Mexico

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Table 25: Interest Rate Differentials

(Difference in annual percentages)

Year	Quarter	Mexican Sight Instruments - Eurodollar (Call Money)	Mexican One Week Instruments - Eurodollar one week	Mexican Three Months Instruments - Eurodollar 3 months	Mexican Three Months Instruments - U. S. A. 3 months CDs a/	Mexican One Year Instruments - Eurodollar 12 months	Mexican One Year Instruments - U. S. A. 12 months CDs a/	Mexican 2 Years Instruments - Eurodollar 24 months
1972								
	I	3.81	-	-	-	3.05	4.28	2.47
	II	3.99	-	-	-	2.96	3.80	2.45
	III	2.79	-	-	-	2.74	3.45	2.38
	IV	3.00	-	-	-	2.62	3.29	2.22
1973								
	I	0.09	-	-	-	0.90	1.94	0.85
	II	- 0.14	-	-	-	0.06	1.51	0.08
	III	- 1.61	-	-	-	0.15	2.25	0.90
	IV	- 0.69	-	-	-	1.25	2.65	1.48
1974								
	I	- 0.04	-	0.31	0.91	1.72	3.17	1.83
	II	- 2.22	-	- 1.17	- 0.33	0.86	2.62	1.29
	III	- 2.69	-	- 2.17	- 0.65	- 0.35	2.78	0.92
	IV	- 0.52	-	0.53	2.17	1.98	3.80	2.17
1975								
	I	2.29	-	3.45	4.46	4.11	5.76	3.79
	II	3.39	-	4.55	5.15	3.95	5.57	3.62
	III	2.55	-	3.69	4.40	3.43	4.75	3.46
	IV	3.24	-	4.19	4.87	3.93	4.91	3.67
1976								
	I	2.55	-	4.45	4.87	4.63	5.58	4.00
	II	2.31	-	4.13	4.65	4.33	5.17	3.87
	III	2.24	-	4.34	4.65	5.51	6.16	4.88
	IV	2.67	-	4.77	5.20	6.87	7.51	6.41
1977								
	I	2.78	-	4.90	5.32	6.77	7.50	6.12
	II	2.30	0.41	5.10	5.66	7.98	8.73	8.37
	III	1.71	- 0.80	4.79	5.42	8.37	8.88	9.13
	IV	1.04	- 0.74	3.93	4.58	7.52	8.03	8.51
1978								
	I	0.67	- 1.08	3.75	4.45	7.20	7.74	7.90
	II	0.22	- 1.67	3.16	3.89	6.61	7.23	7.62
	III	- 0.88	- 0.75	2.30	3.04	5.84	6.48	7.00
	IV	- 2.47	- 0.81	0.67	1.94	3.65	4.68	6.05
1979								
	January (2-15)	- 3.30	n.a.	0.57	1.77	3.04	3.78	5.71

a/ More than US$100,000.

Source: Banco de Mexico.

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Table 26: Indicators of Resource Mobilization and Credit Availability

(As of December 31)

	1970	1971	1972	1973	1974	1975	1976	1977	1978 a/
1. Non-monetary peso liabilities of Banking system b/									
Mex$ billions	119.9	142.4	165.1	180.1	206.8	258.0	258.7	321.7	409.9
as % GDP	28.6	31.5	32.2	29.1	25.4	26.1	21.1	19.2	21.3
2. Total Banking System Credit Outstanding (peso denominated)									
Mex$ billions	130.1	154.0	173.5	192.5	232.2	290.5	392.2	532.5	611.2
as % of GDP	31.1	34.0	33.9	31.1	28.5	29.4	31.9	31.8	31.7
3. Banking System Credit to Private Sector									
Mex$ billions	93.5	109.7	116.4	124.9	153.4	183.2	223.5	294.9	385.8
as % of b/	71.9	71.2	67.1	64.9	66.1	63.1	57.0	55.4	63.1
as % of GDP	22.3	24.2	22.7	20.2	18.9	18.5	18.2	17.6	20.0
4. Banking System Credit to Manufacturing Industry									
Mex$ billions	33.3	38.5	40.0	42.6	55.5	71.0	98.1	136.5	162.4
as % of b/	25.6	25.0	22.7	22.1	23.9	24.4	25.0	25.6	26.6
5. Banking System Credit to Private Manufacturing Industry									
Mex$ billions	27.2	31.8	30.2	32.5	42.4	48.7	63.0	80.8	108.7
as % of b/	20.9	20.6	17.4	16.9	18.3	16.8	16.1	15.2	17.8

a/ As of September 30, 1978.
b/ The term "non-monetary liabilities" is used in this context to refer to all liabilities in local currency of the Banking system except checking accounts and other demand deposits.

Source: Banco de Mexico and mission estimate.

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Table 27: Classification of FONEI's Operations by Financial Intermediaries (1973-1978)

Financial Intermediary (Groups)	1973		1974		1975		1976		1977		1978		Total			
	Number	Million Mex$	Number	Million Mex$	Number	Million Mex$	Number	Million Mex$	Number	Million Mex$	Number	Million Mex$	Number	%	Million Mex$	%
SOMEX/Banco Mexicano	1	37.5	3	25.9	3	67.0	7	231.6	6	256.0	11	586.6	31	16	1,204.6	23
Banco Nacional de Mexico	2	42.5	7	179.5	7	75.8	12	185.9	8	305.7	15	301.6	51	26	1,091.0	21
Banco Comercial Mexicano	3	39.5	4	49.8	2	22.4	2	41.0	4	151.7	5	284.6	20	10	589.0	11
Central Financiera Innova S.A.	-	-	-	-	-	-	-	-	4	170.2	4	166.9	8	4	337.1	7
Banco del Comercio	1	28.0	1	30.3	2	21.1	2	37.0	3	94.6	7	185.6	16	8	396.6	8
Banco del Atlantico S.A.	-	-	1	18.9	2	68.8	-	-	4	66.2	-	-	7	4	153.9	3
Banca Serfim S.A.	-	-	2	57.6	4	24.7	2	38.0	1	16.0	3	137.2	12	6	273.5	5
Banpais S.A.	2	43.2	2	44.0	2	42.6	3	14.9	-	-	5	232.3	14	7	377.0	7
Banco del Noroeste de Mexico S.A.	-	-	1	0.8	1	11.6	-	-	-	-	-	-	2	1	12.4	2
Other intermediaries	1	22.0	4	72.6	-	-	8	112.1	7	98.7	13	393.6	33	17	699.0	14
Total	10	212.7	25	479.4	23	334.0	36	660.5	37	1,159.1	63	2,288.4	194	100	5,134.1	100

Source: FONEI

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Table 2B: Characteristics of FONEI Subprojects d/

	FONEI I		FONEI II		FONEI III		TOTAL			
	No. of Projects	Cost (Mex$ Millions)	No. of Projects	Cost (Mex$ Millions)	No. of Projects	Cost (Mex$ Millions)	Projects No.	Projects %	Cost Mex$ millions	Cost %
A. BY CHARACTERISTIC OF FIRM										
Average size of project (Mex$ million)										
50 and less	26	555.2	22	596.1	19	532.4	67	47.2	1,683.7	11.4
51 to 100	9	599.5	12	938.6	7	555.8	28	19.7	2,093.9	14.1
101 to 200	2	224.5	7	901.6	7	1,060.7	16	11.3	2,186.3	14.8
201 to 300	2	433.4	2	423.3	4	886.8	8	6.5	1,743.5	11.7
301 to 400	1	301.7	-	-	2	686.0	3	2.1	987.7	6.7
401 to 500	-	-	1	413.6	1	454.4	2	1.4	868.0	5.9
More than 500	-	-	1	1,974.9	1	2,716.1	2	1.4	4,691.0	31.6
Unclassified a/	8	338.9	4	99.9	4	127.5	16	11.3	566.3	3.8
Total	48	2,453.2	49	5,348.0	45	7,019.2	142	100.0	14,820.4	100.0
Location b/										
Mexico City	13	429.7	12	500.4	5	660.9	30	21.1	1,611.0	10.9
Guadalajara and Monterrey	8	241.4	7	503.6	9	502.6	24	16.9	1,247.6	8.4
Other major cities	22	1,537.6	19	1,441.6	6	258.1	47	33.1	3,237.3	21.8
Other areas	5	244.5	11	2,902.6	25	5,577.6	41	28.9	8,724.5	58.9
Total	48	2,453.2	49	5,348.0	45	7,019.2	142	100.0	14,820.4	100.0
Type of Firm										
New	9	1,097.2	20	3,341.0	16	5,180.0	45	35.7	9,618.2	67.5
Expansion	31	1,017.1	25	1,907.1	25	1,711.7	81	64.3	4,635.9	32.5
Total f/	40	2,114.3	45	5,248.1	41	6,891.7	126	100.0	14,254.1	100.0
B. BY CHARACTERISTIC OF LOAN										
Size of Loans (Mex$ million) b/ c/										
25 and less	27	483.5	17	357.1	13	230.4	57	40.1	1,071.0	7.2
26 to 50	16	1,382.1	14	653.7	14	790.2	44	31.0	2,826.0	19.1
51 to 75	4	358.2	12	3,132.[illegible]	8	1,066.5	24	16.9	4,557.6	30.8
More than 75	1	229.4	6	1,205.3	10	4,932.1	17	12.0	6,365.8	42.9
Total	48	2,453.2	49	5,348.0	45	7,019.2	142	100.0	14,820.4	100.0
Maturity (years) b/										
0 to 5	5	415.3	13	643.8	23	3,750.2	41	28.9	4,809.3	32.5
5.1 to 8	30	1,131.6	28	2,133.0	21	3,027.3	79	55.6	6,291.9	42.5
8.1 to 10	8	615.1	7	596.3	-	-	15	10.6	1,111.4	7.4
More than 10	5	391.2	1	1,974.9	1	241.7	7	4.9	2,607.8	17.6
Total	48	2,453.2	49	5,348.0	45	7,019.2	142	100.0	14,820.4	100.0
Bank Financing c/										
A Subprojects	21	1,537.6	20	4,127.6	18	5,644.3	59	41.5	11,309.5	76.3
B Subprojects	19	576.7	25	1,120.5	23	1,247.4	67	47.2	2,944.6	19.9
No use of Bank funds	8	338.9	4	99.9	4	127.5	16	11.9	566.3	3.8
Total	48	2,453.2	49	5,348.0	45	7,019.2	142	100.0	14,820.4	100.0
C. BY CHARACTERISTIC OF SUBPROJECT										
Destination of Output										
Import substitution	19	1,219.9	26	1,461.2	15	4,152.1	60	42.2	6,833.2	46.1
Import substitution - export	14	456.8	8	2,877.3	17	1,940.2	39	27.5	5,274.3	35.6
Export	15	776.5	[illegible]	1,009.5	13	926.9	43	30.3	2,712.9	18.3
Total	48	2,453.2	49	5,348.0	45	7,019.2	142	100.0	14,820.4	100.0
Subsector										
Food	5	153.4	-	-	1	46.5	6	4.2	199.9	1.4
Beverage	1	17.6	-	-	-	-	1	0.7	17.6	0.1
Textiles	1	301.7	1	6.0	2	232.3	4	2.8	540.0	3.6
Leather	1	14.7	1	24.2	-	-	2	1.4	38.9	0.3
Paper	4	412.3	2	129.3	3	537.4	9	6.4	1,079.0	7.3
[illegible] material and cement	4	166.2	3	93.2	3	439.1	10	7.0	698.5	4.7
[illegible]	-	44.3	-	-	3	654.5	4	2.8	698.8	4.7
[illegible]	10	512.5	14	2,721.6	11	3,361.0	35	24.6	6,595.1	44.5
Metal products	20	787.1	21	1,723.2	20	1,406.7	61	43.0	3,917.0	26.4
Electrical products	1	43.4	7	630.5	1	241.7	9	6.4	935.6	6.3
Services	-	-	-	-	1	100.0	1	0.7	100.0	0.7
Total	48	2,453.2	49	5,348.0	45	7,019.2	142	100.0	14,820.4	100.0
Financial Rate of Return										
10 to 14.9	6	669.1	11	1,244.5	11	1,388.2	28	19.7	3,301.8	22.3
15 to 19.9	11	463.7	16	3,127.8	12	4,143.0	39	27.5	7,734.5	52.2
20 to 24.9	7	539.6	7	423.4	5	421.2	19	13.4	1,384.2	9.3
25 to 29.9	3	98.0	5	247.4	6	436.2	14	9.9	781.6	5.3
30 to 34.9	5	73.9	2	148.6	4	224.8	11	7.7	448.3	3.0
35 or more	2	72.8	4	55.4	7	405.8	13	9.2	534.0	3.6
Not calculated	14	536.1	4	59.9	-	-	18	12.6	636.0	4.3
Total	48	2,453.2	49	5,348.0	45	7,019.2	142	100.0	14,820.4	100.0
Economic Rate of Return										
10 to 14.9	1	15.2	-	-	1	241.7	2	1.4	256.9	1.7
15 to 19.9	5	676.0	6	2,808.5	2	267.5	13	9.2	3,752.0	25.3
20 to 24.9	3	333.9	7	523.4	1	24.0	11	7.7	881.3	6.0
25 to 29.9	4	137.0	9	649.5	6	357.6	19	13.4	1,144.1	7.7
30 to 34.9	3	111.1	1	94.2	4	238.3	8	5.6	443.6	3.0
35 or More	14	394.2	22	1,172.5	29	5,559.6	65	45.8	7,126.3	48.1
Not calculated	18	785.8	4	99.9	2	330.5	24	16.9	1,216.2	8.2
Total	48	2,453.2	49	5,348.0	45	7,019.2	142	100.0	14,820.4	100.0
Total FONEI	48	1,086.7	49	1,762.5	45	2,251.9	142		5,101.1	
Total Project Costs	-	2,453.2		5,348.0		7,019.2			14,820.4	
FONEI, % of Total	-	44.3		33.0		32.1			34.4	

D. COST PER JOB	FONEI I No. of Projects	FONEI I Cost (Mex$ millions)	FONEI I No. of jobs e/	FONEI II No. of Projects	FONEI II Cost (Mex$ millions)	FONEI II No. of Jobs e/	FONEI III No. of Projects	FONEI III Cost (Mex$ millions)	FONEI III No. of Jobs e/	TOTAL Projects No.	Projects %	Cost Mex$ Mil.	Cost %	Jobs No.	Jobs %	Cost per job (Mex$ thousands)
Average Size of Project (Mex$ millions)																
50 and less	24	521.9	2,787	21	582.4	1,579	23	659.9	1,579	68	55.3	1,764.2	12.6	5,945	35.5	296,754
51 to 100	8	507.3	481	9	710.9	1,760	7	555.8	921	24	19.5	1,774.0	12.7	3,162	18.9	561,037
101 to 200	2	224.5	288	7	901.6	1,743	7	1,060.2	901	16	13.0	2,186.3	15.6	2,932	17.5	745,668
201 to 300	2	433.4	302	2	423.3	783	4	886.8	1,177	8	6.5	1,743.5	12.4	2,262	13.5	770,778
301 to 400	1	301.7	450	-	-	-	2	686.0	572	3	2.5	987.7	7.0	1,022	6.1	966,438
401 to 500	-	-	-	1	413.6	750	1	454.4	219	2	1.6	868.0	6.2	969	5.8	895,769
More than 500	-	-	-	1	1,974.9	276	1	2,716.1	176	2	1.6	4,691.0	33.5	452	2.7	10,378,319
Subtotal	37	1,988.8	4,308	41	5,006.7	6,891	45	7,019.2	5,545	123	100.0	14,014.7	100.0	16,744	100.0	836,998
Unavailable	11	464.4	-	8	341.3	-	-	-	-	19	-	805.7				
Total	48	2,453.2		49	5,348.0		45	7,019.2		142		14,820.4				

a/ Projects not financed with Bank funds.
b/ Including projects not financed with Bank funds.
c/ Financed by FONEI resources including Bank and financial intermediary funds.
d/ Does not include feasibility studies financed.
e/ Appraisal estimates.
f/ Excludes projects not financed with Bank funds.

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Table 29: Projected and Realized Exports in 1977 by a Sample of Enterprises Financed by FONEI (US$ '000)

Enterprise	Projected	Actual
Cementos Anahuac del Golfo, S.A.	7,775	23,855
Cementos de Chihuahua, S.A.	1,074	1,953
Ladrillera Industrial, S.A.	423	1,110
Fabricación de Máquinas, S.A.	1,947	4,542
Condumex, S.A.	4,230	3,183
Camera, S.A.	1,161	5,165
Promociones Industriales Mexicanas, S.A.	1,427	292
Fabricas Orion, S.A.	3,090	974
Fundidora de Aceros Tepeyec, S.A.	--	647
Tubos Flexibles, S.A.	1,455	152
DeKormex, S.A.	--	31
Química Mexama, S.A.	2,913	3,312
Cía. Fundidora del Norte, S.A.	10,128	6,116
Herramientas Nacionales, S.A.	716	677
Autoforjas, S.A.	--	16
Polynova, S.A.	10,605	-
Química Central de Mexico, S.A.	922	294
Ind. de Baleros Intercontinental, S.A.	913	1,780
Casa Aries, S.A.	1,562	470
Resinas Sintéticas, S.A.	900	137
Transejes, S.A.	-	752
Automanufacturas, S.A.	2,145	2,366
Taloquímica, S.A.	734	983
Industrias Resistol, S.A.	4,783	404
Negromex, S.A.	625	736
Total	59,528	59,947

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Table 30: Projected and Realized Import Substitution in 1977 by a Sample of Enterprises Financed by FONEI (US$ '000)

Enterprises	Projected	Actual
Fabricación de Máquinas, S.A.	2,129	3,620
Condumex, S.A.	8,670	29,504
Swecomex, S.A.	2,859	4,032
Comesa, S.A.	700	5,422
Materias Primas y Minerales Lampazos, S.A.	1,620	2,215
Promociones Industriales Mexicanas, S.A.	1,986	6,118
La Florida, S.A.	8,865	7,108
Fenoquímica, S.A.	5,896	14,905
Fundidora de Cueros, Tepeyac, S.A.	2,533	2,522
Tubos Flexibles, S.A.	1,819	1,450
DeKormex, S.A.	1,208	619
Metalúrgica Almena, S.A.	499	1,086
Química Mexama, S.A.	343	3,425
Industrial Papelería Mexicana, S.A.	8,129	6,537
Herramientas Nacionales, S.A.	697	1,139
Autoforjas, S.A.	4,678	6,198
Productos de Estireno, S.A.	2,948	9,682
Eutectic Investment Casting de Mexico, S.A.	1,401	439
Cía. Química Ameyal, S.A.	1,909	58
Química Central de México, S.A.	848	2,972
Ind. de Baleros Intercontinental, S.A.	3,946	3,970
Conductores Monterrey, S.A.	2,976	878
Resinas Sintéticas, S.A.	2,514	649
Transejes, S.A.	2,079	1,614
Automanufacturas, S.A.	3,329	4,166
Industrias Resistol, S.A.	1,496	14,339
Hulva, S.A.	217	113
Cía. Mexicana de Especialidades Industriales, S.A.	1,096	1,347
Aceros de Chihuahua, S.A.	781	1,062
Industrias Monterrey, S.A.	2,128	2,010
Multitex, S.A.	685	520
Reconstructora Mexicana de Maquinaria Industrial, S.A.	3,606	2,340
Total	84,590	142,059

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Table 31: Number of New Jobs Created by a Sample of Projects Financed by FONEI (as of December 1978)

Enterprise	Projected	Actual
Cementos Anahuac del Golfo, S.A.	52	375
Cementos de Chihuahua, S.A.	40	100
Ladrillera Industrial, S.A.	32	80
Fabricacion de Máquinas, S.A.	50	110
Swecomex, S.A.	55	6
Camesa, S.A.	82	100
Motores y Refacciones, S.A.	240	200
Materias Primas y Minerales de Lampazos, S.A.	120	158
Promociones Industriales Mexicanas, S.A.	20	49
Fabricas Orión, S.A.	175	175
La Florida, S.A.	88	205
Fenoquimia, S.A.	170	330
Fundidora de Aceros Tepeyac, S.A.	33	14
Tubos Flexibles, S.A.	50	40
Dekormex, S.A.	40	0
Metalúrgica Almena, S.A.	15	0
Química Mexama, S.A.	15	40
Aceros de Chihuahua, S.A.	60	55
Industrial Papelera Mexicana, S.A.	161	210
Cía. Fundidora del Norte, S.A.	700	359
Herramientas Nacionales, S.A.	55	17
Autoforjas, S.A.	155	368
Productos de Estireno, S.A.	17	12
Polynova, S.A.	668	650
Eutectic Investment Castings de México, S.A.	112	52
Cía. Química Ameyal, S.A.	24	111
Química Central de México, S.A.	25	0
Industria de Baleros Intercontinental, S.A.	35	25
Conductores Monterrey, S.A.	20	40
Casa Aries, S.A.	206	147
Resinas Sintéticas, S.A.	14	40
Transejes, S.A.	61	186
Automanufacturas, S.A.	388	397
Taloquímica, S.A.	30	9
Industrias Resistol, S.A.	76	76
Hulva, S.A.	36	14
Cía. Mexicana de Especialidades Industriales, S.A.	36	46
Negromex, S.A.	27	0
Industrias Monterrey, S.A.	15	82
Multitek, S.A.	40	23
Reconstructora Mexicana de Maquinaria Industrial, S.A.	170	179
Total	4,408	5,080

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Table 32: FONEI: Past and Projected Balance Sheets[a/]
(Mex$ millions)

	HISTORICAL					PROJECTED				
	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
ASSETS										
Cash and deposits	51	4	29	63	92	221	341	483	517	666
Interest and commissions receivable	8	15	20	37	74	157	248	344	432	508
Loan portfolio	295	726	995	1,613	2,735	5,242	8,279	11,464	14,393	16,919
Fixed and other assets	-	-	1	1	1	2	2	2	2	2
Total Assets	354	745	1,045	1,714	2,902	5,622	8,870	12,293	15,344	18,095
LIABILITIES										
IBRD - FONEI I	116	260	606	730	700	668	633	596	557	514
IBRD - FONEI II	-	-	-	307	782	1,111	1,058	1,001	939	871
IBRD - FONEI III	-	-	-	-	-	1,300	2,272	2,272	2,272	2,097
IBRD - FONEI IV	-	-	-	-	-	-	400	2,600	3,800	3,932
Banco de Mexico A	100	332	375	375	375	375	375	375	375	375
Banco de Mexico B	-	-	100	400	920	920	920	920	920	920
Banco de Mexico C	-	-	-	-	-	1,035	1,035	1,035	1,035	1,035
Banco de Mexico D	-	-	-	-	-	-	1,500	2,158	2,386	2,386
Banco de Mexico E and other new resources	-	-	-	-	-	-	-	-	872	2,561
Other liabilities	6	9	21	32	213	110	142	190	224	244
Total Liabilities	222	601	1,102	1,844	2,989	5,518	8,336	11,148	13,381	14,935
EQUITY										
Paid-in capital	125	132	146	161	178	220	291	369	453	719
Retained earnings	5	7	13	7	(9)	2	137	480	996	1,713
Current year's profits (loss)	2	6	(6)	(16)	11	135	343	516	717	911
Exchange rate losses	-	-	(210)	(282)	(267)	(253)	(237)	(221)	(203)	(184)
Total Equity	132	145	(58)	(130)	(87)	104	534	1,144	1,963	3,159
Total Liabilities and Equity	354	745	1,045	1,714	2,902	5,622	8,870	12,293	15,344	18,095

a/ As of December 31.

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Table 33: FONEI: Past and Projected Sources and Applications of Funds
(Mex$ millions)

	HISTORICAL					PROJECTED				
	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
BEGINNING WORKING CAPITAL	87	51	4	29	63	92	221	341	483	517
SOURCES										
IBRD - FONEI I	116	151	373	156	-	-	-	-	-	-
IBRD - FONEI II	-	-	-	307	474	345	-	-	-	-
IBRD - FONEI III	-	-	-	-	-	1,300	972	-	-	-
IBRD - FONEI IV	-	-	-	-	-	-	400	2,200	1,200	132
Banco de Mexico A	100	232	43	-	-	-	-	-	-	-
Banco de Mexico B	-	-	100	300	520	-	-	-	-	-
Banco de Mexico C	-	-	-	-	-	1,035	-	-	-	-
Banco de Mexico D	-	-	-	-	-	-	1,500	658	228	-
Banco de Mexico E and other new resources	-	-	-	-	-	-	-	-	872	1,689
Portfolio recoveries	2	13	59	107	161	353	493	1,340	2,171	3,074
Profits	2	6	(6)	(16)	11	135	343	516	717	911
Increase in paid-in capital	-	7	14	15	16	42	72	77	84	266
Increase in payables	(10)	3	12	11	181 a/	(104)	32	48	34	20
Total Sources	210	411	595	881	1,363	3,115	3,812	4,840	5,306	6,091
APPLICATIONS										
Subloan disbursements	243	444	328	725	1,283	2,860	3,530	4,525	5,100	5,600
Increase in interest, commissions and other receivables	3	7	5	18	37	83	91	96	88	76
Amortization of FONEI I Loan	-	7	27	32	30	32	34	37	40	42
Amortization of FONEI II Loan	-	-	-	-	-	25	53	57	62	68
Amortization of FONEI III Loan	-	-	-	-	-	-	-	-	-	175
Exchange rate losses	-	-	223	89	-	-	-	-	-	-
Amortization of exchange rate losses	-	-	(13)	(17)	(15)	(14)	(15)	(17)	(18)	(19)
Total Applications	246	458	570	847	1,335	2,986	3,693	4,698	5,272	5,942
INCREASE (DECREASE) IN WORKING CAPITAL	(36)	(47)	25	34	28	129	120	142	34	149
ENDING WORKING CAPITAL	51	4	29	63	92	221	341	483	517	666

a/ Includes a Mex$150 million bridge loan from Banco de Mexico.

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FOURTH INDUSTRIAL EQUIPMENT FUND (FONEI) PROJECT

Table 34: FONEI: Past and Projected Income Statements

(Mex$ millions)

	HISTORICAL					PROJECTED				
	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Income										
Interest income	19	48	78	132	262	581	1,070	1,528	1,974	2,344
Commissions	-	1	1	3	3	2	1	1	1	1
Total Income	19	49	79	135	265	583	1,071	1,529	1,975	2,345
Expenses										
Interest expense	6	33	69	125	221	367	630	892	1,112	1,276
Commissions expense	3	2	6	15	12	41	55	67	79	74
Gross Spread	9	14	4	(5)	32	175	386	570	784	995
Administration Expense	7	8	10	11	21	40	43	54	67	84
Operating Profit (Loss)	2	6	(6)	(16)	11	135	343	516	717	911

Note: Arithmetical differences due to rounding of figures.

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FOURTH INDUSTRIAL EQUIPMENT FUND (FONEI) PROJECT

Table 35: FONEI: Operations Projections (1979-1983)
(current prices)

	Actual	Projected				
	1978	1979	1980	1981	1982	1983
Approvals						
No. of projects	62	102	131	146	161	176
Average size (Mex$ million)	37	34	34	34	34	34
Total (Mex$ million)	2,288	3,500	4,500	5,000	5,500	6,000
Disbursements (Mex million)						
35% of approval for the year	(	1,225	1,575	1,750	1,925	2,100
50% of approval 1 year ago	(1,283	(1,635	1,750	2,250	2,500	2,750
15% of approval 2 years ago	(	(	205	525	675	750
Total	1,283	2,860	3,530	4,525	5,100	5,600

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FOURTH INDUSTRIAL EQUIPMENT FUND (FONEI) PROJECT

Table 36: FONEI: Loan Commitments and Resources (1979-1983)

(Mex$ millions)

	1979	1980	1981	1982	1983
Loan Commitments	3,500	4,500	5,000	5,500	6,000
Resources Available for Commitment					
IBRD - FONEI III	807 1/				
Banco de Mexico - Series C	588				
Subloan repayments	353	493	1,340	2,171	3,074
Profits and other	135	343	516	717	911
New Resources Needed for Commitments	1,617	3,664	3,144	2,612	2,015
IBRD - FONEI IV	890	2.233	808	-	-
Banco de Mexico - Series D	727	1,431	228	-	-
Banco de Mexico Series E and other new resources	-	-	3,108	2,612	2,015

1/ Amount not yet committed by FONEI.

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FOURTH INDUSTRIAL EQUIPMENT FUND (FONEI) PROJECT

Table 37: FONEI: Resource Position (1979-1983)

(Mex$ millions)

	1979	1980	1981	1982	1983
Disbursements	2,860	3,530	4,525	5,100	5,600
Other Uses	317 1/	178	189	88	206
Resources available for disbursements					
IBRD - FONEI II	354				
IBRD - FONEI III	1,300	972			
Banco de Mexico - Series C bonds	1,035				
Repayment of subloans	353	493	1,340	2,171	3,074
Profits and other sources	135	343	516	717	911
New resources needed for disbursements	-	1,900	2,858	2,300	1,821
IBRD - FONEI IV	-	400	2,200	1,200	132
Banco de Mexico - Series D bonds	-	1,500	658	228	-
Banco de Mexico - Series E bonds and other new resources	-	-	-	872	1,689
Total Funding	3,177	3,708	4,714	5,188	5,806

1/ Including repayment of Banco de Mexico's bridge loan made in 1978.

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FOURTH INDUSTRIAL EQUIPMENT FUND (FONEI) PROJECT

Table 38: FONEI: Principal Assumptions Used in the Financial Projections

1. Disbursements and Resources: See Tables T-35, T-36 and T-37.

2. Exchange Rate: Mex$22.72 = US$1.00, 1979-1983.

3. Administrative Expenses: 1979 as budgeted, with annual increases of 25% from 1980 to 1983. The 1979 amount includes an extraordinary expense of Mex$6 million arising from FONEI's transfer of offices, and which has been excluded in the base for computing future administrative expenses.

4. Interest Rates and Commissions (in percent):

	Interest Income	Interest Expense
A. IBRD Funds b/		
First loan	9.00	7.25 + 0.25 a/
Second loan	Fixed at 11.5; Floating at 16.00 c/	8.50 + 0.50 a/
Third loan	16.00 c/	7.50 + 0.50 a/
Fourth loan	16.00 c/	8.00 + 0.50 a/
B. Government Funds		
Series A	9.00	9.00
Series B	Fixed at 11.5; Floating at 16.00 c/	10.00
Series C	16.00 c/	12.00
Series D	16.00 c/	12.00
C. Other Resources		
Series E	16.00 c/	12.00
Other Resources	16.00 c/	8.00 + 0.50 a/

5. Average term of subloans assumed to be 7.0 years, including 2 years of grace.

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a/ Commission paid to NAFINSA for loan administration.
b/ The commitment fee for all Bank loans is 0.75% on the undisbursed balances.
c/ Floating at ACF.

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FOURTH INDUSTRIAL EQUIPMENT FUND (FONEI) PROJECT

Selected Documents and Data Available in the Project File

A. On the manufacturing sector and financial system

1. Indicadores Económicos, Various issues, published monthly by Banco de Mexico

2. Informe Anual, 1976 and 1977; annual report of Banco de Mexico.

3. Información Económica, various issues, published by Banco de Mexico.

4. El Mercado de Valores, January 8, 1979, published by NAFINSA.

5. Estadísticas del Comercio Exterior, January-November 1977 and 1978; published by Instituto Mexicano de Comercio Exterior.

6. Transformación, various issues; published by the Camara Nacional de la Industria de Transformación.

7. Actividad Económica, various issues; published by the Centro de Estudios Económicos del Sector Privado.

8. Examen de la Situación Económica de Mexico, various issues; published by the Banco Nacional de Mexico.

9. Boletín Mensual de Información Económica, November 1978; published by the Secretaría de Programación y Presupuesto.

10. Plan Nacional de Desarrollo Industrial (1979-82), 1979; issued by the Secretaría de Patrimonio y Fomento Industrial.

B. On FONEI

1. FONEI's audited financial statements 1974 to 1977.

2. FONEI's Annual Report, 1978.

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IBRD - 10415


JUNE 1970
MEXICO
TOLL ROADS
OTHER MAIN ROADS
RAILWAYS
AIRPORTS
STATE BOUNDARIES
LIST OF STATES
(keyed to gray numbers)
1. BAJA CALIFORNIA
2. BAJA CALIFORNIA SUR
3. SONORA
4. CHIHUAHUA
5. COAHUILA
6. NUEVO LEON
7. TAMAULIPAS
8. SINALOA
9. DURANGO
10. ZACATECAS
11. SAN LUIS POTOSI
12. NAYARIT
13. JALISCO
14. AGUASCALIENTES
15. GUANAJUATO
16. QUERETARO
17. HIDALGO
18. VERACRUZ
19. COLIMA
20. MICHOACAN
21. MEXICO
22. DISTRITO FEDERAL
23. TLAXCALA
24. MORELOS
25. PUEBLA
26. GUERRERO
27. OAXACA
28. CHIAPAS
29. TABASCO
30. CAMPECHE
31. YUCATAN
32. QUINTANA ROO (Terr.)
The boundaries shown on this map do not imply endorsement or acceptance by the World Bank and its affiliates.
U S A
GULF OF MEXICO
P A C I F I C O C E A N
GUATEMALA
HONDURAS
BRITISH HONDURAS
0 100 200 300 400 500
KILOMETERS
TIJUANA
Rosarito
MEXICALI
Ensenada
San Luis Rio Colorado
Colonet
San Felipe
Pto. Peñasco
Sonoyta
TUCSON
Nogales
Agua Prieta
Sta. Ana
Nacozari
Benjamin Hill
HERMOSILLO
Guaymas
CD. OBREGON
Navojoa
Huatabampo
Los Mochis
Topolobampo
San Blas
San Carlos
LA PAZ
San José del Cabo
CD. JUAREZ
EL PASO
Janos
Nvo. Casas Grandes
El Porvenir
El Sueco
CHIHUAHUA
La Junta
Ojinaga
Presidio
La Perla
Jiménez
Hidalgo del Parral
Rosario
Tepehuanes
CULIACAN
DURANGO
MAZATLAN
Aserradero
GOMEZ PALACIO
TORREON
Cd. Acuña
Del Rio
Piedras Negras
Eagle Pass
SAN ANTONIO
Sabinas
Monclova
NVO. LAREDO
LAREDO
SALTILLO
MONTERREY
REYNOSA
MATAMOROS
BROWNSVILLE
Linares
CD. VICTORIA
El Arenal
ZACATECAS
Matehuala
Cd. Mante
Manuel
SAN LUIS POTOSI
Cd. Valles
TAMPICO
AGUASCALIENTES
Jalpa
Ojuelos
Lagos de Moreno
LEON
GUANAJUATO
IRAPUATO
CELAYA
QUERETARO
TEPIC
GUADALAJARA
Pto. Vallarta
Ameca
Zamora
Zacapu
COLIMA
Barra de Navidad
Manzanillo
Tecomán
MORELIA
Los Reyes
Nva. Italia
Apatzingan
Playa Azul
Zihuatanejo
Zitácuaro
TOLUCA
MEXICO
CUERNAVACA
PACHUCA
Tempoal
Tuxpan
Poza Rica
Teziutlán
JALAPA
VERACRUZ
Cardel
PUEBLA
Atlixco
Izúcar de M.
Tehuacán
ORIZABA
Córdoba
Alvarado
Cd. Alemán
Huajuapan
Iguala
Balsas
CHILPANCINGO
Tierra Colorada
Acapulco
Cruz Grande
Pinotepa Nacional
Pto. Escondido
OAXACA
Pochutla
Pto. Angel
Tehuantepec
Salina Cruz
Matías Romero
Minatitlán
Coatzacoalcos
VILLAHERMOSA
Frontera
Palenque
TUXTLA GUTIERREZ
Arriaga
Comitán
Tapachula
Cd. Hidalgo
CAMPECHE
Champotón
Escárcega
MERIDA
Progreso
Yucalpetén
Ticul
Peto
Tizimín
Pto. Juárez
F. Carrillo Puerto
Chetumal