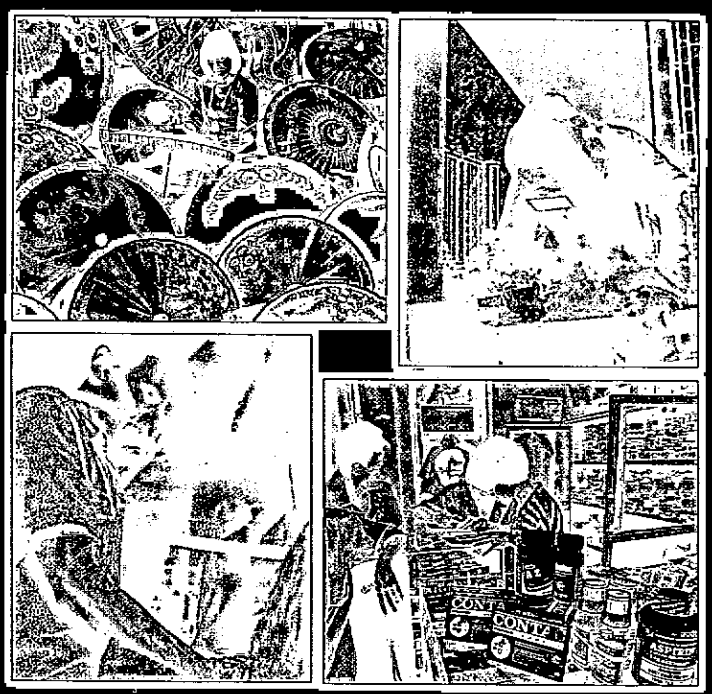
FINANCING FOR SMALL AND MEDIUM-SCALE INDUSTRIES IN THE SEACEN COUNTRIES

Edited by
JUNG-GUN OH



THE SEACEN CENTRE

FINANCING FOR SMALL AND MEDIUM-SCALE INDUSTRIES IN THE SEACEN COUNTRIES

Junggun Oh

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FOREWORD

The role of small and medium-scale industries in the development of nations has been well documented in a number of developed countries, e.g., Japan. There, in addition to providing job opportunities and helping build up a middle class, small and medium-scale industries have often also generated new technologies.

In his study, Junggun Oh performs a similar analysis of the place of small and medium-scale industries in the development and growth of developing countries, in particular among the SEACEN region. Beyond considering their contribution to the real sector, i.e., value-added, employment and exports, he takes a very close look at the financial support programmes which made possible the inception and growth of these industries, especially in the rural areas of the SEACEN countries. The outcome is an interesting typology of the different mechanisms which have propelled these industries to notable development. However, as he also recognizes, the road to their development has been a bit bumpy.

Using fairly current statistical methods and analysis of time series data, Junggun Oh finds that the access of small and medium-scale industries to critical financing is often the result of the monetary and credit policies which get adopted at the end of the day.

Dr. Vicente B. Valdepeñas, Jr.
Director
The SEACEN Centre

Kuala Lumpur
October 1994

EXECUTIVE SUMMARY

This collaborative research project was jointly undertaken by Country Researchers from the following member central banks: Bank Indonesia, Bank of Korea, Bank Negara Malaysia, Nepal Rastra Bank, Bangko Sentral ng Pilipinas, Central Bank of Sri Lanka, Central Bank of China, Taipei and, Bank of Thailand.

Small and Medium-Scale Industries (SMIs) contribute substantially, in particular those in the manufacturing sector, to the SEACEN countries. At various years, 98 to 99 percent of the total manufacturing establishments in Korea, Nepal, the Philippines, Taiwan and Thailand were SMIs. In Indonesia and Malaysia, they accounted for 88 and 78 percent respectively. Some evidence suggested that strong and viable SMIs are necessary for a successful export-oriented growth.

The following are tests carried out to identify and subsequently evaluate some determinants for more efficient SMIs financing:

unit root test autocorrelation function	to check the stationarity of time series
Johansen's cointegration test	to find long-run relationships
Vector Error Correction Model (VECM)	to examine short-run dynamic relationships

Economically meaningful, long-run relationships between loans to SMIs, money supply, interest rate and guarantees to SMIs were found in Korea, Malaysia and the Philippines. This suggests that the more money supply and the lower the interest rate, the more loans become available to SMIs in the long run. SMIs still face a number of problems with may be grouped into four broad categories:

Problems	Some Solutions
Inaccessible Credit	Encourage financial institutions to extend loans to SMIs through more relevant incentives such as a tax allowance.
Lack of Collateral	As poor presentation of documents or proposals and incomplete accounting systems of SMIs are often obstacles to the right appraisal, suitable training schemes in documentation, like the United Assistance Centre for SMIs (UAC) in Taiwan, could be provided.
Cost of Credit	Provide a subsidy for interest-rate differentials between the market rate and a certain lower rate for SMIs.
Lack of Long-Term Financing	Establishment of a second or third-tier stock market to provide equity finance for SMIs. Also, establishment of newly emerging financial instruments such as venture capital, factoring and leasing.

With growing demand for highly sophisticated items, SMIs with flexibility may become advantageous. Remarkably high employment shares of SMIs in Korea, Taiwan and Japan show how much SMIs contribute to the creation of employment opportunities. This may be due to the relatively lower capital/labour ratio of SMIs to Large-Scale Industries (LIs). Thus, as the economy grows, the competitiveness of the industry and subsequently the industrial structure changes. Lack of collateral is the most important obstacle to SMIs in having access to the formal financial institutions. Private financial institutions, being profit-oriented, tend to be reluctant to lend their funds to SMIs facing higher risk. Accordingly, specialized financial institutions and guarantee systems were set up to exclusively provide loans and guarantees for SMIs.

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Part I

FINANCING FOR SMALL AND MEDIUM-SCALE INDUSTRIES IN THE SEACEN COUNTRIES: AN OVERVIEW

by
Junggun Oh

Chapter 1

INTRODUCTION

I. Significance of the Study

It has been widely recognized that small and medium-scale industries (SMIs) play an important role in economic development. They not only alleviate poverty by absorbing surplus labor but also contribute favorably to income distribution, bring about more balanced economic growth, provide a training ground for developing the skills of industrial workers and entrepreneurs, and play a complementary role to large-scale industries (LIs).

However SMIs, in general, face more constraints on their development compared with LIs. One of the major constraints is the lack of financing from formal financial institutions. In this light, this project is aimed at outlining the current financing systems for the SMIs in the SEACEN countries, examining the problems to be addressed and finally providing some policy suggestions to enhance the financing for SMIs.

In the SEACEN countries, contributions of SMIs to their economies remain substantial despite the rapid industrialization on account of LIs. In terms of the number of manufacturing establishments, SMIs contributed 88 percent in Indonesia (1986), 98 percent in Korea (1989), 78 percent in Malaysia (1989), and 99 percent in Nepal (1986/1987), in the Philippines (1988), in Taiwan (1989), and in Thailand (1988), respectively. SMIs' contributions to total industrial employment in the same years stood at 32 percent in Indonesia, 61 percent in Korea, 34 percent in Malaysia, 81 percent in Nepal, 50 percent in the Philippines, 68 percent in Taiwan, and 57 percent in Thailand. Their contributions to total industrial value-added were also considerable. In the same years, the share came up to 36 percent in Indonesia, 45 percent in Korea, 17 percent in Malaysia, 58 percent in Nepal, 24 percent in the Philippines, and 48 percent in Thailand.

The high contribution of SMIs to the economy in the SEACEN countries shows the importance of SMIs. However, what is more important is the significant role of SMIs in economic development. In brief, the major role of SMIs involves the following:

(i) Alleviate the problem of unemployment and poverty by creating employment which further improves income distribution.

(ii) Contribute to balanced regional development in view of their generally wide dispersal all over the region extending to the rural areas.

(iii) Provide training ground for developing business management skills for future large undertakings and for upgrading the quality of labor force and for diffusing technological know-how throughout the economy.

(iv) Play an important complementary role to LIs by producing intermediate inputs and providing various kinds of services and in the process, reducing demand for imports through import substitution of intermediate inputs.

(v) Help to mobilize domestic resources by drawing into production activities savings, labor and raw materials that otherwise remain unutilized.

(vi) Provide potential entrepreneurs with opportunities for new business undertakings which help facilitate the birth and expansion of LIs.

(vii) Meet various kinds of sophisticated demand of consumers by producing a wide variety of goods in small amounts whose scale of production is more efficient in SMIs than in LIs.

(viii) Contribute to development of free enterprise system by encouraging competition among enterprises resulting in an increase in economic efficiency by reducing inefficiency from a monopolistic or oligopolistic system

(ix) Contribute to an increase in domestic entrepreneurship, formation of domestic capital and therefore, a decrease in dependency on foreign capital particularly in developing countries where import-substitution or export-oriented industrialization is supported by foreign capital.

Indeed, the share and the role of SMIs in the SEACEN countries are substantial. The SEACEN countries are carrying out industrialization mostly

with foreign capital. The large-scale import-substitution or export-oriented industrialization with foreign capital frequently encroaches on the share of local SMIs with domestic capital. In addition, LIs with foreign capital are, by and large, more closely related with industries in capital-exporting countries than with local SMIs. As a result, industrialization with foreign capital leads to a deterioration in the balance of payments due to higher imports of intermediate goods. Therefore, in the SEACEN countries where industrialization is in mid-stream, development of SMIs is crucial both to the formation of domestic capital and to an improvement in the balance of payments. In addition, while unemployment and poverty problems still remain in some SEACEN countries, the development of SMIs should be one of the best means to alleviate them.

However, SMIs face many problems including the scarcity of financing, skilled labor and raw materials. Of these, lack of financing appears to be the leading constraint on the development of SMIs. SMIs are generally set up with the owners' own savings and loans from relatives or the informal financial markets. They often need additional financing for purchasing machinery and equipment as well as for working capital requirement. Nevertheless, they find it difficult to obtain loans on favorable terms from formal financial institutions because of their inability to provide sufficient collateral or security and the high risks involved. Such a constraint on external financing leads to a lower capital/labor ratio, which results in lower productivity and lower wage rates in SMIs. Moreover, the constraint increases the risk of bankruptcy for SMIs. Hence, it is necessary to have a special scheme to provide the financing for SMIs. In this regard, this project will outline the current financing systems for SMIs and their problems in the SEACEN countries. It will also provide some policy suggestions to enhance the financing for SMIs in the SEACEN countries.

II. Objectives of the Study

(1) To survey the salient features of SMIs in the SEACEN countries, including the extent, type and source of financing;

(2) To assess the role of the financial market and banking system in financing these industries;

(3) To identify the financial problems of SMIs in the SEACEN countries; and,

(4) To formulate policy suggestions for enhancing development finance of SMIs in the SEACEN countries.

III. Organization of the Study

This project was organized as a collaborative research project with member central banks. Its main purpose is to examine the current financing systems for SMIs in the SEACEN countries and then to seek ways to strengthen financing for SMIs. The project comprises two parts. The first covers an overview and policy suggestions, and the second includes country papers prepared by member banks' co-researchers.

In the first part, an overview on the salient features of SMIs and the current financing systems of SMIs in the SEACEN countries is presented. The problems of SMIs are then assessed. Since the aspects and contribution of SMIs and the financing systems for SMIs in the SEACEN countries are different from country to country, comparative studies included herein may be useful for each individual member country to have new ideas for better financing policies for SMIs. Finally, a number of policy suggestions to enhance the financing for SMIs are provided. The second part includes the respective country papers on the features of SMIs, the current financing systems for SMIs, their problems and some specific policy suggestions.

Chapter 2

SALIENT FEATURES OF SMIs IN THE SEACEN COUNTRIES

I. Definition of SMIs

Small and medium-scale industries or SMIs may be defined in terms of different criteria such as the number of employees, the value of total assets or the value of fixed capital. However, the criteria vary from country to country and from sector to sector, reflecting largely the differences in the level of economic development. Moreover, different criteria may also be employed depending on the purpose of classification even in the same sector of the same country. In addition, the definition of SMIs may change over time reflecting the growth of industrial scales.

Such a wide range of classification has been done principally for providing various types of support such as financial facilities, tax benefits, technical assistance for SMIs which may not be able to compete with LIs without such support. Such varied definitions currently being employed in the SEACEN countries are used without modification in this study precisely because it is not easy to modify them due to the lack of data. Moreover, each definition may better reflect the actual economic reality in the different countries.

Arbitrary modifications for simple comparative studies without considering the differences in conditions of economic development in the respective countries may lead to distortion in understanding the real situation of the SMIs in the respective countries. Therefore, the various definitions over the member countries are herein used without modifications even though this may pose some difficulties for comparative purposes.

It will be useful to do a brief survey of the definitions currently being used in the SEACEN countries:

In *Indonesia*, there is no legal clear-cut definition of SMIs. The Central Bureau of Statistics, however, has used the following classifications since the Industrial Census of 1974/1975:

(i) Cottage manufacturing establishments employ less than 5 workers, including unpaid workers;

(ii) Small manufacturing establishments employ 5 to 19 workers;

(iii) Medium manufacturing establishments employ 20 to 99 workers; and,

(iv) Large manufacturing establishments employ 100 or more workers.

Meanwhile, Bank Indonesia defines firms with total assets of maximum Rupiah (Rp.) 600 million (equivalent to US$ 300,000) excluding land and buildings as small industries.

In *Korea*, SMIs are basically defined in terms of the number of full-time employees under the Small and Medium Industry Basic Act. The amount of total assets is used as a supplementary criterion. Small industries (SIs) are those with no more than 20 employees, while medium industries (MIs) are those with 21 to 300 employees in the manufacturing, mining and transportation sectors including those with 21 to 200 employees in the construction sector. In addition to these general definitions for SMIs, separate criteria are employed for some labor-intensive sub-sectors. For example, the maximum number of employees for MIs is expanded to as many as 1,000 employees in the manufacturing of automobile or some electronic parts.

On the other hand, a firm with the requisite number of employees may be excluded from the category of SMIs if its value of total assets exceeds a certain limit which varies from sector to sector. For example, automobile manufacturers with total assets of more than Won (W) 60 billion (equivalent to US$ 76 million) are not regarded as SMIs even as the number of employees is less than the criterion of SMIs. In addition, once a firm is classified as a SMI, it continues to be regarded as a SMI for the next three years and thus is entitled to receive various types of support even if it grows beyond the cut-off points either through business expansion or merger.

In *Malaysia*, SMIs are basically defined in terms of asset size or shareholders' funds. Under the Industrial Coordination Act of 1975 and the Promotion of Investment Act of 1986, SIs are defined as registered businesses with shareholders' funds or net assets of up to Ringgit Malaysia (RM) 500,000 (equivalent to US$ 196,300), while MIs are defined as those with shareholders' funds or net assets of more than RM 0.5 million to RM 2.5 million. In addition, definition in terms of the number of

employees is also used. SIs are firms employing less than 50 full-time employees, while MIs are those employing 50 to 199 full-time employees.

In *Nepal*, SMIs are defined in terms of the size of fixed capital investments. The New Industry Policy of 1992 classifies various industries into four categories, as follows: (i) traditional cottage industries -- establishments based on local ingenious raw materials or local resources, and associated with the country's traditional art and culture; (ii) SIs -- non-cottage industries with fixed capital investments of up to Rupees (Rs.) 10 million (equivalent to US$ 234,190); (iii) MIs -- with fixed capital investments between over Rs. 10 million to Rs. 50 million; and, (iv) LIs with a fixed capital investment of more than Rs. 50 million.

In the *Philippines*, the definitions in terms of the size of total assets, excluding land, and the number of employees are used. Under the Republic Act No. 6977 known as "Magna Carta for Small Enterprises", enterprises with total assets of up to Peso (₱) 50,000 (equivalent to US$ 1,960) are classified as micro industries; those with total assets of more than ₱ 50,000 to ₱ 500,000 as cottage industries; those with total assets of more than ₱ 500,000 to ₱ 5,000,000 as SIs; and, those with total assets of more than ₱ 5,000,000 to ₱ 20,000,000 as MIs. On the other hand, the National Statistics Office classifies enterprises of less than 10 employees as cottage industries, enterprises of 10 to 99 employees as SIs, while enterprises of 100 to 199 employees as MIs.

In *Sri Lanka*, SIs under the formal Small-Scale Industries Schemes introduced by the Government are defined as firms with plants and machineries of less than Rupees (Rs.) 200,000 (equivalent to US$ 4,350), while SMIs for the purpose of SMI Schemes are defined as firms with plants and equipment of less than Rs. 2 million, excluding land and buildings.

In *Taiwan*, according to the latest definition of the SMIs in the manufacturing industry revised in July 1982, SMIs are defined as firms with paid-in capital of up to New Taiwan Dollar (NT$) 40 million (equivalent to US$ 158,700), and total assets of up to NT$ 120 million. The use of the criteria based on the number of employees was discontinued in the 1982 revision.

In *Thailand*, there is no official definition of SMIs. The Bank of Thailand (BOT), the Small Industry Finance Corporation (SIFC), and the

Small Industry Credit Guarantee Corporation (SICGC), however, define SMIs as firms with net fixed assets of less than Baht (B) 20 million (equivalent to US$ 788,000).

II. Contribution of SMIs to the Economy in the SEACEN Countries

The contribution of SMIs is substantial in the manufacturing sector in all the SEACEN countries. Based on different years, in Korea, Nepal, the Philippines, Taiwan and Thailand, 98 to 99 percent of the total manufacturing establishments were SMIs, while in Indonesia and Malaysia, they accounted for 88 and 78 percent, respectively (see Table 2.2). However, the size of SMIs in terms of the number of employees was small. The number of employees per establishment in Indonesia, Nepal, the Philippines, Taiwan and Thailand ranged only from 7 to 14, while Korea and Malaysia showed relatively larger ratios of 29 and 50, respectively (see Table 2.3).

Such small size is related to the ownership of SMIs. The survey of Korea Federation of Small Business shows that more than 70 percent of SMIs were operated under single ownership in 1989. Consequently, the share of SMIs employing less than 50 employees in total SMIs accounts for 94 percent in Korea (1988) and 92 percent in Thailand (1988).

Accordingly, the share of the employees of SMIs among the total employees of the manufacturing sector showed relatively lower than those of the other establishments but still significant, ranging from 50 percent in the Philippines to 81 percent in Nepal. However, SMIs in Indonesia and Malaysia accounted for only 32 percent and 34 percent, respectively.

The share of the output or value-added of SMIs in the total output or value-added of the manufacturing sector was relatively lower than those of the other establishments or their employees, but still substantial. The share of output in Indonesia, Korea, Nepal, Taiwan and Thailand ranged from 36 percent for Indonesia to 71 percent for Nepal, while those in Malaysia and the Philippines account for relatively lower 17 percent and 27 percent, respectively. SMIs also showed considerable contribution to the exports of the respective countries. The share of the exports of SMIs among total exports stood at 39 percent in Korea and 65 percent in Taiwan.

Table 2.1

SELECTED SEACEN COUNTRIES: DEFINITIONS OF SMIs

Criteria Countries	Number of Employees	Amount of Assets/Capitals
Indonesia	Cottage : Less than 5 Small : 5 – 19 Medium : 20 – 99 Large : 100 or more	Small : Total assets of up to Rp. 600 million (excluding land & building)
Korea	Small : 20 or fewer Medium : 21 – 300 Large : More than 300	Small & Medium : Total assets of up to W 15–60 billion depending on sectors
Malaysia	Small : Less than 50 Medium : 50 – 199 Large : 200 or more	Small : Shareholders' funds or net assets of up to RM 0.5 million Medium : Shareholders' funds or net assets of more than RM 0.5 million up to RM 2.5 billion Large : Shareholders' funds or net assets of more than RM 2.5 million
Nepal	–	Cottage : Local resource-using & traditional industries Small : Fixed capital investments of up to Rs. 10 million Medium : Fixed capital investments of more than Rs. 10 million up to Rs. 50 million Large : Fixed capital investments of more than Rs. 50 million
Philippines	Cottage : Less than 10 Small : 10 – 99 Medium : 100 – 199 Large : 200 or more	Micro : Total assets of up to P 50,000 Cottage : Total assets of more than P 50,000 up to P 0.5 million Small : Total assets of more than P 0.5 million up to P 5 million Medium : Total assets of more than P 5 million up to P 20 million Large : Total assets of more than P 20 million

Table 2.1 (cont'd)

SELECTED SEACEN COUNTRIES: DEFINITIONS OF SMIs

Criteria / Countries	Number of Employees	Amount of Assets/Capitals
Sri Lanka	–	Small : Plants and machines of less than Rs. 0.2 million Medium : Plants and machines of from Rs. 0.2 million to less than Rs. 2 million Large : Plants and machines of Rs. 2 million or more (excluding land & building)
Taiwan	–	Small & Medium : Paid-in Capital of up to NT$ 40 million and total assets of up to NT$ 120 million Large : Paid-in Capital of more than NT$ 40 million and total assets of more than NT$ 120 million
Thailand	–	Small & Medium : Net fixed assets of less than B 20 million Large : Net Fixed Assets of B 20 million or more

Sources: Respective country papers in this study.

It is noteworthy that the larger shares of establishments, employees and output of SMIs in Taiwan compared to those in Korea leads to the larger shares of exports of SMIs in Taiwan than those in Korea. The difference seems to have resulted in the stronger Taiwanese trade account fundamentals compared to those of Korea.

These facts suggest that strong and viable SMIs are necessary for successful export-oriented growth. In the early stage of export-oriented growth, SMIs may play an important role since their products are mostly labor intensive. In the next stage of export-oriented growth, the intermediate goods and parts of manufacturing goods being mostly produced by SMIs can considerably decrease the demand for imports. In particular, sub-contracting on the production of intermediate goods between SMIs and LIs may result in a decrease in the production cost of the export sector, which would naturally enhance export competitiveness. In the contemporary stage of growing demand for highly sophisticated items rather than mass-produced ones, SMIs with more flexibility may have more advantages.

Turning to the sectoral distribution of SMIs, one can see that they are mostly concentrated on relatively labor-intensive industries such as food and beverage, textiles, wood products, fabricated metal, machinery and equipment. In Indonesia, there is predominance of SMIs mainly in food and beverage (33 percent), wood products and furniture (25 percent), textiles, apparel and leather (16 percent), and non-metal products (16 percent). In Malaysia, most SMIs are engaged in the industries of food and beverage (19 percent), wood products and furniture (19 percent), fabricated metal, machinery and equipment (22 percent), and chemical and chemical products (12 percent). The SMIs in the Philippines are dominant in the industries of food and beverage (36 percent), chemical and chemical products (28 percent), and fabricated metal, machinery and equipment (10 percent). Those in Thailand prevail in the industries of fabricated metal, machinery and equipment (32 percent), and food, beverage and tobacco (19 percent).

It is noteworthy to compare the contribution of SMIs to the economy in the SEACEN countries with those in Japan. In Japan, the shares of SMIs in the manufacturing sector in terms of the number of establishments, employees and value-added are substantially high. The shares stand at 99 percent, 72 percent and 52 percent in terms of the number of establishments, employees and value-added, respectively; all of which

Table 2.2

SELECTED SEACEN COUNTRIES :
CONTRIBUTION OF SMIs IN THE MANUFACTURING SECTOR 1/

Country (Year)	Establishment (Unit)	Employees (1000 persons)	Output	Value-Added	Export
Indonesia (1986)	94534 (88.0)	770 (32.0)	-	Rp. 775 bil. (35.5)	-
Korea (1989)	64446 (98.1)	1883 (60.9)	W 52831 bil. (39.4)	W 24718 bil. (45.0)	US$ 24052 mil. (38.6)
Malaysia (1989)	4732 (77.7)	237 (34.0)	RM 13.5 bil. (16.7)	RM 3.5 bil. (16.9)	-
Nepal (1986/87)	9273 (99.1)	111 (80.7)	Rs. 9588 mil. (70.8)	Rs. 2599 mil. (57.9)	Rs. 5220 mil. 2/ (88.4)
Philippines (1988)	77807 (98.9)	545 (50.0)	P 98.2 mil. (26.8)	P 32.9 mil. (24.0)	-
Sri Lanka (1991)	9191 (-)	-	-	-	-
Taiwan (1989)	155865 (98.5)	1507 (68.4)	NT$ 1834 bil. (44.7)	-	NT$ 28 bil. (64.8)
Thailand (1988)	47129 (98.6)	678 (57.0)	B 4492 mil. 3/ (52.0)	B 1359 mil. 3/ (48.1)	-

Notes: 1/ . Figures in parentheses are percentages representing the share in the manufacturing sector.
. - : Not available.

2/ Cottage and small scale industries in 1990/1991.

3/ In 1975.

Sources: Korea, Malaysia, Nepal, the Philippines, Sri Lanka, Taiwan and Thailand: Respective Country Papers in this study.

Indonesia : Central Bureau of Statistics , *1986 Economic Census of Small Manufacturing Sector*, Jakarta, 1989. Requoted from P.L. Chee (1992).

Table 2.3

NUMBER OF EMPLOYEES PER SMI IN THE SEACEN COUNTRIES

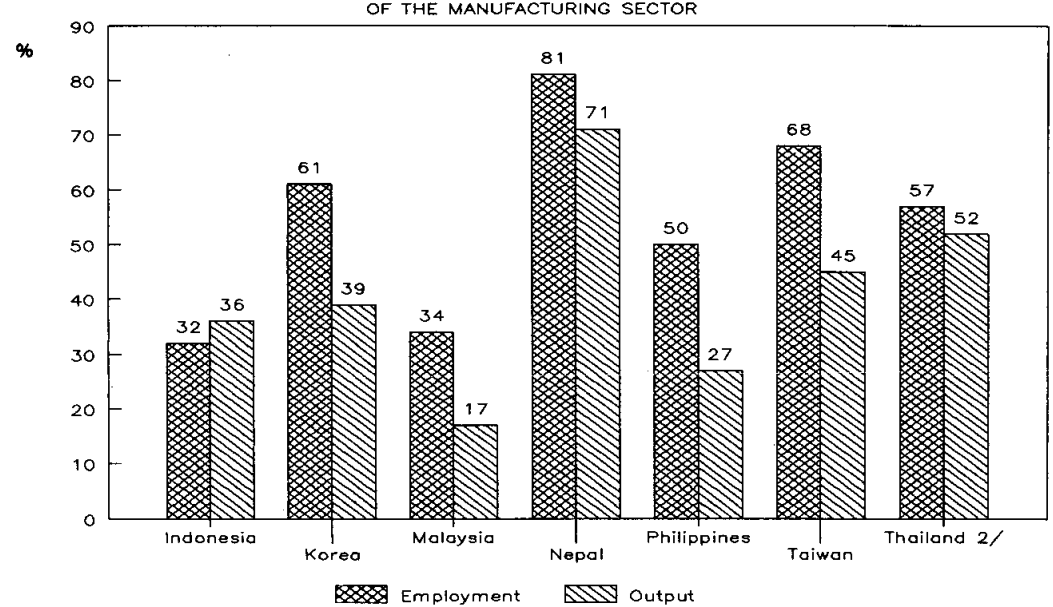
Country (Year)	Number of Employees Per SMI
Indonesia (1986)	8.1
Korea (1989)	29.2
Malaysia (1989)	50.1
Nepal (1986/87)	12.0
Philippines (1988)	7.0
Taiwan (1989)	9.7
Thailand (1988)	14.4

Source: Table 2.2.

Graph 2.1

SELECTED SEACEN COUNTRIES :
CONTRIBUTION OF SMIs TO EMPLOYMENT & OUTPUT 1/

OF THE MANUFACTURING SECTOR



Notes : 1/ Value-added in Indonesia.
2/ Output in 1975.

Source: Table 2.2.

are higher than those of the SEACEN countries, except Nepal. Such Japanese experiences are of particular interest considering the powerful growth of Japanese LIs. That means SMIs and LIs have grown together in Japan. It has been pointed out that two important facts have contributed to the co-existence of SMIs and LIs (*A. Berry and D. Mazumdar, 1991*).

The first one is a strong sub-contracting system between SMIs and LIs.[1] Japanese sub-contracting system is regarded as "a production aspect of Japanese way of management". A sub-contracting system is composed of parent companies and sub-contracting enterprises. A typical feature of a Japanese sub-contracting system is a pyramid-shaped or hierarchical structure supported by many sub-contractors of all sizes. For example, in the case of automobile industry, G. Iwaki (1992) showed that a certain automobile manufacturer deals directly with only about 170 primary sub-contractors, to which about 5,000 secondary sub-contractors are linked. Again, these secondary sub-contractors are linked to about 30,000 or more tertiary sub-contractors. Accordingly, a total of more than 35,000 firms are completely organized or systemized under a sole auto manufacturer. Among them, parts of secondary sub-contractors and all the tertiary ones are SMIs.

Such a typical pyramid type of sub-contracting production system has considerably contributed to make the co-existence of SMIs and LIs possible. On this issue, one cannot ignore either an influence of Japanese traditional hierarchical social system where people of higher positions are responsible for protecting those of lower positions, while the latter loyally support the former. The proportion of sub-contractors in the Japanese SMIs has grown from 53 percent in 1966 to 59 percent in 1971, and to 66 percent in 1981 (G. Iwaki, op. cit.).

The second one is the prevalence of traditional patterns of consumer demand. In the West, the development of LIs was aided by the increasing standardization of goods for mass consumption. Meanwhile, strong consumer demand for traditional products still remains in Japan which could be produced more economically in SMIs.

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1. For more detailed Japanese sub-contracting system, see G. Iwaki (1992).

Table 2.4

SELECTED SEACEN COUNTRIES: THE SECTORAL STRUCTURE OF SMIs
(Percent)

Code	Sub-Sector	Indonesia 1/4/ (1990)	Malaysia 1/5/ (1981)	Philippines 2/6/ (1986)	Thailand 3/6/ (1986)
31	Food, beverage, tobacco	33.3	19.1	35.6	19.4
32	Textiles, apparel, leather	15.9	9.7	6.3	7.8
33	Wood products, furniture	25.0	19.4	4.9	7.4
34	Paper, printing	0.7	7.7	6.6	6.2
35	Chemicals, chemical products	1.4	11.7	28.4	10.0
36	Non-metal	16.0	6.5	2.5	4.2
37	Basic metal	0.0	2.3	3.9	1.2
38	Fabricated metal, machinery, equip.	4.7	22.1	10.3	32.2
39	Others	3.0	1.6	1.6	11.6
	Total	100.0	100.0	100.0	100.0

Notes: 1/ On the basis of the number of employees.
2/ On the basis of value-added.
3/ On the basis of the number of registered factories.
4/ Small scale industries.
5/ Establishments with less than 100 employees.
6/ SMIs employing less than 200 employees.

Sources: Indonesia: Country paper in this study.
Malaysia, the Philippines, Thailand: Calculated from the data of P.L. Chee (1992).

Table 2.5

JAPAN: CONTRIBUTION OF SMIs
(1986)

Establishment (Unit)	Employees (1000 persons)	Value-Added (Billion yen)
432,265 (99.1)	7,869 (72.2)	132,420 (52.0)

Notes: SMIs refer to manufacturing firms employing less than 300 employees. Figures in parentheses are percentages representing the share in the manufacturing sector.

Sources: SME Agency, *White Paper on Small and Medium Enterprises in Japan*, Tokyo, 1986.
Requoted from P.L. Chee (1992).

III. Growth Trend of SMIs in the SEACEN Countries

The time series data of Table 2.6 show significant changes over time in the share of SMIs in the manufacturing sector of the SEACEN countries. The share of SMIs in Indonesia, Malaysia and Thailand decreased during the period under review. These decreasing trends are closely related with the industrialization process which has been carried out in the countries during the period. The share of SMIs in Korea also decreased before the mid-1970's but began to increase since the late 1970's. The share in Taiwan shows a continuous increase in terms of employment since 1976. The increases in Korea since the late 1970's and in Taiwan have resulted from the sustained efforts to strengthen SMIs. In addition, the share of SMIs in Nepal in terms of output and value-added showed considerable increases with the help of the Nepalese Government's Cottage and Small Industry Project, those in the Philippines also increased due to cyclical factors.

In *Indonesia*, the employment share of cottage and small scale industries employing less than 20 employees decreased from 87 percent in 1974/1975 to 81 percent in 1979, and to 67 percent in 1986. The value-added share showed no change from 1974/1975 to 1979 but a decrease from 22 percent in 1979 to 18 percent in 1986. It is noteworthy that the share has substantially decreased in the 1980's when industrialization had been carried out. This means that industrialization, mainly with the help of foreign direct investment (FDI) has resulted in unbalanced growth between SIs and LIs in spite of various kinds of schemes introduced by the Indonesian Government to support SIs.

In *Korea*, the growth trend of SMIs has been closely related with the strategies for economic development. In the 1960's and 1970's, the export-driven growth policy wad pursued and accordingly, economies of scale were emphasized to strengthen the competitiveness of export industries. In particular, in the mid-1970's, the Korean Government tried to develop heavy and chemical industries in an effort to advance the nation's industrial structure. Consequently, the shares of SMIs in the manufacturing sector decreased substantially. Employment share dropped from 66 percent in 1963 to 44 percent in 1976, and value-added share decreased from 53 percent in 1963 to 30 percent in 1976. However, in the late 1970's, the Government began to emphasize balanced growth between LIs and SMIs, introducing various measures to strengthen SMIs such as the establishment of the Small and Medium Industry Promotion Fund in 1978.

Table 2.6

SELECTED SEACEN COUNTRIES: GROWTH TREND OF SMIs 1/

	Establishment					Employment					Output					Value-Added				
Indonesia 2/						86.5 (1974/75)		80.6 (1979)		67.3 (1986)			-			22.2 (1974/75)		22.4 (1979)		17.8 (1986)
Korea	98.7 (1963)	97.0 (1973)	95.9 (1977)	97.4 (1985)	98.1 (1989)	66.4 (1963)	46.6 (1973)	46.0 (1977)	54.8 (1983)	60.9 (1989)			-			52.9 (1963)	54.0 (1973)	32.4 (1977)	37.1 (1983)	45.0 (1989)
Malaysia	96.1 (1981)	84.4 (1983)	81.9 (1985)	79.0 (1988)	77.7 (1989)	53.9 (1981)	43.0 (1983)	41.2 (1985)	36.5 (1988)	34.0 (1989)	29.8 (1981)	23.2 (1983)	20.4 (1985)	18.9 (1988)	16.7 (1989)	33.7 (1981)	25.5 (1983)	20.7 (1985)	19.6 (1988)	16.9 (1989)
Nepal		99.5 (1981/82)		99.1 (1986/87)			87.1 (1981/82)		80.7 (1986/87)			56.2 (1981/82)		70.8 (1986/87)			24.5 (1981/82)		57.9 (1986/87)	
Philippines		98.7 (1983)		98.9 (1988)			43.3 (1983)		50.0 (1988)			22.1 (1983)		26.8 (1988)			21.0 (1983)		24.0 (1988)	
Taiwan	98.7 (1976)	98.9 (1981)	98.6 (1986)	98.5 (1989)		59.6 (1976)	62.0 (1981)	68.3 (1986)	68.4 (1989)		47.1 (1976)	44.8 (1981)	47.3 (1986)	44.7 (1989)				-		

Note: 1/ Shares in the manufacturing sector (%).
2/ Cottage and small scale industries with employees of less than 20.

Sources: Korea, Malaysia, Nepal, the Philippines, Taiwan: Respective country papers in this study.
Indonesia : A. Berry and D. Mazumdar (1992).

As a result, SMIs grew rapidly and their contribution to the economy began to rebound from 1977. The number of SMIs in the manufacturing sector increased more than 2.7 times in the period from 1976 to 1989 to make up 98 percent of all the Korean manufacturers. The employment and value-added shares of SMIs showed significant increases from 44 percent in 1976 to 61 percent in 1989, and from 30 percent in 1976 to 45 percent in 1989, respectively. Business areas of SMIs have also been broadened to such capital-intensive and high-tech industries as electronic parts, non-ferrous metal and machinery, from traditional labor-intensive industries such as textiles, footwear and furniture.

Nevertheless, the contribution ratios of SMIs to the economy in Korea are still lower than those in Japan and Taiwan. The employment share of SMIs in Korea only reached 61 percent in 1989, while those in Japan and Taiwan recorded 72 percent in 1986 and 68 percent in 1989, respectively. Considering the characteristics of SMIs, most of which produce intermediate goods, one may conclude that such weaker structure of SMIs in Korea has resulted in the fragile fundamentals of the trade balance in Korea, while stronger structures of SMIs in Japan and Taiwan have led to the stronger fundamentals of the trade balance. In 1991, the imports of capital goods in Korea reached US$ 30.1 billion, recording 37 percent of total imports, which consequently contributed to the deficit in the trade balance during the year.

In *Malaysia*, the shares of SMIs in terms of establishment, employment, output and value-added have dropped sharply during the 1980's. The shares in terms of the number of establishments and employees dropped from 96 percent and 54 percent in 1981 to 78 percent and 34 percent in 1989, respectively. The shares in terms of the value of output and value-added have also shown similar downward trend, decreasing from 30 percent and 34 percent, respectively, in 1981 to 17 percent together in 1989. Such downward trends of the shares of SMIs reflect mainly the rapid industrialization process which took place during the period under review.

During the industrialization process, SMIs may grow to be LIs which may reduce the relative share of SMIs in the economy. However, it is significant in Malaysia that the absolute number of establishments of SMIs themselves considerably decreased in contrast with other member countries such as Korea and Taiwan (see Table 2.7). Such phenomena sometimes could be observed in the economy where industrialization

is being carried out mostly with foreign capital. The large-scale import substitution or export-oriented industrialization with foreign capital frequently encroaches on the share of local SMIs with domestic capital. In addition, LIs with foreign capital are, by and large, more closely related with industries in capital-export countries than with local SMIs. As a result, industrialization with foreign capital may lead to deterioration in the balance of payments due to imports of intermediate goods. Therefore, as already pointed out, balanced growth between SMIs and LIs is crucial both to the formation of domestic capital and to an improvement in the balance of payments in developing countries.

In *Nepal*, SMIs showed substantial growth during the period of two censuses, i.e., from 1981/1982 to 1986/1987. The number of establishments grew by about two-fold, from 4,879 to 9,273, recording annual average growth rate of 18 percent. The number of employees, the value of output and of value-added increased by 14 percent, 28 percent and 70 percent, respectively, during the same period. Consequently, the share of SMIs in terms of output and value-added increased from 56 percent to 71 percent, and from 25 percent to 58 percent, respectively. However, the shares of SMIs in terms of establishments and employment slightly decreased from 99.5 percent to 99.1 percent, and 87.1 percent to 80.7 percent, respectively, during the same period.

In the *Philippines*, during the period of two censuses of establishments carried out by the National Statistics Office (NSO) in 1983 and 1988, respectively, the number of establishments of SMIs in the manufacturing sector increased by 41 percent from 55,330 to 77,807. The number of employees of SMIs also increased by 42 percent from 385,000 persons to 545,000 persons. Accordingly, the shares of SMIs in terms of establishments, employments, output and value-added also increased from 98.7 percent to 98.9 percent, from 43 percent to 50 percent, from 22 percent to 27 percent, and from 21 percent to 24 percent, respectively, during the period. These increases had mainly resulted from cyclical factors. In 1983, the growth rate of real GNP in the Philippines recorded only 1.4 percent followed by the negative growth rate in two consecutive years. The Philippine economy, though, began to recover in 1986 and reached its peak in 1988, with a growth rate of 7.2 percent.

In *Taiwan*, the number of establishments of SMIs in the manufacturing sector increased by 127 percent from 68,616 in 1976 to 155,865 in 1989. Consequently, the value of output of SMIs jumped by 375

Table 2.7

SELECTED SEACEN COUNTRIES: CHANGES IN ESTABLISHMENTS AND EMPLOYEES OF SMIs

	Establishments (Unit)		Employees (Thousand persons)	
Korea	32384	64446	1045	1883
(1981—>1989)	(96.9)	(98.1)	(51.1)	(60.9)
Malaysia	4977	4732	212	237
(1983—>1989)	(84.4)	(77.7)	(43.0)	(34.0)
Taiwan	90580	155865	1363	1507
(1981—>1989)	(98.9)	(98.5)	(62.0)	68.4)

Sources: Korea (1989), Malaysia, Taiwan: Respective country papers in this study.
Korea (1981): S.C. Kim (1992).

percent during the same period. However, the number of employees of SMIs increased only by 33 percent from 1,137,000 persons in 1976 to 1,507,000 persons in 1989, indicating that capital/labor ratio and labor productivity improved substantially. The share of SMIs in terms of establishments sustained at the high level of 98.5 percent in 1989, which is slightly higher than 98.7 percent in 1976. Nevertheless, the share in terms of employment increased from 60 percent in 1976 to 68 percent in 1989.

The Taiwanese industrial policy, with regard to the scale of establishments, has been in contrast with that of Korea before the late 1970's. In the mid-1960's, the employment share of SMIs in the manufacturing sector in Taiwan was lower than in Korea. But in the 1970's, the share in Taiwan was higher than in Korea. Since the mid-1970's, Korea also tried to strengthen SMIs but still the share in Korea remained lower than in Taiwan by 7.5 percent in 1989. Levy (1991) pointed out three factors as the main reasons for the difference: (i) different response to export market; (ii) the greater Taiwanese capacity to sub-contract; and, (iii) a larger number of Taiwanese independent export traders.

Consequently, the Korean export surge was accompanied not by the entry of new firms but by an expansion in the scale of existing establishments in contrast with that of Taiwan. As a result, the export share of SMIs in the manufacturing sector in Taiwan recorded 65 percent in 1989 while Korea remained at 39 percent in the same year. Levy again ascribes these different responses to different market transaction costs. When transaction costs are high, buyers and manufacturers tend to offset them by dealing in large volumes and accordingly, the opportunities for small traders and manufacturers may be limited. According to him, Korean transaction costs were higher than the Taiwanese.

It is useful to compare the growth trends of SMIs in the SEACEN countries reviewed above with that of Japan. In Japan, SMIs have greatly contributed to its economic expansion and equity. The number of establishments of SMIs in the manufacturing sector increased from 431,000 in 1955 to 731,000 in 1980, which is approximately 24 times Korea and 8 times higher than Taiwan in the same year. The share of SMIs in terms of establishments has been maintained above 90 percent up to the present.

Table 2.8

JAPAN 1/: GROWTH TREND OF SMIs 2/

	1955	1960	1965	1970	1975	1980	1986
Establishment	99.6	99.4	99.4	99.3	99.5	99.5	99.1
Employment	73.0	69.5	68.8	67.5	70.7	73.5	72.2
Output	56.1	48.9	50.9	48.9	51.3	52.0	52.0

Notes: 1/ Shares in the manufacturing sector (%).
2/ SMIs with employees of less than 300.

Source: G. Iwaki (1992).

Accordingly, SMIs absorbed about 8 million employees, which is almost 8 times Korea and 6 times Taiwan in the same year. The employment share of SMIs, as a result, recorded 74 percent in 1980, far higher than in Taiwan and Korea. This shows how much Japanese employment depends on SMIs. However, historically, the employment share of SMIs in Japan declined from 73 percent in 1955 to 68 percent in 1970 and since then, began to rebound to reach 74 percent in 1980. This trend is very significant considering the Japanese growth pattern divided into two periods, i.e., high growth period from the mid-1950's to the early 1970's and stable growth period from the mid-1970's to the present. This means the share of SMIs declined during the high growth period and then rebounded during the stable growth period. It is noteworthy that the trend of the share of SMIs in Korea shows approximately similar to that of Japan.

To sum up, one can find some useful observations from the above review. Firstly, the share of SMIs tends to decline at the early stage of industrialization, particularly with the foreign capital, mainly due to the development strategies adopted to enhance the export competitiveness through enlarging the scale of economy as well as to the poor competitiveness of traditional local SMIs. However, such a declining trend tends to rebound beyond a certain stage of industrialization since the government realizes the limit of economic growth solely depending on LIs and thus begins to try to enhance SMIs (see Graph 2.2).

Secondly, the development of SMIs tends to have a positive relationship with the performance of the balance of payments. As an economy grows, SMIs tend to shift from traditional labor-intensive industries such as textiles, food and footwear to more capital and technology-intensive industries, providing LIs with intermediate goods such as parts and components of machinery. Such development of SMIs may reduce substantially the needs of imports in spite of growing exports. Accordingly, the economy with more creative and stronger SMIs tends to have better performance of the balance of payments (see Graph 2.3).

IV. Significant Roles of SMIs in the SEACEN Countries

It has been reviewed earlier in Sections II and III, that SMIs have a large majority in the manufacturing sector in all the SEACEN countries regardless of the degree of economic development. However, much more important is the significant roles which SMIs play in economic

development. The roles of SMIs may vary from country to country depending on the stage of its economic development. Accordingly, industries where SMIs are predominant tend to change as the economy grows. At the early stage of economic development, SMIs are by and large located in the rural areas. They are mostly cottage or small scale levels. Such cottage and small scale industries generally produce traditional local products such as garments and handicrafts, utilizing natural resources being produced in the countries.

At this stage, SMIs contribute to create employment opportunities and thus, to alleviate poverty in the rural areas. Accordingly, they improve income distribution and bring about a more balanced regional growth. In addition, they help to mobilize domestic resources by drawing into production activities savings, labor and raw materials which otherwise remain idle and unutilized. These effects are very important in some member countries where a lot of populations are still living in the rural areas and where the rates of unemployment are relatively high.

In Nepal, at present, approximately 44,000 cottage and small scale industries are registered with the Government, and a similar number of unregistered cottage industries are operating, producing mainly agro- or forest-based products such as woolen carpets, ready-made garments, handicraft, woolen goods. About 90 percent of the value-added in the private manufacturing sector is estimated to be concentrated in these sectors. The Government's Cottage and Small Scale Industry (CSI) Project under assistance from the World Bank provided substantial opportunities for creating employment, increasing incomes of rural areas and exporting the CSI products.

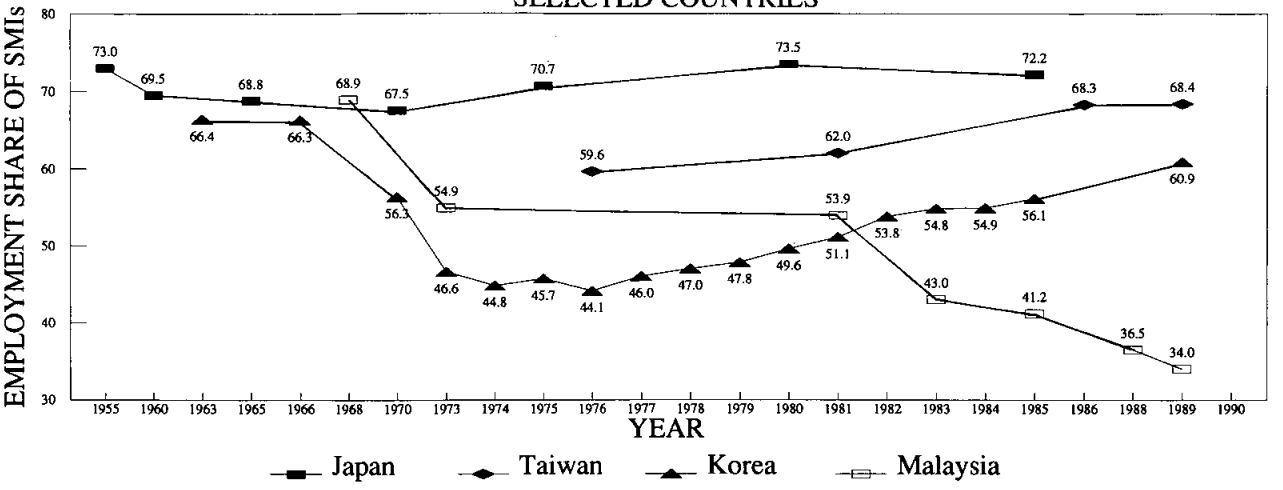
In Sri Lanka, the Small and Medium Scale Industries Schemes which have been implemented three times since its first introduction in 1979 have also contributed considerably to the creation of employment opportunities, an increase in income and alleviation of poverty, particularly in the rural areas.

The effects on employment, savings mobilization and a balanced regional growth generally continue even after the economy has grown. The remarkably high employment shares of SMIs in Korea, Taiwan and Japan show how much SMIs contribute to create employment even in the growing economy. Such high contribution of SMIs to the creation

Graph 2.2

ECONOMIC GROWTH AND SHARES OF SMIs:

SELECTED COUNTRIES

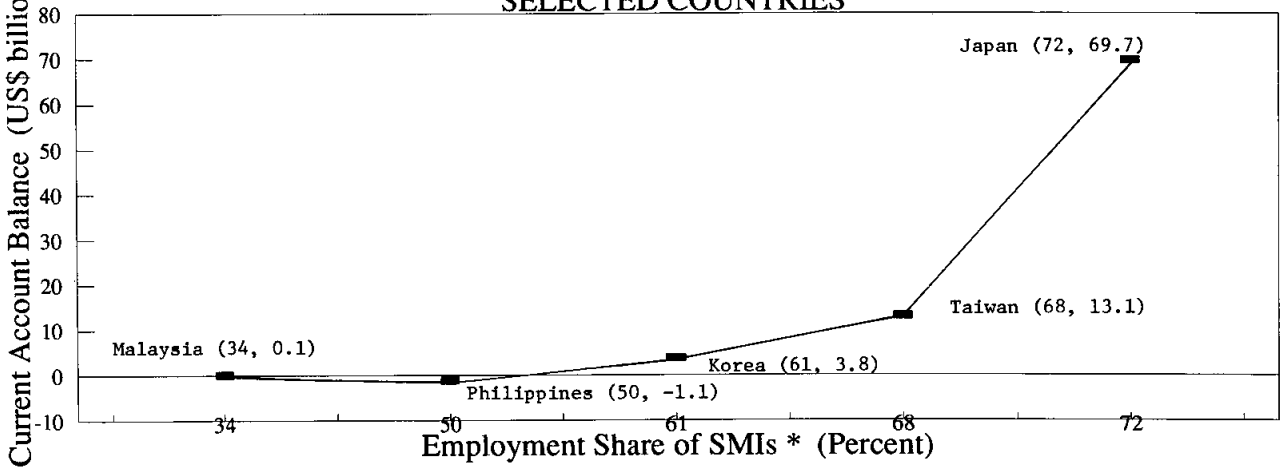


Sources: Korea: Country paper in this study; S.C. Kim (1992); and, C.B. Yoon (1989).
Japan: G. Iwaki (1992).
Taiwan: Country paper in this study.
Malaysia: Country paper in this study; and, C.O. Fong (1990).

Graph 2.3

SHARES OF SMIs AND CURRENT ACCOUNT BALANCE:

SELECTED COUNTRIES



Notes: Current Account Balance: An average of the period from 1986 to 1991.
Employment Share: Korea (1989), Malaysia (1989), the Philippines (1988), Taiwan (1989), and Japan (1986).
* In the manufacturing sector.

of employment opportunities is, of course, mainly due to the relatively lower capital/labor ratio of SMIs compared with that of LIs. As the economy grows, the competitiveness of industry and thus industrial structure changes. The capital/labor ratio of SMIs also increases and the center of SMIs shifts from the raw material-intensive industry such as food, beverage, textiles, wool, wood, paper and leather to the light industry with higher processing such as garments, furniture, printing and rubber products.

Many developing countries tend to start industrialization with these light industries as import-substitution or export-oriented strategies since they have plenty of available labor but not sufficient capital and technology. In 1963, when Korea launched the implementation of the First Five-Year Economic Development Plan, the proportion of the light industry in the SMIs in terms of value-added was 65 percent, among which the raw material-intensive light industry and the higher processing light industry occupied 51 percent and 14 percent, respectively. Table 2.4 shows that the proportion of the light industry in the SMIs in terms of employment was 75 percent in Indonesia (1990) and 56 percent in Malaysia (1981). In the Philippines, the proportion of the light industry in the SMIs in terms of value-added was 53 percent in 1986.

As the economy grows more, the center of SMIs shifts from the light industry to the heavy and chemical industry along with a greater increase in the capital/labor ratio. Aside from the heavy and chemical industry, it also tends to shift from the raw material-intensive heavy and chemical industry such as chemical, non-metal and basic metal products to the higher processing heavy and chemical industry such as fabricated metal and various kinds of machinery.

At this stage, SMIs play a significantly complementary role to LIs by providing the latter with various parts and components through the sub-contracting system between them. The sub-contract system is an important linkage between SMIs and LIs. It improves flexibility of LIs and reduces production costs of LIs, while SMIs benefit from increasing returns to scale by supplying the same products to a number of LIs. This system improves the balance of payments by supplying a number of intermediate goods such as parts and components which otherwise should be imported. SMIs also enhance the efficiency of the economy by supplying goods that would be inappropriate for LIs to produce and

for which the markets are too small to justify mass production. LIs also may benefit from specialized new technology developed by sub-contractors.

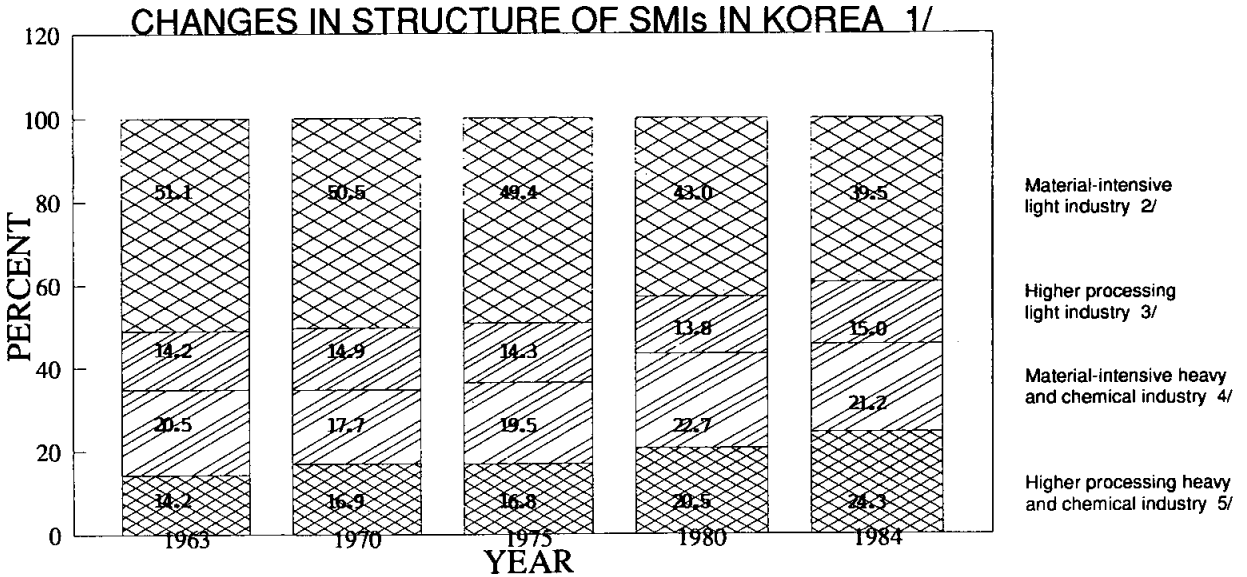
In Korea, the proportion of the heavy and chemical industry in the SMIs increased considerably from 35 percent in 1963 to 46 percent in 1984. Among them, the proportion of higher processing heavy and chemical industry such as electrical machinery and transportation equipment increased from 14 percent in 1963 to 24 percent in 1984. In Malaysia, the share of chemical, rubber and plastic products, and the share of fabricated metal, machinery and equipment showed 12 percent and 22 percent, respectively, in 1981. The share of chemical products in the Philippines and the share of fabricated metal, machinery and equipment in Thailand recorded 28 percent and 32 percent, respectively, in 1986.

In addition, SMIs contribute to the development of the market economy by encouraging competition among enterprises and by reducing inefficiency of a monopolistic or oligopolistic system. This efficiency of market economy may ultimately result in an increase of consumers' welfare. In particular, through the specialized production with a wider variety of goods in small amounts whose productions are more efficient in SMIs than in LIs due to their small scale of production, SMIs can meet increasing demands of consumers for more sophisticated goods in the contemporary society. SMIs can also play the role of buffer zone in the economy by absorbing external shocks more flexibly, so that the economy with higher share of SMIs can adjust itself more flexibly to changes in economic environments.

The role of SMIs in providing training grounds for developing business management skills for future large undertakings and for upgrading quality of labor forces cannot be ignored either. They provide potential entrepreneurs with an opportunity of new business and are often vehicles which facilitate the birth and expansion of LIs.

Finally, it should be noted that in developing countries where import-substitution or export-oriented industrialization are carried out, SMIs contribute to an increase in domestic entrepreneurship, formation of domestic capital and, as a result, a decrease in dependency on foreign capital. Considering the significant roles of SMIs examined above, the industrial policy being centered on SMIs rather than on LIs may be

Graph 2.4



Notes: 1/ In terms of value-added.
2/ Food, beverage, textiles, leather, wood and wood products, paper and paper products, pottery.
3/ Apparel, furniture, printing and publishing, rubber products, other manufacturing goods.
4/ Iron and steel, non-ferrous metal, chemical, petroleum and coal products.
5/ Fabricated metal products, general machinery, electrical machinery, transportation equipment, professional and scientific equipment.

Source: C.B. Yoon (1989).

recommended as an alternative way of industrialization in developing countries.

V. Financing Sources of SMIs in the SEACEN Countries

SMIs in developing countries are launched mainly with entrepreneurs' own funds. In Malaysia, for SIs employing less than 50 employees, 78 percent of the initial capital comes from the owners, while the proportion is only 56 percent for medium and large industries (*Chee, 1977*). More recent Malaysian survey (*Fong, 1990*) also shows that 73 percent of SMIs utilize their own funds to provide 50 percent and more of the capital required to start their business. A further 7 percent of the firms receive help from their parents or friends in providing 50 percent and more of the capital required for the initiation of business. In the case of the Philippines and Thailand also, more than 75-percent initial capital comes from own savings or from relatives and friends (*Chee, 1992*). Levy (1991) shows that, in Sri Lanka, own savings also play a dominant role in the SMIs.

As enterprises expand, the proportion of financing from formal or informal financial institutions increases. However, the increase rate is so marginal that most SMIs still rely on their own savings or reinvestment of profit. Fong (1990) shows in the above survey that 64 percent of SMIs in Malaysia still use their own funds to provide 50 percent or more of the capital required for operation after initiation (see Table 2.10). Such heavy reliance of internal source of funds limits the availability of capital both for setting up business as well as for subsequent operation and growth, and thus results in chronic financial problems.

However, SMIs in some member countries face different types of financial problem. They depend too much on external capital. Table 2.11 shows that the own capital of the SMIs in Korea accounted for only 19 percent of total capital in 1991. The ratio is lower than the ratio of LIs, 26 percent in 1991. In Taiwan, the ratio of current liability to total assets of the SMIs is 62 percent in 1990, much higher than the ratio of the non-SMIs, 35 percent (see Table 2.12).

On the other hand, borrowings from banks are dominant among external financing of SMIs. In Korea, the borrowings from banks accounted for 79 percent of total external financing and the second largest source of external financing was borrowing from non-bank financial

Table 2.9

SOURCE OF INITIAL CAPITAL BY PAID FULL-TIME EMPLOYMENT SIZE GROUP

(In Percentage)

Paid Full-Time Employment Size Group	Owner	Family/ Relative	Friend	Commer-cial Bank	Others	Total
0 - 4	81.7	11.2	4.9	0.3	1.9	100.0
5 - 9	74.0	17.2	6.1	0.1	2.6	100.0
10 - 19	77.9	11.7	10.4	-	-	100.0
20 - 29	86.5	3.3	1.4	-	8.8	100.0
30 - 49	71.5	16.6	7.6	0.6	3.7	100.0
50 and over	55.8	9.5	4.8	6.0	23.9	100.0
Average	74.5	11.6	5.9	1.2	6.8	100.0

Source : Chee, (1977).

Table 2.10

COMPARISON OF SOURCES OF FUNDS FOR INITIAL YEAR AND 1985 AMONG SMIs 1/

Funding Sources as % of Total Requirements	% of Firms 2/			
	Initial Year of Operation		Currently (1985)	
Own Funds:				
Less than 50%		27.1		36.3
50% and more		72.9		63.6
Sub-total	(151)	100.0	(162)	100.0
Parents & Relatives:				
Less than 50%		96.0		99.4
50% and more		4.0		0.6
Sub-total	(151)	100.0	(162)	100.0
Friends & Acquaintance:				
Less than 50%		96.7		100.0
50% and more		3.3		-
Sub-total	(151)	100.0	(162)	100.0
Non-Bank Institutions & Govt. Agencies:				
Less than 50%		98.7		99.4
50% and more		1.3		0.6
Sub-total	(151)	100.0	(162)	100.0
Commercial Banks:				
Less than 50%		88.7		75.3
50% and more		11.3		24.2
Sub-total	(151)	100.0	(162)	100.0

Notes: 1/ Survey of 167 small and medium industries, 1986.
2/ On the basis of number of firms that responded to this question.

Source: Fong (1990).

institutions, recording 12 percent in 1990. Fund raising through bond issuance and borrowings from the curb market made up 7 percent and 2 percent, respectively (see Table 2.13).

In Nepal, borrowings from commercial banks accounted for 54 percent of total external financing in 1981/1982. Nepal Industrial Development Corporation (NIDC) provided 16 percent of total external financing. Commercial banks and NIDC, respectively, accounted for 57 percent and 13 percent of total external working capital financing, while commercial banks, NIDC and foreign institutions, respectively, provided 39 percent, 27 percent and 17 percent of the total external fixed capital financing (see Table 2.14).

In Taiwan, the ratio of borrowings from financial institutions to total borrowings of SMIs showed 69 percent in 1990. However, this ratio was far lower than the ratio of non-SMIs, 81 percent (see Table 2.15). In addition, borrowing terms for SMIs are worse than for non-SMIs. For instance, the ratio of long-term borrowings to total borrowings of SMIs was only 9 percent in 1990, while the ratio of non-SMIs was 24 percent, reflecting that the borrowings of SMIs were heavily dependent on short-term borrowings (see Table 2.15).

Table 2.11

KOREA: OWN CAPITAL RATIO
(Percent)

	1989	1990	1991
Large Industries	29.4	26.7	25.6
Small and Medium Industries	22.4	22.8	19.4

Note: Own Capital Ratio = $\frac{\text{Own Capital}}{\text{Total Capital}} \times 100$

Source: Business Financial Analysis (1990, 1991), The Bank of Korea.

Table 2.12

TAIWAN: RATIO OF CURRENT LIABILITY TO TOTAL ASSETS
(Percent)

	1982	1985	1988	1990
SMIs	62.4	59.2	61.7	61.5
Non-SMIs	48.1	41.5	38.7	34.8

Source: Country paper in this study.

Table 2.13

KOREA: SOURCE OF EXTERNAL FINANCING OF SMIs
(Percent)

	Bank Loans	Foreign Loans	NBFIs Loans	Bonds	Private Loans	Others
1980	74.0	7.2	8.7	0.0	10.1	0.0
1986	71.7	3.1	13.0	8.1	2.9	1.2
1990	78.5	0.0	11.7	7.0	1.7	1.1

Source: Country paper in this study.

Table 2.14

NEPAL: SOURCE OF EXTERNAL FINANCING OF SMIs, 1981/1982
(Percent)

	NIDC 1/	Commercial Banks	Individual & Pvte. Insts.	Foreign Institutions	Others
Fixed Capital	26.9	38.8	11.5	16.7	6.1
Working Capital	13.1	57.4	13.4	1.8	14.3
Total	15.5	54.1	13.1	4.5	12.8

Note: 1/ Nepal Industrial Development Corporation.

Source: Country paper in this study.

Table 2.15

TAIWAN: RATIO OF BORROWING FROM FINANCIAL INSTITUTIONS TO TOTAL BORROWING
(Percent)

	1982	1985	1988	1990
SMIs	64.9	66.9	66.5	69.2
Non-SMIs	70.9	67.9	78.8	80.5

Source: Country paper in this study.

Table 2.16

TAIWAN: RATIO OF LONG-TERM BORROWING TO TOTAL BORROWING
(Percent)

	1982	1985	1988	1990
SMIs	11.0	10.4	7.9	9.4
Non-SMIs	22.9	28.7	22.7	23.6

Source: Country paper in this study.

Chapter 3

CURRENT SYSTEMS FOR FINANCING SMIs IN THE SEACEN COUNTRIES

I. Financial Institutions for Financing SMIs

Considering the lack of finance of SMIs and their difficulty in raising funds, it is not surprising for almost all the member countries to have specialized financial institutions for financing SMIs. The specialized financial institutions are composed of banking institutions and non-bank financial institutions (NBFIs), and are mostly supported by governments. In some member countries such as Korea and Taiwan, private commercial banks also provide SMIs with finance substantially.

Looking at specialized financial institutions for SMIs, in *Indonesia*, Indonesian People's Bank (IPB), one of the state-owned commercial banks has been administering the Rural General Credit (KUPEDES) Program since 1984, which is a general rural saving program also aimed at promoting small business development.

Meanwhile, *Korea* has three types of specialized financial institutions for SMIs such as the Industrial Bank of Korea (IBK), the Citizens National Bank (CNB), and Small and Medium Enterprise Start-up Support Companies (SMESSC). IBK, established in 1961 as a financial institution exclusively for SMIs with more than half of its paid-in capital subscribed by the Government, has at present 254 branches or offices throughout the country and 3 overseas representative offices. IBK specializes in extending medium and long term loans on favorable terms to SMIs and acts as a guarantor for the obligations of SMIs. The Bank's main source of funds are deposits from the public and borrowings from the Bank of Korea (BOK). It is also authorized to issue small and medium industry finance debentures with government guarantees. In 1991, 95 percent of the Bank's total outstanding loans was extended to SMIs.

On the other hand, CNB established in 1963 also with more than half of its paid-in capital subscribed by the Government provides loans to small business employing less than 100 workers and to households. The Bank has 363 domestic branches or offices and 3 overseas

representative offices. Major resources of the Bank are deposits, which constituted 86 percent of its total resources as of the end of June 1990. In 1991, 46 percent of the Bank's total loans was provided to SMIs. IBK and CNB, however, respectively, accounted for only 20 percent and 8 percent of total outstanding loans to SMIs in 1991. Seventy-two percent of total loans to SMIs was provided by the commercial banks (see Table 3.2).

In addition, SMESSC were established as venture capital companies under the Small and Medium Enterprises Start-up Support Act, which passed in 1986 to promote the establishment of small and medium enterprises. As of the end of June 1990, there were 52 companies registered. They provided financial support through underwriting securities of start-up business and also supply management consultancy.

In *Malaysia*, there is no specialized bank exclusively for SMIs but some development financial institutions such as the Malaysian Industrial Development Finance (MIDF) and the Development Bank of Malaysia (DBM) which provided finance for SMIs. MIDF was established in 1960 to provide industrial enterprises with medium and long-term finance. In recent years, MIDF's main source of funds for its lending operation was the ASEAN-Japan Development Fund (AJDF) Loan Scheme. The AJDF, which is composed of two types of funds -- the Overseas Economic Co-operation Fund (OECF) of Japan and Japan Export Import Bank (EXIM) Fund, was introduced in December 1988 for SMIs. The AJDF allocation of RM 270 million to MIDF has been exhausted as of 31 March 1991. MIDF has been administering the New Entrepreneurs Fund (NEF), established in December 1989 with the fund of RM 250 million, to encourage the growth of new Bumiputera (Malay) entrepreneurs.

In addition, the DBM established in 1973 to promote Bumiputera equity participation in commerce and industry provides Bumiputera SMIs with finance. In Malaysia, the loans of SMIs from commercial banks are not considerable. As at the end of 1991, the total loan outstanding to SMIs accounted for only 4.1 percent of total commercial banks' loan outstanding. Data on loans to MIs are not available.

In the *Philippines*, three financial institutions such as the Development Bank of the Philippines (DBP), the Philippine National Bank (PNB) and the Philippine Venture Capital Corporation (PVCC), are mainly

Table 3.1

SELECTED SEACEN COUNTRIES:
SPECIAL FINANCIAL INSTITUTIONS FOR SMIs

Indonesia	▪ Indonesian People's Bank (IPB)
Korea	▪ Industrial Bank of Korea (IBK) ▪ Citizens National Bank (CNB) ▪ Small and Medium Enterprise Start-up Support Companies (SMESSCs) (52)
Malaysia	▪ Malaysian Industrial Development Finance (MIDF) ▪ Development Bank of Malaysia (DBM)
Philippines	▪ Development Bank of the Philippines (DBP) ▪ Philippine National Bank (PNB) ▪ Venture Capital Corporations (VCCs)
Sri Lanka	▪ National Development Bank (NDB)
Taiwan	▪ Medium Business Bank of China (MBBC) ▪ Regional Medium and Small Business Banks (MSBBs) (7) ▪ Credit Cooperative Associates (CCAs) (74)
Thailand	▪ Small Industries Finance Corporation (SIFC)

engaged in providing finance for SMIs. DBP established in 1958 as a specialized government bank operates the Cottage Enterprise Finance Project (CEFP), a credit facility from the World Bank and the KFW (Kreditanstalt für Wiederaufbau) of the Federal Republic of Germany and the Industrial Guarantee Loan Fund (IGLF). Major funding sources of DBP include borrowings from the central bank and foreign currency loans, in particular from the World Bank and the Asian Development Bank; and, from foreign currency bonds floated in overseas capital markets.

PNB, a government-owned commercial bank established in 1916 (authorized to engage in commercial banking as of June 1982), has appropriated an annual loan budget for Small Enterprises Loan Fund (SELF) exclusively for lending to SMIs in the countryside. Loans are limited to non-crop loans and enterprises located outside Metro Manila area. It is, however, pointed out that most SMI loans go to the urban areas due to the concentration of the banking system in these areas (*James and Akrasanee, 1986*).

In addition, some venture capital corporations established to provide equity financing for SMIs provide finance for SMIs. Among them, the Philippine Venture Capital Corporation (PVCC) is a joint undertaking of private commercial banks and the Government to infuse additional capital/equity financing to cottage, small and medium businesses through equity participation. The Phinma Venture Capital Corporation, a subsidiary of the Philippines Investment Management Consultants, Inc. (PIMA), provides growth funds for expansion on an equity basis to innovative small and medium scale Filipino entrepreneurs.

In *Sri Lanka*, the National Development Bank (NDB) has played a role of an apex bank providing refinance facilities for Participating Credit Institutions (PCIs) who are participating in the SMI Loan Scheme.

Taiwan has eight Medium and Small Business Banks (MSBBs) as a specialized financial institution for SMIs. Among them, Medium Business Bank of China (MBBC) is a nationwide operating bank owned by the provincial government and the other seven private MSBBs are local banks. For any of the eight banks, the proportion of loans to SMIs in total loans must not be less than 70 percent. The share of outstanding loans to SMIs in total outstanding loans of MSBBs in 1991 was 73 percent.

Table 3.2

KOREA: OUTSTANDING LOANS OF BANKS TO SMIs, 1991

(Billion Won, %)

	Total Loans (A)	Loans to SMIs (B)		B/A
Nationwide Commercial Banks	40252	18857	(51.2)	46.8
Local Banks	10102	7501	(20.4)	74.3
Industrial Bank of Korea	7755	7386	(20.0)	95.2
Citizens National Bank	6797	3112	(8.4)	45.8
Total	64906	36856	(100.0)	56.8

Note: Figures in parentheses represent the share of each financial institution.

Source: Country paper in this study.

However, the outstanding loans to SMIs of domestic banks is still far more than those of MSBBs. In 1991, the outstanding loans to SMIs of domestic banks totaled NT$ 1450.7 billion, while those of MSBBs totaled NT$ 455.6 billion. The share of outstanding loans to SMIs in total outstanding loans of domestic banks in 1991 was 37 percent (see Table 3.3).

In addition, credit cooperative associations are important sources of financing for SMIs in Taiwan. As of April 1992, Taiwan has 74 credit cooperative associations. Legally, no firm is permitted to enter any association as member to obtain loans from associations. However, the associations mostly extend loans to owners of SMIs. In 1991, the total outstanding loan balances reached NT$ 572.5 billion, showing that the associations were the important sources of financing for SMIs.

In *Thailand*, Small Industries Finance Corporation (SIFC), as a specialized financial institution for SMIs, extends loans, within the maximum amount of ฿ 10 million each, to SMIs which have fixed assets less than ฿ 20 million. The principal objective of SIFC is to provide financial and technical assistance to SMIs, including cottage and handicraft industries. Most of its funds have so far come from the Government.

II. Monetary Policies for Financing SMIs

In addition to the specialized financial institutions for SMIs, most member banks carry out specific monetary policies in order to support financing SMIs. One of the most popular credit policies is the minimum requirement lending ratio policy, under which certain financial institutions are required to provide at least a certain percentage of their loans or guarantees to SMIs. Indonesia, Korea, Malaysia, Taiwan and Thailand among the member central banks included in this study, adopts the minimum requirement lending ratio policy.

Secondly, there are various kinds of credit schemes under which central banks provide funds for financial institutions in order to promote their financing of SMIs. Indonesia, Korea, Malaysia and Sri Lanka adopt varied credit schemes. In addition, Korea, Sri Lanka and Thailand have preferential rediscount or refinancing facilities for SMIs.

On the other hand, under the interest rate policy, the ceiling on the lending rate of commercial banks, which had been preferentially

Table 3.3

TAIWAN: OUTSTANDING LOANS OF BANKS TO SMIs, 1991

(Billion NT$, %)

	Total Loans (A)	Loans to SMIs (B)	B/A
Domestic Banks	3878.9	1450.7 (76.1)	37.4
Medium and Small Business Banks	621.6	455.6 (23.9)	73.3
Total	4500.5	1906.3 (100.0)	42.4

Note: Figures in parentheses represent the share of each financial institution.

Source: Country paper in this study.

given in the 1970s to SMIs, has been almost abolished in line with the trend toward interest rate liberalization. The member central banks only adopt the interest rate policy, assisting indirectly the loans of commercial banks to SMIs with a lower interest rate in order to promote their financing for SMIs.

Looking at such monetary policies for SMIs by country, in *Indonesia* banks are required to allocate at least 20 percent of their credit to small business, excluding the credits out of liquidity credit from Bank Indonesia. The minimum requirement lending ratio policy is called Credit for Small Scale Enterprises (Kredit Usaha Kecil or KUK).

For credit schemes, Bank Indonesia simplified and rationalized the credit schemes through deregulation of banking, monetary and finance in January 1990. The main focus of this measure called January Package (PAKJAN) is to gradually reduce the liquidity credits being provided by the central bank and to encourage banks to mobilize public funds more actively. Accordingly, liquidity credits being supported by the central bank are given only to certain sectors, such as credit to farmers to maintain self-sufficiency in food, credit to cooperatives and, to a certain extent, credit for investment purposes. Firstly, for the Intensification Credit for Paddy and Secondary Crops (KUT), Bank Indonesia provides 100-percent liquidity credit for Village Unit Cooperative (KUD) distributing the credit. Secondly, for credit for cooperatives to finance food procurement and other productive activities, Bank Indonesia provides 75 percent of total credit. Thirdly, for credit for food and sugar procurement, 100 percent of credit is provided by Bank Indonesia; and fourthly, for investment credit to finance investments for plantations, Bank Indonesia provides 40-50 percent of the credit.

Korea has varied minimum requirement lending ratios ranging from 25 percent to 90 percent depending on the type of financial institutions. Among banking institutions, nationwide commercial banks, local-based nationwide commercial banks, local banks and foreign bank branches are respectively required to provide at least 45 percent, 90 percent, 80 percent and 35 percent of increment of domestic currency loans for SMIs. However, foreign bank branches which do not make use of the rediscount facility of the central bank are required to provide only 25 percent or more of the increment on their domestic currency loans for SMIs. Among non-bank financial institutions, investment and finance companies are required to provide at least 35 percent of their discounted

bills for SMIs. Merchant banking corporations, life insurance companies and leasing companies are respectively required to provide at least 25 percent of the total amount of leasing contracts, bills discounted and payment guarantees, 35 percent of increment of loans, and 50 percent of the total value of their leasing contracts to SMIs.

In addition, the Bank of Korea rediscounts 70 percent of commercial bills presented by unlisted manufacturing SMIs to commercial banks and 60 percent of commercial bills presented by other SMIs to commercial banks, higher than the rediscount ratio for LIs of 30 percent. SMIs are also treated preferentially in export financing, and export-related loans of banks to SMIs can be assisted for up to 50 percent of the total amount at a lower interest rate by the Bank of Korea. Interest rates for SMI loans tend to be relatively lower than those of LIs inasmuch as commercial banks can receive financial support relating to their SMI loans from the Bank of Korea. On top of that, the Bank of Korea provides selective support to commercial banks in order to promote some of their financing of SMIs such as loans for the production of parts and components by SMIs, technology development by SMIs, purchase of SMI products, and industrial adjustment by SMIs.

Malaysia has a specific lending guideline for Bumiputera SMIs. It is so called the Principal Guarantee Scheme (PGS) of the Credit Guarantee Corporation (CGC) issued on 29 March 1991. This is a two-year guideline to be complied with by 31 March 1993. PGC is originally the guarantee scheme mainly for SMIs. Commercial banks, as a group, are required to extend loans under the PGS of the CGC, the guarantee cover of which should amount to at least RM 150 million. Of the RM 150 million, at least RM 75 million must be the guarantee cover for loans extended to Bumiputera borrowers. As an interest rate policy, for loans guaranteed under PGS, commercial banks are allowed to charge a maximum of 1.5 percentage point above the declared base lending rate of the individual bank.

As a credit facility for SMIs, New Entrepreneurs Fund (NEF) has been provided since December 1989. NEF being provided by Bank Negara Malaysia is open only to the Bumiputera SMIs. The maximum amount of loan is RM 1 million or 85 percent of the business cost whichever is lower. As the central bank is providing the fund at a very low interest rate to financial institutions, they are allowed to charge a maximum of 5 percent per annum.

Sri Lankan monetary policy for SMIs is aimed at inducing banks' participation in SMI financing with less reliance on the apex institution for refinance and at minimizing distortion in the interest rate structure with the application of the more market-determined interest rate on SMI loans. Consequently, with the introduction of the SMI-IV in 1992, the ratio of refinancing of Participating Credit Institutions (PCIs) from the apex financial institution was reduced to 70 percent of the project cost from the previous 75 percent in the SMI-III. In the case of the interest rate, the market-determined rate has been charged since 1988.

Taiwan's eight medium and small banks are required to provide at least 70 percent of their total loans to SMIs. On the other hand, *Thailand* has the rural credit policy, under which commercial banks are required to lend at least 20 percent of their total deposits in rural areas. Of this 20 percent, 14 percent or more must go to agricultural and small rural industries, and up to 6 percent can go to agro-business. These loans of 20 percent have been exempted from the risk asset requirement against which banks' capital funds must be maintained at a rate of 8 percent. Meanwhile, the Bank of Thailand provides low cost funds for SMIs having the net fixed assets of no more than ฿ 20 million by purchasing the promissory notes drawn by manufacturers upon their working capital from commercial banks and Industrial Finance Corporation of Thailand (IFCT). The 50 percent of the face value of the promissory note may be refinanced up to ฿ 10 million at the interest rate of 3 percent per annum.

III. Guarantee Systems for Financing SMIs

Lack of collaterals is the most important obstacle to SMIs in having access to the formal financial institutions. Consequently, most SMIs cannot but go to the informal curb markets in spite of their high interest rate or rely on the insufficient funds of family members or relatives. Such heavy burdens of financial costs resulting from use of funds out of informal curb markets or lack of finance of SMIs often threaten the management itself of SMIs. They are frequently merged into LIs or bankrupted even in the face of small risks. Accordingly, every member country has varied guarantee systems exclusively providing guarantees for SMIs having insufficient collaterals.

In *Indonesia*, Indonesian Credit Insurance (ICI) was established in 1971 to promote banking lending to SMIs. *Korea* has two credit

Table 3.4

SELECTED SEACEN COUNTRIES :
MONETARY POLICIES FOR SMIs

	Minimum Requirement Lending Ratio	Rediscount Policy/ Refinance Policy	Other Credit Schemes
Indonesia	20% of credit portfolio	-	. Intensification Credit for Paddy and Secondary Crop (KUT) . Credit for Cooperatives . Credit for Food and Sugar Procurement . Investment Credit
Korea	25-90% of increment of loans	60-70% of commercial bills presented by SMIs	. Selective support for commercial banks to promote certain financing of SMIs
Malaysia	Guideline of the Principal Guarantee Scheme (PGS)	-	. New Entrepreneurs Fund (NEF)
Sri Lanka	-	70% of the project cost	-
Taiwan	70% of total loans (medium & small banks)	-	-
Thailand	20% of total deposits	50% of the face value of promissory notes up to ฿ 10 million	-

guarantee funds for SMIs, namely the Korea Credit Guarantee Fund (KCGF) and the Korean Technology Credit Guarantee Fund (KTCGF). The former KCGF was established in 1976, the financial resource of which is raised through contributions from the Government and banking institutions. As of the end of June 1990, among the outstanding balance of contributed funds of W 917 billion, W 844 billion (92 percent) came from banking institutions. The Fund may extend credit guarantees not exceeding the amount of 15 times its funds and profits. As of the end of June 1990, credit guarantees of the Fund for SMIs accounted for 99 percent of the total guarantees. The latter KTCGF was founded in 1987 for the purpose of extending credit guarantees mainly for firms adopting new technology. The source of the Fund is also contributions from the Government and banking institutions. As of the end of June 1990, among the outstanding balance of contributed funds of W 96 billion, W 75 billion (78 percent) came from the banking institutions.

As a guarantee system for SMIs, *Malaysia* established the Credit Guarantee Corporation (CGC) in 1972. CGC introduced the Principal Guarantee Scheme (PGS) in 1989 mainly for assisting SMIs. Any Malaysian SMI is eligible for the Scheme subject to a maximum loan limit of RM 500,000. Under PGS, SMIs may apply to any of commercial banks for credit facility. Furthermore, the ten commercial banks participating in the New Entrepreneurs Fund (NEF) may apply for CGC guarantee cover for NEF loans. Effective from 1 April 1992, commercial banks allowed to charge a maximum 1.5 percentage points above its declared base lending rate (BLR) for loans covered by PGS. Among loans guaranteed by CGC in 1991, 86 percent went to general business such as wholesale, sundry retail trade, construction and transportation, 12 percent to the manufacturing sector and 2 percent to the agricultural sector.

Nepal established the Credit Guarantee Corporation (CGC) with share participation of Nepal Rastra Bank, commercial banks and the Government. CGC guarantees loans of up to Rs. 1 million per loan in the agricultural and service sector and loans of up to Rs. 1.2 million per loan in the industrial sector, within the 75 percent of outstanding loans. The premium of 1 percent per annum is charged.

The Philippines has several guarantee systems for SMIs, namely the Guarantee Fund for Small and Medium Enterprises (GFSME), the

Industrial Guarantee and Loan Fund (IGLF) and the Small Business Guarantee and Finance Corporation (SBGFC). GFSME was established to encourage banking institutions to participate in lending to small and medium scale agro-business projects such as cereals, grains, meat and poultry, fruits and nuts, vegetables and crops, fish and marine products. The Fund supports the participating financial institutions by assuming 85 percent of the total risk involved in lending to SMIs. IGLF is the World Bank program on financial assistance to SMIs to hasten the pace of Philippine industrial development. Assistance comes in the form of guarantee financing for collateral-deficient projects, and loans for working capital and acquisition of fixed assets. IGLF provides credits through participating financial institutions (PFI) like commercial, thrift and rural banks and non-bank financial institutions. In addition, SBGFC was established in January 1992 for the promotion, development of and assistance to SMIs.

In *Sri Lanka*, the Central Bank of Sri Lanka introduced the Credit Guarantee Scheme (CGS) in 1978 for loans under Small Scale Industry Scheme. At present, CGS has a three-tier credit guarantee system with variable extents of guarantee for different sizes of loans such as guarantee coverage of 80 percent for loans of less than Rs. 2 million, 60 percent for loans of Rs. 2-3 million, and 40 percent for loans of Rs. 3-4 million, subject to a maximum of Rs. 1.6 million for each project.

Taiwan established the Credit Guarantee Fund for SMIs in July 1974. The Fund renders 50 to 80 percent of credit guarantees to SMIs. The net worth of the Fund was NT$ 11.8 billion in 1991. The Fund undertakes ten items of credit guarantee operations including ordinary loans, policy loans, commercial loans, export loans, loans for purchasing raw materials, commercial paper guarantee, import tariff accounting guarantee, bond guarantee, loans to youths who open up new business and loans to new products of firms with their own brands.

In *Thailand*, the Small Industry Credit Guarantee Corporation (SICGC) upgraded in December 1991 from the former Small Industry Credit Guarantee Fund (SICGF) established in April 1985 provides guarantee service for SMIs with net fixed assets of under ฿ 20 million. The commission fee is 1.5 percent per annum for the amount guaranteed.

Table 3.5

SELECTED SEACEN COUNTRIES :
GUARANTEE SYSTEMS FOR FINANCING SMIs

Indonesia	▪ Indonesian Credit Insurance (ICI) (1971)
Korea	▪ Korea Credit Guarantee Fund (KCGF) (1976) ▪ Korea Technology Credit Guarantee Fund (KTCGF) (1987)
Malaysia	▪ Credit Guarantee Corporation (CGC) (1972)
Nepal	▪ Credit Guarantee Corporation (CGC) (1974)
Philippines	▪ Guarantee Fund for Small and Medium Enterprises (GFSME) ▪ Industrial Guarantee and Loan Fund (IGLF) ▪ Small Business Guarantee and Finance Corporation (SBGFC)
Sri Lanka	▪ Credit Guarantee Scheme (CGS) (1978)
Taiwan	▪ Credit Guarantee Fund (CGF) (1974)
Thailand	▪ Small Industry Credit Guarantee Corporation (SICGC) (1991)

Note: The year in the parentheses are the year of establishment.

IV. Government Policies for Financing SMIs

In all the countries, the governments realize the important role of SMIs in economic development and adopt various kinds of policies to encourage SMI development. Financial assistance policy, among them, is one of the most important government policies for SMIs since reliance on private financial institutions of SMI financing is not sufficient, considering the difficulty of SMIs to have access to financial institutions. Private financial institutions are basically profit-oriented, and accordingly they tend to be reluctant to lend their funds to SMIs having higher risk. In addition, the limit of financial assistance to SMIs using financial funds tends to increase due to a series of recent financial liberalization. Preferential interest policy for SMIs is already abolished, in line with the trend of interest rate liberalization in most member countries. Mostly, government-owned specialized banks for SMIs are also becoming privatized or universal commercial banks.

In such environments, government policies for financial assistance to SMIs using fiscal funds are becoming substantially important and useful for financing SMIs. Most governments provide financial assistance through establishing special funds for SMIs or through participating in credit guarantee scheme for SMIs or through setting up specialized financial institutions for SMIs. The latter two cases were already reviewed in the previous sections. The special funds are distributed to SMIs normally through financial institutions at a lower interest rate.

Korea established the Small and Medium Industry Promotion Corporation (SMIPC) in 1979 to promote modernization of SMIs, provide training, disseminate information and manage the SMI Restructuring Fund (SMIRF). SMIRF is available through the Industrial Bank of Korea and other commercial banks. SMIPC also leases industrial equipments on a long-term basis. Entrepreneurs who wish to commercialize new products or technologies can also receive financial and managerial assistance under SMIPC's Business Start-up Program. In addition, the Korean Government provides financial assistance for SMIs through various kinds of special funds such as Industry Development Fund, SMI Establishment and Promotion Fund, and through some special programs such as Rural Industry Development Program and Technology Development Program.

The *Malaysian* Government also has several funds or schemes for SMIS, namely Industrial Technical Assistance Fund (ITAF), Industrial

Adjustment Fund (IAF) and Majlis Amanah Rakyat (MARA). ITAF was set up in 1990 to enhance the development of SMIs while IAF was established in 1991 to facilitate the nationalization, modernization and restructuring of selected industries such as wood-based, textiles and machinery and engineering industries. IAF's maximum lending interest rate is 7.75 percent per annum. MARA is aimed at providing credit for small Bumiputera commercial and industrial enterprises with net assets or shareholders' fund of up to RM 500,000. The lending interest rate is 5.5 percent per annum for loans below RM 5,000 and 7 percent per annum for loans above RM 5,000.

The *Nepalese* Government has carried out the Cottage and Small Industry Project since 1982 with the financial and technical assistance of the World Bank and the UNDP in order to promote cottage and small industries. The loans out of this project are channeled to the participating credit institutions through Nepal Rastra Bank.

The *Philippine* Government has launched several programs for financial assistance to SMIs. Among them, Export Industry and Modernization Program (EIMP) administered by the Technology and Livelihood Resource Center (TLRC) which provides funds for export SMIs to implement modernization projects. Seventy percent of the total cost of the projects is financed by EIMP whose resources are soft loans from Overseas Economic Cooperation Fund (OECF) of Japan, while the remaining 30 percent is borne by the borrowers. In addition, the Government has initiated and innovated various self-help and income-generating projects which are now focused on the Consolidated Agricultural Loan Fund (CALF). CALF answers the needs of the agricultural sector and provides credit assistance for micro entrepreneurs. TLRC also provides loans for micro enterprises. Meanwhile, the Department of Trade and Industry (DTI) has developed a self-employment loan assistance program called "Tulong Sa Tao" (TST) for the purpose of generating employment opportunities. It covers assistance and support to micro and small enterprises. Besides, the "Bagong Kilusang Kabuhayan at Kaunlaran" (B-KKK) program is being carried out to expand livelihood opportunities in the economically depressed areas by encouraging and supporting labor-intensive projects through financial as well as technical assistance.

The *Taiwanese* Government established the United Assistance Center for SMIs (UAC) in 1982 with donations of seven provincial government-

owned banks. UAC provides comprehensive assistance for SMIs and helps SMIs to obtain loans from banks. Besides, the Taiwanese Government sets up several Funds for SMIs such as Medium and Small Business Development Fund (MSBDF) and Sino-American Fund (SAF), which are engaged in special lending projects through government-owned banks.

The *Thai* Government provides financial assistance for SMIs through holding the share of Small Industry Finance Corporation (SIFC). The Government is required to hold 25 percent of the SIFC's total shares. SIFC provides financial and technical assistance for SMIs whose fixed assets are less than ฿ 20 million. The Government also granted financial support to Industrial Finance Corporation of Thailand (IFCT) in the form of soft loan, guarantee of IFCT's loan and participation in the share of IFCT. IFCT mainly provides medium- and long-term loans for up to 15 years, to finance investment in fixed assets such as land development, plant or office construction, and machinery and equipment.

Table 3.6

SELECTED SEACEN COUNTRIES :
GOVERNMENT POLICIES FOR FINANCING SMIs

Korea	▪ Small and Medium Industry Promotion Corporation (SMIPC) ▪ Various special funds, such as SMI Restructuring Fund (SMIRF), Industry Development Fund (IDF)
Malaysia	▪ Industrial Technical Assistance Fund (ITAF) ▪ Industrial Adjustment Fund (IAF) ▪ Majlis Amanah Rakyat (MARA)
Nepal	▪ Cottage and Small Industry Project (CSI)
Philippines	▪ Export Industry and Modernization Program (EIMP) ▪ Consolidated Agricultural Loan Fund (CALF) ▪ Technology and Livelihood Resource Center (TLRC) ▪ Tulong Sa Toa Employment Generation Program (TST) ▪ Bagong Kilusang Kabuhayan at Kaunlaran (B-KKK)
Taiwan	▪ United Assistance Center for SMIs (UAC) ▪ Medium and Small Business Development Fund (MSBDF) ▪ Sino-American Fund (SAF)
Thailand	▪ Small Industry Finance Corporation (SIFC) ▪ Industrial Finance Corporation of Thailand (IFCT)

Chapter 4

DETERMINANTS OF EFFECTIVE FINANCING FOR SMIs

I. Introduction

In general, government and central bank policies to support SMIs have considerably influenced financing for SMIs in developing countries where SMIs having insufficient collaterals or creditworthiness hardly have access to formal financial institutions or formal financial markets. For instance, in most SEACEN countries, specialized financial institutions and guarantee systems for SMIs are established by the governments, and many commercial banks are obligated to provide a certain ratio of loanable funds for SMIs. In addition, development of financial markets and competition among financial institutions may make the access of SMIs to formal financial resources easier and the terms of SMI loans more favorable.

Moreover, some important macroeconomic policy variables such as money supply and interest rate cannot be excluded from important determinants of financing for SMIs. One may generally assume that the more fund availability and the lower the interest rate, the easier the access of SMIs to formal financial resources. Nevertheless, it may be different from country to country depending on the specific situations of each country which variable influences more importantly the financing for SMIs.

However, all these determinants of financing for SMIs are hardly quantified due to the specific characteristics of certain policies and lack of data. In this chapter, therefore, the effects of some policy variables such as money supply, interest rate and guarantees to SMIs on financing for SMIs are examined for three countries - Korea, Malaysia and the Philippines, where data of at least more than 20 observations are provided, considering the possibility of small sample bias.

For Korea, the annual data series of loans outstanding to SMIs of commercial banks, the Industrial Bank of Korea (IBK) and the Citizens National Bank (CNB), stock of M2, a nominal average yield on corporate bonds and guarantee outstanding to SMIs from 1970 to 1991 are used. For Malaysia, the annual data series of loans outstanding of commercial banks and finance companies to small industries (SIs) of

the manufacturing sector, stock of M2, the nominal average lending rate of commercial banks and finance companies from 1970 to 1991 were respectively employed. For the Philippines, the quarterly data series of loans outstanding of commercial banks to SMIs, stock of M2 and the nominal interest rate on 90-day T/bills from 1981:1 to 1992:2 were respectively used. All the quarterly data were seasonally adjusted using the X-11 method. All the variables including the interest rate were transformed into logarithm.

The unit root test and autocorrelation function to check the stationarity of the time series, Johansen's cointegration test to find a long-run relationship and finally, Vector Error Correction Model (VECM) to examine a short-run dynamic relationship were respectively employed to identify and evaluate the determinants of financing for SMIs more efficiently.

II. Stationarity of Time Series

2.1 Unit Root Tests: A Brief Review on Recent Issues

During the last decade, numerous papers on test of non-stationarity of time series were published in order to avoid spurious regression using non-stationarity time series. Among them the Augmented Dickey-Fuller (ADF) test suggested by Dickey and Fuller (1981) and, Said and Dickey (1984) is one of the popular tests. In the following equation:

$$\Delta X_t = \alpha + \sum_{i=0}^{n} \beta_i t^i + \gamma X_{t-1} + \sum_{j=1}^{m} \pi_j \Delta X_{t-j} + \varepsilon_t \quad \ldots\ldots\ldots\ldots \quad (1)$$

That is:

$$X_t = \alpha + \sum_{i=0}^{n} \beta_i t^i + \phi X_{t-1} + \sum_{j=1}^{m} \pi_j \Delta X_{t-j} + \varepsilon_t \quad \ldots\ldots\ldots\ldots \quad (2)$$

where, $\phi=r+1$.

If the null hypothesis of $\gamma=0$, i.e., the null hypothesis of a unit root ($\phi=1$) is rejected, the series X_t could be stationary.

However, it should be noted that a lot of issues also have arisen on the unit root test. For instance, it has been pointed out that it is

statistically difficult to differentiate between a model with a unit root (ϕ=1) and a model with a near unit root (e.g., ϕ=0.95) in a small sample (*Cochrane*, 1991). In addition, one may suspect whether it really makes sense to hinge an economic theory on a point estimate of a parameter, i.e., on whether or not there is a unit root (*Madd*ala, 1992, p. 582). Another argument on the lag lengths of the first differences is also noteworthy.

In the equations (1) and (2), the purpose in adding the terms ΔX_{t-j} is to allow for any ARMA error process. But if the MA parameter is large, the AR approximation would be poor unless *m* is large. Therefore, the ADF test with a long *m* may be suggested as the best test (Schwert, 1989). But too many lags may also reduce the power of the test because of more parameters being estimated and a reduced number of effective observations. The long autoregression also may bias the OLS estimate ϕ of ϕ toward 1, thus suggesting the presence of a unit root, even when $|\phi|<1$ (Choi, 1990). A certain criterion would be used to select the optimal lag length, but different lag lengths may be selected depending on which criterion is used. As criteria, the Final Prediction Error (FPE), Schwartz Criterion (SC), Hannan-Quinn Criterion (HA), Likelihood Ratio Test (*Sims*, 1980) and Bayesian Estimation Criterion (BEC) (*Geweke and Meese*, 1981) are respectively suggested.

Another issue is the possibility of asymmetry depending on which null hypothesis is employed between the null hypothesis of non-stationarity and of stationarity. The null hypothesis in standard unit root test is non-stationarity, i.e., unit root (γ=0, or ϕ=1). But if the null hypothesis is stationarity, the conclusion might be quite different (*Kahn and Ogaki*, 1990).

Considering these issues on the unit root test, it is suggested to examine a correlogram together in order to identify more correctly whether or not the series of interest is stationary (*Maddala*, 1992). In particular, in a small sample, this suggestion may be more desirable. Therefore, both unit root test and the examination of correlogram are together employed in this chapter.

2.2 Korea

The correlogram of level variables of loans to SMIs in log does not show any sign of damping (Graph 4.2), while the correlogram of their

first difference falls quickly (Graph 4.3). In the unit root tests of loans to SMIs, level variables do not show a clear sign of stationarity, while their first differences show stationarity (Table 4.1). Consequently, one can conclude that loans to SMIs in log are first-order integrated, i.e., I(1).

The correlograms of level variables and first differences of money supply in log decline slowly (Graphs 5.5 and 5.6), while the correlogram of second differences drops quickly and tapers off as the number of lags increases (Graph 4.7). In the unit root tests for money supply, level variables and first differences do not show a clear sign of stationarity while second differ.ences show stationarity (Table 4.2). Accordingly, money supply in log can be assumed to be second-order integrated.

In level variables of the nominal interest rate in log, the correlogram (Graph 4.9) and unit root test results (Table 4.3) show non-stationarity but the correlogram of first differences falls quickly and tapers off as the number of lags increases (Graph 4.10). Consequently, one may conclude that the interest rate is first-order integrated although the unit root test results on the first differences do not show clearly the sign of stationarity (Table 4.3).

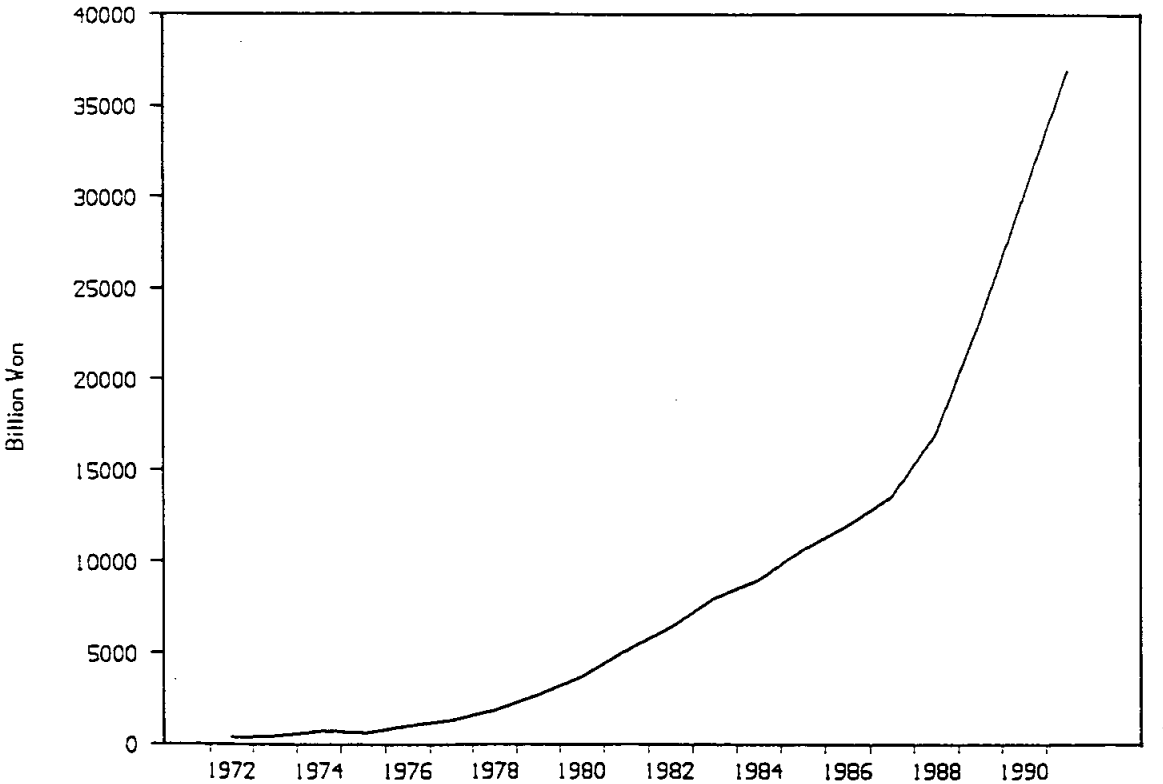
In guarantees to SMIs, level variables do not show stationarity (Graph 4.12 and Table 4.4). The correlogram of first differences tapers off but declines slowly (Graph 4.13), and thus one may suspect stationarity of the first differences. The results of unit root tests on the first differences do not show any sign of stationarity at the 5-percent significant level either (Table 4.4). Meanwhile, the correlogram and the unit root test results of second differences clearly show stationarity (Graph 4.14 and Table 4.4). Accordingly, one may conclude that guarantees to SMIs are second-order integrated.

2.3 Malaysia

Unit root tests of loans to SMIs in log show no sign of stationarity in their first differences as well as level variables (Table 4.5). Nevertheless, the correlogram of first differences of loans to SMIs in log drops quickly and tapers off as the number of lags increases (Graph 4.17). Consequently, one may conclude that loans to SMIs in log are first-order integrated.

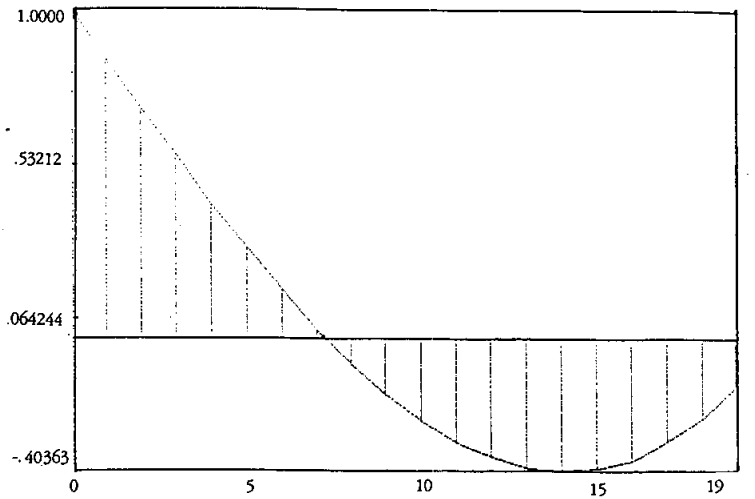
Graph 4.1

Bank Loans to SMIs in Korea



Graph 4.2

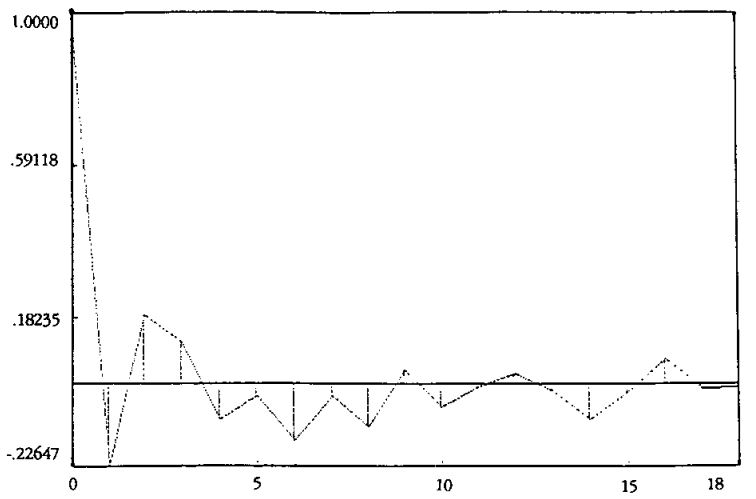
Autocorrelation Function of LOANL, Sample from 1972-1991



LOANL1: FIRST DIFFERENCES OF LOANL

Graph 4.3

Autocorrelation Function of LOANL1, Sample from 1973-1991



LOANL: LOANS TO SMIs IN LOG

Table 4.1

UNIT ROOT TESTS FOR LOANS TO SMIs IN KOREA

Unit root tests for variable LL

statistic	sample	observations	without trend	with trend
DF	1973 1991	19	-1.3088(-3.0294)	-1.6541(-3.6746)
ADF(1)	1974 1991	18	-1.3146(-3.0401)	-1.2116(-3.6921)
ADF(2)	1975 1991	17	-.71738(-3.0522)	-1.1059(-3.7119)
ADF(3)	1976 1991	16	-2.5032(-3.0660)	-5.3358(-3.7347)
ADF(4)	1977 1991	15	-1.3742(-3.0819)	-1.3653(-3.7612)
ADF(5)	1978 1991	14	-1.9976(-3.1004)	-2.6792(-3.7921)
ADF(6)	1979 1991	13	-1.8655(-3.1223)	-1.9833(-3.8288)

95% critical values in brackets.

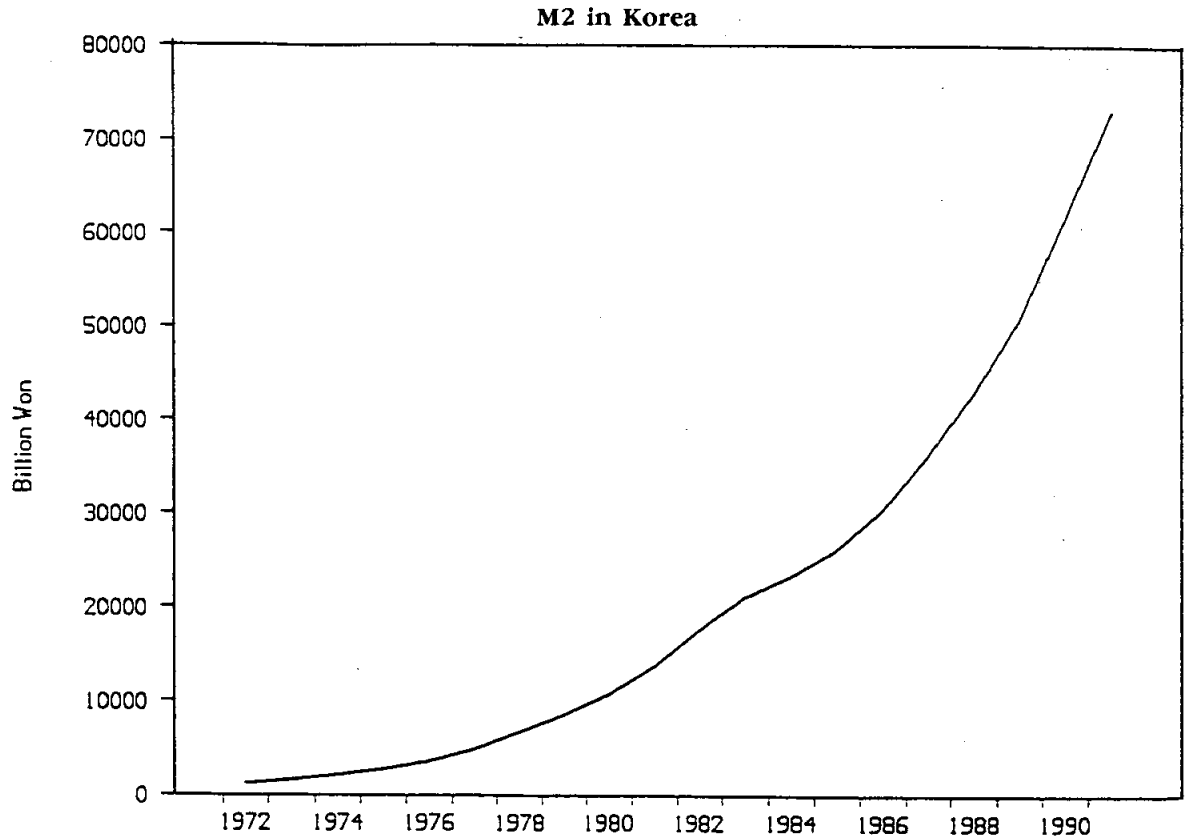
Unit root tests for variable LL1

statistic	sample	observations	without trend	with trend
DF	1974 1991	18	-5.0992(-3.0401)	-5.2726(-3.6921)
ADF(1)	1975 1991	17	-2.8327(-3.0522)	-2.7637(-3.7119)
ADF(2)	1976 1991	16	-1.4597(-3.0660)	-2.3115(-3.7347)
ADF(3)	1977 1991	15	-2.3477(-3.0819)	-2.6377(-3.7612)
ADF(4)	1978 1991	14	-1.5538(-3.1004)	-2.5870(-3.7921)
ADF(5)	1979 1991	13	-2.1851(-3.1223)	-3.1183(-3.8288)
ADF(6)	1980 1991	12	-1.8741(-3.1485)	-1.8461(-3.8731)

95% critical values in brackets.

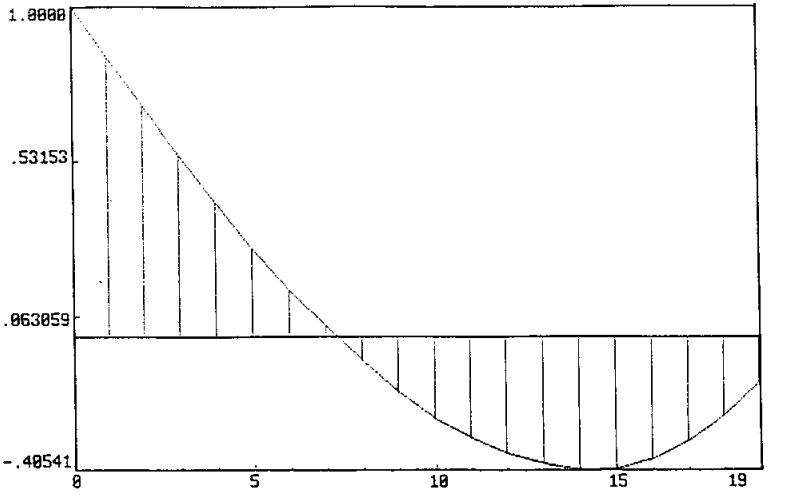
Note: LL= Loans to SMIs in Log
LL1=First Differences of LL

Graph 4.4


M2 in Korea
Billion Won
80000
70000
60000
50000
40000
30000
20000
10000
0
1972
1974
1976
1978
1980
1982
1984
1986
1988
1990

Graph 4.5

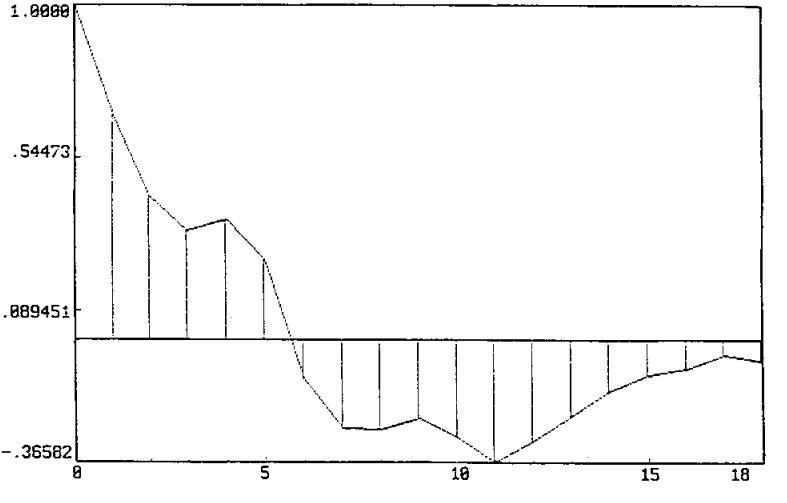
Autocorrelation Function of MSL, Sample from 1972-1991



MSL: MONEY SUPPLY IN LOG

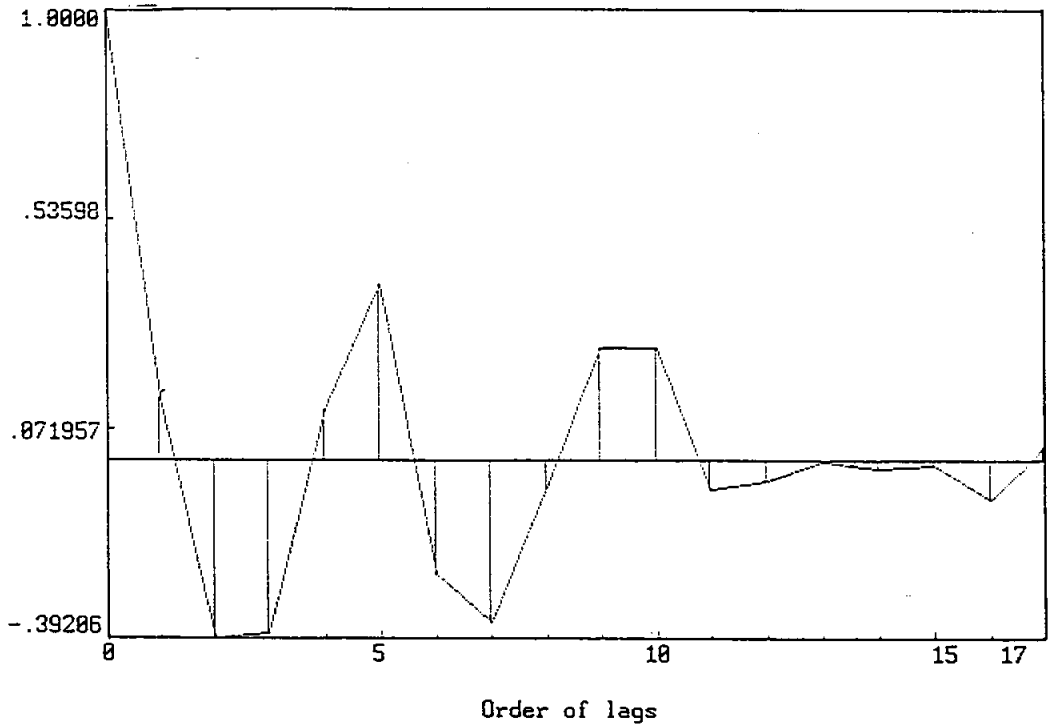
Graph 4.6

Autocorrelation Function of MSL1, Sample from 1973-199



MSL1: FIRST DIFFERENCES OF MSL

Graph 4.7
Autocorrelation Function to MSL11, Sample from 1974-1991



MSL11: SECOND DIFFERENCES OF MSL

In money supply in log, the DF tests of level variables and first differences show stationarity but ADF tests show non-stationarity. Accordingly, one may suspect stationarity of first differences as well as level variables of the money supply. However, the correlogram of first differences falls sharply and converges to zero as the number of lags increases (Graph 4.20), while the correlogram of level variables decreases slowly (Graph 4.19). Therefore, one may conclude that money supply in log is first-order integrated.

In the interest rate in log, the correlogram of level variables tapers off as the number of lags increases but it decreases a little bit slowly and consequently, one may suspect stationarity of level variables (Graph 4.22). The results of unit root tests of level variables also show non-stationarity (Table 4.7). On the other hand, DF-test results and the correlogram of first differences show a clear sign of stationarity (Graph 4.23 and Table 4.7). Accordingly, the interest rate in log is defined to be first-order integrated.

2.4 Philippines

The results of unit root tests and the correlogram of level variables of loans to SMIs in log show non-stationarity (Graph 4.25 and Table 4.8), while both the results of unit root tests and the correlogram of their first differences clearly show stationarity (Graph 4.26 and Table 4.8).

For money supply in log, the results of unit root tests and the correlogram of level variables also show non-stationarity (Graph 4.28 and Table 4.9), while both the results of unit root tests and the correlogram of first differences show stationarity (Graph 4.29 and Table 4.10).

For interest rate, ADF-test results of level variables with three lags and six lags narrowly show stationarity at 5-percent significant level (Table 4.10) but their correlograms show non-stationarity (Graph 4.31). Accordingly, one may conclude with reservation that the interest rate is zero-order integrated. Meanwhile, both unit root test results and the correlogram of their first differences show a clear sign of stationarity (Graph 4.32 and Table 4.10). Therefore, in the Philippines, all the loans to SMIs, money supply and interest rate in log are defined to be first-order integrated.

Table 4.2

UNIT ROOT TESTS FOR MONEY SUPPLY IN KOREA

Unit root tests for variable ML

statistic	sample	observations	without trend	with trend
DF	1973 1991	19	-4.6431(-3.0294)	-1.2752(-3.6746)
ADF(1)	1974 1991	18	-1.3491(-3.0401)	-1.1621(-3.6921)
ADF(2)	1975 1991	17	-3.1610(-3.0522)	-1.9039(-3.7119)
ADF(3)	1976 1991	16	-1.8969(-3.0660)	-1.7952(-3.7347)
ADF(4)	1977 1991	15	-1.8681(-3.0819)	-3.3124(-3.7612)
ADF(5)	1978 1991	14	-1.4325(-3.1004)	-2.3428(-3.7921)
ADF(6)	1979 1991	13	-3.1550(-3.1223)	1.5081(-3.8288)

95% critical values in brackets.

Unit root tests for variable ML1

statistic	sample	observations	without trend	with trend
DF	1974 1991	18	-2.0231(-3.0401)	-2.2128(-3.6921)
ADF(1)	1975 1991	17	-1.4814(-3.0522)	-3.1662(-3.7119)
ADF(2)	1976 1991	16	-1.1392(-3.0660)	-1.8582(-3.7347)
ADF(3)	1977 1991	15	-.78507(-3.0819)	-1.4041(-3.7612)
ADF(4)	1978 1991	14	-1.3279(-3.1004)	-1.4507(-3.7921)
ADF(5)	1979 1991	13	-2.5292(-3.1223)	-4.7559(-3.8288)
ADF(6)	1980 1991	12	.60879(-3.1485)	-3.1932(-3.8731)

95% critical values in brackets.

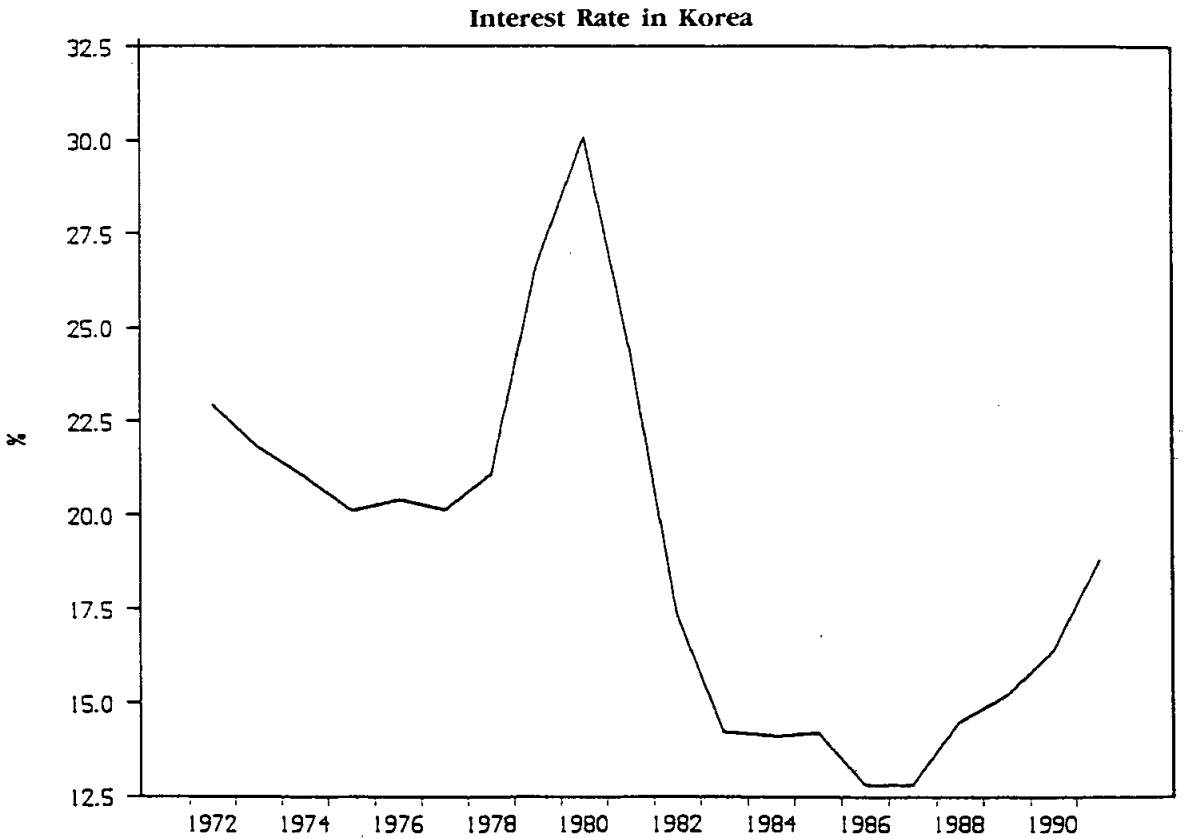
Unit root tests for variable ML11

statistic	sample	observations	without trend	with trend
DF	1975 1991	17	-3.8517(-3.0522)	-3.5942(-3.7119)
ADF(1)	1976 1991	16	-3.9794(-3.0660)	-3.8404(-3.7347)
ADF(2)	1977 1991	15	-3.4221(-3.0819)	-3.2638(-3.7612)
ADF(3)	1978 1991	14	-2.0425(-3.1004)	-2.1076(-3.7921)
ADF(4)	1979 1991	13	-1.2212(-3.1223)	-1.6100(-3.8288)
ADF(5)	1980 1991	12	-3.4985(-3.1485)	-3.2359(-3.8731)
ADF(6)	1981 1991	11	-2.4737(-3.1803)	-2.3983(-3.9272)

95% critical values in brackets.

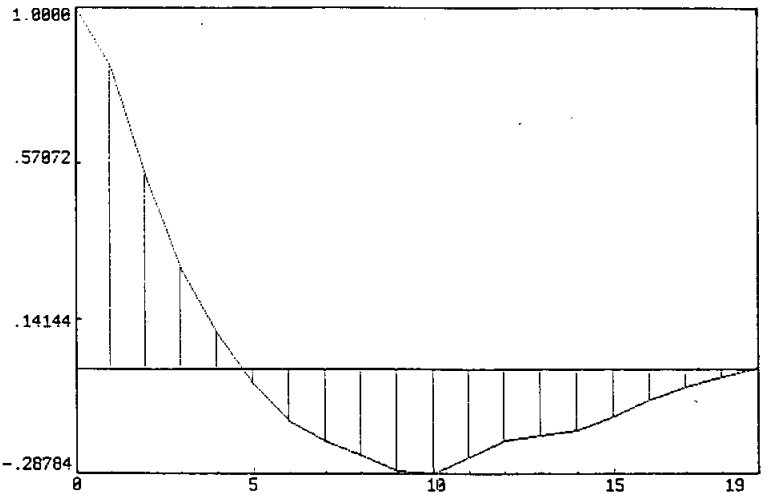
Note: ML=Money Supply in Log
ML1=First Differences of ML
ML11=Second Differences of ML

Graph 4.8


Interest Rate in Korea
32.5
30.0
27.5
25.0
22.5
20.0
17.5
15.0
12.5
%
1972
1974
1976
1978
1980
1982
1984
1986
1988
1990

Graph 4.9

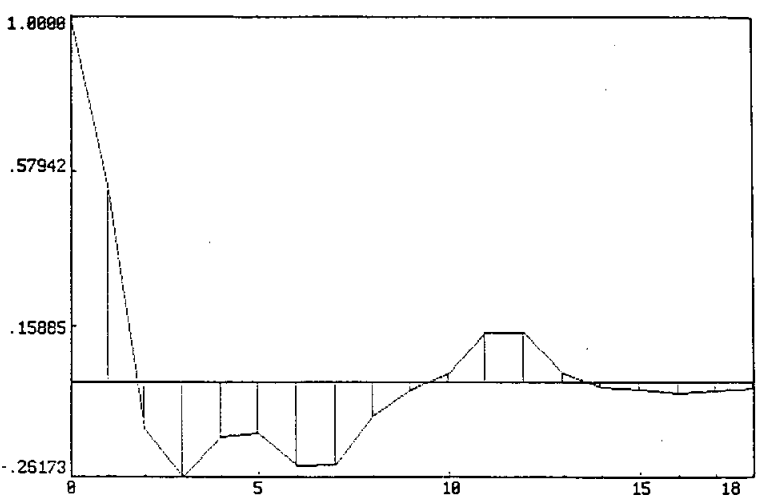
Autocorrelation Function of INTL, Sample from 1972-1991



INTL: INTEREST RATE IN LOG

Graph 4.10

Autocorrelation Function of INTL1, Sample from 1973-1991



INTL1: FIRST DIFFERENCES OF INTL

UNIT ROOT TESTS FOR INTEREST RATE IN KOREA

Unit root tests for variable IL

statistic	sample	observations	without trend	with trend
DF	1973 1991	19	-1.3205(-3.0294)	-1.0682(-3.6746)
ADF(1)	1974 1991	18	-2.3549(-3.0401)	-2.8721(-3.6921)
ADF(2)	1975 1991	17	-1.2718(-3.0522)	-1.2974(-3.7119)
ADF(3)	1976 1991	16	-1.8668(-3.0660)	-2.8973(-3.7347)
ADF(4)	1977 1991	15	-1.2162(-3.0819)	-1.8546(-3.7612)
ADF(5)	1978 1991	14	-1.0395(-3.1004)	-4.2905(-3.7921)
ADF(6)	1979 1991	13	-.75997(-3.1223)	-2.3127(-3.8288)

95% critical values in brackets.

Unit root tests for variable IL1

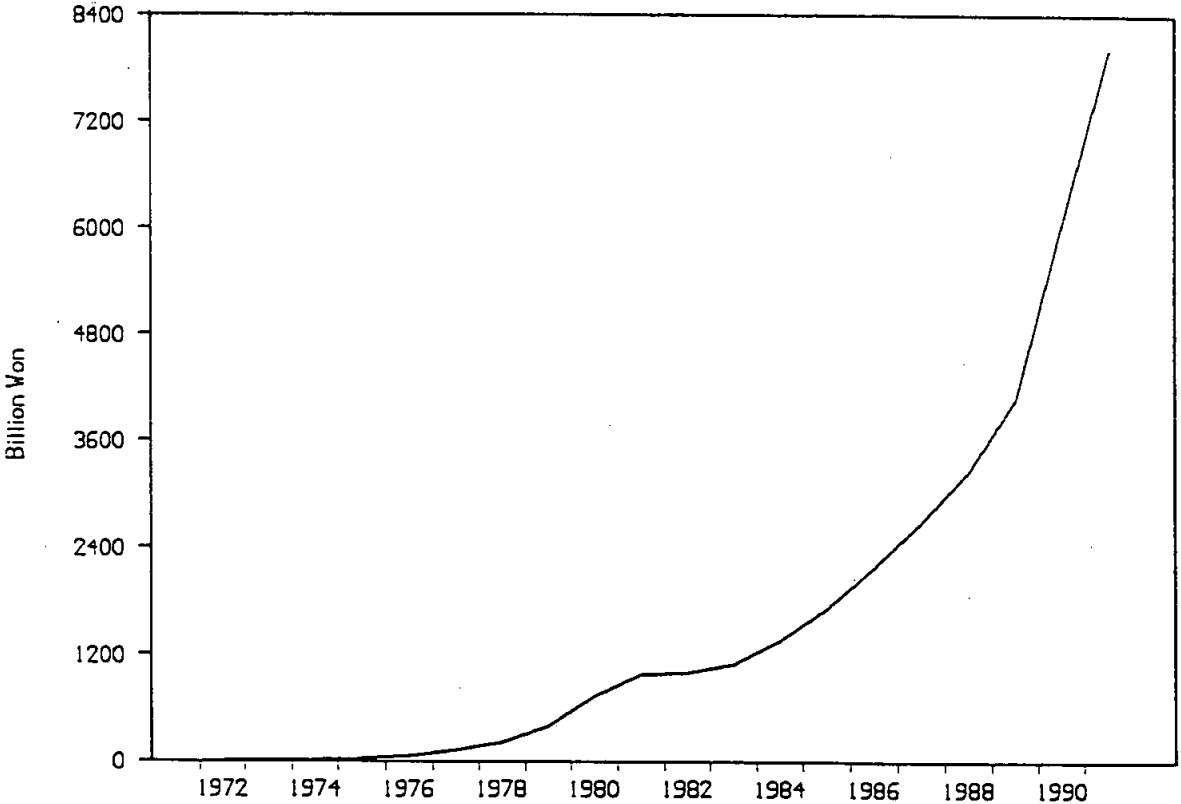
statistic	sample	observations	without trend	with trend
DF	1974 1991	18	-2.0073(-3.0401)	-2.0014(-3.6921)
ADF(1)	1975 1991	17	-3.3931(-3.0522)	-3.3341(-3.7119)
ADF(2)	1976 1991	16	-1.3622(-3.0660)	-1.3254(-3.7347)
ADF(3)	1977 1991	15	-2.0463(-3.0819)	-1.8699(-3.7612)
ADF(4)	1978 1991	14	-1.4776(-3.1004)	-1.3525(-3.7921)
ADF(5)	1979 1991	13	-2.3232(-3.1223)	-1.8951(-3.8288)
ADF(6)	1980 1991	12	-1.5397(-3.1485)	-.46770(-3.8731)

95% critical values in brackets.

Note: IL=Interest rate in Log
IL1=First Differences of IL

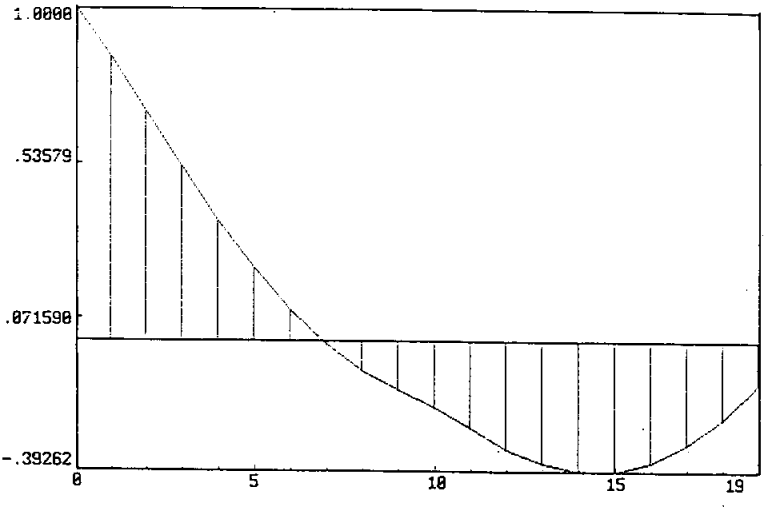
Graph 4.11

Guarantee Outstanding to SMIs in Korea



Graph 4.12

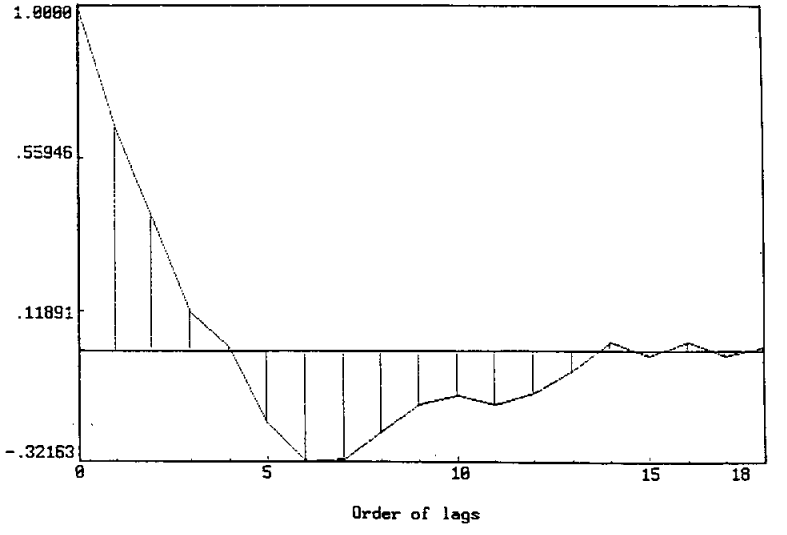
Autocorrelation Function of GRTL, Sample from 1972-1991



GRTL: GUARANTEES TO SMIs IN LOG

Graph 4.13

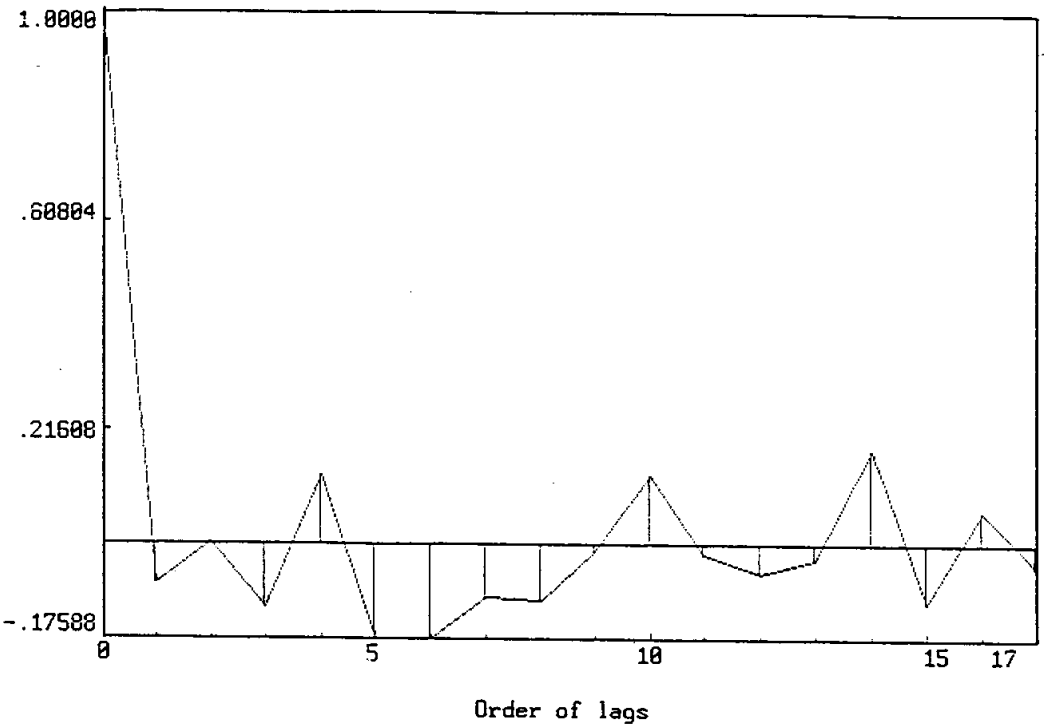
Autocorrelation Function of GRTL1, Sample from 1973-1991



GRTL1: FIRST DIFFERENCES OF GRTL

Graph 4.14

Autocorrelation Function of GRTL11, Sample from 1974-1991



GRTL11: SECOND DIFFERENCES OF GRTL

Table 4.4

UNIT ROOT TESTS FOR GUARANTEE TO SMIs IN KOREA

Unit root tests for variable GL

statistic	sample	observations	without trend	with trend
DF	1973 1991	19	-2.1394(-3.0294)	-.78660(-3.6746)
ADF(1)	1974 1991	18	-2.3446(-3.0401)	-2.4424(-3.6921)
ADF(2)	1975 1991	17	-2.1354(-3.0522)	-2.5527(-3.7119)
ADF(3)	1976 1991	16	-3.1887(-3.0660)	-3.9417(-3.7347)
ADF(4)	1977 1991	15	-.83616(-3.0819)	-2.7739(-3.7612)
ADF(5)	1978 1991	14	-2.5175(-3.1004)	-3.0157(-3.7921)
ADF(6)	1979 1991	13	-1.1574(-3.1223)	-3.1230(-3.8288)

95% critical values in brackets.

Unit root tests for variable GL1

statistic	sample	observations	without trend	with trend
DF	1974 1991	18	-1.8913(-3.0401)	-2.5162(-3.6921)
ADF(1)	1975 1991	17	-1.6468(-3.0522)	-2.2427(-3.7119)
ADF(2)	1976 1991	16	-1.7173(-3.0660)	-2.8645(-3.7347)
ADF(3)	1977 1991	15	-1.8038(-3.0819)	-1.2572(-3.7612)
ADF(4)	1978 1991	14	-2.2258(-3.1004)	-2.9115(-3.7921)
ADF(5)	1979 1991	13	-1.6535(-3.1223)	-1.4481(-3.8288)
ADF(6)	1980 1991	12	-2.0395(-3.1485)	-2.1408(-3.8731)

95% critical values in brackets.

Unit root tests for variable GL11

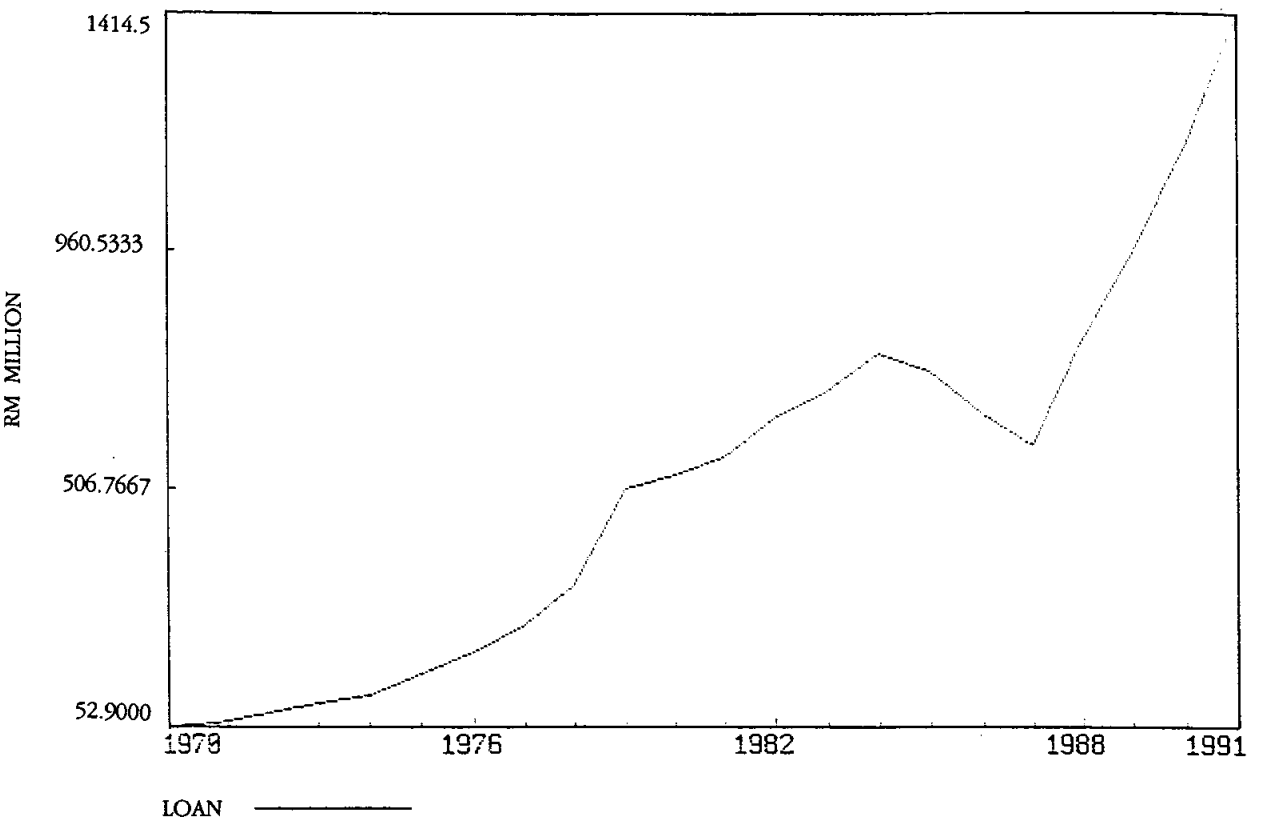
statistic	sample	observations	without trend	with trend
DF	1975 1991	17	-4.2516(-3.0522)	-4.1111(-3.7119)
ADF(1)	1976 1991	16	-2.6575(-3.0660)	-2.5596(-3.7347)
ADF(2)	1977 1991	15	-3.8830(-3.0819)	-3.6873(-3.7612)
ADF(3)	1978 1991	14	-1.4455(-3.1004)	-1.5113(-3.7921)
ADF(4)	1979 1991	13	-2.6040(-3.1223)	-2.7036(-3.8288)
ADF(5)	1980 1991	12	-1.5035(-3.1485)	-1.9351(-3.8731)
ADF(6)	1981 1991	11	-1.5388(-3.1803)	-2.3548(-3.9272)

95% critical values in brackets.

Note: GL=Guarantee to SMIs in Log
GL1=First Differences of GL
GL11=Second Differences of GL

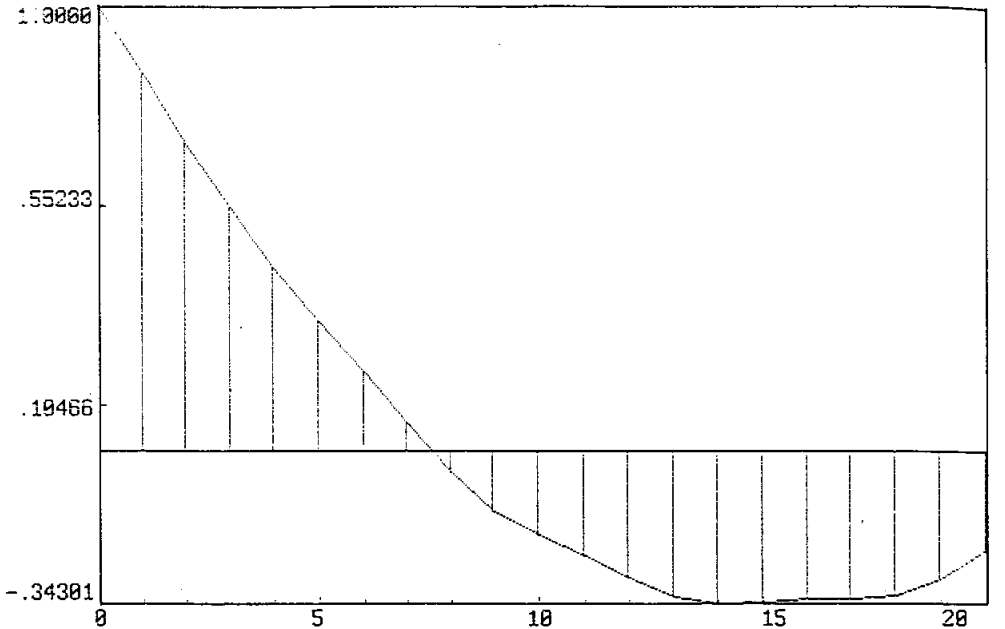
Graph 4.15

Loans to SIs in Malaysia



Graph 4.16

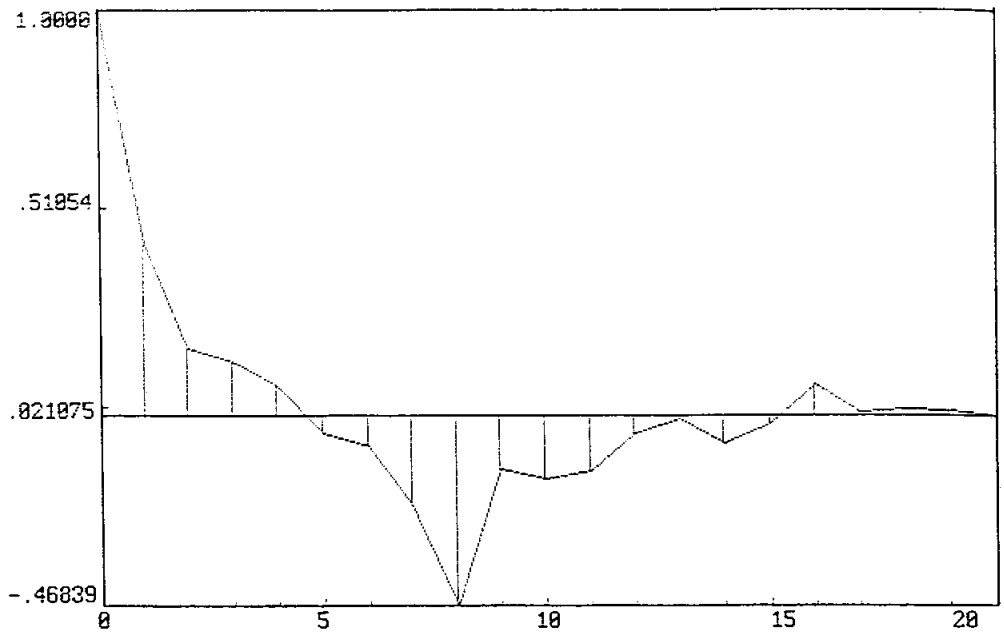
Autocorrelation Function of LOANL, Sample from 1970-1991



LOANL: LOANS TO SIs IN LOG

Graph 4.17

Autocorrelation Function of LOANL1, Sample from 1971-1991



LOANL1: FIRST DIFFERENCES OF LOANL

Table 4.5

UNIT ROOT TESTS FOR LOANS TO SIs IN MALAYSIA

Unit root tests for variable LL

statistic	sample	observations	without trend	with trend
DF	1971 1991	21	-1.8812(-3.0115)	-1.2628(-3.6454)
ADF(1)	1972 1991	20	-1.6735(-3.0199)	-1.9247(-3.6592)
ADF(2)	1973 1991	19	-1.3335(-3.0294)	-1.7141(-3.6746)
ADF(3)	1974 1991	18	-1.4077(-3.0401)	-2.0225(-3.6921)
ADF(4)	1975 1991	17	-1.7503(-3.0522)	-2.4038(-3.7119)
ADF(5)	1976 1991	16	-1.3846(-3.0660)	-2.2144(-3.7347)
ADF(6)	1977 1991	15	-1.4371(-3.0819)	-3.1321(-3.7612)

95% critical values in brackets.

Unit root tests for variable LL1

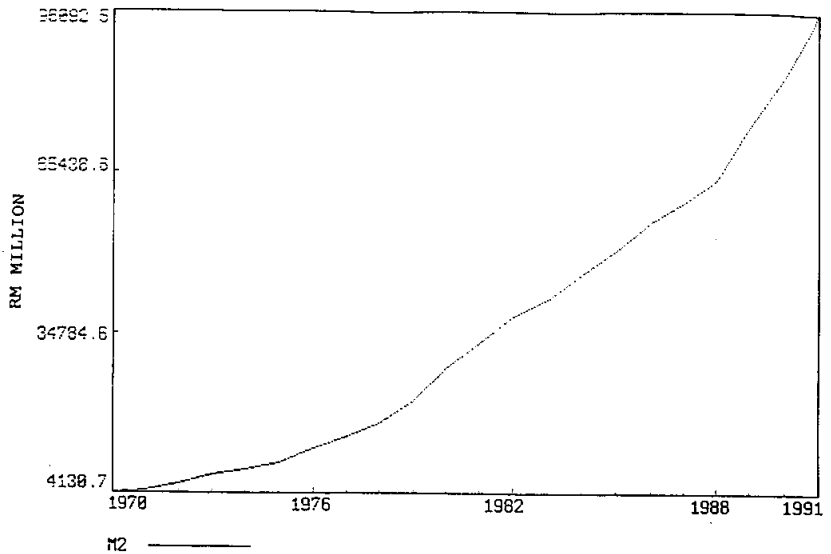
statistic	sample	observations	without trend	with trend
DF	1972 1991	20	-2.6995(-3.0199)	-2.8945(-3.6592)
ADF(1)	1973 1991	19	-2.2136(-3.0294)	-2.2535(-3.6746)
ADF(2)	1974 1991	18	-1.6484(-3.0401)	-1.7024(-3.6921)
ADF(3)	1975 1991	17	-1.3833(-3.0522)	-1.6289(-3.7119)
ADF(4)	1976 1991	16	-1.4859(-3.0660)	-1.3899(-3.7347)
ADF(5)	1977 1991	15	-1.2843(-3.0819)	-1.2941(-3.7612)
ADF(6)	1978 1991	14	-1.5691(-3.1004)	-1.2971(-3.7921)

95% critical values in brackets.

Note: LL=Loans to SIs in Log
LL1=First Differences of LL

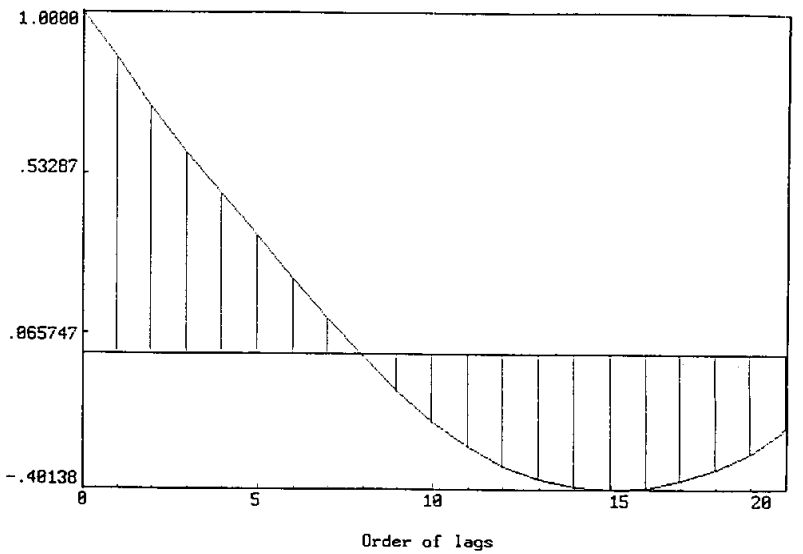
Graph 4.18

M2 in Malaysia



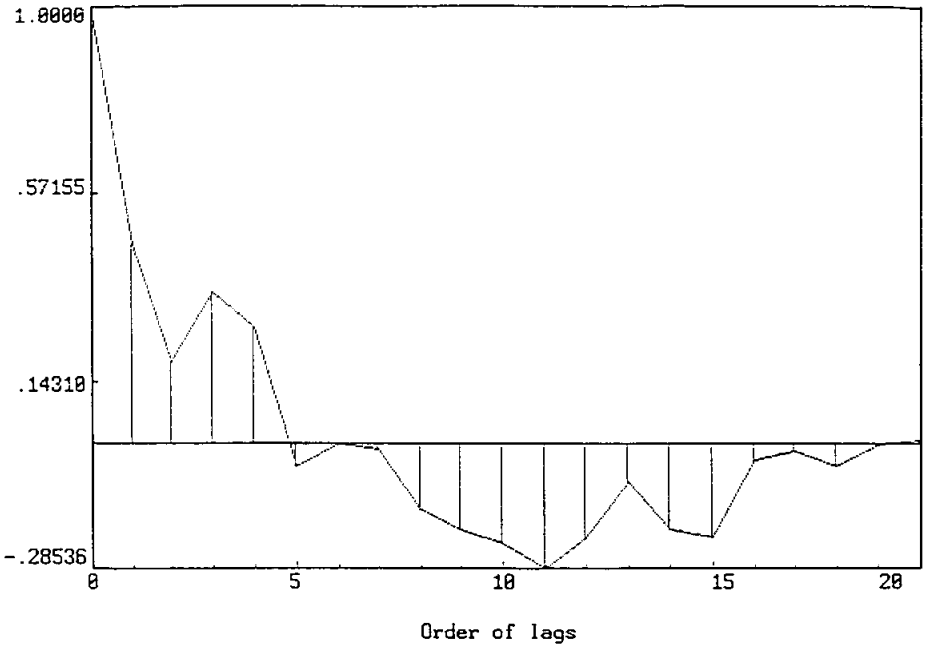
Graph 4.19

Autocorrelation Function of M2L, Sample from 1970-1991



Graph 4.20

Autocorrelation Function of M2L1, Sample from 1971-1991



M2L1: FIRST DIFFERENCES OF M2L

Table 4.6

UNIT ROOT TESTS FOR MONEY SUPPLY IN MALAYSIA

Unit root tests for variable ML

statistic	sample	observations	without trend	with trend
DF	1971 1991	21	-3.0218(-3.0115)	-.63186(-3.6454)
ADF(1)	1972 1991	20	-2.8444(-3.0199)	-1.4698(-3.6592)
ADF(2)	1973 1991	19	-2.4235(-3.0294)	-1.0387(-3.6746)
ADF(3)	1974 1991	18	-1.0049(-3.0401)	-1.4231(-3.6921)
ADF(4)	1975 1991	17	-1.4103(-3.0522)	-1.7520(-3.7119)
ADF(5)	1976 1991	16	-2.3485(-3.0660)	-1.1602(-3.7347)
ADF(6)	1977 1991	15	-1.3429(-3.0819)	-.96970(-3.7612)

95% critical values in brackets.

Unit root tests for variable ML1

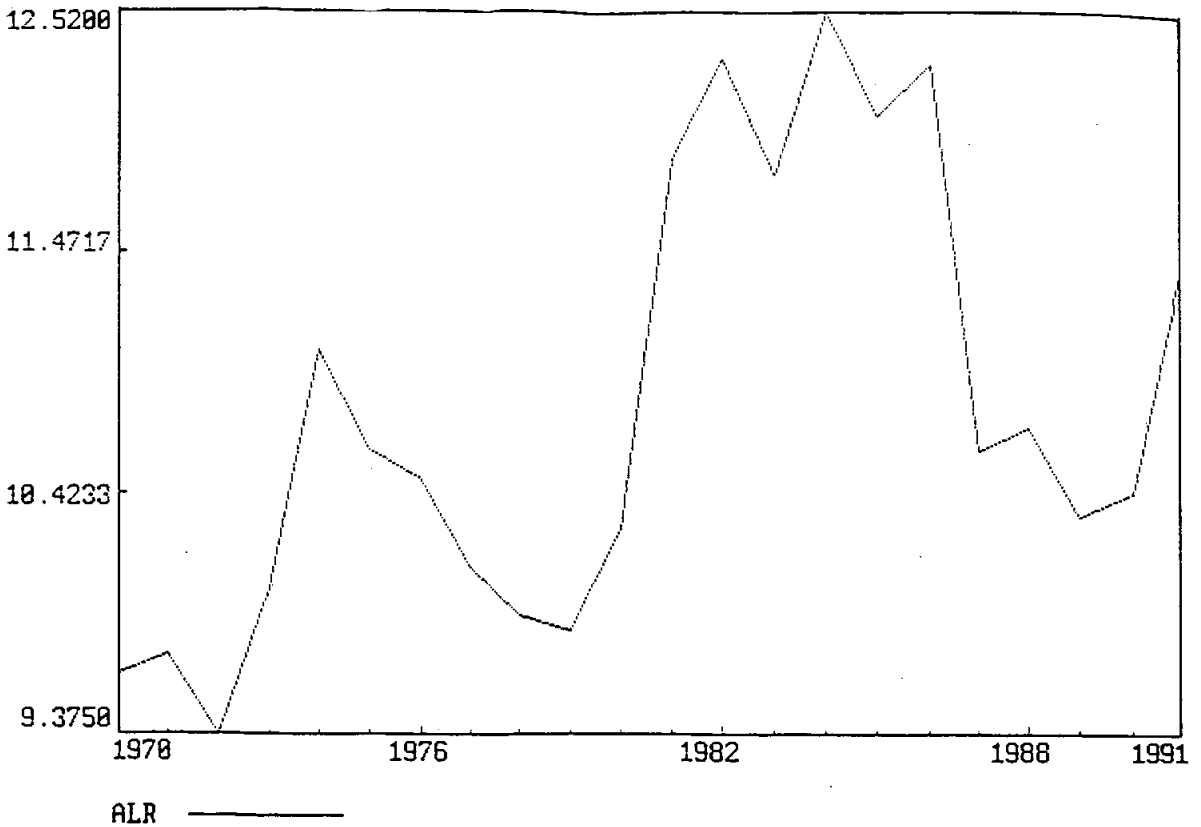
statistic	sample	observations	without trend	with trend
DF	1972 1991	20	-2.6129(-3.0199)	-3.9007(-3.6592)
ADF(1)	1973 1991	19	-2.1672(-3.0294)	-3.2507(-3.6746)
ADF(2)	1974 1991	18	-1.5548(-3.0401)	-1.3980(-3.6921)
ADF(3)	1975 1991	17	-1.1186(-3.0522)	-1.4849(-3.7119)
ADF(4)	1976 1991	16	-1.3705(-3.0660)	-2.5863(-3.7347)
ADF(5)	1977 1991	15	-1.1480(-3.0819)	-1.5229(-3.7612)
ADF(6)	1978 1991	14	-.75726(-3.1004)	-2.1710(-3.7921)

95% critical values in brackets.

Note: ML=Money Supply in Log
ML1=First Differences of ML

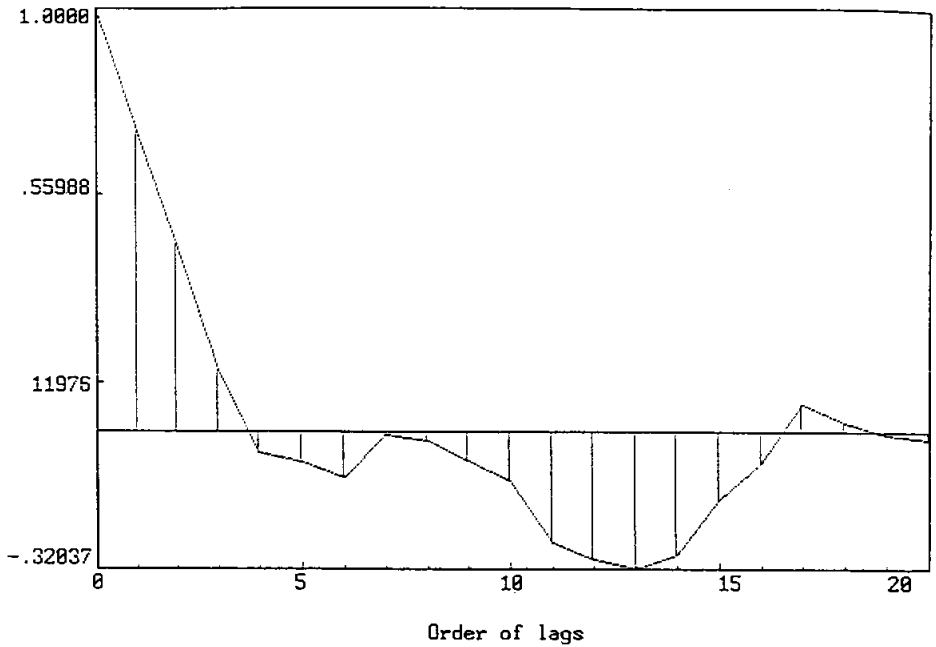
Graph 4.21

Interest Rate in Malaysia



Graph 4.22

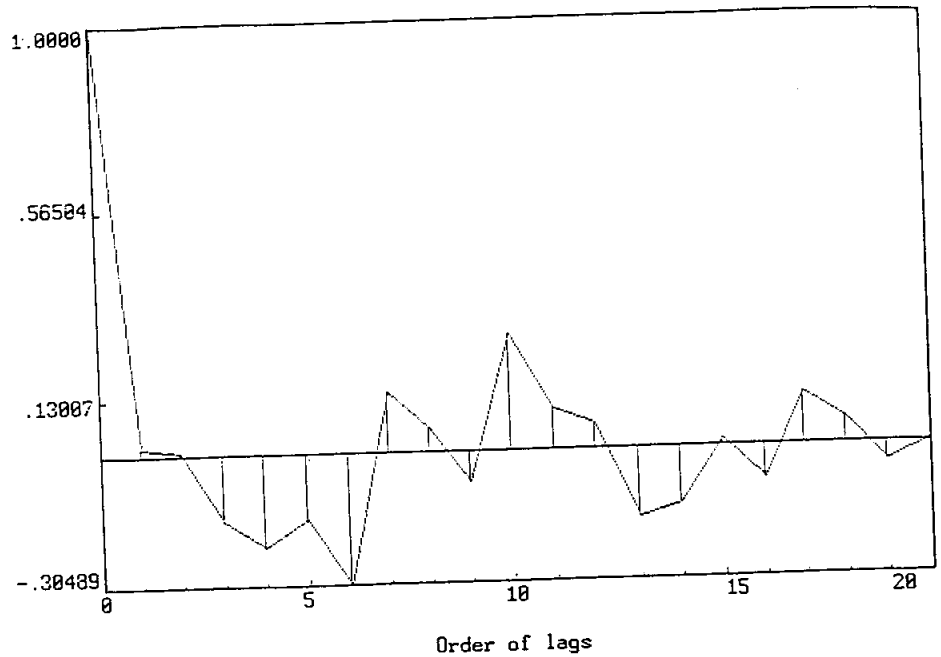
Au· Autocorrelation Function of ALRL, Sample from 1970-1991



ALRL: ALR IN LOG

Graph 4.23

Autocorrelation Function of ALRL1, Sample from 1971-1991



ALRL1: FIRST DIFFERENCES OF ALRL

Table 4.7

UNIT ROOT TESTS FOR INTEREST RATE IN MALAYSIA

Unit root tests for variable IL

statistic	sample	observations	without trend	with trend
DF	1971 1991	21	-1.8461(-3.0115)	-1.9438(-3.6454)
ADF(1)	1972 1991	20	-1.9558(-3.0199)	-2.1527(-3.6592)
ADF(2)	1973 1991	19	-2.4579(-3.0294)	-2.7054(-3.6746)
ADF(3)	1974 1991	18	-1.9935(-3.0401)	-2.5692(-3.6921)
ADF(4)	1975 1991	17	-1.2379(-3.0522)	-2.6478(-3.7119)
ADF(5)	1976 1991	16	-1.2149(-3.0660)	-2.5327(-3.7347)
ADF(6)	1977 1991	15	-1.0346(-3.0819)	-1.0886(-3.7612)

95% critical values in brackets.

Unit root tests for variable IL1

statistic	sample	observations	without trend	with trend
DF	1972 1991	20	-3.9879(-3.0199)	-3.8671(-3.6592)
ADF(1)	1973 1991	19	-2.6739(-3.0294)	-2.6701(-3.6746)
ADF(2)	1974 1991	18	-2.4526(-3.0401)	-2.3208(-3.6921)
ADF(3)	1975 1991	17	-2.6872(-3.0522)	-2.2828(-3.7119)
ADF(4)	1976 1991	16	-2.2274(-3.0660)	-2.1033(-3.7347)
ADF(5)	1977 1991	15	-3.0283(-3.0819)	-3.0116(-3.7612)
ADF(6)	1978 1991	14	-1.5068(-3.1004)	-1.6097(-3.7921)

95% critical values in brackets.

Note: IL=Interest Rate in Log
IL1=First Differences of IL

III. Long-Run Relationships: Johansen's Cointegration Test

3.1 Johansen's Procedure: A Brief Review

Even though each series may have a unit root, there may exist various stationary linear combinations of the variables. In this case, the series are called to be cointegrated. When cointegration exists among certain variables, long-run relationships among the variables may also be stationary such that the time series of the variables can be used for regression even though each series may be non-stationary.

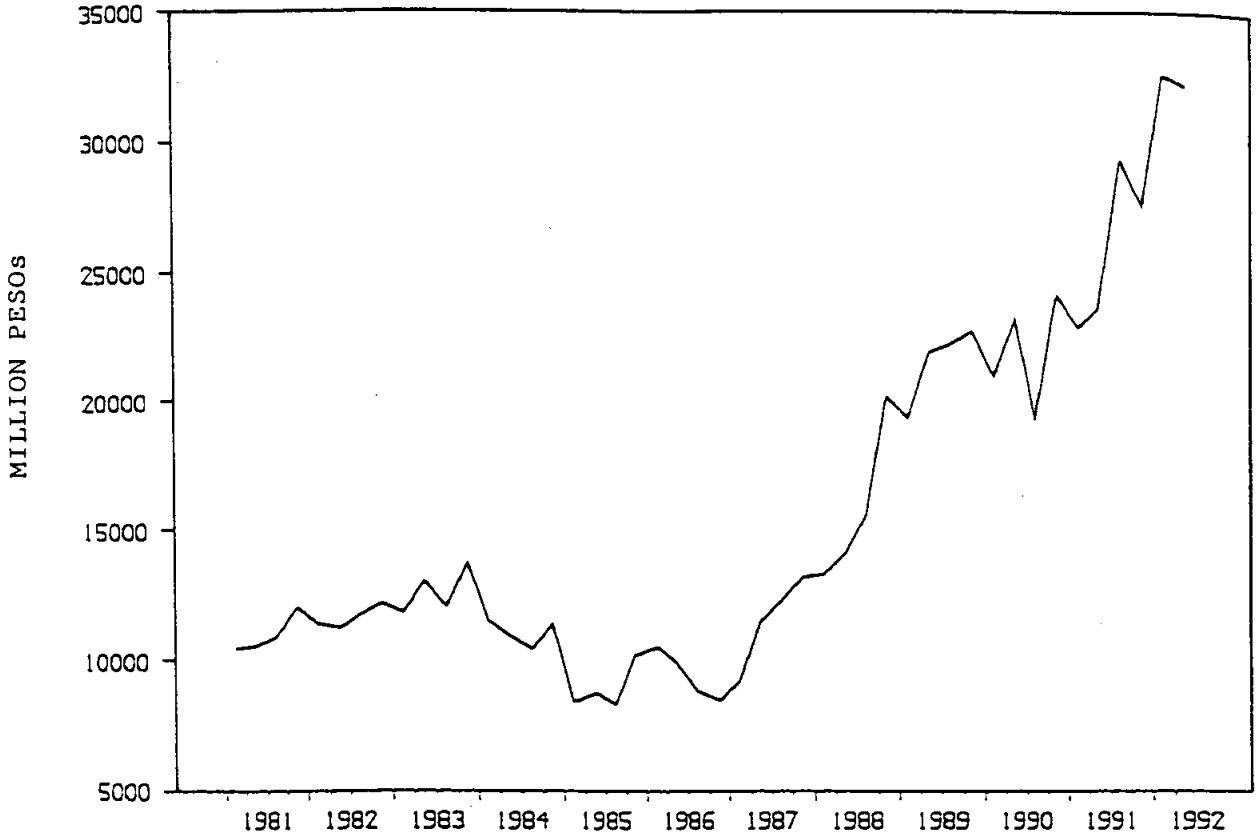
Several methods to test the existence of cointegration have been suggested. The first one is a residual-based cointegration test. Once the time series of certain variables are cointegrated, residuals calculated from cointegrating regression of the variables become stationary. Therefore, the unit root test on estimated residuals may be used as a test on cointegration of the variables. As methods of the residual-based cointegration test, Augmented Dickey-Fuller (ADF) Test (Engle and Granger, 1987), Z_α and Z_t tests (Phillips, 1987), Variance Ratio Test and a Multivariate Trace Statistic (*Phillips and Ouliaris*, 1990) have been respectively suggested.

The other is cointegration test based on the error correction term in a dynamic model. This method takes into account the error structure of the underlying process, which the regression estimates do not. As methods of the error correction term based cointegration test, Likelihood Ratio Test (*Johansen*, 1988; *Johansen and Juselius*, 1990), Error Correction Mechanism (ECM) Statistic (*Banerjee, et.al.*, 1986; *Kremers, et.al.*, 1992) and Wald Test (*Boswijk and Franses*, 1992) have been respectively proposed. In fact, the Johansen's parallels the ECM procedure, but with the system complete. Conversely, the ECM procedure is a special case of the Johansen's procedure for a system in which cointegration vectors appear in only the equation of interest. Another method is the Common Stochastic Trend Test suggested by Stock and Watson (1988).

However, Gonzalo (1991) compares several methods of estimating cointegration vectors and then shows that the maximum likelihood in a fully specified error correction model (Johansen's procedure) has clearly better properties than the other estimates. The reason for expecting the estimators to behave better than the regression estimates is that they

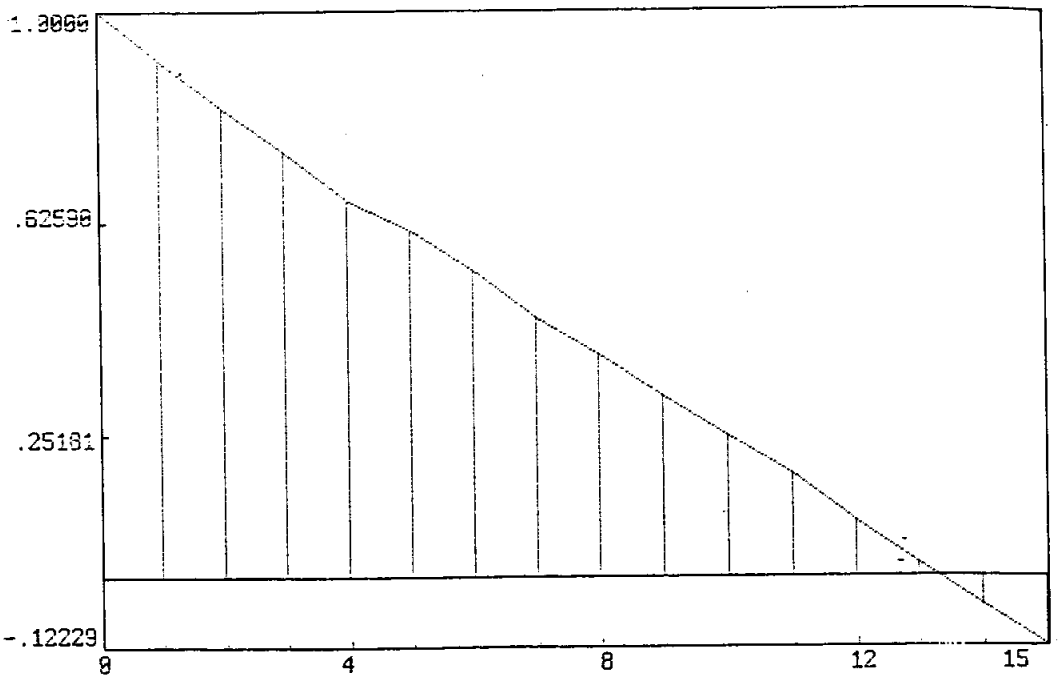
Graph 4.24

Bank Loans to SMIs in the Philippines



Graph 4.25

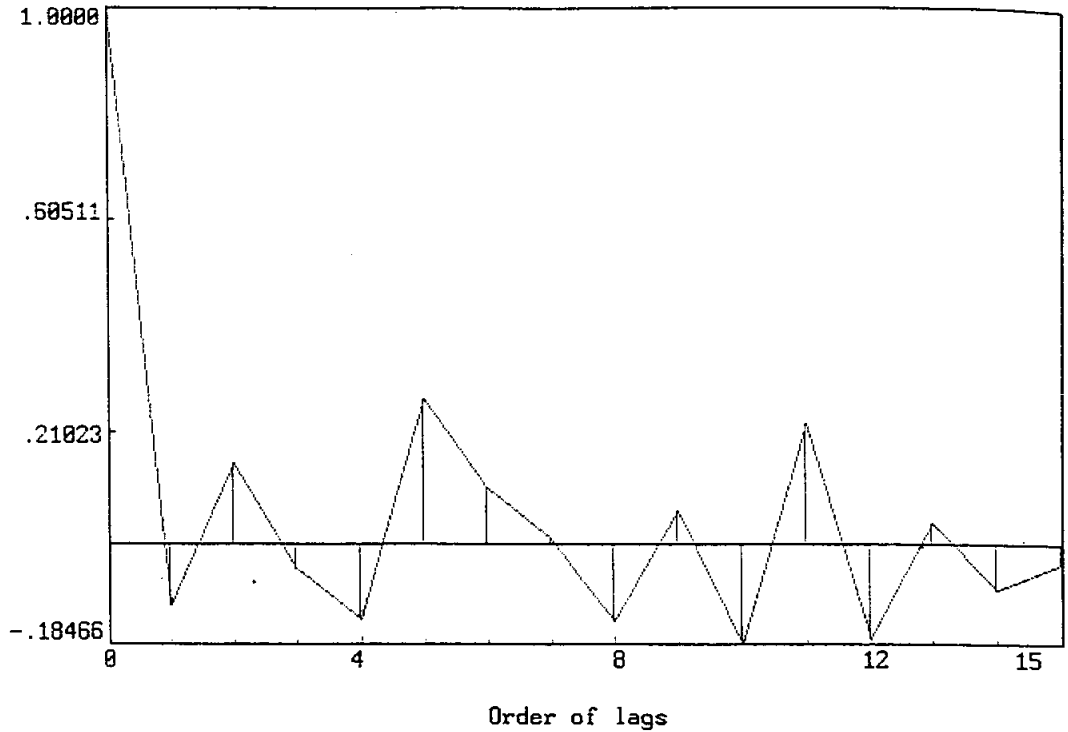
Autocorrelation Function of LL, Sample from 1981Q1-1992Q2



LL: LOANS TO SMIs IN LOG

4.26

Autocorrelation Function of LL1, Sample from 1981Q2-1992Q2



LL1: FIRST DIFFERENCES OF LL

Table 4.8

UNIT ROOT TESTS FOR LOANS TO SMIs IN THE PHILIPPINES

Unit root tests for variable LL

statistic	sample	observations	without trend	with trend
DF	1981Q2 1992Q2	45	.27970(-2.9271)	-1.3016(-3.5112)
ADF(1)	1981Q3 1992Q2	44	.50329(-2.9287)	-1.0208(-3.5136)
ADF(2)	1981Q4 1992Q2	43	.26641(-2.9303)	-1.2639(-3.5162)
ADF(3)	1982Q1 1992Q2	42	.34593(-2.9320)	-1.2370(-3.5189)
ADF(4)	1982Q2 1992Q2	41	.64359(-2.9339)	-1.0858(-3.5217)
ADF(5)	1982Q3 1992Q2	40	.037102(-2.9358)	-1.3598(-3.5247)
ADF(6)	1982Q4 1992Q2	39	-.26035(-2.9378)	-1.8912(-3.5279)

95% critical values in brackets.

Unit root tests for variable LL1

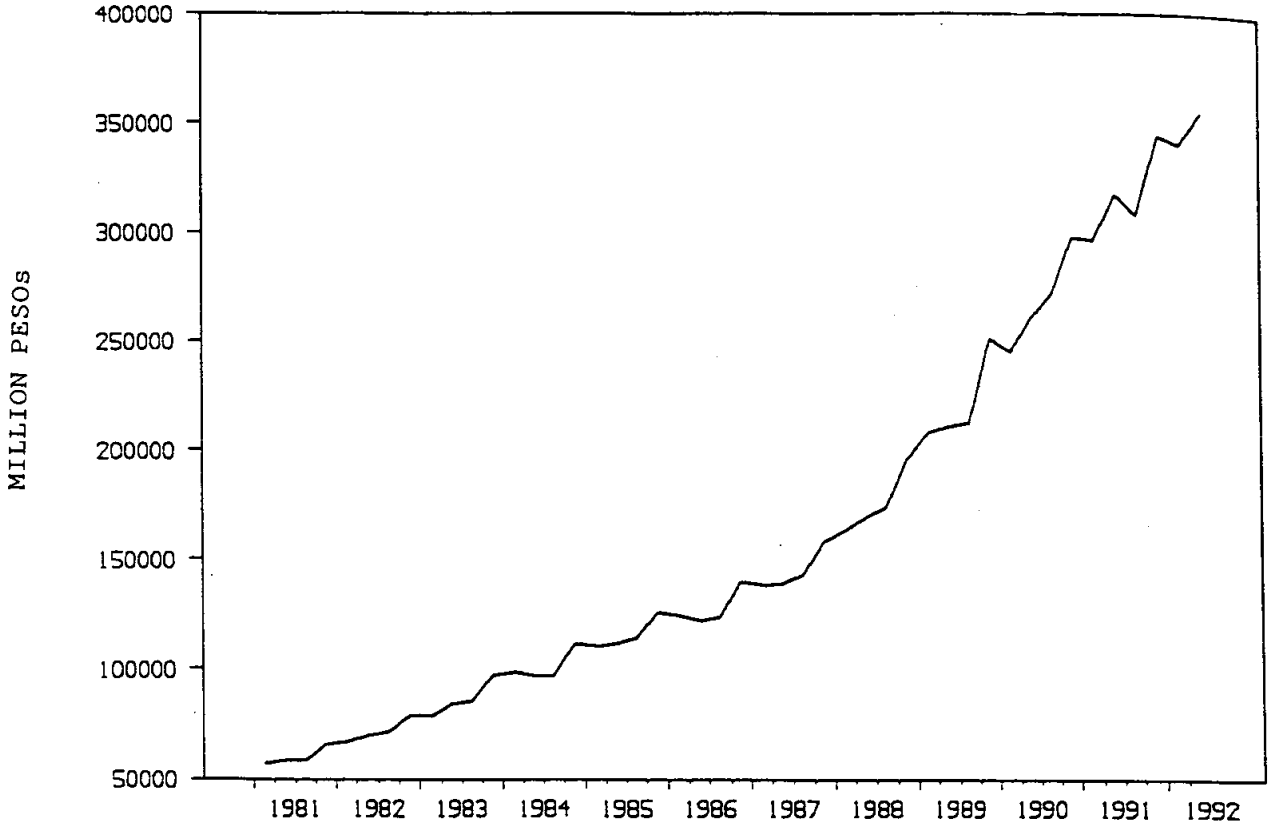
statistic	sample	observations	without trend	with trend
DF	1981Q3 1992Q2	44	-7.2719(-2.9287)	-7.5454(-3.5136)
ADF(1)	1981Q4 1992Q2	43	-4.0005(-2.9303)	-4.3084(-3.5162)
ADF(2)	1982Q1 1992Q2	42	-3.3849(-2.9320)	-3.7962(-3.5189)
ADF(3)	1982Q2 1992Q2	41	-3.4122(-2.9339)	-3.9983(-3.5217)
ADF(4)	1982Q3 1992Q2	40	-2.0448(-2.9358)	-2.4392(-3.5247)
ADF(5)	1982Q4 1992Q2	39	-1.4728(-2.9378)	-1.9588(-3.5279)
ADF(6)	1983Q1 1992Q2	38	-1.5521(-2.9400)	-2.0060(-3.5313)

95% critical values in brackets.

Note: LL=Loans to SMIs in Log
LL1=First Differences of LL

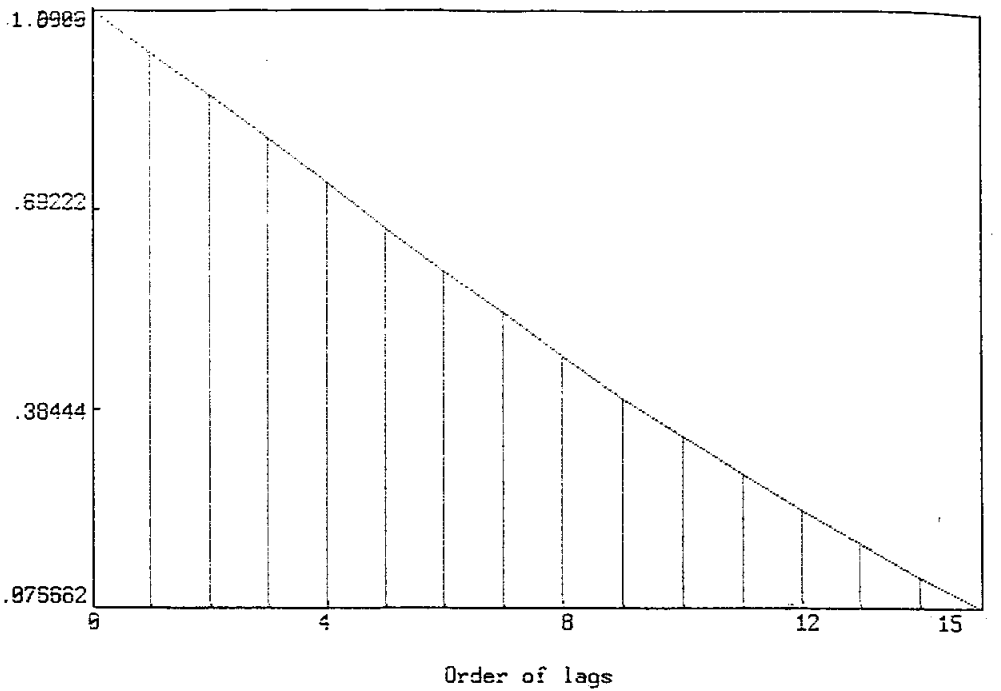
Graph 4.27

M2 in the Philippines



Graph 4.28

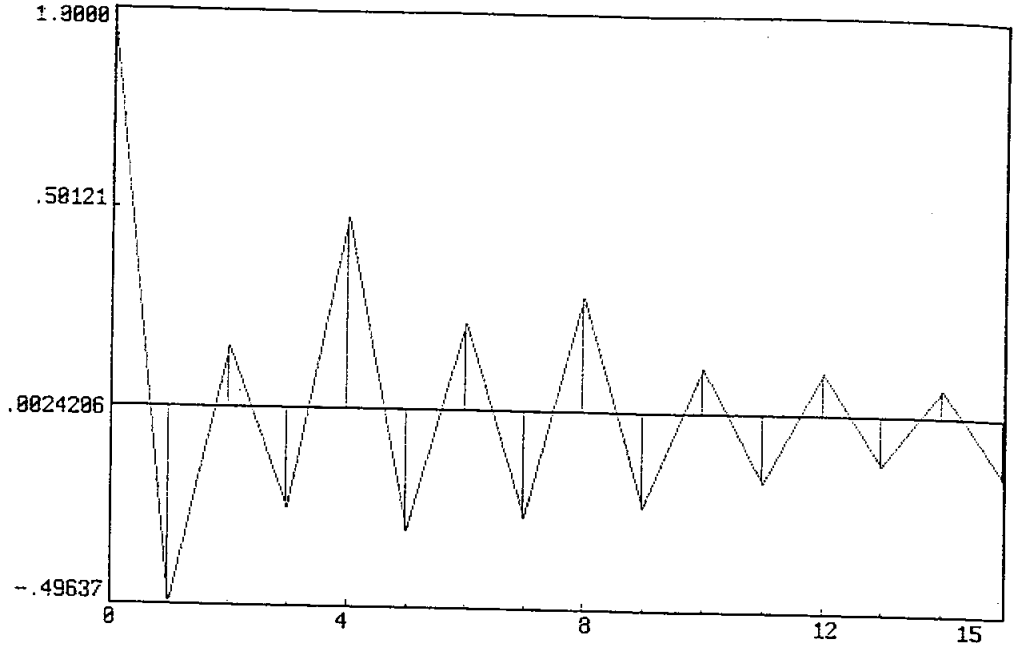
Autocorrelation Function of ML, Sample from 1981Q1-1992Q2



ML: MONEY SUPPLY IN LOG

Graph 4.29

Autocorrelation Function of ML1 Sample from 1981Q2-1992Q2



ML1: FIRST DIFFERENCES OF ML

Table 4.9

UNIT ROOT TESTS FOR MONEY SUPPLY IN THE PHILIPPINES

Unit root tests for variable ML

statistic	sample	observations	without trend	with trend
DF	1981Q2 1992Q2	45	-.10638(-2.9271)	-2.9164(-3.5112)
ADF(1)	1981Q3 1992Q2	44	.18970(-2.9287)	-1.6977(-3.5136)
ADF(2)	1981Q4 1992Q2	43	.59186(-2.9303)	-1.5391(-3.5162)
ADF(3)	1982Q1 1992Q2	42	-.013234(-2.9320)	-.99651(-3.5189)
ADF(4)	1982Q2 1992Q2	41	-.25817(-2.9339)	-1.8528(-3.5217)
ADF(5)	1982Q3 1992Q2	40	.021519(-2.9358)	-2.1245(-3.5247)
ADF(6)	1982Q4 1992Q2	39	.18352(-2.9378)	-3.4651(-3.5279)

95% critical values in brackets.

Unit root tests for variable ML1

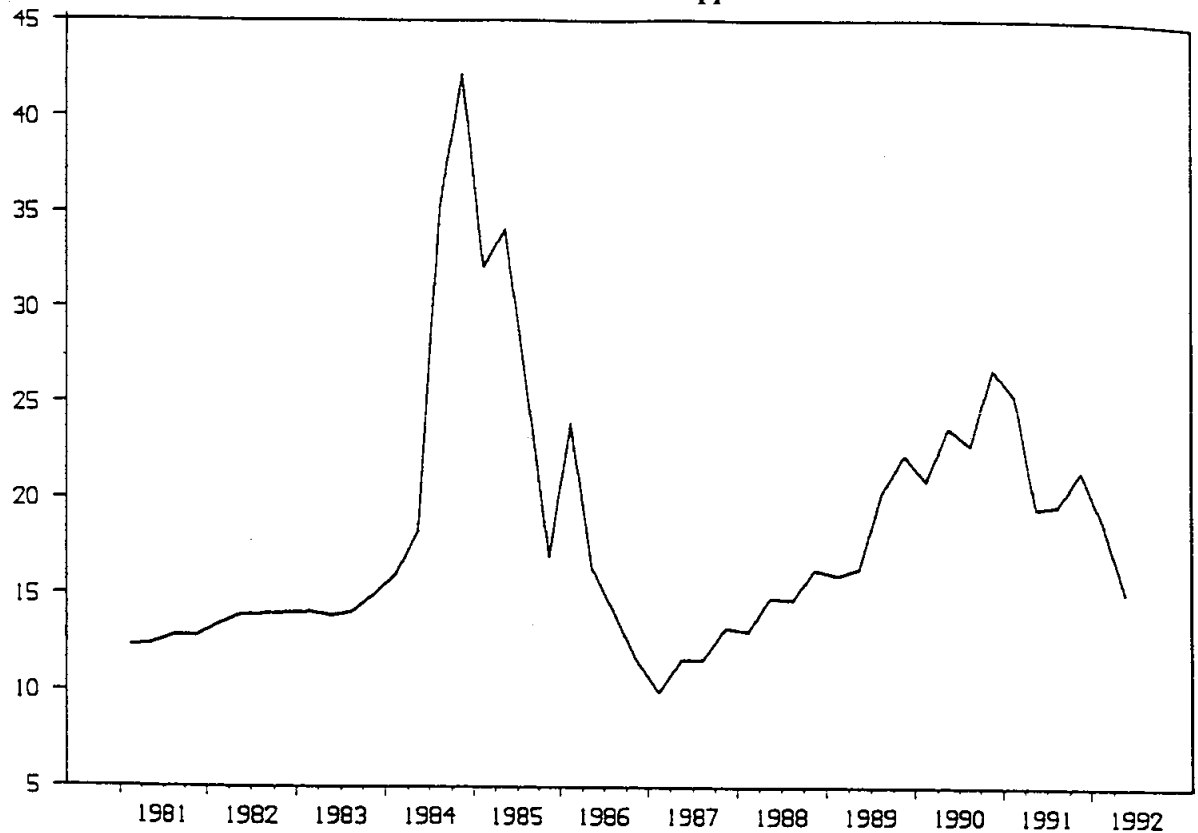
statistic	sample	observations	without trend	with trend
DF	1981Q3 1992Q2	44	-11.1862(-2.9287)	-11.0729(-3.5136)
ADF(1)	1981Q4 1992Q2	43	-6.3529(-2.9303)	-6.3560(-3.5162)
ADF(2)	1982Q1 1992Q2	42	-6.3218(-2.9320)	-6.1742(-3.5189)
ADF(3)	1982Q2 1992Q2	41	-2.4332(-2.9339)	-2.3478(-3.5217)
ADF(4)	1982Q3 1992Q2	40	-1.9887(-2.9358)	-1.9629(-3.5247)
ADF(5)	1982Q4 1992Q2	39	-1.4362(-2.9378)	-1.4881(-3.5279)
ADF(6)	1983Q1 1992Q2	38	-1.7515(-2.9400)	-1.6832(-3.5313)

95% critical values in brackets.

Note: ML=Money Supply in Log
ML1=First Differences of ML

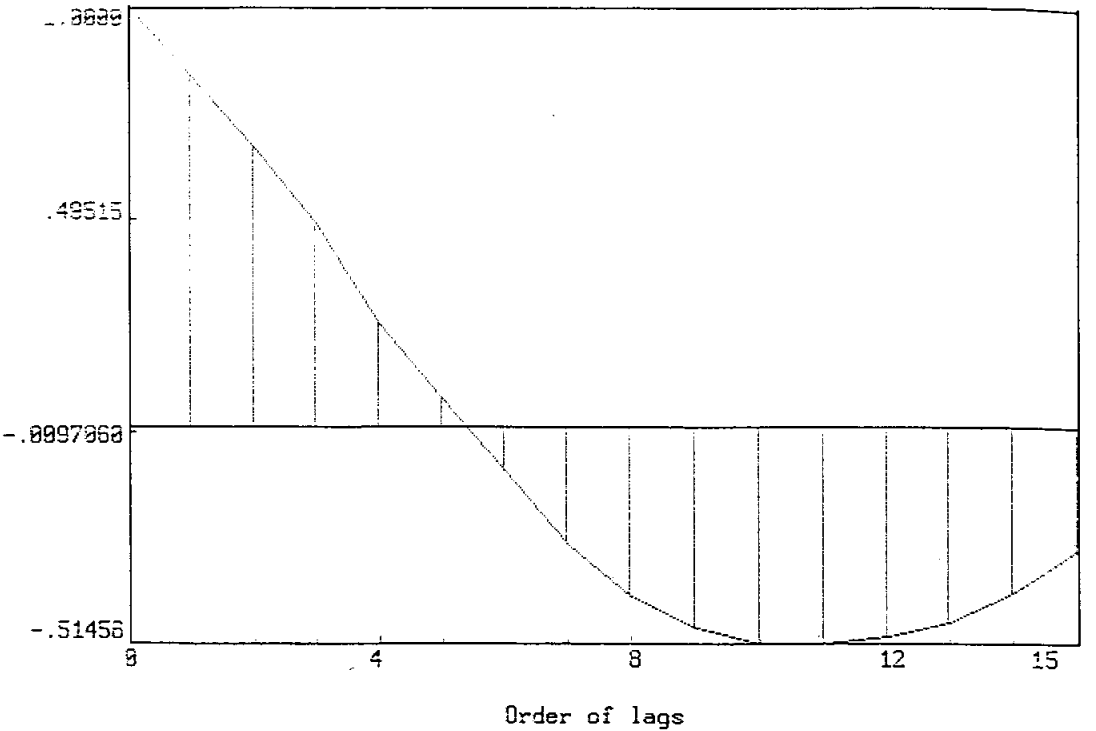
Graph 4.30

Interest Rate in the Philippines



Graph 4.31

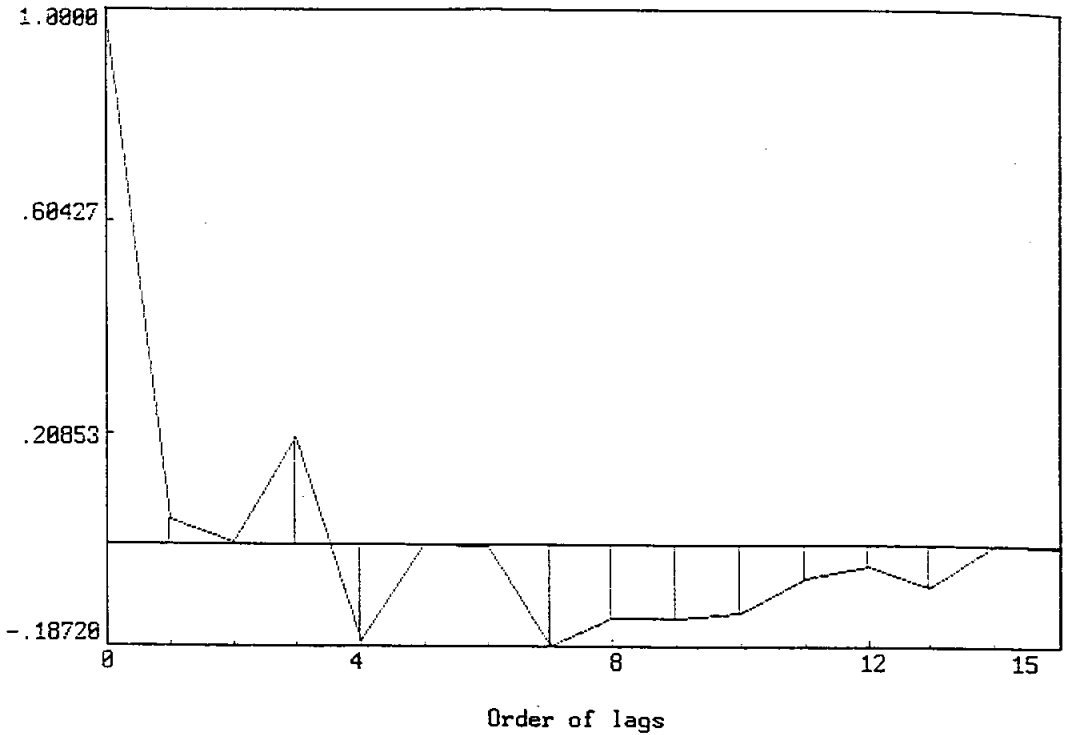
Autocorrelation Function of IL, Sample from 1981Q1-1992Q2



IL: INTEREST RATE IN LOG

Graph 4.32

Autocorrelation Function of IL1, Sample from 1981Q2-1992Q2



IL1: FIRST DIFFERENCES OF IL

Table 4.10

UNIT ROOT TESTS FOR INTEREST RATE IN THE PHILIPPINES

Unit root tests for variable IL

stastatistic	sample	observations	without trend		with trend	
DF	1981Q2 1992Q2	45	-2.0207(	-2.9271)	-1.9062(	-3.5112)
ADF(1)	1981Q3 1992Q2	44	-2.1372(	-2.9287)	-2.0452(	-3.5136)
ADF(2)	1981Q4 1992Q2	43	-2.2591(	-2.9303)	-2.1482(	-3.5162)
ADF(3)	1982Q1 1992Q2	42	-3.0143(	-2.9320)	-2.9022(	-3.5189)
ADF(4)	1982Q2 1992Q2	41	-2.5191(	-2.9339)	-2.4349(	-3.5217)
ADF(5)	1982Q3 1992Q2	40	-2.7198(	-2.9358)	-2.6611(	-3.5247)
ADF(6)	1982Q4 1992Q2	39	-2.9396(	-2.9378)	-2.8500(	-3.5279)

95% critical values in brackets.

Unit root tests for variable IL1

statistic	sample	observations	without trend		with trend	
DF	1981Q3 1992Q2	44	-6.1034(	-2.9287)	-6.0684(	-3.5136)
ADF(1)	1981Q4 1992Q2	43	-4.2613(	-2.9303)	-4.2504(	-3.5162)
ADF(2)	1982Q1 1992Q2	42	-2.7826(	-2.9320)	-2.7978(	-3.5189)
ADF(3)	1982Q2 1992Q2	41	-3.0400(	-2.9339)	-3.0399(	-3.5217)
ADF(4)	1982Q3 1992Q2	40	-2.5152(	-2.9358)	-2.5057(	-3.5247)
ADF(5)	1982Q4 1992Q2	39	-2.2929(	-2.9378)	-2.2809(	-3.5279)
ADF(6)	1983Q1 1992Q2	38	-2.3152(	-2.9400)	-2.3088(	-3.5313)

95% critical values in brackets.

Note:IL= Interest Rate in Log
IL1=First Differences of IL

take into account the error structure of the underlying process (*Johansen*, 1988).

In this paper, Johansen's procedure was employed for more efficient cointegration test. Let us assume that the data generating process of X_t is a finite VAR such as:

$$H_1: X_t = \pi_1 X_{t-1} + \ldots + \pi_k X_{t-k} + \varepsilon_t, \; t = 1, 2, \ldots\ldots T \quad \ldots\ldots\ldots\ldots \quad (3)$$

for given values of X_{-k+1} ..., X_0; and, where {εt} is a sequence of i.i.d. p-dimensional Gaussian random variables with mean zero and variance matrix θ.

In general, with economic time series being non-stationary process, VAR systems like (3) have usually been expressed in first-differenced form. Unless the difference operator is also applied to the error process and explicitly taken account of, differencing implies loss of information in the data.

Using Δ=1-L, where L is the lag operator, the model (3) can be rewritten in the error correction form, such as:

$$\Delta X_t = \Gamma_1 \Delta X_{t-1} + \ldots + \Gamma_{k-1} \Delta X_{t-k+1} + \pi X_{t-k} + \varepsilon_t \quad \ldots\ldots\ldots\ldots \quad (4)$$

where, $\Gamma_i = -(I-\pi_1-\ldots-\pi_i)$, (i=1, ..., k-1); and, $\pi = -(I-\pi_1-\ldots-\pi_k)$.

Note that the model (4) is expressed as a traditional first-differenced VAR model, except term πX_{t-k}. In a simple case where X_t is integrated of order 1, ΔX_t is stationary. Accordingly, our main concern is whether or not the coefficient matrix π contains information about long-run relationships between the variables in the data vector. Suppose that the matrix π has rank r<P. It can be decomposed into the product of two matrices, such as:

$$H_2 : \pi = \alpha \beta' \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (5)$$

where, α and β are pxr matrices respectively.

Although X_t is non-stationary as a vector process, the linear combinations given by $\beta' X_t$ are stationary. This means that the vector process X_t is cointegrated with cointegrating vectors β. A main concern in this

model is to find the number of cointegrating vectors, i.e., rank (r) of matrix π, then to estimate the cointegrating vectors β. One may assume three cases: (i) r=p, (ii) 0<r<p; and, (iii) r=0.

In general, the number of cointegrating vectors (r) is unknown in empirical modeling, and must first be determined from the data. This step is important since both underestimation and overestimation of r have potentially serious consequences for estimation and inference. Once the number of cointegrating vectors (r) is known, one can proceed to estimate α and β.

Johansen suggested the likelihood ratio test for the hypothesis given by (5), i.e., for the hypothesis that the number of cointegrating vectors is r. The likelihood ratio statistic for the hypothesis H_2 in H_1 , since H_1 is a special case of H_2 for the choice r=P, is such as:

$$-2\ln (Q;\ H_2 \mid H_1) = -T \sum_{i=r+1}^{p} \ln (1-\hat{\lambda}_i) \quad \ldots\ldots\ldots\ldots \quad (6)$$

where, $\hat{\lambda}_{r+1}$, ... $\hat{\lambda}_{\pi}$ are the p-r smallest squared canonical correlations. This statistic is called the trace statistic.

He also suggested the other alternative likelihood ratio statistic for testing $H_2(r)$ in $H_2(r+1)$, such as:

$$-2 \ln (\theta;\ r \mid r+1) = -T \ln (1-\hat{\lambda}_{r+1}) \quad \ldots\ldots\ldots\ldots \quad (7)$$

This statistic is called the maximal eigenvalue statistic (λ_{max} statistic).

Both statistics are asymptotically distributed as χ^2 and depend only on the dimension p-r, i.e., the number of non-stationary components under the hypothesis.

Once the number of cointegrating vectors is determined, the cointegrating vectors are estimated by maximum likelihood estimation method. The estimation of β is performed by regressing ΔX_t and X_{t-k} on the lagged differences. The estimate of β is the empirical canonical variates of X_{t-k} with respect to ΔX_t corrected for the lagged differences.

The ordering of the relations based on the ordering of $\hat{\lambda}_i$ means that the first relation, $\hat{\beta}_1 X_t$, is most correlated with the stationarity part of the process ΔX_t when corrected for the lagged values of the differences, and the second is the next most correlated, etc. However, all the cointegrating vectors estimated may not all have meaningful economic interpretation and thus one has to choose the linear combinations which makes economic sense. Note that, once the ECMs have been defined, $\hat{\alpha}$ reveals the importance of each cointegrating combination in each equation, and is related to the speed of adjustment of each dependent variable to the associated disequilibria.

3.2 Korea

In Korea, the first differences of loans to SMIs and of the interest rate, and the second differences of money supply and guarantees to SMIs are Z(0). Accordingly, the series of I(1) are the level variables of loans to SMIs and of the interest rate, and the first differences of money supply and guarantees to SMIs respectively. Graphs of these series of I(1) strongly show trends in loans to SMIs, money supply and guarantees to SMIs (Graphs 4.33 to 4.36). Therefore, a model with a linear trend is assumed.

The cointegration test results of a VAR model with three lags based on the maximal eigenvalue statistic and trace statistic are reported in Table 4.11. Both statistics rejected the null hypothesis of $r \leq 2$ and accepted the null hypothesis of $r \leq 3$ at the 5-percent significant level. Consequently, one may conclude that the model has two cointegrating vectors.

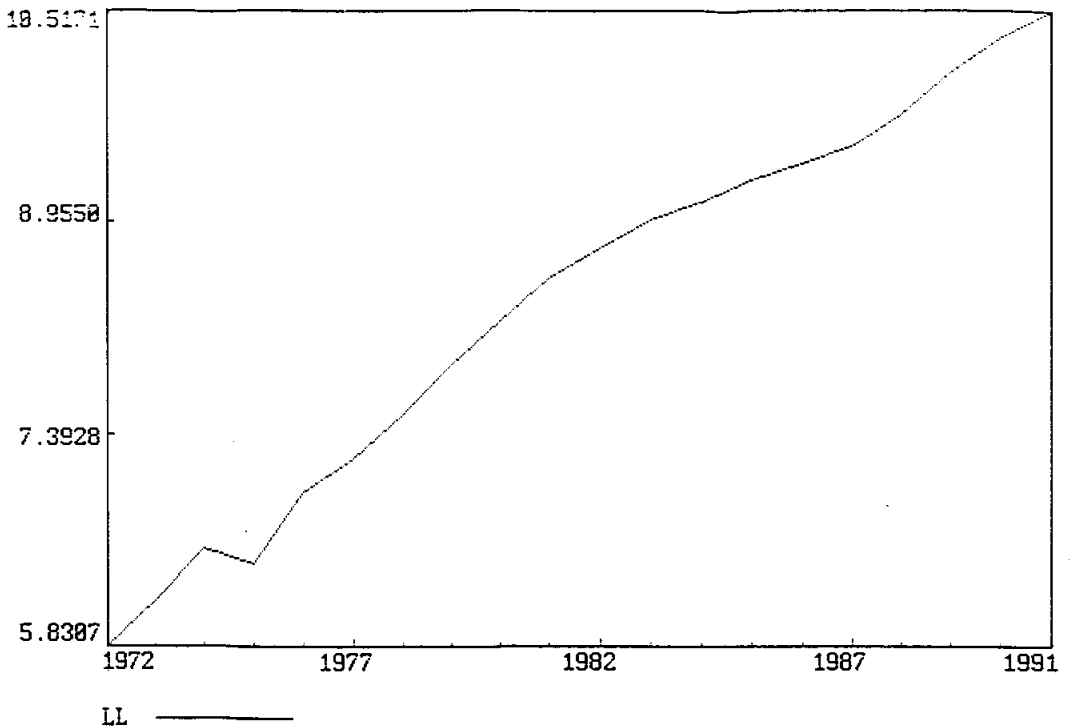
The estimated cointegrating vectors and the estimated adjustment coefficients are reported in Table 4.12. Among three cointegrating vectors, an economically meaningful vector is the third-one and thus a long-run relationship between loans to SMIs, money supply, interest rate and guarantees to SMIs may be defined as:

$$LL = 72.4429\ ML1 - 36.8223\ IL + 6.6978\ GL1 \quad \ldots\ldots\ldots \quad (8)$$

where, LL : Loans to SMIs in log
ML1 : First differences of money supply in log
IL : Interest rate in log
GL1 : First differences of guarantees to SMIs in log

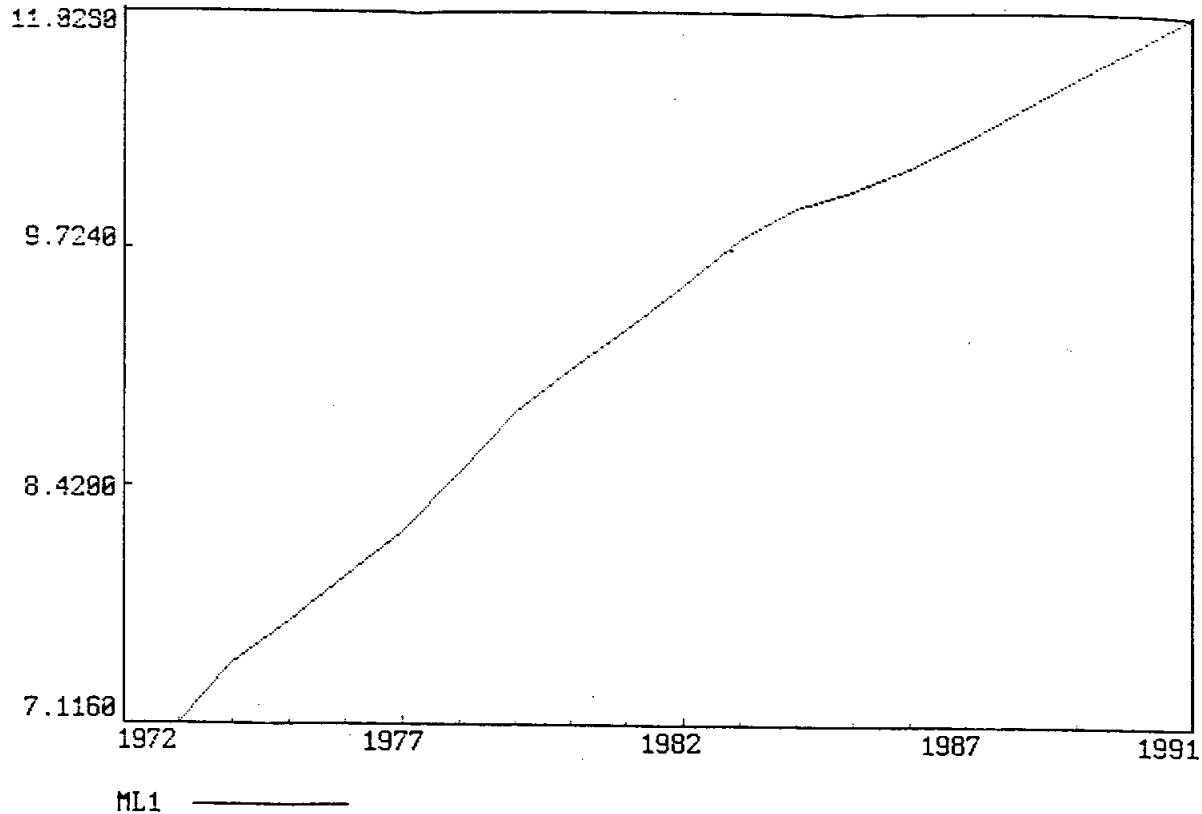
Graph 4.33

Bank Loans to SMIs in Korea (S.A. in Log)



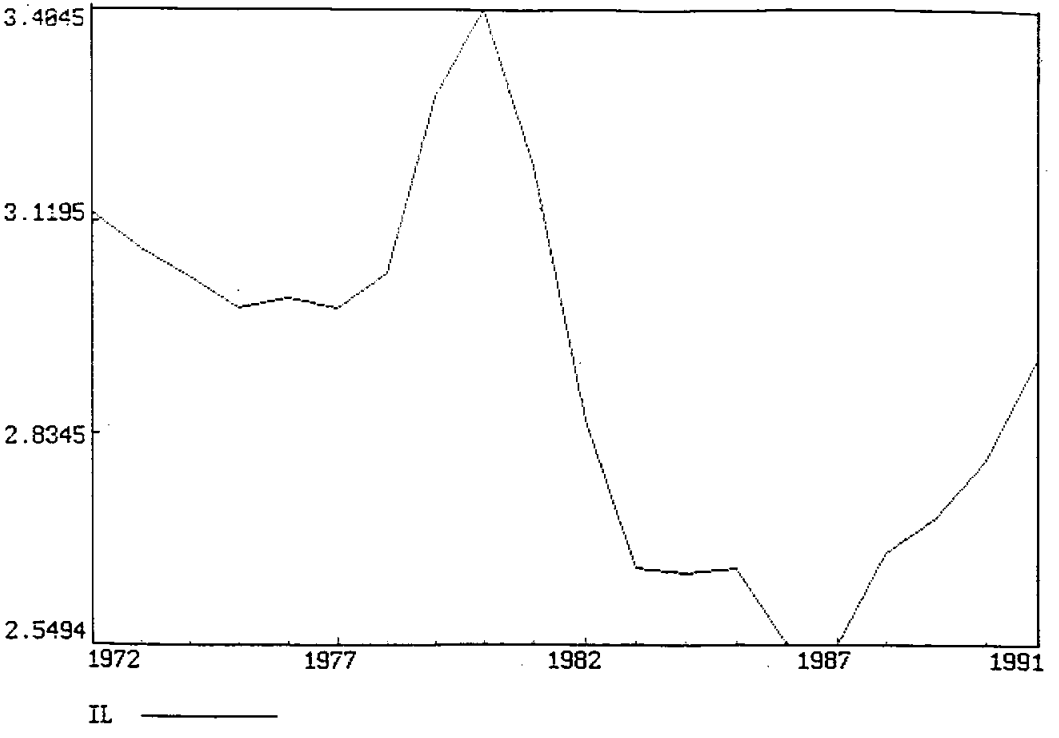
Graph 4.34

First Differences of Money Supply in Korea (S.A. in Log)



Graph 4.35

Interest Rate in Korea (S.A. in Log)



Graph 4.36

First Differences of Guarantees to SMIs in Korea (S.A. in Log)

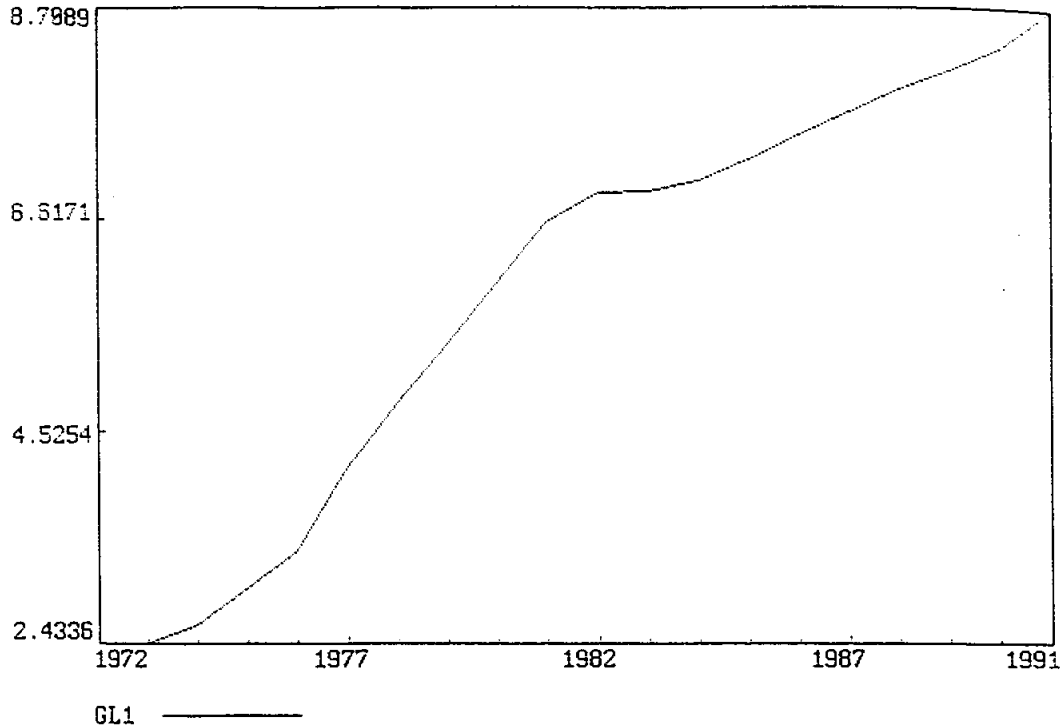


Table 4.11

JOHANSEN TESTS FOR KOREA

Johansen Maximum Likelihood Procedure (Trended case, with trend in DGP)
Cointegration LR Test Based on Maximal Eigenvalue of the Stochastic Matrix

16 observations from 1976 to 1991. Maximum lag in VAR = 3.
List of variables included in the cointegrating vector:

LL	ML1	IL	GL1

List of eigenvalues in descending order:

1.00000	.99646	.68481	.11448

Null	Alternative	Statistic	95% Critical Value	90% Critical Value
r = 0	r = 1	*NONE*	27.0670	24.7340
r<= 1	r = 2	90.2826	20.9670	18.5980
r<= 2	r = 3	18.4732	14.0690	12.0710
r<= 3	r = 4	1.9453	3.7620	2.6870

Johansen Maximum Likelihood Procedure (Trended case, with trend in DGP)
Cointegration LR Test Based on Trace of the Stochastic Matrix

16 observations from 1976 to 1991. Maximum lag in VAR = 3.
List of variables included in the cointegrating vector:

LL	ML1	IL	GL1

List of eigenvalues in descending order:

1.00000	.99646	.68481	.11448

Null	Alternative	Statistic	95% Critical Value	90% Critical Value
r = 0	r>= 1	*NONE*	47.2100	43.9490
r<= 1	r>= 2	110.7012	29.6800	26.7850
r<= 2	r>= 3	20.4186	15.4100	13.3250
r<= 3	r = 4	1.9453	3.7620	2.6870

Table 4.12

COINTEGRATION VECTOR ESTIMATION RESULTS FOR KOREA

Estimated Cointegrated Vectors in Johansen Estimation(Normalized in Brackets)

16 observations from 1976 to 1991. Maximum lag in VAR = 3, chosen r = 3.

	Vector 1	Vector 2	Vector 3
LL	-1.1516	-.67715	.14685
	(-1.0000)	(-1.0000)	(-1.0000)
ML1	-16.2577	-25.1817	-10.6384
	(-14.1180)	(-37.1880)	(72.4429)
IL	2.9666	2.4678	5.4074
	(2.5762)	(3.6444)	(-36.8223)
GL1	-8.0790	-2.1720	-.98359
	(-7.0157)	(-3.2076)	(6.6978)

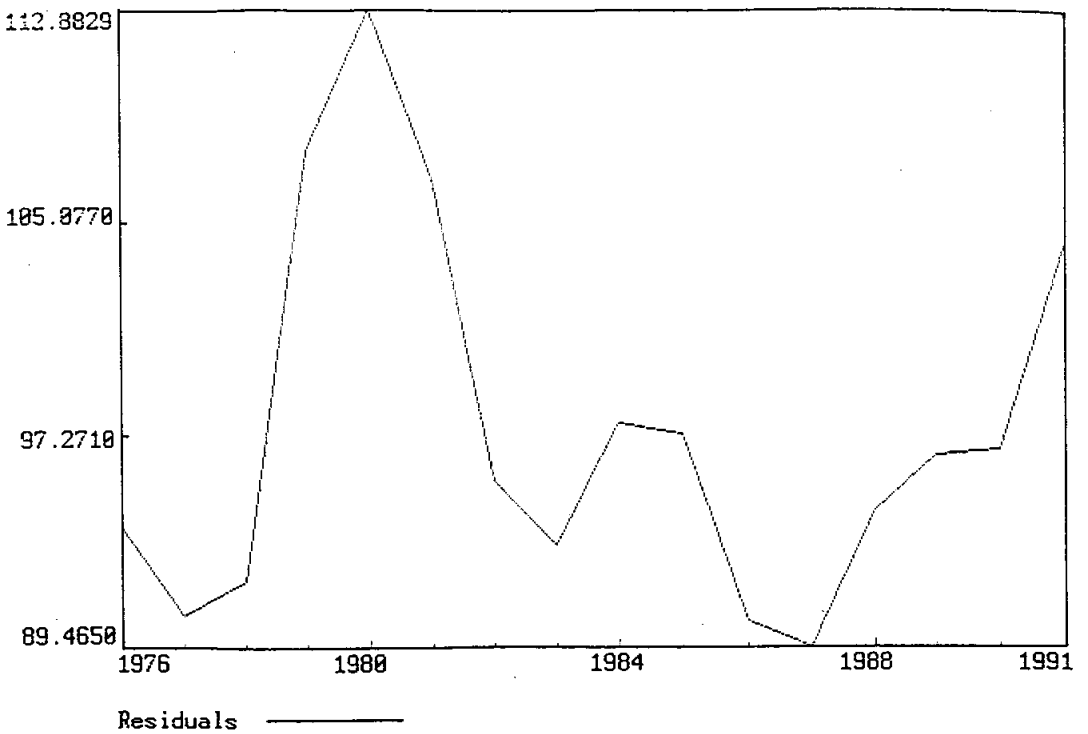
Estimated Adjustment Matrix in Johansen Estimation(Normalized in Brackets)

16 observations from 1976 to 1991. Maximum lag in VAR = 3, chosen r = 3.

	Vector 1	Vector 2	Vector 3
LL	.14710	-.27221	.050037
	(.16939)	(-.18432)	(-.0073481)
ML1	.028380	.021454	.0037308
	(.032681)	(.014528)	(-.5479E-3)
IL	-.035371	-.067874	-.11916
	(-.040732)	(-.045960)	(.017499)
GL1	.32012	-.18273	-.22855
	(.36864)	(-.12374)	(.033564)

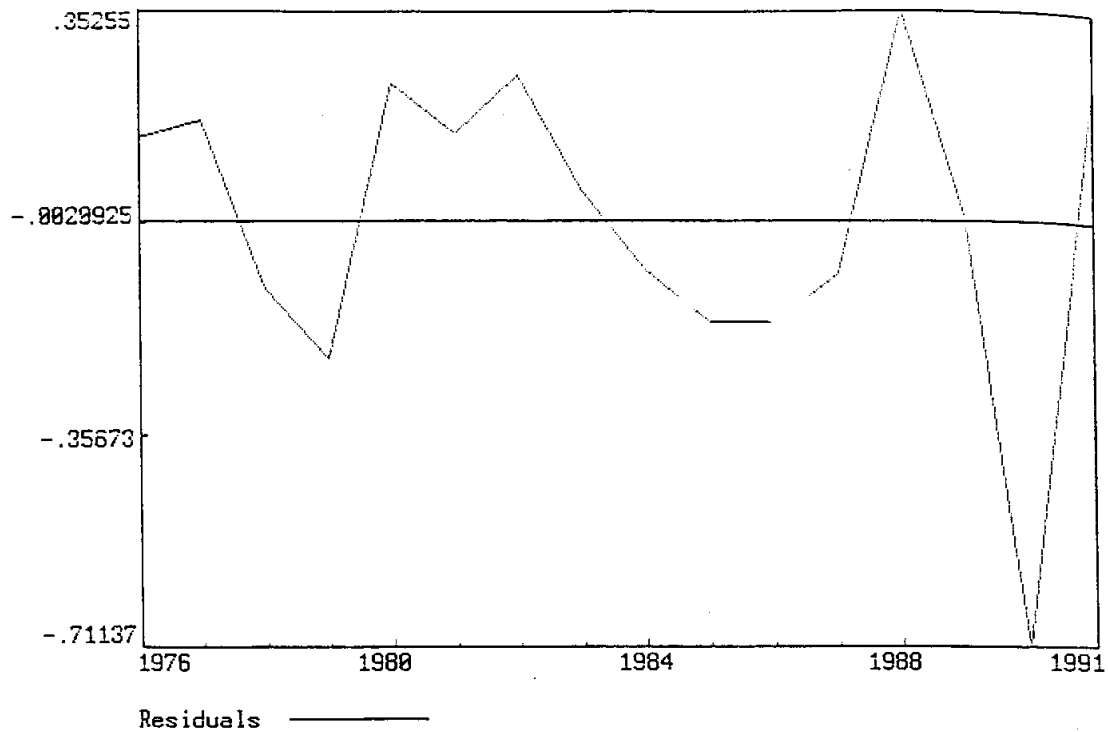
Graph 4.37

Residuals of Cointegrating Vector 3



Graph 4.38

Residuals of Cointegrating Vector 3 Adjusted for Short-Run Dynamics



The plots of cointegration relationship and cointegration relationship adjusted for short-run dynamics are shown in Graphs 4.37 and 4.38 respectively.

Cointegration relationship adjusted for short-run dynamics describes an inherent tendency to move towards the equilibrium states, without necessarily ever reaching it because of frequent and often large shocks pushing it away from the equilibrium path. In that sense, the graph of cointegration relationship describes actual deviation from the equilibrium path as a function of short-run effects, while the graph of cointegration relationship adjusted for short-run dynamics shows the adjustment path corrected for the short-run dynamics of the model (*Johansen and Juselius*, 1992).

3.3 Malaysia

In Malaysia, all the series of loans to SMIs, money supply and interest rate are I(1). The graphs on the series of loans to SMIs and money supply show strong trends (Graphs 5.39 and 5.40), and thus a model with a linear trend is assumed. The cointegration test results of a VAR model with three lags are reported in Table 4.13. In both the maximal eigenvalue statistics and trace statistic, the null hypothesis of $r \leq 2$ against the alternative hypothesis of $r=3$ rejected at 5-percent significant level. Consequently, one may conclude that there are three cointegrating vectors in this model.

The estimated cointegrating vectors and the estimated adjustment coefficients are reported in Table 4.14. Among the three cointegrating vectors, the second one may make sense economically and consequently, a long-run relationship between loans to SMIs, money supply and interest rate may be defined as

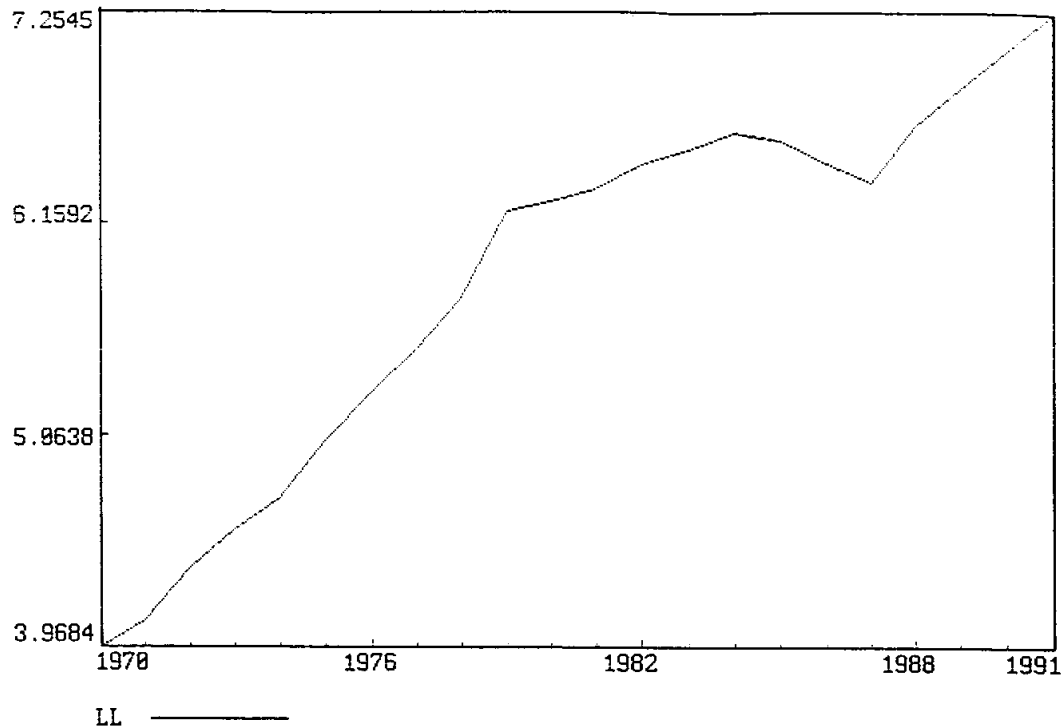
$$LL = 1.3051\ ML - 2.5677\ IL \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (9)$$

where, LL : Loans to SMIs in log
ML : Money supply in log
IL : Interest rate in log

The graphs of cointegration relationship and of cointegration relationship adjusted for short-run dynamics are respectively shown in Graphs 4.42 and 4.43.

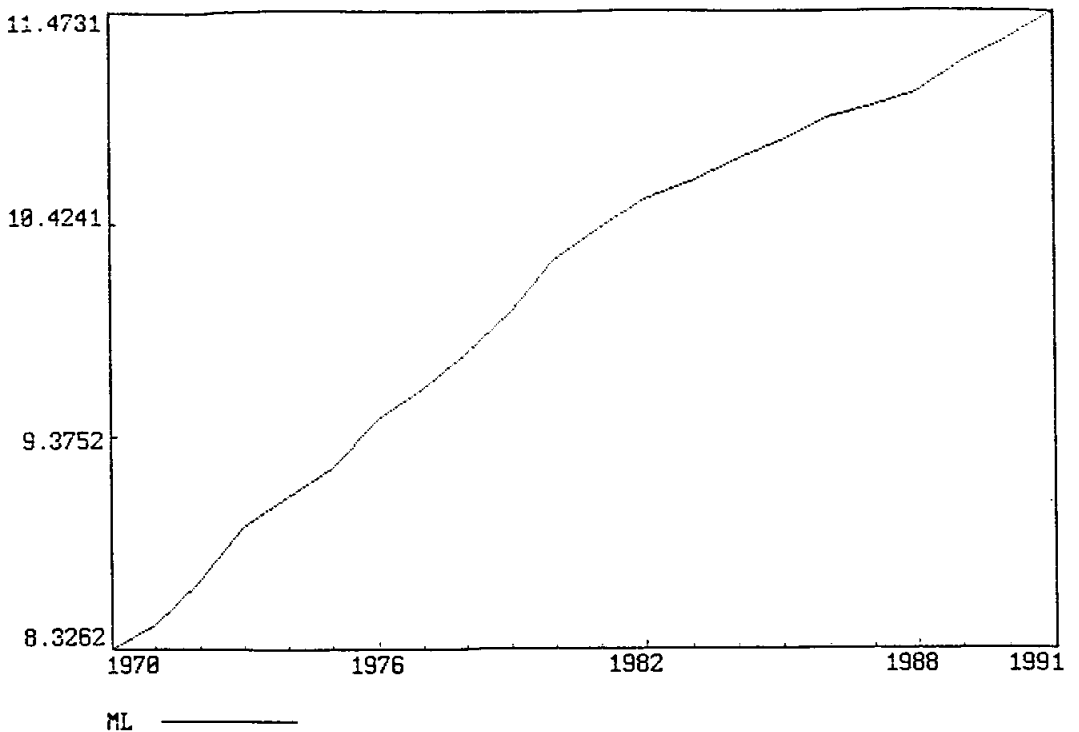
Graph 4.39

Loans to SIs in Malaysia (S.A. in Log)



Graph 4.40

Money Supply in Malaysia (S.A. in Log)



Graph 4.41

Interest Rate in Malaysia (S.A. in Log)

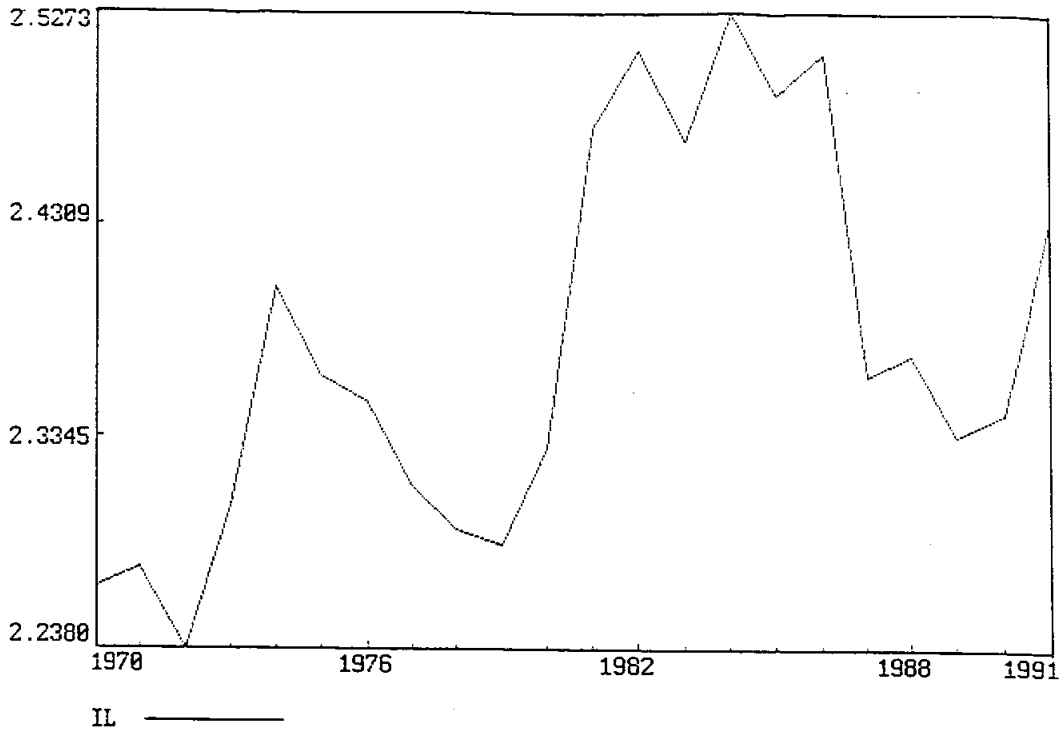


Table 4.13

JOHANSEN TESTS FOR MALAYSIA

Johansen Maximum Likelihood Procedure (Trended case, with trend in DGP)
Cointegration LR Test Based on Maximal Eigenvalue of the Stochastic Matrix

19 observations from 1973 to 1991. Maximum lag in VAR = 3.
List of variables included in the cointegrating vector:
LL ML IL
List of eigenvalues in descending order:
.81900 .34989 .20749

Null	Alternative	Statistic	95% Critical Value	90% Critical Value
r = 0	r = 1	32.4758	20.9670	18.5980
r<= 1	r = 2	8.1817	14.0690	12.0710
r<= 2	r = 3	4.4185	3.7620	2.6870

Johansen Maximum Likelihood Procedure (Trended case, with trend in DGP)
Cointegration LR Test Based on Trace of the Stochastic Matrix

19 observations from 1973 to 1991. Maximum lag in VAR = 3.
List of variables included in the cointegrating vector:
LL ML IL
List of eigenvalues in descending order:
.81900 .34989 .20749

Null	Alternative	Statistic	95% Critical Value	90% Critical Value
r = 0	r>= 1	45.0760	29.6800	26.7850
r<= 1	r>= 2	12.6003	15.4100	13.3250
r<= 2	r = 3	4.4185	3.7620	2.6870

Table 4.14

COINTEGRATION VECTOR ESTIMATION RESULTS FOR MALAYSIA

Estimated Cointegrated Vectors in Johansen Estimation(Normalized in Brackets)

19 observations from 1973 to 1991. Maximum lag in VAR = 3, chosen r = 3.

	Vector 1	Vector 2	Vector 3
LL	1.3659	-1.0147	-1.1143
	(-1.0000)	(-1.0000)	(-1.0000)
ML	-1.6589	1.3243	.81365
	(1.2146)	(1.3051)	(.73016)
IL	-7.2845	-2.6054	1.9204
	(5.3333)	(-2.5677)	(1.7233)

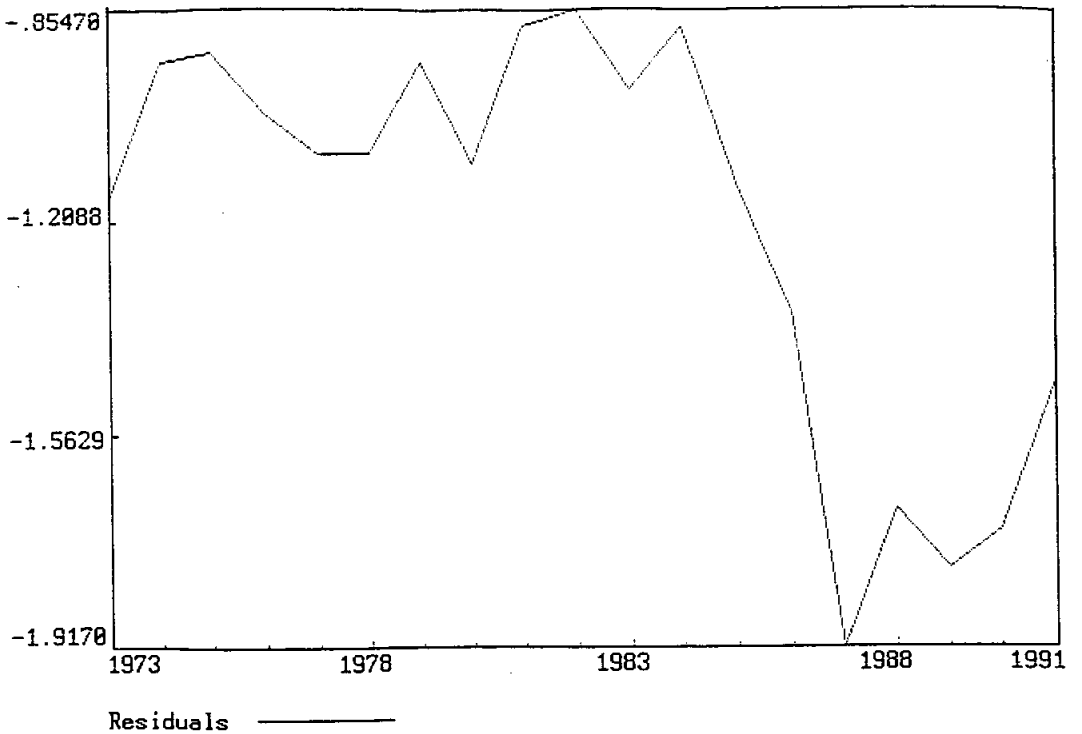
Estimated Adjustment Matrix in Johansen Estimation(Normalized in Brackets)

19 observations from 1973 to 1991. Maximum lag in VAR = 3, chosen r = 3.

	Vector 1	Vector 2	Vector 3
LL	.11653	.18181	.13905
	(-.15916)	(.18448)	(.15495)
ML	.11264	-.027461	-.0086033
	(-.15385)	(-.027864)	(-.0095871)
IL	.062956	.069840	-.085044
	(-.085989)	(.070865)	(-.094768)

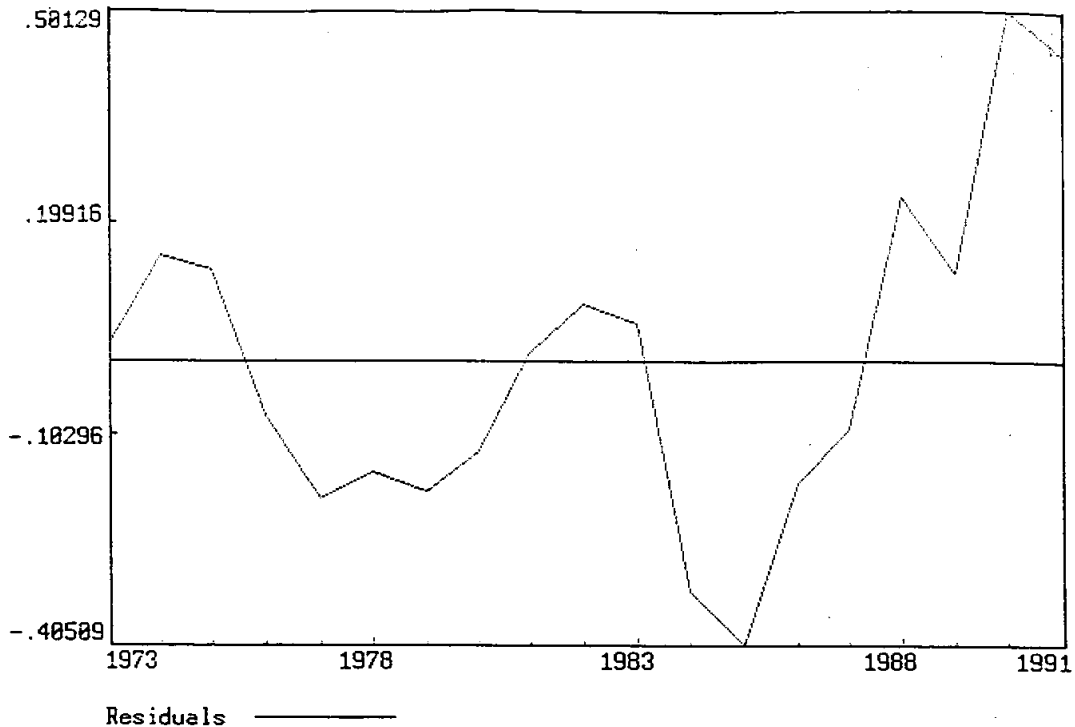
Graph 4.42

Residuals of Cointegrating Vector 2



Graph 4.43

Residuals of Cointegrating Vector 2 Adjusted for Short-Run Dynamics



3.4 Philippines

In the Philippines, quarterly data are used, differently from the above two countries employing annual data, and thus all the data are seasonally adjusted with the X-11 method.

All the series of loans to SMIs, money supply and interest rate are defined as I(1) in the above unit root test. The graphs for the time series of loans to SMIs and money supply show trends (Graphs 4.44 and 4.45), and thus a model with a linear trend is also assumed.

The number of lags of a VAR model are assumed to be eight, enough to reflect the properties of quarterly data series.

The cointegration test results of the model are reported in Table 4.15. In both the maximal eigenvalue statistic and trace statistic, the null hypothesis of r=0 is rejected but the null hypothesis of $r \leq 1$ is accepted at the 5-percent significant level. Consequently, one may conclude that this model has one cointegrating vector.

The estimated cointegrating vector reported in Table 4.16 is also economically meaningful and thus a long-run relationship between loans to SMIs, money supply and interest rate is defined as:

$$LL = 1.3304\ ML - 2.7292\ IL \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ (10)$$

where, LL : Loans to SMIs in log
ML : Money supply in log
IL : Interest rate in log

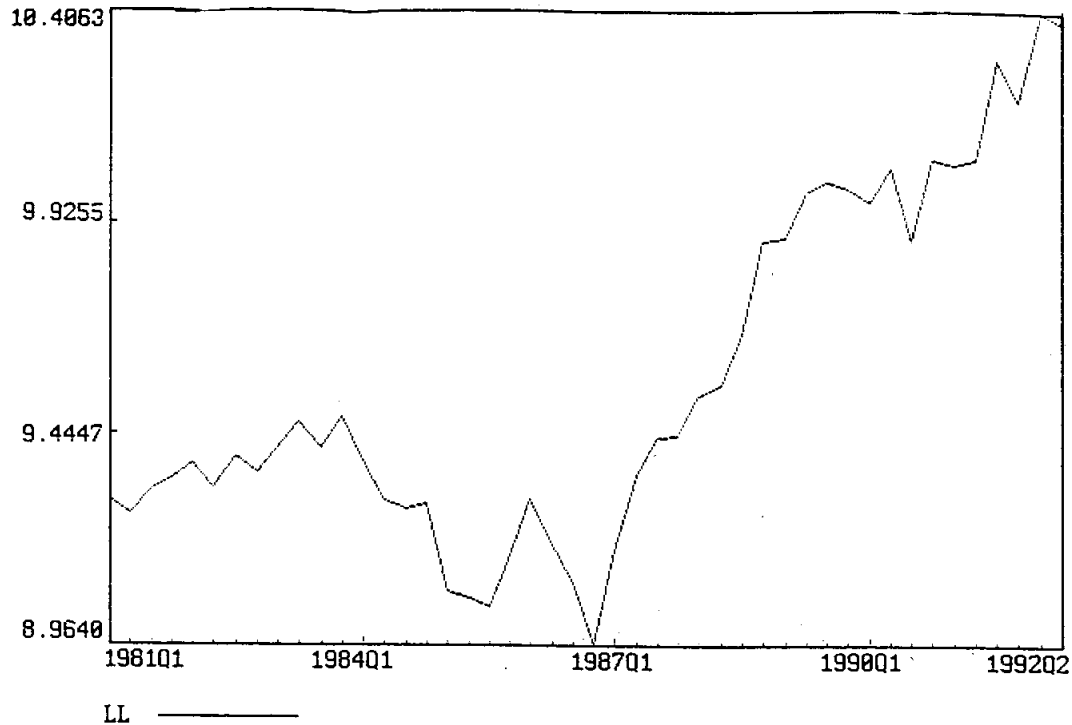
IV. Short-Run Dynamics: Vector Error Correction Model

4.1 Vector Error Correction Model

If X_t and Y_t are cointegrated, there is a long-run relationship between them. Furthermore, the short-run dynamics can be described by the error correction model (ECM). This is known as the Granger representation theorem. If $X_t \sim I(1)$, $y_t \sim I(0)$, and $Z_t = Y_t - \beta X_t \approx \tau(a)$, i.e., X_t and Y_t are cointegrated, the Granger representation theorem says that in this case X_t and Y_t may be considered to be generated by ECMs of the form:

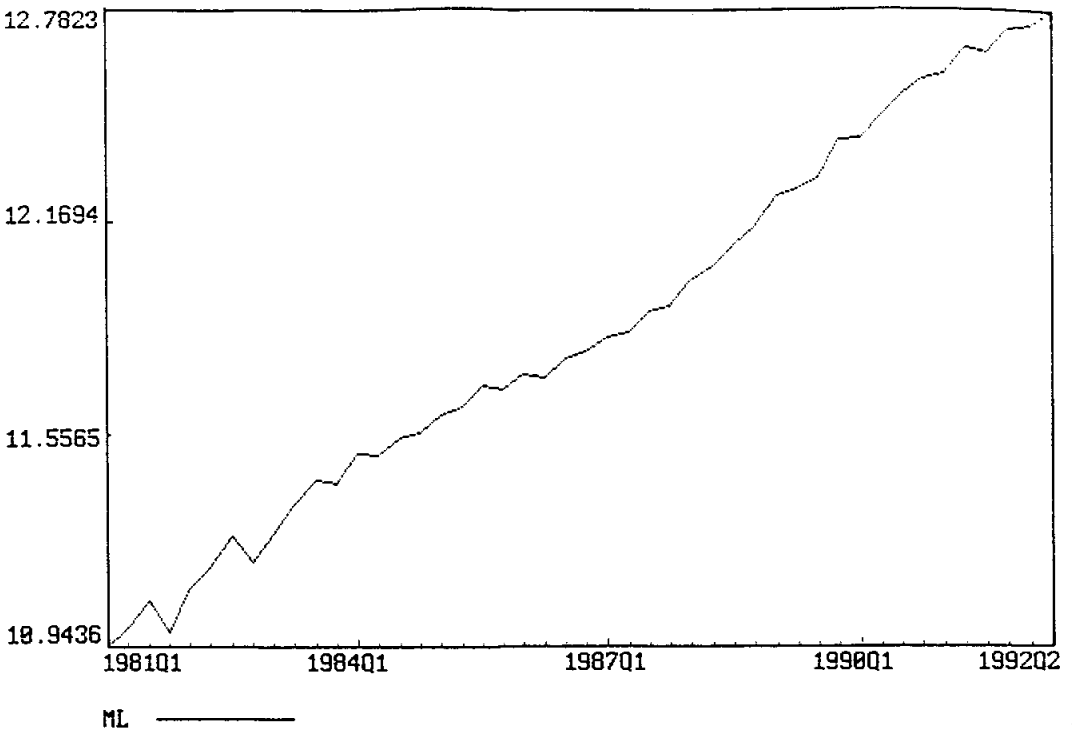
Graph 4.44

Loans to SMIs in the Philippines (S.A. in Log)



Graph 4.45

Money Supply in the Philippines (S.A. in Log)



Graph 4.46

Interest Rates in the Philippines (S.A. in Log)

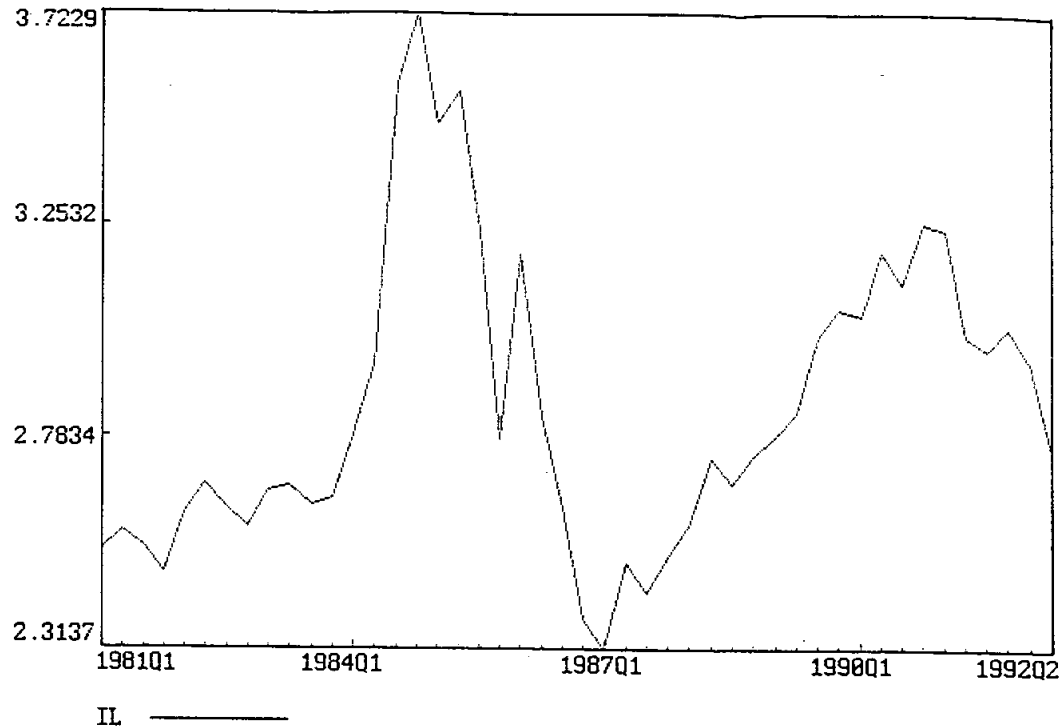


Table 4.15

JOHANSEN TESTS FOR THE PHILIPPINES

Johansen Maximum Likelihood Procedure (Trended case, with trend in DGP)
Cointegration LR Test Based on Maximal Eigenvalue of the Stochastic Matrix

38 observations from 1983Q1 to 1992Q2. Maximum lag in VAR = 8.
List of variables included in the cointegrating vector:
LL ML IL
List of eigenvalues in descending order:
.71142 .21372 .8939E-4

Null	Alternative	Statistic	95% Critical Value	90% Critical Value
r = 0	r = 1	47.2260	20.9670	18.5980
r<= 1	r = 2	9.1366	14.0690	12.0710
r<= 2	r = 3	.0033969	3.7620	2.6870

Johansen Maximum Likelihood Procedure (Trended case, with trend in DGP)
Cointegration LR Test Based on Trace of the Stochastic Matrix

38 observations from 1983Q1 to 1992Q2. Maximum lag in VAR = 8.
List of variables included in the cointegrating vector:
LL ML IL
List of eigenvalues in descending order:
.71142 .21372 .8939E-4

Null	Alternative	Statistic	95% Critical Value	90% Critical Value
r = 0	r>= 1	56.3660	29.6800	26.7850
r<= 1	r>= 2	9.1400	15.4100	13.3250
r<= 2	r = 3	0033969	3.7620	2.6870

Table 4.16

COINTEGRATION VECTOR ESTIMATION RESULTS FOR THE PHILIPPINES

Estimated Cointegrated Vectors in Johansen Estimation(Normalized in Brackets)

38 observations from 1983Q1 to 1992Q2. Maximum lag in VAR = 8, chosen r = 1.

	Vector 1
LL	.91679
	(-1.0000)
ML	-1.2197
	(1.3304)
IL	2.5021
	(-2.7292)

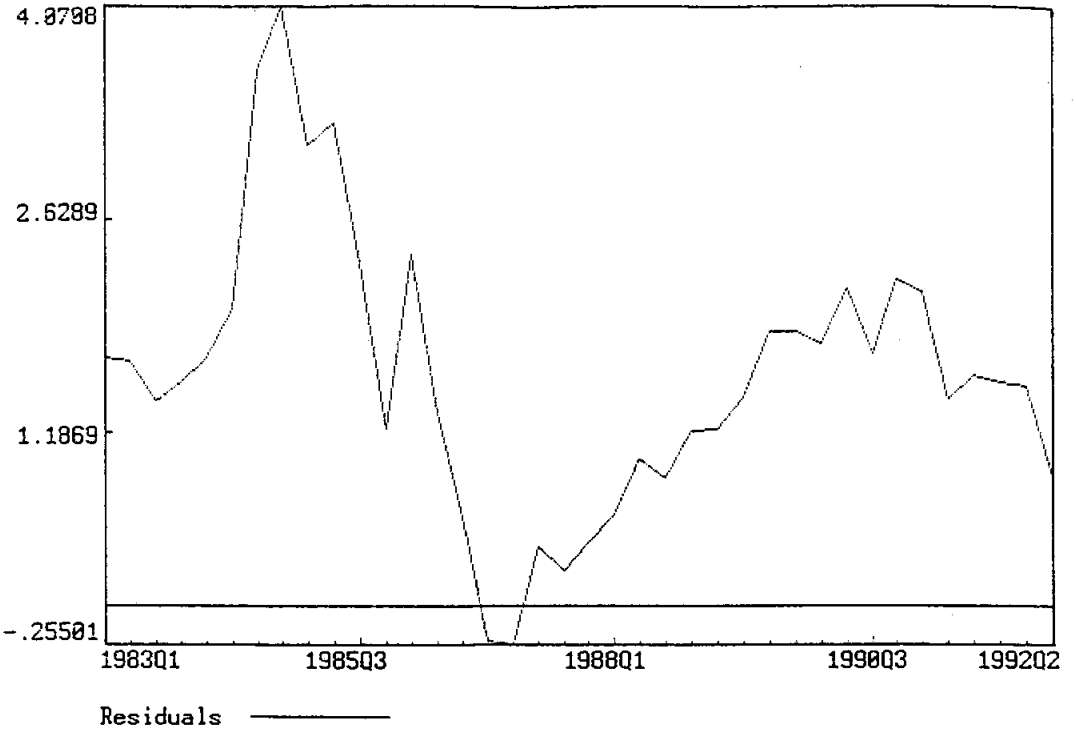
Estimated Adjustment Matrix in Johansen Estimation(Normalized in Brackets)

38 observations from 1983Q1 to 1992Q2. Maximum lag in VAR = 8, chosen r = 1.

	Vector 1
LL	-.34228
	(.31380)
ML	-.023138
	(.021212)
IL	-.37423
	(.34309)

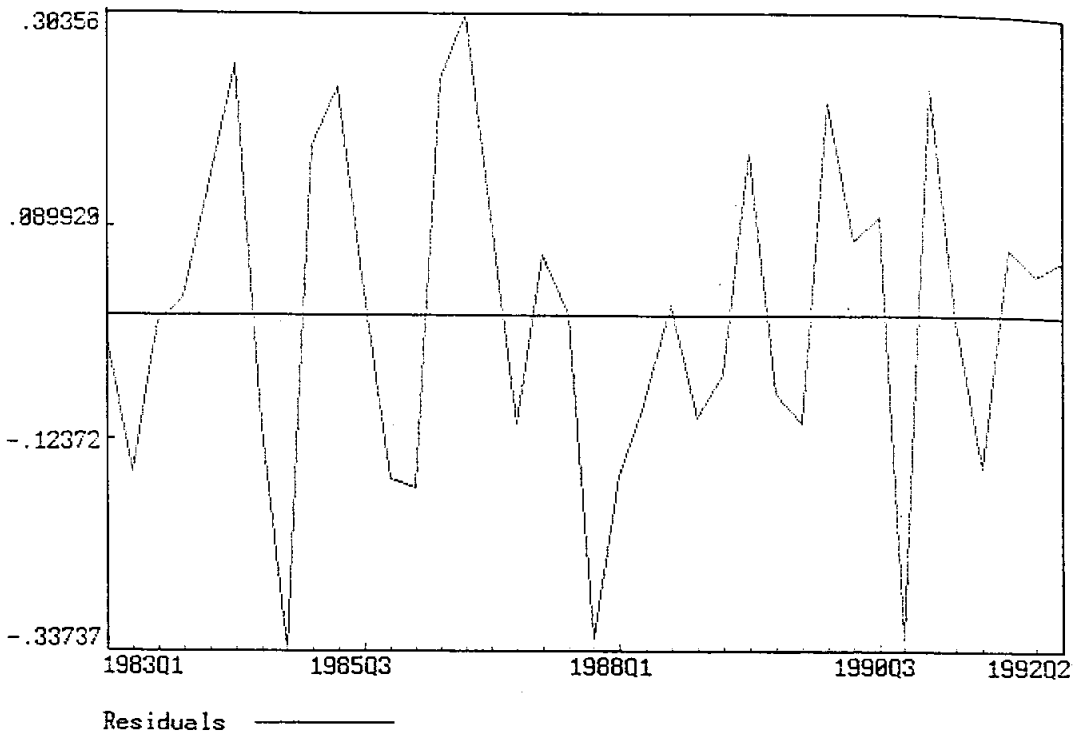
4.47

Residuals of Cointegrating Vector 1



4.48

Residuals of Cointegrating Vector 1 Adjusted for Short-Run Dynamics



$$\Delta X_t = P_1 Z_{t-1} + \text{lagged } (\Delta X_t, \Delta Y_t) + \varepsilon_{1t} \quad \ldots\ldots\ldots\ldots (11)$$
$$\Delta Y_t = P_2 Z_{t-1} + \text{lagged } (\Delta X_t, \Delta Y_t) + \varepsilon_{2t}$$

where at least one of ρ_1 and ρ_2 is non-zero and ε_{1t} and ε_{2t} are white-noise errors.

Note that the above equation (4) is already the error correction form of a VAR model which is called a Vector Error Correction Model (VECM). In a VECM, πX_{t-k} is an error correction term. This model can be classified into three cases depending on the number of cointegrating vectors, i.e., rank (π):

(i) Rank (π) = P, i.e., the matrix π has full rank in which case all the variables are trend-stationary and the application of an unrestricted VAR in levels is appropriate;
(ii) Rank (π) = e, i.e., the matrix π is the null matrix in which no cointegration exists and the application of an unrestricted VAR in first differences is appropriate; and,
(iii) O<Rank (π) = r<P, in which case there are pxr matrices α and β such that $\pi = \alpha\beta'$, and thus an unrestricted VAR either in levels or in differences is inappropriate. The data can be described by an error correction model of the form (4) or by a VAR in r cointegration relationships and n-r first differences of the process.

One important contribution of cointegration tests is in the modeling of VAR systems, whether they should be in levels or first differences, or both with some restrictions. The cointegration theory gives a theoretical basis for imposing some restrictions on the VAR model. It has been found that predictions from a VAR model improved with restrictions imposed by cointegration theory (*Engle and Yoo*, 1987). In this paper, the above VECM, based on the above cointegration test results, is employed to estimate a VAR model and then to carry out multivariate Granger causality test to identify causal relationships between variables.

4.2 Korea

Multivariate causality test results using the above Korean VECM are reported in Table 4.17. The results show that, in Korea, the nominal interest rate and guarantees to SMIs cause loans to SMIs at the 2-percent and the 3-percent significant levels respectively, while money supply

does not. This likely means that an increase in the money supply may not be the conducive channel for funds increase into SMIs and moreover, the relatively high nominal interest rate is a burden to SMIs for financing themselves. Strong causal effects of guarantees to SMIs on loans to SMIs are found as expected. It is also found that loans to SMIs do not cause money supply and the nominal interest rate in Korea.

4.3 Malaysia

In Malaysia, the matrix π has full rank as reported in the above cointegration test. Accordingly, an unrestricted VAR model in levels rather than VECM was applied. Multivariate causality test results using this model are reported in Table 4.18, which shows that money supply causes loans to SMIs at the 10-percent significant level, while the nominal interest rate does not.

This probably implies that in Malaysia, the level of the nominal interest rate is relatively low and thus it does not count for financing SMIs as much as fund availability does. It is also found that loans to SMIs cause money supply at the 5-percent significant level, while it does not cause the interest rate.

4.4 Philippines

In the Philippines, the above cointegration test results show that there is one cointegrating vector between loans to SMIs, money supply and the interest rate. Accordingly, a VECM was applied to test multivariate Granger causality.

The test results are reported in Table 4.19. However, it is found that neither money supply nor interest rate cause loans to SMIs in the short run and vice-versa. In the long run, cointegration test results show economically meaningful relationships between loans to SMIs, money supply and the interest rate as shown in the above equation (10). Nevertheless, short-run dynamic relationships between them are not found. This probably implies that the other policy variables for financing SMIs such as quantitative credit policies rather than money supply and the interest rate play more important roles in financing for SMIs in the short run, even though the latter variables influence financing for SMIs in the long run.

TABLE 4.17

VECM (LL1, ML11, IL1, GL11) TEST RESULTS

DEPENDENT VARIABLES	INDEPENDENT VARIABLES			
	LL1	ML11	IL1	GL11
LL1	8.2327	3.7487	0.0268	1.1121
	(0.1083)	(0.2106)	(0.9739)	(0.4734)
ML11	5.0697	2.0234	5.4476	0.0165
	(0.1648)	(0.3308)	(0.1551)	(0.9838)
IL1	61.7596	2.6345	0.2972	0.2203
	(0.0159)	(0.2751)	(0.7709)	(0.8194)
GL11	31.5416	1.2233	2.9101	0.6687
	(0.0307)	(0.4498)	(0.2558)	(0.5993)

Note: Upper figures -- F-Statistics

Figures in parenthesis -- significance levels

TABLE 4.18

VAR (LL, ML, IL) TEST RESULTS

DEPENDENT VARIABLES	INDEPENDENT VARIABLES		
	LL	ML	IL
LL	11.3721	4.7118	0.0267
	(0.0014)	(0.0267)	(0.9937)
ML	2.7190	111.5354	0.9117
	(0.1006)	(0.0000)	(0.4693)
IL	1.4475	0.6157	7.3589
	(0.2869)	(0.6204)	(0.0068)

Note: Upper figures -- F-Statistics

Figures in parenthesis -- significance levels

TABLE 4.19

VECM (LL1, ML1, IL1) TEST RESULTS

DEPENDENT VARIABLES	INDEPENDENT VARIABLES		
	LL1	ML1	IL1
LL1	1.0964	1.8706	1.0636
	(0.4450)	(0.1995)	(0.4609)
ML1	1.0049	3.8568	1.5898
	(0.4908)	(0.0388)	(0.2644)
IL1	1.6372	2.5935	1.4225
	(0.2520)	(0.1027)	(0.3146)

Note: Upper figures -- F-Statistics

Figures in parenthesis -- significance levels

V. Summary and Conclusion

The long-run and short-run dynamic effects of important monetary policy variables such as money supply, interest rate and guarantees to SMIs on the loans to SMIs of formal financial institutions were analyzed in order to derive some useful monetary policy implications for financing SMIs.

In particular, Johansen's procedure was employed to search for a long-run relationship between loans to SMIs, money supply, the interest rate and guarantees to SMIs. In all the countries under review, i.e., Korea, Malaysia and the Philippines, economically meaningful relationships between them were found as expected, although relatively small samples were used to derive a long-run relationship due to the restrictions in data collection. Based on the above long-run relationships, one may conclude that the more money supply and the lower the nominal interest rate, the more loans become available to SMIs in the long run.

A VECM was employed to examine short-run dynamic relationships between the above variables. A VECM has been pointed out to work better than a VAR model because the former takes into account an error correction term, while the latter does not. However, the short-run relationships showed up differently from country to country, reflecting different financial market conditions and government/central bank policies for financing SMIs of the respective countries.

For instance, in Korea where the nominal interest rate is relatively high but the share of loan outstanding to SMIs in total loan outstanding of banks is also relatively high (57 percent in 1991), the interest rate causes loans to SMIs, while money supply does not. Same result was found in Japan (*Ishida*, 1992).

On the other hand, in Malaysia where the nominal interest rate is relatively low but the share of loan outstanding to SMIs in total loan outstanding of commercial banks is insignificant (4 percent in 1991), money supply causes loans to SMIs, while the interest rate does not.

In the Philippines, neither money supply nor the interest rate causes loans to SMIs. In this case, probably other policy variables seem to affect more strongly loans to SMIs in the short-run, although money

supply and the interest rate influence loans to SMIs in the long run.

Of course, it is found that guarantees to SMIs affect positively loans to SMIs in both the long run and short run as expected. These results were derived from analyses using relatively small samples. Moreover, in developing countries, some data such as money supply and the interest rate have often been inflexible for modeling. Nevertheless, from the above analysis one may derive some useful monetary policy implications including the importance for financing SMIs to keep the nominal interest rate sufficiently low, in particular in the economy where financing SMIs heavily depends on bank loans, and to provide enough funds in financial markets, in particular in the economy where SMIs find it difficult to access formal financial institutions.

In addition, the transmission system should be improved to channel more of the amount of money increase into SMIs. It is also confirmed that enhancement of guarantee systems for SMIs is crucial for financing SMIs, most of which have neither sufficient collaterals nor credit-worthiness.

Chapter 5

POLICY ISSUES AND SUGGESTIONS FOR FINANCING SMIs IN THE SEACEN COUNTRIES

In spite of the important roles of SMIs in economic development and a lot of supporting policies for financing SMIs, SMIs still face a number of problems, which may fall into the following four main categories:

I. Inaccessibility to Credit

One of the common findings from the above analyses is that SMIs in most SEACEN countries are launched mainly with their own funds and additionally rely on their own savings or reinvestment of profit for the further expansion of their business. Their external financing is mostly indirect financing from banking and non-bank financial institutions since their creditworthiness is insufficient to access the money and capital markets for direct financing. Nevertheless, the share of banking institutions' loans to SMIs in their total loans is quite insignificant. For instance, in Malaysia, the loan outstanding to SMIs accounted for only 4 percent of total commercial banks' loan outstanding as of the end of 1991. This means that SMIs find it hard to access the credits of formal financial institutions. In the above empirical analysis, therefore, money supply rather than the interest rate causes loans to SMIs in Malaysia.

Of course, there are some exceptional cases such as Korea and Taiwan where SMIs highly depend on external financing and the share of loan outstanding to SMIs in total loan outstanding of banks is also relatively high. That is, in Korea, the own capital of SMIs accounted for only 19 percent of total capital in 1991 and the share of loan outstanding to SMIs in total loan outstanding of banks was 57 percent in 1991.

In Taiwan, the ratio of current liability to total assets of SMIs was 62 percent and the share of loan outstanding to SMIs in total loan outstanding of domestic banks in 1991 was 37 percent. In this case, the interest rate rather than money supply causes loans to SMIs as shown in the above empirical analysis of Korea. Nevertheless, in general, it was observed that inaccessibility to credit was one of the severe barriers to financing SMIs.

One of the main reasons of the inaccessibility is lack of funds. Ordinary commercial banks are normally reluctant to provide SMIs with loans mainly because of their inherent high risks. Accordingly, specialized financial institutions for financing SMIs are inevitable. However, there are no sufficient sound specialized financial institutions for SMIs except in Korea and Taiwan. In addition, the funds of some specialized financial institutions for SMIs, mostly development institutions and government-owned commercial banks, are raised from government or international financial organizations such as the World Bank and Asian Development Bank (ADB) and consequently, there must be limits to funds available for SMIs.

In order to expand the availability of funds, the source of funds of specialized financial institutions should be diversified. In Korea and Taiwan, the main sources of funds are deposits from the public and the issuance of small and medium industry finance debentures. Institutional investors such as various kinds of funds could be good alternative sources.

As financial liberalization proceeds, conventional quantitative credit schemes for SMIs, such as a mandatory minimum lending ratios to SMIs, have become ineffective. Selective credit policies have often been found to have resulted in inefficient allocation of funds, an increase in non-performing loans of banks and a misconception of the credit, which is often regarded as charity rather than credit. Accordingly, market principles should be adopted more widely in supporting the financing of SMIs. However, liberalized financial institutions may be more reluctant to provide SMIs with loans unless there are sufficient incentives.

Therefore, it is necessary to provide financial institutions with relevant incentives, such as a tax allowance or strengthening of a guarantee system, to encourage them to extend loans to SMIs. In this regard, the role of fiscal funds of government should be enhanced in parallel with an inevitable reduction in selective credit schemes.

II. Lack of Collateral

The other common observation is the inability of SMIs to provide adequate collateral for loans, which restricts access of SMIs to formal financial institutions. Considering the process of financial liberalization

and inevitability of a reduction in selective credit schemes for SMIs, guarantee systems for SMIs should be enhanced. However, in this case, if the expansion of guarantee funds heavily depends on contributions from banking institutions as in Korea, the expansion of funds may be limited. Moreover, it may increase the cost of funds for banking institutions which will finally be transferred again to SMIs. Accordingly, more contribution from government should be considered.

In addition, lending practices of financial institutions should evolve toward a greater focus on the creditworthiness of borrowers rather than on their collateral. In order for financial institutions to move toward this way, they need to improve their loan evaluation capabilities. Government should also provide financial institutions with facilities to train their staff for the improvement of appraisal skills. Provision of guarantee by the guarantee system means a shift of the burden of assessing loans from the financial institutions to the guarantee system. Therefore, the loan evaluation capabilities of the guarantee system also should be enhanced. A routine or occasional review, if necessary, e.g., when economic conditions or riskiness of customers are changed, by financial institutions should be done on the creditworthiness of SMIs.

In this regard, it should be noted that a poor presentation of documents or proposal and incomplete accounting system of SMIs are often obstacles to the right appraisal and consequent reasons of inaccessibility of SMIs to credit. Therefore, government should provide SMIs with suitable training schemes and services for documentation and preparation of complete and correct accounting systems. In this regard, the United Assistance Centre for SMIs (UAC) in Taiwan could be a good example.

The other way to overcome the reluctance of financial institutions to extend loans to SMIs could be to allow securitization of SMI loans such as a mortgage bond market in Malaysia. Higher probability of defaults of securities backed by SMI loans can be compensated by higher yields.

Finally, credit cooperatives as in Taiwan and Korea could be recommended as quite useful financial institutions for SMIs having insufficient collateral. Credit cooperatives basically provide their members who have savings in the cooperatives with loans without requesting for material collateral.

III. Cost of Credit

The ceiling of the lending rate of commercial banks for SMIs, which had been preferentially given in the 1970s to SMIs, has been practically abolished in line with the trend of interest rate liberalization. The member central banks only assist indirectly the loans of commercial banks to SMIs in order to promote their financing for SMIs with a lower interest rate.

Therefore, as interest rate liberalization proceeds, the high cost of credit is becoming an important issue in financing SMIs. The cost of credit of SMIs is, in general, more expensive than that of LIs mainly because SMIs cannot offer adequate collateral. SMIs are regarded to have higher risk. The staffs of financial institutions are not properly trained for the risk appraisal of SMIs and the administration cost for loans to SMIs is higher than for loans to LIs.

At the early stage where SMIs find it hard to access the credit of formal financial institutions, the cost of credit does not matter but only the access to credit does. However, as financial markets and SMIs grow, the cost of credit is more and more becoming one of the important obstacles to financing SMIs. The above empirical analysis shows that the interest rate rather than money supply causes loans to SMIs in Korea. Similar results were found in Japan (Ishida, 1992). In EC countries also, the cost of credit is pointed out as the most severe problem faced by SMIs (Ernst and Young, 1990). As financial markets develop, financing LIs is becoming more dependent on direct financing with help from their good creditworthiness, while financing SMIs still remains highly dependent on bank loans compared with LIs. Therefore, a change in monetary policy such as a change in the interest rate would affect more the financing for SMIs than that for LIs.

In this environment, a conventional ceiling system of lending rate to SMIs is becoming less effective because it makes financial institutions more reluctant to provide SMIs with loans. Accordingly, it may be more appropriate for the government or central bank to provide a subsidy for interest rate differentials between the market rate and a certain lower rate for SMIs or for the government to grant tax incentives to financial institutions providing SMIs with loans of lower interest rate.

IV. Lack of Long-Term Financing

Most financing of SMIs depends on bank loans. For instance, in Korea, the ratio of bank loans to total external financing of SMIs in 1990 recorded 79 percent, while the ratio of financing from the issue of bonds was only 7 percent. Traditionally, bank loans such as overdrafts are for short-term working capital.

Therefore, SMIs have difficulties financing long-term investment of machinery and equipments. This makes the financial structures of SMIs more unstable. Nevertheless, SMIs find it difficult to access capital or money markets because of their lack of creditworthiness. In this regard, two suggestions may be considered. Firstly, the establishment of second or, in some cases, third tier stock markets which aim to provide equity finance for SMIs which do not want or are unable to apply for a full listing may be recommended. Strict listing requirements act as a deterrent to SMIs. It should be further simplified for SMIs within boundaries that keep the credibility of the market.

The over-the-counter (OTC) market in Japan and the third tier market in Taiwan could be good examples. Korea also opened an OTC market in 1987. In the United Kingdom, United States, and France as well, the second or third tier markets are successfully operated with well-developed capital markets. The government policy to support these markets is essential at the early stage for their successful establishment to attract private investors.

Secondly, newly emerging financial instruments such as venture capital, factoring and leasing could be further used towards long-term financing of SMIs. In Korea, 57 venture capital companies and 25 leasing companies are being operated as of the end of 1992.

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Part II

COUNTRY PAPERS

Chapter 6

FINANCING FOR SMIs IN INDONESIA

by
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I. Introduction

The development policy guideline of Indonesia states that in order to equalise development throughout the country, development programmes should cover and give greater opportunity to small-scale enterprises to expand and to develop their businesses. Furthermore, it is important to give those enterprises more responsibility by giving them an opportunity to strengthen their capital, as well as to increase their skills and markets.

It is a fact that the small-scale enterprises have some strategic roles in the economy. They are important not only because they are numerous but also because they have a huge capability to create job opportunities at low cost. On the other hand, small-scale enterprises suffer from disadvantages such as the weakness in management skills, lack of capital, traditional methods of production, and limited markets. Bank Indonesia (BI), as the central bank, has the responsibility to encourage the development in order to promote the smooth production and development activities as well as to expand employment opportunities and increase the living standard of the people. Based on this, Bank Indonesia through the banking system and other concerned institutions participates in the upgrading of small-scale enterprises as a whole through both financial and technical assistance.

Indonesia started its small-scale enterprise financial assistance programme through a "Selective Credit Policy". The financial assistance programme started in 1973 by introducing various subsidised credit schemes. For these schemes, BI provided its official support even at a later stage, assistance as well as refinancing facilities were channelled through the establishment of Small Enterprise Development Project (SEDP) in every BI branch.

II. Salient Features of SMIs in Indonesia

2.1 Definition of a SMI

It is not easy to have an exact definition of a SMI since the definition is usually based on the needs of the users. For BI, the definition of small-scale industry as well as small-scale enterprise is an enterprise with total maximum assets of Rp. 600 million (equivalent to US$ 300,000), excluding land and building. Such a definition makes it easy for banks to verify the total assets of the SMIs which are applying for loans from the banks. For the small- and medium-scale industrial enterprise (SMIE) projects conducted by Bank Indonesia and the World Bank, the definition used for the SMIs is an industry which employs 5 to 20 workers, and with the total assets of US$ 500,000 excluding land and inventory. The Ministry of Industry and the Central Bureau of Statistics (BPS) use the number of employment as a criterion, classifying firms with 5 to 20 workers as small scale.

2.2 Contribution of the Small and Medium-Scale Manufacturing to the Economy in Indonesia

Small-scale industrial enterprises play an important role in the manufacturing sector. The Economic Census in 1986 found that two-thirds of all industrial employees work for firms employing less than 20 persons. The larger part of this employment are contributed by household firms which employ less than 5 workers. Based on the survey conducted by BPS, 53 firms employed 1 to 4 workers while 23 firms employed more than 150 workers.

In value-added terms, the contribution of the small-scale industrial firms is less substantial. GDP data by sector suggest that industrial firms with below 20 employees accounted for 24 percent of the manufacturing value-added in 1989. These industries contributed 4 percent of the total GDP in the same year.

The small industrial enterprises in Indonesia have various businesses. In 1990, there were 1,793,638 number of small manufacturing enterprises employing almost 2 million workers. The activities are food and beverages, textiles, garments and leather, wood and furniture, paper and printing, chemicals and rubber, non-metallic mining, basic metals, metal products, sport appliances and toys, and others. The firms

producing food and beverages accounted for 33 percent of the total enterprises and employed more than 32 percent of the total employment (the number of firms and the number of workers employed are listed in Appendix 6.1). Geographically, the bulk of the small-scale industries is concentrated in the most populated islands, Java and Bali (Appendix 6.2). Their contribution was more than 76 percent of total contribution, and about 88 percent of those enterprises are spread out in the rural areas.

III. Financing Policies for SMIs in the 1980s in Indonesia

Like other countries, Indonesia began small-scale enterprises financial assistance through a "Selective Credit Policy". The financial assistance programme started in 1973 by introducing various subsidised credit schemes such as the Small Investment Credit (KIK), the Permanent Working Capital Credit (KMKP), Mass Guidance Credit (Bimas), and others. Most of the loans were characterised with low interest rates and simple application procedures. BI provided the liquidity credit for the loans.

In line with the development of the economic and financial sector, the Government implemented several deregulation policies to make the banking system more independent. In June 1983, BI removed the credit ceiling regulation which resulted in banks being freed to set their own interest rates for fund mobilisation and credit (except for those credits supported by BI) as well as to increase their loans. In October 1988, BI simplified the procedures and requirements for opening new branches and banks. This deregulation was to enlarge the operational areas of the banks so that these banks would be able to serve all regions within the country. Since then, the number of banks, excluding rural banks, has increased from 111 banks in October 1988 to 194 banks in February 1992, while the number of offices during the same period increased from 1728 to 4247 (Table 6.1).

Only a few commercial banks operate in the big cities, except for the Government-owned commercial banks. On the other hand, rural banks are allowed to operate only in the villages and they are restricted from opening any branches. Therefore, the small-scale enterprises which are usually located in the villages are only able to have access to the rural banks.

Table 6.1

DEVELOPMENT OF BANKS AND OFFICES: 1988-1991

Year	No. of Commercial Banks	No. of Offices	No. of Rural Banks
1988	111	1728	7706
1989	148	2578	7748
1990	171	3563	8516
1991	192	4247	8296

Source: Bank Indonesia, Indonesian Financial Statistic Vol. XXV, No. 3, March 1992.

IV. Current Systems of Financing SMIs in Indonesia

BI launched the deregulation policy package of January 1990 which is called PAKJAN 1990. This package was designed to decrease the dependency of banks on the liquidity credit of BI, while still encouraging the participation of the banks in financing small-scale enterprises by introducing a quota system, a 20 percent of the credit portfolio of each bank must be allocated for the financing of small-scale enterprises. PAKJAN 1990 changed the financial system from a subsidised to a market financial system.

As was already stated, before PAKJAN 1990, BI set up numerous credit schemes for small-scale enterprises which were supported by the liquidity credit from BI. Due to this, the amount of liquidity credit provided increased very rapidly.

The credit programmes have benefited many small businesses. For example, the amount of handicraft exports increased from US$ 30 million at the end of 1986 to US$ 250 million at the end of 1989, increasing by an average of about 244 percent per year. Meanwhile, the increasing total liquidity credit made the dependency of the banks on liquidity credit even greater than before. In addition, the liquidity credit also created some problems because of several weaknesses.

From the monetary authority's point of view, liquidity credit resulted in a high inflation rate since it is "fresh money" produced by BI, meaning it is not generated from the public. Therefore, it has a significant effect on the circulation of money in the economy. It also induced speculation, especially in foreign currencies trading. As the interest rate was very low, the liquidity credit facility did not encourage banks to mobilise deposits from the public. Instead, it developed an excess demand for credit causing the banks to neglect selectivity and prudential analysis on lending procedures as well as allowing fraudulent activities in the use of the credit. From the banks' point of view, they also suffered from a large number of bad debts. The bad debts continued to grow each year to such an extent that they caused spreads of nearly zero in some handling banks. Some of them solved the problem by submitting their claims to PT. Askrindo, an insurance company. From the small debtors' point of view, the cheap credit gave a false perception about loans. The borrower regarded the credit as "charity" rather than an ordinary commercial credit which resulted in some defaulting their repayments. Moreover, there was an indication that some debtors did not use the credit to expand their businesses but instead deposited the funds, reaping higher interest rates than their loan interest.

Being aware of these weaknesses, BI through the deregulation policies of January 1990, simplified and rationalised the credit system. These measures are known as PAKJAN or the January Package, and the implementation of this credit policy in Indonesia is elaborated as follows:

4.1 Essence of the Package

The package included a gradual reduction of liquidity credit as part of banks' credits and that liquidity credits be given only to certain sectors such as the agricultural sector, to farmers to maintain self-sufficiency in food and to cooperatives and for investment purposes.

All the other credits which are specifically mentioned and are no longer funded by the liquidity credit (called "general credit") have to be funded by the bank's own funds mobilised from the public. The liquidity credit which had been given in the past for these types of credit will be gradually withdrawn in accordance with the schedule of repayment.

At least 20 percent of the bank's credit portfolio should be in the form of credit given to small-scale enterprises called Kredit Usaha Kecil (KUK). For foreign-owned banks, instead of financing KUK, they are to allocate 50 percent of their portfolio credit for export credit.

By the inclusion of this provision in the package, the banks would be required to think of profitability in their operation and also the banks' need to pay sufficient attention to the development of small-scale enterprises. The details of the existing national credit schemes after the January 1990 deregulation package are as follows:

4.1.1 Overall Objectives of PAKJAN 1990

(i) To strengthen the function of the banks as a main tool and the executor of the national credit system;

(ii) To strengthen the function of the central bank as the "Lender of Last Resort";

(iii) To gradually phase-out the liquidity credit in order to decrease the dependency of the banks on BI and at the same time, encourage the banks to mobilise the public fund actively; and,

(iv) To encourage the banks to finance small-scale enterprises by setting up a quota of 20-percent credit for small-scale enterprises financed by each bank.

4.2 Current Credit System

The current credit system for the SMIs in Indonesia is streamlined into a limited scheme. The implementation of PAKJAN 1990, the credit schemes are simplified as follows:

4.2.1 Credit Scheme Supported by Liquidity Credit of Bank Indonesia

(i) Intensification Credit of Paddy and Secondary Crop (KUT)

The credit can be used only to finance paddy and secondary crop intensification. The amount of credit is based on

the farmer's real needs and it is distributed through the Village Unit Cooperative (KUD). BI provides 100-percent liquidity credit at 3-percent interest rate per annum. The lending rate to the farmers is 16 percent per annum, including a 6-percent fee for KUD.

(ii) Credit for Cooperatives

The credit is available for KUD and other primary cooperatives to finance food procurement and other productive activities, except those which are already covered by KUT. Credit for cooperatives can be divided into two types:

(a) Credit for KUD: The credit can be used for financing the procurement of rice, food crops, cloves and fertiliser. The amount of credit is based on the farmer's real needs. For this scheme of credit, BI provides 75 percent of the total credit at 12-percent interest rate per annum. The lending rate of the credit is 18 percent per annum.
(b) Primary cooperative credit extended for its members: The credit can be used to finance any productive activities in all economic sectors except trade and services sectors. The amount of credit provided is a maximum of Rp. 30 million per member with lending rate of 18 percent per annum, including 4-percent fee for the cooperative. Like the credit for KUD, the liquidity credit given is 75 percent of total credit with an interest rate of 6.5 percent per annum

(iii) Credit for Food and Sugar Procurement

This scheme of credit is available for the government buffer body (a logistic agency) called BULOG. A 100 percent of liquidity is provided by BI and the credit is given to the buffer body at a lending rate of 18 percent per annum.

(iv) Investment Credit

Due to the lack of long-term funds, especially for development banking, BI still provides liquidity credit to finance plantation investment and housing loans.

(a) The investment credit lending rate depends on the market rate. The liquidity credit provided for the western region is 40 percent while that for the eastern region is 50 percent of the total credit. The interest rate of the liquidity credit is 16 percent per annum.

(b) For housing loans, BI provides 42.43 percent and the World Bank provides 6.57 percent of the total loans. The interest rate of the liquidity credit is 9 percent per annum.

4.2.2 Credit Without Liquidity Credit of Bank Indonesia

(i) General Credit

Other credit that have not been mentioned are financed by the banks' own funds.

(ii) Credit for Small-Scale Enterprises (KUK)

In line with the policy of supporting the development of small-scale enterprises, a certain portion of the credit portfolio of the banks has to be made available for small-scale enterprises. The banks are required to allocate at least 20 percent of their credit to small businesses, excluding those credit using liquidity credit from BI.

Since the Indonesian financial policy uses a market-oriented approach, there is no interest rate policy for credit. The banks are free to set their own lending rate. The recovery system adopted are fully dependent on the policy of each bank. As all banks require collateral for credit given, they could insure the credit. Despite the fact that the businesses financed by the loans themselves are collaterals, most of the banks also ask for additional collateral such as land, house and others. All the credit to the industrial sector are integral parts of the whole national credit system as far as the formal banking service is concerned.

4.2.3 Performance of the Credit

(i) Credit for Farmers

It is important to know that most of the credit for farmers are supported by the Central Bank. This credit is channeled

to the farmers through the Village Unit Cooperative to finance certain commodities, namely paddy and food crop intensification. The credit disbursement is relatively small compared to the total agricultural credit, e.g., the disbursement in June 1992 was only Rp. 145.6 billion or 1.45 percent of the total. The small amount of the disbursement resulted from the limited capability of farmers to absorb the credit since farmers are generally not able to gain access to credit from the banks.

(ii) Credit for Cooperatives

Credit for cooperatives consists of credit to Village Unit Cooperative to finance paddy, food crops, fertiliser and cloves, and credit for members of cooperatives to finance the business of members in all sectors except trade and services. Like the previous scheme, the disbursement of the second credit scheme to the industrial sector was relatively low as well. In September 1992, it was only Rp. 226 billions or around 4.45 percent of the total credit available. The performance of the credit scheme was below expectation since the rate of arrears was about 30 percent of the credit outstanding.

(iii) Credit for Small Enterprises (KUK)

The credit for the small-scale enterprises is known as KUK. During the period from December 1989 to August 1992, the KUK has been increasing from Rp. 14.0 trillion to Rp. 22.8 trillion or around 20.95 percent per annum. The KUK distribution to the industrial sector as of August 1992 was about Rp. 2.3 trillion or 10.1 percent of the total KUK. This amount is second only after the trade sector. The performance of the KUK is better than credit for farmers and cooperatives, with a rate of arrears of around 19 percent of the credit outstanding.

(iv) Rural General Credit (KUPEDES)

This type of credit is earmarked for the rural areas by Bank Rakyat Indonesia since 1984. Since then, the credit has been

increasing sharply. In 1984, it was about Rp. 110.6 billion, increased to Rp. 1,500 billion in April 1992 or 181.3 percent per annum. The number of clients in 1992 was 1,800,000. KUPEDES' performance differs from the previous credit scheme as the arrears rate is below 10 percent of the credit outstanding. The success factors of this credit are firstly, the market-based interest rate charged to the customers who have no subsidies from the Central Bank. Secondly, the scheme allocates percentages to clients as incentives for repaying the instalments on time. In case the customers do not pay the instalments on time, the incentive will be converted to cover the arrears.

V. Problems of Financing SMIs in Indonesia

The KUK has a credit maximum of Rp. 200 million which is available for small-scale enterprises with total assets up to a maximum of Rp. 600 million (approximately US$ 300,000), excluding land and building. The performance of KUK shows an increasing trend. As of December 1989, KUK credit was Rp. 14.1 billion which increased to Rp. 22.8 billion in March 1992 or an average increase of 27.4 percent per annum. The ratio increased from 17.5 percent to 22.3 percent during the same period. Even though the data shows a very optimistic trend, both the banks and the small-scale businesses face many problems in the increase of the percentage of KUK.

The banks have to face several problems. Firstly, it is difficult for the banks to identify eligible clients for their KUK. Secondly, the transaction cost of small credits is higher than the other credits and the credit risk is also higher. Lastly, the banks have limited branches to reach the scattered small businesses in the rural areas, where the majority of the small-scale enterprises are located. For the small enterprises, the biggest problem is how to gain access to banks. They are not capable of fulfiling the banks requirements since their management ability is low and their market is limited.

Other problems are related to credit application. In the event of a credit application, a proposal is required by bank. This proposal is to be prepared by the SMIs. Very few SMIs can draw up "a bankable proposal". From past experiences, BI is aware that technical assistance

is needed as much as the financial assistance. Therefore, BI provides its assistance through the Small Enterprise Development Project (PPUK), a project established by BI to support the development of small-scale enterprises.

VI. Policy Suggestions for Financing SMIs in Indonesia

The provision of credit to the small-scale enterprises involve higher risks and higher costs than credit for the large enterprises. Therefore, in trying to cope with these inherent problems, the relevant credit scheme must carefully consider the feasible procedures of disbursement and repayment which are practical and economical from the banking point of view. Despite all these efforts, there are always problems that need to be solved. An attempt will be made in the following to discuss the main issues arising out of the experience of the past few years with regard to industrial credit in Indonesia.

The main problem for small enterprises is the difficulty in obtaining credit. Easy access to credit is more important to them than the price charged to the credit. It has been asserted that a small enterprise would consider taking credit on the condition that they could repay it later than whether it was expensive or not.

It should be noted that in a competitive credit market which is presently encouraged in Indonesia, the interest rate should be high enough to cover the operational cost. It should also be lower than the rates charged by the usurious money-lenders. Therefore, suggestions to increase the accessibility of farmers to the credit of the banks are as follows:

6.1 Credit Distribution Through Group

There is a growing argument for servicing credit to a group rather than to the individuals who would not be able to meet bank requirements. Some of the reasons for this are:

(i) the cost of servicing credit to a group is lower than that to an individual;

(ii) the action of a group, when carried out appropriately, may

result in optimal production, both in economic terms and from an environmental point of view; and,

(iii) the collateral of credit may be borne by the block savings of the group.

The main issue is whether the small enterprises are willing and able to join and form an effective, efficient and lasting group. This is essential as in many occasions when credit arrears have resulted from groups which were less committed. Hence, development and training through proper extension service is required before a group can be considered eligible for credit application. An interesting example on how groups should be effectively organised can be seen from the Pilot Project Linking Banks and Self-Help Groups.

6.2 Foster-Parent Linkage Program

To increase the eligibility leverage of the small enterprises, other efforts which can be adopted is to develop the linkages between the small businesses and a large-scale company through the Foster Father Linkage Program. In this case, the foster father can provide assistance to the small enterprises on marketing, management, production technology and others. The function of the small enterprises is to produce compatible products efficiently and be able to sell the products easily through the foster parent. This scheme will help the bank in evaluating the eligibility of both small- and large-scale enterprises.

6.3 Savings-Credit Ratio

Developing the savings habit of the people, especially in the rural areas, is very important in linking the bank to the small enterprises. Experience shows that credit which is attached to group savings is an effective way to increase the performance of the clients. The bigger the savings, the more credit is secured for the banks as the savings can be used as a collateral. Hence, the promotion of the savings habit among the small enterprises is necessary.

6.4 Joint-Liability System

The principle of a sense of belonging in a group is in line with the joint-liability system in that each member of a group is liable.

Experience shows that credit to such a group will be successful if the joint-liability system is built within the group. From the beginning, each member of the group has to be committed to share the credit risk of the group. In case there is an arrear of one or more members of the group, all the members would be responsible for repaying the loan. Hence, the joint-liability system is necessary for an easier access to credit. The implementation of the joint-liability system will assist in making credit to SMIs by banks more attractive.

VII. Small Enterprise Development Project (PPUK)

As part of BI's effort to promote the development of small-scale enterprises, technical assistance is provided by the establishment of the PPUK in 1978. PPUK is located at every BI branch of which there are 40 all over the country. For this project, BI hires consultants of multi-discipline sciences such as development banking, agriculture and industrial sciences. Along the way, the strategy and activities of PPUK have been modified in line with the deregulation on the banking and financial sectors. The modifications were made to counteract weaknesses identified by BI, among which are:

(i) The lack of experience among banks with small-scale enterprises and their preoccupation with physical collateral rather than project feasibility.

(ii) An alleged lack of management, technical and marketing skills among small-scale enterprises.

In order to correct these deficiencies, BI devised a two-pronged approach:

(i) Participating banks must adopt development-oriented banking techniques of project proportion, appraisal and supervision, and train their management and staff accordingly.

(ii) Greater assistance must be provided by non-bank institutions to small-scale enterprises in the areas of financial management and accounting, technical and maintenance skills and marketing.

The objective of PPUK is to boost the capability of small businesses to develop their businesses so that they will be able to have easier access to the banks. In turn, this will enhance the quality and quantity of small credit as well as to improve the organisation of their businesses. PPUK works together with not only the banks but also with the Local Enterprise Development Unit (LEDU), an institution which deal with the development of small enterprises, and other concerned institutions. To make PPUK more effective in its task, any service provided by PPUK is linked to those institutions. The strategies applied by PPUK are to increase the eligibility of small businesses, in cooperation with LEDU, so that they are able to absorb the loan easily; to improve the capability of the banks' staff in handling the small credits; and, to look for any investment opportunity in order to enlarge the small enterprise businesses. The activities of PPUK include conducting surveys so as to identify potential investment opportunities, conducting training and consultation for the staff of banks, LEDU, as well as the small-scale enterprises, and maintaining the sustainability of projects which have been successfully developed using the banking loans.

The target groups of PPUK are micro, small- and medium-scale enterprises. The effort to develop the micro enterprises is launched through the Linking Bank and Self-Help Group Project (PHBK). PHBK is a joint project of the Republic of Indonesia and the Republic of Germany managed by BI. The policy guidance is provided by a national task force comprising banks and the Self-Help Promoting Institutions (SHPI), a non-government organisation as financial intermediary. The technical assistance is provided by Deutsche Gesellschaft Zuzammernarbeit (GTZ). The activities which are carried out by PHBK are:

(i) to identify banks, Self-Help Promoting Groups and micro business groups which have savings and loan activities which fulfil certain eligibility criteria;

(ii) to provide training to bank staff on linkages between banks and savings and loan groups and to the staff of the Self-Help Promoting Group on how to link with banks and in the management of groups; and,

(iii) to provide consultancy to the staff of banks and the involved groups in supporting the linkage programme between banks and the self-help groups.

The mission to develop small enterprises is launched through inter alia the foster parent and foster child (ABA) mechanism, as well as the development of credit through groups and cooperatives. The ABA mechanism is a mutually beneficial relationship between big businesses and some small-scale enterprises. The "father" helps the "children" on several aspects such as capital, marketing, techniques of production and management. It also could act as a credit guarantor if the small businesses need loans from the banks. The role of PPUK on this mechanism is to adopt, design and maintain the sustainability of such a relationship.

The task to develop the medium-scale enterprises is carried out through the improvement of private consulting companies known as service providers. BI promotes the development of medium-scale enterprises through the Small- and Medium-Scale Industrial Enterprise Project (SMIEP) and the Agricultural Financial Project (AFP). Both projects are supported by the World Bank. SMIEP is a project with the objective of developing small- and medium-scale industries. The participants of SMIEP are given both financial and technical assistance. The financial assistance is provided through several banks using the funds from the World Bank, while the technical assistance is given by consultants called service providers which give guidance to the businesses so that they could improve their eligibility. The service providers are coordinated by the Technical Assistant Unit (TAU) Manager. The AFP is a project for small- and medium-scale agricultural businesses. Like SMIEP, AFP also provides technical assistance to its participants. The specific activities carried out by TAU are:

(i) to identify eligible banks and service providers;

(ii) to carry out surveys to identify potential business opportunities;

(iii) to provide training to bank and service provider staff to improve their capability of developing medium-scale businesses; and,

(iv) to provide consultancy to service providers and medium-scale businesses.

PPUK has been in existence for many years and has been of considerable benefit to banks and small-scale enterprises. The focus of

its activities in the future will be on the institutional development of LEDUs and banks to ensure that they have the capability of assisting small-scale enterprises to develop their businesses. In the long term, technical assistance to small-scale enterprises will be coordinated under the Small Enterprise Development Coordination Authority. It is expected that the present technical assistance programme of BI and of some other institutions would be transferred to the abovementioned Authority.

VIII. Summary and Conclusion

SMIs have an important role in the economy. The large number of SMIs has a strong influence on the economy as a whole. The Government of Indonesia supports fully the development of the SMIs. This support comes in the form of financial assistance as well as technical assistance. There are several ways to enhance the development of SMIs, such as to create "foster father and foster child relationship" and to treat the SMIs as a group. Through these mechanisms, SMIs could increase their management capability, the usage of modern production technology, and in enlarging their markets. Moreover, these mechanisms may also increase the access of SMIs to the banking system.

Appendix 6.1

NUMBER OF FIRMS AND EMPLOYMENT IN SMALL INDUSTRIES IN 1990

Sub-Sector	Number of Firm		Number of Workers	
Food, beverages	596.376	33,25%	1978.654	33,27%
Textiles, garment, leather	256.863	14,32%	947.559	15,93%
Wood, furniture	552.382	30,80%	1489.476	25,04%
Paper, printing	6.520	0,36%	41.272	0,69%
Chemical, rubber	21.077	1,18%	83.904	1,41%
Non-metallic mining	236.325	13,18%	952.635	16,02%
Basic metal	-	-	-	-
Metal product	67.329	3,75%	277.504	4,67%
Other manufacturing	56.766	3,16%	176.708	2,97%
TOTAL	1793.638		5947.712	

Source: Ministry of Industry (1991).

Appendix 6.2

OUTPUT AND EMPLOYMENT SHARES OF MAJOR SMALL INDUSTRIES WHICH EMPLOYED 20 - 75 WORKERS IN 1990

Description	Output (%)	Employment (%)
Food, beverages	9,2	18,1
Textiles, apparel	4.9	13,2
Wood	4,6	10,2
Paper	7,0	22,7
Chemical	7,7	12,5
Non-metallic mineral	6,6	28,7
Engineering	6,1	14,5
Other manufacturing *	11,1	24,3
TOTAL	6,9	15,1

* Including: Jewellery, sporting goods.

Source: Ministry of Industry (1991).

Appendix 6.3

GEOGRAPHICAL DISTRIBUTION OF SMALL INDUSTRIES IN INDONESIA IN 1990 (%)

Region	Number of Firms	Share of Firms in Rural Areas
Sumateral	10	86
Jawa and Bali	76	88
Kalimantan	5	88
Sulawesi	6	92
Other Eastern Islands	3	88
INDONESIA	100	88

Source: Ministry of Industry (1991).

Chapter 7

FINANCING FOR SMIs IN KOREA

by
Sung-Hwa Kim

I. Introduction

Small- and medium-scale industries (SMIs) in Korea have played an important role in economic development during the past 30 years. Particularly since the late 1970s, they have grown remarkably not only in terms of their share in the economy but, also in terms of their structure.

Recently, however, SMIs in Korea have suffered great difficulties in the process of structural adjustment of the economy. Their export competitiveness has weakened tremendously, due mainly to wage hikes in excess of productivity gains and also slow progress in technological development. The number of bankruptcies among them has increased substantially since last year, and it has become even more difficult for the SMIs to obtain sufficient financing. In addition, the present financing system of SMIs, which depends heavily on policy loans, reveals too many shortcomings particularly during the financial liberalization process.

In this context, the paper examines the problems of the current financing system for SMIs and explores the implications on future policies, while providing a brief overview of Korea's SMIs and their financing system.

II. Salient Features of SMIs in Korea

2.1 Definition of SMIs

In Korea, SMIs are basically defined by the number of full-time employees under the Small and Medium Industry Basic Act. A firm's total assets is used as a supplementary criterion. SMIs can be divided into two categories, namely small firms and medium firms. This classification is further broken down into the various major industrial sectors as shown in Table 7.1.

Small firms are defined as those with not more than 20 employees in the manufacturing, mining, transportation, and construction sectors; and, those with five or fewer employees in the commercial and other service sectors. Medium firms are defined as those with between 21 and 300 employees in the manufacturing, mining and transportation sectors; between 21 and 200 employees in the construction sector; and, between 6 and 20 employees in the commercial and other service sectors.

Table 7.1

DEFINITION OF SMIS
(Unit: Number of Full-Time Employees)

Type of Business	**Small Firms**	**Medium Firms**
Manufacturing, Mining, Transportation	20 or fewer	21-300
Construction	20 or fewer	21-200
Commerce and Other Service	5 or fewer	6-20

While these are some of the general definitions for SMIs, a separate criterion was established for some labor-intensive sub-sectors (Table 7.2). For example, the maximum number of employees for a medium firm is expanded to as many as 1,000 for manufacturers of automobile or some electronic parts.

On the other hand, a firm within the requisite number of employees may be excluded from the category of SMIs if its total assets exceeded a certain limit (Table 7.3).

A firm classified as an SMI, will continue to be SMI for three years after a business expansion or merger beyond the cut-off points.

2.2 Current Status of SMIs and Their Contribution to the Economy

According to a survey conducted by the National Statistical Office, there were 1,674,936 companies in Korea at the end of 1986 and of

Table 7.2

EXCEPTIONAL CRITERIA FOR LABOR-INTENSIVE INDUSTRIES IN DEFINING SMIS

Number of Employees	Type of Business
From 21 to 1000	Manufacturing of automobile or electronic parts, etc.
From 21 to 700	Anthracite coal mining, manufacturing of ready-made clothes, earthenware, hats, bags, dolls, toys, etc.
From 21 to 500	Weaving, dyeing, manufacturing of medical supplies, frozen foods and soap, etc.
From 6 to 400	Technological services concerning construction and engineering, etc.
From 6 to 300	Wholesale (wholesale centers or chain stores only), general retail, etc.
From 6 to 200	Travel agencies, automobile repair industry, etc.
From 6 to 150	Production of cartoon films
From 6 to 100	Hospitals, souvenir retail, mutual credit unions, leasing of machinery and equipment, etc.
From 21 to 100	Installation of telecommunication or electric facilities
From 6 to 40	Wholesale, sale of automobiles and bicycles, etc.

Table 7.3

MAXIMUM LIMITS ON TOTAL ASSETS IN DEFINING SMIS

Total Assets	Type of Business
12 billion won	Coal mining, quarrying, etc.
15 billion won	Metal mining, manufacturing of draftsman's instruments, etc.
20 billion won	Printing, manufacturing of lumber, furniture and non-metallic minerals, etc.
25 billion won	Manufacturing of foods, drinks and cigarettes
30 billion won	Manufacturing of fuel briquets, textiles, clothes, bags and dolls, etc.
40 billion won	Primary metal industry, manufacturing of paper, machinery and equipment, etc.
50 billion won	Steel industry, manufacturing of electronic parts, etc.
60 billion won	Manufacturing of automobile or ship parts, etc.

these, SMIs accounted for 98.6 percent. When classified by sector, the wholesale, retail and lodging businesses made up the majority with 60.5 percent of the total number of SMIs; the real estate and service sectors accounted for 23.4 percent; the manufacturing sector for 13.2 percent; and other sectors including construction, transportation and storage for 2.9 percent.

Of the SMIs in the manufacturing sector in 1988, smaller firms with less than 5 employees made up over two-thirds of the total while larger SMIs with more than 100 employees was only 2.7 percent.

Another survey conducted by Korea Federation of Small Business showed that more than 70 percent of SMIs had single ownership in 1989.

SMIs in Korea have made a large contribution to the economy. In the manufacturing industry, the number of SMIs with at least five employees represented 98.1 percent of the total establishments in 1989. As for employment, SMIs absorbed about 1.9 million workers or 60.9 percent of all workers in the industry.

Despite their numerical significance SMIs accounted for a relatively small proportion of value-added and export earnings. In 1989, they produced 45.0 percent of the value-added total of manufacturing firms and provided 38.6 percent of Korea's total exports.

2.3 Growth Trend of SMIs

The growth trend of SMIs has been closely related with the strategies for economic development. In the 1960s and 1970s, the Government pursued an export-driven growth policy and emphasized economies of scale to strengthen the competitiveness of export industries. During the latter half of 1970s, moreover, the Government tried to develop the chemical and heavy industries intensively in an effort to advance the nation's industrial structure.

As a result, resources were concentrated in a relatively small number of huge manufacturing firms and the share of SMIs in the economy was reduced substantially. SMIs' contribution ratio to the amount of value added dropped from 52.9 percent in 1963 to 32.4 percent in 1977. This downward trend was also apparent in the number of SMIs

Table 7.4
Small and Medium Manufacturers by Size: 1988

	Number of Employees					
	1-4	5-49	50-99	100-299	Over 300	Total
Number of SMIs	123,735	49,449	5,552	3,609	1,318	183,663
(share, %)	(67.4)	(26.9)	(3.0)	(2.0)	(0.7)	(100.0)

Table 7.5
SHARES OF SMIs IN THE ECONOMY: 1989

	Number of Establishments 1/ (number)	Number of Employees 1/ (thousand persons)	Amount of Value Added 1/ (bil. won)	Amount of Production 1/ 2/ (bil. won)	Amount of Export (mil. US$)
SMIs (A)	64,446	1,883	24,718	52,831	24,052
Total (B)	65,684	3,093	54,959	134,098	62,377
A/B (%)	98.1	60.9	45.0	39.4	38.6

Notes: 1/ Based on firms in the manufacturing sector with at least 5 employees.

2/ In 1988.

and their employees. In 1963, 98.7 percent of Korean firms were SMIs employing 66.4 percent of the total labor force. But, by 1977 these ratios had fallen to 95.9 percent and 46.0 percent respectively.

In the late 1970s, however, the Government began to emphasize balanced growth between large firms and SMIs, recognizing that the underdevelopment of SMIs would hinder further development of the economy. Since then, various measures to extend business scope of SMIs and to modernize their facilities have been implemented by the Government, including the establishment of the Small and Medium Industry Promotion Fund in 1978.

In addition, changes in the economic environment such as the sophistication of industrial structure and the diversification of consumers' demand for goods provided a favorable condition for the development of SMIs. Specialization of works and the ability to adjust rapidly to a changing environment were regarded as more important than economies of scale.

Consequently, SMIs grew rapidly and their contribution to the economy became greater. The number of SMIs in the manufacturing sector increased more than 2.5 times during the period from 1978 to 1989 to make up 98.1 percent of all Korean manufacturers. SMIs employed 60.9 percent of the total work force and contributed 45.0 percent of the value added to the economy in 1989.

Table 7.6

GROWTH TREND OF SMIs
(Shares in Manufacturing; Unit: Per Cent)

	1963	1973	1977	1983	1989
Number of Establishments	98.7	97.0	95.9	97.4	98.1
Number of Employees	66.4	46.6	46.0	54.8	60.9
Amount of Value-Added	52.9	34.0	32.4	37.1	45.0

Meanwhile, the business areas in which the SMIs actively participated have been broadened to include capital-intensive and high-tech industries such as electronic parts, non-ferrous metals and machinery. The development of technology is also accompanied by a sharp increase in wage costs. Previously, Korea's small and medium manufacturers had been mostly confined to labor-intensive industries such as textiles, general merchandise, furniture, etc.

2.4 Role of SMIs

In the process of rapid economic growth since the early 1960s, Korea's SMIs have greatly contributed to the economy by serving as seed-beds for start-ups, partners with large firms, innovators of new technology, etc.

The first outstanding aspect of SMIs' role was that they created remarkable employment opportunities. While this was more important in the 1960s and 1970s when the rate of unemployment was relatively high, the SMIs continued to be credited with creating new employment in recent years. During the period from 1979 to 1989, almost 90 percent of new jobs were provided by SMIs in the manufacturing sector.

Secondly, SMIs strengthened the industrial basis by producing various parts and components and supplying them to large firms under sub-contract. Sub-contracting, which forms one of the main linkages between SMIs and large firms in Korea, improves flexibility and reduces production costs of many large firms while SMIs benefit from increasing returns to scale by supplying the same products to a number of large firms. SMIs also enhanced the efficiency of the economy by supplying goods that would be inappropriate for large firms to produce and goods for which the market was too small to justify mass production.

Thirdly, SMIs are credited with improving the equity of income distribution and promoting balanced regional development. Even though the degree of contribution can hardly be evaluated, it is reasonable to conclude that SMIs generate relatively small increase in income for a large number of people because they produce a large number of modest wage payments and low capital incomes. In addition, SMIs are more evenly distributed throughout the country compared to large firms, whose locations are heavily dependent on infrastructure facilities or imported materials.

In addition, SMIs provided the economy with trained industrial workers and entrepreneurs. The training opportunities offered by SMIs clearly help to upgrade the quality of human resources and contribute towards entrepreneurial development. SMIs also enable those just starting up themselves to put their skills and knowledge into practice.

Finally, SMIs help to mobilize the financial resources of the economy. SMI funds are often wholly or partly financed by the owners' family, friends and relatives, and a proportion of the capital mobilized for investment in SMIs would not have been available to the economy unless SMIs have aggressively sought after it.

2.5 Financing Sources of SMIs

According to a survey conducted by the Bank of Korea, SMIs rely heavily on external sources for their financing. 77.2 percent of their total funds were financed by borrowings from financial institutions, bond issuance, corporate financing such as accounts and notes payable, etc., in 1990.

Another survey conducted by Citizens National Bank showed that borrowings from banks accounted for 78.5 percent of total external financing of SMIs in 1990 (corporate financing such as accounts and notes payable was excluded from the total amount of external financing in the survey). The second largest source of external financing was borrowings from non-bank financial institutions, forming 11.7 percent of the total. Fund raising through bond issuance made up only 7.0 percent and borrowing from the curb market 1.7 percent.

Table 7.7
FINANCING SOURCES OF SMIs
(Unit: Per Cent)

	1985	1986	1987	1988	1989	1990
Own Capital 1/	21.3	23.5	21.1	21.8	22.4	22.8
External Financing 2/	78.7	76.5	78.9	78.2	77.6	77.2
Total	100.0	100.0	100.0	100.0	100.0	100.0

Notes: 1/ Includes paid-in capital and retained earnings.
2/ Includes borrowings from financial institutions, bond issuance and corporate financing such as accounts and notes payable.

While this applied to SMIs which had at least five employees, many smaller firms are assumed to rely more on the curb market including borrowings from their relatives or friends.

Table 7.8
SOURCES OF SMI EXTERNAL FINANCING
(Unit: Per Cent)

	Bank Loan	Foreign Loans	Non-Bank Financial Institution Loans	Bonds	Private Loans	Other
1980	74.0	7.2	8.7	-	10.1	-
1983	71.3	3.3	14.0	5.0	4.4	2.0
1986	71.7	3.1	13.0	8.1	2.9	1.2
1989	77.7	-	11.6	7.8	1.8	1.1
1990	78.5	-	11.7	7.0	1.7	1.1

III. Financial Policies for SMIs in the 1980s in Korea

As noted earlier, it was after the mid-1970s that the role of SMIs awakened into new significance and the Government strengthened policy to support them in Korea. From the early 1960s through the mid-1970s, when large firms provided the main engine of economic growth, the Government's policy for SMIs centered mainly on maintaining their management stability and securing demand for their products.

Since the late 1970s, various measures have been taken to develop the SMI sector in Korea. Looking at the financial measures to support SMIs in the 1980s in detail, the ratios commercial banks were required to observe in lending to SMIs among total lending were increased on three occasions, from 30 percent of the increment in their Korean won loans to 35 percent for the nation-wide commercial banks and from 40 percent to 80 percent for local banks. With effect from February 1992, this ratio for nation-wide commercial banks was raised again to 45 percent, with banks being allowed to keep the ratio at a minimum level of 40 percent until August 1992.

Since 1981, SMIs have also been treated preferentially in the discount of their commercial bills on the aspects of selecting eligible firms

Table 7.9
TREND OF BANKS' OBLIGATORY LENDING RATIOS TO SMIs
(Unit: Per Cent)

	Mar.1976 1/	Dec.1976	Oct.1980	Mar.1985	Apr.1986	Aug.1986	Feb.1992
Nationwide Commercial Banks	30	30	35	35	35	35	45
Local Banks	30	40	55	55	80	80	80
Foreign Bank Branches	-	-	-	25	25	35	35 2/

Notes: 1/ Based on the increment in total loans.
2/ For those branches that do not make use of the central bank's rediscount facilities for commercial bills, a ratio of 25 percent applies.

and setting maximum discount ceilings. From the same date, the Bank of Korea began to apply a higher rediscount ratio for SMIs than for large firms. And the rediscount of large firms' commercial bills was eventually abolished in February 1989.

In addition, the credit guarantee system for SMIs was strengthened in the 1980s, in view of the fact that they often lacked adequate collateral to provide to financial institutions against loans. From 1983 the Korea Credit Guarantee Fund, which was established in 1976, was obliged to restrict its guarantees exclusively to SMIs, and another credit guarantee company, the Korea Technology Credit Guarantee Fund, was established in 1989 to support the adoption of new technologies.

Lastly, many special funds have been established to supplement existing financial system for the SMIs. Among them are the SMI Mutual Assistance Fund (1984), the Industrial Development Fund (1986), the Industrial Technology Promotion Funds in the Petroleum Fund (1986), and the SMI Structural Adjustment Fund (1989), etc.

Since the late 1980s, however, Korean SMIs have been faced with great difficulties in the process of the structural adjustment of the economy. Their competitiveness has been weakened greatly mainly due to the soaring of labor costs and underdevelopment of technology. Fierce competition from other newly developing countries such as China and South East Asian countries made their international environment more unfavorable.

To cope with this situation, financial policies for the SMIs have recently focused more on the reinforcement of their long-term competitiveness through structural improvements such as the enhancement of technology development and conversion of sunset or struggling SMIs to more profitable business fields.

IV. Current Systems for Financing SMIs in Korea

4.1 Financial Institutions for SMIs

As with other nations, the financial system in Korea is made up of a central bank, the Bank of Korea, banking institutions, and non-bank financial institutions.

Banking institutions consist of commercial banks that engage both in short-term and long-term financing business under the provisions of the General Banking Act and specialized banks that channel funds to particular sectors such as SMIs and agriculture. Non-bank financial institutions include development institutions that provide medium- and long-term loans for industrial development, savings institutions, investment institutions that do business in the money and capital market, and life insurance companies, etc.

Among these financial institutions, commercial banks and specialized banks are the most important sources of SMI financing. Non-bank financial institutions, notably investment and finance companies, mutual saving and finance companies, life insurance companies, leasing companies and venture capital companies, also provide SMIs with various forms of funding.

In addition, there are several kinds of government and public programme loans aimed at encouraging facilities investment by SMIs and strengthening their competitiveness.

4.1.1 Banking Institutions

Banks, the predominant suppliers of credit to SMIs, continued to increase their loans to SMIs during the 1980s. The share of loans to SMIs in total bank loans increased from 45.2 percent in 1981 to around 60 percent as of end-June 1991.

Table 7.10

BANK LOANS TO SMIs
(Unit: Billion Won)

	1981	1983	1985	1987	1989	June 1991
Total Loans (A)	11,358	18,439	25,285	32,007	46,202	56,174
Loans to SMIs (B)	5,134	8,145	10,808	13,758	23,135	33,268
B/A (%)	45.2	44.2	42.7	43.0	50.1	59.2

Note: Loans are based on the balance of domestic currency loans of deposit money banks.

(i) Commercial Banks

Commercial banks in Korea are classified into three categories: nationwide commercial banks which have widespread and unrestricted branch networks; local banks which operate within a geographically limited area; and, domestic branches of foreign banks. As of the end of 1991, there were 13 nationwide commercial banks, 10 local banks, and 70 branches of foreign banks.

Commercial banks are required to extend a certain proportion of their loans to SMIs under guidelines established by the Bank of Korea. Nation-wide commercial banks and local banks are obliged to extend at least 45 percent and 80 percent, respectively, of their total loan increments to SMIs. The pertinent ratios for foreign bank branches are 25 or 35 percent, the latter being for those that make use of the re-discount facilities of the Bank of Korea. In order to encourage banks to abide by the guidelines, the Bank of Korea supports a certain ratio of their loans to SMIs.

(ii) Specialized Banks for SMIs

There are two specialized banks that were set up to provide loans to SMIs: the Industrial Bank of Korea and the Citizens National Bank.

The Industrial Bank of Korea

The Industrial Bank of Korea (IBK) is a financial institution set up exclusively for SMIs business in order to supply funds required to complement the independent activities of SMI businesses and to improve their economic status. The bank was established in 1961 under the Industrial Bank of Korea Act with more than half of its paid-in capital subscribed by the Government.

Formerly known as the Small and Medium Industry Bank, the Industrial Bank of Korea today has over 9,000 employees in 254 branches and offices throughout the country and 3 overseas representative offices.

IBK specializes in extending medium- and long-term loans on favorable terms to small businesses along with loans for technology development, export and import financing, facility modernization, business start-ups and energy conservation. The bank also engages in foreign exchange business and acts as a guarantor for the obligations of small and medium enterprises.

The bank's main sources of funds are deposits from the public and borrowings from the Bank of Korea. It is also authorized to issue Small and Medium Industry Finance Debentures with government guarantees up to ten times the amount of its paid-in capital and reserves.

IBK's total outstanding loans reached 7,755 billion won in 1991, of which 95 percent was extended to SMIs.

The Citizens National Bank

The Citizens National Bank (CNB) is a government-run bank, set up to provide loans to small businesses with a workforce of less than 100 and to households. CNB was established in 1963, under the Citizens National Bank Act, with more than half of its paid-in capital subscribed by the Government. The bank performs many of the same functions as IBK, but mainly for smaller firms. The banks has 363 domestic branches and offices throughout the country and 3 overseas representative offices.

Its main financing activities consist of mutual remuneration loans to those having mutual installment deposit accounts in the bank. Major

resources of the bank are deposits which, include mutual installment deposits which constituted 86 percent of its total resources as of end-June 1990. By the amendment of the Citizens National Bank Act in 1982, the scope of its business activities was widened to include the acquisition, purchase, sale, acceptance and guarantee of securities issued by small-scale business firms.

CNB loans and remunerations to small businesses totaled 3,112 billion won as of end of 1991, which comprised 46 percent of total loans.

Table 7.11

BANK LOANS TO SMIs (1991)
(Unit: Billion Won, %)

	Total Loans (A)	**Loans SMIs (B)**	**(B/A)**
Nation-Wide Commercial Banks	40,252 (62.0)	18,857 (51.2)	46.8
Local Banks	10,102 (15.6)	7,501 (20.4)	74.3
Industrial Bank of Korea	7,755 (11.9)	7,386 (20.0)	95.2
Citizens National Bank	6,797 (10.5)	3,112 (8.4)	45.8
Total	64,906(100.0)	36,856(100.0)	56.8

Note: Figures in parentheses represent the share of each financial institution.

4.1.2 Non-Bank Financial Institutions

(i) Investment and Finance Companies

Investment and finance companies, originally established in 1972 to develop the money market and to attract funds from the curb market, supply short-term operational funds to SMIs by the discount and brokering of commercial paper.

Under the Government's guidelines, investment and finance companies are required to extend at least 35 percent of total amount of their discounts to SMIs.

(ii) Merchant Banking Corporations

Merchant banking corporations were first established in 1976 to meet the demand of business firms for a wide range of banking and financial services. Their business includes: (i) foreign capital inducement, overseas investment, and international financing; (ii) loans for operational and equipment funds; (iii)transactions and brokerage of commercial paper and securities; (iv) securities investment trust; and, (iv) leasing business and management consultancy, etc.

Merchant banking corporations are obliged to provide 25 percent of their total amount of leasing contracts, bills discounted, and payment guarantees to SMIs.

(iii) Life Insurance Companies

In the life insurance business, there are currently 26 domestic companies, 4 foreign company branches, and post offices. On the recommendation of the Government, the insurance companies provide 35 percent or more of their total loans to SMIs.

(iv) Mutual Savings and Finance Companies

Mutual savings and finance companies, introduced initially to absorb small-scale curb market funds into the organized financial market, now offer installment savings with remuneration and provide financial services especially to households and small business firms. Under the guidelines of the Government, the mutual savings and finance companies should supply at least 80 percent of their total loans to households and small-sized firms.

(v) Venture Capital Companies

There are two types of venture capital business in Korea. New-technology-enterprise-financial-support companies engage in the businesses of providing financial support for technology development projects by underwriting stocks and convertible bonds issued by new or estab-

lished business firms, extending loans and offering leasing and factoring services. Currently, there exist four new-technology-enterprise-financial-support companies.

Small and medium enterprise start-up support companies, another type of company providing venture capital, were established under the Small and Medium Enterprise Start-up Support Act. They provide financial support through underwriting securities of start-up businesses and also supply management consultancy. As of end-June 1990, 52 companies were registered as small and medium enterprise start-up support companies.

(vi) Leasing Companies

The first leasing company was established in 1973 under the Leasing Industry Promotion Act and there are currently 20 leasing companies in Korea. Leasing companies provide business enterprises, especially small and medium firms, with lease financing for industrial and business equipment, machinery and plant, etc.

The companies' main sources of funds are borrowings from domestic and foreign financial institutions, and the sale of debentures, which may be issued up to an amount ten times their paid-in capital and reserves.

4.1.3 Programme Loans for SMIs

The Industrial Bank of Korea provides special programme loans to SMIs to encourage facilities investment and strengthen competitiveness.

Programme loans for the modernization of firms, business start-ups, technology, development, restructuring and local industry development are available from the Small and Medium Industry Restructuring Fund through the Small and Medium Industry Promotion Corporation (SMIPC).

Additional funds are available from other public funds such as the Energy Consumption Rationalization Fund, the Environment Protection Fund, the Petroleum Fund, the SMI Industrial Development Fund, the SMI Mutual Assistance Fund.

4.2 Monetary Policies for SMIs

One of the most important credit policies in regard to SMIs' financing may be the requirement for financial institutions to observe a minimum ratio of loans to small and medium enterprises. Financial institutions, both bank and non-bank financial institutions, are required to supply a certain percentage of their loans or guarantees to SMIs.

The Bank of Korea encourages banks to provide additional funds to SMIs by subsidizing a certain proportion of their loans to SMIs and it adds to or scales back its assistance to the banks according to their performance in this regard.

Table 7.12

GUIDELINE RATIOS FOR LOANS AND GUARANTEES TO SMIs

Financial Institutions		Guideline Ratio
Banking Institutions		
Nation-wide commercial banks	-	45 percent of increment of domestic currency loans
Local based nation-wide com. banks	-	90 percent of increment of domestic currency loans
Local banks	-	80 percent of increment of domestic currency loans
Foreign bank branches	-	35 percent of increment of domestic currency loans (if not making use of BOK rediscounts, 25 percent or more)
Non-Bank Financial Institutions		
Investment & finance companies	-	35 percent of their discounted bills
Merchant banking corporations	-	25 percent of the total amount of leasing contracts, bills discounted, and payment guarantees
Life insurance companies	-	35 percent of increment of loans
Leasing companies	-	50 percent of the total value of their leasing contracts

In addition, the Bank of Korea rediscounts a certain ratio of commercial bills presented by SMIs to commercial banks. The current rediscount ratio is 70 percent for unlisted manufacturing SMIs and 60 percent for other SMIs. SMIs are also treated preferentially in export financing. The average loanable amount per U.S. dollar for export-related loans to SMIs is set at 650 won, whereas it is only 400 won for large enterprises. The export-related loans of banks to SMIs can be assisted for up to 50 percent of the total amount at a low interest rate by the Bank of Korea. For large enterprises, on the other hand, the rediscount ratio is set at 30 percent.

The Bank of Korea provides selective support to commercial banks in order to promote their financing of SMIs. In managing its credit facilities, it gives special consideration to commercial banks' loans for the production of parts and components by SMIs, technology development by SMIs, purchases of SMI products, and industrial structure adjustment by SMIs. Furthermore, in order to secure easier access to banking funds by SMIs, the Bank recently allowed banking institutions to accept as collateral real estate owned by persons other than borrowers in extending loans to SMIs, but declined to allow this in the case of large enterprises.

SMIs also receive preferential treatment in the application of interest rates on their loans. The Bank of Korea encourages commercial banks to treat SMIs more favorably in evaluating the creditworthiness of potential borrowers. In addition, interrest rates for SMI loans tend to be relatively lower than those for large enterprises inasmuch as commercial banks can receive financial support relating to their SMI loans from the Bank of Korea. Some special programme loans offered by specialized banks such as IBK also provide preferential interest rates for SMIs.

4.3 Guarantee System for SMIs

There are two credit guarantee funds for SMIs: the Korea Credit Guarantee Fund and the Korea Technology Credit Guarantee Fund.

4.3.1 The Korea Credit Guarantee Fund

The Korea Credit Guarantee Fund was established in 1976 under the Credit Guarantee Fund Act for the purpose of extending credit

guarantees for the liabilities of those business enterprises which generally suffer from a lack of adequate collateral. The Fund's financial resources are raised through contributions from Government and banking institutions.

Its main business consists of extending credit guarantees, providing credit information, giving management and technical assistance, and participating in capital investment in SMIs. The Fund may extend credit guarantees not exceeding an amount of 15 times its contributed funds and profits. Guarantees for SMIs must constitute more than 60 percent of the Fund's outstanding guarantees.

As of end-June 1990, its outstanding guarantees registered 4,499 billion won. Credit guarantees for small and medium firms amounted to 4,460 billion won, accounting for 99 percent of the total. By type, guarantees for loans predominate, making up 79 percent. The outstanding balance of contributed funds stood at 917 billion won, of which 844 billion won consisted of contributions from banking institutions.

4.3.2 The Korea Technology Credit Guarantee Fund

The Korea Technology Credit Guarantee Fund was founded in 1987 under the New Technology Enterprise Financial Support Act for the purpose of extending credit guarantees mainly for the liabilities arising from the adaptation and application of newly developed technologies to commercial production.

The Fund was separated from the Korea Credit Guarantee Fund to be in line with the revision of this act in December 1988 in order to provide special financial services for business firms adopting new technologies and to meet the growing need for competitiveness in credit guarantee business. As with the Korea Credit Guarantee Fund, its sources of finance are contributions from Government and banking institutions.

Its main operational activities are similar to those of the Korea Credit Guarantee Fund, apart from the provision of technology credit guarantees for the development of new technologies, which are handled only by this Fund. Guarantees for technology development must constitute more than 60 percent of its outstanding guarantees.

At the end of June 1990, its outstanding guarantees stood at 511 billion won, of which 337 billion won was allotted to guarantees for

technology. The outstanding balance of contributed fund stood at 96 billion won, of which 75 billion won consisted of contributions from banking institutions.

4.4 Role of Financial Markets in Financing SMIs

The money market provides market participants with various instruments to intermediate their short-term demand for and supply of funds. First developed in the 1960s with the issuance of Monetary Stabilization Bonds (MSBs) and Treasury bills, the money market in Korea now embraces a wide range of financial markets including those for negotiable certificates of deposit (CDs), repurchase agreements (RPs), commercial paper (CP), Treasury bills, MSBs, and the call market.

SMIs's fund raising activities through the money market are, however, severely restricted because their financial status is not strong enough to access the markets.

In addition, the relative importance of the securities markets for SMI financing still remains low, even though SMIs have increased their issuance of corporate bonds and common stocks through the capital market. In practice, there are strong practical constraints on SMIs' use of the capital market for financing, not only because their financial position is weak, but also because they lack adequate collateral.

It is of course the case that SMIs in most countries often find themselves denied access to the organized markets, and therefore tend to rely on non-institutional sources of credit such as the curb market.

4.5 Role of Government in Financing SMIs

4.5.1 Budget for SMIs

According to the government budget for 1992, the financial support for SMIs to be provided by the Central Government amounts to 526.4 billion won. This amount is composed of 177.6 billion won in contributions to governmental or public funds and 348.8 billion won in loans through these funds and special programmes.

Table 7.13

1992 GOVERNMENT BUDGET FOR SMIs

(Unit: Billion Won)

Item	Amount		
	Contributions	Loans	Total
– Financial Assistance through Special Funds	44.0	225.0	269.0
. SMIs Restructuring Fund	10.0	150.0	160.0
. SMIs Mutual Assistance Fund	5.0	-	5.0
. SMIs Establishment Promotion Fund	10.0	-	10.0
. Subscription to Industrial Bank of Korea	5.0	-	5.0
. Industry Development Fund	-	65.0	65.0
. Credit Guarantee Fund	7.0	-	7.0
. Technology Credit Guarantee Fund	7.0	-	7.0
. Modernization of Distribution Facility	-	10.0	10.0
– Rural Industry Development Program	27.1	123.8	150.9
– Technology Development	75.2	-	75.2
– Other SMI related Institutional Support	31.2	-	31.2
Total	177.6	348.8	526.4

4.5.2 Small and Medium Industry Promotion Corporation

The Small and Medium Industry Promotion Corporation (SMIPC) was set up in January 1979 under the SMI Promotion Act of 1979.

The major responsibilities of SMIPC are to promote modernisation and cooperative programmes, to provide training and other services to small and medium enterprises, to disseminate information, and to manage the Small and Medium Industry Restructuring Fund (SMIRF).

SMIRF's modernization programme provides financial assistance through the Industrial Bank of Korea and commercial banks to those enterprises having high growth potential or which are involved in such

government-designated priority sub-sectors as the automotive, machine tool, and electrical and electronic parts industries. SMIPC leases industrial equipment on a long-term basis to qualified businesses, allowing them to replace obsolete equipment and maximize production efficiency.

Entrepreneurs who wish to commercialize new products or technologies can also receive financial and managerial assistance under SMIPC's Business Start-up Programme. Other programmes undertaken by SMIPC include the Small Business Training Institute; research, publication and information services; overseas training; domestic and foreign consultancy services; and, cooperative programmes for joint SME factory and facility investment, business management and mergers.

V. Determinants of Effective Financing for SMIs in Korea

Given that the effectiveness of SMI financing is represented by the amount of funds channelled to SMIs, there are two most important factors that influence the flow of funds to SMIs: the willingness of goverment to support SMIs and the development of the financial system.

Financial institutions are generally reluctant to provide funds to SMIs because the risks involved in SMI loans tend to be high and the returns are often insufficient to compensate for the relevant risks. This is especially true when financial institutions' supply of loanable funds falls short of the demand for funds and the loan rates are regulated. The lack of acceptable collateral also hampers SMIs from obtaining the necessary amount of funds at the appropriate time. Under these financial circumstances, an active government role is essential for the enhancement of the flow of funds to SMIs.

There are a large number of specific factors that illustrate the willingness of a Government to facilitate SMI financing.

One of the typical measures taken by the Government is to oblige financial institutions to provide a certain proportion of their loans to SMIs. The higher the mandatory ratio, the greater the possibility for funds to flow to the SMIs.

Other factors that reflect government support for SMIs include the number of special financial institutions that are established to provide

funds to SMIs, the existence of interest rate compensation for SMI loans, and the amount of budgetary expenditure to promote SMI financing.

The central bank can also encourage financial institutions to extend more loans to SMIs by subsidizing a certain proportion of their loans. The credit guarantee system, which is established and managed by the Government, promotes SMI financing through reducing the risk involved in SMI loans and supplementing the creditworthiness of SMI that lack adequate collateral.

All these supportive measures provided by the Government enhance the flow of funds to SMIs and become the key determinants of effective financing for SMIs.

Financing for SMIs may also be influenced by the development of the financial system. As financial markets deepen with the development of the economy and the deregulation of the financial sector, large industries come to depend more heavily on direct financing through the issuance of bonds and commercial papers for their funds, while SMIs remain the main customers of financial intermediaries.

Competition among financial institutions should make the access of SMIs to financial resources easier and the terms of SMIs loans more favorable. Therefore, the progress of financial liberalization and the level of financial deepening may be considered as factors that influence SMI financing.

In addition, the development of banking institutions relative to that of non-bank financial institutions can affect SMI financing. To the extent that banking institutions provide more of their loans to SMIs than do non-bank financial institutions, the development of banking institutions makes a contribution to the enforcement of SMI financing.

It remains to be examined whether macroeconomic variables such as GNP growth rate, inflation rate, money supply, and the level of interest rates have a significant influence on the efficiency of SMI financing.

VI. Problems of Financing for SMIs in Korea

Despite the important role that the SMIs play in economic development, they are plagued by a number of common problems. These

include: shortcomings in managerial capabilities; lack of skills in marketing, technology, product development, product diversification and quality control; shortage of high caliber, skilled man-power; and, shortage of capital and lack of access to regular financial institutions.

Of course, specific problems encountered by SMIs vary from one country to another and the nature and extent of problems may vary over time. Currently, Korean SMIs face a number of difficult problems such as protracted structural adjustment to changes in the economic environment and deteriorating international competitiveness. With price competitiveness being eroded by wage hikes and severe competition from late-starter industrializing Asian countries, those labor-intensive SMIs that rely heavily on exports for their business are suffering most severely in the process of industrial restructuring.

Financing is one of the most crucial problems encountered by many SMIs in restructuring their businesses. This raises several important points concerning the current financing system of SMIs in Korea.

First of all, the institutional framework for SMI financing, which relies heavily on compulsion by the Government and the central bank, is becoming increasingly inappropriate as the economy develops coupled with the process of financial liberalization.

Throughout the 1960s and 1970s, the financial sector in Korea, especially the banking sub-sector, was heavily regulated by the Government. In order to finance the economic development process more effectively, the Government intervened extensively in the mobilization and allocation of financial resources. Except for a relatively short period of high interest rates, the Government pursued a low-interest-rate policy. Interest rates on policy loans were much lower than those on general bank loans.

Since the early 1980s, however, it has become widely recognized that government control over the financial sector is increasingly ineffective as the scale of the economy continues to expand and the industrial structure becomes more sophisticated.

In this regard, reforms were implemented to liberalize the financial sector. With the progress of financial liberalization, government support for targeted sectors, including SMIs, through policy loans and

preferential lending rates has become increasingly controversial both in respect to its nature and its scope.

Most notably, regulations such as mandatory minimum lending ratios to SMIs for financial institution have become ineffective because they lack economic incentives to induce financial institutions to observe them. It is not surprising that financial institutions, whose prime concern is high profitability and low risk, should be reluctant to lend money to SMIs that are, in many cases, involved in high risk business or are unable to generate sufficient returns for them.

Secondly, it may be pointed out that the role of the Government is not itself sufficient to support SMI financing. The Government has declared its total commitment to developing SMIs and has adopted various assistance programmes in the area of financing, marketing, management, production and technology to improve and modernize this sector. Even though the amount of fiscal support for SMIs has been continuously increased, it still stands at a low level compared to that provided by financial institutions and the central bank.

Lastly, the practice of relying on collateral in extending loans rather than on the creditworthiness of borrowers still persists among most financial institutions. It is a common experience for SMIs to have their loan applications turned down simply because they are unable to provide acceptable collateral.

Table 7.14
LOANS TO SMIs BY TERMS OF CREDIT
(Unit: Per cent)

	1983	1986	1989
Loans against collateral	72.9	66.0	60.9
Loans not covered by collateral	27.1	34.0	39.1
(Credit guarantees)	7.8	17.7	16.1
(Credit only)	19.3	16.3	23.0
Total	100.0	100.0	100.0

Note: Figures are based on the Korean won loans of deposit money banks.

VII. Policy Suggestions for Financing SMIs in Korea

The problem of establishing an effective system of financing for SMIs remains at large regardless of the stage of economic development a nation's economy has reached, or the kind of financial system it has. Even in the most highly developed countries, there are SMIs that require adequate support from the Government. Various kinds of initiatives are needed to improve the effectiveness of the system of financing for SMIs in Korea.

Most importantly, market principles should be adopted more widely in the system of financial support for SMIs. Financial institutions that are not owned or managed by the Government are generally reluctant to shoulder the high risks associated with lending to SMIs in comparison to the low rate of return they offer. Therefore, it is necessary to draw up economic measures that are effective in encouraging financial institutions to extend loans to SMIs.

Instead of imposing mandatory regulations such as minimum lending ratios to SMIs, measures that reduce relevant risks or increase the rate of return on loans to SMIs should be taken. In this context, the credit guarantee system and financial support from Government need to be enhanced. Credit guarantees make loans to SMIs more attractive by reducing relevant risks, and financial support from Government increases the rate of return on lending to SMIs. Government support for financial institutions can be provided in the form of compensation for the shortfall on the rate of return between SMI loans and other general loans. In addition, loans to SMIs may be increased more effectively by providing credit guarantees for commercial bank loans instead of supplying funds directly through specialized banks.

The effectiveness of SMI financing can be improved by utilizing market principles instead of increasing government interference in the flow of financial resources.

Secondly, in line with the Government's responsibility for nurturing SMIs, fiscal support from government or public funds should be enlarged. Funds to increase fiscal support for structural adjustment and technology development may be mobilized by issuing long-term Treasury bonds. There is a justifiable case for increasing government debt in that the beneficiaries of technological development and structural adjustment tend to be those in future generations.

Lastly, the lending practices of financial institutions should evolve toward a greater focus on the creditworthiness of borrowers rather than on the collateral they offer. It has been widely advocated that, as financial markets develop with the progress of interest rate deregulation and financial deepening, large enterprises mobilize more of their funds directly from the public, while the main customer base of most financial intermediaries are the SMIs. To prepare for such changes in the financial environment, financial institutions need to improve their loan evaluation capabilities.

VIII. Summary and Conclusions

This paper has provided a review of the current financing system for SMIs in Korea and made some policy suggestions based on its examination of the problems.

One of the most crucial problems in SMI financing is that Korean SMIs still suffer from difficulties in raising funds in spite of the well-organized support system. It is suggested that in order to increase the effectiveness of SMI financing, a market-principle-oriented approach should be adopted to the financial support system. Economic incentives should largely replace regulations and the risk-return concept should be adopted as the basis for restructuring the system. Enhancing the credit guarantee system for SMIs is suggested as an alternative to imposing mandatory minimum lending ratios for financial institutions. It is expected that this market-principle-oriented approach will be able to solve the problems in SMI financing without hindering the process of financial liberalization.

In addition, it is recommended that fiscal support for SMI financing be enlarged. Funds to increase fiscal support for SMI financing may be mobilized by issuing long-term Treasury bonds.

Lastly, it is proposed that the lending practice of financial institutions, which currently emphasizes collateral, should evolve toward a system based on the creditworthiness of borrowers.

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LEGISLATION RELATED TO SMIs

1. Small and Medium Industry Basic Act(December 1966)

This act, which is sometimes termed SMIs' constitution, was formulated to lay down comprehensively all basic matters relating to SMIs. It defines the scope of the SMIs and indicates the basic direction of government policy toward them. Various policy measures for the development of SMIs have been drawn up under the terms of this act.

2. Small and Medium Industry Promotion Act (December 1978)

This act mandates that the government prepare training and technical guidance for SMIs as well as programs for cooperation among them. Under this act, the SMI Promotion Corporation was established as a government-run organization to ensure the effective implementation of government support policies for SMIs.

3. Small and Medium Industry Business Coordination Act (December 1961)

This act was promulgated to deal fairly with excessive competition among the SMIs. This act also ensures business opportunities are open to them by prohibiting the participation of large enterprises in areas reserved for SMIs.

4. Small and Medium Industry Sub-Contracting System Promotion Act (December 1975)

This act aims to protect the interests and rights of SMIs that act as sub-contractors to large firms. It mandates, for example, that the government can take the necessary action to prevent delays in payment by a prime contractor to sub-contractors, most of which are SMIs.

5. Small and Medium Industry Products Procurement Act (December 1981)

The objective of this act is to promote the procurement of SMI products by governmental and other public organizations.

6. Special Act for the Promotion of Structural Improvement and Business Stabilization of SMIs (March 1989)

This legislation was enacted to improve the structure of SMIs and to strengthen their competitiveness, by helping them to cope with the changing economic environment. To this end, it strongly encourages the development of technology as well as the use of computers and information systems.

7. Small and Medium Industry Start-up Promotion Act (May 1989)

This act was formulated to encourage the establishment of SMIs by offering aspiring entrepreneurs financial support and tax incentives.

8. Industrial Bank of Korea Act (July 1961)

This act was formulated to provide SMIs with an exclusive source of funds through establishing the Industrial Bank of Korea.

9. The Small and Medium Industry Cooperative Act (December 1961)

This act was passed to encourage cooperation among the SMIs in a spirit of mutual assistance. The Small and Medium Industry Mutual Fund was established under this act.

NON-FINANCIAL ORGANIZATIONS THAT SUPPORT SMIs

1. Bureau of SMIs Within the Ministry of Trade and Industry

This is the government body in charge of the design and implementation of basic policies concerning SMIs. It also guides and supervises the activities of various organizations related with SMIs.

2. SMI Promotion Corporation (SMIPC)

The corporation was set up under the SMI Promotion Act of 1979. Its major functions are financial assistance for the development of new technology and start-ups mainly through the SMI Promotion Fund; implementation of modernization programs; provision of managerial and technical training and information for SMIs; promotion of SMIs'international activities; etc.

3. Korea Federation of Small Business (KFSB)

This was established in 1962 by SMIs themselves to protect their interests and to promote their position in the national economy through strengthening their competitiveness. The major functions of KFSB are proposals and recommendations to the Government about SMI policies; assistance in organizing cooperatives and their activities; provision of managerial and technical advice; support for joint projects of cooperatives; operation of the Mutual Assistance Fund; conduct of a number of surveys on SMIs; etc.

4. Other Organizations

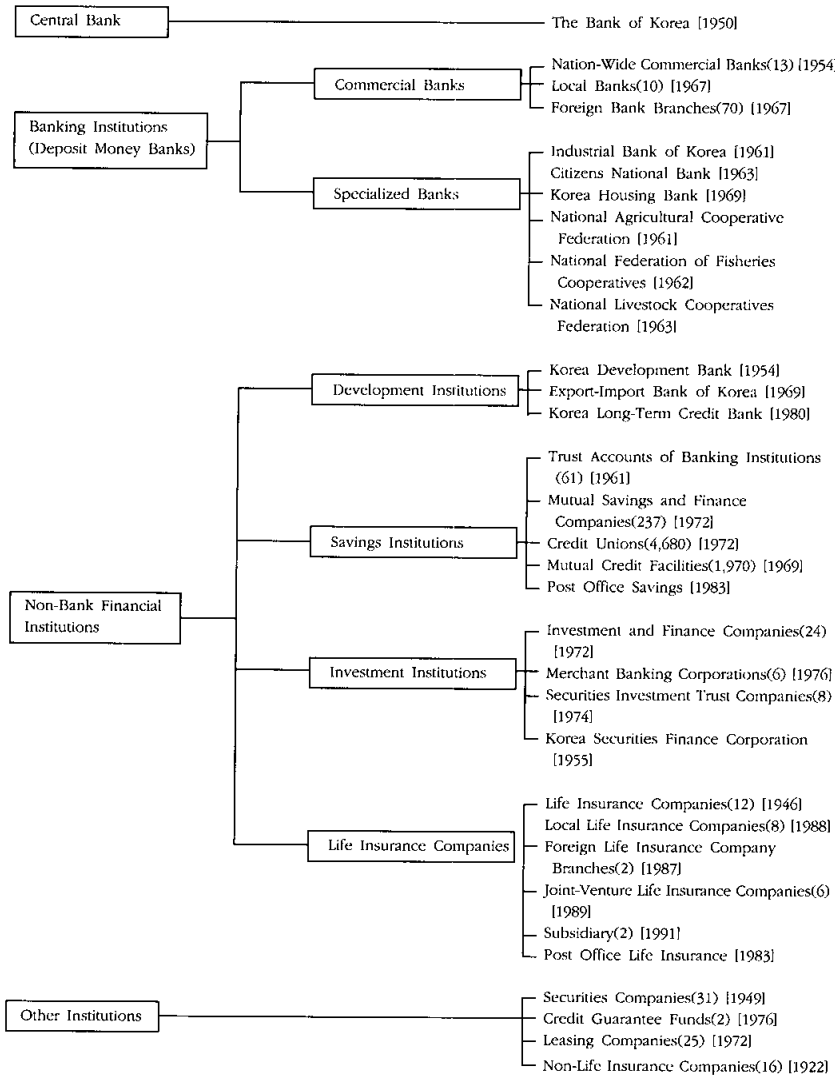
There exist many public organizations which provide support directly or indirectly for the development of SMIs. The Korea Chamber of Commerce and Industry (KCCI) makes policy recommendations to the Government and plays a pivotal role in external trade by the issue of commercial documents. In addition, it conducts various surveys on the economy and holds useful seminars for SMIs.

The Korea Trade Promotion Corporation (KTPC) introduces Korean products and companies to foreign buyers and provides domestic firms with new information on overseas markets.

The Korea Advanced Institute of Science and Technology (KAIST), which is one of Korea's leading research institutes and specializes in a wide range of high-tech sectors, helps to develop new technologies in partnership with private enterprises and to commercialize new products or manufacturing processes.

FINANCIAL INSTITUTIONS IN KOREA

(As of the End of April 1992)



Notes: 1. Figures in parentheses represent the number of institutions.
2. Figures in brackets represent the year in which the institution was established. Where there are more than one such institutions, the year is that of the first to be established.

Chapter 8

FINANCING FOR SMIs IN MALAYSIA

by
Ng Thiam Hee and Boon Moi Koh

I. Salient Features of SMIs in Malaysia

1.1 Introduction

The small and medium industries (SMIs) occupy a prominent position in the development agenda of most countries, industrialized and developing alike. The role of SMIs is widely acknowledged as being crucial in revitalizing and enhancing the industrialization process through industrial deepening. Although SMIs account for a large share of Malaysia's industrial sector, they have hitherto performed significantly less well than large firms and their foreign counterparts. Against the background of a rapidly changing economic environment, specifically with the increasing pace of industrial expansion in Malaysia during the 1990s, the role of the small- and medium-scale industries (SMIs) in such expansion must be embraced to complement the activities of their larger counterparts. Realizing the important roles which the SMIs can play in strengthening the industrial linkages and providing the foundations for the development of a core of entrepreneurs to support the nation's industrial thrust, the Malaysian Government has made concerted efforts through the private sector and various governmental institutions to promote SMIs. This is to ensure that the SMIs can undertake better and sustainable business activities and link themselves not only to the local firms and foreign investors, but also to global trade.

1.2 Definition of SMIs

There is no legal or a single clear cut definition of what constitutes 'small' and 'medium' industries in Malaysia. Only recently, a broad consensus appears to have emerged within official circles on what comprises 'small', 'medium' and 'large scale' enterprises. Under the Industrial Coordination Act, 1975 and the Promotion of Investment Act, 1986, the distinction between small-scale and medium-scale enterprises are in terms of assets size or shareholders' funds. The small-scale industries or enterprises (SSEs) are defined as registered businesses with

shareholder's funds or net assets of up to RM 500000, while a medium-scale industries or enterprises (MSEs) are defined as having shareholder's funds or net assets of more than RM 0.5 million to RM 2.5 million. The usage of these particular definitions of small and medium enterprises has gained wider acceptance in Malaysia, especially among the central agencies for policy, regulatory and administrative purpose and also by the financial institutions community. For the purpose of this paper, SMIs would refer to those enterprises as defined by virtue of its net assets or shareholders' funds. In this respect, small-scale industries are those with shareholders' funds or net assets of up to RM 500000, while medium-scale industries refer to those having shareholders' funds or net assets of more than RM 0.5 million to RM 2.5 million. As latest data for analysis purposes is not available (DOS latest annual industrial survey was for the year 1989), all analysis for this section would refer to the period up to the year 1989 only.

Under the lending guidelines of the Central Bank, the same definition for small-scale enterprises is adopted but with an additional qualification that the loan limit to each enterprise must not exceed RM 500000. However, medium-scale enterprises for purpose of loans are not defined. In terms of employment, the SSEs can be defined as those enterprises engaging less than 50 full-time employees, while for the MSEs the range of full-time employees were between 50-199. Large enterprises would then be defined as those employing over 200 workers. Such division is based on estimates by the Malaysian Industrial Development Authority (MIDA) during 1985 and 1986, where the average number of employees per manufacturing establishment with less than RM 0.5 million shareholders' funds was 46, while establishments with shareholders' funds of between RM 0.5 million to RM 2.5 million was 92. Based on this findings, firms with less than 50 full-time employees can be classified as SSEs and those employing 50 to 199 employees as MSEs.

1.3 Principal Characteristics of the SMIs

One of the principal characteristics of the SMIs which distinguishes them from their large counterparts is that they are typically organized as family or sole proprietorship business involving low levels of capitalization financed mainly by the savings of the family's friends or relatives. Hence, SMIs tend to be more labor intensive and rely heavily on family labor and part-time workers. This phenomenon is evidenced

through the relevant findings in the Department of Statistics Industrial Survey 1989 where the average value of asset per employee (which measure the degree of capital intensity) of the SSIs was only RM 3813 compared with RM 13585 and RM 55580 for the medium and large-scale industries respectively (Table 8.1). Generally, this reflected that the large-scale industries tend to be more capital-intensive than the small- and medium-scale industries. With regard to the organizational structures of the SMIs, it was basically simple - being run mostly as a one-man operations and involve very little specialization in production and management. Traditionally, the level of education of SMIs' managerial manpower has been low. In the case of MSIs, due to their relatively greater size, they have a more formal organizational structure and division of labor. Unlike the large industries which were mainly located at urban areas, SMIs are located in both the rural and urban areas and in the developed as well as in the least developed states in Malaysia. Within the urban domain, SSIs in particular, were located not only in the commercial and industrial centers, but also as backyard operations in the residential areas.

Another common feature of the SMIs is that their production and market-orientation, which traditionally have been concentrated in product areas more amenable to small-scale production requiring less capital and catering for the domestic market. Their products are either not suitable or not competitive in terms of pricing for exports. As a result, very few SMIs are capable of exporting their products. Another significant feature of the SMIs is that most of them are engaged in simple assembly, mixing or finishing operations which require relatively little skill. Therefore, it can be found that most SMIs are being operated by managers and entrepreneurs who have limited skills and managerial capabilities, especially in terms of expanding their production capacities beyond what has been inherited and established. In Malaysia, SMIs are predominant in manufacturing, retail trade, wholesale trade and construction. Prior to the early 1980s, Malaysian Chinese accounted for almost 80 percent of SSIs, however following the adoption of the New Economic Policy (NEP) in 1971, the number of SSIs owned by Bumiputera had increased and were concentrated in handicrafts, batik printing, food processing and furniture production sectors.

1.4 Sectoral Structure of SMIs

Traditionally, SMIs have concentrated in product areas more amenable to small-scale production requiring less capital and catering for

Table 8.1

MEASUREMENT OF FIXED CAPITAL PER WORKER RATIO IN THE MANUFACTURING SECTOR: 1989

Industry	Value of Fixed Capital ($ billion) (K)	No. of Paid Employees (L)	Fixed Capital Per Worker (K/L)
Small-Scale Industries	0.4	104900	3813
Medium-Scale Industries	1.8	132500	13585
Large-Scale Industries	25.6	460600	55580
Total	27.8	698000	39828

Source: Department of Statistics Annual Industrial Surveys, various issues.

the domestic market. Based on the Department of statistics Industrial Census for 1981, it was found that more than 80 percent of the SMIs population were in the food products, textiles and wearing apparel, wood products, chemical products, paper products, fabricated metal products and electrical and electronics product industries (Table 8.2).

Most of the SSIs were engaged in a relatively simple labor-intensive techniques and were predominant in industries producing food products (18 percent of total SSIs), textile and wearing apparel (17 percent); wood products (16 percent); fabricated metal products (15 percent) and electrical and electronics products (9 percent). It is notable that, SSI's contribution to value added is very significant in the wood products, food products and fabricated metal products industries. These industries as a group accounted for more than 40 percent of the total value added of the small-scale industries.

In the case of the medium-scale industries, they were mainly concentrated in the food and wood products industries by virtue of the number of establishments and value-added contribution in those industries. An even more significant contribution to value added were the chemical and rubber products industries despite their small number of establishments (17.5 percent). These two industries contributed about 20 percent of the total value-added of the medium-scale industries.

The SMIs engaged in the food products industry were mostly engaged in making beehoon/noodles, bakeries and biscuits, in addition to their involvement in the small rice mills. In the textile and wearing apparel sector, a large number of the SMIs was the small-time apparel makers; while in the wood products industry, they were mainly involved in furniture making. The SMIs were also engaged in the foundries and hardware but their contribution to value added was not significant. The list of products produced by the SMIs is shown in Appendix 8.1.

1.5 Importance of the SMIs

Despite the limitations of the SMIs as outlined in its principal characteristics above, the SMIs nevertheless play an important role in the industrial expansion process of the country. The SMIs are seen as a major outlet for the absorption of unskilled manpower and low income segments of the population and as a key mechanism for ensuring

Table 8.2

MALAYSIA: SMIs DISTRIBUTION BY MAJOR INDUSTRY GROUP, 1981 1/

	Small-Scale Industries		Medium-Scale Industries	
	No. of Establish-ments	Share of Value-Added	No. of Establish-ments	Share of Value-Added
Food Products	3280	12.9	232	14.8
Beverages	79	0.6	18	2.1
Tobacco Products	210	1.1	4	0.1
Textiles and Wearing Apparel	3122	8.7	73	5.9
Wood Products	2972	18.9	327	21.9
Paper Products	907	8.7	107	8.6
Chemicals and Chemical Products	924	8.1	148	9.4
Petroleum Products	9	0.2	3	0.7
Rubber Products	427	4.8	97	10.1
Non-Metallic Mineral Products	764	6.3	98	5.3
Iron and Steel Products	378	2.2	29	2.3
Fabricated Metal Products	2525	9.7	98	5.5
Electrical Machinery Products	1639	12.3	107	9.5
Transport Equipment	346	3.4	39	1.8
Others 2/	644	2.1	24	2.0
Total	18226	100.0	1404	100.0

1/ DOS 1981 Industrial Census.

2/ Manufacture of leathers and products of leather, leather substitutes and fur, except footwears and wearing apparel and manufacture of professional and scientific & measuring & controlling equipment, n.e.c.

that the benefits of economic growth reach the poor. Moreover, SMIs provide an excellent training ground for the development and upgrading of entrepreneurship skills. They also make efficient use of the underutilized resources as well as serve as important vehicles for promoting forward and backward linkages in various sectors of the economy. The SMIs are also seen as providing better opportunities for the use of relatively labor-intensive production techniques. Taking all these into account, the promotion of the SMIs has always been one of the core issues in the Government's industrial development strategy. As such, some of the priority areas identified for the development of the SMIs includes:

(a) Improving SMIs capacity to supply industrial inputs;

(b) Increase SMIs capacity to penetrate export markets;

(c) Improve SMIs investment efficiency;

(d) Increase SMIs productivity;

(e) Upgrade SMIs managerial and entrepreneurial know-how;

(f) Development of indigenous technology;

(g) Expansion of SMIs supporting infrastructure;

(h) Creation of necessary environment for SMIs development; and,

(i) Adequate supply of skilled manpower and public and private sectors cooperation to assist SMIs.

The Industrial Master Plan (IMP) implemented since 1986, among others, had further endorsed the role of the SMIs as supporting industries which could play the ancillary roles in line with the objective of establishing a broader industrial base. Among the important roles of the SMIs in industrial development were as follows:

(a) The SMIs play an important complementary role to support the large firms;

(b) The SMIs serve as a `training ground' for developing the skills of industrial workers and entrepreneurs;

(c) The SMIs act as a catalyst for the growth of the national economy in line with the aim of widening the existing narrow industrial base;

(d) The SMIs offer ample opportunities for the utilization of relatively labor-intensive production techniques, thus creating more job opportunities; and,

(e) The SMIs also help in increasing the value-added of local commodities and resources, thus encouraging the diversification and the shift in emphasis from upstream to more downstream activities.

1.6 Contribution of the SMIs to the Malaysian Economic Growth

On the basis of the definition of SMIs adopted in this paper, the SMIs accounted for 96.1 percent of the total manufacturing establishments in Malaysia in 1981, while in terms of employment, it accounted for 54 percent of total employment. Due to the small size of such manufacturing establishments, it can be observed that although it made up the bulk of the total establishments in the manufacturing sector, its contribution to total output was low at almost 30 percent in 1981. As shown in Table 8.3b, it can be observed that the role of the SMIs was found to be on a downward trend based on several factors. The most outstanding fact is that its share to total number of establishment of the manufacturing sector had progressively declined over the 1980s period. From the high share of 96 percent in 1981, it shrunk to 78 percent in 1989, reflecting mainly the rapid industrialization process which took place during the period under review (1981-1989), which in turn had resulted in matured SMIs which undertook expansion programs, to graduate into the large enterprises group (Table 8.3a). Similar trend of growth was also noted in SMIs contribution to total employment of the manufacturing sector. In 1981, the SMIs' share to total employment accounted for more than half (53.9 percent) and this had gradually been reduced to 43 percent in 1983, 41.2 percent in 1985 and eventually it accounted for 34 percent in 1989. Large industries thus, assumed the role of the leading sector as far as the employment is concerned, i.e., from 46.1 percent in 1981 to the high of 66 percent in 1989 (Table 8.4).

Table 8.3a

MALAYSIA: SMIs CONTRIBUTION RATIO TO TOTAL ESTABLISHMENTS IN THE MANUFACTURING SECTOR, 1981–1989

	1981 1/		1983		1985		1988		1989	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.	Percent
Small-Scale Industries (SSI)	18226	89.2	3683	62.4	3422	58.8	3200	55.3	3247	53.3
Medium-Scale Industries (MSI)	1404	6.9	1294	21.9	1346	23.1	1365	23.6	1485	24.4.
Sub-Total SMIs	19630	96.1	4977	84.4	4768	81.9	4565	79.0	4732	77.7
Large Industries (LI)	801	3.9	922	15.6	1052	18.1	1217	21.0	1360	22.3
TOTAL	20431	100.0	5899	100.0	5820	100.0	5782	100.0	6092	100.0

1/ DOS Census.

Source: Department of Statistics Annual Industrial Surveys, various issues.

Table 8.3b

MALAYSIA: CHANGES IN THE RELATIVE IMPORTANCE OF SMIs 1/ IN ITS CONTRIBUTION TO GROWTH IN THE MANUFACTURING SECTOR

	1981	1983	1987	1988	1989
Percentage Share to:					
o Number of Establishment					
SSI	89.2	62.4	58.8	55.3	53.3
MIS	6.9	21.9	23.1	23.6	24.4
SMIs	96.1	84.3	81.9	78.9	77.7
o Total Employment					
SSI	33.8	21.9	20.5	16.8	15.0
MIS	20.1	21.1	20.6	19.8	19.0
SMIs	53.9	43.0	41.1	36.6	34.0
o Total Output					
SSI	14.9	8.9	7.7	6.0	5.1
MIS	14.9	14.3	12.7	12.9	11.6
SMIs	29.8	23.2	20.4	18.9	16.7
o Total Value-Added					
SSI	17.9	10.4	8.3	6.7	5.8
MIS	15.8	15.1	12.4	12.9	11.1
SMIs	33.7	25.5	20.7	19.6	16.9

1/ SMIs consist of SSI ($0.5 million and below); and, MSI (>$0.5 million to $2.5 million).

Source: Department of Statistics Annual Industrial Survey, various issues.

It has earlier been highlighted that although the SMIs made up the bulk of total establishments of the manufacturing sector (78 percent in 1989), its contribution to total output was not that significant. In fact it has declined by 4.3 percent during the 1981-1989 period. In value terms, the SMIs output value was only RM 14 billion in 1989 against the large industries total of RM 67 billion (Table 8.5). With regard to its share to total value-added of the manufacturing sector, a similar declining trend was observed. The SMIs share dropped to 17 percent in 1989 from 34 percent in 1981 (Table 8.6). As shown in Table 8.3b, it is noteworthy that within the SMIs group, the contribution of the medium-scale industries had gained prominence over that of the small-scale industries during 1988-1989 period (particularly in terms of its shares to the number of establishments and total employment). In 1981, SSIs accounted for 89 percent of the total number of establishments in the manufacturing sector, while that of the MSIs was merely a modest 7 percent. However, due to the rapid changes that took place especially during the industrialization drive, the share of the MSIs to total number of establishments became more significant where it accounted for almost a quarter (24.4 percent) in 1989.

The great improvement in the performance of the MSIs can be further confirmed on the basis of the changes in labor productivity. As shown in Table 8.7, MSIs achieved higher annual productivity growth of 4.7 percent compared to that of SSIs which only recorded 3.8 percent between 1981 and 1989. Although LSIs have comparative advantage than MSIs as the former category uses more up-to-date machineries and better trained workers, their labor productivity had grew by 4.8 percent, similar to that of MSIs.

The capital-output ratio (which measure efficiency in production utilization) for LSIs increased considerably between 1981 and 1989 (Table 8.8). In contrast, the capital-output ratios for SSIs and MSIs were on a downward trend, and was particularly more marked for MSIs. This indicated an increased efficiency of SSIs and MSIs as less capital is used to produce per unit of output.

II. Financial Policies for SMIs in the 1980s in Malaysia

The Government has always accorded priority to the development of SMIs. This was shown as early as the 1960s in the First Malaysia

Table 8.4

MALAYSIA: SMIs CONTRIBUTION RATIO TO TOTAL EMPLOYMENT IN THE MANUFACTURING SECTOR, 1981–1989
(In Thousand)

	1981		1983		1985		1988		1989	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.	Percent
Small-Scale Industries (SSI)	196.2	33.8	107.9	21.9	97.7	20.5	100.3	16.8	104.9	15.0
Medium-Scale Industries (MSI)	116.3	20.1	104.3	21.1	98.3	20.6	118.4	19.8	132.5	19.0
Sub-Total SMIs	312.5	53.9	212.2	43.0	196.0	41.2	218.7	36.5	237.4	34.0
Large Industries (LI)	267.5	46.1	281.0	57.0	280.3	58.8	380.0	63.5	460.6	66.0
TOTAL	580.0	100.0	493.2	100.0	476.3	100.0	598.7	100.0	698.0	100.0

Source: Department of Statistics Annual Industrial Surveys, various issues.

Table 8.5

MALAYSIA: SMIs CONTRIBUTION RATIO TO TOTAL OUTPUT IN THE MANUFACTURING SECTOR, 1981–1989
(M$ billion)

	1981		1983		1985		1988		1989	
	Value	Percent	Value	Percent	Value	Percent	Value	Percent	Value	Percent
Small-Scale Industries (SSI)	5.7	14.9	3.7	8.9	3.5	7.7	3.9	6.0	4.1	5.1.
Medium-Scale Industries (MSI)	5.7	14.9	5.9	14.3	5.8	12.7	8.4	12.9	9.4	11.6
Sub-Total SMIs	11.4	29.8	9.6	23.2	9.3	20.4	12.3	18.9	13.5	16.7
Large Industries (LI)	26.9	70.2	31.8	76.8	36.3	79.6	52.9	81.1	67.3	83.3
TOTAL	38.3	100.0	41.4	100.0	45.6	100.0	65.2	100.0	80.8	100.0

Source: Department of Statistics Annual Industrial Surveys, various issues.

Table 8.6

MALAYSIA: SMIs CONTRIBUTION RATIO TO TOTAL VALUE-ADDED IN THE MANUFACTURING SECTOR, 1981-1989
(M$ billion)

	1981		1983		1985		1988		1989	
	Value	Percent	Value	Percent	Value	Percent	Value	Percent	Value	Percent
Small-Scale Industries (SSI)	1.7	17.9	1.1	10.4	1.0	8.3	1.1	6.7	1.2	5.8
Medium-Scale Industries (MSI)	1.5	15.8	1.6	15.1	1.5	12.4	2.1	12.9	2.3	11.1
Sub-Total SMIs	3.2	33.7	2.7	25.5	2.5	20.7	3.2	19.6	3.5	16.9
Large Industries (LI)	6.3	66.3	7.9	74.5	9.6	79.3	13.1	80.4	17.2	83.1
TOTAL	9.5	100.0	10.6	100.0	12.1	100.0	16.3	100.0	20.7	100.0

Source: Department of Statistics Annual Industrial Surveys, various issues.

MEASUREMENT OF LABOR PRODUCTIVITY 1/ IN THE MANUFACTURING SECTOR

Year	Small-Scale Industries	Medium-Scale Industries	Large-Scale Industries
1981	0.02915	0.04901	0.10056
1983	0.03429	0.05656	0.11317
1985	0.03582	0.05900	0.12950
1988	0.03888	0.07095	0.13921
1989	0.03908	0.07095	0.14611
Growth Rate (1981-1989)	3.8 %	4.7 %	4.8 %

1/ Gross output per worker.

Source: Department of Statistics Annual Industrial Surveys, various issues

Plan (1966-1970) where the goal of developing SMIs was closely linked with that of developing Bumiputera entrepreneurs. The Second Malaysia Plan (1971-1975) continued to stress the development of SMIs. During this period, a wide range of management, technical and financial assistance was provided to encourage the development of SMIs and integrate it into the modern industrial sector. To promote the development of Bumiputera SMIs, agencies such as MARA (Council of Trust for the Indigenous People), the Development Bank of Malaysia, and the National Productivity Centre set up special programs to provide training, advisory services, and guidance to small businesses. Better terms and conditions of financing and more favorable incentives were also made available to these industries. In this respect, the Credit Guarantee Corporation (CGC) was incorporated in 1972 to encourage commercial banks to provide more loans to SMI.

The role of SMIs as a training ground for future entrepreneurs and as a mean for restructuring racial economic balance was emphasized in the Third Malaysia Plan (1976-1980). Hence, Government efforts during this period were focused on the training of small entrepreneurs and the provision of credit, technical expertise and extension services. The Fourth Malaysia Plan (1981-1985) repeated the aims of the Third Plan and strengthened the Government's commitment to SMIs. MARA, the Development of Malaysia and Agricultural Bank of Malaysia were allocated RM 318 million to foster the development of SMIs. In the light of uncertainties associated with external demand and rising protectionism, the strategy recommended by the Industrial Master Plan and adopted in the Fifth Malaysia Plan (1986-1990) was one of re-orientation of the manufacturing sector from being an essentially inward-looking, domestic-oriented sector to one of export-orientation. Hence, the emphasis for SMIs policy was the expansion, improvement and modernization of SMIs through improving the incentive system, developing research and development activities, and strengthening institutions responsible for the development of the manufacturing sector. For this purpose, the Special Programme for the Development of Small Industries involving RM 234 million was undertaken with the cooperation of the World Bank which was introduced in 1985 and to last till 1988.

The strategy adopted to promote SMIs, particularly small-scale industries development, was for the Government to provide a wide range of public support services. This strategy, with its initial domestic market-orientation, was not reviewed until the downturn in the economy

Table 8.8

MEASUREMENT OF CAPITAL OUTPUT RATIO IN THE MANUFACTURING SECTOR

Year	Small-Scale Industries	Medium-Scale Industries	Large-Scale Industries
1981	0.5294	1.0667	1.2698
1983	0.4545	0.9375	1.7468
1985	0.5000	1.0667	2.0100
1988	0.3636	0.7619	1.7328
1989	0.3333	0.7826	1.4884

Source: Department of Statistics Annual Industrial Surveys, various issues

in the early 1980s. As outlined in the Fifth Malaysian Plan, growing recognition is now being given to the need for a more outward-looking, export-oriented development of SMIs. As a result, the emphasis of SMI policy has shifted to expanding and modernizing SMIs through the provision of financial assistance, improvement of the incentive system, promotion of R&D activities, and the strengthening of institutions responsible for SMIs.

Incentives for SMIs were strengthened considerably in the 1989 budget. Pioneer status were accorded automatically to all SMIs producing a designated list of products. A RM 890 million fund under the ASEAN-Japan Development Fund (AJDF) to be managed by four financial institutions was also specially assigned to provide financial assistance to SMIs. Under this fund, SMIs are provided financial assistance at concessionary terms. This budget also removed many of the discriminations against SMIs. For example, large-scale enterprises located in Free Trade Zones were allowed to import their inputs and components duty-free. This privilege had not been accorded to domestic SMIs. Hence, SMIs were prevented from sourcing input from cheaper foreign sources. The 1989 budget exempted SMIs from import duties for raw materials, components and parts.

Government has attempted to ensure that SMIs has access to funds by prescribing lending guidelines and setting up special funds. For the commercial banks, quotas on lending to small-scale enterprises were imposed as far back as 1973, while for finance companies, guidelines were laid down since 1979. Gradually, these guidelines were relaxed in line with the Government's objective to liberalize the financial sector. By 1992, quantitative lending limits to small-scale enterprises were removed except for lending under the Principal Guarantee Scheme of the Credit Guarantee Corporation. Ceiling interest rates were also prescribed for lending to small-scale enterprises. This has also been liberalized.

Special funds have been set up by the Government to channel financial resources directly to the SMIs at concessionary rates. They include the New Investment Fund (set up in 1985), the New Entrepreneurs Fund (1989), Industrial Technical Assistance Fund (1990), and the Industrial Adjustment Fund (1991). These funds are available at low interest rates to SMIs.

III. Current Systems for Financing SMIs in Malaysia

3.1 Financial Institutions for SMIs

As at end of 1991, the total assets of the Malaysian financial sector amounted to RM 372.2 billion. The financial sector comprises of two main components: the banking system and the non-banking system. The former consists of the Central Bank, commercial banks, finance companies, merchant banks and discount houses. Together they accounted for 71.4 percent of the loans and investments outstanding in the financial sector in 1991. The remaining assets were held by the non-banking system comprising of provident, pension and insurance funds; and, development finance institutions and savings institutions. The main institutions providing funds to SMIs are the commercial banks, finance companies, merchant banks and the development finance institutions.

3.1.1 Commercial Banks

At the end of 1991, the number of commercial banks in Malaysia totaled 37. As a group, they accounted for more than 40 percent of the financial system's assets. The commercial banks are widely spread out, operating from more than 1000 branch offices throughout the country. This should enable even the remotest SMIs easy access to the banks.

The total liabilities of the commercial banks stood at RM 152 billion at the end of 1991, out of which 63 percent was sourced from deposits. The assets of the commercial banks, then, comprised of loans (64 percent), investment (15 percent) and other assets (21 percent). The loans were made up of RM 96 billion domestic loans and RM 1 billion foreign loans. The main types of loans were overdrafts, term loans, trade bills and bankers' acceptances.

SMI loans from the commercial banks can be in the form Principal Guarantee Scheme (PGS) loans, bankers' acceptances, Export Credit Refinancing facilities and normal term loans. As at end of 1991, the total loans outstanding to small-scale enterprises amounted to about RM 4 billion or 4.1 percent of commercial banks total loans outstanding. Historically, small loans share of total bank loans has not varied greatly. The manufacturing sector accounted for 15.7 percent of total small loans

Table 8.9

ASSETS OF THE FINANCIAL SYSTEM AS AT END OF 1991

	$ Billion	% Share
Central Bank	44.6	12.0
Commercial Banks	153.5	41.2
Finance Companies	49.0	13.2
Merchant Banks	13.3	3.6
Discount Houses	5.2	1.4
Provident, Pension and Insurance Funds	70.0	18.8
Development Finance Institutions 1/	6.5	1.7
Savings Institutions 2/	9.2	2.5
Other Financial Intermediaries 3/	20.9	5.6
Total	372.2	100.0

1/ Include Malaysian Industrial Development Finance Berhad (MIDF), Bank Pertanian Malaysia, Borneo Development Corporation, Sabah Development Bank, Sabah Credit Corporation, Bank Pembangunan Malaysia and Bank Industri.

2/ Include National Savings Bank, Bank Kerjasama Rakyat and the cooperative societies.

3/ Include unit trusts, building societies, Pilgrims Management and Fund Board, Credit Guarantee Corporation and Cagamas Berhad.

extended. Data on loans to medium-scale industries are not available.

3.1.2 Finance Companies

At the end of 1991, finance companies held 13.2 percent of the total assets of the financial system. There are 41 finance companies operating from 603 branches all over the country. This made finance companies second only to commercial banks in its geographical distribution.

The total liabilities of the finance companies amounted to RM 49 billion with deposits making up about 71 percent of the total. The main type of deposit with the finance companies is fixed deposit which accounted for 94 percent of total deposits. Finance companies usually offer higher interest rates on deposits than banks. Due to their higher cost of funds, they also charge higher interest rates on loans.

On the asset side, as of end of 1991, the finance companies allocated 70 percent, 8 percent and 22 percent of their total assets to loans, investments and other assets respectively. The loan portion consists of hire purchase, leasing finance and housing loans. Finance companies are not allowed to operate current account and hence, cannot provide overdraft services. A large portion, about 34 percent, of the finance companies' lending was for financing purchases of motor vehicles through hire purchase.

At the end of 1991, the finance companies loans to small companies totaled RM 5,405 million. Out of this, 14.4 percent is channelled to the manufacturing sector. The main industries attracting the loans are the food, beverages and tobacco; textiles and wearing apparels; and, wood and wood products. Again, no data is available on lending to medium-scale manufacturing firms.

3.1.3 Merchant Banks

There are 12 merchant banks which also played an role in providing funds to the manufacturing sector. Merchant banks act as special financial intermediaries in the financial market and are engaged in professional fee-based activities such as, corporate finance advisory

Table 8.10

COMMERCIAL BANKS' LOANS TO SMALL-SCALE ENTERPRISES

Year	Loans Outstanding ($ Million)	Manufacturing Loans Outstanding ($ Million)	Manufacturing Share of Loans Outstanding (Percent)
1970	343.3	41.4	12.1
1975	945.4	115.5	12.2
1980	2806.7	395.5	14.1
1985	3473.3	466.7	13.4
1986	3232.0	425.9	13.2
1987	2983.6	389.9	13.1
1988	3819.5	498.3	13.0
1989	3712.4	416.4	11.2
1990	3802.7	544.5	14.3
1991	4048.1	634.1	15.7

Table 8.11

FINANCE COMPANIES' LOANS TO SMALL-SCALE ENTERPRISES

Year	Loans Outstanding ($ Million)	Manufacturing Loans Outstanding ($ Million)	Manufacturing Share of Loans Outstanding (Percent)
1970	66.3	9.4	14.2
1975	300.6	34.6	11.5
1980	1082.5	129.6	12.0
1985	1978.1	255.7	12.9
1986	1865.6	216.8	11.6
1987	1702.0	192.5	11.3
1988	2257.1	285.1	12.6
1989	3043.1	418.0	13.7
1990	4281.4	612.0	14.3
1991	5405.2	780.4	14.4

services, investment advice, portfolio management services, and services for the restructuring of ownership. Bank Negara Malaysia (BNM) guidelines specify that 30 percent of the merchant banks' net income has to be derived from fee-based activities. In addition, to the fee-based activities, merchant banks also engage in fund-based activities such as, accepting deposits and making loans, discounting, factoring and participation in syndicated loans, leasing, and bridging finance as well as equity financing.

The total liabilities of merchant banks at the end of 1991 totalled RM 13.3 billion, sourced mainly from deposits (RM 8 billion). Merchant banks provide loans to the manufacturing sector as part of its normal operations. At the end of 1991, loans to the manufacturing sector accounted for 20.7 percent of total loans extended by the merchant banks. However, no data are available on the amount that is channelled to SMIs.

3.1.4 Development Finance Institutions

Development finance institutions are specialized financial institutions established to promote a higher level of investment in industries. In Malaysia, the development finance institutions are set up to fill a gap in the supply of financial services that are not usually covered by the existing financial institutions especially long-term loans for new industrial projects. The six development finance institutions in Malaysia are Sabah Development Bank, Malaysian Industrial Development Finance (MIDF), Bank Pembangunan Malaysia, Bank Industri Malaysia, Borneo Development Corporation, and Malaysian Industrial Estate Limited. As at end of 1991, the total assets of these institutions stood at RM 4.1 billion. The largest institutions in terms of loans outstanding to the industrial sector are MIDF, Bank Pembangunan and Bank Industri collectively accounted for 92 percent of the development finance institutions' industrial loans which will be covered here.

(i) Malaysian Industrial Development Finance Berhad (MIDF)

MIDF was set up in 1960 to promote industrialization in Malaysia through providing financial assistance to private industrial enterprises in the form of medium to long-term loans, factory mortgage loans and hire-purchase facilities. MIDF extends loans to industrial enterprises as part of its normal operations as well as administering special loan schemes.

In the past few years, MIDF's main source of funds for its lending operations came from two Government-assisted funds: New Investments Fund (NIF) and ASEAN-Japan Development Fund (AJDF) Loan Scheme. The NIF was introduced by BNM in 1985 and was terminated in 1987. The AJDF was introduced in December 1988 for the small and medium-sized industries and comprises of two types of loans. Only Malaysian small and medium-scaled industries are allowed to borrow from the OECF funded portion of the scheme. The maximum amount allowed is RM 5 million at an interest rate of 6.5 percent per annum. For the EXIM Bank funded portion, all Malaysian companies are eligible to use the facility. Up to RM 20 million may be borrowed at 7.75 percent per annum. The AJDF allocation to MIDF has almost been exhausted by 31 March 1991. Loans approved under these two schemes up to March 31 1991, totalled about RM 400 million.

More recently, MIDF was appointed to administer two new funds: the New Entrepreneurs Fund (NEF) and the Industrial Adjustment Fund (IAF). The NEF was a RM 250 million fund established in December 1989 to encourage the growth of new Bumiputera entrepreneurs in business ventures as part of the Government's efforts to increase the participation of Bumiputera in the industrial sector. Besides MIDF, three commercial banks and Bank Pembangunan were chosen to approve loans under the scheme. Under NEF, soft loans would be given to eligible borrowers to finance fixed assets purchased for new projects. The loans which carry an interest rate of 5 percent per annum are granted for a maximum period of five years and can be used to finance up to 85 percent of the cost of the fixed assets. Working capital loans are not permitted under the scheme. MIDF has approved loans amounting to RM 912000 under this scheme up to 31 March 1991.

The IAF was introduced by the Government in February 1991 with an allocation of RM 500 million. The objective of the IAF is to facilitate the rationalization and restructuring of three industry sectors: machinery and engineering, wood-based, and textile industries. MIDF was designated as the lead borrower for the textile sector. The Fund will make available funds to be lent as medium and long-term fixed rate loans. An amount of RM 100 million was earmarked for each sector, with the balance of RM 200 million to be lent on a first-come-first-served basis to borrowers in any of the three sectors. Currently, the maximum interest rates that can be charged on IAF loans is 7.75 percent per annum.

In addition to the special loan schemes, MIDF also extends loans as part of its operations. MIDF's project loan scheme provides up to 70 percent financing for fixed assets (land, factory building, plant and machinery) of a project based on actual cost. The borrower, however, is required to put up equity capital of not less than the loan amount to pay for the balance of the fixed assets cost and to meet pre-operating/preliminary expenses and part of the working capital. The balance of the working capital could be sourced from commercial banks or other financial institutions. Financing for up to 75 percent of the cost of plant and machinery can be obtained through the machinery loan scheme. The maximum loan size will depend on the shareholders' fund and other existing borrowing. The shareholders' funds should not be less than the loan applied for. With the factory mortgage loan, up to 70 percent of the cost of land and factory buildings together with basic installations can be financed. Currently, the interest rate charged on these loans is between 9-11 percent per annum depending on the term of the loan.

MIDF also provides lease financing. This scheme is tailored to assist the small industries who require higher percentage financing than is possible with the machinery loan. Hence, this scheme can be seen as an alternative to the machinery loan. Up to 100-percent lease financing is available for the purpose of acquiring plant and machinery. MIDF only considers applications from on-going ventures with acceptable track records. The tenure of the loan ranges from 3 to 12 years. A grace period of 3 to 24 months is possible during which only interest is payable on the loan amount. For leases of RM 0.5 million and below, the interest rates ranges from 6.5 to 8.0 percent per annum whereas for leases above RM 0.5 million the interest rate is between 6.0-7.5 percent per annum.

As at end of March 1991, MIDF has RM 460.5 million worth of loan outstanding. The bulk of the loans (RM 378 million or 82 percent) was given to the manufacturing sector. Most of the loans made in 1991 were given under the AJDF scheme due to the concessionary interest rate offered. MIDF has approved loans totalling RM 222.1 million and RM 103.5 million under the OECF and EXIM Bank funded portion of the AJDF scheme respectively, up till the end of 1991. The actual amount disbursed was RM 148.8 million and RM 77.9 million respectively. The AJDF scheme has proven to be very successful so much so that MIDF has exceeded their allocation of RM 270 million (RM 187 million under

OECF and RM 83 million under EXIM Bank). Lending through MIDF's own resources was much smaller as the interest rates under the AJDF scheme was more favorable.

(ii) Bank Pembangunan Malaysia Berhad (BPMB)

Bank Pembangunan Malaysia (Development Bank of Malaysia) was established in 1973 to promote Bumiputera equity participation in commerce and industry. The bank provides medium and long-term loans for the purchase of fixed assets in approved projects and for equity participation in commercially viable projects, as well as the provision of guarantees for industrial equipment loans to Bumiputera industrialists. To complement its financial role, the bank also provides a wide range of technical, managerial and consultancy services for the planning and implementation of projects.

Bumiputera SMIs can utilize the project loan facility of BPMB. The loan can be used to purchase land, factory, office building and machinery as well as to finance working capital. The loan amount varies from RM 30000 to RM 12 million. BPMB maintains a two-tiered interest rate structure for its loans. For loans not exceeding RM 250000, the interest rate charged in 1991 was lower, ranging from 2 to 12 percent per annum while for larger loans, the interest rates range from 2 to 13 percent per annum. BPMB also provides leasing facilities for equipment and administers the AJDF Loan Scheme, New Entrepreneurs Fund (NEF), the Industrial Adjustment Fund (IAF), and the Industrial Technical Assistance Fund (ITAF).

As at end of 1991, Bank Pembangunan has RM 805 million of long-term loans outstanding. Loans to the manufacturing sector amounted to RM 369 million or 46 percent of the total loans outstanding. It has also disbursed RM 166.6 million under the OECF portion of the AJDF Loan Scheme by the end of 1991.

(iii) Bank Industri Malaysia Berhad

Bank Industri Malaysia (Industrial Bank of Malaysia) was set up by the Government in 1979 to provide long-term finance, where appropriate on concessionary terms, to all sectors of the economy. The objective of the bank is to promote and help finance the expansion of productive capacity in capital-intensive and high-technology industries,

especially those which are export-oriented, including priority projects in the economy with a long gestation period. The development and finance of the shipping and shipyard industries, in particular, were identified by the Government as the priority sector for the bank's operations.

A large portion of Bank Industri's loan to the engineering sector came from the AJDF Loan Scheme which offered low interest rates. As at end of 1991, Bank Industri has approved RM 116.5 million and RM 128.4 million under the OECF and EXIM Bank funded portion of AJDF Loan Scheme respectively. Out of this amount, RM 81.5 million and RM 84.4 million has been disbursed under the respective portions. In addition, Bank Industri also provides its own financing facilities. The engineering financing facilities covers both the major and, ancillary and auxiliary supporting industries. For new engineering projects and expansion/replacement of existing production line machinery and equipment, up to 85 percent of the project cost (excluding land) but subject to a debt/equity ratio not exceeding 3.5:1 can be borrowed. Interest rate is charged at a concessionary rate of 6.5-9.0 percent per annum. The term of the loan can be up to a maximum of 15 years, inclusive of 5-year grace period, depending on cash flow of the project. Bank Industri also provides leasing facilities for up to 90 percent of the intrinsic value of machinery and equipment.

In addition to normal leasing facilities, Bank Industri provides financing under the Islamic Development Bank (IDB) line leasing. Up to 90 percent of the intrinsic value of the machinery and equipment, subject to a maximum amount of approximately RM 6.4 million (2 million Islamic Dinars). No interest as such is charged but IDB's return on the lease (ROI) payment financing shall be 8 percent with the lessee assuming the foreign exchange risk. The maximum period of the lease is 10 years, inclusive of a grace period of not more than 3 years.

Bank Industri also administers the ECR scheme for the Central Bank. Furthermore, Bank Industri also administers the trade financing facilities provided by IDB. The import trade facility is a short-term financing facility offered by the IDB to assist Malaysian importers in the purchase of needed developmental inputs from member as well as non-member countries of IDB. Bank Industri acts as an executing agent and provides a guarantee facility to the Malaysian importer. In order to apply for this facility, the minimum value per transaction should be equiva-

lent to at least US$ 200000. Raw materials for industry, industrial intermediate goods and construction materials are eligible for this facility. The period of payment is between 6-24 months with a mark-up of 8 percent and 8.5 percent per annum of the total purchase price charged if the goods is obtained from member and non-member countries respectively. Bank Industri will charge a guarantee fee of 1.5 percent per annum of the total outstanding amount guaranteed. A longer-term trade financing scheme is also offered by IDB to assist Malaysian exporters in their exports to any member countries of the Organisation of Islamic Conference. A maximum of 80 percent of the f.o.b. value of the export item. The longest term for the facility is 60 months. Again, no interest is charged, but a mark-up of 7.5 percent on the amount financed by the IDB is charged. This facility has not been very popular as the borrower has to bear the exchange rate risk but is expected to pick up as the Government has agreed to bear the exchange rate risk.

As at the end of 1991, Bank Industri has RM 375 million worth of loans on its books. Out of this RM 179 million went to the manufacturing sector while RM 163 million went to the transport and storage sector reflecting Bank Industri's commitment to finance shipping.

3.2 Monetary Policies for SMIs

3.2.1 Lending Guidelines

The latest guideline on lending to small-scale enterprises under the Principal Guarantee Scheme (PGS) of the Credit Guarantee Corporation (CGC) was issued on 29 March 1991. This is a two-year guideline to be complied by 31 March 1993. Commercial banks, as a group, are required to extend loans under the PGS of the CGC, the guarantee cover of which should amount to at least RM 150 million. Of the RM 150 million, at least RM 75 million must be the guarantee cover for loans extended to Bumiputera borrowers. Between 1 April 1991 and 31 March 1992, CGC had guaranteed 2799 PGS loans amounting to RM 174.4 million with a guarantee cover of RM 64.13 million, of which RM 22.8 million of guarantee cover was issued to Bumiputeras.

3.2.2 Interest Rate Policy

Currently, for loans guaranteed under the PGS, the commercial banks are allowed to charge a maximum of 1.5 percentage points above the

declared base lending rate (BLR) of the individual bank (except for loans approved by banks up to 31 March 1992, which would still be subjected to the ceiling rate of 9 percent per annum or 1.5 percentage points above the declared BLR of the individual commercial bank, whichever is lower). This rate excludes the 0.5 percent guarantee fee charged on the amount guaranteed (not the total loans outstanding) by the CGC which is to be paid separately by the borrower. Previously, there was a ceiling of 9 percent per annum or 1.5 percentage points above the BLR, whichever is lower.

3.2.3 Credit Facilities

(i) Export credit refinancing

This scheme was set up to provide exporters with ready access to credit facilities at competitive rates of interest and to develop backward linkages in export-oriented industries. The scheme covers almost all manufactured goods, agriculture food products and selected primary commodities, i.e., all products not included in the negative list would be eligible for financing. The scheme runs through the commercial banks, Bank Industri and Bank Islam. Access to the ECR scheme is not automatic. Eligible goods must fulfill the minimum local content of 30-percent raw materials used and have a minimum value-added of 20 percent. Companies whose products do not meet this criteria may apply to BNM for special consideration on a case-by-case basis. Exemption from the local content and value-added criteria are extended to primary commodities (such as, rubber, crude palm oil and cocoa), wood articles, base metal and textiles. The interest rate charged is generally below the market rate. From 1 October 1991 onwards, the funding rate for ECR, i.e., the rate charged by BNM to the commercial banks is 5.5 percent per annum and the maximum rate the commercial banks are allowed to charge the exporters is 7 percent per annum.

The ECR scheme consists of the pre-shipment and the post-shipment facility. The pre-shipment facility is meant to assist exporters to finance part of their working capital during the production stage. Under this facility, the exporters are allowed to borrow up to a maximum of 85 percent of their export order value for a maximum period of 120 days. Exporters who wish to offer attractive credit terms to foreign buyers of their goods can take advantage of the post-shipment facility. This facility allows the exporters to borrow a maximum of 95 percent

and 85 percent of export invoice value for financing transacted under the letter of credit and without letter of credit respectively. The maximum refinancing period for the post-shipment is 180 days.

This scheme has proven to be extremely successful since its inception. However, there are concerns that the large firms are dominating the ECR facilities. As a result, the Central Bank imposed a maximum limit of RM 50 million on the use of ECR by an exporter at any one time. Export-oriented small and medium-scale industries which fulfil the criteria can take advantage of the cheap financing offered. However, there are no data on how much of the funds is channelled to small firms.

(ii) New Entrepreneurs Fund

The New Entrepreneurs Fund (NEF) is a revolving fund launched in December 1989 by the Government with funds provided by BNM. The aim of the fund is to assist Bumiputera entrepreneurs in new business ventures through the provision of loans at low interest rates for the financing of investments in new productive capacities. The size of the fund initially was RM 250 million which was later raised to RM 350 million. All types of business will be eligible to apply for the fund but special consideration will be given to manufacturing, agriculture, tourism and export-oriented projects. The fund will be disbursed through eleven commercial banks, Bank Pembangunan and Malaysian Industrial Development Finance (MIDF).

The Fund is open only to small and medium-scale Bumiputera enterprises. The maximum amount of loan given out under the scheme is RM 1 million or 85 percent of the cost of the business whichever is lower. As the Central Bank is providing the fund at very low interest rate to the financial institutions, they are allowed to charge a maximum of 5 percent per annum. The maximum repayment period is five years. There is no fixed allocation for each institution as they are expected to compete for borrowers. To reduce the risk in lending to small and medium-sized businesses, the participating financial institutions are allowed to ask CGC to guarantee part of the loan.

The fund has not been very successful. As at 31 December 1992, only 463 loans totalling RM 100.8 million has been approved. Out of that RM 38.6 million or 38.3 percent of total loans approved went to manufacturing and industrial concerns.

3.3 Guarantee System for SMIs

The Credit Guarantee Corporation (CGC) was established in 1972, with the main objective of providing guarantee cover to the commercial banks for loans extended to small-scale enterprises (SSEs). The CGC currently assist in the financing of small businesses through its three main schemes - the Principal Guarantee Scheme (PGS), Loan Fund for Hawkers and Petty Traders (LFHPT) and Association Special Loan Scheme (ASLS).

The Principal Guarantee Scheme was introduced in April 1989 to replace and resolve the difficulties encountered in the previous two schemes (General Guarantee Scheme (CGS) and the Special Loan Scheme (SLS)). The aim of the PGS is to assist small-scale enterprises with no collateral or with inadequate collateral to have ready access to credit facilities by absorbing some of the risk from the commercial banks. Any Malaysian small-scale enterprises is eligible for the scheme subject to a maximum loan limit of RM 500000. The scheme does not focus on any specific sector or group of small-scale enterprises. Under the PGS, small-scale enterprises will make an application to any of the commercial banks for credit facility. As soon as the facility is approved by the bank, the bank will submit the application to CGC. After that, CGC will issue a guarantee cover after satisfying itself that the facility has been properly appraised by the bank and conditions under the PGS are met. Credit facilities eligible to be guaranteed under the PGS include term loans, overdrafts, letters of credit, trust receipts, bills purchased, shipping guarantees and Export Credit Refinancing (ECR). Furthermore, the ten commercial banks participating in the New Entrepreneur Fund may apply for CGC guarantee cover for NEF loans approved by them on or after 1 June 1991. This is to encourage the banks to lend more under the NEF by reducing the risks. Effective from 1 April 1992, the Central Bank removed the 9 percent interest rate ceiling on loans under the PGS and commercial banks are now allowed to charge a maximum of 1.5 percentage points above its declared BLR for loans covered by PGS.

The guarantee cover provided by CGC will vary according to the collateral provided by the borrower up to a maximum 70 percent. The LFHPT and ASLS will not be discussed further here as loans under those schemes are limited to petty traders only and no loans are made under these schemes to the manufacturing sector.

During 1991, the banks as a whole extended 7811 new loans with an approved value of RM 218.3 million (9785 loans and RM 324.5 million in 1990) under the CGC's guarantee scheme. Of the new loans guaranteed, RM 206.3 million (95 percent) were guaranteed under the PGS involving a total of 3349 borrowers. The growth of PGS loans in 1991 compared unfavorably against that in 1990 partly due to the imposition of a ceiling interest rate of 9 percent on loans under the PGS. In the face of rising interest rates, 9 percent is just above the BLR of most banks and hence do not compensate for the higher risk and cost of lending to small-scale enterprises. Since its inception, CGC has guaranteed 10628 PGS loans with an aggregate loan limit of RM 598.1 million at the end of 1991. The Central Bank has continued to issue lending guidelines to commercial banks to ensure that they continue to channel funds to the small-scale enterprises through the PGS.

Loans guaranteed by the CGC in 1991 were directed at three broad sectors, namely, general business, agriculture and industry. Lending to the general business sector continued to dominate the other sectors, accounting for 7364 loans valued at RM 187.6 million, or about 86 percent of the total value of loans approved and guaranteed. The major business activities financed included wholesale and sundry retail trade, hawking and petty trading, construction, transportation, and the range of business services. Manufacturing sector accounted for a total of 313 loans, valued at RM 25.4 million. These loans were granted mainly to finance activities involving simple processing, textiles, printing and light machinery and fabrication, the production of wood and wood products, plastics, rubber products and basic metal products, and the processing of food. The value of these loans accounted for about 12 percent of the total value of loans guaranteed during the year. About 3 percent of the total value of loans approved and guaranteed or RM 5.3 million went to the agricultural sector.

3.4 Role of Financial Markets in Financing SMIs

The capital market in Malaysia consists of the equity, the Malaysian Government Securities (MGS) and the private debt securities market. The Kuala Lumpur Stock Exchange is the only equity market in Malaysia, and it is made up of the Main Board and the Second Board. To be listed on the Main Board, a company must have a minimum paid-up capital of RM 20 million, while for the Second Board it is RM 5 million. Hence, SMIs, by definition, are not able to raise funds through issuing shares.

SMIs are not prevented from raising funds through issuing bonds. However, this exercise may not be very cost effective. This is because the fixed cost of issuing bond is high. Thus, if the amount of funds to be raised is small, the cost of each dollar raised would be high. The Government's intention in developing the private debt securities (PDS) market has been to allow larger corporations to tap funds directly from the market. A credit rating agency, Rating Agency Malaysia (RAM), has been set up to facilitate the issuance of corporate bonds. So far, the companies that have issued bonds are mainly large companies. This market has not yet been well-developed but even when it has been fully developed, it is unlikely to contribute much to the funding of SMIs.

3.4.1 Venture Capital

Venture capital is usually defined as equity investment in a new company for an agreed period of time. Venture capitalists' return on investment comes from the appreciation of the share of the company it has invested in. The risks are high but so are the return. SMIs, especially those engaged in innovative, high technology business are very suitable for venture capital finance. Banks and conventional financial institutions may be unable to assess properly the potential of these innovative SMIs. Even if they realize the potential, banks may not be the best institutions to undertake the risks.

The venture capital industry in Malaysia is still in its infancy. An Asian Development Bank study on venture capital financing in Malaysia revealed that there is a general lack of awareness of the venture capital concept in the Malaysian business community and that this is a serious impediment for the successful development of venture capital financing.

The main elements of venture capital are:

(a) The investment is made with equity participation either via a direct purchase of shares or through warrants, options or convertible securities.

(b) Investments are of a fixed-term nature and are normally minority equity stakes or positions.

(c) Portfolio companies are led and to a large extent owned by an entrepreneur or a group of entrepreneurs.

(d) Venture capitalists are active 'hands-on' investors. They aim to add value to their portfolio companies through active involvements with the firms' management teams and by offering them guidance and assistance in major strategic decisions and contacts with customers, suppliers, managers and additional capital sources.

(e) When the company has matured enough and reached the size where it can attract other sources of financing, typically after 5-10 years, venture capital firms aim to liquidate their position in the company by taking it public or selling it to another company.

SMIs have financial and managerial needs which are different from those of larger ones; their cashflows and assets are different, as are their growth potential. When start-up enterprises or introduction of new techniques are involved, financing must be adequate in quality and duration to enable initial negative cash-flows to be covered and positive cashflows to be realized; the attraction of funding is potential future earnings rather than current profits.

SMIs often have difficulties to raise and to use traditional long-term finance arising from the characteristics of both the firms and the financiers. The SMIs are not only small in industrial size but can also be new enterprises with no track record for the investors to evaluate the firm. SMIs may have difficulties to meet the eligibility criteria in their corporate analysis, which has hitherto focused almost entirely on profits and other financial ratios and is dominated by quantitative values. Even if they have access to funds, the use of debt may create problems for SMIs. They may not be able to service the debt during the early years of operation, let alone to repay it, because all earnings are needed to finance new, continuous investments. These investments are also mainly intangible and do not create collateral in the traditional sense. Conversely, the success factors in these firms are more qualitative by their nature based on managerial and technical expertise plus other talents.

SMIs may be strong on the technology and idea side but weak in some other aspects required to create a successful enterprise and manage growth, such as marketing, accounting, and research and development

or international operations. Thus, SMIs can through venture capital, take advantage of outside assistance at the early stages of their development.

Venture capital in SMIs is vital in the developing world where risks attached to non-conventional ventures could be higher due to rapid social changes and the increasingly fast pace of economic activity. Venture capitals are a form of mobilizing private risk capital for investment in technologically innovative projects undertaken by entrepreneurs who have limited capital resources but possess viable business plans. By providing equity financing, the venture capitalists can perform by lending their expertise and experience by participating in management and strategic planning of SMIs, thereby helping them to grow and to stand on their own before venturing on to realize capital gains. With a strong and solid SMIs sector, linkages to the larger industries can be forged, and by fulfilling this requisite to industrialization, our vision will be a reality.

3.4.2 Role of Government in Financing SMIs

Since independence, the Malaysian Government has been supportive of SMIs. Several schemes and policy have been implemented in order to spur the development of SMIs. Currently, the financial assistance provided by the Government for SMIs include:

(i) Industrial Technical Assistance Fund (ITAF)

ITAF was set up by the Government in early 1990 with an initial allocation of RM 50 million. The fund is to provide assistance to enhance the development of small and medium-scale industries (SMIs) into a progressive, high quality and modern industry capable of supporting the large industries in Malaysia.

The fund was set up to provide grants to SMIs which participate in any of the following schemes:

(a) Feasibility Study Scheme;

(b) Product Development and Design Scheme;

(c) Quality and Productivity Improvement Scheme; and,

(d) Market Development Scheme.

Assistance is given in the form of matching grants whereby 50 percent of the project costs is borne by the applicant company. Priority will be given to SMIs which manufacture or intend to manufacture products promoted under the Promotion of Investments Act 1986 (include list in Appendix 8.1). All applications will be evaluated by an Evaluation Committee at the relevant implementing agencies which are fully responsible for the management, approval and supervision of each study/project.

The implementing agencies are Bank Pembangunan Malaysia Berhad, Standards and Industrial Research Institute of Malaysia (SIRIM) and the Malaysian Export Trade Centre.

(ii) Industrial Adjustment Fund

The fund was announced on 5 February 1991 to facilitate the rationalization, modernization and restructuring of selected industries such as wood-based, textile and machinery and engineering industries. An initial RM 500 million has been allocated by the Government for the fund. To be eligible for the scheme, companies must have existing operations as at 31 December 1990.

The fund is administered by the Central Bank. Three development finance institutions (DFIs) involved have been designated as the lead agency for the following industries:

(a) Bank Industri Malaysia Berhad - Machinery and engineering;

(b) Bank Pembangunan Malaysia Berhad - Wood-based; and,

(c) Malaysian Industrial Development Finance Berhad - Textiles.

The maximum lending rate charged under the fund is 7.75 percent per annum. The maximum tenure of the fund is 8 years. The minimum size of the project eligible for funding is RM 100000 per project. The maximum funding is up to 85 percent of the project cost, or a maximum amount of RM 10 million for each project.

3.4.3 Majlis Amanah Rakyat (MARA)

MARA's loan division is aimed at providing credit to small Bumiputera commercial and industrial enterprises with net assets of up to RM 500000 or shareholders' fund of up to the same amount. The loan can be used to purchase fixed assets, or as working capital. The maximum amount of loan that can be taken out by a manufacturing company is RM 250000. The interest rate charged on the loans is low - 5.5 percent per annum for loans below RM 5000 and 7 percent per annum for loans above RM 5000. The repayment period varies with the amount of loan and could be up to 10 years. Some form of collateral is required for the loans.

IV. Determinants of Effective Financing for SMIs in Malaysia

In this section, an attempt will be made to quantify the factors affecting the financing of SMIs. As data on the financing of SMIs is scarce, the number of observations that can be used is not very high. The series of data available on the formal financing of SMIs is loan outstanding to small-scale companies in the manufacturing sector by both commercial banks and finance companies.

The total loans to small manufacturing firms (MSL) can be expected to depend on the growth of the economy (RGNP), the monetary condition (MS), the cost of funds (ALR), the price level (CPI) and the level of financial development of the economy (FA). This estimated equation can be written as:

$$MSL = k + a\ RGNP + b\ MS + c\ ALR + d\ CPI + e\ FA$$

The growth in the economy is expected to stimulate the growth in the manufacturing sector. This will result in greater output and higher investment. Hence, growth in the economy is expected to result in an increase in loans to SMIs. The growth in the economy can be proxied by the growth in real gross domestic product (RGNP).

An easier monetary condition will make it easier for the small firms to obtain loans. Hence, during periods of easy liquidity, the small firms can be expected to borrow more. The amount of money supply (M3) can be used as an indicator of the liquidity condition. A greater amount of money supply should result in more loans.

The cost of credit to SMIs can be proxied by the average lending rate (ALR) of both the finance companies and commercial banks. It would be preferable to have the actual interest rate charged to small manufacturing firms. Unfortunately, this data is not available. However, as long as the banks maintain a fixed interest margin above the ALR for loans to small manufacturing companies, the ALR will still give good results. As the cost of credit rise, the small firms should borrow less, resulting in a fall in loans to small manufacturing firms. Therefore, the coefficient for ALR should be negative.

Consumer price index (CPI) is the scale variable in the regression equation. As the loan outstanding is expressed in nominal terms, an increase in the CPI should increase the amount of loans outstanding even if the real amount of loan is unchanged. The coefficient of CPI should then be positive.

The state of development of the financial system can also exert an influence on the financing of SMIs. A more efficient financial system can be expected to provide financing more effectively to SMIs. As a proxy for the state of financial development, we will use the assets of the financial system (FA). The coefficient is expected to be positive as well.

4.1 Empirical Results

The results from the regression is shown in Appendix 8.2. The equation is estimated in first difference form. The results were not good. In fact the only significant variable was change in the gross national product. Re-estimating the equation without all the insignificant variables gives us a better result. It is shown that the change in the manufacturing small loans is positively significant in relation to the change in GNP. An attempt was made to estimate the relationship using percentage change. The results, however, were not that good.

The small sample size meant that the results are not very robust. As a result, no strong conclusion should be drawn from this regression exercise.

V. Problems of Financing for SMIs in Malaysia

The financing problems faced by SMIs in Malaysia are not unique. Most of them are faced by SMIs in other countries. A survey by the

Tokyo Institute of Developing Economies revealed that 50 percent of entrepreneurs ranked inadequacy of financial resource as their most crucial business difficulty, while 28 percent ranked it as their second major business difficulty. This is largely due to the small size of their businesses which are traditionally family-owned, with capital mainly from personal savings or loans from friends and relatives. Eighty percent of firms surveyed listed their own funds as their major source of financing.

The inability of SMIs to provide adequate collateral for loans from the banking system has also restricted access to commercial bank credit in most cases, resulting in a shortage of working capital. Commercial banks are usually reluctant to extend loans to SMIs. Reasons cited are the high administrative costs involved in processing small loans; high costs involved in providing consulting services and in monitoring the business operations of small accounts; and the high proportion of defaults. Finance companies are usually more ready to give loans to SMIs. They, however, charge higher interest rates than commercial banks.

Commercial banks are not keen to lend to SMIs as there is an interest rate ceiling of 1.5 percentage points above the BLR for loans extended under the PGS scheme. This ceiling may deter greater lending to SMIs as the interest rate the commercial banks are allowed to charge may not be sufficient to compensate for the risks involved.

The lack of an active venture capital market now appears to be a constraint on the development of innovative, high risk business ventures by SMIs. The conservative lending policies of the commercial banks do not dispose them to lend to new, small-scale projects involving unproven, innovative proposals, partly because they lack staff with the experience and professional expertise to assess the technology and commercialization prospects of the project proposals.

VI. Policy Suggestions for Financing SMIs in Malaysia

The banks have not been very forthcoming with their loans to SMIs. They find it difficult to evaluate the credit-worthiness of SMIs. Their low volumes of loans to SMIs may not justify the banks building up their expertise in the area. The Credit Guarantee Corporation may be able to play a bigger role. As it has expertise in the area of assessing

the quality of SMIs, it can process loan applications and then indicate whether it will be willing to guarantee the loans. This will shift the burden of assessing loans from the banks to CGC. This may be better if CGC is more qualified to assess loans. To recover the extra costs involved, CGC can charge loan applicants a fee to assess their loans.

Another way to overcome the reluctance of banks to extend loans to SMIs would be to allow the banks to repackage the loans and sell it off. This would minimize the risks to them of any future defaults. There already exists a well-developed mortgage bond market in Malaysia. Admittedly, securitizing SMI loans are likely to be more problematical than mortgages. For one, securities backed by SMIs loans have higher probability of defaults, but this can be compensated by higher yields. If priced appropriately, there should not be much trouble in the selling of SMI loans in the bond market. The Government can contribute by developing the institutional and legal framework for such a market.

Developing the venture capital industry can help spur the development of innovative SMIs who may find it difficult to obtain funds from conventional sources. The Government has taken an important step towards this end by setting up the Malaysian Technology Development Corporation to finance high technology ventures. Further assistance in terms of tax breaks and special funds may contribute to the development of high-technology SMIs.

Currently, there exists a large number of agencies responsible for assisting SMIs. They work more or less independently of one another without a strong coordinating authority. SMIs seeking Government assistance may have to approach several institutions. Further, these SMIs may not utilize all the facilities available due to a lack of knowledge. A central authority in charge of all the financial assistance for SMIs as well as providing advice may help improve the flow of funds to SMIs.

VII. Summary and Conclusions

SMIs can play an important role in the development of Malaysia into an industrialized country. Currently, SMIs faced some problems in financing mainly due to their small size and a lack of expertise in the

formal financial sector in assessing small loans. There is a lack of a well-developed venture capital industry to provide start-up capital to innovative SMIs. This situation persists despite the many attempts by the Government to rectify the situation.

The Government can overcome these problems by formulating appropriate policies. In particular, a more unified approach towards financing of SMIs may ensure that funds available are channelled more effectively to the SMIs.

LIST OF PRODUCTS OF SMIs

Industry	Products/Activities
Food	- Bakery products (bread, biscuit and etc.)
	- Noodles and related products
	- Keropok (prawn crackers)
	- Other fish products made by drying, salting and fermentation
	- Crustacean and similar food
	- Processed meat products
	- Sauces (soya sauces, chili sauces and etc.)
	- Animal feeds
	- Sugar products
Beverages and Tobacco	- Milk products
	- Cocoa, coffee and tea
	- Soft-drink products (fruit juices)
	- Tobacco products
Textiles and Wearing Apparel	- Wearing apparels
	- Batik printing
	- Carpet
	- Leather products
	- Footwears (boots, slippers, sandals, soles and heels)
	- Rope
Wood	- Wooden furniture (doors, window frames and etc.)
	- Rattan furniture
	- Products derived from utilization of wood waste (e.g., activated charcoal, wooden briquettes and wood wool)
Transport Equipment	- Plastic and rubber-moulded parts
	- Lamps
	- Window hardware
	- Steering system
	- Knuckles
	- Jacks
	- Tools and others
Paper	- Papers and paper products
	- Printing and publishing
Rubber	- Tubes
	- Belting
	- Hose
	- Glues

Industry	Products/Activities
	- Rollers
	- Sheeting and melting
	- Toys
Non-Metallic Mineral	- Cement products
	- Ceramic and clay products
	- Glass ornaments and articles of adornment
	- Mirror
	- Bricks and related products
Metal Fabricated	- Cutlery
	- Hard tools
	- Tin smelting
	- Fixture metal
	- Tin moulds
	- Metal boxes
	- Wires and Wire products
	- Brass, copper, pewter and aluminium products
Light Engineering	- Foundry
	- Engineering workshops
	- Ancillary components manufacture
	- Repairing and reconditioning of equipment
Chemicals	- Plastic products
	- Soap, cosmetic, detergent and toilet preparation

EMPIRICAL TEST RESULTS

LS // Dependent Variable is DMSL
Date: 11-20-1992 / Time: 9:00
SMPL range: 1969 - 1991
Number of observations: 20

VARIABLE	COEFFICIENT	STD. ERROR	T-STAT.	2-TAIL SIG.
C	-39.825520	36.474756	-1.0918653	0.293
DALR	-6.1660390	30.440564	-0.2025599	0.842
DCPI	0.3225387	4.0642012	0.0793609	0.938
DFINAS	-0.0039562	0.0053280	-0.7425232	0.470
DGNP	0.0304814	0.0110950	2.7473018	0.016
DMONEY	0.0123066	0.0155931	0.7889285	0.443

R-squared	0.581245	Mean of dependent var	55.18000
Adjusted R-squared	0.431690	S.D. of dependent var	79.91971
S.E. of regression	60.24856	Sum of squared resid	50818.45
F-statistic	3.886487	Log likelihood	-106.7816

LS // Dependent Variable is DMSL
Date: 11-20-1992 / Time: 9:03
SMPL range: 1969 - 1991
Number of observations: 21

VARIABLE	COEFFICIENT	STD. ERROR	T-STAT.	2-TAIL SIG.
C	-42.474527	21.932161	-1.9366321	0.068
DGNP	0.0355842	0.0060890	5.8439770	0.000

R-squared	0.642535	Mean of dependent var	64.83810
Adjusted R-squared	0.623721	S.D. of dependent var	89.59161
S.E. of regression	54.95691	Sum of squared resid	57384.97
F-statistic	34.15207	Log likelihood	-112.8844

DMONEY : **Change in MONEY over preceding year (RM million)**
DFINAS : **Change in FINASS over preceding year (RM million)**
DGNP : **Change in RGNP over preceding year**
DALR : **Change in ALR over preceding year**
DCPI : **Change in CPI over preceding year**
DMSL : **Change in MSL over preceding year (RM million)**

Chapter 9

FINANCING FOR SMIs IN NEPAL

by
Shrestha Pratap Mehar

I. Introduction

1.1 The Economy: An Overview

Like other developing economies, Nepal's development efforts are geared towards bringing about gradual fundamental changes in the structure of the economy with shift from predominantly agricultural economy to an increasingly industrial economy. Despite the growth in the manufacturing sector, its share in GDP remained at 5 percent during the 1980s, leading to the need for raising the contribution of industry in the national income, employment generation and lower import dependence.

The country ushered into a new era of economic development during the past three decades of planned development efforts, particularly, in the area of infrastructural development. Time has come to properly utilise such existing facilities and enhance the industrial development in order to alleviate poverty of the country. Against this backdrop, SMIs constitute a base for private industrial initiatives, generating significant income and employment opportunities in both urban and rural areas. The country has, therefore, adopted development strategies directed towards the creation of greater employment opportunities, equitable distribution of income, poverty alleviation, mobilisation of savings and balance of payments support through the development and promotion of SMIs.

In the fiscal year 1985/1986, the Government embarked on an economic stabilisation programme in order to redress the situation caused by an expansionary financial policies adopted in the early 1980s. This programme was extended and further supported by a structural adjustment programme (SAP) with the assistance from the International Monetary Fund and the World Bank. Although the implementation of this programme appeared satisfactory, the slow pace of economic development made it imperative to accelerate the momentum of growth through increased industrial investment, greater domestic resource

mobilisation and well-managed limited resources. The Government in its Eighth Five-Year Plan envisages GDP growth rate of 5.1 percent per annum, implying the need for substantial investment increase in the industrial sector. The macroeconomic foundation of the Plan is based on: (i) reallocation of public and private investment to high productivity sectors; (ii) increased efficiency in manufacturing and industry, transport and communication, electricity and gas, and finance and real estate sectors; (iii) stimulation of private savings and active involvement of the private sector; (iv) better screening and performance monitoring of projects; and, (v) proper balance and consistency between growth rate and resource availability.

1.2 The Rationale for the Development and Promotion of SMIs

SMIs have a crucial role to play in generating employment opportunities for a growing labour force. It also aids in the mobilising of domestic skills and resources in the production of goods that can contribute towards better export performance and import substitution. Programmes like poverty alleviation, income distribution, savings mobilisation, balanced regional development may be attained by the development of this core sector. The development of SMIs such as cottage and small industries producing artistic goods and handicrafts to respond to the need of foreign tourists has pivotal importance for the promotion of tourism in a country like Nepal. Since SMIs consume a relatively higher proportion of domestic raw materials, ingenuity and skill, it supports the balance of payments and helps to raise the living standard of the target group, namely the rural people. The development of SMIs is of critical importance in view of the bleak possibility of the emergence of large-scale industries in the private sector due to longer gestation period needed for its establishment, complex procedures involved for the technology transfer, higher dependence on imported inputs and also the huge magnitude of investment required. Moreover, a positive economic rate of return may be reaped out of investment in SMIs. They are also a seedbed for entrepreneurial talent and help to promote agro-industrial linkages. SMIs also have a greater resource adding effect through increased self-finance, ploughing back of profits and mobilising resources from informal sources at significant levels.

1.3 SMIs in the National Development Plans

During the Seventh Plan Period (1986/1987-1990/1991), some concrete efforts were made both in policy and operational programme levels

to develop and expand SMIs, especially the cottage industries. To attain the objectives of reducing widespread unemployment and underemployment in the rural and urban areas, improvement of the productivity and quality of exportable goods and also meeting of internal demand for consumer goods substituting their imports, the Plan formulated a set of policies for the development and promotion of SMIs consisting of: (i) provision of institutionalised and coordinated promotional services in order to increase the productivity of skills and local raw materials; (ii) gradual expansion of intensive cottage industry development programmes in various parts of the country; (iii) arrangement of regular supplies of raw materials at district level; (iv) easy flow of credit through financial institutions; and, (v) generation of manpower for the development and expansion of cottage industries. In line with such policies and programmes, provisions were made for motivators, entrepreneur management, and skill development training as well as promotional services, etc.

1.4 Policies and Programmes Under Eighth Five-Year Plan

The Eighth Five-Year Plan (1992-1997) is directed towards adopting a liberal and private sector-oriented industrial investment policy. Priority has been accorded to those industries with higher value-added to the economy and also to those likely to meet the domestic demand for essential commodities and construction materials. Export-based as well as viable industries like the carpet industry are to be sustained, while others with good potential will be identified and necessary incentives provided for their promotion. The main working policies relate to: (i) review of existing Industrial Policy and Enterprises Act; (ii) gradual exemption of licensing requirement to set up industries; (iii) introduce a one window system for providing government facilities and services; (iv) encourage foreign investment as well as joint collaboration in import substituting and export-oriented industries; (v) emphasis on developing indigenous raw material-based industries together with maintaining backward and forward linkages between small and cottage industries and large industries; (vi) encourage cottage industries in order to generate more employment opportunities and non-farm income; (vii) emphasis on the strengthening of existing public enterprises on a commercial basis; (viii) privatise public enterprises and reduce their number to a minimum level; (ix) initiation of "productivity management drive" to strengthen and enhance the productivity of manufacturing units; and, (x) establish "Export Processing Zone" in order to give a boost to

the 100-percent export-oriented ventures and also promotion of the Overseas Promotion and Marketing Agency to facilitate foreign private and public investments in Nepal.

The Government has recently introduced the new Industrial Policy 1992 with the objective of: (i) increasing the contribution of the industrial sector to the national economy through increased industrial production and productivity; (ii) emphasising the development of local resource-based and export-oriented industries; (iii) reducing the pressure of unemployment and under employment in the agriculture sector through the development of labour-intensive industries; and, (iv) adopting appropriate policy conducive to industrialisation for balanced regional development. In order to attain these objectives, the policy envisages a set of working policies encompassing healthy competition, protection of industries through customs duties (with the provision of elimination of such protection as per time-bound schedule), promotion of export of industrial goods, development of national and local resource-based industries as well as small, cottage and agro-based industries, and encouragement of foreign investment including transfer of technology and management. The Policy is committed towards the adoption of liberal, competitive and private sector-oriented investment policy.

In order to attract more foreign investment and provide the necessary incentives to the industries, the Foreign Investment and One Window Policy 1992 has also been introduced. The major objectives of the policy relates to: (i) the generation of income and employment opportunities through increased industrial production; (ii) enhancement of the private sector's participation in the industrialisation process; (iii) improvement of productivity; (iv) strengthening of the competitive capacity of domestic products in international markets, (v) attract foreign investment; and, (vi) transfer of modern technology and management.

II. Salient Features of SMIs in Nepal

2.1 Definition of SMIs

SMIs in Nepal are generally defined in terms of the size of fixed capital investment. The volume of investment, however, is being re-

vised upwards from time to time with the changes in industrial policies. The new Industrial Policy 1992 has classified the various industries into four categories, namely: (i) traditional cottage industries based on local raw materials and local resources and are associated with the country's tradition, art and culture; (ii) small-scale industries - industries other than the cottage industries and having a fixed capital investment of up to Rs. 10 million; (iii) medium-scale industries with fixed capital investment of more than Rs. 10 million but below Rs. 50 million; and, (iv) large-scale industries with a fixed capital of more than Rs. 50 million. This classification has been made with the provision of various financial facilities, concessions, and institutional support services. According to this policy, the traditional cottage industry is to be exempted from excise duty, sales tax and income tax. Institutional arrangements are to be provided to the cottage and small-scale industries that are based on local raw materials, labour and tradition. Institutional arrangements are also made to provide adequate fixed as well as working capital for small and cottage industries.

2.2 Contribution of the SMIs to the Nepalese Economy

As can be seen from the Census of Manufacturing Establishment 1986/1987, the average fixed assets per establishment in SMIs stood at Rs. 234,000 as against Rs. 36.8 million in large-scale industries. Similarly, SMIs required an average investment of about Rs. 20,000 to create one job opportunity as compared to Rs. 98,000 required by large industries indicating a higher labour intensity in SMIs. The ratio of output to fixed assets in SMIs was also encouraging at 4.4 compared to 1.6 for large-scale industries, revealing higher productivity in SMIs. Within the SMIs, the average investment of fixed assets per establishment as well as per labour for cottage industries was still low at Rs. 118,000 and Rs. 13,000, respectively, while the ratio of output to fixed assets stood at 6.5, an encouraging sign (Table 9.1).

During the period, the total manufacturing establishments stood at 9359 units, of which SMIs accounted for an overwhelming proportion of 99.1 percent (9273 units). Of the total SMIs, the cottage industries share was as high as 93.6 percent followed by small-scale industries at 4.3 percent and the medium-scale industries at 1.2 percent. In terms of employment generation, these establishments have generated employment opportunities for 137,000 persons, of which, 80.7 percent (111,000 persons) were employed by SMIs. The structural distribution

of employment in SMIs revealed that the cottage industries accounted for 58.3 percent of total employment, small-scale industries, 13.4 percent, and medium-scale industries, 9.0 percent. The Census also indicated that SMIs provided employment for 12 persons per establishment on an average, 9 persons in cottage industries, 46 persons in small-scale industries and 112 in medium-scale industries (Tables 9.3 and 9.4).

During 1986/1987, the categories of SMIs as differentiated by employment size of below 50, 50-99, 100-199, 200-499 and 500 and above represent 94.0 percent, 3.2 percent, 1.8 percent, 0.8 percent and 0.3 percent of total SMIs, respectively. Of the SMIs, the share of cottage industries falling in these categories of employment sizes represented 96.1 percent, 2.2 percent, 1.1 percent, 0.5 percent and 0.1 percent, respectively. The share of SMIs constitutes a large portion in the gross output of the manufacturing sector. Of the total gross output, SMIs constitutes 70.8 percent, with the ratio of cottage industries accounting for 49.3 percent, small-scale industries, 12.0 percent, and medium-scale industries, 9.5 percent compared to 28.9 percent for large industries. Moreover, of the total value-added of manufacturing establishments, SMIs constitutes 57.9 percent, large industries, 41.7 percent, and others, 0.4 percent. Within SMIs, cottage industries' share is as high as 39.1 percent of SMIs value-added, while the small-scale industries and medium-scale industries constitute 10.8 percent and 8.0 percent, respectively. The share of cottage and small-scale industries product for overseas export also picked up from 23.2 percent in 1981/1982 to 75.6 percent in 1986/1987 and reached a record share of 88.4 percent in 1990/ 1991. To sum up, SMIs are characterised by lower capital requirements and high employment generating potential as reflected in the lower average capital investment per establishment and lower average fixed assets per employee. Moreover, in the manufacturing sector, the share of SMIs is predominant in terms of the number of establishments, employment,value of gross output and total value-added, all reflecting strong growth potentials inherent in SMIs (Tables 9.1 to 9.6).

2.3 Growth Trends of the SMIs

The growth trend of SMIs in terms of the number of establishments, employment, output and value-added indicate inherent growth potentials. Within a period of five years (between the period of two Censuses, 1981/1982-1986/1987) the number of SMIs markedly grew by about two-fold from 4879 to 9273 reflecting an annual average growth

Table 9.1

PRINCIPAL INDICATORS OF SMIs: NEPAL
(in Rs. Thousand)

Type of Industries	Fixed Assets Per Establishment 1/		Output/Fixed Assets Ratio		Fixed Assets Per Labour		Output Per Labour		Value-Added Per Labour		Value-Added/ Output Ratio	
	1981/82	1986/87	1981/82	1986/87	1981/82	1986/87	1981/82	1986/87	1981/82	1986/87	1981/82	1986/87
SMIs	135.2	234.0	6.0	4.4	10.3	19.6	62.1	86.8	9.0	23.5	14.5	27.1
Cottage Ind.	56.0	117.5	14.3	6.5	6.2	12.9	89.0	83.7	9.8	22.0	11.1	26.3
Small-Scale Ind.	875.1	1371.7	1.4	2.9	15.5	30.1	22.0	88.4	13.5	26.6	61.3	30.1
Medium-Scale Ind.	3889.0	5302.1	0.2	2.2	19.5	47.6	4.6	104.3	2.0	28.9	44.0	27.7
Large-Scale Ind.	37619.8	36849.5	3.5	1.6	95.3	97.6	328.4	154.6	188.2	73.9	57.3	47.8
Unclassified	-	-	-	-	-	-	-	-	-	18.3	-	-
Average	318.7	496.6	4.5	62.1	21.2	42.0	96.2	104.4	32.0	32.8	33.3	33.2

Sources: Census of Manufacturing Establishments, 1981/82, Central Bureau of Statistics, His Majesty's Government of Nepal.
Census of Manufacturing Establishments, 1986/87, Central Bureau of Statistics, His Majesty's Government of Nepal.

Table 9.2

ROLE OF COTTAGE AND SMALL INDUSTRIES (CSIs)
PRODUCT ON FOREIGN TRADE: NEPAL
(in Rs. Million)

Fiscal Year	Export			Share of Major CSIs' Product to Oversea Export
	To India	To Oversea Countries	Total	
1981/82	994.4	497.1	1491.5	115.5 (23.2)
1982/83	843.3	288.7	1132.0	162.7 (56.4)
1983/84	1160.7	5432.2	1703.9	303.6 (55.9)
1984/85	1601.7	1138.9	2740.6	738.5 (64.8)
1985/86	1241.1	1836.9	3078.0	1202.5 (65.5)
1986/87	1302.6	1688.8	2991.4	1277.5 (75.6)
1987/88	1567.8	2546.8	4114.6	2204.2 (86.4)
1988/89	1034.9	3160.4	4195.3	2862.0 (90.6)
1989/90	602.5	4553.7	5235.5	3812.0 (83.7)
1990/91	1701.2	5902.5	7603.7	5220.2 (88.4)

1/ Provisional (Figure, for 1990/91, derived from NRB publication of foreign trade).

N.B.: The figures within the bracket is annual percentage of CSIs' major product to total oversea exports.

Sources: Economic Survey 1990/91; HMG/N, MOF, 1991.

Table 9.3

INDICATORS OF DISTRIBUTION OF SMIs: NEPAL
(in Percentage)

Categories of Industries	Number of Establishments		Employment		Outputs		Investments		Value-Added	
	1981/82	1986/87	1981/82	1986/87	1981/82	1986/87	1981/82	1986/87	1981/82	1986/87
SMIs	99.5	99.1	87.1	80.7	56.2	70.8	42.2	46.8	24.5	57.9
Cottage Industries	94.4	93.6	56.2	58.3	52.1	49.3	16.6	22.1	17.3	39.1
Small Industries	3.9	4.3	14.6	13.4	3.3	12.0	10.7	11.9	6.1	10.8
Medium Industries	1.2	1.2	16.3	9.1	0.8	9.5	14.9	12.7	1.0	8.0
Large Industries	0.5	0.7	12.9	18.5	43.8	28.9	57.8	53.2	75.5	41.7
Unclassified		0.2	-	0.8	-	0.3	-	-	-	0.4
Total:	100	100	100	100	100	100	100	100	100	100

Sources: Census of Manufacturing Establishments 1981/82, Central Bureau of Statistics, His Majesty's Government of Nepal.
Census of Manufacturing Establishments 1986/87, Central Bureau of Statistics, His Majesty's Government of Nepal.

Table 9.4

GROWTH TREND OF SMIs: NEPAL

Type of Industries	Number of Establishment		Growth* (%)	Employment (in Thousand)		Growth* (%)	Outputs (in Rs. Million)		Growth* (%)	Investments (in Rs. Million)		Growth* (%)	Value-Added (in Rs. Million)		Growth* (%)
	1981/82	1986/87		1981/82	1986/87		1981/82	1986/87		1981/82	1986/87		1981/82	1986/87	
SMIs	4879	9273	18	64.3	110.5	14.4	3986.3	9588.3	28.1	659.1	2169.2	45.8	577.6	2598.7	70.0
Cottage Ind.	4628	8760	17.9	41.5	79.8	18.5	3695.3	6680.1	16.2	259.1	1029.3	59.5	408.6	1753.9	65.8
Small Ind.	191	402	22.1	10.8	18.3	13.9	236.4	1618.1	116.9	166.7	551.4	46.2	145.0	487.4	47.2
Medium Ind.	60	111	17.0	12.0	12.4	0.1	54.6	1290.1	452.6	233.3	588.5	30.5	24.0	357.4	277.8
Large Industries	24	67	35.8	9.5	25.3	33.3	3111.9	3911.3	5.1	902.9	2468.9	34.7	1783.6	1870.6	1.0
Unclassified	-	19	-	-	1.1	-	-	37.9	-	-	-	-	-	20.2	-
Total:	4903	9359	18.2	73.8	136.9	17.1	7098.2	13537.5	18.1	1562.0	4638.1	39.4	2361.2	4489.5	18.0

* An annual average rate of growth.

Sources: Census of Manufacturing: Nepal 1981/82, Central Bureau of Statistics, HMG of Nepal.
Census of Manufacturing: Nepal 1986/87, Central Bureau of Statistics, HMG of Nepal.

Table 9.5

NUMBER OF ESTABLISHMENT BY EMPLOYMENT SIZE IN MANUFACTURING INDUSTRY: NEPAL

Type of Industries	Total No. of Establishment		Distribution (%)									
			49 and below		50 - 99		100 - 199		200 - 499		500 and above	
	1981/82	1986/87	1981/82	1986/87	1981/82	1986/87	1981/82	1986/87	1981/82	1986/87	1981/82	1986/87
SMIs	99.5	99.1	99.3	99.9	98.1	97.4	94.4	92.2	89.7	85.9	60.0	48.9
Cottage Ind.	94.4	93.6	96.7	96.4	65.8	63.8	56.0	53.3	56.4	53.8	25.0	20.0
Small Ind.	3.9	4.3	2.7	3.0	25.3	27.5	24.2	25.6	10.3	10.3	10.0	8.9
Medium Ind.	1.2	1.2	0.5	0.5	7.0	6.6	14.3	13.3	23.0	21.0	25.0	20.0
Large Industries	0.5	0.7	0.1	0.1	1.9	2.6	5.5	7.8	10.3	13.6	40.0	51.1
Unclassified	-	0.2	-	-	-	-	-	-	-	-	-	-
Total:	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: Distribution of establishment by employment size for the year 1986/87 is based on the 1981/82 census.

Sources: Census of Manufacturing Establishments, Nepal, 1981/82, Central Bureau of Statistics, HMG of Nepal.
Census of Manufacturing Establishments, Nepal, 1986/87, Central Bureau of Statistics, HMG of Nepal.

Table 9.6

NUMBER OF ESTABLISHMENT BY EMPLOYMENT SIZE IN MANUFACTURING INDUSTRY: NEPAL

Type of Industries	Number of Establishment		Number of Establishment by Employment Size									
			49 and below		50 - 99		100 - 199		200 - 499		500 and above	
	1981/82	1986/87	1981/82	1986/87	1981/82	1986/87	1981/82	1986/87	1981/82	1986/87	1981/82	1986/87
SMIs	4879	9273	4591	8715	155	301	86	166	35	67	12	22
Cottage Ind.	4628	8760	4446	8415	104	197	51	96	22	42	5	9
Small Ind.	191	402	123	259	40	84	22	46	4	8	2	4
Medium Ind.	60	111	22	41	11	20	13	24	9	17	5	9
Large Industries	24	67	4	11	3	8	5	14	4	11	8	23
Total:	4903	9340	4595	8726	158	309	91	180	39	78	20	45

Note: Distribution of establishment by employment size for the year 1986/97 is based on the 1981/82 census.

Sources: Census of Manufacturing Establishment, Nepal, 1981/82, Central Bureau of Statistics, HMG of Nepal.
Census of Manufacturing Establishment, Nepal, 1986/87, Central Bureau of Statistics, HMG of Nepal.

rate of 18.0 percent. Within SMIs, small-scale industries grew markedly by 22.1 percent followed by cottage industries by 17.9 percent and medium-scale industries by 17.0 percent. During the period, the number of large-scale industries went up from 24 units to 67 units reflecting an annual average increase of 35.8 percent. The contribution of SMIs in the total manufacturing establishments remained highly significant and consistent over the period at 99.5 percent in 1981/1982 and at 99.1 percent in 1986/1987 (Tables 9.3 and 9.4).

With the growth of SMI establishments, the direct employment opportunities created remained significant from 64,000 in 1981/ 1982 to 111,000 in 1986/1987, representing a two-fold increase with an average annual growth of 14.4 percent between the two Censuses. Within SMIs, the employment growth rate in cottage industries reached 18.5 percent followed by small-scale industries at 13.9 percent and medium-scale industries at 0.1 percent. The SMIs' share in total employment generated remained significant and consistent ranging between 87.1 percent to 80.7 percent during the period under review (Table 9.4).

Likewise, the output of SMIs exhibited average annual growth of 28.1 percent with its share moving up from 56.2 percent to 70.8 percent of the total manufacturing output. Within SMIs, the contribution of output of small- and medium-scale industries displayed marked upswings from 4.1 percent (1981/1982) to 21.5 percent (1986/1987), while the share of cottage industries dropped marginally from 52.1 percent to 49.3 percent during the same period. Both the share and growth of SMI output revealed higher growth potential. The SMIs' share in total value-added moved up from 24.5 percent to 57.9 percent with the ratio of value-added to output increasing from 14.5 percent to 27.1 percent during the period reflecting a higher productivity potential.

During the period, the fixed assets per establishment grew at an annual rate of 14.6 percent (20,000). The output per labour as well as the value-added per labour also increased markedly by an annual average growth rate of 8.0 percent and 32.2 percent, respectively, all reflecting the lower capital intensity and growth in labour productivity of SMIs.

On an average, the number of establishments in SMIs increased annually by 18.0 percent, employment by 14.4 percent, gross output by 28.1 percent and value-added by 70.0 percent. Regarding the distribution, the share of SMIs in total establishments remains promising, sig-

nificant and consistent (over 99 percent) between these two periods. The SMIs' share in total output as well as value-added spiraled up from 56.2 to 70.8 percent and 24.5 to 57.9 percent, respectively. Furthermore, despite the decline in output to fixed assets ratio to 4.4 in 1986/1987 from 6.0 in 1981/1982, the output per labour as well as value-added per labour went up annually by 8.0 percent and 32.2 percent, respectively, reflecting higher labour productivity in SMIs (Tables 9.1 to 9.7).

2.4 Significant Role of SMIs

The contribution of the manufacturing sector to the country's GDP moved up from about 4.2 percent in 1974/1975 to 6.7 percent in 1990/1991, and the share of SMIs is estimated to be over 4 percent. The rapid increase in employment as well as growth in the export-oriented industries such as carpets, ready-made garments and handicrafts during the last decade have made significant impacts on employment generation in the manufacturing sector. Moreover, the country has become self-sufficient in the production of consumer goods such as detergents, soaps, biscuits, slippers, and stationery products. During 1986/1987, in comparison with large-scale industries, the fixed assets per labour in SMIs was significantly lower by 79.9 percent than the large-scale industries, while the ratio of output to fixed assets was more than double in these industries, revealing higher labour intensity and capital productivity. SMIs have also contributed towards savings mobilisation through increased self-finance, plough-backs and informal sources of finance. SMIs' support of the balance of payments through better export performance and lower use of imported inputs is of crucial significance. Within SMIs, the share of cottage and small-scale industry products (mostly woollen carpets, ready-made garments, handicrafts, woollen goods) in the overseas export picked up from 23.2 percent in 1981/1982 to 88.4 percent in 1990/1991. Besides entrepreneurial developments, strengthening of inter-sectoral linkages and opening up of investment opportunities for lending institutions on a viable basis are the key rationale for the development and promotion of SMIs in the country.

There are presently about 44,000 cottage and small-scale enterprises registered with the Government. In addition, a similar number of unregistered cottage industries are estimated to be in operation, producing mainly agro- and forest-based products, conwoollen goods, etc. About 90 percent of the manufacturing value-added in the private sector is estimated to be concentrated in these industries. The Government

Table 9.7

GROWTH RATE OF ESTABLISHMENT BY EMPLOYMENT SIZE IN MANUFACTURING INDUSTRY: NEPAL

Type of Industries	No. of Establishment			No. of Establishment by Employment Size																
				49 and below			50 - 99			100 - 199			200 - 499			500 and above				
	1981/82	1986/87	Growth %	1981/82	1986/87	Growth %	1981/82	1986/87	Growth %	1981/82	1986/87	Growth %	1981/82	1986/87	Growth %	1981/82	1986/87	Growth %		
SMIs	4879	9273	18.1	4591	8715	18.0	155	301	18.3	86	166	18.6	35	67	20.0	12	22	16.7		
Cottage Ind.	4628	8760	17.9	4446	8415	17.9	104	197	17.1	51	96	17.6	22	42	20.0	5.0	9	16.0		
Small Ind.	191	402	22.1	123	259	21.2	40	84	22	22	46	21.8	4	8	25.0	2.0	4	20.0		
Medium Ind.	60	111	17.0	22	41	17.3	11	20	16.4	13	24	16.9	9	17	17.8	5.0	9	16.0		
Large Industries	24	67	35.8	4	11	35.0	3	8	33.3	5	14	36	4	11	35.0	8.0	23	37.5		
Total:	4903	9340	18.1	4595	8726	18.0	158	309	18.6	91	180	19.6	39	78	21.5	20.0	45	25.0		

Note: Distribution of establishment by employment size for the year 1986/87 is based on the 1981/82 Census.

Sources: Census of Manufacturing Establishments, Nepal, 1981/82, Central Bureau of Statistics, HMG of Nepal.
Census of Manufacturing Establishments, Nepal, 1986/87, Central Bureau of Statistics, HMG of Nepal.

also took a concrete step for the development of SMIs particularly the cottage and small-scale industries in the country by launching the Cottage and Small-Scale Industry (CSI) Project with the assistance of the World Bank to provide greater opportunities for gainful employment in the non-agricultural sector, increase in the sources of rural income and enhance the export of CSI products. In terms of growth, establishments, loan disbursements, employment creation and repayments, the CSI-I results were encouraging, and the World Bank extended financial assistance for CSI-II phase in 1986 and continued till mid-June 1992. At present, 5167 industries under this Project have been providing employment to 54,000 persons. Furthermore, various cottage and small-scale industries financed under the Intensive Banking Programme (IBP) and Small Farmers Development Programme (SFDP) have also been equally helpful in alleviating the poverty of rural households by providing them gainful employment opportunities.

2.5 Financing Sources of SMIs

Financial institutions (development banks, commercial banks and specialised banks) are the key financing sources of the manufacturing sector including SMIs in Nepal. This is demonstrated in the magnitude of the manufacturing sector loan which constitutes a significant proportion of the total outstanding loan portfolio of the abovementioned financial institution at 28.1 percent (NRs. 5114.5 million) in 1991 compared to 9.8 percent about a decade ago in 1982 (Appendix 9.4). Within financial institutions, commercial banks' share constitute an overwhelming proportion of 88.8 percent of the total outstanding manufacturing sector loans followed by the development bank (Nepal Industrial Development Corporation) at 10.0 percent, and the rest by the specialised bank (Agricultural Development Bank) at 1.1 percent in 1991. Data on the magnitude and details of institutional finance for SMIs is fragmented and scanty. Available information have explicitly recognised the significant proportion contributed by SMIs out of the total manufacturing sector loans. Based on the Census of Manufacturing Establishments 1981/1982, out of the total institutional capital investment of Rs. 708.5 million for SMIs, the contribution of financial institutions was 69.6 percent, individual and private institutions constituted 13.1 percent, foreign institutions 4.5 percent, and other agencies 12.8 percent (Table 9.7).

Data on non-institutional (informal) source of finance, self-finance and ploughing-back is scanty and virtually not available. However,

available data on non-institutional source of finance for other sectors particularly agriculture have demonstrated, as crude proxy, of the emerging role of such finance for SMIs. This is mainly attributable to the difficult access to institutional finance and also reflects entrepreneurs' attachment to traditional modes and values.

III. Financial Policies for SMIs in the 1980s in Nepal

3.1 Directed Credit

The Government intervenes extensively in the allocation of institutional credits to SMIs within the financial system to promote productive sectors in conformity with its macroeconomic policies and encourages income transfers to target groups of borrowers. Nepal Rastra Bank (NRB), the central bank is involved in various ways and to different extent in the delivery of institutional credit by enforcing lending policies and sectoral allocation of resources. In line with the Government's policy, NRB has encouraged the involvement of commercial banks in SMIs through the "Small-Scale Credit Programme" for financing "priority sectors" (agriculture, cottage and small-scale industry, and services) for the first time in 1974. Under this programme, the commercial banks were required to invest 5 percent of their total deposit liabilities in priority sectors. The commercial banks' participation in the programme was intensified with the increase of such investments to 7 percent in 1976 and 10 percent in 1981. The "Intensive Banking Programme" (IBP) was also launched, as a nucleus of the priority sector programme, especially to serve low income families who were previously outside the purview of commercial banks' lending. In 1984, commercial banks were directed to disburse at least 8 percent of their total loan portfolio to priority sectors. At present, the requirement has been increased to 12 percent reflecting the pivotal role of these banks in SMI financing in the country.

3.2 Interest Rate Policy

During the early 1980s, the interest rate policy was geared towards making adjustments in the level and structure of interest rates and ensuring that rates were positive in real terms and also fostering lending to productive sectors including SMIs. However, in the middle of 1980s, attention was focussed gradually on liberalising interest rates from

administrative controls and creating a competitive atmosphere among financial institutions. In May 1986, the commercial banks were freed by NRB to set deposit rates equal or above the minimum rate fixed by NRB and all lending rates were freed, to be determined by financial institutions. However, a maximum ceiling rate of 15 percent was stipulated to priority sector lending. Further, since 31 August 1989, NRB adopted a liberal interest rate policy, under which financial institutions are free to determine their own interest rates on deposits and lending operations. The liberalisation of interest rates was directed at strengthening the financial viability of lending operations of financial institutions, to minimise the gap between rates prevailing in formal and informal credit markets and also to flow more resources to productive sector on a competitive basis supplying adequate finance for SMIs.

3.3 Credit Guarantee

There is also a provision to provide credit guarantee to the commercial banks for priority sector lending in the form of a 1-percent premium charge on such loans. For this purpose, a credit guarantee corporation (CGC), owned by NRB, the commercial banks and HMG/N, was established in 1974. The major objectives of the corporation include the guarantee of loans advanced by banks and financial institutions to priority sectors (agriculture, industry and services), pre-export and post-export sector credit and to the compensation of loss in case of default of such loans. Besides the Priority Sectors Guarantee Scheme 1974, the Corporation has also introduced the Educated Unemployed Credit Guarantee Scheme 1984 and Live Stock Guarantee Scheme 1987.

3.4 Fiscal Policy

The fiscal policy of the Government also aimed to promote SMIs particularly export-oriented cottage and small-scale manufacturing industries and import substituting industries. The basic legal and fiscal incentive framework for the abovementioned industries are contained in the 1987 Industrial Enterprise Act (IEA), and Foreign Investment and Technology Act (FITA). The IEA specifies various fiscal incentives for the industrial sector, including excise duties, tax holidays, based on the size of an enterprise and the value-added. The Act stipulates sales tax and import duty concessions for imported equipment, machinery and tools for industries and provides basis for tariff protection for import-competing industries. The trade reform under the "Structural Adjust-

ment Fund" (SAF) arrangement also aimed to rationalise and simplify the tariff structure, to progressively liberalise imports to enhance the industrial sector and to increase incentives to the export sector. Relatively low rates were applied to the export of raw materials, which were raised in steps for intermediate goods, semi-manufactured goods and higher rates were applied to luxurious consumer goods, and other finished goods which could be produced domestically. Since 1986, the Government decided to follow a more liberal import policy. Under this policy, the system of auction of import licences was introduced. The import of selected raw materials and intermediate goods were placed under the industrial "Open General Licensing" (OGL) and necessary consumers' goods under commercial OGL. The Industrial Enterprise Act 1987 eased the administrative control of issuing industrial licences and introduced a passbook system for the import of industrial raw materials. The introduction of the industrial OGL simplified procedures to acquire import licences for raw materials as well as intermediate goods and ensured timely supply of inputs. The recently introduced new Industrial Policy 1992 as well as the Foreign Investment and One Window Policy 1992 have added incentives to attract investments to the industrial sector. Under the new industrial policy, the national priority industries, specifically the manufacturing industries, as well as energy-based, agricultural and forest-based, and mineral industries are entitled to income tax holiday of five to seven years. In addition, an income tax rebate of 50, 20, and 10 percent, and excise duties of 25, 15 and 10 percent will be granted to industries which are established in areas categorised as remote, under developed and least developed areas, respectively. An industry utilising locally available raw materials, chemicals and packing materials, etc., on which excise duty, or sales tax or both are already imposed on, will be allowed a refund of such duty and taxes. Moreover, special facilities for the reimbursement of customs duty, excise duty and sales tax imposed on raw materials and auxiliary raw materials will be given to various types of export-oriented industries, based on the quantity of export and quantity of sales within the country in foreign currency. Moreover, industries exporting 90 percent or more of their products are entitled to enjoy the same facilities as has been provided to the industries established in export processing zones. An additional income tax rebate of 5 percent will be given to public companies which sell at least 15 percent of their shares by listing themselves at the stock exchange. Moreover, export earnings as well as dividends received from investments on industries are exempted from income tax.

3.5 Foreign Exchange Policy

The new Industrial Policy and Trade Policy 1992 are directed towards a more liberalised access to imported industrial inputs and machinery with the provision of adequate incentives for exports and the enhancement of international competitiveness for domestic industrial products. Following the introduction of partial convertibility of the foreign exchange system effective 4 March 1992, foreign currency earnings through exports of goods are allowed a market-determined exchange rate. At present, 75 percent of earnings through the export of goods and services are required to be sold to the commercial banks at market-determined exchange rates while the remaining 25 percent are required to be sold to NRB at the official rates. On the other hand, foreign currency required for the import of industrial machinery and of industrial raw materials under the auction system are provided at official rate of exchange. The Foreign Investment and One Window Policy 1992 have also allowed a repatriation of share capital, dividends, loan investments and also compensation in foreign currency, all directed towards making medium-scale industries attractive for foreign collaboration.

It is too soon and premature to try to assess the results and effects of these new financial policies on SMIs. However, there is no doubt that the economy, in the present scenario of liberalised government policies and the relaxation of various regulations, is expected to get a big boost and is going to open a much wider scope for the development of SMIs.

IV. Current Systems for Financing SMIs in Nepal

4.1 Financial Institutions for SMIs

Financial institutions for SMIs in Nepal consists of the Central Bank (Nepal Rastra Bank); two state-controlled commercial banks, Nepal Bank Limited (NBL) and Rastriya Banijya Bank (RBB); three foreign joint-venture banks, Nepal Arab Bank (Nabil), Nepal Grindlays Bank Limited (Grindlays) and Nepal Indosuez Bank Limited (Indosuez); the development banks, Nepal Industrial Development Corporation (NIDC) and the Agricultural Development Bank of Nepal (ADB/N); and, Credit Guarantee Corporation (CGC). Nepal Rastra Bank is responsible for formulat-

ing the financial policies which assist financial institutions in extending financial assistance to SMIs. Commercial banks provide the bulk of credits, both fixed and working capital, to SMIs. However, of the total credit extended by these banks, the share of manufacturing credit is estimated at about 30 percent.

The manufacturing sector term-lending rate is lower than the working capital loan rate. Over 70 percent of the commercial banks' short-term finance credit consists mainly of trading and consumption loans using movable and immovable property as collateral. However, term lending by banks effectively began only after the introduction of the priority sector lending programme and the World Bank-assisted Cottage and Small Industry (CSI) Project. The lending and operating standards and procedures of specialised financial institutions like Nepal Industrial Development Corporation (NIDC) and Agricultural Development Bank/ Nepal (ADB/N) are geared toward term lending and are more advanced than those of the commercial banks. Their lendings are based largely on the assessment of project viability, while the commercial banks implicitly provided term credit against adequate collateral security. With the establishment of the foreign joint-venture banks, the financial market has become more competitive for industrial lending with increased supply of credit to SMIs.

The Nepal Industrial Development Corporation (NIDC) was established in 1959 to promote private sector participation in the country's industrialisation, provide loans and guarantees, make equity investment in medium- and large-scale manufacturing industries and also participate in loan syndications and venture capital investment. The Corporation gives high priority to investment in projects using indigenous raw materials and fulfilling the primary needs of the people. The Corporation also gives priority to the export-oriented industry. The Corporation, since its inception till mid-April 1992, has invested a total sum of Rs. 1,924.0 million to 1,096 units of cottage, small-, medium- and large-scale industries in the form of loans, share participation and guarantee loans. Of the total disbursement of loans for 1096 units, the number of village and cottage industry stood at 414 units (37.8 percent of total units), while in value terms the amount was just 8.7 million (less than 1 percent). During the Seventh Five-Year Plan, the Corporation disbursed Rs. 775.8 million against the targeted amount of Rs. 700.0 million. The target of disbursement for the Eighth Five-Year Plan has been set at Rs. 2,000.0 million. NIDC's term lending period is set

at a minimum of five years to a maximum of 15 years including a two-year grace period. Most term lendings are at interest rates of 18 percent for fixed assets and 19 percent for working capital.

In the case of CSI Project, the participating credit institutions are required to extend sub-loans not exceeding 80 percent of the sub-project investment cost and the rest of the 20 percent should be contributed by the borrowers as equity participation. The scheme was introduced to facilitate project based lending to cottage and small-scale industries in the country.

4.2 Monetary Policies for SMIs

With the complete liberalisation of interest rates on 31 August 1989, thus paving the way for the determination of interest rates by market mechanism even for the priority sector credit, NRB resorted to monetary instruments such as treasury bills auctions, reserve requirements, secondary transactions in government securities and rediscount facilities. The refinance/rediscount facilities were also redesigned to offer three windows, i.e., (i) basic, (ii) selective, and (iii) lender of last resort. The facility of selective rate which is at par with the basic rate of 13 percent has been fixed for banks and financial institutions for pre-export, post shipment-export credit and priority sector credit.

In order to channel a greater amount of resources to the core sector of the economy, NRB has made it mandatory for commercial banks to invest at least 40 percent of their total loan outstanding for the productive sector, of which 12 percent should be invested in the priority sector. Of this 12 percent, the domestic commercial banks are required to provide small loans to a minimum of 2.75 percent and for foreign joint-venture banks, 0.25 percent to economically deprived people. Non-compliance of this provision is subject to penalty. To facilitate the industrial sector in the importation of raw materials, machineries and parts, a minimum rate of 10-percent margin has been fixed on import letters of credit for the import of: (i) raw materials, machinery and their parts necessary for registered manufacturing industries; and, (ii) industrial raw materials, machinery and their parts for business entities established with a view to supply raw materials and machinery to the industrial projects.

4.3 Credit Guarantee System

With a view to encouraging the commercial banks to invest in priority sector, a Credit Guarantee Corporation (CGC) was also established in 1974 with share participation from NRB, commercial banks and HMG/N. The Corporation guarantees loans up to Rs. 1.0 million per loan in the agriculture and service sector and Rs. 1.2 million in the industry sector. There is a provision to provide guarantee up to 75 percent of the outstanding loan by charging a premium of 1 percent per annum. While paying the compensation, 50 percent is paid to the bank after verification of the claimed documents and the other 50 percent paid only after the receipt of the approval certificate of the bank auditor. Under the system the commercial banks cannot generally file claims to the CGC before the due date of the loan except in specified cases such as: (i) natural calamities; (ii) misuse of loan; and, (iii) recovery actions being taken because of the misuse of loan. After the receipt of compensation from the CGC, the banks have to take legal action within one year and failure to do so will result in the refounding of compensation to the Corporation. Although the initial capital outlay of the CGC was Rs. 13.0 million in 1974/1975, it grew almost ten-fold to Rs. 27.6 million by 1991/1992, with NRB having the highest number of shares. The paid-up capital should be raised in view of its expanding guarantee activities. In this connection, the new joint-venture banks which are also users of the guarantee service provided by the CGC, should help to raise its fund by subscribing to its shares.

Since the inception of the CSI Project, NRB has a guarantee scheme to provide credit guarantees for CSI sub-loans. This guarantee scheme is funded by HMG/N and contributed from the refinance interest spread of 1 percent and 3 percent of CSI-I phase and II phase, respectively. Thus, the clients are not required to pay a premium for guarantee. The guarantee limit is up to 75 percent of the sub-loan guaranteed or outstanding balance whichever is less. All other guarantee procedures are similar to the CGC's.

4.4 Role of Financial Markets in Financing SMIs

The institutional financing of SMIs in Nepal is in an embryonic stage. This is mainly attributable to the presence of non-corporate forms of organisations, easy access to informal credit and the absence of adequate legal framework. The Security Exchange Center established in

1976 is a concrete step towards paving the way to a capital market. Most of the transactions of the "Securities Exchange Center (SEC)" are, however, limited to government securities and only a small volume of industrial shares and debentures of big industrial concerns are carried out at present. The SEC has been undertaking new issues and sales management of share and debentures in order to augment the supply of securities in the market. Corporate bodies are obliged to list their shares and debentures in the market in order to be qualified for exchange. The number of listed companies, their paid value and total market value has been growing continuously. Presently, there are 55 companies listed in the SEC, valued at Rs. 1160.0 million, of which 22 companies are related to the manufacturing industry. The SEC has also managed 22 new issues of shares, one issue of preference share and six issues of debentures and thereby mobilised Rs. 230.0 million from the market. According to the proposed budget for the fiscal year 1992, the Government is contemplating the development of the Securities Exchange Center into a Stock Exchange in order to foster the development of a capital market in the country. Legal enactments shall also be provided to form a separate Securities Exchange Board for directing and controlling the transactions of the stock exchange. To enhance the volume of transactions and promote new issue services and sales management through intermediaries, such as merchant banks, underwriters, institutional brokers and private parties will be allowed to operate in the private sector.

4.5 Role of the Government

The Government has provided various incentives to the cottage and small-scale industries in the form of foreign exchange facilities; income tax, excise and custom duty exemption; concessionary credit facilities; liberal licensing and provision of institutional arrangements. The new Industrial Policy 1992 has further streamlined and liberalised the system by waiving licence requirements except for specific industries like health, defence and environmental related industries. The Government has also been playing a greater role in the provision of financial, managerial and technical assistance to SMIs through well-coordinated institutional arrangements. Other than the specialised financial institutions such as the NIDC and ADB/N and commercial banks, there are various supporting services providing agencies such as the Industrial Service Center, Trade Promotion Center, Export Service Center, Cottage and Industry Development Board and Cottage Industry &

Handicraft Emporium. The Government is also supporting financial institutions by providing financial assistance in the form of share participation, loans and guaranteeing external financial support. In order to promote the cottage and small-scale industries, the Government launched the CSI project in 1982 with financial and technical assistance from the World Bank and UNDP. The sub-loan component of this programme was channelled through NRB for the purpose of refinancing to the participating credit institutions. Furthermore, the Government provided an interest subsidy of 80 percent on loans amounting up to Rs. 5000.00 and 33 percent on loans above Rs. 5000.00 but below Rs. 15,000.00.

V. Determinants of Effective Financing for SMIs in Nepal

One of the key determinants of effective financing of the SMIs in Nepal is the effective lending cost of credit on which the financial viability of lending operations of financial institutions depend. The spread of effective lending cost of credit compared with the nominal lending rates of such credit of financial institutions has remained below the real cost of capital leading to the depletion of their resources by constraining recycle of funds which adversely affect the financial viability of lending operation. The higher effective lending cost of credit to SMIs is mainly attributable to the higher average cost of fund and higher transaction costs (i.e., higher cost of administering credit and the cost of the risk of loan delinquency). Subsidised lending to SMIs, particularly cottage and small-scale industries, via a concessionary rate of interest has resulted in the unsustainability of the credit programme. Available studies have estimated the effective lending cost of credit to cottage and small-scale industries, which may be considered representative of the SMIs, at 37.8 percent in 1991 (29.20 percent for the transaction cost and 8.65 percent for cost of capital relative to nominal lending rate of 15 percent) indicating the inherent subsidy element that distorts resource allocation and consequently weaken the sustainability of lending operations. The situation is further aggravated by the presence of lower volume of bank transactions, both deposits and lendings failing to attain break-evens which contribute to lower interest spreads. Moreover, the structure of effective lending cost of credit to SMIs explicitly recognises the higher transaction cost estimated at 29.20 percent (including 6.15 percent for the cost of operating, and 23.05 percent for the cost of bad debt loans). The more careful the loan appraisal, supervision of loans

Table 9.8

SOURCES OF CAPITAL FOR MANUFACTURING INDUSTRY: NEPAL
(1981/1982)
(in Rs. Million)

Catagories	No. of Establ-ishment	NIDC 1/		Commercial Banks		Individual & Pvte. Insts.		Foreign Institutions		Other Agencies		Total	
		Fixed Capital	Working Capital	Fixed Capital	Working Capital	Fixed Capital	Working Capital	Fixed Capital	Working Capital	Fixed Capital	Working Capital	Fixed Capital	Working Capital
1. SMI	4879	34.0	76.1	49.1	334.2	14.6	78.1	21.1	10.6	7.6	82.9	126.5	582.0
Cottage Ind.	4628	3.2	0.3	11.0	32.2	4.4	9.7	-	-	5.8	38.1	24.6	80.3
Small Ind.	191	8.4	0.2	25.6	71.7	3.0	13.7	0.1	2.2	0.2	32.2	37.3	120.1
Medium Ind.	60	22.4	75.6	12.5	230.3	7.2	54.7	21.0	8.4	1.6	12.6	64.8	381.6
2. Large Ind.	24	25.4	-	22.0	65.4	23.8	8.9	29.8	31.2	68.0	0.6	169.0	106.0
3. Total: (1+2)	4903	59.4	76.1	71.1	399.6	38.4	87.0	50.5	41.8	75.6	83.5	295.5	688.0

1/ Nepal Industrial Development Corporation.

Source: Census of Manufacturing Establishment, Central Bureau of Statistics, His Majesty's Government of Nepal, 1981/82.

and pursuit of delinquents, the higher the administrative costs are likely to be. The prevalence of high loan delinquency among SMI borrowers, on the other hand, diminished the lending programme's resource base threatening the sustainability of lending operations of the financial institutions.

However, the time series for the effective lending rate are not available. Therefore, the nominal lending rate is taken as the determinant of credit to SMIs for the regression estimation. The other variables hypothesised to effect credit to SMIs are money supply, credit guarantee outstanding, bank branches, inflation and the real GDP growth rate. Money supply is suppose to effect credit to SMIs in a positive direction because with an expansion in money supply, there will be an easing of liquidity in the credit market and banks are therefore able to extend a higher level of credit. The lending rate is suppose to have a negative effect on credit to SMIs because the higher the cost of capital, the lower would be the demand for loans. Expansion of bank branches is also suppose to exert a positive influence on credit to SMIs as extension of banking services leads to a higher access for bank credit. Inflation is also assumed to exert a positive impact on credit to SMIs for two reasons: (i) with rising prices, industries need more working capital and hence, higher demand for bank loan; and, (ii) with rising prices and constant nominal lending rate, the real cost of borrowing declines and borrowers are inclined to demand more credit at the lower real cost of borrowing. Likewise, the growth in the economy would increase the investment opportunities and generate a greater demand of credit for such investments.

Thus, the overall effective financing of SMIs is assumed to be represented by the following regression equation:

$$CRO/S = c + GUAO/S + M2 + INTRAT + BANK + INFL + RGDPG'$$

where:

CRO/S	=	Credit to SMIs (outstanding)
c	=	Constant (intercept)
GUAO/S	=	Credit guarantee outstanding
M2	=	Broad money supply
INTRAT	=	Nominal rate of interest on SMI loans
BANK	=	Number of branches
INFL	=	Rate of inflation as measured by consumer price index
RGDPG'	=	Real GDP growth rate

5.1 Analysis of Estimated Effective Financing Function

The effective financing functions based on the regression equation were estimated for the period 1977-1991 for which the date are available and also when the formal SMI credit schemes were in operation. The estimated results using simple OLS regression techniques are presented in Table 9.9.

The first equation considers the influence of credit guarantee outstanding (GUAO\S), broad money supply (M2), nominal rate of interest (INTRAT) the number of branches of commercial banks (BANK), the rate of inflation (INFL) and the real growth rate of GDP (RGDPG). Except for BANK, INTRAT and RGDPG' variables, all the other variables yielded positive sign as expected and the explanatory power was satisfactory. However, the coefficient of BANK is not only negative but also unexpectedly statistically significant. Hence, an alternative estimation is done by dropping this variable in the second equation. Even though the interest rate (INTRAT) variable has the expected sign in this second equation, the coefficient on GDP was still negative which is inconsistent with the hypothesis.

An estimation was made with the dropping of the GDP variable from the equation. In equation III, all the variables yielded positive signs as expected and the explanatory power was also satisfactory. Except for the two variables of credit guarantee outstanding and money supply which have positive impacts on SMI financing and are statistically significant at 5-percent level, the interest rate variable and inflation rate are not statistically significant implying that these variables have no significant influence on SMI loan.

It may be assumed that the guarantee amount and credit outstanding do not have cause and effect relationship but rather they occur simultaneously. A fourth equation was also tried excluding this variable. Although all the variables have the expected signs only the money supply variable was statistically significant.

On the basis of the statistical criterion, it was found that equation III to be more appropriate as it describes the favourable influence of the credit guarantee scheme and broad money supply on the flow of credit to SMIs. The interest rate as well as inflation rate variables, though assumed equally to be influential in inducing SMI financing, seems to have less significance.

Table 9.9

DETERMINANTS OF EFFECTIVE FINANCING OF THE SMIs
(Dependent Variable: Credit to SMIs)

Independent Variables	Equation Number			
	I	II	III	IV
C	-129.8	279.5	294.5	-458.3
	(-0.3)	(0.4)	(0.4)	(-0.6)
GUAO\S	2.99	2.74	2.73	–
	(5.2)*	(2.5)*	(2.6)*	–
M2	0.11	0.11	0.11	0.15
	(10.6)*	(5.4)*	(5.7)*	(10.6)*
INTRAT	62.1	-60.1	-62.6	-15.0
	(1.6)	(-1.0)	(-1.1)	(-0.2)
BANK	-4.41	–	–	–
	(-5.1)*	–	–	–
INFL	23.2	11.99	12.5	17.8
	(2.9)*	(0.8)	(0.9)	(1.04)
RGDPG	-0.45	-2.83	–	–
	(-0.05)	(-0.15)	–	–
R|	0.997	0.989	0.989	0.981
F-Statistics	506.2	159.1	220.5	191.1
D.W.	2.76	1.3	1.3	0.62
Period	1977-1991	1977-1991	1977-1991	1977-1991

C = Intercept
GUAO\S = Credit guarantee outstanding
M2 = Level of broad money supply
INTRAT = Nominal interest rate on loan
BANK = Number of bank branches
INFL = Inflation rate
RGDPG = Growth rate of real gross domestic product
* = Significant at 5-percent level

Note: Figures in the parenthesis are t-ratios.

VI. Problems of Financing for SMIs in Nepal

One of the critical issues of SMIs financing in Nepal is the higher effective cost of lending, the principal determinant mainly attributable to higher average cost of fund and higher transaction costs which lowers profitability and therefore threatens the sustainability of lending operations. The lower average interest spreads is mainly attributable to higher average cost of funds relative to yield rate on lending implying an inherent interest rate subsidy element which is further aggravated by transaction volumes which are below break-even level. The higher transaction costs, on the other hand, reflect the high cost of administering credit and loan delinquency. This has critically constrained the reflow of their resources and depleted the resource base, adversely affecting the financial viability of credit programmes for SMIs.

High loan delinquency which diminishes a lending programme's resource base and threatens financial viability of lending institutions is a widespread and inherent problem of SMI financing. The prevalence of high loan delinquency in SMI financing is a manifestation of managerial inefficiency and incompetency, deficient lending policies and procedures as reflected in unsound project appraisals, absence of monitoring and supervisions, stringent collateral requirements and bureaucracy further aggravated by borrowers' unwillingness and inabilities to fulfil their loan obligations. While the borrowers' inability to repay the loan are being affected by inadequate production volume and cash flows, their unwillingness to repay more often than not were the result of the misuse of loans, willful default, lack of credit consciousness and counseling with banks. Moreover, constrained delivery of inputs and support services to SMIs have also accentuated such loan delinquency.

The weak and deficient institutional arrangements is one of the crucial problems of SMI financing in the country. Problems such as lack of timely supply of raw materials, absence of adequate provision for marketing and training facilities,transfer of suitable technology, proper project identification/feasibility study have emerged from time to time due to deficiency of strong institutional supports. Moreover, the SMIs have no access to facilities like leasing and hire purchase, venture capital/ merchant banking, etc. The implication of such weak institutional arrangements is reflected in the higher cost of lending, high loan delinquency, closures, cost overruns and time overruns of many SMI projects.

The supply of institutional credit has remained far below the demand for SMI credit in the country as manifested in the estimated higher proportion of non-institutional (informal) credit in SMI financing. The inaccessibility of institutional credit is mainly attributable to the absence of concrete financing policies and programmes, managerial deficiencies, the absence of specialised institutions and the weak information system which inhibits accurate projections of credit demand. Lack of detailed data on SMI borrowers and status of loans is one of the critical constraints. These constraints forced SMI borrowers to resort to informal sources of credit at higher cost of capital. This phenomenon has also inhibited institutional facilities and support services to SMIs which affects the financial viability of lending operations and also intensified the unemployment problem.

A common flaw of SMI financing is the inefficient and ineffective monitoring and supervision as indicated by a lack of data on borrowers and on the status of loans, absence of flexible midstream correction mechanisms, failure to recognise major repayment problems and lack of trained manpower. These problems constrain the flow of credit resulting in poor project evaluation, creating repayment problems including willful default and misutilisation of funds. The lack of adequately trained manpower in the lending institutions also constrained SMI financing in the country. This is attributable to the absence of a proper manpower development programme, poor quality of local training and absence of allocation of resources for training. Inadequate training of manpower can lead to unsound project appraisals, unplanned and unsystematic monitoring and supervision, time overrun and cost overruns of projects leading to serious repayment problems.

VII. Policy Suggestions for Financing SMIs in Nepal

The presence of higher effective lending cost of SMI credit needs to be addressed through the raising of interest spreads in order to recover the opportunity cost of capital in the long term. This can be achieved through a reduction in transaction costs and marked increase in the volume of transactions to attain sustainability of SMI credit operations. Subsidies need to be justified in terms of higher benefit-cost ratio, greater employment effects, lower fiscal costs, lower transaction costs maintaining the financial viability of lending institutions.

The repayment of SMI loans hang heavily on managerial competence, soundness of project appraisals and the effectiveness of monitoring. It also depends largely on the willingness and ability of the borrower to fulfil his obligation. The problem of low loan repayment rates , therefore, needs to be addressed through better and constant supervision, monitoring and collection practices and by lowering the costs of intermediation and raising the quality of the lending process.

Pertinent, systematically updated information on SMI borrowers and on the status of loans is needed for constant project monitoring and for introducing flexible midstream correction mechanisms. Streamlining of such SMI credit information system would not only facilitate the recognition of major repayment problems but also upgrade the quality of project evaluation.

The recent emergence of non-institutional (informal) sources of finance for SMI, a reflection of the inaccessibility of institutional credit, need to be viewed in terms of integration, promotion and institutionalisation of inter-linkages between institutional and non-institutional financial markets. This may be attained by shifting from a policy of financial repression to one of financial liberalisation followed by institutional and operational reforms which would facilitate SMI financing in the country.

Rehabilitation of poor performing SMIs, a manifestation of the managerial incompetency, deficient lending policy and procedures, is one of the crucial issues in SMI financing and need to be viewed in terms of financial and technical viability of such units. A coherent framework providing ample warning in advance to identify the incidence of poor performance for timely action through change in management, infusion of additional funds and other measures need to be instituted.

Institutional building, particularly setting up of specialised SMI credit intermediaries including hire-purchases, leasing and banking based on sustainable lending operation with innovative financing mechanisms need to be instituted. The rationale behind such institutional building is to augment institutional supply of credit to cope with the demand for SMI financing along with delivery of other crucial inputs to facilitate SMI financing.

VIII. Summary and Conclusions

The rationale behind the growing support for the development and promotion of SMIs including the cottage and small-scale industries in Nepal are: (i) employment creating potential reflected in lower fixed capital per job ratio; (ii) balance of payments support through better export performance and limited use of imported inputs; (iii) greater savings mobilisation manifested in higher self-finance, plough-backs and reliance on informal source of finance; (iv) poverty alleviation by producing wage goods at lower prices; and, (v) rapid entrepreneurial development indicated in the setting up of new ventures. The higher labour intensity, capital productivity, value-added in SMIs along with their growth trends have explicitly demonstrated the strong growth potential inherent in SMIs financing in Nepal.

Nepal launched its Eighth Five-Year Plan recently which emphasises a policy of economic liberalisation and privatisation of industrial investments with priority accorded to the development and promotion of industries including SMIs which have higher value-added to the economy and coping with the domestic needs of essentials. The Plan envisages the promotion of institutional arrangements and supports the creation of a congenial environment to facilitate industrial financing in the country. Within the framework of the Plan, a new Industrial Policy 1992 has been adopted with the objectives of enhancing industrial production and productivity, developing local resource based, export-oriented and labour-intensive industries and attaining balanced regional industrial development. Moreover, a Foreign Investment and One Window Policy 1992 has also been introduced with the prime objectives of creating opportunities for income and employment generation, augmenting the private sector's participation in the country's industrialisation process, attracting foreign investment along with the transfer of modern technology and management, and enhancing competitiveness in the international market.

One of the critical constraints of SMI financing is the higher effective cost of lending (the principal determinant) which lowers profitability and threaten the sustainability of credit programmes. High loan delinquencies, the root cause of higher effective lending cost, is a widespread problem in SMIs and have critically constrained the reflow of financial institutions' resources and depleting the resource base, thus affecting their financial viability. In addition, weak and deficient insti-

tutional arrangements have also constrained delivery of inputs and support services. The emergence of non-institutional sources of SMI finance partly reflects the inaccessibility of SMIs to institutional credit. Moreover, a common problem in SMI financing is the inefficient and ineffective monitoring and supervision which undermine flexible midstream correction mechanisms. Paucity of trained manpower also inhibits the efficient delivery of SMI finance.

In view of the higher labour intensity, capital productivity, resource additionality, balance of payments and poverty alleviation effects of SMIs, the Government has accorded it priority with a package of incentives and institutional arrangements under the new Industrial Policy 1992 to facilitate SMI financing in the country. A dynamic policy strategy is needed to address the sustainability of SMI credit programme of financial institutions by maintaining the effective lending cost at a level to reflect the cost of capital. Subsidies, on the other hand, need to be economically justified and gradually phased out. Improvement in collection rates may be achieved through better and constant supervision, monitoring and collection practices and by raising the quality of the lending process. Financial dualism in SMI financing need to be addressed through financial liberalisation accompanied by institutional and operational reforms with emphasis on the promotion and institutionalisation of inter-linkages. Rehabilitation of poor performing SMIs needs to be viewed in the light of their financial and technical viability. Regular flow of information on SMI borrowers and on the status of loans would result in a better system of midstream correction mechanisms. Promotion of specialised credit intermediaries with innovative financing mechanisms need to be instituted to facilitate and promote SMI financing in the country.

NEPAL STANDARD INDUSTRIAL CLASSIFICATION

1. Manufacturing

1.1 Food manufacturing
1.2 Manufacture of dairy products
1.3 Canning and preserving of fruits and vegetables
1.4 Manufacture of vegetables and animal oils and fats
1.5 Grain mill products
1.6 Bakery products including (noodles)
1.7 Sugar factories and refineries
1.8 Manufacture of cocoa, chocolate and sugar confectionery

2. Manufacturing of Food, Beverages and Tobacco

2.1 Food manufacturing

2.1.1 Tea processing
2.1.2 Tea packing
2.1.3 Spices grinding
2.1.4 Ice manufacturing
2.1.5 Dalmoth/snacks manufacturing
2.1.6 Manufacturing of animal feeds

2.2 Beverage industries

2.2.1 Distilling, rectifying, and blending spirits
2.2.2 Wine industries (Manufactured from fruits only)
2.2.3 Beer manufacturing
2.2.4 Soft drinks and carbonated water industries

2.3 Tobacco manufactures

2.3.1 Bidi manufacturing
2.3.2 Cigarette manufacturing
2.3.3 Tobacco manufacturers n.e.c.

3. Textile, Wearing Apparel and Leather Industries

3.1 Manufacture of textiles

3.1.1 Spinning, weaving and finishing textiles
3.1.2 Non-wearing textiles goods
3.1.3 Knitting mills
3.1.4 Manufacture of carpet and rugs
3.1.5 Jute manufacture

3.2 Manufacture of wearing apparel except foot wear

3.3 Manufacture of leather and leather products (except footwear and wearing apparel)

3.4 Footwear manufacturing

4. Manufacture of Wood and Wood Products including Furnitures

4.1 Manufacture of wood and wood products except furniture (door, window, plywood)

4.1.1 Sawmills, planing, and other wood mills
4.1.2 Manufacture of wood and cork products n.e.c. (mirror, frame etc.)

4.2 Manufacture of furniture and fixtures, except primarily of metal

5. Manufacture of Paper and Paper Products; Printing and Publishing

5.1 Manufacture of paper and paper products

5.2 Printing, publishing and allied industries

6. Manufacture of Chemicals and of Rubber and Plastic Products

6.1 Manufacture of other chemical products

6.1.1 Manufacture of drugs and medicines
6.1.2 Manufacture of soap and cleaning preparation, perfumes, cosmetics and other toilet preparations
6.1.3 Manufacture of chemical products n.e.c. (including match industries and coal tar industries), sal seed oil, bran oil, lubricating oil

6.1.4 Manufacture of rubber products

6.2 Manufacture of plastic products n.e.c (including polythene pipes)

7. Manufacture of Non-Metallic Mineral Products

7.1 Manufacture of glass and glass products

7.2 Manufacture of other non-metallic mineral products

7.2.1 Manufacture of structural clay products (mainly bricks and tiles)
7.2.2 Manufacture of cement,lime and plaster (including hume pipes)
7.2.3 Manufacture of non-metallic mineral products n.e.c (manufacture of chalk, slate, etc.)

8. Basic Metal Industries

8.1 Iron and steel basic industries (manufacture of iron rode)

9. Manufacture of Fabricated Metal Products, Machinery and Equipment

9.1 Manufacture of cultery, hand tools except machinery and equipment

9.1.1 Manufacture of cultery and hand tools
9.1.2 Manufacture of furnitures and fixtures primarily of metal
9.1.3 Manufacture of structural metal products (manufacture of rolling shutters, grills, railings)
9.1.4 Manufacture of fabricated metal productsexcept machinery and equipment n.e.c. (manufacture of metallic vessels)

9.2 Manufacture of electrical industrial machinery, apparatus, appliances and supplies

9.2.1 Manufacture of radio, television and communication equipment

9.2.2 Manufacture of electrical apparatus n.e.c. (manufacture of transformer, refrigerator, insulated wires, insulating apparatus)

9.3 Manufacture of profesional and scientific equipment n.e.c. (manufacture of watches and clocks)

10. Other Manufacturing Industries

10.1 Manufacture of industries n.e.c.

Appendix 9.2

CONTRIBUTION OF MANUFACTURING SECTOR
TO TOTAL GDP: NEPAL
(At Current Prices; in Rs. Million)

Fiscal Year	Total GDP	Manufacturing Contribution to GDP
1981/82	30998	1243 (4.0%)
1982/83	33761	1460 (4.3%)
1983/84	39390	1816 (4.6%)
1984/85	44417	1998 (4.5%)
1985/86	50424	2622 (5.2%)
1986/87	56137	3065 (5.5%)
1987/88	68858	3646 (5.3%)
1988/89	77534	3619 (4.7%)
1989/90 1/	90825	4546 (5.0%)
1990/91 2/	105300	7078 (6.7%)

1/ Revised preliminary estimate.
2/ Preliminary estimate.

Note: The figure in the bracket indicates the precentage contribution.

Appendix 9.3

OVERSEAS EXPORT OF MAJOR CSI COMMODITIES: NEPAL
(in Rs. Million)

Fiscal Year	Total Export	Overseas Export	Major Commodities					
			Woolen Carpet	Readymad Garment	Handi-craft	Woolen Goods	Others	Total
1981/82	1491.5	497.1	84.0	13.8	12.2	5.1	0.4	115.5
1982/83	1132.0	288.7	137.8	10.0	9.4	4.8	0.7	162.7
1983/84	1703.9	543.2	265.4	20.5	12.6	3.9	1.2	303.6
1984/85	2740.6	1138.9	249.4	470.9	12.7	4.6	0.9	738.3
1985/86	3078.4	1836.9	376.4	803.7	18.4	3.8	0.2	1202.5
1986/87	2991.4	1688.8	627.5	611.2	32.4	5.3	1.1	1277.5
1987/88	4114.6	2546.9	1223.7	916.6	53.8	9.0	1.1	2204.2
1988/89	4195.3	3160.4	1634.0	1117.8	91.6	16.8	1.8	2862.0
1989/90	5235.5	4553.7	2318.5	1399.2	71.1	23.2		3812.0
1990/91	7603.7	5902.5	3723.6	1350.3	78.1	21.0	47.2	5220.2

Sources: Economic survey 1990/91, Ministry of Finance HMG/N.
Nepal Foreign Trade Statistics, NRB, Research Department, B.O.P. Division Issue No. 12.

Appendix 9.4

INDICATORS OF FINANCIAL ASSISTANCE
TO THE MANUFACTURING SECTOR: NEPAL
(Outstanding as at Mid-July)
(in Rs. Million)

Financial Institutions	1982	1987	1988	1989	1990	1991
1. Nepal Industrial Dev. Corp.	340.2	682.3	786.6	829.6	949.9	837.6
of which: Mfg. Sector	83.6	277.6	342.7	390.3	497.5	511.5
(%)	(24.6)	(40.7)	(43.7)	(47.0)	(52.4)	(61.1)
2. Commercial Banks	3141.5	6941.5	8164.3	10356.7	11798.7	14009.0
of which: Mfg. Sector	313.2	2074.8	2575.2	3134.7	3817.6	4545.6
(%)	(10.0)	(29.9)	(31.5)	(30.3)	(32.4)	(32.4)
3. Agricultural Development Bank	566.6	1981.3	2242.1	2568.7	2985.6	3348.6
of which: Mfg. Sector	-	41.9	49.4	54.5	62.2	57.4
(%)	-	(2.1)	(2.2)	(2.1)	(2.1)	(2.1)
4. Total	4048.3	9605.1	11193.0	13755.0	15734.2	18195.2
of which: Mfg. Sector	396.8	2394.3	2967.3	3579.5	4377.3	5114.5
(%)	(9.8)	(24.9)	(26.5)	(26.0)	(27.8)	(28.1)

Sources: NRB, Quarterly Economic Publications.
NRB, CSI Project Office Publications.

CSI PROJECT AND PRIORITY SECTOR
INDUSTRIAL CREDIT: NEPAL
(in Rs. Million)

Fiscal Year	Annual Loan Disbursement				Loan Outstanding at the End of Fiscal Year		
	CSI Project	Priority Sector	Total	% of Growth Rate	CSI Project	Priority Sector	Total
1982/83	11.1	7.4	18.5	-	11.0	9.4	20.4
1983/84	35.3	22.2	57.5	210.8	44.7	28.2	72.9
1984/85	50.4	40.5	90.9	58.1	86.2	59.3	145.5
1985/86	72.7	76.6	149.3	64.2	144.6	117.7	262.3
1986/87	43.0	120.0	163.0	9.2	168.1	211.1	379.2
1987/88	36.1	59.1	95.2	-41.6	177.1	238.7	415.8
1988/89	40.8	76.9	117.7	23.6	190.0	276.2	466.2
1989/90	29.7	85.1	114.8	-2.5	190.7	309.8	500.5
1990/91	19.5	89.0	108.5	-5.5	178.1	330.4	508.5
Average	37.6	64.1	100.5				

Sources: NRB, Development Finance Dept., Cottage and Small Industry Project Office Publications.
NRB, Development Finance Dept., Priority Sector Credit Units Publications.

LOAN RECOVERY SITUATION UNDER
CSI PROJECT AND PRIORITY SECTOR CREDIT: NEPAL
(Cummulative Figures Ending Mid-July)
(in Rs. Million)

Fiscal Year	Loan Receivables			Loan Repayment			Recovery Rate (%)		
	CSI Project	Priority Sector*	Total	CSI Project	Priority Sector*	Total	CSI Project	Priority Sector*	Total
1983	0.1	2.1	2.2	0.1	1.0	1.1	100.0	47.6	50.0
1984	3.4	7.3	10.7	1.8	4.4	6.2	52.5	60.3	57.5
1985	15.4	18.2	33.6	10.7	13.8	24.5	69.5	75.8	72.9
1986	36.7	36.8	73.5	25.0	32.0	57.0	68.1	87.0	77.6
1987	67.7	73.5	141.2	44.5	58.6	103.1	65.7	79.7	73.0
1988	109.9	123.3	233.2	71.6	90.1	161.7	65.2	73.1	69.3
1989	148.7	197.7	346.4	99.5	129.5	229.0	66.9	65.5	66.1
1990	192.8	263.5	456.3	128.9	181.0	309.5	66.6	68.7	67.8
1991	230.5	338.0	568.5	160.6	249.4	410.0	69.7	73.8	72.1

* Industrial credit only.

Sources: NRB, Development Finance Dept., Cottage & Small Industry Project Office Publications.
NRB, Development Finance Dept., Priority Sector Credit Units Publications.

Chapter 10

FINANCING FOR SMIs IN THE PHILIPPINES

by
Rizalina J. Veron

I. Introduction

Small- and medium-scale industries or small- and medium-scale enterprises (SMEs) falling under the manufacturing sector assume a principal role in nation building via their contribution to rural development, job creation and equitable distribution of income. SMEs also create backward and forward linkages with existing industries, and are vehicles for the development of entrepreneurial skills and the utilization of indigenous resources.

This paper aims to outline the current financing system of SMEs in the Philippines, to identify their financing problems and to provide policy suggestions to enhance financing for these industries.

In particular, this paper will cover the following aspects: first, salient features of the SMEs in the Philippines by presenting the definition of SMEs, their contribution to the economy, their growth trends, their significant role in the country, as well as their financing sources; second, financial policies for the SMEs in the 1980s; third, the current financing systems of the SMEs; and, fourth, econometric analysis of the determinants of an effective financing scheme. This paper likewise examines the problems of financing for SMEs and draws policy suggestions for financing. The last part presents the summary and conclusion.

II. Salient Features of the SMEs in the Philippines

2.1 Definition of a Small- and Medium-Scale Enterprise

In general, a small- and medium-scale enterprise could be commonly defined in terms of total asset size and number of employees.

2.1.1 Based on Total Asset Size

As determined under Section 3 of Republic Act No. 6977, otherwise known as the "Magna Carta for Small Enterprises", SMEs shall be de-

fined as any business activity or enterprise engaged in industry, agri-business and/or services, whether single proprietorship, cooperative, partnership or corporation whose total assets, inclusive of those arising from loans but exclusive of the land on which the particular business entity's office, plant and equipment are situated, must have value falling under the following categories:

Micro : Less than ₱ 50,000
Cottage : ₱ 50,001 - ₱ 500,000
Small : ₱ 500,001 - ₱ 5,000,000
Medium : ₱ 5,000,001 - ₱ 20,000,000

For this paper, a small- and medium-scale enterprise (SME) shall be defined as any business activity or enterprise engaged in industry, particularly manufacturing, whose total assets (as defined above) must be ₱ 20 million and below.

Based on the old definition of SMEs adopted by the Central Bank (CB) prior to the implementation of the Magna Carta for Small Enterprises, SMEs are those whose total assets amount to at least ₱ 100,000 up to ₱ 4 million.

2.1.2 Based on Number of Employees

According to the National Statistics Office (NSO), cottage enterprises are those employing less than 10 workers, small enterprises, 10 to 99 workers, while medium enterprises employ 100 to 199 workers. Based on this definition, SMEs therefore are those employing 10 to 199 workers which is consistent with the more flexible interpretation based on asset limit as defined under RA 6977.

2.2 Contribution of the SMEs to the Economy and Growth Trends

To quantify the contribution of SMEs to the economy, the ratios of SMEs' establishments, total employment, total sales and total value added to the respective aggregate data in the Manufacturing sector are presented in Table 10.1. SMES' contribution to exports cannot be determined by the National Statistics Office since not all SMEs which export their goods do the export activities themselves; those who are not capable sub-contract their goods to exporters.

It is similarly important to discuss the basic limitation of data gathered in this section. For 1983 and 1988, figures were based on the *Census*

of Establishments (prepared by NSO) which contains a complete listing of establishments. For 1984-1987 data, the source was the *Annual Survey of Establishments* (also prepared by NSO), which contains information about sample respondents only. As such, discussion was focused on contribution ratios of SMEs to the manufacturing sector since analysis over time cannot be prepared as there are no complete data series available.

The available data presented indicate that SMEs have significant contributions to the manufacturing sector in particular and hence to the economy in general.

In 1983, a total of 55,330 SMEs have employed 385,069 persons, accumulated sales of ₱ 36.0 million, and contributed ₱ 11.9 million worth of value-added to the manufacturing sector. In terms of percentage share to the manufacturing sector, SMEs accounted for a substantial 98.7 percent of total number of establishments in 1983, but contributed less shares of 22 and 21 percent of total sales and value-added respectively. In 1984, there was a general decline in the contribution ratios of SMEs in the manufacturing sector in terms of number of establishments, employees, sales and value-added, indicative of the economic and financial crises during 1984-1985, although SMEs' dominance in the sector still prevailed.

Performance improved markedly in 1988 following the increased utilization of the industrial and service sectors during the year, particularly the manufacturing sub-sector. Total establishments improved by 40.6 percent in 1983-1988, resulting in a substantial expansion in employment at 41.5 percent. Aggregate sales and value-added more than doubled during the same period.

2.3 Significant Role of the SMEs in the Philippines

Small- and medium-scale enterprises in the Philippines are considered important contributors to employment creation and generation of income, particularly for low-income population groups. In effect, the country's economic grassroots are strengthened given the proper support for the SMEs' continued operation.

Majority of the SMEs are located in the rural areas. Thus, they typically alleviate poverty in the countrysides, and offer opportunities

Table 10.1

CONTRIBUTION OF COTTAGE, SMALL- AND MEDIUM-SCALE ENTERPRISES (CSMEs) ON THE MANUFACTURING SECTOR IN TERMS OF NUMBER OF ESTABLISHMENTS, EMPLOYMENT, SALES AND VALUE-ADDED: 1983-1988 **

A. CONTRIBUTION RATIO TO TOTAL ESTABLISHMENTS IN MANUFACTURING SECTOR

Year	Number of Establishments		
	Total (Manufacturing)	CSMEs Total	CSMEs Contribution Ratio
1983	56,047	55,330	98.7%
1984	5,435	4,769	87.7%
1985	5,369	4,725	88.0%
1986	5,294	4,628	87.4%
1987	5,000	4,289	85.8%
1988	78,635	77,807	98.9%

B. CONTRIBUTION RATIO TO TOTAL EMPLOYMENT IN MANUFACTURING SECTOR

Year	Number of Employees		
	Total (Manufacturing)	CSMEs Total	CSMEs Contribution Ratio
1983	888,567	385,069	43.3%
1984	645,516	177,009	27.4%
1985	623,671	178,896	28.7%
1986	636,219	183,814	28.9%
1987	675,206	181,501	26.9%
1988	1,090,109	544,720	50.0%

C. CONTRIBUTION RATIO TO TOTAL SALES IN MANUFACTURING SECTOR

Year	Value of Sales (In Million Pesos)		
	Total (Manufacturing)	CSMEs Total	CSMEs Contribution Ratio
1983	163.0	36.0	22.1%
1984	214.6	42.8	19.9%
1985	223.7	41.1	18.4%
1986	246.9	50.2	20.3%
1987	292.0	56.2	19.2%
1988	392.9	103.3	26.3%

D. CONTRIBUTION RATIO TO TOTAL VALUE-ADDED IN MANUFACTURING SECTOR

Year	Value-Added (In Million Pesos)		
	Total (Manufacturing)	CSMEs Total	CSMEs Contribution Ratio
1983	56.8	11.9	21.0%
1984	68.8	12.4	18.0%
1985	79.0	13.0	16.5%
1986	97.7	16.8	17.2%
1987	105.4	17.6	16.7%
1988	137.0	32.9	24.0%

** 1983 and 1988 figures were based on the Census of Establishments for 1984-1987 data, figures were based on the Annual Survey of Establishments (both prepared by the National Statistics Office). The Census of Establishments contains a complete listing of establishments, while the Annual Survey of Establishments contains information about sample respondents only.

Source: Department of Trade and Industry.

for sustainable livelihood. Additionally, SMEs make use of the natural resources outside of the Metropolis; assuming such utilization is proper, this could enhance the country's ability to produce goods using natural endowments that could in turn, enhance self-sufficiency for needed input.

On the use of capital, SMEs offer a way of channelling rural savings to productive use when these would otherwise have been kept in unproductive forms, such as jewelry, cash or idle structures.

On an aggregate basis, the productive utilization of capital resources could be translated to bigger yield of goods and services that could eventually improve the country's overall output performance.

2.4 Financing Sources of the SMEs

On the basis of survey data in the early 1980s, savings and inheritance comprise the principal source of SME finance of initial investment. With the operation of additional financing and guarantee schemes during the late 1980s, SMEs were given varied financing options. As of June 1992, there are at least 13 financing programs, 8 guarantee schemes and 3 venture programs (inclusive of 14 venture capital corporations) available for cottage, SMEs (Table 10.2).

The financing programs shown in Table 10.2 were created for different purposes, such as fixed asset acquisition, working capital finance, site improvement and raw materials purchase. Funds for these credit programs come from various sources - the National Government, government-owned corporations, multilateral donors and foreign governments. Funds from the National Government and government-owned corporations are reallocations of domestic resources to priority sectors, while those coming from foreign sources are in addition to domestic resources.

Some project initiators/implementors undertake direct lending activities; some make use of accredited participating financial institutions (PFIs) to handle the credit evaluation and collection procedures. PFIs are normally selected by the implementing agency on the bases of resources and lending activities. These PFIs, due to their large resources and countryside presence (via branches), deliver the credit programs to target beneficiaries within and outside the Metropolis.

Table 10.2

SELECTED FINANCING PROGRAMS FOR COTTAGE, SMALL- & MEDIUM-SCALE ENTERPRISES (CSMEs)

Financing Programs	Eligible Borrowers/ Projects	Loan Purpose	Maximum Amount of Loan	Interest Per Annum	Repayment	Collateral Requirement	Implementing Agency
Kabalikat sa Pagpapaunlad ng Industriya Lending Program (KASAPI)	Agri-business, manufacturing, utilities, transpo/communication, commercial & export prod'n, trading & service related enterprises & who are SSS members of good standing	-Acquisition of M/E -Working Capital -Const'n/improvement of factory bldgs warehouse & other civil works -Add/increase capacity utilization of firms	P100,000 - 10M	20%	5 yrs (grace period - 1 year)	Machinery/ Equipment, Land Building	Social Security System (SSS)
Window I	Industrial; Agro-ind'l Manufacturing Enterprises	Short-term working capital needs	Depends on project requirements	Market-determined	18 months	Real estate Chattal	Development Bank of the Philippines (DBP)
Window II	Service industries Supportive of mftg. activities	Fixed asset Acquisition			5 years	Mortgage Letter of Credit (L/C)	DBP
Window III	Cooperatives, associations; educational inst. engaged in significant activities	Working capital Infrastructure & fixed asset acquisition	Depends on project requirements	NEDA projected inflation rate plus 2 %	Depends on cash-flow of the project	Buildings. Machinery, Equipment, etc.	DBP
Small Enterprise Loan Fund (SELF)	Non-crop prod'n enterprise; Retail establishments outside Manila	Construction,acquisition processing, op'n of plant.storage facilities machinery/equipment,payment for workers & independent contractors	P250,000	Regular lending rate	W/C - 1 year Capital - 5 yrs	Hold-out on savings & TD, real est, acquisition from loan proceeds	Philippine National Bank (PNB)
Pangkabuhayan ng Bayan Lending Program	Filipino-owned enterprises (with assets of not more than P5 million) preferably CBBE holders engaged in the manufacture of export products	Fixed-asset acquisition Capital Expenditures Working capital	Depends on project requirements but not to exceed P1M	1 yr or less-17%; Up to 3 yrs-18%; Up to 5 yrs-19%	Operating capital-1 yr; Fixed asset & capital - 5 years	Real estate mortgage; Machinery & Eqpt acquired from loan proceeds) Joint & several signatures of owner, partner & stockholder	PNB
Balikatan sa Kabuhayan Program (BKSP)	Primary processing of agri-based prod; Livestock & poultry proj (expansion of on-going proj only); Fish-pond & other aqua-culture; Non-traditional crop prod with maximum gestating pd/ cycle of 6 months	Working capital; Equipment/machinery acquisition; site improvement	Livestock, poultry aqua-culture-P500,000; Primary processing-P1M	12%	Max of 3 yrs (grace period of 6 months)	Real estate, Bldgs & land, Transp. equipment, Machinery & equipment	Technology & Livelihood Resource Center (TLRC)

Table 10.2 (cont'd)

Financing Programs/ Guarrantee Schemes	Eligible Borrowers/ Projects	Loan Purpose	Maximum Amount of Loan	Interest Per Annum	Repayment	Collateral Requirement	Implementing Agency
Urban Livelihood Financing	Maftg, processing(start-up or on-going)located w/n Metro Manila, Region 3 & 4	Working capital; acquisition of machinery & equipment; Site improvement	Metro Manila-min of P15,000; Regions 3 & 4 - min of P200,000	17%	Max of 5 yrs Credit line- 1 to 2 yrs	Land, Bldg & Improvements;Transp & equipment; House -hold appliances, Fixtures	TLRC
Transactional Financing	Accredited producers/suppliers with confirmed POs or LCs	Working capital; payment of labor; other working capital purposes	POs - P750,000 LCs - P1M	18-24%, depending on asset size,no. of yrs in bus	6 months	Real estate,personal properties & chattel mortgage	TLRC
Phil. International Trading Corp (PITC) Financing Facility	Direct/Indirect Export Producers; existing PITC clients with good track record	Raw materials/working capital	70% of L/C but not exceeding P200,000	Prime rates charged by PNB or Interbank, whichever is lower	Upon negotiation of L/C, or maturity of PN, whichever comes earlier	LC proceeds, joint & several signatures of partners	Phil. Int'l Trading Corporation (PITC)
Export Industry Modernization Program	Exporters with projects having modernization input	Building, machinery Civil works, Working capital	70% of project cost for expansion project; 60% of project cost for new project	10%	Long-term loans - 5 to 10 yrs with grace pd of 1 to 3 yrs	Land, building, machineries	TLRC
Packing Credit	Exporters	Packing Credit	80% of LC submitted for refinancing	Market-Determined	90 days	Promissory Note, LO or PO	Central Bank of the Philippines (CBP)
International Trade Financing	SMEs engaged in import/ export business	Pre-shipment & Post-shipment needs	Depends on project needs; Export advances/line credit	Market-Determined	90 days	Real estate, chattels, stocks, bonds, etc.	PNB
Industrial Guarantee & Loan Fund (IGLF)	Mftg. concerns & service industries supportive of mftg. activities	Factory site; Bldg; Machinery & Eqpt; Working Capital; Export packing/ production credit	Sponsorship scheme- P150,000; accreditation-P20M	Market-Determined	Working cap - 7 yrs; Fixed assets-12 yrs. more than 1 year	any collateral acceptable to participating financial inst'n-PFI	DBP
Small Business Loan Portfolio Guarantee Program	Productive/commercial activities located outside Metro Manila through selected dev't banks & financial institutions	Working capital; equipment/machinery acquisition; fixed assets	US$150,000	Prevailing market rate	more than 1 year	Collaterals acceptable to PFI	US Agency for Int'l Development (USAID)

Table 10.2 (cont'd)

Financing Programs/ Guarrantee Schemes	Eligible Borrowers/ Projects	Loan Purpose	Maximum Amount of Loan	Interest Per Annum	Repayment	Collateral Requirement	Implementing Agency
Pre-Shipment Export Finance Guarantee Program							
- Revolving Export Loan Guarantee	Direct/indirect non-traditional exporters, exporting for 2 yrs with sales of at least $50,000; Networth minimum of P500,000	Pre-shipment Working Capital	P150,000-P7M, line not to exceed 150% of last year's export sales	Guarantee fee-1% of guaranteed portion ; Utilization fee-1/4% of guarantee portion per 90 days or less	Revolving for 1 year	Export L/C, confirmed PO or confirmed sales contract; Personal guarantee(s) of principal(s)	Phil. Export & Foreign Loan Guarantee (Philguarantee)
- Export Trade Finance Guarantee (ETFC)	Direct/indirect non-traditional exporters, have 6 mos. export performance, annual domestic sales ex-port LC; at least P250,000 -worth of networth	Pre-shipment Working Capital	P150,000 - P4.5M	Guarantee fee-1/4% of guaranteed portion ; Utilization fee-1/2% of guarantee portion per 90 days or less	180 days	Export L/C Personal Guarantee of principal(s)	Philguarantee
Export Credit Guarantee Program	Small & Medium-scale exporters through accredited banks	Pre-shipment and revolving lines of credit (packing credit, export advance line, export purchase line)	Small: P100,000-2M Medium: P100,000-5M	Filing fee:1/5 of 1% of the guarantee acomodation Guarantee fee-1/5% of guarantee acomodation		Collaterals acceptable to PFIs Indemnity agreement with negative pledge in favor of Philguarantee	Philguarantee
Guarantee Fund for Small and Medium Enterprises-Regular Guarantee Facility	Small and Medium scale agri-based projects	Working capital; Plant facilities Acquisition of fixed assets	Small: P50,000-2M Medium: P50,000-8M	Market-Determined	Working capital - 5 yrs Fixed asset-10 yrs	Project assets Joint & several signatures of partners/principal stockholders on non-individual borrowers	Guarantee Fund for Small & Medium Enterprises (GFSME)

Table 10.2 (cont'd)

Financing Programs/ Guarrantee Schemes	Eligible Borrowers/ Projects	Loan Purpose	Maximum Amount of Loan	Interest Per Annum	Repayment	Collateral Requirement	Implementing Agency
Guarantee Opportunities for Light Industries (GOLD) Program	SMEs engaged in selected mftg., service or franchise activities	FA acquisition, Bldg.improvement, const'n of plant facilities,working capital	Small: P50,000-4M Medium: P50,000-8M	Lending inst. discretion but should not exceed int set by GFSME Mngt	WC-3 yrs; FA-5 yrs incl. 1 yr grace pd Bldg. improvement/expansion- 10 yrs incl. 1 year grace pd	Project assets Joint & several signatures of partners, members/ principal stockholders on non-individual borrowers	GFSME
Bankers Association of the Philippines (BAP) Credit Guarantee Loans	Export/non-export mftg SME service cos. & export traders	Short-term working cap; Fixed asset	80% of L/C or PO maximum of P2M	At least 2% below ave.commercial bank rate for the mo immediately preceding pertinent quarter	Based on cash flow of bus.but max of 4 yrs for new asset & 3 yrs for reconditioned units	Mach/equipment to be acquired out of loan proceeds; joint & several suretyship or comakers; Deed of Assign of L/C or PO; Real Estate Mortgage	Bankers Association of the Phils.
Venture Programs							
Technology Utilization Financing Program	Depends on proj capability to contribute to industrialization & attainment of self-reliance in the countryside	Equipment/machinery Site/plant improvement Working Capital	P2.5M	15%	Based on project's cap to pay w/ 1 yr grace pd on principal	Land, Bldgs & improvements; Machinery & eqp't Transp eqp't	TLRC
Venture Capital Corporation	Cottage & SMEs	Transactional Financing Funds Syndication Financing packaging	Needs of the bus. Paying capacity of applicant; Growth potential of bus.				National Development Company - VCCs
DOST-PCIERD Financing Program for the Commercialization of New Products & Technology	Commercially viable technologies,R & D projects & other technologies developed by Fil individuals	W/C through purchase order financing; Fixed assets through term loan; R & D costs	Proj. requirements; Paying capacity of applicant; Growth potential of bus.	Rate that will cover overhead cost & project-ed inflation rate by NEDA		100% secured by collaterals; Partially secured/unsecured for patented inventions Corp-general partners/officers sign as sureties for borrower	Department of Science & Technology

III. Financial Policies for SMIs in 1980s in the Philippines

In 1980, a modified form of universal banking was established for financial institutions to offer a wide range of services subject to high minimum paid-in capital requirements. The transformation of commercial banks to expanded commercial banks was viewed to mobilize long-term resources needed to fund major industrial projects in the 1980s. From 1980 to 1991, a total of 11 commercial banks were transformed into expanded commercial banks.

Measures to strengthen the financial system were also adopted not only to facilitate the flow of credit to vital sectors of the economy but also to increase the system's viability. In 1987, the CB pursued the reform of government banking institutions and the privatization of government-acquired banks. On the other hand, the restructuring of the balance sheets of two major government banks was completed with the transfer of non-performing assets to the Asset Privatization Trust (APT) and of identified liabilities to the National Government.

It was also in 1987 when the CB started the program to assist rural banks with the issuance of Circular No. 1143 and subsequently, of Circular No. 1172 of 29 March 1988. It aims to strengthen the rural banking system by placing rural banks in a position that they can more adequately provide banking services to the rural sector through a capital build-up and conversion scheme and/or plan of payment for those rural banks experiencing financial difficulty.

The program is essentially a capital build-up scheme consisting of a prerequisite fresh capital infusion and a subsequent conversion and/or plan of payment of all arrearages of rural banks with the CB which are past due and unpaid as of 31 December 1986.

3.1 1990s

3.1.1 More Liberal Bank Branching Policy

Starting April 1991, the CB has liberalized its branch banking policy to improve resource mobilization and enhance financial intermediation. The policy would award, through auction, franchises to eligible commercial and thrift banks to open more branches in the National Capital Region, cities of Cebu and Davao and in first class cities and municipalities.

To encourage the establishment of more banking units in the countryside, the CB has further relaxed the branching regulation through the elimination of bidding for branches to be established in second class cities and municipalities. The policy also provides incentives for establishing branches in less developed regions by entitling commercial banks to set up one branch in Metro Manila and other first class cities and municipalities for every three branches they set up in other (less developed) service areas.

Likewise, to increase the availability of credit in the countryside, the privilege of nationwide branching was given to rural banks.

With the deregulation policy of bank branching, the total number of financial institutions increased to 8,744 as of end-September 1992 or an increase of 942 units over a twelve-month period. For the first nine months of 1992, total applications for new banking offices approved reached 266, out of which 146 were actually opened during the period.

The entry of foreign banks in the Philippines is currently being studied with the objectives of improving efficiency and stability in the financial system through increased competition among banks, and of complementing the liberalized investment environment in the country.

3.1.2 Policy on Capital Adequacy

To assure the continued stability of banks and widen their capability to meet the increase in demand for their services, the CB adopted a policy of reviewing periodically the need for additional capitalization by all banks. The required minimum capitalization for various types of banks was increased in July 1991 (Circular No. 1296). The minimum paid-in capital requirement for regular commercial banks was raised from ₱ 500 million to ₱ 750 million, for expanded commercial banks from ₱ 1 billion to ₱ 1.5 billion and for investment houses, from ₱ 20 million to ₱ 100 million. Capitalization requirement for existing thrift banks was increased in 1990 from ₱ 10 million to ₱ 20 million for thrift banks with head offices in Manila and from ₱ 5 million to ₱ 10 million for those with head offices outside of Metro Manila. Capitalization requirement for new thrift banks was raised from ₱ 20 million to ₱ 100 million in Metro Manila and from ₱ 10 million to ₱ 20 million for head offices outside Metro Manila. For rural banks, the new prescribed paid-in capital was ₱ 20 million for those incorporated in the NCR and ₱

10 million in Cebu and Davao cities (Circular No. 1294). Currently, existing rural banks in NCR, Cebu and Davao cities with capitalization of below ₱ 1 million are required to raise their capital to aforesaid amounts in four equal semi-annual installments beginning January 1992.

3.1.3 Policy on Strengthening Existing Rural Financial Institutions

With the end in view of further developing the rural financial sector which mainly includes SMEs, the following monetary policies are currently adopted:

(a) CB Circular No. 1312 of 15 October 1991 provides incentives for merger/consolidation as a means to develop larger and stronger financial institutions. Among others, these incentives include revaluation of bank premises, improvements, and bank equipment of the institutions; conversion or upgrading of the existing head offices, branches and/or other offices of the merged or absorbed institutions into branches of the new or surviving financial institution; condonation of liquidated damages and/or penalties on loan arrears to the CB of rural banks which are parties to the merger or consolidation.

(b) Another program that could serve as an effective means to mobilize credit for SMEs is the Countryside Financial Institutions Enhancement Program (CFIEP) which was launched in 1991 by the CB, the Land Bank and Philippine Deposit Insurance Company. Among others, this program (as contained in CB Circular 1315) is aimed at raising the capital base of countryside financial institutions by encouraging existing and new investors to infuse fresh equity into said institutions and thereby accelerate the Government's economic development efforts. As of end-September 1992, there were 56 rural banks whose applications under this programme were approved.

(c) Lower cost of countryside credit is significantly sought through the passage of CB Circular Nos. 1276 and 1303. CB Circular No. 1276 of 5 March 1991 approved the exemption from reserve requirements of special time deposits of financial institutions under the special financing programs of the Government and/or international financial institutions being administered/previously administered by the CB, provided that the benefit from such exemption shall be passed on to the bor-

rowers by the participating financial institutions. CB Circular No. 1303 of 22 August 1991 approved the exemption of special time deposits of rural banks and cooperative banks under the Multi-Livestock Dispersal Loan Program from the reserve requirement, provided that the benefit from such exemption shall be passed on to the borrowers by the participating bank.

(d) More recently, complementary measures such as setting priority areas for the establishment of cooperative banks. Information campaigns on various credit programmes and credit requirements, and closer monitoring of banks' compliance with bank regulation are similarly being pursued by the CB.

3.1.4 Mandatory Credit Allocation Policy for Small Enterprises

Pursuant to Republic Act No. 6977 which provides for the promotion, development and assistance to SMEs, the Central Bank issued CB Circular No. 1288 of 17 May 1991, requiring lending institutions to allocate a specified percentage of credit resources to small enterprises whose assets amount to ₱ 5 million and below. These institutions are also encouraged to make available funds for lending to medium-scale enterprises with total assets of more than ₱ 5 million but not exceeding ₱ 20 million.

The allocated portion of funds for small enterprises shall be at least 5 percent of total loan portfolio by 31 December 1991; 10 percent by 31 December 1992 through 31 December 1995; and, 5 percent by 31 December 1996. Said mandatory quota may be lifted by 31 December 1997. A summary report of compliance with this requirement showed that total funds set aside was more than the minimum requirement of 10 percent by end-1992 (although the Monetary Board has deferred until the first quarter of 1993 the effectiveness of the 10 percent bank credit allocation to ease pressures on banks who cannot immediately comply with the law). Based on the summary report, total funds set aside at ₱ 26.8 billion accounted for 12.9 percent of the entire loan portfolio, exceeding the 10 percent mandatory quota (Table 10.3). Out of this amount, ₱ 21 billion was allocated by operating (at the same time reporting) commercial banks, composed of expanded and non-expanded banks, and branches of foreign banks. The bank's inability to comply with the mandatory quota (as mentioned above) might have been the experience of non-reporting rural and thrift banks. Based on

Table 10.3, the rural and thrift banks' allocated portions accounted for 26 and 25 percent of the loan portfolio although the reporting banks represented 17.3 and 59.2 percent only of the aggregate operating rural and thrift banks, respectively.

An alternative compliance with the abovementioned mandatory allocation of credit resources to small enterprises is the issuance of non-negotiable promissory notes to be offered by the Small Business Guarantee and Finance Corporation (SBGFC) created under RA 6977. The Philippine National Bank, the trustee bank of SBGFC shall issue the promissory notes to each bank corresponding to their deficiency in maintaining 5 percent of their loanable funds to small enterprises. The promissory notes shall bear an interest rate of one-third lower than the prevailing rate of Treasury bills or other government securities. The lower interest rate, to be paid by the borrower (SBGFC) to the investor (commercial bank), was intended to encourage commercial banks to lend to small-scale enterprises. Banks alleged, however, that this policy could raise the cost of intermediation. Financial policies and programs that directly concern SMEs, namely, the CFIEP, the mandatory credit allocation policy for small enterprises and the issuance of non-negotiable promissory notes as an alternative compliance to the quota, are at their initial stage of implementation. Thus, their contribution to SMEs' growth are still not apparent and measurable. Meanwhile, the financial policies designed to strengthen the financial system and eventually facilitate credit flow to selected sectors of the economy could be regarded as environmental factors bearing an indirect impact on SMEs.

IV. Current Systems for Financing SMEs in the Philippines

4.1 Financial Institutions for SMEs

Since the early 1980s up to the present, extensive amendments to the legislation governing financial institutions are made to develop the financial structure and be responsive to the growing financial needs of the country. As a borrower of funds, SMEs partake in the intermediation process in the financial system and are therefore affected by these legislations.

The Philippine financial system, amidst significant financial developments, has grown in size and complexity. Banks and non-banks,

Table 10.3 SUMMARY REPORT ON COMPLIANCE WITH SMALL ENTERPRISE CREDIT REQUIRED UNDER R.A. 6977 (In Mil. Pesos)

	As of 31 December 1992			
	No. of Reporting Banks	Loan Portfolio	Total Funds Set Aside	Percent of Compliance
BANKING SYSTEM	229	208,271	26,799	12.87%
1. Commercial Banks	32	183,393	20,992	11.45%
1.1 Expanded Commercial Banks	13	144,297	16,203	11.23%
1.2 Non-Expanded Commercial Banks	15	27,548	2,646	9.61%
1.3 Branches of Foreign Banks	4	11,548	2,143	18.56%
2. Thrift Banks	58	18,053	4,465	24.73%
2.1 Savings & Mortgage Banks	4	13,058	2,451	18.77%
2.2 Phil. Development Banks	22	3,521	1,606	45.61%
2.3 Stock Savings & Loan Associations	32	1,474	408	27.68%
3. Rural Banks	136	2,624	691	26.33%
4. Specialized Government Banks	3	4,201	651	15.50%

	As of 30 June 1992			
	No. of Reporting Banks	Loan Portfolio	Total Funds Set Aside	Percent of Compliance
BANKING SYSTEM	239	210,132	21,439	10.20%
1. Commercial Banks	31	172,982	13,333	7.71%
1.1 Expanded Commercial Banks	12	133,840	10,617	7.93%
1.2 Non-Expanded Commercial Banks	15	28,810	1,992	6.91%
1.3 Branches of Foreign Banks	4	10,332	724	7.01%
2. Thrift Banks	69	21,076	4,991	23.68%
2.1 Savings & Mortgage Banks	7	15,035	2,791	18.56%
2.2 Phil. Development Banks	24	4,079	1,760	43.15%
2.3 Stock Savings & Loan Associations	38	1,962	440	22.43%
3. Rural Banks	136	2,325	521	22.41%
4. Specialized Government Banks	3	13,749	2,594	18.87%

	As of 31 December 1991			
	No. of Reporting Banks	Loan Portfolio	Total Funds Set Aside	Percent of Compliance
BANKING SYSTEM	146	190,241	16,351	8.59%
1. Commercial Banks	31	157,941	10,961	6.94%
1.1 Expanded Commercial Banks	12	120,944	7,431	6.14%
1.2 Non-Expanded Commercial Banks	15	26,306	2,358	8.96%
1.3 Branches of Foreign Banks	4	10,691	1,172	10.96%
2. Thrift Banks	45	17,197	2,505	14.57%
2.1 Savings & Mortgage Banks	6	13,311	1,394	10.47%
2.2 Phil. Development Banks	19	2,714	1,027	37.84%
2.3 Stock Savings & Loan Associations	20	1,172	84	7.17%
3. Rural Banks	67	951	187	19.66%
4. Specialized Government Banks	3	14,152	2,698	19.06%

	As of 30 June 1991			
	No. of Reporting Banks	Loan Portfolio	Total Funds Set Aside	Percent of Compliance
BANKING SYSTEM	100	156,322	11,073	7.08%
1. Commercial Banks	29	131,444	5,194	3.95%
1.1 Expanded Commercial Banks	10	91,901	3,512	3.82%
1.2 Non-Expanded Commercial Banks	16	29,172	1,429	4.90%
1.3 Branches of Foreign Banks	3	10,371	253	2.44%
2. Thrift Banks	44	13,394	2,242	16.74%
2.1 Savings & Mortgage Banks	5	10,097	307	3.04%
2.2 Phil. Development Banks	23	2,758	1,838	66.64%
2.3 Stock Savings & Loan Associations	16	539	97	18.00%
3. Rural Banks	25	349	111	31.81%
4. Specialized Government Banks	2	11,135	3,526	31.67%

Source: Central Bank of the Philippines.

encompass a total of 7,855 offices nationwide, with total resources of ₱ 764.1 billion as of 31 December 1991. A large portion of the funds generated for asset growth was channelled to loans (net of reserve for probable losses) which expanded by ₱ 51.1 billion or 15.7 percent on an annual basis.

By institution, the banking system is composed of commercial banks, thrift banks (further broken down into private development banks, savings and mortgage banks, and stock savings and loan associations), rural banks and specialized government banks. Together, they comprise 3,791 offices and account for 89 percent of total resources of the financial system as of end-1991.

As to total resources, commercial banks shared the bulk (73.3 percent) of the total resources of the financial system as of end-1991; specialized government banks, 7.7 percent; thrift banks, 6.2 percent; and, rural banks, 2.0 percent. Non-bank financial intermediaries, constituting those with and without quasi-banking functions, shared 10.1 percent of the total resources of the financial system, during the same period.

Commercial banks are the main credit supplier in the financial system. As of end-1990, commercial banks are estimated to have extended more than 50 percent of the combined total loans granted by banks and non-banks. During the same period, the manufacturing sector continued to absorb the biggest share (43.6 percent) of commercial bank credits, 14.1 percent of which was channelled to SMEs.

The Philippine financial system is also characterized by the presence of a credit rating bureau founded in 1982 to provide reliable and complete credit information on the financial, commercial and industrial borrowers to safeguard investors' confidence. The Credit Information Bureau, Inc. (CIBI) was conceived as a non-stock, non-profit private corporation, to engage in collating and analyzing credit and business information on individuals, institutions and corporations engaged in varied business activities. CIBI's operation was initially funded by a ₱ 1 million grant from the CB; total infused funds by the CB reached ₱ 12.5 million in 1987. Additional funding for operations was sourced from the income generated by the company's services to client subscribers. As of January 1993, CIBI has investigated thoroughly the financial position and credit ratings of 24,948 corporations and 8,792 individuals and businessmen.

4.2 Monetary Policies for SMEs

4.2.1 Interest Rate Policy

To allow interest rates to be market-determined or to settle at the point where the supply for loanable funds equal the demand for credit was a developmental policy to spur investments.

In 1981, monetary authorities decided to adopt a floating interest rate policy on savings and time deposits and NOW accounts (CB Circular No. 777), deposit substitutes (CB Circular No. 779) and on loans and yields on purchases of receivables with maturities beyond 730 days (CB Circular No. 783). Interest rate ceilings on short-term loans were however maintained during the year but were also eventually lifted in January 1983. The gradual lifting on the interest cap was made to place an informal limit to short-term deposit rates and thereby allow the market to adjust to the new environment. Interest rates charged by lending institutions to SME borrowers are reasonable and consistent with market rates. For instance, the Export Industry Modernization Program of the Technology and Livelihood Resource Center (TLRC) bear an interest rate of 10 percent per annum, significantly lower than the prevailing average lending rate of 16.0 percent in 1988, the period of the program's implementation. Collateral requirements, however, covered 100 percent of assets such as land, building and machinery utilized for the purpose.

There is also an instance wherein interest rates are made to encourage financial institutions to lend to small-scale enterprises (SEs). As an alternate compliance to the mandatory allocation of credit resources to SEs, the promissory notes offered by the Small Business Guarantee and Finance Corporation (SBGFC) bear an interest rate of 1/3 percent lower than the prevailing rate of Tresury bills or other government securities. The lower interest rate, to be paid by the borrower (SBGFC) to the investor (commercial bank), was intended to encourage commercial banks to lend to SEs.

4.2.2 Rediscounting Policy

As a monetary policy instrument of the CB, the rediscounting policy serves both as an allocative instrument and as a liquidity mechanism in the monetary system. As an instrument for credit allocation, the CB

uses this to prioritize various economic activities by providing lower than market or competitive interest rates including higher loan values for top priority economic activities. This serves as an incentive to banking institutions to participate actively in financing these activities and to promote the growth of priority industries. As a liquidity mechanism, it is intended to influence the general credit and liquidity situation, since any change in the level of bank borrowings from the CB has a direct impact on the reserve assets of commercial banks, and on their ability to extend credits to their borrowers.

CB's rediscount window, possible through authorized agent banks (AABs) which act as retailers of the facility, remained accommodative with regard to the financing needs of government-favored activities such as exports and SMEs. The credit facilities of the CB that may be availed of at present by commercial banks, who re-lend funds to SMEs, are the following:

(a) Export Packing Credit: Refers to the pre-export financing requirements before: (i) shipment of goods covered by letters of credit (L/C), purchase order (PO) and/or sales contract (SC); and, (ii) delivery of goods to be sold to US bases.

(b) Export Bill Credit: The financing during the period of collection before final credit/payment from the foreign drawee bank is received.

(c) Working Capital Financing to Indirect Exporters: Pertains to loans for the working capital needs of local manufacturers with a contract to sell to direct exporters.

(d) Grains Quedan Financing: Loans for the operating capital of millers; NFA-franchised bonded operators and traders of palay and corn.

(e) Sugar Quedan Financing: Loans for the operating capital of sugar planters/millers/traders registered with the sugar regulatory administration whose stocks are covered by quedan.

As in the previous years, the bulk of the rediscounts for 1991 went to export packing credits. During the year, total loans granted by commercial banks to SMEs for export packing credits stood at ₱ 4535.5

million. For the first nine months of 1992, SME loans for this facility aggregated ₱ 1707.7 billion, down by 54.4 percent from the comparable level last year.

In line with the policy on decentralization and countryside development, CB allowed its regional offices in March 1991 to rediscount export credits up to a maximum of ₱ 5 million per application for commercial bank, ₱ 3 million for rural banks, and ₱ 450,000 for thrift banks. In April 1991, per CB Memo Circular No. 420, the rediscounting facility was extended to include indirect exporters (i.e., manufacturers who have supply arrangements with direct exporters) of less than ₱ 5 million for cottage and small-scale industries and less than ₱ 20 million for medium-scale enterprises. These loans are made subject to certain conditions, such as the requirement that at least 70 percent of the raw materials used by the borrower should be indigenous or locally produced.

To ensure greater access to exporters, the 1991 export rediscount budget of the CB was raised to ₱ 8 billion from ₱ 5 billion in 1990. Although there is no ceiling on the lending rate that the banks can charge on their rediscounting papers, the CB has maintained the bank's spread using moral suasion in order that commercial banks would limit their spread to 3 percent.

4.3 Guarantee System for SMEs

Guarantee systems, primarily created in the Philippines to encourage financial institutions to lend more actively to SMEs, involve financial assistance from both bilateral and multilateral programs of international organizations such as the Asian Development Bank and the World Bank. As shown in Table 10.2, the more well known loan guarantee systems are the Industrial Guarantee and Loan Fund-IGLF (CB, DBP); Small Business Loan Portfolio Guarantee Program (USAID); Revolving Export Loan Guarantee, Export Trade Finance Guarantee, Export Credit Guarantee Program (Philguarantee); Guarantee Fund for Small and Medium Enterprises-Regular Guarantee Facility, Guarantee Opportunities for Light Industries (GFSME); and, BAP Credit Guarantee Loans (Bankers' Association of the Philippines). The Industrial Guarantee and Loan Fund, the first of its kind by the World Bank, is a financing programme specially set up to meet the financing needs of cottage, small and medium-scale industries for working capital and fixed assets.

An important feature of the program is the guarantee and credit risk schemes designed to help the financial institutions overcome their reluctance to lend to SMEs under collateral agreements. The scheme is important primarily as a source of funds for conduit financial institutions at a cost generally lower than their alternative market sources.

CB administered the IGLF since 1976 up to 30 June 1990. During this period, loans granted to SMEs aggregated ₱ 10279.2 million while guarantees amounted to ₱ 7.3 million. In August 1990, the administration of the IGLF was transferred to the Development Bank of the Philippines. Total amount released from the date of transfer up to the third-quarter 1993 reached ₱ 3060.5 million with the credit risk guarantee portion totalling ₱ 102.4 million during the same period. Majority of IGLF funds came from the International Bank for Reconstruction and Development (IBRD) at $140.8 million, while ADB and the USAID are likewise creditor institutions of the Fund with total exposure of $100 million and $15.2 million, respectively.

Philguarantee, on the other hand, was intended to provide a guarantee of up to 70 percent of the credit facility for export-oriented activities. It has two major facilities- the Pre-shipment Export Finance Guarantee Program (PEFG) and the Export Credit Guarantee Program (ECGP-SMI). For the first three quarters of 1992, total loans extended by the PEFG reached ₱ 33.3 million, with total amount of guarantee totalling ₱ 25.7 million. On the other hand, ECGP-SMI has total loans of ₱ 11.0 million with ₱ 7.7 million guarantee coverage as of the first-quarter 1992 (latest available data). Only accredited banks can tap the guarantee facilities of Philguarantee.

The Guarantee Fund for Small and Medium Enterprises or GFSME likewise operates through accredited commercial banks, development banks, rural banks and thrift banks. Recently, it accredited two nonfinancial NGOs. GFSME covers 85 percent of the amount of loans while the remaining 15 percent is shouldered by the accredited institution.

The USAID's Small Business Loan Portfolio Guarantee Program, popular among participating banks because of its administrative simplicity and automatic guarantee coverage and payment, provides a 50-percent guarantee cover for eligible loans. The low guarantee coverage is indicative of USAID's offhand role in the evaluation, approval and

control of loans, which are automatically assumed by PFIs, which are in turn chosen by USAID on the bases of resources and lending practices. The bigger the bank is in terms of resources, the more active it is in lending to SMEs and the higher the bank's interest is in joining the program, the more likely it is recommended by USAID as a participating bank in their program.

4.4 Role of Financial Markets in Financing SMEs

4.4.1 The Philippine Capital Market

The Philippine capital market is made up of the loans, bonds and equity markets. Except for the bond market which is not yet developed for the SMEs, the loans and equity markets are at present being enjoyed by SMEs through various financing packages and the venture capital corporations.

A Venture Capital Corporation (VCC), a joint undertaking between the private sector and the Government, was organized primarily to provide additional capital to cottage, SMEs. A VCC is owned 60 percent by a participating commercial bank and 20 percent each by the National Development Company (NDC) and the Livelihood Corporation (Livecor).

A VCC is usually associated with equity financing which covers any of the following:

(a) "start-up" or "seed" money to finance launching of an enterprise;

(b) "venture" funds to carry the company to a size where it can secure capital and loans from the public stock market, commercial banks, and other conventional sources; and,

(c) "growth" capital for major expansion of the company.

In equity financing, the VCC's role is one of the partnership, providing management and technical advisory services and other such assistance deemed fit from time to time.

Capital assistance may also come in the form of: (i) transactional financing whereby the VCC will provide equity to entrepreneurs in need

of funds for short-term transactions; and, (ii) funds syndication with other financial institutions.

The basic difference between VCCs and other traditional credit institutions is that VCC funding primarily comes in the form of capital assistance instead of a loan as in the case of other financial institutions. In this respect, evaluation of the enterprise or business by a VCC would concentrate on long-term viability and growth potential, while a finance company would rather concentrate on the short-run capability, and on collateral requirements. While a finance company assumes the role of a creditor, the VCC assumes that of a business partner.

As of end-1991, VCCs' outstanding loans amounted to ₱ 18.2 million, ₱ 6.8 million or 37.0 percent of which went to the manufacturing sector. Although total outstanding loans dropped slightly by 0.6 percent (on an annual basis) during the period, outstanding loans to the manufacturing sector increased markedly by 31.7 percent (Table 10.4).

4.5 Role of Government in Financing SMEs

Recognizing that SMEs can help provide a self-sufficient industrial foundation for the country, the Government has undertaken two positions to promote, support, strengthen and encourage the growth and development of SMEs. One position requires a direct role in basic development tasks such as organizing, supervising and lending to key economic enterprises; the other opts for an offhand role of merely providing the right economic environment and infrastructure conducive to the business climate.

The Small and Medium Enterprise Development Council (SMED Council) shall be the primary agency responsible for the promotion, growth and development of SMEs in the country by virtue of Republic Act No. 6977. It shall facilitate and closely coordinate national efforts to promote the viability and growth of SMEs. It shall likewise assist relevant agencies in the tapping of local and foreign funds and promote the use of existing guarantee programs. The SMED Council shall be attached to the Department of Trade and Industry and shall have an initial funding of ₱ 5 million from the savings of the DTI.

Other government agencies and financial institutions that undertake various programs for SME growth and financing in particular, are

the Central Bank, the Development Bank of the Philippines, the Land Bank, the Philippine National Bank, the Social Security System, the Government Service Insurance System, the Department of Science and Technology, and the Office of the President.

V. Determinants of Effective Financing for SMEs in the Philippines

This section presents an econometric analysis to determine the most favorable environment for an SME to flourish. Factors such as money supply (to represent liquidity), Gross Domestic Product (to represent the country's output of goods and services), real and nominal interest rates (to represent the value and cost of money), number of branches of financial institutions (to represent presence of financial institutions in the countryside), are perceived to play a contributory role for an SME to grow and develop. Thus, the explanatory or independent variables chosen are as follows:

X1 = Money supply, in million pesos
X2 = Real GDP, in million pesos
X3 = Real interest rates on 90-day T/bills, in percent
X4 = Nominal interest rates on 90-day T/bills, in percent
X5 = Inflation rate, in percent
X6 = Number of branches of financial institutions
X7 = Financial Interrelation Ratio (Financial assets of the Financial System divided by current GNP)

Loans granted, indicative of SME finance, which is a requirement for growth, was used in the analysis and shall likewise represent the dependent variable Y.

A multiple linear regression model was conducted using the Statistical Analysis System or SAS, to determine the significance and contribution of each variable to the dependent variable, Y. The quarterly series started in the first quarter of 1981 up to the second quarter of 1992, thus a total of 46 observations (Table 10.5).

An initial run of the program revealed the presence of serial correlation. To solve this problem, an autoregressive error model using the ARIMA procedure of SAS was considered instead of a simple nor-

Table 10.4

VENTURE CAPITAL CORPORATIONS:
SCHEDULE OF RECEIVABLES/LOANS
AS OF DATES INDICATED

(In Thousand Pesos)

	Levels			Annual % Change	
	1989	1990	1991	1990	1991
By Industry/Purpose					
1. PRIVATE SECTOR					
1.1 Agri., Fishery & Forestry	5,703	2,236	945	39.21%	945
1.2 Mining & Quarrying	2,609			0.00%	
1.3 Manufacturing	5,285	5,132	6,757	97.11%	6,757
1.4 Public Utilities		367	109		109
1.5 Construction	206	3,064	3,379	1487.38%	3,379
1.6 Services	3,442	2,286	2,899	66.41%	2,899
1.7 Financial Institutions					
1.8 Trade	3,471	3,562	3,198	102.62%	3,198
1.9 Real Estate	551	371		67.33%	
1.10 Consumption		1,375	8		8
1.11 Others	2,170	45	946	2.07%	946
Sub-Total:	23,437	18,438	18,241	78.67%	18,241
2. PUBLIC SECTOR	23,437	18,438	18,241	78.67%	18,241

Source: Central Bank of the Philippines.

mal model for the errors. The ARIMA procedure incorporated the serial correlations into the model to improve the results of the regression analysis.

YULE-WALKER ESTIMATES

SSE	1.55	DFE	37
MSE	4194218	Root Mse	2047.98
Reg RSQ	0.85	Total RSQ	0.92

Variable	DF	B Value	Std Error	t-ratio	Approx Prob
Intercept	1	-33923.39	11433	-2.97	0.0052
X1	1	0.16	0.06	2.64	0.0119
X2	1	0.06	0.04	1.69	0.1003
X3	1	-443.44	563	-0.79	0.4361
X4	1	372.72	570	0.65	0.5174
X5	1	-438.54	565	-0.78	0.4424
X6	1	8.84	3.92	2.25	0.0302
X7	1	1261.39	1355	0.93	0.3580

Using the results presented above, the multiple regression model is given by:

$$Y_t = -33923.3 + 0.16X_{1t} + 0.06X_{2t} - 443.44X_{3t} + 372.72X_{4t} - 438.54X_{5t} + 8.84X_{6t} + 1251.39X_{7t}$$

α_t = error terms, normally distributed about the 0 axis and is equal to $-0.37\ \alpha_{t-2}$

Using the results of the Yule-Walker estimates above, there are three significant regression parameters, namely, money supply (X1), real GDP (X2), and number of branches of financial institutions (X6).

Money supply proved to be a significant factor to SME finance since the more liquid the financial system is the more likely it is for financial institutions to allot more funds to deficit units like the SMEs.

Real GDP is significant since higher domestic production is indicative of a thriving business community and high consumer demand, which

Table 10.5

QUARTERLY DATA OF VARIABLES: 1981-1992

	Y	X1	X2	X3	X4	X5	X6	X7
1981.1	10438.9	21712	154808	-3.123	12.277	15.4	2546	4.84
.2	10553.5	22098	160083	-0.887	12.413	13.3	2641	4.76
.3	10898.4	20467	149057	-0.037	12.763	12.8	2672	5.16
.4	11992.0	23524	168646	-1.736	12.736	11.0	2725	4.70
1982.1	11368.1	22330	159532	2.750	13.350	10.6	2790	5.07
.2	11204.0	22471	165968	3.271	13.871	10.6	2835	5.09
.3	11737.8	20963	152363	3.521	13.921	10.4	2876	5.62
.4	12172.1	23495	177529	4.690	13.990	9.3	2922	4.90
1983.1	11771.0	22165	165396	7.444	14.044	6.6	2950	5.29
.2	12978.0	23050	175550	7.132	13.832	6.7	2998	5.17
.3	11993.8	23503	155221	5.324	14.024	8.7	3029	5.65
.4	13725.6	32489	171926	-2.798	14.902	17.7	3072	5.54
1984.1	11441.2	30176	157541	-20.333	15.967	36.3	3093	5.11
.2	10903.6	31500	163900	-25.903	18.197	44.1	3103	4.90
.3	10408.0	31528	137771	-25.599	35.301	60.9	3092	5.44
.4	11382.8	33629	158117	-15.911	42.189	58.1	3090	4.74
1985.1	8404.1	29632	139944	-10.352	32.048	42.4	2935	5.17
.2	8732.2	29067	147579	0.974	34.074	33.1	2960	4.96
.3	8278.6	28999	130050	9.943	25.643	15.7	2874	5.94
.4	10193.4	35827	154131	9.198	16.898	7.7	2876	4.80
1986.1	10487.0	38164	139844	20.194	23.894	3.7	2917	5.66
.2	9854.7	33978	151648	15.255	16.255	1.0	2950	5.35
.3	8763.9	33508	140036	15.374	13.974	-1.4	2952	5.36
.4	8434.9	42694	159661	12.010	11.610	-0.4	2976	4.42
1987.1	9238.3	40997	144309	10.454	9.854	-0.6	3009	4.88
.2	11483.1	42158	158195	8.863	11.563	2.7	2961	4.49
.3	12287.1	43708	149972	5.256	11.556	6.3	2961	4.46
.4	13200.0	52416	167258	6.273	13.173	6.9	3024	4.07
1988.1	13341.8	51818	153486	4.093	12.993	8.9	3027	4.40
.2	14105.8	50140	161947	5.460	14.760	9.3	3054	4.14
.3	15566.7	49423	158250	6.440	14.640	8.2	3090	4.40
.4	20148.4	59718	185099	7.650	16.250	8.6	3107	3.81
1989.1	19278.9	58411	162885	9.150	15.950	6.8	3133	4.46
.2	21865.9	59983	170403	6.964	16.364	9.4	3144	4.24
.3	22161.5	58971	166329	5.914	20.314	14.4	3187	4.25
.4	22650.3	78530	198765	3.961	22.261	18.3	3231	3.77
1990.1	20896.0	70774	171556	6.179	20.879	14.7	3273	4.16
.2	23152.0	69771	175346	9.402	23.702	14.3	3290	4.27
.3	19279.8	71633	172159	9.958	22.758	12.8	3318	4.40
.4	24119.0	89012	198194	11.960	26.760	14.8	3346	4.02
1991.1	22821.7	82154	171031	6.012	25.312	19.3	3384	4.44
.2	23579.9	83225	172706	-0.707	19.493	20.2	3467	4.52
.3	29324.0	83868	169294	-0.116	19.684	19.8	3552	4.51
.4	27572.7	101374	199461	5.691	21.391	15.7	3623	3.97
1992.1	32645.0	95126	171916	9.244	18.744	9.5	3841	4.65
.2	32283.7	100539	169813	6.078	15.078	9.0	3898	4.70

Variables:

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Y = Loans outstanding of commercial banks by size of firm (small- and medium-scale) (in Million Pesos)

X1 = Money supply (in million pesos)

X2 = Real GDP (in million pesos)

X3 = Real interest rates on 90-day T/bills (in %)

X4 = Nominal interest rates on 90-day T/bills (in %)

X5 = Inflation rate (in %)

X6 = Number of branches of financial institutions

X7 = Financial Interrelation Ratio (financial assets of the financial system/current GNP)

in turn encourage SME investments and eventually SME business/activities.

The number of branches of financial institutions similarly proved significant to SME finance since the more branches there are, the better for SMEs (assuming financing facilities are present) since SMEs could easily reach financial institutions through branches.

The negative, although weak impact of real interest rates (on 90-day T/bills) and inflation rate (as denoted their by T-ratio of -0.8 each and the relatively high probability of 0.4) to the dependent variable Y, means that these explanatory variables can slightly affect SME loans in an opposite direction. Higher real interest rates (on 90-day T-bills) and inflation rate will slightly lower loans to SMEs.

The nominal interest rate on 90-day T-bills as well as the financial interrelation ratio have relatively small although positive effect on SME loans.

Based on the foregoing, the most favorable environment for SMEs to flourish, therefore, should possess the following:

(a) moderately high liquidity (but should not be inflationary);

(b) high domestic production; and,

(c) greater number of branches of financial institutions.

Chapter 11

FINANCING FOR SMIs IN SRI LANKA

by
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I. Introduction

The development of small- and medium-scale industries (SMIs) in developing countries is generally believed to contribute substantially to employment creation and generation of income, particularly for low-income population groups. SMIs themselves have proved to be highly effective in alleviating poverty by absorbing surplus of labour and reduce income disparities. On the other hand, they also play a complementary role to large-scale industries by producing intermediate goods and services and bring about a more balanced economic growth.

With the liberalised economic policy package introduced since 1977, the Government of Sri Lanka demonstrated its determined efforts to develop the country's industrial sector. Sri Lanka, being a small country, both in economic and conventional senses considers it most appropriate to embark on an industrial policy that would encourage small- and medium-scale industries. Thus, the Government of Sri Lanka has made major revisions in industrial policies since 1977, replacing most import quotas and licensing with tariffs, and improving investment and export incentives for foreign and local entrepreneurs.

However, due to the problems inherent within the financial system itself, domestic banks could not finance small- and medium-scale industries on a large scale from their own resources. Project lending invariably requires the commitment of funds for a longer period for the purchase of fixed assets. Commercial banks encounter the problem of managing liquidity when financing long-term projects in favour of SMIs. On the other hand, banks historically having involved themselves in trade financing have a bias for security-based lending as against project-oriented lending. This has also led to a shortage in experienced personnel to deal with the technical aspects of projects. The outcome was that banks continued to be mere conduits in the disbursement of government funds under various project-based credit schemes rather than stepping towards financing long-term projects from their own resources.

Recognising the vital role that small-scale industries can play in promoting employment and increasing income, especially in rural areas, the Government introduced a credit scheme for Small Scale Industries (SSI) in 1978. The Bank of Ceylon, People's Bank and the Development Finance Corporation of Ceylon in collaboration with the Industrial Development Board were the participating credit institutions in this scheme.

The National Development Bank (NDB), established in 1979, realising the role it has to play in financing small- and medium-scale industries which was given due attention at that time, considered it prudent to make effective use of the extensive branch network of commercial banks, the two state-owned Bank of Ceylon and People's Bank in particular, and initiated corrective measures to encourage banks to involve in a scheme of project-oriented lending. It was only since the involvement of the NDB in financing SMIs that banks continued to participate in SMI financing with a promise.

The objectives of this paper are to examine the existing sources and means of financing SMIs and suggest policy measures to enhance the flow of credit to the SMI sector. The minor importance of SMI financing in investment portfolios in commercial banks prior to 1978 necessitates the present paper to draw a line confining the study for the period since 1978 covering formal small-scale industries and the SMI financing launched by the NDB. The paper consists of eight sections. Section II deals with salient features of the SMIs while financial policies for the SMIs in the 1980s will be discussed in Section III. Section IV is devoted to detail the current financing systems of the SMIs. Determinants of effective financing will be estimated in Section V. In Section VI, problems of financing will be examined. Before summarising and concluding the paper in Section VIII, policy suggestions for financing SMIs will be explored in Section VII.

II. Salient Features of the SMIs in Sri Lanka

2.1 Definition of SMIs

In defining SMIs, various countries use various yard sticks. While some countries adopt the criterion of the number of persons engaged in the industry, some others use the initial cost of the project.

In Sri Lanka, small-scale industries under the formal SSI Scheme introduced by the Government are defined as those firms with plant and machinery of less than Rs. 200,000 while small- and medium-scale industries for the purpose of SMI schemes are defined as firms with plant and equipment (original cost) excluding land and building of less than Rs. 2 million.

2.2 Contribution of SMIs to the Economy

The contribution of SMIs to the manufacturing sector in terms of the number of establishments appear to be increasing in the recent past. The number of projects approved by the NDB for refinance has increased substantially since 1990 as evidenced by the number of projects approved in 1990 and 1991 at 1343 and 1502 respectively, in contrast to 833 projects approved in 1989. Except in 1980, the number of establishments approved each year until 1989 was below the level of 1989. The total number of SMIs as at end 1991 stood at 8424. Together with the small-scale industries approved under the SSI Scheme the total number of establishments was 9191 by the end of 1991. This accounted for 9 percent of the total establishments in the manufacturing sector in 1983, the only year for which data are available for a comparison. However, given the increasing number of new projects approved each year since 1983, the present contribution ratio should be higher than what it was in 1983.

In terms of employment generation, SMIs were estimated to contribute 5 percent of the total employment in the manufacturing sector. However, as the estimates of employment under each project are provided by the investors/borrowers themselves at the time of approval of the project for refinance, a realistic comparison with the manufacturing sector is not possible. The estimated number of employment generation under SMI-I within the two year period of 1980-1981 was 17,526. Under SMI-11, it was estimated to have generated 25,060 employment opportunities during the period 1982-1987. The employment creation under SMI-III was estimated at 38,021 during the period 1988-1991 making a total of 80,607 employment opportunities by end 1991. The fourth SMI Scheme which commenced in 1992, is expected to generate a further 14,080 employment opportunities.

2.3 Growth Trends

The available data indicate a growing impact of SMIs on the manufacturing sector in particular, and on the whole economy in general. As is shown in Table 11.1, the number of establishments approved has increased continuously since 1983 except in 1988 during which a decline in projects approved was observed due to the completion of commitments under SMI-II. The growth trend suggests that there is a growing demand for SMI financing. With the introduction of SMI-III in 1988, the number of projects approved increased each year highlighting the non-availability of institutional financial support for SMIs other than those refinanced by the NDB.

Table 11.1

GROWTH TRENDS IN PROJECT APPROVALS AND EMPLOYMENT*

	SMI-I			SMI-II				SMI-III			
Year	**1980**	**1981**	**1982**	**1983**	**1984**	**1985**	**1986**	**1987**	**1988**	**1989**	**1990**	**1991**
Projects Approved	1001	767	173	37	258	676	686	750	489	833	1343	1502
Employment Generation	10461	7065	1680	360	2506	6566	6663	7285	4462	7600	12254	13705

* Estimated employment generation under each SMI Scheme was distributed according to the number of projects approved each year.

The introduction of the first formal SMI Scheme in 1979 had a stimulating effect on employment generation in 1980. The continuous drop in employment creation during 1981-1983 was due to the completion of commitments under SMI-I in 1981 and the introduction of the second SMI Scheme in 1982. The sharp drop in employment generation in 1983 reflects the responsiveness of borrowers under SMI Schemes to the rate of interest applied. The increase in the rate of interest on SMI loans from 15 percent under SMI-I to 20 percent under SMI-II resulted in a sharp drop in the demand for credit under SMI loan schemes. The number of projects as well as the number of employment generated increased when the rate of interest was revised downward to 14 percent in June 1983. The drop in the number of projects approved and employment generation in 1988 was due to the completion of SMI-II

Scheme in 1987 and the commencement of the third SMI Scheme during 1988.

In all, the trend suggests that there is a negative correlation between the number of establishments/employment and the rate of interest on SMI loans while there is a positive correlation between SMI loans and the availability of financial resources.

2.4 Role of SMIs

Small- and medium-scale industries continue to be an important segment in the private manufacturing sector in Sri Lanka due mainly to their very nature of operation. SMIs are labour intensive and use relatively simple or intermediate technologies of production that correspond to the abundance of labour and the scarcity of physical and human capital that prevail in most developing countries like Sri Lanka. Thus, SMIs can help increase the level of employment in the country, in the rural sector in particular, reducing the income disparity between the rich and the poor. Moreover, SMIs demonstrate a higher degree of efficiency in using capital and mobilising savings, entrepreneurial talent and other resources that otherwise would remain idle. At the same time, SMIs have quite a high average financial and economic return.

As a survey conducted by the Ministry of Industries and Scientific Affairs highlights, SMIs account for over 90 percent of private industrial units, over 70 percent of employment and over 55 percent of value added in the private manufacturing. The only substantial increase in larger industrial investment and output have been among firms involving foreign capital, approved either by the Greater Colombo Economic Commission (GCEC) or the Foreign Investment Advisory Committee (FIAC). Despite the fact that these numerical examples are obsolete they point to the fact that SMIs can contribute substantially to the local economy in numerous ways.

2.5 Financing Sources

The main source of finance for SMIs is the formal lending institutions. As the coverage of the study is restricted to SMIs that come under SMI Schemes which enjoy the refinance and credit guarantee facilities, the formal lending institutions that finance SMI projects will be the PCIs

in each SMI scheme. The SMIs that come under this scheme however, appear to represent the majority share of SMIs operating in the country since the aggregate number and size of small-scale industries that operate outside these SMI schemes are small.

The borrowers of sub-loans under the SMIs are required to contribute at least 20 percent of the project cost with each SMI being financed at least by two sources, namely the PCIs and the borrower himself. With regard to the borrower's contribution, financing of his share can be met mainly through two sources; his own savings and family or relatives. In the Sri Lankan context, this is particularly so as most of the SMIs are family concerns. Experience suggests that involvement of other financial institutions in financing SMIs that are co-financed by PCIs under SMI schemes, is minimal if not at all.

The participation of the informal financial markets such as curb markets in financing SMIs is not familiar in Sri Lanka due to the high interest rates and unacceptable terms and conditions. On the other hand, the very limited scope of other financial markets in Sri Lanka such as the capital market and venture capital restricts them as a financial source for SMIs.

III. Financial Policies for SMIs in the 1980s in Sri Lanka

The change in political ideologies in Sri Lanka in 1977 was accompanied by a shift from an inward looking economic policy to an outward looking policy regime. The economy was directed towards industrialisation through the establishment of investment promotion zones. With this change in economic policies, the Government recognised the immense role that SMIs can play, especially in a small agro-based country like Sri Lanka and took immediate measures with a view to inducing the flow of credit to this sector. The credit policy was formulated in order to enhance the activities in the industrial sector, in that the flow of credit to the industrial sector was freed from regulations by the monetary authority.

As an initial step, a credit scheme for small-scale industries was introduced in 1978 which was partially covered by a credit guarantee scheme launched by the Central Bank. Along with the SSI credit scheme, a credit scheme for the SMIs was introduced in 1979 with refinance

facilities extended by the NDB. As in the case of SSIs, these loans were made eligible for a partial credit guarantee by the Central Bank. Under SMI-III the equity contribution by an investor to a SMI project was increased to 25 percent of the project capital, compared with the 20 percent requirement under SMI-I and II. Further, with the introduction of SMI-III, with a view to encouraging the banks to finance SMIs from their own funds, the refinance was reduced from 80 percent to 75 percent of the loan. On the other hand, the guarantee liability of the Central Bank was limited to the principal amount in default against the coverage of both the principal amount and the other charges in arrears.

A notable change in interest rate policy on credit for SMIs has been observed during the latter half of the 1980s. When introducing the SMI credit schemes, the interest rate policy was directed towards a subsidised rate with a view to inducing the flow of credit to the SMI sector. Accordingly, credit under SMI-I was granted at a concessional rate of 15 percent per annum. An attempt to bring these rates to the levels determined by the markets was unsuccessful due to the negative response from the borrowers. With the increase in the interest rate on SMI loans to 18 percent in January 1982 from 15 percent under SMI-I, and further to 20 percent in November in the same year, a dramatic drop in the flow of credit to the SMIs was observed reflecting the sensitivity of investors to interest rates. This necessitated a downward revision in interest rates on SMI loans. Accordingly, the rates were adjusted in June 1983 bringing the rates down to 14 percent.

With the introduction of SMI-III, a major change in the interest rate policy was effected by adjusting the interest rates upward to reflect more market-determined rates. In contrast to the fixed rates applicable under the previous SMI schemes, a variable rate of interest based on the prevailing average weighted prime rate (AWPR) was used under SMI-III. Accordingly, the adjustments in the interest rates were expected to reflect both the cost of funds and the project risk. A high risk project should bear a higher rate of interest which reflects the risk element than for a low risk project.

IV. Current Systems for Financing SMIs in Sri Lanka

4.1 Financial Institutions

From the very inception of SMI loan schemes, the National Development Bank (NDB) continued to be the apex institution providing

refinance facilities for Participating Credit Institutions (PCIs). The strategy for selecting financial institutions for participation in SMI financing concentrated mostly on adequate staff, branch network and an agreement to making the necessary organisational arrangements to handle loan requests efficiently.

Each agreement between the PCIs and the NDB stipulate the institution's responsibilities on: (i) assignment and training of SMI staff; (ii) sub-project appraisal standards; (iii) regular and close supervision of sub-projects; (iv) adherence to the terms and conditions of lending and repayment; (v) procurement and disbursement requirements; (vi) quarterly reporting to management and NDB; and (vii) policies for SMI lending operations.

Of the five credit institutions participating in the first SMI loan scheme (SMI-I), four were banks, of which two were state banks, the other being a development financial institution. At the time of the commencement of the SMI-I in 1979, the two state banks alone had 336 branches spread throughout the country and accounted for about 85 percent of commercial bank lending in Sri Lanka. The two private banks, the Commercial Bank of Ceylon and the Hatton National Bank had limited branch network and accounted for 11 percent of the total credit extended by the commercial banking system. In all, 96 percent of the total credit extended by the commercial banks was covered by the four commercial banks which participated in the SMI-I. The same institutions participated in the second SMI project (SMI-II) which commenced operations in 1982. In addition to the existing five PCIs, Sampath Bank, Seylan Bank and some regional development banks also joined the SMI program with the introduction of the third SMI loan scheme in 1988.

With the commencement of the SMI schemes, the formulation and appraisal of the SMI projects was done by the Industrial Development Board (IDB). It was also responsible for recommending them for financing by one of the two state banks. However, because of the reluctance of the state banks to rely on project evaluation by another institution, the majority of the IDB's proposals were rejected. Under this system, responsibilities of supervision were unclear, while the repayment risks rested with the bank. As this joint scheme did not work well, the PCIs were made fully responsible for the appraisal, disbursement, supervision and recovery of SMI sub-loans. The NDB being the apex institution sets free the limits for each PCI in respect

of sub-loans under SMI schemes. The NDB is concerned only about the eligibility of the sub-loans for refinance facilities if the size of the sub-loan is below the free limit set by the NDB for that PCI. If the sub-loan size is above the free limit, the NDB will check not only the eligibility but also the viability of the project. The repayment period ranges between 3-10 years depending on the investors capacity to pay and the type of activity involves.

4.2 Monetary Policies for SMIs

The financial policies adopted during the closing years of the 1980s continued to be in force during the early 1990s. The country demonstrated the movement towards a more market-oriented system of economic activities with emphasis on private sector participation. Steps were taken to accelerate the process of reducing the state sector dominance in certain industrial as well as service sectors. Interest rates were adjusted to reflect more market-oriented rates. Even the refinance rates were adjusted upward several times to bring the rates closer to market-determined rates.

A similar policy was adopted in respect of SMI financing in that lending for the industrial sector continued to be free of regulations even when stringent credit controls were in force. In contrast to the 1980s, the current credit policy places more emphasis on the participation of banks in industrial lending on their own. Thus, a gradual reduction in refinancing was effected since the late 1980s which continued to be in force during the first two years of the 1990s. With the introduction of the SMI-IV in 1992, the refinance facility was reduced to a uniform level of 70 percent of the project cost in contrast to the higher level of refinance at 75 percent of the project cost for banks and 90 percent in the case of DFCC.

The interest rate policy for SMIs adopted in 1988 under SMI-III continued to apply under SMI-IV where a market-determined rate was charged in order to reflect both the cost of funds and the risk element.

The current monetary policies for SMIs reflect two major themes: (i) the objective of inducing banks' participation in SMI financing with less reliance on the apex institution for refinance; and, (ii) the application of a more market-determined rate on SMI loans minimising the distortions in the interest rate structure.

4.3 Guarantee Systems

The participation of financial institutions not especially meant for long-term lending in small- and medium-scale industries has been somewhat discouraging throughout the world due mainly to the problems inherent within the financial systems themselves. Commercial banks and other financial institutions had shown a marked reluctance to accommodate finance to industries without adequate marketable securities. The attitude of financial institutions necessitated the search for measures that would encourage the participation of commercial banks and other financial institutions in financing SMIs. The introduction of credit guarantee schemes was a direct response to the slow movement of credit institutions in respect of financing SMIs.

In Sri Lanka, with the introduction of the SMI schemes, it was considered appropriate to provide partial coverage to eligible sub-loans extended by the PCIs under the SMI schemes. Accordingly, the Central Bank of Sri Lanka introduced the Credit Guarantee Scheme in 1978 for loans under the SSI Scheme with a partial coverage of 75 percent of the sub-loan amount or the amount in default whichever is lower. With the introduction of the SMI-I scheme in 1979, the Central Bank extended the credit guarantee scheme to cover loans granted with a partial coverage of the lower of 60 percent of the sub-loan amount or Rs. 400,000.

The credit guarantee continued to provide a partial coverage to eligible sub-loans granted under SMI-II. However, a modification was made in respect to the coverage of the sub-loans, raising it to the lower of 60 percent of the sub-loan amount or Rs. 800,000 to reflect the doubling in eligible sub-loan size under SMI-II. Under SMI-III which was introduced in 1988, a three-tier credit guarantee scheme was introduced with variable extents of guarantee for different sizes of loans with sub-loans less than Rs. 2 million, Rs. 2 to 3 million and Rs. 3 to 4 million having guarantees of 80 percent, 60 percent and 40 percent, respectively, subject to a maximum of Rs. 1.6 million for each project.

The total credit guaranteed by the Central Bank under the SSI scheme was Rs. 23.4 million which accounted for 75 percent of the total of Rs. 31.2 million loans granted under the scheme for 767 projects while 63 claims amounting to Rs. 1.7 million had been fully settled by end-1991. Under SMI-I, out of a total volume of Rs. 286.1 million granted for 1,670

projects, Rs. 157.5 million had been guaranteed while 224 claims for Rs. 17.8 million had been fully settled. On the other hand, of the total loans granted under SMI-II at Rs. 1,392.5 million for 2,531 projects, the Central Bank guaranteed a sum of Rs. 713.6 million. A total of 99 claims for Rs. 23.3 million had been settled under the scheme. Meanwhile, under SMI-III, out of a total of Rs. 2,373.2 million granted for 3,883 projects, the Central Bank guaranteed for a sum of Rs. 1,660.7 million. Of this, 6 claims for Rs. 1.6 million had been fully settled by end-1991. In addition to these fully paid claims, a sum of Rs. 2.8 million had been paid for partial settlements under SMI-I and II. Thus, the total claims paid under SMI schemes as of end-1991 amounted to Rs. 45.5 million or 1.1 percent of the total volume of loans granted under SMI-I, II and III.

4.4 Role of Financial Markets

The long-term nature of the financial requirements of SMIs set limitations on the part of commercial banks to finance SMI projects. Prevailing high interest rates and inflation rates coupled with the short-term nature of resources of banks make it necessary for banks to concentrate on short-term lending. This has resulted in the very limited participation of commercial banks other than the PCIs under SMI schemes in financing SMIs. The PCIs' involvement in long-term financing under SMI schemes is however, highly correlated with the refinance and credit guarantee available under these schemes.

The participation of other financial institutions and markets are negligible due mainly to the under-developed nature of such markets. Despite the encouraging developments observed in the capital market during the recent past, benefits received by the SMIs are minimal as listed companies on the stock exchange are normally large-scale industries.

Venture capital being a relatively new concept to Sri Lanka has not made much impact on equity financing of SMIs. However, with the recent measures taken by the Government to develop the venture capital industry a rosy future for SMI financing can be expected as venture capital is concerned more with entrepreneurs rather than projects. Moreover, venture capital companies take high risks financing even for start-ups. Out of the four registered venture capital companies in Sri Lanka, two are already in the business while the other two will com-

mence business shortly. However, as there are limitations on the part of the venture capital industry such as the lack of expertise, a quick upsurge in SMIs cannot be expected.

4.5 The Role of Government

As the policy-maker, the Government can play a vital role in promoting SMIs in the country and thereby the economic development in general. The main responsibility of the Government will be the formulation of the strategy for industrialisation, a part of which is SMIs. In support of the industrialisation process, the Government can take steps either to direct or encourage other financial institutions to initiate supportive measures.

In Sri Lanka, more emphasis has been placed on directing more credit for industrial purposes from the banking system. In order to encourage the participation of banks in financing SMIs, the Government makes available refinance facilities to PCIs through the NDB under the loan programs negotiated with the International Development Association and the Asian Development Bank. In order to give partial protection to the PCIs, such refinanced SMI sub-loans are guaranteed by the Central Bank on behalf of the Government.

The Government's endeavour to develop the industrial sector was demonstrated in its policies toward industrialisation. In this regard, the Government has introduced from time to time, packages of fiscal incentives including tax holidays and incentives for marketing and promotion and research and development. In order to protect infant industries from international competition, protective tariffs have been used until such new industries get off the ground.

V. Determinants of Effective Financing for SMIs in Sri Lanka

Despite the fact that financing of the SMIs is constrained to a large extent by the scarcity of resources, it is believed that a number of factors may influence the flow of credit to the SMI sector. When introducing the SMI credit schemes, a subsidised rate was applied with a view to inducing the use of credit for SMIs. It was thought that a higher rate of interest that is comparable with the rates applicable to other types of loans would have a negative impact on the SMIs. In

this context, interest rate is used as an independent variable in the regression with an apriori hypothesis that it would have a negative effect on the flow of credit to the SMI sector.

The introduction of credit guarantee schemes was aimed at encouraging commercial banks and other financial institutions to participate in financing SMIs. Thus, it is expected that the volume of loans that is guaranteed by the relevant institution or authority would enhance the flow of credit to the SMIs. Meanwhile, the number of branches of PCIs is also considered as an independent variable with a positive relationship in the financing of SMIs as the number of outlets available would facilitate the smooth flow of credit to SMIs throughout the island. The number of SMI projects approved for refinance implies the demand for credit for such projects. Thus, an increase in the number of projects would mean an increased participation of entrepreneurs in small- and medium-scale industries. It is assumed therefore, that the number of projects approved for refinance facilities would have a positive impact on financing SMIs.

An expansion in the level of money supply in the economy would increase the liquidity position of commercial banks thus enabling them to accommodate increasing volumes of credit for SMIs. On the other hand, growth in the economy would increase the investment opportunities and thereby the demand for credit for such investments. Therefore, it is expected that both the broad money supply and the GDP growth rates have favourable influence on the flow of credit to SMIs. As the rate of inflation is assumed to have a negative effect on economic activities, it is believed that SMI financing would be negatively affected with the increase in the rate of inflation.

Thus, the overall effective financing of SMIs is assumed to be represented by the following regression equation:

$$\text{Loans Granted} = C + a_1\,\text{Int} + a_2\,\text{Guar} + a_3\,\text{PC1} + a_4\,M_2 + a_5\,\text{Proj} + a_6\,\text{GDP} + a_7\,\text{Inf-RT}$$

where C = Constant (intercept)
Int = Nominal rate of interest on SMI loans
Guar = Volume of SMI loans guaranteed
PCI = Number of branches of PCIs
M2 = Broad money supply

Proj = Number of SMI projects approved for refinance
GDP = GDP growth rate
Inf-RT = Rate of inflation

5.1 Analysis of Estimated Effective Financing Function

The effective financing functions were estimated for the period 1980-1991, the period during which formal SMI credit schemes have been in operation. The estimated results using simple OLS regression technique are presented in Table 11.2.

The first equation considers the influence of nominal interest rate on SMI loans (Int), the number of branches of PCIs (PCI) and the number of SMI projects approved for refinance (Proj). Except for Int variable all the other variables yielded positive signs as expected and the explanatory power was satisfactory. While the two variables with positive impacts on SMI financing are statistically significant at 1-percent level, the Int variable was not statistically significant implying that interest rate has no significant influence on SMI loans.

In view of the possible positive impact of the volume of SMI loans guaranteed (Guar), and the level of broad money supply (M2) on SMI financing both these variables were additionally included in the second equation. Even though the explanatory power of the equation was improved, none of the variables were statistically more significant at a reasonable level. Addition of inflation rate (Inf-Rt) in equation three, further improved the explanatory power, but the variables were not statistically significant as in equation two. However, as expected, the rate of inflation had a negative effect on SMI financing. Addition of GDP growth rate (GDP) on the other hand, did not improve the explanatory power and the sign of the variable was unexpectedly negative while none of the variables were statistically significant.

The insignificant influence of Int, Guar, M2, GDP and Inf-RT variables would be due to the fact that financing of SMIs are currently determined to a large extent by the availability of resources mainly from the international lending agencies. With respect to Int and Inf-RT, the response was re-examined by introducing the real rate of interest as an independent variable instead of Int and Inf-RT. It was observed that real interest rate has a positive impact on SMI financing

Table 11.2

DETERMINANTS OF EFFECTIVE FINANCING OF THE SMIS

Variable	Equation Number			
	1	2	3	4
C	-2292.2814 (-8.5760)*	-702.6399 (0.7614)	-99.7731 (-0.1050)	-268.3199 (-0.2549)
Int	17.5227 (1.3853)	9.2726 (0.5372)	11.8127 (0.7372)	10.5367 (0.6104)
GUAR		0.6861 (0.8077)	0.8921 (1.1196)	1.0673 (1.1870)
PCI	3.6693 (7.9727)*	0.9523 (0.6559)	-0.1121 (-0.0732)	0.4239 (0.2280)
M_2		0.0025 (0.5637)	0.0029 (0.7163)	0.0006 (0.0982)
PROJ	0.3329 (6.4907)*	0.0928 (0.5464)	0.0544 (0.3423)	0.0606 (0.3558)
GDP				-11.8135 (-0.6100)
INF-RT			4.8369 (-1.4314)	-3.5654 (-0.8547)
R^2	0.9634	.9777	0.9842	0.9855
$\bar{R}^2$	0.9497	0.9590	0.9651	0.9601
DW	2.5576	1.9954	2.5889	2.9111
Period	1980/91	1980/91	1980/91	1980/91

C = Intercept; INT = Nominal interest rate on SMI loans;
GUAR = Volume of SMI loans guaranteed; PCI = Number of branches of PCIs;
M2 = Level of broad money supply; PROJ = Number of SMI projects approved;
GDP = Growth rate of Gross Domestic Product; INF-RT = Rate of inflation;
* = Significant at 1-percent level.

though the results were insignificant at a reasonable level of significance. The insignificance of the response of borrowers on the interest rate may be due to the fact that borrowers are concerned more on other factors than interest rates. On the other hand, the interest rates on other types of loans remained quite high during the period under review so that a reasonably higher interest rate may not have been a matter to be concerned with. Further, the variable rates of interest charged on SMI loans are consistent with the policy of adopting more market-oriented rates of interest for most of the other financial instruments. Thus, the rate of interest on SMIs may not be a significant factor in SMI financing. The influence of the rate of interest on the number of projects approved and the employment generation, which was clearly noted in 1983 when the interest rate on SMI loans was increased sharply to 20 percent at a time when the interest rate policy was an administered one, may not have been accounted for in the regression due to the point being an outliner. The importance of a guarantee scheme on the other hand, though necessary to induce PCIs to undertake financing for SMIs at the initial stage of a loan scheme in particular, seems to have diluted due to the high recovery rates of SMI loans granted by the PCIs.

In all, Equation 1 describes the influence of the number of branches of PCIs and the number of projects undertaken under SMI loan schemes. The spread of PCI branches throughout the country would enhance the number of lending outlets facilitating the flow of credit to SMIs smoothly and minimising the distance between the lender and the borrower. On the other hand, an increase in the number of projects would result in a higher demand for credit.

VI. Problems of Financing for SMIs in Sri Lanka

Despite the fact that the important role that small- and medium-scale industries can play is an accepted norm in economic development, the flow of credit to SMIs still depend heavily on the availability of refinance and guarantees. While some of the problems arise due to the nature of financing for SMIs, some are inherent in the financial system itself. Financing for SMIs necessitates a match between the objectives of banks and those of SMIs. While banks are concerned in financing short- and medium- term projects because of their short-term deposit base, the SMIs need the assistance for medium- and long-term

financing requirements. The banks as well as the investors encounter problems in matching these objectives which lie at opposite ends of each other.

6.1 Inadequate Financial Resources

Due to the reluctance of banks to finance SMIs on their own, the financing of SMIs is limited to the resources made available by the international organisations; IDA and the ADB in the case of Sri Lanka. The lack of adequate resources has resulted in an excess demand for SMIs reflecting the need for an increased supply of funds to this sector. The excess demand for SMI financing was clearly noted in 1981 when the commitments under SMI-I was completed well in advance of the scheduled time.

6.2 Securities/Collateral Requirement

Project-oriented in contrast to security-oriented lending is an accepted principle in SMI financing. The banks in practice, however, do not measure the success of SMI lending purely on project objectives but on the rate of recovery of loans. As the recovery of loans are highly correlated with the securities or collateral the banks inevitably tend to rely on securities or collateral requirements for financing of SMIs. Thus, securities and collateral still weigh heavily in lending for SMIs by banks. As bankers tend to entertain projects with good collateral in preference to those with weaker securities, projects that cannot be supported by securities or collateral will be rejected even when such projects are financially and economically viable.

6.3 Equity Contribution

A major problem both the bankers and investors experience in financing SMIs is the equity participation by the investor. From the bankers view point a certain equity contribution is an essential factor especially in the case of new entrepreneurs as a partial guarantee for investors' sacrifice for the success of the project. On the other hand, potential borrowers who are not in a position to contribute equity are rejected even though the projects are viable. Depending on the risk involved, the banks may also request for higher equity contributions than the minimum requirement resulting in a higher probability of rejecting the project. The fact is that the project is rejected even if the expected returns are very high.

6.4 Non-Availability of Past Accounts

Performance in the past few years is an important factor in appraising an existing project. The non-availability or under estimation of past accounts can be detrimental when requesting for financial assistance. While small entrepreneurs as a practice do not maintain proper accounts, some deliberately underestimate the accounts in order to minimise or avoid tax payments. The result is that bankers are not able to get accurate information regarding the profitability, assets and liabilities of the existing business. This would perhaps result in a direct rejection of the project or a requirement for the investor to contribute a higher level of equity.

6.5 Lack of a Database

Evaluation of SMI lending in the past is an important aspect in further developing the small- and medium-scale industrial sector. The lack of a comprehensive information system will undermine the importance of SMI financing even though their contribution to the economy is significant. It is necessary to collect information not only on the amount disbursed and recovered but also the contribution to the economy in terms of output and value-added.

VII. Policy Suggestions for Financing SMIs in Sri Lanka

The problems inherent in the financial system and those associated with SMI financing will undermine the objective of promoting the industrial sector in the country. Therefore, the following measures are suggested in order to develop the industrial sector through the smooth flow of credit to the sector:

(i) The existing SMI credit schemes are totally financed by the international organisations such as IDA and the ADB, thus limiting the flow of credit to this sector. Despite the fact that banks accommodate financial assistance to some established medium- and large-scale industries the volume of credit extended to SMIs outside the SMI credit schemes is rather low. The obvious reason for this limited flow of credit to SMIs is the difficulties encountered by banks in matching their short-term deposit liabilities with the medium- and long-term repayments under SMIs. One remedy would be to

increase the funds available in the Medium- and Long-Term Credit Fund so that the flow of credit to SMIs are unaffected due to a lack of financial resources. Another option would be to encourage banks to extend credit from their own resources. Such credit extended to SMIs could be made eligible for the central bank guarantee as a means of motivating banks to finance SMIs.

(ii) The problems associated with collateral requirements can be minimised if the banks employ a dependable project appraisal procedure. A good project should not be rejected simply because the investor is not in a position to give a security or collateral. The project itself may be more than enough to support the credit granted by banks. However, in order to ascertain as to whether the project would be a successful one, the present appraisal system should be improved. The banks should give priority to evaluating a project rather than prioritising collateral requirements.

(iii) The present system of SMI financing requires the investors to contribute a certain amount of equity. However, this would deprive skilled entrepreneurs from institutional credit who cannot make any equity participation. This could be solved through the assistance of venture capital which specialises in equity financing of projects including start-ups. As the present venture capital market in Sri Lanka is in its infancy, measures should be taken to promote venture capital in order to meet the financial requirements of the industrial and service sectors.

(iv) Financing of SMIs would also be facilitated by the establishment of a secondary market for SMIs. In this regard the venture capital companies can play a vital role in assisting the SMIs to develop and to reach the standards required for a listing in a secondary market. Once the industry is developed to a level of self-financing, the shares of the SMI held by the venture capital company can be sold at the secondary market and to exit from the ownership of that particular industry to serve another in a similar manner.

(v) The existing interest rate policy of charging a fixed rate for all the borrowers results in the low-risk borrowers subsidising the high-risk borrowers, as it does not provide any screening. Charging of differential interest rates depending on the risk element can be justified if the screening procedures are developed to distinguish

the various risk categories. It has been argued that interest and principal of loans in default are being recovered from non-delinquent borrowers, if a screening procedure is not adopted to charge differential interest rates. The proposed system would enable the banks to charge an interest rate on SMI loans that would reflect the estimated cost of lending which includes the risk element.

(vi) In contrast to the subsidised interest rates applied in the previous SMI schemes the current SMI schemes apply a variable rate of interest determined by the market conditions. The economic theory suggests that under normal behavioral assumptions the share of own funds in financing a given investment project rises with the cost of external funds. This implies that the availability of credit at concessional conditions is likely to reduce the share of self-financing, and that such funds may be directed to more productive purposes. Thus, it is a good idea to set market-determined rates for SMI loans which is consistent with the current policy of adopting a market-determined interest rates on credit as well as financial instruments.

(vii) In order to facilitate the evaluation of credit to SMIs, a data base should be developed with the assistance of PCIs. The NDB which is equipped with the necessary technical competence could develop a system to collect data such as the output generated by each project, the actual employment created and the value added relating to SMIs. The importance of having such information is that it would help evaluate the importance of SMIs in the economy. Comparisons could also be made with other sectors.

In all, the credit and interest rate policies for SMIs should be conducive for the development of the small- and medium-scale industrial sector with minimum distortions in the interest rate structure.

VIII. Summary and Conclusion

The small- and medium-scale industries play an important role in economic development through increased output in the industrial sector, employment generation and income of rural poor thus narrowing the income disparity. However, despite the relative importance of SMIs in economic development, resources available for financing SMIs ap-

pear to be rather low due to the problems inherent within the banking system itself as well as issues outside the financial system.

While SMIs have potentially easier access to commercial credit in countries with highly developed financial markets than in countries like Sri Lanka where commercial credit is generally very scarce, the actual access of SMIs to commercial credit is largely determined by the monetary and credit policies. Easy access to bank credit appear to have a greater influence on the demand for credit for SMIs than any other determinant of effective financing of SMIs. On the other hand, market-determined interest rates may not necessarily inhibit flow of credit to the SMIs, particularly when the interest rates applicable to other financial instruments are governed by market forces. Thus, it appears that credit and interest rate policies that are conducive for the development of the small- and medium-scale industrial sector with minimum distortions in the interest rate structure and resource allocation would serve as stimulants in the development of SMIs. Correct monetary and credit policies would also encourage banks in self-financing rather than resorting to subsidised funds made available through various credit schemes.

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Chapter 12

FINANCING FOR SMIs IN THE REPUBLIC OF CHINA (R.O.C.), TAIPEH

by
Ping-Yao Chang

I. Introduction

The Small- and Medium-Scale Industries (SMIs) have played an important role in the economy. The SMIs are small in their operating scales and short of skilled employees. Their financial structures are not good. Owing to these reasons, the SMIs are in a more disadvantageous position than the non-SMIs in competing for funds from financial institutions or in entering the financial market for borrowing. Therefore, the SMIs have often experienced many difficulties in borrowing from financial institutions, so their development is adversely affected. These difficulties were not completely caused by the financial institutions or financial market, but partly caused by the SMIs themselves, such as problems in regard to their accounting systems, management, marketing and R&D, etc.

Based on the importance of the SMIs in the economy and the difficulties in financing faced by the SMIs, the Government has always placed great emphasis on trying to resolve the problems in financing the SMIs. To assist the SMIs, the Government has established a complete system that provides comprehensive assistance for the SMIs.

The main purpose of the article is to investigate the current problems in financing the SMIs and to provide some suggestions to improve the financing of SMIs. The article is composed of six sections. Section I will describe the salient features of the SMIs. We will state the Government's financial policies for the SMIs in Section II, and then explain the system of financing for the SMIs in Section III. We will investigate the problems in financing for the SMIs in Section IV. Section V provides some policy suggestions to improve financing for the SMIs. The final section is the summary and concluding remarks.

II. Salient Features of SMIs in the R.O.C

We will describe the salient features of the SMIs in terms of the definition, the contribution to the economy, the growth trend, the

importance of their roles, the financial conditions and financing sources of the SMIs in the R.O.C.

2.1 Definition of SMIs in the R.O.C

The definition of the SMIs in the manufacturing industry had been revised for three times since 1967. The latest revision was made in July 1982. Each revision gradually raised the ceiling for total assets or paid-in capital in order to match with the needs of economic development. The SMIs was defined as those firms which have no more than five-million-dollar assets and no more than one-hundred current employees. The 1973 revision added to registered capital under five million dollars and raised the ceiling for total assets to $20 million from $5 million. The 1977 revision cancelled the registered capital under $5 million, added to paid-in capital under $20 million and raised the ceiling for total assets to $60 million. The 1982 revision raised the ceiling for paid-in capital to $40 million and the ceiling for total assets to $120 million, and cancelled the criteria for current employees.

2.2 The Contribution to the Economy and the Growth Trend of SMIs in the R.O.C.

The share of the SMIs in the manufacturing industry was above 98 percent in terms of the number of enterprises in 1989. In the same year, the share was about 45 percent in terms of output value, 68 percent in terms of the number of employees, and 65 percent in terms of export value. It is clear from these figures that the SMIs made a significant contribution to the economy in the R.O.C.

In respect of the growth trend of the SMIs in the manufacturing industry, the number of enterprises, the output value, the number of employees and the export value of the SMIs have increased continuously since 1976. Thus, the share of the SMIs has always been above 98 percent in terms of the number of enterprises, the share has always been above 44 percent in terms of output value, the share has increased continuously and reached 68 percent in terms of the number of employees in 1989, and the share has also been above 60 percent in terms of export value.

2.3 Significant Role of SMIs in the Economy of the R.O.C.

The SMIs are enormous in terms of the number of enterprises, the kind of products involved, and the generation of employment oppor-

Table 12.1

THE SHARE OF THE SMIs IN THE MANUFACTURING INDUSTRY

Year	Number of Enterprises		Output Value		Employment		Export Value	
	No.	%	Amount (Million NT$)	%	Year-End Employment (Person)	%	Amount (Million NT$)	%
1976	68,616	98.7	386,087	47.1	1,136,766	59.6	-	-
1981	90,580	98.9	616,212	44.8	1,362,551	62.0	10,559	71.8
1984	120,981	98.8	1,401,305	48.2	-	-	12,379	62.5
1985	119,073	98.8	-	-	-	-	12,897	64.6
1986	126,690	98.64	1,586,119	47.27	1,695,609	68.25	18,117	70.1
1987	145,124	98.66	-	-	-	-	24,627	70.8
1988	152,871	98.60	1,444,647	36.56	-	-	24,939	63.3
1989	155,865	98.49	1,833,927	44.72	1,507,163	68.39	27,898	64.8

Source: The activity report for the SMIs in 1989, Medium and Small Business Administration, the Ministry of Economic Affairs.

tunities. Moreover, the SMIs are located in different areas and have distinct specialization in production, so, the SMIs have played many significant roles in the economy as follows:

(i) The SMIs can contribute to the development of local economy, and the balancing of the economic development in different areas because they are widely located in different areas.

(ii) The SMIs may provide many employment opportunities for local residents, increase the part-time income of the farmers, and more efficiently utilize the rural manpower because they employ many laborers and is scattered in different rural areas.

(iii) The SMIs may increase market competition and improve consumer welfare because they are enormous in numbers.

(iv) The SMIs may easily engage in specialization in production benefit from the division of labor.

(v) The SMIs may satisfy the demands for diversified products from different consumers with different tastes because the SMIs may produce many different products.

(vi) The SMIs may provide training opportunities for their employees and cultivate the managers and technicians.

2.4 The Financial Positions and Financing Sources of SMIs

We may investigate the financial positions and financing sources of the SMIs from the industrial financial positions survey published by the Economic Research Department, the Bank of Taiwan. We will analyze the following financial ratios such as liability to assets ratio, profitability ratio and different borrowing or lending ratios, etc., compared with those of the non-SMIs.

(i) In respect of the ratio of current liability to total assets, the ratio was high at 61.5 percent for the SMIs in 1990, far above the 34.8 percent for the non-SMIs. It showed from these ratios that the SMIs were heavily dependent upon the current liability as a source of fund.

(ii) In respect of the ratio of net worth to total assets, the ratio for the SMIs was only 30.8 percent in 1990, far below the 56.7 percent for the non-SMIs, showing that the ratio of non-borrowed fund for the SMIs was very low.

(iii) In respect of the various profitability ratios, these ratios, including profitability ratios from operating revenue, total assets, capital and net worth, were much lower for the SMIs than those ratios for the non-SMIs, reflecting that the profitability was much lower for the SMIS than for the non-SMIs. These ratios were respectively 0.63 percent, 0.87 percent, 3.37 percent and 2.81 percent for the SMIs in 1990, compared with 7.15 percent, 6.18 percent, 18.03 percent and 10.91 percent for the non-SMIs, respectively.

(iv) In respect of the ratio of long-term borrowing to total borrowing, the ratio for the SMIs was only 9.4 percent in 1990, far below the 23.6 percent for the non-SMIs.

The borrowing of the SMIs was heavily dependent upon short-term borrowing. In respect of the ratio of the borrowing from financial institutions to total borrowing, the ratio for the SMIs reached 69.2 percent in 1990, but it is far below the 80.5 percent for the non-SMIs. The ratio also showed that 30 percent of the total borrowing was from non-financial institutions for the SMIs. In respect of the ratio of the borrowing from short-term bills floating to total borrowing, the ratio was only 0.8 percent for the SMIs in 1990, far below the 9.8 percent for the non-SMIs, showing that the fund obtained from money markets was trivial for the SMIs.

III. Financial Policies for SMIs in the R.O.C.

The Government has played a very important role in financing for the SMIs. The Government sets up the Credit Guarantee Fund for the SMIs, allowed the mutual savings and loans companies to be reorganized as the medium and small business banks, required the government-owned banks to establish the medium and small business finance departments and the United Assistance Center for the SMIs, set up the Medium and Small Business Administration under the Ministry of Economic Affairs which is responsible for assisting the small and medium

Table 12.2
FINANCIAL POSITIONS OF THE SMIs IN THE MANUFACTURING INDUSTRY
(Unit: Per Cent)

	1982		1983		1984		1985		1986		1987		1988		1989		1990	
	SMI	Non-SMI	SMI	Non-SMI	SMI	Non-SMI	SMI	Non-SMI	SMI	Non-SMI	SMI	Non-SMI	SMI	Non-SMI	SMI	Non-SMI	SMI	Non-SMI
Ratio of Current Liability to Total Assets	62.38	48.05	61.82	47.60	58.91	45.29	59.17	41.48	60.32	39.94	61.94	40.01	61.74	38.67	60.71	36.09	61.53	34.80
Ratio of Long-Term Liability to Total Assets	10.49	14.63	11.72	13.40	11.94	14.32	9.85	15.55	9.32	14.20	6.57	12.48	6.88	11.81	7.55	8.86	7.68	8.52
Ratio of Net Worth to Total Assets	27.13	37.31	26.46	38.99	29.12	40.39	30.98	42.98	30.36	45.86	31.49	47.52	31.38	49.51	31.74	55.05	30.78	56.67
Ratio of Profit to Operating Revenues	0.57	2.33	1.02	5.06	0.97	5.63	1.34	4.43	1.57	7.83	1.70	9.23	1.39	8.63	1.21	9.61	0.63	7.15
Ratio of Profit to to Total Assets	1.00	2.17	1.81	5.06	1.88	5.89	2.49	4.64	3.05	8.62	3.17	10.18	2.26	8.86	1.78	8.90	0.87	6.18
Ratio of Profit to Capital	4.32	8.34	8.19	19.44	7.84	22.23	10.33	15.88	13.23	29.92	13.35	36.04	9.00	31.34	6.96	27.40	3.37	18.03
Ratio of Profit to Net Worth	3.70	5.82	6.83	12.98	6.45	14.59	8.04	10.80	10.04	18.79	10.08	21.43	7.21	17.90	5.59	16.18	2.81	10.91
Ratio of Long-Term Borrowing to Total Borrowing	10.95	22.87	8.55	22.82	14.33	23.80	10.38	28.65	7.89	28.27	5.07	22.00	7.91	22.66	9.81	22.66	9.41	23.56
Ratio of Borrow'g from Fin. Insts. to Total Borrow'g	64.85	70.89	63.46	67.60	68.54	61.91	66.93	67.89	68.04	77.03	63.07	79.75	66.47	78.79	66.84	83.95	69.19	80.48
Short-Term Bills Borrowing to Total Borrowing'g	2.50	15.69	2.29	18.51	2.60	2.07	2.37	19.3	2.43	10.54	1.46	6.64	1.33	7.21	1. 5	6.62	0.80	9.83

Source: Industrial Financial Position Survey in Taiwan Area (1982-1990), Economic Research Department, Bank of Taiwan.

enterprises, and established the Medium and Small Business Development Fund in order to build a complete assistance system for the SMIs. Moreover, several government agencies also appropriated special funds and offered special lending projects for the SMIs through the government-owned banks. We will respectively explain the goals of the financial policy for the SMIs, the assistance system for the SMIs, and the Government's major special lending projects and related measures for the SMIs as follows:

3.1 The Goal of the Financial Policy for SMIs

The goal of the Government's financial policy for the SMIs is to provide comprehensive assistance for the SMIs, including assistance in technology advancement, management, and improvement of financial positions on one hand, and to encourage the development of high-technology industries to help in advancing our industry structure on the other.

3.2 The Assistance System for SMIs

The assistance system for the SMIs is composed of the government agencies, financial institutions, and private organizations and groups.

(i) In respect of the government agencies, the Ministry of Economic Affairs is the responsible authority. The Medium and Small Business Administration was set up under the Ministry of Economic Affairs in January 1982. The Administration is responsible for assisting the SMIs. The Medium and Small Business Development Regulation was approved and implemented in February 1991 as a basis for assisting the SMIs. The Medium and Small Business Development Fund was set up according to the Regulation.

(ii) In respect of financial institutions, the Banking Law was revised in 1975. The eight mutual savings and loans companies were reorganized as the medium and small business banks which became specialized banks for the SMIs. The loans these banks made to the SMIs must not be below 70 percent of the total. Several government-owned banks established the medium and small business finance departments which provided assistance in financing and financial management for the SMIs.

The domestic banks and credit cooperative associations also play a significant role in financing for the SMIs. The Credit Guarantee Fund for the SMIs was set up under the support of the Government in July 1974 with an aim to help solving the credit-shortage problem of the SMIs in financing. Moreover, seven provincial government-owned banks donated a fund and established the United Assistance Center for the SMIs.

(iii) In respect of private organizations and groups, the China Productivity Center is responsible for assisting the SMIs on the issue of management. The Industrial Technology Institute and the Metallic Industry Development Center are responsible for providing assistance in production technology for the SMIs. The China External Trade Development Council provides assistance in export development for the SMIs.

Moreover, business schools in universities are also trusted by the government agencies to provide assistance in management, financial management, accounting system and marketing for the SMIs.

3.3 The Government's Major Special Lending Projects and Related Measures for SMIs

The Development Fund in the Executive Yuan, the Central Bank of China, and the Sino-American Fund in the Council for Economic Planning and Development all appropriated special funds and provided special lending projects for the SMIs through government-owned banks, including development lending project and lending projects on assisting the SMIs in advancing their technology level, the strategic industry investment, the anti-pollution equipments of private firms and purchases of automatic equipments by the private firms, etc. The National Youth Commission appropriated special fund to provide lending projects for the youth who open up a new business. The Medium and Small Business Development Fund managed by the Ministry of Economic Affairs appropriated special fund and provided lending projects for those SMIs who could not obtain their lending from the banks through the government-owned banks.

The Medium and Small Business Administration under the Ministry of Economic Affairs, the Ministry of Finance and the Central Bank of China collectively instituted "the current concrete measures on strengthening financing for the SMIs".

These measures are as follows:

(i) to raise the limit of lending amount;

(ii) to extend repayment term;

(iii) to relax items and subjects of credit guarantee; and,

(iv) to monitor and examine the government-owned banks performances in financing for the SMIs.

IV. Current Systems for Financing SMIs in the R.O.C.

4.1 Current System of Financing for SMIs

The current system of financing for the SMIs is very complete and concrete. The system includes four groups of agencies or institutions; namely the financial institutions which engage in lending to the SMIs, the Credit Guarantee Fund which provides the credit guarantee for the SMIs when it is short of credit or to mortgage assets, the United Assistance Center that provides assistance in financial management and financing for the SMIs, and several government agencies that undertake special lending projects for the SMIs.

4.1.1 Financial Institutions Which Engage in Lending to SMIs

This kind of institutions mainly include medium and small business banks, domestic banks and credit cooperative associations.

There are currently eight medium and small banks. Only one of them is a nation-wide operating bank owned by the provincial government. The other seven private banks are not permitted to operate nation-wide and are classified as local banks. The proportion of any such bank's loans to the SMIs in its total loans must not be less than 70 percent. On the other hand, the operating scales of the domestic banks are very large. These banks are permitted to operate in nation-wide area. Their business scopes are also very wide, including ordinary loans, short-term bills investments and foreign exchange business.

There were 16 domestic banks before 1992. There are 31 domestic banks after the 15 new private banks all started operating in April 1992. The credit cooperative associations are cooperative organizations, but they also undertake some banking operations. No firm is permitted to enter any association as its member or obtain loans from associations. However, associations often extend loans to the owners of the SMIs because the owners of the SMIs can obtain loans from an association in the name of its member, and then transfer the loan proceeds to their firms. As of April 1992, there were 74 credit cooperative associations. Domestic banks have the largest share in the total loans of these three kinds of banks. The medium and small business banks have shares similar to the credit cooperative associations in total loans of these three kinds of banks. The shares of domestic banks, medium and small business banks and credit cooperative associations were 80.5 percent, 12.2 percent and 11.3 percent in 1991 respectively. The share of loans to the SMIs in total loans of medium and small banks was very high at 73.3 percent in 1991, showing that the total loans of medium and small banks were, in the larger part, channelled to the SMIs. Such share of domestic banks was only 37.4 percent in the same year, reflecting that most loans of domestic banks were channelled to the non-SMIs. However, the outstanding loan balances of the SMIs were still far higher for domestic banks than for medium and small business banks. Such loan balances of domestic banks totalled $1450.7 billion in 1991. Such balances of medium and small business banks totalled $455.6 billion. The share of domestic banks in total loan balances was higher at 76 percent, but the share was only 24 percent for medium and small business banks. As to credit cooperative associations, their loans were in the most part given to the owners of the SMIs, and then the loan proceeds were shifted to the SMIs for use. The total loan balances reached $572.5 billion in 1991, showing that credit cooperative associations were also the main sources in financing for the SMIs.

4.1.2 The Credit Guarantee Fund for SMIs

As we all know, the SMIs are usually short of mortgaged assets, so the banks take a higher risk to lend to the SMIs. Thus, the SMIs cannot obtain enough loans from the banks. For these reasons, the Credit Guarantee Fund for the SMIs was set up under the support of government agencies in July 1974. The Fund renders 50 percent to 80 percent of credit guarantee to the SMIs which are short of mortgaged assets. The net worth of the Fund totaled $491 million when the Fund

was set up in 1974. The net worth of the Fund expanded to $11.8 billion in 1991 after it has developed for 17 years.

The Fund undertakes ten items of credit guarantee operations, including ordinary loans, policy loans, commercial loans, export loans, loans for purchasing raw materials, commercial paper guarantee, import tariff accounting guarantee, bond guarantee, loans to the youth who open up a new business and loans to new product for firms with their own brands.

As of the end of 1991, the number of enterprises guaranteed by the Fund has accumulated to 69,421, and the guaranteed amounts were $776.9 billion. Loans obtained by credit guarantee have accumulated to $976.2 billion, outstanding guaranteed balances have reached $86.3 billion, and outstanding lending balances were $111 billion. The guaranteed pieces by the Fund totalled to 79,704 in 1991 which amounts to $112.6 billion. Loans totalled $143.5 billion in the same year. The ratio of credit guarantee utilization was 5.8 percent in the same year.

4.1.3 The United Assistance Center for SMIs

Seven provincial government-owned banks donated $100 million and established the United Assistance Center for the SMIs in July 1982. The Center currently provides a comprehensive assistance for the SMIs and helps the SMIs to obtain loans from the banks. The assistance of the Center includes financing, computerization, business diagnosis, financial management and planning for upgrading the SMIs and trading their stocks at the stock exchange.

As to assistance in financing, a SMI can apply for this assistance to the Center when it encountered difficulties in applying for loans from the banks. The Center carried out investigation and diagnosis on the SMI, then sent the diagnosis results to the assessing commission, finally deciding how the SMI would be assisted. The Center will propose a bank to refuse to lend to the SMI if it decides initially to render management assistance to the SMI, which means the SMI must at first improve its management. The Center will then propose a bank to lend to the SMI if it decides to render financial assistance to the SMI, and then the Center will inform the Fund to render credit guarantee to the SMI.

4.1.4 Several Government Agencies that Undertake Special Lending Projects for SMIs

The Development Fund in the Executive Yuan, the Central Bank of China, Sino-American Fund in the Council for Economic Planning and Development, National Youth Commission and Medium and Small Business Development Fund in the Ministry of Economic Affairs all appropriated special funds and engaged in special lending projects through government-owned banks. These lending projects for the SMIs have already been mentioned in the previous section. We will not repeat here.

4.2 The Role of the Financial Market in Financing for SMIs

The financial market may be divided into two sub-markets, money market for short-term bills trading and capital market for stock and bond trading.

4.2.1 Money Market

The money market was established in 1976. It is currently composed of three bills finance companies that undertake brokerage, trading, underwriting and visa with regard to the short-term bills. The Ministry of Finance has decided to approve domestic banks to undertake short-term bills operations. Therefore, the money market will experience a stronger competition in the near future, and it will be more convenient for the SMIs to obtain short-term bills financing.

Those credit-reliable SMIs that intend to issue commercial papers through any bills finance company must still obtain the visa from the financial institutions and pay some expense for guarantee and underwriting. The fund obtained from the money market by the SMIs is trivial currently. According to a survey, commercial papers accounted for only 0.8 percent of the total borrowing of the SMIs in 1990.

4.2.2 Capital Market

The volume of government bond or corporate bond issuance was insignificant in the past. Outstanding government bond or corporate bond were in the most part held by financial institutions or firms for a long time. Therefore, secondary bond market was not active in the

Table 12.3

OPERATION STATISTICS OF THE CREDIT GUARANTEE FUND FOR THE SMIs (1974-1991)
(Amount Unit: Million NT$)

Year	Net Worth	Guaranteed Pieces	Guaranteed Amount	Lending Obtained by Credit Guarantee	Year-End Guaranteed Balances	Year-End Lending Balance Obtained by Credit Guarantee	Year-End Credit Guarantee Utilization Rate (%)
1974	491	35	54	90	38	54	0.10
1975	559	848	216	368	163	233	0.34
1976	628	2,272	942	1,395	405	578	0.67
1977	654	5,978	2,750	4,000	1,557	2,224	1.77
1978	701	10,000	4,877	7,140	2,724	3,891	2.00
1979	794	18,124	9,757	13,239	6,200	8,267	4.05
1980	1,142	32,874	17,817	21,954	8,791	11,270	4.67
1981	1,597	37,650	20,928	25,706	10,881	13,530	5.15
1982	1,827	52,818	35,404	42,349	13,800	17,092	5.38
1983	2,221	64,465	43,481	52,902	21,089	26,302	6.58
1984	2,775	88,333	67,992	83,295	34,971	43,850	9.48
1985	3,329	93,201	72,350	89,338	41,550	52,466	10.35
1986	3,545	88,733	74,295	92,537	47,007	59,922	10.41
1987	4,259	92,159	81,010	102,705	53,312	68,913	9.32
1988	5,930	81,783	77,942	99,198	57,002	73,768	6.85
1989	8,470	73,405	77,606	98,743	59,147	76,509	5.68
1990	8,326	65,551	76,867	97,723	61,514	79,251	5.24
1991	11,808	79,704	112,623	143,521	86,294	110,999	5.82

Sources: Annual Report of the Credit Guarantee Fund for the SMIs in 1991.

past. Only a few large business groups qualify and have a desire to issue corporate bonds. The SMIs cannot raise long-term funds through the bond market.

According to the criteria for listing company at the Taiwan Stock Exchange, the paid-in capital of the first class, second class and third class of listed company should not be less than $200 million, $100 million and $50 million respectively, but the SMIs cannot satisfy the criteria for listing company and cannot obtain long-term proceeds by issuing stocks at the Taiwan Stock Exchange. Moreover, the over-the-counter market was established in 1989, but the paid-in capital of listing company in the over-the-counter market should not be less than $50 million. The SMIs cannot also satisfy the criteria for listing company in the over-the-counter market and cannot raise long-term proceeds through the over-the-counter market. Thus, the SMIs cannot currently raise long-term proceeds by issuing stocks in the stock market.

In sum, currently the SMIs still suffer a strict restriction in entering the financial market, so the financial market plays a minor role in financing for the SMIs.

V. Determinants of Effective Financing for SMIs in the R.O.C.

The effective financing for the SMIs may implies that the SMIs which need to finance can rapidly obtain proceeds from financial institutions or financial markets with reasonable conditions such as interest rate, repayment term, commission fees and lending amount, whether the proceeds were used for purchasing plants and equipments, market development and new technology transfer, or used for operating financing. Thus, determinants in effective financing for the SMIs include the following:

5.1 Strong or Weak Competition Among Financial Institutions

The financial institutions may provide better services and more beneficial conditions in financing to the SMIs if the competition among financial institutions is stronger. Thus, the SMIs may readily obtain financing from financial institutions.

5.2 The Soundness of the Credit Guarantee System

The financial institutions may take a lower risk on lending to the SMIs and would have a higher desire to lend to the SMIs if the credit guarantee system is sounder. Thus, the SMIs that are short of mortgaged assets but credit-reliable and soundly managed may readily obtain credit guarantee and borrowing from banks at a lower interest rate and commission fees.

5.3 The Completeness and Correctness of SMIs' Financial Statements

The financial institutions cannot generally evaluate the credit-reliability of the SMIs owing to the incompleteness and incorrectness of their financial statements. For this reason, the financial institutions demand the SMIs to provide mortgaged assets in order to insure their claims for lending. Therefore, the SMIs often experienced great difficulties in obtaining loans from the financial institutions and paid a higher interest rate for borrowing.

5.4 The Establishment of Business Credit-Rating System

A business with good credit may obtain credit guarantee and lending from financial institutions at a lower interest rate and commission fee or readily enter the financial market for fund raising. On the other hand, a business with bad credit may obtain credit guarantee and lending from financial institutions at a higher interest rate and commission fee. Thus, the establishment of the business credit-rating system will encourage a SMI with good credit to enter the financial market for fund raising.

5.5 Convenience in Entering the Financial Market for SMIs

The SMIs may enter the financial market more easily for fund raising if the development of the financial market has been better.

5.6 Effective Combination of Financing and Other Assistance

The SMIs are very weak in management, technical innovation and financial management, so, it is essential that the Government provides the above-mentioned comprehensive assistance for the SMIs. Under the

assistance, the management of the SMIs may gradually improve toward a normal and sound condition, and the SMI may also develop soundly. Thus, the financing for the SMIs would be readily available which can make a major contribution to the development of SMIs.

VI. Problems of Financing for SMIs in the R.O.C.

Although the current system of financing for the SMIs is generally complete and concrete, but there are some weaknesses if we deeply examine the operation of this system.

(i) Lower desire of the banks to lend to the SMIs: There are several reasons as to why the banks have a lower desire to lend to the SMIs. These reasons are as follows: the unit cost of loans to the SMI is higher owing to the smaller amount and numerous items in regard to the loan. The risk in lending to the SMIs is also higher. Moreover, the competition among banks is also not strong.

(ii) The financial statements of the SMIs are not complete and correct: The banks cannot generally evaluate the credit-reliability of the SMIs which apply for lending from banks according to the financial statements of the SMIs because the financial statements of the SMIs are not complete and correct. Thus, the banks often demand the SMIs to provide mortgaged assets for their loans. At the same time, the loan amount approved by the banks is too low to meet the demand for money of the SMIs. The SMIs also experience the worse terms of lending.

(iii) The Credit Guarantee Fund for the SMIs does not currently engage in direct credit-evaluating and credit-guarantee reviewing for the SMIs except for those participating in the major-minor factory system. The Fund introduced direct credit-evaluating operation in June 1990, but this operation was only restricted to those SMIs participating in the major-minor factory system, other SMIs were excluded from this operation. The credit-evaluating and credit-guarantee reviewing were mostly undertaken by the banks which the SMIs applied for the loans. The SMIs would not obtain the credit guarantee for their loans if the banks do not approve the loan applications of the SMIs.

(iv) The credit cooperative associations cannot directly lend to the SMIs, but the owners of the SMIs often obtained loans from associations in the name of their members. This procedure gave rise to complicated problems for the SMIs and made it more difficult for them to obtain sufficient loans.

(v) The SMIs cannot satisfy the criteria for listing stocks or issuing corporate bonds, so they cannot obtain long-term fund through the stock and bond market. Thus, the SMIs must depend greatly on lending from banks and private borrowing in order to meet their demand for fund.

(vi) The business credit-rating system was not established: Any firm that wants to issue short-term bills must obtain guarantee from financial institutions. The guarantee fees are all the same for all firms regardless of their differences in credit-reliability. This increases the cost of issuing bills of credit-good firms.

VII. Policy Suggestions for Financing SMIs in the R.O.C.

After examining the above-mentioned problems of financing for the SMIs. We can present some policy suggestions to improve the financing for the SMIs.

(i) The law relating to credit cooperative associations should be revised to permit the SMIs to enter any association as its member, but the loan amount of individual SMI as a member and the share of total lending to the SMIs in total lending of the association should be appropriately set.

(ii) The Credit Guarantee Fund for the SMIs may establish a credit-evaluating department and directly undertake credit-evaluation and credit-guarantee review for the SMIs in order to facilitate the SMIs to obtain credit guarantee.

(iii) In the long-run, the business credit-rating system may be established in order to help the SMIs to enter the money market. The Fund may set different guarantee fees according to the different credit rating of the SMIs and expand the scope of the enterprises to allow commercial papers to be issued without any credit guarantee.

(iv) Relevant agencies may assist the SMIs to list their stock in the over-the-counter market. Relevant agencies may also simplify the listing documents for the SMIs according to their characteristics. Thus, the listing procedures of the SMIs may be simplified, and the relevant cost of listing may be reduced.

(v) The owners of the SMIs should make greater efforts to establish a complete and sound accounting system and prepare correct and complete financial statements and performance reports. Thus, the financial institutions may make an objective and correct evaluation on the SMIs according to their financial statements and performance reports and may decrease their dependence on mortgaged assets and guarantor.

VIII. Summary and Conclusions

8.1 Summary

The SMIs play an important role in the manufacturing industry in terms of the shares of employment, export value, the number of enterprises and output value. For the growth trend of the SMIs, the share of the number of enterprises was always kept above 98 percent, the share of output value above 44 percent, and the share of export value above 60 percent. Moreover, the share of the employment increased continuously and reached 68.39 percent in 1989.

The SMIs have played many significant roles in the economy such as balancing local economic development, offering employment opportunities, increasing competition in the market, producing diversified products and cultivating management and technicians. However, the SMIs were heavily dependent upon current liability as a source of its fund. The ratio of non-borrowed fund for the SMIs was very low. The profitability was much lower for the SMIs than for the non-SMIs. The borrowing of the SMIs was heavily dependent upon short-term borrowing. The fund obtained from money market was trivial for the SMIs.

The Government has always been emphasizing on financing the SMIs and intends to provide comprehensive assistance for the SMIs. The Medium and Small Business Administration is responsible for assisting the SMIs. In respect of financial assistance for the SMIs, the

Government firstly helped to establish the Credit Guarantee Fund for the SMIs, secondly, the Government permitted mutual savings and loans companies to be reorganized as medium and small business banks, thirdly, several government-owned banks were required to establish Medium and Small Business Finance Departments, and finally, to help in setting up the United Assistance Center for the SMIs. Moreover, the Central Bank of China, Sino-American Fund in the Council for Economic Planning and Development, Development Fund in the Executive Yuan, and Medium and Small Business Development Fund all appropriated special funds to provide some special lending projects for the SMIs through government-owned banks.

The current system of financing for the SMIs was generally complete and concrete. The system covers four groups of agencies or institutions, namely, financial institutions which engage in lending to the SMIs, the Credit Guarantee Fund for the SMIs which provides the credit guarantee for the SMIs that are short of credit or mortgaged assets, the United Assistance Center for the SMIs that provides assistance in financial management and financing for the SMIs, and several government agencies that undertake special lending projects for the SMIs.

Domestic banks have the largest share in the total loans of the three kinds of banks including domestic banks, medium and small business banks and credit cooperative associations. The medium and small business banks and credit cooperative associations have similar shares in total loans of these three kinds of banks. Such shares of domestic banks, medium and small business banks and credit cooperative associations were 80.5 percent, 12.2 percent and 11.3 percent in 1991 respectively. However, the share of loans to the SMIs in total loans of medium and small banks was very high at 73.3 percent in 1991. Such share of domestic banks was below 40 percent in the same year. Such share of credit cooperative associations was very high. The SMIs currently face strict restriction in entering the financial market. The financial market plays a minor role in financing the SMIs. The main determinants of effective financing for the SMIs include the competitiveness of financial institutions, the soundness of the credit guarantee system, the completeness and correctness of the SMIs' financial statements, the establishment of the business credit-rating system, and the effective combination of financing and other assistance.

The current system of financing the SMIs is still experiencing some problems, including the banks' reluctance to lend to the SMIs, incom-

pleteness and incorrectness of the financial statements of the SMIs, indirect credit-evaluation and credit-guarantee review for the SMIs adopted by the Credit Guarantee Fund, indirect lending to the SMIs by the credit cooperative associations, not being able to satisfy the criteria for listing stock or issuing corporate bonds for the SMIs, and not being able to establish a business credit-rating system.

8.2 Conclusions

From the above analysis, we know that the SMIs do play a very important role in the manufacturing industry and also make major contributions to the economy. However, the ratio of non-borrowed capital was very low, and the SMIs were heavily dependent on short-term borrowing.

The current system of financing for the SMIs is very complete and concrete. The SMIs may easily obtain their loans from the financial institutions but still encounter restriction in entering the financial market. The financial market plays a minor role in financing for the SMIs. Moreover, the SMIs' own problems also have a major influence in obtaining loans from the financial institutions. Therefore, we must continue to help the SMIs to improve their financial statements and to establish a complete accounting system, meanwhile, we should make greater efforts to develop a sound financial market.

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Chapter 13

FINANCING FOR SMIs IN THAILAND[1]

by
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I. Introduction

Presently, the majority of small- and medium-scale industries in Thailand are consumer product industries such as food processing, beverage and tobacco; livestock and fisheries; textiles, garment and leather products; and, metal, machinery and equipment industries. They are located in every part of the Kingdom with the most concentration in the central region. Most of them share common characteristics, i.e., sole proprietorship, small capital investment, management by the owner, and employing outdated manufacturing process, etc. Thus, the SMIs have always been faced with the problem of production techniques, marketing, financing and management.

Financial and credit problems are the major obstacles to the progress of SMIs in Thailand. In order to start a productive process, business needs to invest in land, building and plant, machinery and equipment, and working capital to cover expenses for day-to-day operation. Such investment requires considerable amount of money which is partly raised by the owner while the additional financial resources may be met by external sources of funds both from the organised and unorganised sources. The credit from organised money market, however, has lower interest rate but there are many significant drawbacks. Financial institutions usually consider credit to the SMIs as high risk credit. These make many SMIs, especially those located in regional area, dependent on unorganised sources with higher interest rate. This financial problem discourages the SMIs' proprietors from improving their existing manufacturing process and expanding larger production line, which will deteriorate long-term industrial development.

The major factor that hinders the SMIs from getting financial support from organised money market is its lack of collateral for credit. The reason is that the credit approval practice of most financial insti-

1. The views expressed in this paper are those of the writers and should not be attributed to the Bank of Thailand.

tutions in Thailand is based on fixed assets as collateral. The institutions will not extend credit line in the same value as backed up by fixed assets. Practically, the credit line extended by the institution will only be about 50-80 percent depending on the type of collateral used.

On average, the SMIs possess fixed assets consisting about 45 percent of the total assets. When the industry uses its fixed assets as collateral, it will effectively receive loan equivalent to only about 34 percent of its total assets. This assures that the industry would be getting 75 percent of its securities' value. If it gets loan of about 50 percent of its security value, by using land and building excluding machinery and equipment as collateral, its ability to receive loan will be reduced to only 10-12 percent of its total assets. These force SMIs' proprietors to seek more collateral in order to secure more loan to meet their financial needs. Meanwhile, financial institutions are unwilling to extend credit to the SMIs due to the risk of bad loans and credit procedure expenditure are much higher than that of the large industries.

II. Salient Features of SMIs in Thailand

2.1 Definition of SMIs

There is no official definition of SMIs in Thailand. However, SMIs can be defined according to the size of employment, net fixed assets, and registered capital depending on the purpose of study and the relevant institutions, such as:

(a) The Small Industry Finance Corporation (SIFC): The SIFC defines SMIs as enterprises whose net fixed assets are less than ฿ 20 million.

(b) The Small Industry Credit Guarantee Corporation (SICGC): The SICGC defines SMIs as enterprises whose net fixed assets are less than ฿ 20 million and the amount of loan is at least ฿ 200,000 with the maximum loan from every commercial banks not exceeding ฿ 10 million.

(c) Commercial Banks: Banks' definition of SMIs is based on the amount of loan, while any firm lending less than ฿ 1 million is defined as a SMI.

(d) The Bank of Thailand (BOT): SMIs shall be those with the value of net fixed asset not exceeding ฿ 20 million, and the maximum value of promissory notes issued by each undertaking must not exceed ฿ 10 million a year.

2.2 Contribution of the SMIs to the Economy

In consideration of the contribution of the SMIs to the economy of Thailand in terms of the number of factories and employment, it is quite clear that the SMIs account for the majority of more than 90 percent of the total establishment and 57 percent of the total employment in the industrial sector. According to the study of the SMIs in Thailand conducted by Saeng Sanguanruang and others in 1975, it indicated that the SMIs produce 52 percent of the total products and 48.1 percent of the total value-added of the whole industrial sector.

2.3 Significant Role of the SMIs

2.3.1 Improve Productive Efficiency of the Economy

Most industries in Thailand started as cottage and handicraft industries at the beginning. In general, these industries have low productivity efficiency. However, changes in the economic and social structure have made cottage and handicraft industries less important. Their simple methods of production have been forced to become more sophisticated for their very survival. Thus, most cottage industries tended to expand to small- or medium-scale industries because of advantages such as flexibility in management, lower investment to adjust production line to fit changes in consumer's taste, and their locations which are usually close to markets and input sources.

Fundamentally, the SMIs originated from the development in skill and specialisation in local production, input of raw materials mostly of agriculture products, and labours which are in the local areas. Therefore, the SMIs actively promote employment and the use of local resources, and contribute a great deal to income generation of locals and production expansion. Moreover, in some industrial branches, the SMIs are supporting large industries by supplying them with lower-cost components for their production line.

2.3.2 Promote Business Administration Skill

The ownership of a small-scale industry is one of the few channels that is open to an innovative entrepreneur. It is a way to prove one's ability and the best way to gain hands-on experience in business. Because a small-scale industry needs little investment, it is best suited to an individual who is interested in an independent career and who wishes to start his/her own business. Moreover, a successful proprietor will be able to expand his/her business in the future.

2.3.3 Help to Increase Domestic Capital

The major obstacles to economic development are the inadequacy of capital funds and the difficulty in encouraging more savings. Owners of small-scale industries usually raise their start-up capital from family members and other locally unorganised sources.

2.3.4 Economic Capital Funds

In general the product of SMIs have a lower capital per unit of production and shorter capital turnover period than the large-scale industries as small-scale industries are relatively more flexible in adjusting their production line to accommodate changes in business environment. The SMIs also have less investment risk as compared with large-scale industries. Moreover, there are many products that can be produced by SMIs at a lower cost because some products need special craftmanship in their production.

2.3.5 Provide More Employment

One major advantage of SMIs is their ability to create job opportunities for the labour force due mainly to their labour-intensive production. This characteristic is appropriate for the labour condition of Thailand where there are many unskilled workers, lack of technology knowhow, and need for more capital goods.

2.3.6 Maximum Use of National Resources

SMIs which are scattered all over Thailand helps in the maximisation of local resources such as capital, labour and raw materials. The official promotion and assistance to the SMIs will result in increased investment distribution and regional development.

2.3.7 Increase Income Distribution to Rural Areas

The production of the SMIs responds to the demand of the local markets at regional and district levels. SMIs can therefore play a significant role in the distribution of industrial development and improving the standard of living in regional areas.

III. Financial Policies for SMIs in the 1980s in Thailand

The industrial sector, especially the SMIs, is a priority sector which has received special attention from government agencies. There are a number of financial policies launched by the Government during this period as follows:

(a) Since 1986, the Bank of Thailand (BOT) has set 20 percent of total industrial credit extended by commercial banks as non-risk assets so that they need to maintain less capital funds as proportional to risk assets.

(b) In 1987, the BOT extended the implementation of the Agricultural Credit Policy to cover the Rural Credit Policy by approving commercial banks to cover credit for SMIs in regional areas whose loans outstanding is less than ฿ 10 million for old customers and ฿ 5 million for new customers. Later in 1991, the BOT allowed the credit line for both groups to be at ฿ 10 million.

(c) The BOT allocated financial aid to SMIs in terms of long-term loans through the Industrial Finance Corporation of Thailand (IFCT) during 1987-1989 for a total amount not exceeding ฿ 100 million a year.

(d) In late 1991, the Ministry of Finance upgraded the status of the Small Industry Finance Office (SIFO) to the Small Industry Finance Corporation (SIFC) and the Small Industry Credit Guarantee Fund (SICGF) to the Small Industry Credit Guarantee Corporation (SIGFC) by special laws allowing the organisations to be independent juristic entities so that funds can be raised to facilitate their operation.

(e) On 1 June 1992, the Government lifted the lending rate ceiling imposed on commercial banks' loan following the removal of the deposit rate ceiling. The lifting of the lending rate ceiling is expected to have positive effects on the SMIs in that they will be able to get more credit from commercial banks because the banks can now charge higher interest rates to cover their credit risk. This will greatly reduce dependency on funds from the unorganised sources.

IV. Current Systems for Financing SMIs in Thailand

4.1 Financial Institutions for SMIs

Financial institutions operating in the field of industrial finance are the Bank of Thailand, commercial banks, finance companies, the Industrial Finance Corporation of Thailand (IFCT) and the Small Industries Finance Office (SIFO).

4.1.1 The Bank of Thailand

The Bank of Thailand, as the central bank does not offer any direct financial assistance to industrial borrowers but indirectly through commercial banks and the Industrial Finance Corporation of Thailand (IFCT). For the objective, function and scope of operations of this institution, please see the next item on: "Monetary Policies for SMIs: The Role of the Bank of Thailand".

4.1.2 Commercial Banks

Commercial banking first came to Thailand in 1888 with the establishment of a foreign bank branch. The first Thai bank was set up later in 1906. For a period of time, Thai banks had played a relatively minor role compared to foreign bank branches. Thai banks have since grown very rapidly. At end-1991, there were 15 Thai banks which had between them 2,442 domestic branches, and 25 branches overseas, compared with 16 branches of 14 foreign banks.

At end-1991, assets of the commercial banking system totalled ฿ 2,147.5 billion. Deposits amounted to ฿ 1,751.5 billion or 73.6 percent of GDP. Thai commercial banks had a market share in deposits of 97.8

percent as compared to 3 percent for foreign bank branches. Credits totalled ฿ 1,789.4 billion or 75.1 percent of GDP. Thai banks have a 94.5-percent market share while foreign bank branches, 5.5 percent.

Commercial banks play a major role in mobilising deposits and extending credit in the organised money market, accounting for some 75 percent of deposits and 73.4 percent of credits. After the commercial banks are the 92 finance companies which account for 14.3 and 17.1 percent of deposits and credits, respectively. The remaining credit of 4.7 percent is accounted for by the specialised institutions such as the Bank for Agriculture and Agricultural Cooperatives (BAAC), the Government Housing Bank (GHB) and the Industrial Finance Corporation of Thailand (IFCT), among 22 others (Appendix 13.3).

The commercial bank credit granted is short-term in nature, mainly in the form of bills, loans and overdrafts. At end-1991, commercial banks provided overdraft facilities which accounted for 26.8 percent of total bank lending, whereas loans and bills discounted amounted to 47.7 percent and 25.5 percent, respectively (Appendix 13.5). With regard to term loans, most commercial banks provides loan on a short-term basis since their major sources of funds are time and savings deposits with a maturity period of less than three years. Nevertheless, overdraft financing which is convenient for borrowers can be used as long-term loans by rolling them over. Generally, maturities of such credit commitments vary on a case-by-case basis but usually are within one year. In the case of bills discounted, business and industrial firms in need of short-term funds may sell post-dated cheques, promissory notes or bills of exchange to commercial banks at a discount, and with recourse. Maturities of these bills discounted are usually less than one year.

About three-quarters of total credit granted by commercial banks is held against collateral. Very few banks perform indepth project appraisals, analysing the future cash flow or conditions which might indicate the project's chances for success. Rather, they are concerned primarily with the asset position of the borrower, his past credit rating, and above all, the type of collateral he can offer. For well-known persons among the business community, no collateral, other than a signature or two as personal guarantors, may be required. However, in most cases, a tangible security is required by the banks, more often in the form of a land mortgage.

Of the total bank lending at end-1991, 25.3 percent was extended to manufacturing, 17.4 percent to wholesale and retail trade, 9.2 percent to foreign trade, and 7.0 percent to the agricultural sector (Appendix 13.6).

4.1.3 Finance Companies

Among the most dynamic of Thai financial institutions are the finance companies. Although these companies are relatively new with history dating back to only 1969, they have grown rapidly to rank the second largest group of financial institutions in the country.

The emergence of finance companies in the late 1960s occurred at the time when the banking industry desperately needed competition. At the beginning, finance companies were allowed to operate freely with neither specific licence requirements nor supervision. In fact, prior to 1969, private limited companies were able to mobilise funds from the public without permission from the Ministry of Finance.

Hence, in 1969, the Revolutionary Decree No. 58 was passed and this was soon followed by the Revolutionary Decree Article 5 in 1972 requiring companies to apply for permission from the Ministry of Finance in order to engage in the finance business.

The first full-fledged finance companies began operations in 1969 and many more have been established since then. They obtain funds mostly through the issuance of promissory notes and through borrowing from commercial banks. They may not accept any type of deposits from the public. Securities companies, on the other hand, engage primarily in the securities business. All finance and securities companies are authorised and regulated by the BOT, with the approval from the Ministry of Finance, under the Act on Undertaking of Finance Business, Securities Business, and Credit Foncier Business B.E. 2522 (1979), amended by the Emergency Decree B.E. 2526 (1983) and B.E. 2528 (1985). At end-1991, there were 92 finance and securities companies operating in Thailand. Of these 92 companies, 21 were finance companies and 71 were finance and securities companies dealing with both types of business. There were 12 securities companies dealing only with the securities business.

As already mentioned, finance companies may not accept deposits. In order to compete with commercial banks for funds from the public,

finance companies offered higher interest rates on their promissory notes than those by commercial banks on their deposits. After the interest rate ceiling on promissory notes issued by finance companies was lifted in March 1990, the interest rates are still subject to the 16-percent limit set by the Lending Act B.E. 2523 (1980) and the ceiling rate on their lending rates were maintained at 19.5 percent per annum. The face value of a promissory note must be at least ฿ 10,000 in Bangkok and two nearby provinces, and at least ฿ 5,000 elsewhere.

Both finance companies and commercial banks use the some considerations for their lending criteria. These considerations are: borrowers qualifications such as collateral, ability to pay, business performance, credit worthiness, and loan objective. The lending rate charged by financial institutions are usually at the highest level allowed under the BOT regulation.

4.1.4 The Industrial Finance Corporation of Thailand (IFCT)

The IFCT was set up by the Industrial Finance Corporation of Thailand Act, B.E. 2502 (1959), to take over from the Industrial Bank of Thailand which had been operating since 1952. The IFCT assumed some of the assets of its predecessor in the form of an interest-free 50-year loan from the Government. Despite being incorporated by a special act, the IFCT is largely owned by the private sector, principally the Thai commercial banks, while the remaining is owned by the Ministry of Finance. At present, the Ministry of Finance owns about 12 percent of IFCT shares. The Government, through the Ministry of Finance, has the right to appoint its representatives to the IFCT's Board of Directors as long as the IFCT is accommodated with government loans or government guarantee for its borrowings. In 1991, foreign and Thai commercial banks hold about 37 percent of the total shares, followed by private sector companies holding 28 percent, finance and securities companies holding 17 percent, individuals and insurance companies holding 5 percent and 1 percent, respectively. The IFCT stocks are also listed and traded on the Securities Exchange of Thailand (SET). According to the present lending framework, the IFCT has outlined the terms and conditions for its financing which can be summarised as follows:

(a) Provision of medium- and long-term loans for up to 15 years with fixed or floating interest rates and a certain grace period

to finance investment in fixed assets such as land improvement, plant or office construction, machinery and equipment.

(b) Minimum loan amount denominated at ฿ 1 million while the maximum loan amount for any single project is 25 percent of the IFCT's equity (presently is ฿ 1,100 million).

(c) Tiering system for small projects with fixed assets of not more than ฿ 20 million, where the loan size ranges from ฿ 500,000 - ฿ 10 million for the new project, and from ฿ 200,000 - ฿ 10 million for the expansion of existing projects.

(d) The interest rate structure for medium- and long-term loans which at present range from 15.0 to 16.0 percent, depending on the project categories. Nevertheless, projects which have operated for a certain period of time may apply for working capital loans which are available at fixed or floating interest rates.

(e) Exclusion of projects which the Government holds over one-third of the registered capital, or which are not carried out by registered company, are deemed not qualified for IFCT financing.

(f) The IFCT will not finance the total cost of the projects. The borrower must have some financial investment for his own proposed project. The required proportion of the borrower's own financing to the total project cost varies from industry to industry.

(g) In general, the IFCT accepts the following fixed assets as collateral security against loans: factory land, buildings, machinery and equipment registered at the Ministry of Industry under the Machine Registration Act of 1971, other intangible properties or other properties and guarantees provided by commercial banks recognised by the IFCT.

(h) The IFCT may invest in the equity of an enterprise, but the participation normally will not exceed 25 percent of the enterprise's total equity. This equity participation must also not be more than 10 percent of the IFCT's capital funds.

(i) Guarantee credit made available to an industrial enterprise from any of the following sources:
   - any financial institution within or outside the country; and,
   - suppliers of machinery within or outside the country.

However, the IFCT's total financial assistance to a single enterprise, including loans, equity investment and guarantees, cannot normally exceed 25 percent of the IFCT's equity.

With regard to the criteria used for project financing, the IFCT emphasises potential prospects and performance of the projects rather than the creditstanding of its clients or the amount or quality of the collateral provided. Projects financed by the IFCT must therefore pass the project appraisal procedures on the different aspects including the market, technical, financial, managerial, economic and environmental dimensions. On the borrower's side, if the project is systemtically formulated and realistically assessed, a number of potential operational problems can be dealt with before the project is actually implemented. Consequently, the effective project evaluation is one of the important means of allocating scarce financial resources to the projects which will generate the most benefit to the country as a whole.

4.1.5 The Small Industries Finance Office (SIFO)

The Small Industries Finance Office (SIFO), formerly the Loan Office for Small Industries Finance Development, was established by the Cabinet Resolution in 1964 and has been placed under the Department of Industrial Promotion in the Ministry of Industry. It is managed by a Committee consisting of members appointed by the Cabinet. The principal objectives of SIFO are to provide financial and technical assistance to small industrial enterprises, including cottage and handicraft industries. At present, the SIFO is not allowed to extend credit to any enterprise that has more than ฿ 20 million in net fixed asset.

The SIFO receives most of its funds from the Government. Since it is not a juristic entity, it cannot raise funds by borrowing. The SIFO deposits a large proportion of its funds at the Krung Thai Bank, a government-owned commercial bank, which also provides supplementary funds to SIFO account, presently at the ratio of 3:1, for the purpose of lending to small-scale industries at low interest rates. Normally, approval of loan applications is made by SIFO while the Krung Thai

Bank undertakes the actual lending operations as well as assuming all credit risks. However, SIFO may also grant loans directly to small-scale industrial enterprises without supplementary funds from the Krung Thai Bank. The usual repayment periods of these loans range from 3 to 7 years. Presently, the amount of loans to an enterprise is limited to ฿ 5 million if it is jointly made by SIFO and the Krung Thai Bank with interest rate of 13.5 percent per annum, and ฿ 1 million if it is made by SIFO alone with the 9-percent lending rate. The SIFO practice in the provision of financial support to SMIs is the same as IFCT's that it considers collateral and feasibility of the projects.

As SIFO was not a juristic entity, it could not acquire sufficient external funds for its work expansion which was its major limitation, reducing its competitiveness with other financial institutions. The SIFO's status was enhanced when it was ratified as the Small Industries Finance Corporation (SIFC) under the provision of the Small Industries Finance Corporation Act B.E. 2534 (1991) with provision for SIFC to become a juristic entity, effective from 30 December 1991.

The SIFC will grant loans to the SMIs who have fixed asset less than ฿ 20 million and within a maximum amount of ฿ 10 million each.

4.2 Monetary Policies for SMIs: The Role of Central Bank

It is a well-known fact that the main task of a central bank is to maintain the stability of the currency in order to build up a strong base for the financial system and consequently for a stable economic growth. The direct role of the central bank in developing the economy is also considered important and has become increasingly apparent particularly in the developing countries. Specifically, this role is most notable in the allocation of funds and its discretionary policies in the distribution of funds from the financial system to priority sectors.

The factors determining which economic sector deserves priority could be its income contribution towards the gross domestic product and its labour employment scale relative to those of other sectors. In the case of Thailand, both qualifications are quite evident in the agricultural sector. However, it is necessary to develop other sectors as well, such as the industrial sector, so as to establish a firm base for future economic development, and the export sector to stimulate the growth of basic economic sectors. Since Thailand has maintained an

open economy, export demand has been a major impetus for the expansion in production and national income. Moreover, export earnings will enhance the ability to import capital goods or other goods essential for the country's development, whilst reducing the reliance on external capital.

As capital funds are often the core of the development of various economic sectors, central banks have to assure the adequacy of such funds as well as to meet any shortage of funds in priority sectors. In this respect, the BOT, as the supervisor of financial institutions which mobilise funds from surplus sectors and allocate to the deficit sectors, must formulate a policy on the allocation of funds to be followed by commercial banks. This is particularly necessary in cases where market forces are not sufficently efficient to allocate funds to the priority sectors where there are high investment risks and relatively low rates of return.

The role of the BOT in developing the industrial sector comprises:

4.2.1 Credit Policy

The BOT emphasises a credit policy which increases the share of the industrial sector through the following measures:

(a) Under the rural credit policy, the Bank requires commercial banks to lend at least 20 percent of their total deposits in rural areas. Initiated as an agricultural credit directive, the commercial banks have been required to loan out successively higher amounts to farmers each year, beginning from 5 percent in 1975 and increasing to 13 percent in 1979-1986, including 2 percent to agro-business. It was subsequently broadened to the rural credit directive in 1987. Out of the present requirement of 20 percent, 14 percent or more must go to agriculture or small-scale rural industries while up to 6 percent must go to agro-business. In terms of magnitude, the target involved has been increased from ฿ 3.5 billion under the 1975 directive to ฿ 342.6 billion under the 1992 directive. Shortfall amounts are required to be placed on deposits with the BAAC to be loan out again to farmers.

(b) 20 percent of loans to priority sectors have been exempted from the risk asset requirement against which banks' capital

funds must be maintained at a rate of 8 percent. Included within the definition of priority sectors are the agriculture, industry and housing for medium-income groups.

As a consequence of these measures, the industrial sector has been receiving more financing from the banking system annually. The proportion of bank credits extended to industrial sector has increased from 29.1 percent of industrial output in 1975 to 70.1 percent in 1991. As a proportion of total lending by commercial banks, the share of the industrial sector has increased from 19.9 percent to 25.3 percent during the same period.

4.2.2 Interest Rate Measures

From April 1966 to September 1979, BOT's instructions to commercial banks was to charge industrial sector credit, backed up by movable or immovable properties, a lower lending rate than those of other economic sectors except the export sector. However, this policy has been abolished since October 1979 in order to support the free market mechanism.

Table 13.1

LENDING RATE IN THAILAND
(Percent Per Annum)

Lending Rate	1966	1972	1974	1979	1980	1981	1983	1990	1992
Export	9	8.5	15.0						
Industry	12	11.5	12.5	15	18	19	17.5	16.5	19.0
Others	14	14	15.0						

4.2.3 Rediscount Policy

(i) Medium- and Large-Scale Industry

The regulation on rediscount of promissory notes arising from industrial undertakings through commercial banks was originally prescribed in 1963 applicable only to promissory notes arising from the procurement of raw materials for industrial uses. The ceiling for this rediscounting was set at 90 percent of the value of raw materials and

the rediscount and discount rates were 5 and 7 percent, respectively. In 1964, the BOT included the rediscount of promissory notes arising from sales of goods with the extension of payment period at 90 percent of the total sales value. With the objective of promoting industries which are either essential to the economic development or are utilisers of local agricultural raw materials or export-oriented industries, the regulations governing financial assistance to industrial undertakings were revised three times in 1969, 1974 and 1988. Details of the present requlations which have been in force since 1988, are as follows:

(a) *Objective:* To provide financial support for the industries which are essential to rural development, expecially labour-intensive industries or industries which utilise local agricultural products as their raw material.

(b) *Method and instrument:* Purchase from commercial banks and IFCT the promissory notes (P/N) drawn by manufacturers for funding their working capital. The credit line for issuing P/N will be allotted to each manufacturer once a level of 70 percent to 100 percent of their performance is reached will be adjusted subsequently.
(More favourable consideration is given to medium-sized industries that own fixed asset of not more than ฿ 200 million.)

(c) *Qualifications:* Industries applying for this credit scheme must meet at least one of the following five criteria:
(1) Not less than 20 percent of total raw material used is local agricultural product,
(2) Not less than 50 percent of total raw material used is local product,
(3) Employ labour intensively in their production process,
(4) Contribute to rural development, or
(5) Not less than 50 percent of total production costs is local expenses or not less than 60 percent of total raw material used is locally produced (for manufacturers of exporting products or for industries who assemble parts for other industries).

(d) *Amount of refinancing:* 50 percent of the face value of the P/N.

(e) *Maturity of P/N:* 120 days.

(f) *Interest rates:* BOT charges commercial banks 5 percent per annum for the refinancing amount while permits commercial banks to charge their customers not more than 10 percent per annum for the full amount of the P/N.

(ii) Small-Scale Industry

With the aim of providing low interest credit facilities to small industrial undertakings, the BOT has discounted since 1978 via commercial banks, promissory notes issued by small industrial entrepreneurs, at the rediscount and discount rates identical to those specified for other industries, i.e., 5 and 7 percent per annum, respectively, under less restrictive rules and regulations. However, small-scale industries eligible for this facility shall be those with registered capital or net fixed assets not exceeding ฿ 2 million (extended to ฿ 5 million in 1980 and ฿ 10 million in 1986) and with their factories situated outside Bangkok Metropolis, except for those located in the Industrial Estate. The amount of each promissory note qualified for rediscounting must not be lower than ฿ 5,000 and the maturity must not exceed 120 days from the date of rediscount at the BOT. The maximum value of promissory notes issued by each undertaking must not exceed ฿ 1 million a year.

The regulation governing financial assistance to small-scale industrial undertakings was revised in 1988 with details as follows:

(a) *Objective:* To provide low cost funds for small-scale industries.

(b) *Definition of small-scale industry:* As small-scale industry is an industry which has the value of net fixed asset not more than ฿ 20 million.

(c) *Method and instrument:* Purchase from commercial banks and IFCT the promissory notes drawn by manufacturers upon their working capital. The credit line is based on their previous performance and will be adjusted subsequently.

(d) *Amount of refinancing:* 50 percent of the face value of the P/N. Each manufacturer is eligible for issuing P/N up to ฿ 10.0 million.

(e) *Maturity of P/N:* 120 days.

(f) *Interest rate:* BOT charges commercial banks 3 percent per annum for the refinancing amount while permits commercial banks to charge manufacturers not more than 10 percent per annum for the full amount of the P/N.

(g) *Penalty for abuse of the facilities:* 6.5 percent per annum.

(h) *Duration of support:* Assistance granted for each manufacturer under this scheme will not exceed 5 years.

(iii) The Discount of Promissory Notes from the Industrial Finance Corporation of Thailand (Long-Term Credits)

In an effort to provide low interest loans for the establishment and expansion of industrial undertakings, the BOT in 1974 introduced the first long-term credit programme in 1974. Under this programme, the BOT would discount pro missory notes with 10-year maturities, issued by the Industrial Finance Corporation of Thailand (IFCT) and guaranteed by the Ministry of Finance within a credit line of ฿ 200 million, at an interest rate of 8 percent per annum. The IFCT is allowed to reloan to its customers at a rate of not more than 10.5 percent per annum. The industries qualified for this programme were export-oriented and import substituted industries as well as those using local agricultural raw materials equivalent to at least 20 percent of the total raw materials used. In addition, these industries must have value-added including raw materials, wages and salary and other necessary domestic expenses worth not less than 50 percent of total costs. The maximum amount of loans granted to each industry was limited to 70 per cent of the total lendings extended by the IFCT.

In 1978, the BOT granted another long-term credit of ฿ 200 million to the IFCT with revised criteria and conditions as follows:

(a) The industries eligible for the facility as mentioned above have to be equipped with the following qualifications:

(1) They shall not be situated in Bangkok Metropolis and its neighbouring provinces, namely, Nonthaburi, Pathum Thani, Samut Prakarn, Samut Sakhon and Nakhon Pathom, with exception to those located in the Industrial Estate. The rationale for this condition was to decentralise in-

dustrial development and to redistribute long-term funds to outer provincial areas.

(2) Their production process must be directed towards power conservation.

(3) They must be export-oriented industries, exporting not less than 50 percent of their products.

(4) They must be industries which utilise domestic agricultural raw materials of not less than 50 percent of the total raw materials consumed, or import-substituting industries. In addition, they must have value-added not below 80 percent of total costs of production.

(b) The maximum credit line granted to each industry would be in the range of 40-80 percent of the loans extended by the IFCT, depending mainly upon the capacity to encourage labour employment and domestic raw materials consumption.

(c) The interest rates chargeable by the BOT shall be as follows:

(1) 7 percent per annum to be applied to industries which export at least 50 percent of their products.

(2) 8 percent per annum to be applied to the industries producing domestically consumed goods.

The relending rate to be charged by IFCT shall not be over 3 percent above the BOT's discount rates.

Recently, the BOT granted financial support to the IFCT for the amount of not exceeding ฿ 100 million annually from 1987 to 1989 under the condition that the IFCT must reloan to small-scale industries whose net fixed asset do not exceed ฿ 10 million and are eligible for financial assistance under the Bank's regulation concerning promissory notes issued by small-scale industries. In terms of the location of the industries, they must be situated outside the Bangkok Metropolis and its perimeters except for those located in the industrial estates. They must also be labour-intensive industries (with the proportion of investment to labour not exceeding ฿ 200,000 per head). The total lending amount is not to exceed ฿ 50 million per annum. Furthermore, for these long-term credit (term loan under seven years), the Bank has set a condition that the IFCT could charge a lending rate to its customers as stated in a loan agreement between them and the Bank will charge

interest rate to IFCT at 4 percent per annum under IFCT's ceiling rate.

(iv) Other Measures

Other measures adopted by the BOT to increase the flow of credit to the industrial sector is to encourage commercial banks, finance companies and credit foncier companies to provide more financial assistance to the Industrial Finance Corporation of Thailand (IFCT). Shares and debentures of the IFCT have privileges as follows :

(a) Commercial banks

- Commercial banks may regard IFCT's share debentures as part of the assets which are required to be maintained when applying for permission to open a new branch.

- Investment in IFCT's share debentures or loaning on the security of IFCT's share debentures are not included in the computation of the capital fund-risk assets ratio.

- In accordance with the BOT's announcement on 18 April 1983, commercial banks are not permitted to grant loans to any one individual for an amount greater than 25 percent of their equities. This does not, however, apply when the loans are backed by holdings of IFCT's debentures. In this regard, the nominal rather than the market value of IFCT's debentures will be used for computational purposes.

- According to the announcement of the BOT on the ratio of commitments by a commercial bank to any person to capital funds (No. 2) B.E. 2528 dated 23 May 1985, the total amount that a commercial bank can avail, accept, underwrite, discount or rediscount and/or provide loan guarantee to any person on any day should not exceed 50 percent of the capital fund. However, this will not apply in cases where IFCT's share debentures are used as collateral.

- In accordance with the Ministry of Finance's announcement made in connection with the Commercial Banking Act (B.E. 2505) on 12 September B.E. 2515, branches of overseas banks may include IFCT's share debentures as part of the assets which have to be maintained in Thailand.

(b) Finance companies

- In accordance with the BOT's announcement dated 3 June 1982 with respect to the required capital fund-risk asset ratio, investments in IFCT's share debentures are considered non-risk assets.

- In accordance with the BOT's announcement of 30 December 1980 with respect to lending exposure, the amount of loans granted to an individual or of investments made in an enterprise cannot at any given day exceed 30 percent of capital fund effective as of 1 May 1983.
  However, the above percentage shall not apply if loans granted by finance companies are backed by holdings of IFCT's debentures or are made on the security of such debentures. In this regard, the nominal rather than the market value of IFCT's debentures will be used for computational purposes.

(c) Credit foncier companies

According to the BOT's annoucement of 19 April 1982, with respect to the maintaining of the capital fund-risk asset radio, IFCT's shares/ debentures are considered non-risk assets.

The Holders of IFCT Shares as of 31 December 1991

1.	Commercial banks	36.6%
2.	Finance companies	17.0%
3.	Insurance companies	1.3%
4.	The Ministry of Finance	12.3%
5.	Juristic bodies	27.7%
6.	Individuals	5.1%

The Holders of IFCT Debentures as of 31 December 1991

1.	Commercial banks	9.1%
2.	Finance companies)	
3.	Insurance companies)	42.7%
4.	The Government Savings Bank	47.6%
5.	Others	0.6%

4.3 Guarantee System for SMIs

SMIs have limited access to external sources of fund especially financial institutions because lending by these institutions is generally made on the basis of collateral. Project loans are usually granted for large projects, and personal guarantees are acceptable only in the case of large-scale firms. Lending to SMIs which do not have sufficient collateral is considered high risk and costly considering the prevailing interest rate permitted under the law.

To overcome the problem of the inaccessibility of institutional credit to SMIs, an industrial credit guarantee scheme (ICGS) has been proposed. The scheme is to guarantee loans made by participating financial institutions to SMIs at a fee, to be paid for by the borrowers. If the loans default, financial institutions can claim the guaranteed amount from the ICGS.

On 17 April 1985, the Small Industry Credit Guarantee Fund (SICGF), with an initial capital of ฿ 200 million, was established in cooperation with the Ministry of Finance, all the Thai commercial banks on behalf of the Thai Bankers' Association, the Krung Thai Bank Ltd., and the Industrial Finance Corporation of Thailand (IFCT). This new set-up would help SMIs with a lack of collateral but viable small-scale industries to have better access to institutional sources of credit for which the unsecured portion of the loan will be guaranteed by the Fund. The IFCT has been assigned to administer the Fund for the first five years of its operation. The Fund's objectives under the Agreement of its Establishment and Operations are as follows:

(a) to increase credit extension from financial institutions to small-scale industries;

(b) to strengthen financial institutions' confidence in providing credit to small-scale industries;

(c) to accelerate the dispersal of credit extension to small-scale industries throughout the country; and,

(d) to promote industrial development to achieve the target of the National Economic and Social Development Plan.

During 1991, the SICGF approved loan guarantees to the SMIs amounting to ฿ 167.5 million for 141 projects while the guarantee amount approved by the SICGF during 1985 to 1991 totalled ฿ 585.9 million for 662 projects.

Like the SIFO, the SICGF was not a juristic entity and had difficulty in lending capital funds for work expansion. It was later upgraded to the Small Industry Credit Guarantee Corporation (SICGC) under the provision of the Small Industry Credit Guarantee Corporation Act B.E. 2534 (1991), effective 30 December 1991. The SICGC aims to replace and rectify and modify the framework of SICGF. The Act also required that the IFCT, as the supervisor of the SICGF, to hand over assets, rights, liability and all responsibilities of the SICGF to the SICGC within 180 days from the effective date of the Act. The SICGC will provide quarantee services to the SMIs whose net fixed assets are under ฿ 20 million and will charge a commission fee of 1.5 percent per annum of the quarantee amount.

4.4 Role of Financial Markets in Financing SMIs

4.4.1 Money Market

The money market in Thailand can be divided into three categories namely, short-term credit market, inter-institution loan market and commercial bills market. Commercial bills are short-term financial instruments consisting of promissory notes, bills of exchange and bankers' acceptances. They have been issued by some finance companies and industrial undertakings (primary market), either directly or through underwriters. The secondary market for commercial bills is still limited and underdeveloped. Only the issuing firms and/or their underwriters act as secondary buyers of commercial bills before maturity. There are very few industrial enterprises which issue commercial bills for public subscription.

Since 1978, the SMIs have been unable to issue common shares and debentures to raise capital funds directly from the public due to the prohibition under the law which allows this practice to only the public companies and the listed companies.

However, in order to support private sector, especially the industrial sector, to issue financial instruments, the Government promulgated

the Securities and Exchange Act B.E. 2535 (1992), effective from 16 May 1992. The Act allows all companies to issue common shares and financial instruments. Moreover, the Government is also considering the establishment of a Credit Rating Agency to evaluate the creditworthiness of the issuers.

4.4.2 Capital Market

The development of the capital market is essential for Thailand's expanding economy as it is an alternative way of raising funds other than through credit. The Government established the Securities Exchange of Thailand (SET) in 1975. The stock market is still small by international standards but is rapidly expanding. During the past few years, the capital market has been growing substantially in terms of the number of companies listed on the SET, the number of domestic and foreign investors, and new financial struments traded such as convertible debentures and warrants. The companies quoted in the SET comprise: (a) listed companies which are large companies with capital of over ฿ 20 million, the number of shareholders exceeding 300 and recording a profit for three consecutive years prior to listing; and, (b) authorised companies which are smaller companies with capital funds greater than ฿ 10 million and with more than 50 shareholders. Authorised companies are not required to record profits for three consecutive years prior to quotation but must have promising prospects.

At present, there are 299 listed and authorised companies, and the market capitalisation in relation to GDP is 42 percent. Foreign participation is encouraged, either by individuals, institutional investors or in the form of mutual funds.

Table 13.2
STOCK MARKET IN THAILAND

	1975	1980	1985	1990 (March)	1992
SET Index	84.08	124.67	134.95	612.86	822.72
Market Capitalisation (billion baht)	5.39	25.52	49.46	613.52	1196.66
(as % of GDP)	(1.8)	(3.9)	(4.9)	29.9)	(42.0)
No. of Listed and Authorised Companies	21	77	97	214	299

The SET limits can be summarised as follows:

(i) Unfilled Orders and Insufficient Supply

The increased interest in the Thai stock market by overseas and local investors has resulted in a vast disparity between the demand and supply of stocks. Many orders were going unfilled because the trading system could not cope with the overwhelming volume. Thus, effective 1 June 1990, the trading period was extended to four hours daily, a 50-percent increase from its previous three hours. The SET and its brokers will work on the computerisation of the system and all trading will be fully automated by mid-1991.

A good way of increasing the supply of stock is through increases in the capitalisation and listing of additional companies. All these avenues are being actively pursued. With the economy growing rapidly, many listed companies which are also expanding are raising capital through the SET. Brokers and the SET are constantly seeking out candidates for listing, and expediting their evaluation. The SET plans to double the number of listed stocks by 1995 (over its 1990 level).

In accordance with government policy to encourage privatisation, many state enterprises have contemplated listing on the SET, thus bringing these organisations under private sector management. Thus far, Krung Thai Bank, North East Products and Thai Airways International have been privatised and listed on the SET, amounting to 7000, 500 and 2230 million baht par value, respectively. Others that are considering this same course of action include the Electricity Generating Authority of Thailand and the Port Authority of Thailand.

(ii) Dominance of Short-Term Investors

Much of the investment in the SET has been from high networth individuals who generally have short-term horizons. This situation is, however, changing. By deregulating foreign exchange controls, the Bank of Thailand will make trading in Thai securities more attractive to offshore institutions. Presently, local funds and domestic institutional investors (such as insurance companies) must comply with rigid regulations concerning fund management and investment. The Minister of Finance is considering legislation to relax these restrictions. These liberalisation measures would ensure that the SET will have long-term

stability and a more steady and controlled rate of growth. The issues addressed are symptomatic of a developing nation in a state of rapid change and improvement. Many private sector organisations are willing to participate in policy development, infrastructive construction, etc., to assist the Government, and these initiatives will ensure that Thailand will keep growing and remain an outstanding opportunity for investment.

4.5 Role of Government in Financing SMIs

One of the Government's role in financial assistance to SMIs in Thailand is to lend financial support through the SIFO in the form of seed financing at the beginning and annual budget arrangement from 1964 to 1972 totalling ฿ 53.6 million.

Table 13.3

ANNUAL BUDGET FOR SIFO

Fiscal Year	Account (Baht)
1964	9,650,000
1965	10,000,000
1966	5,000,000
1967	5,000,000
1968	5,000,000
1969	6,000,000
1970	7,500,000
1971	3,000,000
1972	2,500,000
Total	53,650,000

Between 1973 to 1986, the Government has not allocated any annual budget for SIFO, until the fiscal year 1987 when it received loans from the Industrial Promotion Department, Ministry of Industry for the Project on Economic Revival and Growth Acceleration totalling ฿ 100 million with a ten-year payback period and no interest rate.

Later SIFO was upgraded to SIFC by special law which require the Government, through Ministry of Finance, to hold 25 percent of total

SIFC's share of ฿ 300 million. In addition to financial assistance through SIFC, the Government also granted financial support to IFCT in the form of soft loans and guarantees of IFCT's loans both onshore and offshore; and, shareholding of IFCT's shares.

For the establishment of the SICGF, the Government, through the Ministry of Finance, was the founder and held 50 percent of the total ฿ 200 million capital investment share. Later, SICGF was upgraded to SICGC by special law which required the Ministry of Finance to hold not less than 25 percent of the total ฿ 400 million paid-in capital.

V. Determinants of Effective Financing for SMIs in Thailand

Currently, the SMIs have two main sources of funds, the internal sources which come from proprietors' savings and investments, and external sources which can be divided into two categories - the organised and unorganised sources.

The most important source of funds for SMIs is the unorganised sources, accounting for 86.2 percent of total SMIs' working capital due largely to the inaccessibility and inadequacy of funds of the organised sources. These problems and obstacles will be discussed further. The unorganised sources of funds of the SMIs can be divided into four types.

5.1 The Rotating Credit Societies

As in many Asian countries, this form of unorganised money market is very popular in Thailand. This involves a group of people getting together, each agreeing to supply a certain sum of money at fixed intervals, not necessarily an equal amount each time. With the exception of the organiser who gets the lump sum the first round, each person in the group takes turn in taking the money contributed by the others. The turn is generally determined by bidding and once the turn is taken, that person can no longer take out any more funds in the succeeding rounds.

Capital funds raised from the rotating credit is considered to be short-term credit where the installment periods are normally less than two years. On an average, the interest rate of the rotating credit is

higher than that of financial institutions. From a survey of the BOT, the average rate of the rotating credit is 22.2-23.4 percent per annum while the lending rate of financial institutions is about 18-19 percent per annum.

5.2 Trade Credit

SMIs normally receive trade credits from those supplying raw material to them. In giving trade credits, suppliers allow raw material to be taken without their intermediate buyers having to pay for the raw material for a period of time (30-90 days). However, if the buyers choose to pay cash, a discount is given and a minimum time of 7 to 20 days is allowed for cash payment.

5.3 Cheque Discounting

Cheque discounting is the exchange of post-dated cheques for cash at a discount. The practice is also done in the organised money markets as commercial banks and finance companies do provide cheque discounting facilities to their customers. The period for cheque discounting in both the organised and the unorganised money markets is about one to three months.

Normally the purchasers of the discounted cheques do not pay much attention to the securities that are used to back up the cheque but rather, the most important criteria in their evaluation is the reliability of the issues and the counter-signers, and the assurance from their business colleagues. The discounted rate depends on the level of reliability and it is normally between 1.5 to 3.0 percent per month.

5.4 Local Creditors and Relatives

This type of lending is based on the personal relationship between lenders and borrowers, and is mostly without collateral except for lending from local creditors who usually take post-dated cheques as collateral. The lending rate is 2.5 percent per month.

The general characteristics of the unorganised sources that were just mentioned above can be summarised as follows:

(a) Most of the loans are short-term and have higher lending rates than those of the organised sources.

(b) Approval criteria depend on the reliability of the borrowers rather than the feasibility of project or collateral.

(c) The borrowers' reputation and reliability which are the most important approval criteria together with post-dated cheques as collateral are popular but if the loan amount is large, other collateral such as land or other fixed assets are also needed.

In this study, factors which have significant effect on loans to SMIs are as follows:

5.4.1 The Broad Money Supply

It is believed that changes in money supply will affect liquidity of commercial banks which will, in turn, reflect on loans to SMIs. Money supply is expected to have positive relationship with loans to SMIs.

5.4.2 Gross Domestic Product

Economic growth will enhance investment opportunity especially for large industries rather than SMIs so that the relationship between economic growth and loan to SMIs should be a negative one.

5.4.3 Overdraft from Commercial Banks

It is assumed that overdraft facilities should have a positive relationship with loans to SMIs because most proprietors of SMIs have difficulty in acquiring long-term credit from the organised sources. Overdraft facilities from the commercial banks serve as a source of funds instead.

5.4.4 Number of Branches of Commercial Banks

The number of branches of commercial banks is considered as an independent variable with a positive relation to loans to SMIs.

5.4.5 The Inflation Rate

A low inflation rate will induce more investment and accelerate economic activities and therefore should have a positive impact on loan to SMIs.

These relationships can be summarised in the form of a regression equation as follows:

$$LSMI = C + ß_1GDP + ß_2M_2 + ß_3NOBRA + ß_4 P^{\bullet} + ß_5 OD$$

where, LSMI = Loan to SMIs
C = Constant (intercept)
GDP = Gross domestic product
M2 = Broad money supply
NOBRA = Number of branches of commercial banks
$P^{\bullet}$ = Inflation rate
OD = Overdraft from commercial banks

The effective financing equations were estimated from the first quarter 1987 to the fourth quarter 1990 and employed the OLS regression technique. The results are shown in Table 13.4:

Table 13.4
DETERMINANTS OF EFFECTIVE FINANCING TO SMIs

Variables	Equation Number			
	1	2	3	4
c	-1789.8724	-2139.5527	-2381.1573	-5135.4259
	(-0.0501)	(-1.1443)	(-1.2172)	(-2.7458)
GDP	-0.0544	-0.0428	-0.0544	-0.0432
	(-2.2348)	(-3.1013)	(-2.3453)	(-1.6083)
OD	0.0763	0.0738	0.0758	0.0719
	(2.4752)	(5.3608)	(5.2380)	(4.2316)
P	952.4011	999.8959	951.3268	
	(2.2607)	(2.6349)	(2.3969)	
M2	0.0305		0.0304	0.0528
	(0.6018)		(0.6311)	(0.9456)
NOBRA	-0.3516			
	(-0.0166)			
R^2	0.9075	0.9041	0.9074	0.8591
$\bar{R}^2$	0.8612	0.8801	0.8738	0.8239
D.W.	1.5221	1.5311	1.5223	1.4229
Period	1987.1-1990.4	1987.1-1990.4	1987.1-1990.4	1987.1-1990.4

From the above table, it can be seen that equation (2) yields the best statistical result in explaining the determinants of effective financing of SMIs in Thailand. This equation shows strong relationship between the independent variable - LSMI and the dependent variables, i.e., GDP, OD and P, which is consistent with the hypothesis that GDP will have a negative relation while that of OD and P will be have positive impacts. For M2 and NOBRA, the insignificant influences can be explained based on the assumption that the number of commercial bank branches may be already large enough and the easily accessible location would mean that an increase in the number of branches will have little effect on loans to SMIs while M2 may have no direct influence on loans to SMIs as this has been accommodated by overdraft facilities from commercial banks instead.

Determinants of financing of SMIs in Thailand comprise the following factors:

(a) The SMIs in Thailand do not have easy access to the organised money market because SMI lending is high-risk and borrowers have lower credibility compared with large-scale industries. Most SMIs lack the collateral and have no acceptable accounting system and systematic management which make the credit cost of approval of financial institutions relatively high. Meanwhile, the Government's control on the lending rate ceiling also obstructs SMIs from obtaining financial support. This is because financial institutions cannot increase their lending rates to offset financial risk.

(b) Prior to the Securities and Exchange Act B.E. 2535 (1992) promulgation in May 1992, SMIs cannot raise funds directly from the public by issuing shares or debentures because of restrictions by law. The Public Companies Act B.E. 2521 (1978) and Securities Exchange of Thailand Act (No. 2) B.E. 2537 (1984) allow only public companies and listed companies to make such a public offering.

(c) The Small Industry Credit Guarantee Fund (SICGF) has little influence on SMI financing. Before 1992, SICGF which was established by the government sector together with the private sector had no juristic entity status so that it cannot borrow money for work expansion. Consequently, many SMIs who

seek collateral provided by SICGF cannot acquire loans from financial institutions.

(d) There is also the problem of the supervisory authority of the SIFO which presently falls under the jurisdiction of the Ministry of Industry. It would be more appropriate and beneficial if SIFO came under the supervision of the Ministry of Finance as finance is the main function and responsibility of SIFO.

VI. Problems of Financing for SMIs in Thailand

Though the SMIs are large in number and important to the economic system, there are many problems associated with them. There are many obstacles that impede their growth, which can be summarised as follows:

6.1 Financial Problems

The main financial problem faced by most SMIs is insufficient capital funds from financial institutions which have forced SMIs to depend on unorganised sources.

6.1.1 Risk Obstacles

(a) Projects applying for financial support are usually sensitive to economic change and their proprietors usually lack the necessary data and information. Financial institutions, therefore, do not have sufficient data for credit approval.

(b) It is difficult for creditors to appraise and control the use of loans according to the objectives laid out in the proposed project. This causes financial institutions to impose conditions which may not facilitate investment.

(c) Most SMIs are family businesses. Decisions are made by the manager who is also the owner. Demise can at times cause special problems in a family-run business. There are frequently difficulties in ensuring adequate succession of competent ownership and control which may lead to the closure of the business.

(d) SMIs are usually incapable of providing suitable security for creditors and their loan applications are usually rejected or otherwise approved with a lending rate ceiling.

(e) SMIs have to raise money from both the organised and the unorganised sources at a relatively high cost. The reason is that they are considered to be risky businesses by financial institutions which may not be able to repay their loans.

6.1.2 Cost Obstacles

The credit lines of SMIs are normally small and returns low. Financial institutions, therefore, have little incentive to loan to SMIs as the cost of appraisal and other follow-up procedures are normally high.

6.2 Marketing Obstacles

(a) Products of SMIs are mainly supplied to the small local markets in regional or district areas. Their ability to expand are limited because of their capacities, marketing cost, and quality of products.

(b) SMIs products are unable to compete with products of large-scale industries and imported products especially in terms of product quality and marketing.

(c) The quality of SMIs products are usually below generally accepted standards because producers do not pay much attention to their quality control.

6.3 Problems in Proprietors' Ability

(a) Proprietors usually use personal specialisation and experience in running their businesses but there is a lack of management skills such as finance, legal and production management, etc.

(b) Lack of necessary and significant information to make effective decision.

(c) Shortage of specialised and competent proprietors.

(d) There is a lack of well-organised management. The owner plays all the major roles in the organisation and this may cause wrong decisions being taken as there is no countercheck.

(e) Lack of serious promotion and assistance from government agencies.

(f) There is little cooperation among the involved parties such as SMIs' proprietors, government agencies and other investment associations, etc., to stimulate the development of SMIs.

6.4 Production Technology Obstacles

(a) Most SMIs employ traditional production processes and conventional machinery and equipment which in turn reduce SMIs' adaptability to changes in new technology. As a result, SMIs products are often low in quality and the cost of production high as compared with similar products produced by large-scale industries.

(b) There is little quality control in the production of SMI goods. More often than not, the products change little in appearance over time. There is often no quality improvement and no response to changes in consumers' taste. The quality of products are poor because of low quality raw materials, insufficient skill labours, and outdated machinery and equipment.

6.5 Labour Problem

(a) The short supply of skilled labour and the lack of work training reduce the production efficiency and cause frequent labour movement from one workplace to another. This impedes SMIs from reaching their full capacity.

(b) There is also seasonal shortage of unskilled labour especially at the beginning and end of harvesting season as workers go back to help in family farms. This leads to work interruption, lack of specialisation and low work efficiency.

6.6 Problems with Raw Materials

(a) SMIs have disadvantages as compared with large-scale industries in the acquisition of raw materials and parts of pro-

ductive equipments because they have low bargaining power.

(b) The supply of raw materials are usually not stable and their qualities are also inconsistent. The reason is that most of the raw materials of SMIs are agricultural products which change seasonally, both in their quality and quantity.

VII. Policy Suggestions for Financing SMIs in Thailand

In order to develop SMIs, it is necessary to overcome many fundamental obstacles such as inadequate capital funds, low management efficiency, outdated production process, lack of qualified workers, marketing problems, and low product quality. The way to solve the above problems is to adopt proper development strategy to gain efficiency in the use of human and natural resources and to accelerate the production process and marketing development, in harmony with domestic and international environmental conditions.

The following policy suggestions are confined only to the role of financial institutions in the development of SMIs. The main aim is to increase the opportunities and abilities of SMIs to acquire more support from financial institutions. The suggestions are as follows:

7.1 Interest Rate Measure

The lending rates of IFCT and SIFC should be market-oriented rather than fixed below market rate as current practice. The major problem of SMIs in Thailand is that they have no access to institutional funds rather than the pricing problem. In fact, the lending rates of the organised sources are much lower than those of the unorganised sources. Moreover, a lower lending rate creates credit approval distortions and the misuse of loans as the spread between interest earning and cost of funds are so small while credit risks are relatively high.

7.2 Measure to Allow Commercial Banks to Count SMIs' Credit as Non-Risk-Based Capital in Higher Percentage

To encourage commercial banks to extend more credit to SMIs, the Bank of Thailand should allow higher percentage of SMI credit to be

counted as non risk-based capital. Currently, only 20 percent of SMI credit is considered as non risk-based capital.

7.3 Organise Seminars to Educate SMI Proprietors in Modern Accounting and Information Management System

The related parties both in the public and private sectors such as the Ministry of Industry, Ministry of Commerce, the provincial trade associations, and the manufacturing associations, etc., should join hands to promote skill development of local proprietors in the area of marketing, technology transfer, information management, and modern accounting systems. These promotions will fulfil the credit approval criteria of the organised money market to a certain degree and increase the possibility of a loan acquisition.

VIII. Summary and Conclusion

It is widely accepted that SMIs can play a significant role in promoting employment, distribution of income and prosperity to rural areas and also raising efficiency in the domestic use of national resources. The vigorous development of SMIs will therefore not only directly stimulate the economic prosperity of people in regional areas but also the long-term national economic development.

Nevertheless, SMIs in Thailand face many fundamental problems such as the shortage of investment funding and skilled labour, lack of management and marketing skills and outdated manufacturing knowhow. Of the many problems, the shortage of investment funding is the most crucial one. The shortages occur in terms of working capital and expansion funding because SMI proprietors normally have no or not enough loan securities, inadequate supportive performance data in finance and accounting, and most of their projects are risky and sensitive to economic changes.

Due to their risky and sensitive natures, SMIs have to rely on financial support from the unorganised sources whose lending rates are considerably high. This obstructs the efficiency, productive development and business expansion of SMIs.

The Government recognises the existence of problems associated with SMIs especially in terms of funding. It has implemented a number

of measures to clear the accessibility of SMIs to the organised money market and also raise investment funds from the capital market. The measures included the upgrading of the SIFO (Small Industrial Fund Organisation) to become the SIFC (Small Industrial Fund Corporation) and established the SICGF (Small Industry Credit Guarantee Corporation), enacting the Securities and Exchange Act B.E. 2535 (1992) to help SMIs raise funds directly from the public by issuing financial instruments. It also established the Credit Rating Agency to evaluate credit worthiness of the issuers, etc. The development of SMIs also depends on the Government's ability to provide basic infrastructure such as communication and transportation.

In addition, the Government should encourage the practice of sub-contraction in the manufacturing sector which has been highly successful in Japan and some other developed countries. Such a system would give SMIs a chance to participate in large-scale production projects and also enjoy the benefits from economic growth along with larger-scale industries. However, sub-contraction in Thailand is still at the rudimentary stage and occurs mostly at cottage industry level and are practised by local middlemen with little connection with large-scale industries. The practice should be given more incentive as it could help SMIs to improve and upgrade their operations through technology transfer and flow of orders from large-scale industries.

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ESTABLISHMENTS AND EMPLOYMENT IN THE MANUFACTURING SECTOR IN 1988
(Unit: Million Baht)

Employment Size	Establishments		Employment	
	Amount	%	Amount	%
Cottage-Scale Industries (Less than 10 employees)	33,251	69.6	120,993	10.2
Small-Scale Industries (10 - 49 employees)	10,911	22.8	224,650	18.9
Medium-Scale Industries (50 - 199 employees)	2,967	6.2	332,001	27.9
Large-Scale Industries (More than 200 employees)	669	1.4	510,991	43.0
Total	47,798	100	1,188,635	100

Source: Labour Department, Ministry of Interior.

OUTPUTS AND VALUE-ADDED IN THE MANUFACTURING SECTOR IN 1975
(Unit: Million Baht)

Employment Size	Outputs		Value-Added	
	Amount	%	Amount	%
Cottage-Scale Industries (Less than 10 employees)	101.5	1.2	26.7	26.7
Small-Scale Industries (10 - 49 employees)	1,443.2	16.7	409.8	14.5
Medium-Scale Industries (50 - 199 employees)	2,947.1	34.1	922.9	32.7
Large-Scale Industries (More than 200 employees)	4,149.4	48.0	1,467.5	51.9
Total	8,641.2	100.0	2,826.9	100.0

Sources: The study of the SMIs in Thailand, pg. 58, Saeng Sanguanruang and others, 1975.

SAVING MOBILIZED AND CREDIT EXTENDED OF FINANCIAL INSTITUTIONS IN THAILAND

(At End-1991)

	Saving Mobilized		Credit Extended	
	Billion Baht	Percentage	Billion Baht	Percentage
1. Commercial Banks	1,751.5	75.0	1,789.4	73.4
2. Finance Companies	334.9	14.3	415.5	17.1
3. Life Insurance Compaines	40.4	1.7	18.5	0.8
4. Agricultural Cooperatives	2.6	0.1	12.0	0.5
5. Saving Cooperatives	7.8	0.3	60.0	2.5
6. Pawnshops	-	-	7.2	0.3
7. Credit Foncier Companies	2.5	0.1	3.7	0.1
8. Government Saving Bank	120.5	5.2	14.9	0.6
9. BAAC	41.8	1.8	48.7	2.0
10. Industrial Finance Corp. of Thailand	-	-	26.3	1.1
11. Government Housing Bank	33.8	1.5	39.7	1.6
12. Small Industrial Finance Office	-	-	0.1	0.0
Total	2,335.8	100.0	2,436.0	100.0

CREDIT EXTENDED TO MANUFACTURING SECTOR
BY MAJOR FINANCIAL INSTITUTIONS (OUTSTANDING AMOUNT)
(Unit: Million Baht)

Institutions	1987	1988	1989	1990	1991
Bank of Thailand	423.4 (0.2)	396.9 (0.1)	184.0 (0.1)	186.2 (0.05)	225.8 (0.04)
Commercial Banks	162,238 (83.2)	223,931 (84.1)	290,519 (84.4)	375,108 (85.4)	457,617 (85.07)
Finance Companies	24,079 (12.3)	33,626 (12.6)	43,835 (12.7)	53,688 (12.2)	68,120 (12.66)
IFCT	8,260.8 (4.2)	8,308.7 (3.1)	9,483.3 (2.8)	10,212.0 (2.3)	11,831.1 (2.20)
SIFO	23.6 (0.01)	32.3 (0.01)	44.7 (0.01)	100.3 (0.03)	127.1 (0.03)
Total	195,024.8 (100.0)	266,294.9 (100.0)	344,066.0 (100.0)	439,294.5 (100.0)	537,921 (100.0)

Source: Bank of Thailand.

Appendix 13.5

COMMERCIAL BANK'S CREDIT CLASSIFIED BY TYPES
(Unit: Billion Baht)

	1987		1988		1989		1990		1991	
	Volume	%	Volume	%	Volume	%	Volume	%	Volume	%
1. Term Loans	237.9	35.4	334.2	39.2	475.8	42.8	662.6	44.7	854.4	47.7
2. Overdrafts	224.7	33.4	268.4	31.4	321.0	28.9	423.7	28.6	478.8	26.8
3. Bills	210.2	31.2	250.9	29.4	313.8	28.3	395.6	26.7	456.2	25.5
3.1 Domestic bills	164.1	24.4	181.6	21.3	228.3	20.7	290.9	19.6	339.8	19.0
3.2 Import bills	8.2	1.2	11.2	1.3	13.8	1.2	16.6	1.1	18.4	1.0
3.3 Trust receipts	24.6	3.7	40.5	4.7	50.1	4.5	66.0	4.5	69.5	3.9
3.4 Export bills	13.3	1.9	17.6	2.1	21.6	1.9	22.1	1.5	28.5	1.6
Total	672.9	100.0	853.5	100.0	1,110.6	100.0	1,481.9	100.0	1,789.4	100.0

Source: Bank of Thailand.

DOMESTIC BILLS, LOANS AND OVERDRAFTS OF COMMERCIAL BANKS CLASSIFIED BY PURPOSE
(As at End of December 1991)

	Million Baht	Percentage
1. Agriculture	126,387.0	7.0
2. Mining	8,247.7	0.4
3. Manufacturing	457,617.4	25.3
4. Construction	72,095.1	4.0
5. Real Estate Business	207,104.3	11.5
6. Imports	71,543.3	3.9
7. Exports	95,257.4	5.3
8. Wholesale and Retail Trade	314,843.0	17.4
9. Public Utilities	30,096.9	1.7
10. Banking and Other Financial Business	99,266.7	5.5
11. Services	123,217.1	6.8
12. Personal Consumption	201,846.2	11.2
13. Others	0.0	0.0
Total	1,807,558.1	100.0

INDUSTRIAL CREDIT OF COMMERCIAL BANKS BY TYPE OF INDUSTRY

(UNIT: Million Baht)

End of Period	1989	1990	1991
1. CROP PRODUCTS	23,850.5	24,814.2	25,298.6
1.1 Rice Mill	11,981.1	13,745.6	14,059.2
1.2 Others	11,869.4	11,068.6	11,239.4
2. SUGAR	13,512.8	15,535.8	15,917.5
3. BEVERAGES	14,774.8	14,407.2	14,391.8
3.1 Alcoholic	12,169.5	11,233.9	10,763.5
3.2 Non-Alcoholic	2,605.3	3,173.3	3,628.3
4. OTHER FOOD	24,958.1	35,116.6	44,082.7
4.1 Canned Fruit and Vegetable	4,269.5	5,026.1	7,310.7
4.2 Canned Seafood	5,853.8	10,382.9	14,131.5
4.3 Others	13,246.1	18,270.1	21,534.9
4.4 Tobacco	1,588.7	1,437.5	1,105.6
5. KAPOK AND BAMBAY FIBER	2,331.6	1,926.8	1,949.7
6. WEARING APPAREL, EXCEPT FOOTWEAR	12,287.9	18,162.1	22,880.0
7. TEXTILES	25,447.9	35,135.8	39,707.0
8. WOOD AND WOOD PRODUCTS	12,259.2	15,866.7	21,976.5
9. PAPER, PAPER PRODUCTS AND PRINTING	12,870.4	16,882.5	23,628.0
9.1 Paper and Paper Products	7,916.8	9,924.8	14,955.6
9.2 Printing	4,953.6	6,957.7	8,672.4
10. CHEMICALS AND CHEMICAL PRODUCTS	26,348.7	34,412.7	40,719.0
10.1 Plastic and Plastic Products	11,203.0	17,034.8	22,167.3
10.2 Fertilizer and Pesticides	2,517.5	2,944.5	2,300.9
10.3 Pharmaceutical Products	2,940.8	3,536.7	4,148.0
10.4 Others	9,687.4	10,896.7	12,102.8
11. PETROLEUM AND PETROLEUM PRODUCTS	3,718.5	4,975.4	5,470.3
12. RUBBER AND RUBBER PRODUCTS	11,235.2	13,988.1	15,284.8
13. NON-METALLIC MINERAL PRODUCTS	13,167.3	16,127.1	21,905.2
13.1 Ceramic and Pottery	4,612.0	6,044.7	6,394.0
13.2 Cement and Cement Products	4,132.4	6,309.3	10,736.5
13.3 Others	4,422.9	3,773.1	4,774.7
14. BASIC METAL INDUSTRIES	17,234.9	21,902.6	26,077.9
14.1 Iron Works	13,006.2	18,712.0	22,421.3
14.2 Tin Works	410.7	334.5	413.3
14.3 Others	3,818.0	2,856.1	3,243.3
15. METAL PRODUCTS AND MACHINERY	15,841.1	22,554.0	29,654.3
15.1 Machinery	3,746.8	8,360.6	10,707.4
15.2 Other Metal Products	12,094.3	14,193.4	18,946.9
16. Electrical Machinery and Supply	16,910.4	24,634.4	30,529.8
16.1 Electrical Machinery	7,148.4	8,801.7	11,431.0
16.2 Electrical Supply	9,762.0	15,832.7	19,098.8
17. TRANSPORTATION EQUIPMENTS	17,469.5	24,885.7	38,182.0
18. MISCELLANEOUS	26,300.0	33,780.5	39,962.3
18.1 Leather and Leather Products	4,392.8	6,943.1	9,322.3
18.2 Jewelery and Related Articles	2,681.2	5,114.1	6,822.7
18.3 Dolls and Toys	1,265.6	2,142.3	3,051.7
18.4 Articles and Flowers	604.8	763.9	779.9
18.5 Others	17,355.6	18,817.1	19,985.7
TOTAL	290,518.8	375,108.2	457,617.4

1/ Including interbank transaction.

DOMESTIC BILLS, LOANS AND OVERDRAFTS OF FINANCE COMPANIES CLASSIFIED BY PURPOSE
(As at End of December 1991)

	Million Baht	Percentage
1. Agriculture	2,878.9	0.7
2. Mining	1,468.3	0.4
3. Manufacturing	68,119.7	16.4
4. Construction	10,990.2	2.7
5. Real Estate Business	99,768.1	24.0
6. Imports	7,233.9	1.7
7. Exports	4,327.1	1.0
8. Wholesale and Retail Trade	32,120.6	7.7
9. Public Utilities	7,039.1	1.7
10. Banking and Other Financial Business	23,487.9	5.7
11. Services	25,635.9	6.2
12. Personal Consumption	104,925.7	25.2
13. Others	27,512.7	6.6
Total	415,508.1	100.0

Appendix 13.9

FINANCE COMPANIES' CREDIT CLASSIFIED BY MATURITY
(Unit: Million Baht)

	1987		1988		1989		1990		1991	
	Volume	%	Volume	%	Volume	%	Volume	%	Volume	%
Call Loan	34,715.4	30.6	45,500.3	29.5	78,255.2	32.8	87,043.2	27.6	131,674.6	31.7
Less than 1 Year	39,238.5	34.6	54,525.6	35.3	74,745.3	31.3	103,002.8	32.7	131,252.8	31.6
More than 1 Year	39,382.0	34.8	54,382.5	35.2	85,515.1	35.9	125,064.8	39.7	152,590.5	36.7
Total	113,335.9	100.0	154,408.4	100.0	238,515.6	100.0	315,110.8	100.0	415,517.9	100.0

Source: Bank of Thailand.

INDUSTRIAL LENDING OF FINANCE COMPANIES
BY TYPE OF INDUSTRY
(Unit: Million Baht)

	1989	1990	1991
Beverage	1,069.4	1,585.2	1,696.9
Food Processing	6,315.3	7,637.1	8,775.8
Tobacco	94.7	106.4	76.2
Gunny Bag and Jute Products	284.5	89.5	358.8
Wearing Apparel	1,699.1	2,213.3	2,954.6
Textiles	3,149.2	3,367.5	4,479.8
Wood and Wood Products	1,094.3	1,510.7	1,682.1
Paper and Paper Products	2,281.1	3,276.0	3,917.8
Chemicals and Chemical Products	4,570.2	5,887.2	7,914.2
Products of Petroleum and Coal	1,145.4	1,822.7	1,719.1
Rubber and Rubber Products	1,108.1	1,203.4	1,689.2
Non-Metallic Mineral Products	2,987.7	2,968.1	5,176.2
Metallic Mineral Products	3,713.6	4,928.1	6,326.4
Machinery	2,469.1	3,172.3	4,130.2
Electrical Machinery and Appliances	3,737.6	3,897.0	4,139.9
Transport and Transport Equipment	3,957.7	4,933.8	6,139.0
Leather Products	334.5	565.9	867.4
Jewelry and Ornament	340.2	451.7	680.4
Toy	157.8	269.5	330.9
Artificial Flowers and Trees	29.3	25.0	40.4
Other Industries	3,295.7	3,777.4	5,024.4
Total	43,834.5	53,687.8	68,119.7

Appendix 13.11

IFCT'S LOAN APPROVALS, COMMITMENTS, DISBURSEMENTS AND OUTSTANDINGS
(Million Baht)

Year	Approvals		Commitments		Disbursements	Outstandings 1/	
	No. of Project	Amount	No. of Project	Amount		No. of Project	Amount
1960-1985	999	16,230.5	913	14,719.4	12,582.5	426	8,119.2
1986	141	1,449.7	131	1,383.3	1,135.5	506	8,241.7
1987	139	2,264.4	132	1,419.1	1,143.7	580	8,260.8
1988	134	2,276.7	116	2,314.0	1,435.0	597	8,308.7
1989	182	3,550.5	185	2,352.1	2,671.7	655	9,483.3
1990	194	3,531.1	181	3,609.6	2,783.0	712	10,212.0
Total	1,789	29,302.9	1,658	25,797.5	21,751.4		

1/ As at 31 December.

Source: IFCT.

IFCT'S APPROVED LOANS CLASSIFIED BY TYPE OF INDUSTRY
(Million Baht)

	1990		1960 - 1990		
	No. of Project	Amount	No. of Project	Amount	%
1. Agro-Industries, Agri-Business and Food Processing	58	514.0	536	4,894.4	16.7
2. Mining and Quarrying	11	66.6	67	297.2	1.0
3. Tobacco Curing and Redrying	-	-	17	70.2	0.2
4. Textiles, Wearing Apparel and Leather Industries	13	345.4	149	2,193.8	7.5
5. Wood-based Industries	8	55.8	97	818.6	2.8
6. Furniture and Fixture	9	81.7	56	493.5	1.7
7. Pulp, Paper and Paper Products	4	70.5	35	1,174.2	4.0
8. Printing and Packaging materials	2	13.6	17	202.3	0.7
9. Rubber and Rubber Products	5	23.9	52	520.9	1.8
10. Chemicals and Chemical Products	14	171.6	130	2,240.3	7.6
11. Products of Petroleum and Coal	-	-	5	20.8	0.1
12. Non-metallic Mineral Products	18	589.6	144	5,238.1	17.9
13. Iron and Steel Products and Other Metal Products	8	101.1	111	3,577.8	12.2
14. Machinery	14	251.3	70	1,468.6	5.0
15. Electrical Machinery and Appliances	9	171.0	65	881.5	3.0
16. Transport Equipment	4	14.5	40	339.7	1.2
17. Construction	-	-	6	169.2	0.6
18. Industrial Gas	3	8.5	10	447.0	1.5
19. Transport and Storage Facilities	1	105.0	42	945.8	3.2
20. Services	6	869.0	87	2,626.9	9.0
21. Other Industries	7	78.0	53	682.1	2.3
Total	194	3,531.1	1,789	29,302.9	100.0

Source: IFCT.

IFCT'S APPROVED LOANS CLASSIFIED BY SIZE AND REGION
(Million Baht)

	1990			1960-1990		
	No. of Project	Amount	%	No. of Project	Amount	%
Size						
Baht 0 - 5 million	103	297.0	8.4	949	2,556.8	8.7
Baht 5.1 - 10 million	33	277.6	7.9	308	2,417.6	8.3
Baht 10.1 - 20 million	27	442.5	12.5	283	4,475.6	15.3
Baht 20.1 - 50 million	20	679.0	19.2	137	4,688.2	16.0
Baht 50.1 - 100 million	4	290.0	8.2	68	4,830.5	16.5
Baht Over 100 million	7	1,545.0	43.8	44	10,334.2	35.2
Total	194	3,531.1	100.0	1,789	29,302.9	100.0
Geographical Region						
(A) Bangkok 1/	32	853.7	24.2	546	8,833.9	30.1
(B) Regions Outside Bangkok	162	2,677.4	75.8	1,243	20,469.0	69.9
Divided into: Central Region	28	997.7	28.3	361	10,974.3	37.5
Eastern Region	17	342.7	9.7	142	3,730.7	12.7
North-Eastern Region	41	320.7	9.1	239	1,348.4	4.6
Northern Region	41	728.9	20.6	257	2,124.7	7.3
Southern Region	35	287.4	8.1	244	2,290.9	7.8
Total	194	3,531.1	100.0	1,789	29,302.9	100.0

1/ Including Nonthaburi and Samut Prakan.

Source: IFCT.

APPROVED LOANS OF SIFO
(Unit: Thousand Baht)

Fiscal Year	Loan Application Received		Applications Approved		(3)=(1):(2) (%)		Outstanding
	No. of Loans	Loan Amount	No. of Loans	Loan Amount	No. of Loans	Loan Amount	
1964	121	26,039	12	2,439	9.9	9.4	1,289
1965	123	38,672	49	11,049	39.8	28.6	10,468
1966	131	44,926	70	15,667	53.4	34.9	19,410
1967	191	55,498	86	22,023	45.0	39.7	33,400
1968	219	67,518	112	26,257	51.1	38.9	51,922
1969	219	71,411	119	31,656	54.3	44.3	66,951
1970	199	67,616	114	26,358	57.3	39.0	72,568
1971	149	58,289	67	18,554	45.0	31.1	76,332
1972	167	57,689	79	21,678	47.3	37.6	75,503
1973	165	65,149	58	16,229	35.2	24.9	76,018
1974	117	58,180	43	14,917	36.7	25.7	66,640
1975	145	82,655	72	28,675	49.7	34.7	76,068
1976	107	68,490	60	25,290	56.1	38.4	89,166
1977	152	98,390	83	46,195	54.6	46.9	115,419
1978	148	104,240	85	44,880	57.4	43.0	135,645
1979	119	77,830	52	23,995	43.7	30.8	128,598
1980	43	29,760	3	370	7.0	1.2	103,352
1981	9	5,300	1	100	11.1	1.9	74,648
1982	61	42,500	11	7,710	18.0	18.1	56,223
1983	20	13,150	7	2,695	35.0	20.5	44,039
1984	78	45,472	26	9,580	33.3	21.1	40,784
1985	96	52,640	31	13,720	32.3	26.1	40,628
1986	260	158,255	92	30,780	35.4	19.4	46,366
1987	259	153,465	140	35,745	54.1	23.3	42.4
1988	338	145,700	222	40,960	65.7	28.1	42.1
1989	678	326,574	276	119,880	40.7	36.7	69.1
1990	428	325,940	333	173,060	77.8	53.1	115.1
1991	265	298,400	176	126,130	66.4	42.3	127.1

APPROVED LOANS OF SIFO BY TYPE OF INDUSTRY
(Unit: Thousand Baht)

Fiscal Year	Manufacturing Industries		Servicing Industries		Handicraft Industries		Cottage Industries		Total	
	No. of Loans	Loan Amount	No. of Loans	Loan Amount	No. of Loans	Loan Amount	No. of Loans	Loan Amount	No. of Loans	Loan Amount
1964	7	2,166	-	-	1	50	4	223	12	2,439
1965	32	7,557	6	2,015	7	1,107	4	370	49	11,049
1966	51	13,012	11	1,775	5	760	3	120	70	15,667
1967	68	19,243	8	1,470	5	1,050	5	260	86	22,023
1968	83	22,777	11	1,793	9	1,180	9	507	112	26,257
1969	95	26,997	16	3,579	5	950	3	130	119	31,656
1970	76	18,497	26	6,396	10	1,415	2	50	114	26,358
1971	54	15,274	10	2,490	3	790	-	-	67	18,544
1972	59	16,603	14	4,060	4	930	2	85	79	21,678
1973	50	15,744	3	350	1	10	4	125	58	16,229
1974	33	12,490	9	2,277	1	150	-	-	43	14,917
1975	61	26,180	5	1,750	3	495	3	250	72	28,675
1976	48	23,220	6	2,330	3	600	3	140	60	26,290
1977	70	40,440	10	5,400	-	-	3	355	83	46,195
1978	67	37,800	13	6,770	-	-	5	310	85	44,880
1979	44	20,895	5	2,650	-	-	3	450	52	23,995
1980	-	-	1	250	1	100	1	20	3	370
1981	1	100	-	-	-	-	-	-	1	100
1982	4	2,950	-	-	-	-	1	60	5	3,010
1983	8	5,125	3	1,700	-	-	1	70	12	6,895
1984	8	4,060	4	2,000	-	-	2	120	14	6,180
1985	29	12,070	8	3,750	1	100	2	200	40	16,120
1986	44	16,730	10	2,000	1	100	18	3,480	73	22,510
1987	79	29,320	25	4,420	5	1,000	18	2,520	127	37,260
1988	64	21,325	14	2,050	128	14,425	16	3,160	222	40,960
1989	108	82,400	33	19,955	69	10,530	54	6,225	276	119,880
1990	131	104,500	66	41,785	28	10,210	101	16,560	326	173,055
1991	86	101,400	51	17,200	10	3,500	29	4,530	176	126,630

BANK OF THAILAND'S REFINANCING SCHEMES
(Unit: Million Baht)

Year	Export Bills		Industry Bills		Animal Husbandary Bills		Small Industry Bills	
	Purchase	Outstanding	Purchase	Outstanding	Purchase	Outstanding	Purchase	Outstanding
1969	632.1	94.0	141.8	n.a.				
1970	903.4	251.1	864.1	212.1				
1971	1,742.3	617.1	1,518.4	276.8				
1972	2,755.4	516.6	2,558.3	334.5				
1973	3,160.2	988.1	2,546.0	494.5				
1974	7,975.9	2,247.7	2,823.5	1,370.2	44.1	27.8		
1975	10,885.4	3,264.1	5,391.2	1,573.7	76.5	42.2		
1976	16,750.7	3,733.9	5,946.0	1,570.9	100.7	53.8		
1977	19,857.9	3,333.7	7,037.3	1,838.6	184.4	96.3		
1978	24,592.1	4,778.0	6,847.4	1,743.6	236.5	111.4		
1979	39,164.5	10,262.1	7,298.3	1,950.5	247.0	116.3		
1980	46,021.5	8,851.8	8,097.3	2,054.6	255.4	121.1		
1981	57,361.6	13,436.6	5,057.4	1,463.4	270.3	138.3		
1982	65,832.6	15,800.6	6,049.8	1,445.3	351.0	168.3		
1983	77,234.4	18,602.3	3,784.1	958.0	464.5	208.6		
1984	87,802.4	19,540.4	3,169.3	876.2	496.6	218.9		
1985	91,676.0	19,142.3	2,021.5	424.0	323.3	216.8	3.0	3.0
1986	96,798.3	19,887.6	1,267.0	414.1	580.8	252.6	14.5	8.7
1987	81,541.3	16,007.1	1,225.5	423.4	465.2	181.6	37.9	15.8
1988	126,155.6	33,626.1	1,336.6	393.9	625.0	241.4	83.9	33.6
1989	75,237.5	17,256.0	534.1	184.0	823.1	342.4	130.2	33.9
1990	74,551.6	18,625.6	495.5	171.6	857.4	326.7	51.6	14.0
1991	89,096.2	19,840.8	649.3	201.0	921.8	407.5	59.9	19.2

Appendix 13.17

SICGF'S CREDIT GUARANTEE APPROVALS

Year	Annual Data		Accumulated	
	No. of Projects	Guarantee Amount (Baht '000)	No. of Projects	Guarantee Amount (Baht '000)
1986	16	8,452	16	8,452
1987	118	76,928	134	85,380
1988	126	107,108	260	192,488
1989	120	107,632	380	300,120
1990	141	118,327	521	418,447
1991	141	167,466	662	585,913

Appendix 13.18

TRADING OF CORPORATE SECURITIES IN SET

	1989				1990				1991			
	Shares		Value		Shares		Value		Shares		Value	
	Million Shares	%	Million Baht	%	Million Shares	%	Million Baht	%	Million Shares	%	Million Baht	%
1. Financial Institutions	545.7	35.4	57,949.3	41.3	1,108.0	35.0	88,745.7	25.7	4,944.1	60.9	287,229.0	49.1
2. Commerce	97.9	6.4	11,374.6	8.1	232.4	7.4	22,798.5	6.6	209.7	2.6	22,217.5	3.8
3. Service	38.7	2.5	3,647.5	2.6	153.3	4.8	16,935.7	4.9	218.5	2.7	22,333.4	3.8
4. Industries	201.3	13.1	43,328.2	30.8	580.6	18.4	167,216.6	48.4	998.0	12.3	140,930.7	24.1
5. Others	657.0	42.6	24,097.7	17.2	1,087.9	34.4	49,779.3	14.4	1,743.0	21.5	112,070.6	19.2
Total	1,540.4	100.0	140,397.3	100.0	3,162.2	100.0	345,475.8	100.0	8,113.3	100.0	584,781.2	100.0