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**ON FINANCIAL LIBERALISATION IN LDCS:
THE CASE OF EGYPT 1960-93**

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Summary

This thesis deals with the issue of financial development in Egypt at the sectoral, macroeconomic and household levels over the period 1960-93. The thesis is organised in ten chapters, including a summary of the main results in chapter (10).

Chapter (1) provides an introduction of the topics treated in the thesis and an overview of the main developments in the Egyptian economy during the study period.

Chapter (2) reviews the theoretical literature and empirical studies on the main issues concerning financial development.

Chapters (3) and (4) derive stylised facts from the discussion of the evolution of the financial system in Egypt. Chapter (3) assesses the structure, regulation and performance of the banking sector. Chapter (4) focuses on the Egyptian securities market, exploring its development since its establishment in 1883. Further it analyses the performance of the market using the main published indicators and highlights the impediments to its progress.

Chapter (5) is concerned with the growing role of Islamic finance in both the formal and informal sectors in Egypt. After constructing a model to illustrate the distinctive characteristics of Islamic banking, the chapter investigates the role of Islamic banks and Islamic branches of conventional banks. The chapter also provides an analysis of the Informal Islamic Investment Companies which flourished in Egypt during the 1980s.

Chapter (6) analyses the causes, measures and impact of financial repression in Egypt over the period 1960-90. The findings of this chapter indicate that financing the budget deficit was the main reason for repressing the financial sector. The chapter discusses the impact of the different repressive methods used including inflation tax, interest rate ceilings, high reserve requirements, directed credit schemes, regulation on the portfolio composition of banks, and government ownership of financial intermediaries. The government revenues from particular repressive measures such as inflation tax, seigniorage and interest rate ceilings were estimated for the whole study period and were substantial by most international standards. There follows a discussion of the main consequences of financial repression including capital flight, money substitution, the excessive use of inflation hedges and the thriving of informal financial transactions.

Chapter (7) presents an econometric analysis of the impact of the real interest rate on saving, investment and economic growth in Egypt. The results of this analysis indicate that the real interest rate had a positive impact on financial saving, possibly through a portfolio shift. However its impact on total saving, investment and economic growth was insignificant.

Chapters (8) and (9) are concerned with the issue of the coexistence of formal and informal financial sectors in rural Egypt. The analysis is based on a survey of 200 households undertaken by the author in four Egyptian villages in the Nile delta. The methodology adopted and the description of the surveyed region are reported in chapter (8). The findings provided in chapter (9) suggest that informal financial transactions in our sample can be classified as intermittent. There was no evidence of the existence of professional money lenders. Loans, with very few exceptions, were interest free. Most loans were undertaken without contract or collateral. However default cases were low thanks to societal governance. Moreover the chapter analyses the characteristics of RoSCA in Egypt and its role in financial intermediation. The determinants of formal and informal borrowing are estimated using Tobit analysis. The chapter concludes with a discussion of the implications of financial liberalisation on household credit decisions.

This thesis highlights the importance of a liberalised financial system for economic development in Egypt. However it argues that financial liberalisation, on its own, is not a sufficient remedy for the problems encountered in the financial sector. Macroeconomic stability and prudential regulation are considered to be essential prerequisites for liberalisation. In addition the thesis strongly emphasises the need for the restructuring of the financial system and the ensuring of its compatibility with the cultural environment to enable the full realisation of the benefits of financial liberalisation.

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MSM
February, 1995

List of Abbreviations and Acronyms

£E	Egyptian Pound
2SLS	Two-stage least squares
3SLS	Three-stage least squares
<i>Bai'Salam</i>	Purchase with deferred delivery
BCCI	Bank of Credit and Commerce International
BIS	Bank of International Settlements
CAO	Central Audit Organisation
CBE	Central Bank of Egypt
CMA	Capital Market Authority
CPI	Consumer Price Index
ERSAP	Economic Reform and Structural Adjustment Programme
ESM	Egyptian Securities Market
<i>Fatwa</i>	Religious opinion
FIBE	Faisal Islamic Bank
FY	The Egyptian fiscal year, runs from the 1st of July to the 30th of June
GDP	Gross Domestic Product
GNP	Gross National Product
HH	Household
ICOR	Incremental capital/output ratio
IFC	International Finance Corporation
IFM	Informal Financial Market
IIBID	International Islamic Bank for Investment and Development
IICs	Islamic Investment Companies
<i>Ijarah</i>	Leasing
IMF	International Monetary Fund
<i>Infitah</i>	Open door policy
LDC	Less developed country
LIBOR	London Inter-Bank Offered Rate
MGB	Meet Ghamr Bank
<i>Mudarabah</i>	Trust finance
<i>Murabaha</i>	Mark-up contract
<i>Musharakah</i>	Partnership or joint venture finance
NBE	National Bank of Egypt
NIB	National investment Bank
NSB	Nasser Social Bank
OLS	Ordinary Least Squares
PBDAC	Principal Bank of Development and Agricultural Credit
PLS	Profit and Loss Sharing
<i>Qard Hasan</i>	Beneficence loan
<i>Riba</i>	Usury
ROA	Rate of return on assets
ROE	Rate of return on equity
ROI	Rate of return on income
RoSCA	Rotating Saving and Credit Association
<i>Sharia</i>	Islamic law
SOE	State Owned Enterprise
T. Bills	Treasury Bills
<i>Zakat</i>	Alms tax

Chapter (1)

Introduction

"It is melancholy to contrast the present poverty of Egypt with its prosperity in ancient times, when the variety, elegance, and exquisite finish displayed in its manufactures attracted the admiration of surrounding nations, and its inhabitants were in no need of foreign commerce to increase their wealth or to add to their comforts." Edward W. Lane (1836)

(1.1) The issues:

When Egypt gained independence, in 1952, the prevailing economic wisdom was that state intervention, economic planning, physical capital accumulation and inward orientation could enhance economic development. Meanwhile the bulk of economic literature considered the effect of financial sector on economic development as negative or at best neutral.¹ However circumstances have changed and the advice given to the developing countries, including Egypt, has become completely different.

In 1973 McKinnon and Shaw, in two separate studies, challenged the conventional wisdom regarding the role of the financial system in economic development. They argued that 'financial repression'² resulted in a reduction of the real rate of economic growth and halted, or retarded, the development process. They suggested that financial liberalisation, by the removal of repressive measures that distort the financial market, may improve the

¹Fry (1989), p. 13.

²McKinnon (1989), p. 29 states that "when governments tax and otherwise distort their domestic capital markets, the economy is said to be financially repressed."

mobilisation of domestic savings, maximise investment, raise the average efficiency of capital investment and hence improve real economic growth.³

Financial liberalisation policy, based on the influential models of McKinnon (1973) and Shaw (1973) has become an integral part of the reform programmes endorsed by the Bretton Woods institutions. These programmes commonly include five main components that directly involve the financial sector, namely⁴:

1. Reduction of the size of fiscal deficit and a change in the method of its finance.
2. Deregulation of interest rates.
3. Elimination, or at least reduction, of the use of directed credit schemes and preferential interest rates.
4. Restructuring of financial intermediaries to raise their efficiency.
5. Liberalisation of external financial policies, to reduce entry barriers against foreign intermediaries and deregulate international lending and borrowing.

Egypt provides an interesting case study for the analysis of an emerging financial system, and examining the conduct of financial policy and its role in economic development. Egypt has a fairly sophisticated financial system for its stage of development. It has a banking network consisting of the Central Bank, 44 commercial banks, 33 investment and business banks, 22 branches of foreign banks, and 4 specialised banks (2 real estate banks, an industrial bank, and an agricultural bank with 17 affiliates). The formal financial system also includes a securities market and 7 insurance companies. Islamic financial institutions are represented by two private Islamic banks and a public one all are registered with the central bank. In addition there has been more than 100 informal Islamic investment companies.

³See Park (1991), p. 345.

⁴See World Bank (1989), chapter 9, our summary is based on Roe (1993), p. 7.

Since 1960 Egypt has adopted two distinct financial policies: financial repression during 1960-74, partial financial liberalisation over the period 1974-91. A policy of financial reform has been initiated in 1991. A thorough understanding of the impact of these different policies on financial and economic development should be based on analytical investigation undertaken at the sectoral, macroeconomic and household levels.

The objectives of this thesis are as follows:

First, it aims to analyse the structure, regulation and performance of the banking system and the securities market in Egypt from the start of the introduction of interventionist measures in the early 1960s until 1991 which marks the beginning of the current financial liberalisation programme.

Second, it attempts to investigate the structure, significance and mechanisms of the informal financial sector in rural and urban Egypt.

Third, the study also addresses the issue of Islamic finance and its role in the Egyptian formal and informal financial sectors.

Fourth, the thesis seeks to determine the causes, measures and impact of financial repression that prevailed over the study period in Egypt.

Fifth, it attempts to test the hypotheses of the neo-liberal school regarding the impact of real interest rates on saving, investment and economic growth in Egypt over the period 1960-90.

Sixth, based on a survey of 200 households in four Egyptian villages, the study aims to examine the direct impact of financial measures on the household's lending and borrowing decisions in the formal and informal credit markets.

(1.2) Key developments in the Egyptian economy:

The Egyptian economy over the period 1960-91 has passed through four main developments, namely, the nationalisation measures and heavy state intervention implemented during the 1960s; the *infitah*, open door, policy adopted during the 1970s; an attempt at economic reform as a response to external shocks during the 1980s; and the initiation of a comprehensive economic reform and structural adjustment programme in the early 1990s. While the implications of these developments on the Egyptian financial sector are analysed in detail below, in this section we discuss their main aspects.

(1.2.1) Nationalisation and state intervention:

At the time of the 1952 revolution of the Free Officers, which overthrew the monarchy in Egypt, the economy was predominantly based on the private sector. The private sector was responsible for 87% of the economy's value added and accounted for 95% of total civilian employment. Public sector activities were limited to the provision of public services such as electricity, water supply, railways and civil administration.⁵

The Free Officers did not appear to have a particular commitment to any economic ideology.⁶ Thus no major changes in economic policy were apparent during the first five years of the revolution, 1952-1956, and the economy remained predominantly private.⁷ However the Suez Crisis of 1956 initiated a series of government interventions, starting with the Egyptianisation laws of 1957, *de facto* nationalisation, which sequestered the British and French properties.⁸

⁵See World Bank (1987), p. 2 and Mabro (1974), pp. 124-6.

⁶See O'Brien (1966), p. 68.

⁷The only significant change in economic policy before 1957 was the first stage of 'agrarian reform' in 1952, which was politically motivated to limit the power of the advocates of the old regime and gain some popular support from the recipients of the redistributed land.

⁸For further discussion of the economic developments during the 1950s, see Hansen and Marzouk (1965), Mabro (1974), Mead (1967) and O'Brien (1966).

In 1961 the government implemented an economy wide nationalisation measures which marked the adoption of a public-sector-led and inward-oriented development strategy.⁹ As experienced in other countries, the nationalisation of major enterprises in one sector led to the nationalisation of other enterprises in the same or other sectors. Thus by 1963 the public sector ownership covered all financial institutions, transport, all significant manufactories. External trade and a significant amount of internal trade were also controlled by the state. The only sectors of the economy left outside complete government ownership, were agriculture and urban real estate, but they were overwhelmingly regulated by laws and decrees.¹⁰

The 1967 war resulted in the loss of the revenues of oil fields and mines of the Sinai desert and the dues of the Suez Canal. On the other hand there was also a critical need for resources to rebuild the army.¹¹ During the war period 1967-73, military expenditure in Egypt reached an average of 25% of its GDP, sacrificing investment and growth in the economy.¹² As a result, the government found it necessary to relax some of the restraints that had been imposed on the economy and encourage foreign investment.

Thus in 1968 the government attempted to reduce the heavy restrictions of the foreign exchange system and, in 1971, tried to provide foreign investment with assurances against confiscation and sequestration and also granted tax concessions.¹³ Although these reform attempts were not significant, they marked the start of a change in economic policy which

⁹ For an analysis of the Egyptian economy during the 1960s see Abdel-Fadil (1980), Mabro (1974), El-Kammash (1968), and Hansen and Marzouk (1965).

¹⁰ On the role of the public sector in the economic development of Egypt during the 1960s, see Mabro (1974), pp. 124-140 and Sultan (1968), pp. 41-73.

¹¹ As noted by Amin (1982) pp. 96-7, it was hard after the defeat in this war to demand more sacrifices from the people for the sake of economic development or to impose more measures to redistribute income and wealth, or to disparage the Arab regimes which became an important source to rebuild the Egyptian army or to continue in criticising the USA that seemed then with a great influence in the Middle East.

¹² See Handoussa and Shafik (1993), p. 20.

¹³ These measures are covered by law 65/1971, see Abdel-Khalek (1982), p. 36.

led to a major shift in the development strategy by the adoption of *infitah*,¹⁴ open door, policy in 1974.

(1.2.2) The *infitah* policy:

It was not only the war effort which put pressure on the government to change its socialist economic orientation of the 1960s. The *infitah* policy was a response both to internal economic problems related to the heavy state intervention and to major changes in the international economic and political environment. By the early 1970s, the economy suffered from severe problems including, sluggish productivity in the industrial sector dominated by publicly owned enterprises, slow growth in the agricultural sector, a large fiscal deficit and a prolonged imbalance of trade.¹⁵

Arab petrodollars, western technology and abundant Egyptian labour were the main pillars of the *infitah* policy. The stated objective was to increase exports, but the underlying strategy of import substitution¹⁶ remained without significant change.¹⁷ The government endeavoured to attract foreign capital. Foreign investors were granted a five to ten years tax exemption, immunity from sequestration and unrestricted repatriation of profits according to law 43/1974 and law 32/1977. Most of tax privileges granted to foreign investors were extended, after strong pressure, to cover indigenous firms in 1981.¹⁸ A partial liberalisation of external trade was also achieved through law 118/1975

¹⁴On the background, measures and short run impact of the *infitah* policy, see Abdel-Khalek (1981) and (1982), and Amin (1981).

¹⁵Richards and Waterbury (1990), p. 240.

¹⁶On the relation between import substitution and industrialisation in LDCs see Kirkpatrick (1989), pp. 56-81.

¹⁷See Springborg (1993), p. 147 and Ikram (1980), pp. 25-27 for a discussion of the economic philosophy of *infitah*.

¹⁸See Handoussa and Shafik (1993), p. 43.

which allowed the private sector to import goods,¹⁹ except those identified as 'strategic' which include essential food imports, such as wheat.²⁰

However these measures only achieved a partial liberalisation of the external sector of Egyptian economy, leaving the 'internal sector' paralysed with an array of restrictive regulations and the dominance of the public sector. Although the real growth rate of the GNP during the early years of the *infitah*, 1975-79, averaged 8.6%,²¹ which was remarkably high by international standards, most of this growth was in the external sector, or in activities closely related to it. Namely oil revenues, Suez Canal dues, tourism and remittance of Egyptian workers abroad. Meanwhile the real growth rate in the agricultural sector, for example, was 1.9% over the period 1974-79.²² This disparity in economic growth between different sectors and the relative decline in the non-booming sectors, i.e. agriculture and manufacturing, was symptomatic of a Dutch disease problem in the economy.²³

Stimulated by the *infitah* policy accompanied with a favourable external environment the Egyptian economy continued to grow, with an average of 8.5% per annum until the mid-1980s. However the *infitah* policy failed to produce a sustainable growth in the economy or to generate sufficient employment for the growing labour force. The oil sector and Suez Canal, for example, employed less than 1% of the labour force whereas they formed 16.5% of the GDP. Twelve years after the launching of *infitah* measures, state-owned enterprises were still dominating non-agricultural production activities. They owned two-

¹⁹ It is worth noting that this law implicitly encouraged the use of black market foreign exchange through the so called 'import by the use of own exchange system', according to which the official foreign exchange were not responsible for providing importers with their foreign exchange requirements.

²⁰ For a discussion of *infitah* measures and their economic implications, see Abdel Khalek (1982), op. cit., pp. 37-64 and Richards and Waterbury (1990), pp. 240-246.

²¹ Zaytoun (1982), p. 129.

²² *ibid.*, p. 139.

²³ On Dutch disease see the survey by Corden (1984) and for a discussion of Egyptian case see Dervis, Martin and Wijnbergen (1984).

third of the stock of fixed capital, absorbed 45% of total fixed investment, accounted for 40% of the GDP and produced 83% of total exports. However the private sector impact in the labour market was relatively higher than the public sector, as the former absorbed 59% of the labour force.²⁴

(1.2.3) The 1986 external shock and reform attempts:

When the price of oil, the main export of Egypt, declined by 50% between January and June 1986, the economy was not prepared to absorb this external shock, especially when the rest of the sources of foreign exchange, mentioned above, were predominantly oil related. The Real GDP growth slowed down to 2.7% per annum in 1986-88 and the economy rapidly experienced serious difficulties.²⁵ The deficit of the fiscal budget reached 23% of GDP in 1986, excluding debt amortisation. The current account deficit exceeded 10% of GDP. The external debt accumulated to reach 119% of GDP in 1987 with a debt service ratio of over 40% of total exports. Inflation accelerated to 25% in 1987 from an average of 17% during the preceding five years.²⁶

Thus towards the end of the 1980s, the economy suffered from several structural weaknesses including:

".. widespread price/cost distortions, attributable in large part to extensive price controls and subsidies; negative real interest rates; a weakly structured budget, characterised in particular by a highly inelastic and narrowly drawn revenue base; a balance of payments suffering from a limited non-oil export base, a sizable imbalance between total export receipts and import payments, heavy dependence on worker remittances, and a mounting debt service burden; and complex exchange and inefficient trade systems."²⁷

²⁴ Notice that the employment impact as well as the contribution of the public sector to the GDP were limited relative to the resources invested because of the higher capital-labour and capita-output ratios in this sector compared with the private sector. See World Bank (1987), pp. 5-8.

²⁵ Dailami and Dinh (1991), p. 3.

²⁶ *ibid.*, p. 4. and World Bank (1988), pp. i-ii and pp. 10-11.

²⁷ IMF (1988), p. 2.

These distortions did not appear suddenly in the economy, they were present for long period but masked by the remarkable increase in external resources and capital inflows. These resources enabled the government to expand its expenditure, financed investment programmes and funded rising imports. With the sudden and steep shortage of external resources in 1986, it became harder to cover these distortions. At this stage a critical need for stabilisation measures and adjustment efforts became apparent.

The government started a macroeconomic reform programme coordinated with the IMF and the World Bank in 1987 aimed at reducing external and internal imbalances. As a result there was some improvement in the multiple exchange rate regime as the government managed to reduce the exchange rates from at least five different rates to three. The Egyptian pound was gradually devalued by 25% in nominal terms and a free exchange market was established. Moreover quantitative restrictions on imports were reduced, and exports were increasingly liberalised.²⁸

The budget deficit was also reduced, despite the depressed external revenues, by significant cuts in consumer subsidies, bringing the prices of goods and services more closely in line with their production costs, and increasing the price of energy to become close to its international levels. Some measures were also taken to reduce government intervention in the pricing of agricultural products.²⁹ In addition a programme to reform the public sector enterprises and encourage the private sector was initiated.³⁰

However, the pace of reform under this programme was rather slow as the government faced difficulties in applying particular measures included in the programme. As a result,

²⁸ Dailami and Dinh (1991), *op. cit.*, pp. 4-5 and World Bank (1990), p. 4.

²⁹ For an analysis of the impact of government intervention in agricultural prices and recent reform attempts, see Dethier (1991), pp. 33-74.

³⁰ *ibid.*

the 1987 reform programme was short lived as it was terminated after few months of its implementation when the IMF refused to advance further drawings against the stand-by agreement after an initial disbursement in May 1987.³¹

The failure of this reform programme can be explained by four main factors that have also hindered other reform attempts in the past.³²

1. The magnitude of effort required to reform the macroeconomic imbalances and microeconomic distortions accumulated over three decades of mischievous policies.
2. The difficulties arising from the reform programme itself regarding its negative impact on the vulnerable lower-income-groups, and the associated social and political instability.³³ It was not possible for the government to implement the rest of austerity measures included in the programme, especially since there were few adequate compensatory measures for the negatively affected segments of the population.³⁴
3. This reform programme, like other ones in the past was confronted with interest groups "who were able to block or subvert reforms which threaten their short-run interests".³⁵
4. Egypt also relied on its strategic position and special role as a stabilising power in the Middle East to extract 'strategic rent' from the western donors. By

³¹IMF (1988), p. 2 states that the 1987 reform programme "was not completed because understandings could not be reached on policy actions in the areas of exchange system, interest rates, energy prices, and agricultural procurement prices, and on corrective steps relating to the 1987/88 budget and to departures in the exchange rate management from agreed commitments".

³²An example of these attempts is that of 1965 when the government faced a shortage of foreign exchange and tried to engage in a stand-by agreement with the IMF, and increase the prices of some goods. These attempts were unpopular and the government had to resign, few months later. See Springborg (1993), p. 146.

³³The food riots of January 1977 were a strong example of the likely impact of applying austerity measures without adequate provisions to accommodate their negative impact on the poor.

³⁴See World Bank (1991), pp. 2-3.

³⁵See Richards (1991), p. 1721. For a further discussion of the role of interest groups in policy making in Egypt see Awad (1991), pp. 275-94 and Hinnebusch (1993), pp. 159-170.

exploiting its strategic status along with "a habit of living on the future"³⁶, Egypt did not take several reform programmes seriously and often managed to postpone the implementation of hard economic measures. Successive Egyptian governments have long adopted this delay strategy³⁷ in a way that Richards (1991) describes as "successful disaster". This strategy resulted in modest, mainly political, achievements in the short run and has had disastrous repercussions in the long run.

(1.2.4) The economic reform and structural adjustment programme:

The Iraqi invasion of Kuwait in 1990, resulted in massive returns of Egyptian workers from the conflict zone, losses of workers remittances, a decline of tourist receipts and Suez Canal dues and a worsening of investment climate. However Egypt received significant financial assistance from the Gulf states and the USA which cancelled US\$ 13 billion of its total external debt of US\$ 51 billion. Egypt was also granted, in 1991, a debt/debt service relief by the Paris Club creditors equivalent to 50% of the outstanding debt over three phases through mid-1994 conditional upon implementing an IMF agreement.³⁸

This financial assistance, accompanied with higher oil export prices and a decrease in main import prices, especially foodstuffs, offset the losses incurred as a result of the Gulf crisis. The balance of payments experienced a surplus of around US\$ 0.9 billion in 1990/91, the debt forgiveness and rescheduling reduced the debt service from 46% of

³⁶Hansen (1991), p. 4.

³⁷For example the calls for the reform of the inefficient public sector and attempts for improving the pricing policy date back to the mid-1960s. Moreover Mabro (1974), p. 131 reports some moves towards liberalisation but describes them as being timid. However it took the government almost three decades to apply some effective measures to achieve these objectives.

³⁸IMF (1991), pp. 7-8 and World Bank (1992), p. xxv.

exports to approximately 16.5% and permitted an increase in the net international reserves from only US\$ 1.7 billion to US\$ 6.1 billion.³⁹

These developments improved the creditworthiness of the Egyptian economy and improved its capacity to embark on a comprehensive Economic Reform and Structural Adjustment Programme (ERSAP) in 1991. This reform programme has been supported by a stand-by arrangement from the IMF and a structural adjustment loan from the World Bank, in addition to the bilateral debt forgiveness/debt service relief of the Paris Club.

The primary objective of ERSAP is summarised by the IMF (1991) as

"to create, over the medium term, a decentralized market based, outward-oriented economy where private sector activity will be encouraged by a free, competitive, and stable environment with autonomy from government intervention. For this purpose, controls on economic activity and investment are to be dismantled and primary reliance placed on market forces for resource allocation."⁴⁰

This reform programme has involved the financial sector in four main ways.⁴¹ First, channelling loanable funds into budget deficit, in a way that reduces the reliance on inflationary finance until the deficit itself can be controlled. Second, advancing finance to the existent and emerging private sector activities. Third the financial sector, in its own right, is subject to an array of liberalisation and institutional restructuring measures included in the programme. Hence the financial sector is considered as being in the forefront of the reform programme as an 'agent of change'.⁴²

³⁹ *ibid.*

⁴⁰ See IMF (1991), p. 8 and for the details ERSAP, see World Bank (1991) and (1992), and IMF (1991) and (1992).

⁴¹ Harvey and Jenkins (1994), p. 1.

⁴² See Wijnbergen (1993), p. 9.

(1.3) The scope and methodology of the thesis:

The thesis is organised in ten chapters including an introduction, in **chapter (1)** and a summary of main results and conclusions of the research in **chapter (10)**.

Chapter (2) provides a review of the theoretical literature and empirical studies on the main issues of financial development. The chapter starts by outlining the McKinnon-Shaw theoretical framework and its main hypotheses. Theoretical extensions of the McKinnon-Shaw analysis are then considered by highlighting the models of Kapur (1976), Galbis (1977), Mathieson (1980) and Fry (1988) in addition to the recent studies that adopt the approach of endogenous growth.

The chapter continues by discussing the arguments of the Neo-Structuralist school, reflected in the works of van Wijnbergen (1982), (1983a) and (1983b), Taylor (1983), and Buffie (1984) with emphasis on the role of informal financial markets. The views of Post-Keynesian school are also highlighted.

Given that these schools provide several, conflicting hypotheses regarding the effects of financial liberalisation on saving, investment and economic growth, the last section is devoted to the discussion of empirical studies that support or reject the theoretical propositions. The chapter concludes by considering the prerequisites of financial liberalisation, which unlike liberalisation itself, are not subject to serious dispute.

Chapter (3) discusses the different phases of development of the Egyptian banking system since its early stages in the mid 19th century until the application of the 1991 reform programme. In addition to the overview of the historical evolution of the banking industry, the chapter assesses the structure of the banking system using the indicators of financial widening and deepening. The chapter continues by discussing the difficulties that

face the banking system, including the regulatory problems. Then the performance of the banking system is analysed by using specific operating ratios.

In this chapter as in chapters (4) and (6), in order to provide a deeper perception of the analysis, some comparisons are drawn between the Egyptian experience and those of selected countries, mainly less developed. The basis of selection are first the significant similarity, or difference, in economic conditions and policies. Second the availability of reliable and comparable data for the concerned issues.

The analysis presented in this chapter and chapters (4) and (5) has benefited from a series of interviews undertaken by the author with Egyptian experts and officials in the financial sector. Due to the reserved nature of bank reports, including those of the Central Bank, these interviews were of invaluable importance as a useful source of information on the important developments in the financial system and views on different measures of the financial policy.

Chapter (4) continues the analysis of the formal financial sector by exploring the development of the Egyptian securities market (ESM). The chapter starts by discussing the role of securities markets in LDCs and highlights their advantages and disadvantages. Moreover it provides a critical appraisal of the market-based versus bank-based debate and its relevance to the LDCs. Then it analyses the development of the ESM by dividing it into three phases starting with the establishment of the Alexandria Stock Exchange in 1883 and ending in 1993 by the application of the new Capital Market Law. Further it provides an analysis of the performance of the ESM using the main published indicators. The chapter is concluded by an examination of the impediments facing the progress of the ESM.

Chapter (5) is concerned with the growing role of Islamic finance in both the formal and informal sectors in Egypt. The chapter starts by discussing the concept of usury and its evolution in economic thinking. Then it outlines the Islamic stand regarding the prohibition of usury and its economic implications. The chapter provides a model, constructed by the author, to illustrate the distinctive characteristics of Islamic banking. After determining the sources of funds and their allocation according to the Islamic principles, the chapter examines the case of Islamic banks in Egypt. In analysing the performance of the formal Islamic intermediaries, the chapter distinguishes between the public and private banks and also highlights the case of Islamic branches of conventional banks. In doing so the analysis relies on the relevant published data of the intermediaries in addition to several interviews with experts in Islamic banking.

In addition to the different formal Islamic intermediaries, more than 100 informal financial institutions, claiming to be based on Islamic principles, were set up in Egypt in the late 1970s and early 1980s. These institutions were called "*Sharikat Tawzeef Al-Amwal Al-Islamiyyah*" that crudely translates as Islamic Investment Companies (IICs). The chapter provides an analysis of the IICs as regard to their activities, size and adopted mechanisms in the mobilisation of resources and the reasons of their quick rise and sudden fall during the 1980s and its repercussions. The chapter concludes by discussing the main problems of Islamic finance and its prospects.

Chapter (6) analyses the causes, measures and consequences of financial repression in Egypt over the period 1960-90. This chapter provides the evidence that government intervention in the financial sector in Egypt is not of regulatory or corrective nature but mainly repressive. This chapter highlights the different reasons for repressing the financial sector such as the condition of the financial system after independence, the impact of dominating ideologies during the 1950s and 1960s and the implementation of

anti-usury laws. Moreover it gives a particular emphasis to financing the budget deficit as the main reason for financial repression.

The chapter discusses the impact of different methods of financial repression including: ceilings on interest rates, high reserve requirements, directed credit schemes, ownership of banks, intervention in the portfolio composition of banks in addition to extracting excessive revenues from the inflation tax. The chapter analyses the impact of these adopted methods and estimates the Egyptian government revenues generated from particular repressive measures, such as inflation tax, seigniorage and interest rate ceilings. Moreover it discusses the main consequences of financial repression like capital flight, money substitution, hoarding gold as an inflation hedge, and the thriving of informal financial transactions.

Chapter (7) presents an econometric analysis of the impact of real interest rate on saving, investment and short run economic growth in Egypt. As mentioned above, Egypt in 1991 started an economic reform programme with financial liberalisation as one of its central components and freeing interest rates as a main reform measure. While it is still early to judge the outcomes of this reform programme, an analysis of the financial repression period of 1960-90 would help understanding whether the country is proceeding with the right model.

This chapter examines, using econometric methods, the determinants of financial and total saving, investment and economic growth. Moreover as regard to the investment function a switching regime model was also applied to calculate the net impact of real interest rate on investment. In order to allow for this analysis a specifically written programme, in FORTRAN language, is used. The chapter is concluded with the policy implications of the analysis.

Chapter (8) provides an essential prelude to the analysis of the rural credit market undertaken in the chapter (9), which deals with formal and informal credit markets in rural Egypt with respect to the liberalisation programme of 1991. The analysis is based on a dataset specifically collected by the author for this purpose, between December 1992 and April 1993, from a sample of four Egyptian villages. Thus the chapter starts with a discussion of the reasons of adopting a microeconomic focus in the analysis.

These reasons can be summarised in four issues. First the unavailability of macroeconomic data on the impact of the so recent liberalisation programme of the formal sector. Second, the possibility of obtaining more reliable and systematic evidence on informal financial transactions through the use of household survey. Third a household survey data can provide direct measures of the impact of changes in economic policy and highlight the household's reactions to these changes. Fourth, in such an under-researched area, particularly in the Egyptian context, a household-based analysis may reveal some important aspects and explore new areas for research.

The chapter then discusses the methodology adopted, including the procedure of the selection of the sample and questionnaire⁴³ design. Then it provides a description of the surveyed area and the socio-economic characteristics of the four sampled villages. The chapter continues by considering the general characteristics of both formal and informal credit markets and provides a taxonomy of the latter. Then the structure of the household portfolio is examined with an emphasis on the relative importance of different saving instruments.

Chapter (9) presents, in four sections, the analysis of the rural credit market based on the survey data. The first section determines the relative size of informal credit and the

⁴³ See a detailed description of the questionnaire in appendix (3) and the list of variables in appendix (4).

socio-economic characteristics of borrowers and lenders. Then the chapter analyses the sources, purposes and main attributes of informal credit with emphasis on the role of collateral and problems of default.

As informal finance can take a form of collective arrangements, the second section in the chapter analyses one of its widely found examples in Egypt, that is Rotating Savings and Credit Association (RoSCA). First the main features of RoSCA are assessed with a highlight of its merits. Then by using our survey results, RoSCAs in Egypt are considered, assessing their structure, purposes, design and rotation. The section is concluded by further remarks on RoSCA and its viability in the future in the light of financial development in Egypt.

In the third section two models are constructed in order to estimate the determinants of formal and informal borrowing in the four sampled villages by using a Tobit analysis. The fourth section is devoted to the examination of the initial impact of the financial liberalisation programme of 1991 on household's financial decisions and its asset and credit positions.

Chapter (2)

On Financial Liberalisation in LDCs: A Review of the Literature

*"Our opinion is correct but subject to error, other opinions are incorrect but could be right."
Al-Shafi'i, The eminent Imam and scholar (767-820)*

(2.1) Introduction:

The recognition of the important role of finance in economic development can be traced back to Adam Smith who reports that "the trade of the city of Glasgow, doubled in about fifteen years after the first erection of the banks there; and the trade of Scotland has more than quadrupled since the first erection of the two public banks at Edinburgh."¹ In 1911 Joseph Schumpeter argued that "the banker ... authorizes people, in the name of society as it were, to...innovate"². He identifies the role of financial intermediaries as mobilising savings, evaluating projects, managing risk, monitoring managers and link these services to technological innovation and economic development.³

Nevertheless since the Second World War, the literature has been dominated by views that consider finance as having, at best, neutral effects on growth.⁴ Development economists in the post-war period generally considered finance as being fundamentally as an issue of government mobilisation of resources to support an increased rate of capital accumulation.⁵ Financial development was seen as simply following economic growth,

¹Smith (1776), p. 315.

²Cited in King and Levine (1993), p. 735.

³These services of the financial system, identified by Schumpeter in 1911, were among the ones highlighted by Shaw (1973) and Long (1983) which include: provision of medium of exchange; mobilisation and allocation of capital, transformation and distribution of risk, transformation of the size of financial transactions; transformation of maturities; provision of professional management; risk reduction through diversification; stabilisation of economic fluctuations through financial policies. Listed in Kumar and Tsetsekos (1993), p. 57.

⁴See Fry (1989), p. 13 and (1993), p. 8.

⁵Fitzgerald and Vos (1989), p. 19.

which was the argument of Joan Robinson (1952) as she wrote "By and large, it seems to be the case that where enterprise leads finance follows"⁶.

However, the writings and empirical work of Patrick (1966), Cameron et al (1967), Goldsmith (1969), McKinnon (1973) and Shaw (1973) began to challenge the dominant wisdom and provided important findings and insights on institutional aspects of finance in LDCs and the links between financial development and economic growth. These studies induced a revival of interest in the issues of financial development. Recent studies have benefited from the current advances in economic and quantitative analyses. Greater availability of data and information on LDCs, especially after the inclusion of financial reform measures in the structural adjustment and stabilisation programmes supported by the World Bank and the IMF, allowed for extensive applied studies and the development of empirical evidence.

This chapter is organised as follow. In the following section we discuss the main causes, measures and effects of financial repression in LDCs. Then we analyse the McKinnon-Shaw framework and its theoretical extensions. The neo-structuralist critique and the post-Keynesian response are then discussed. The review of literature proceeds by considering the issues of prerequisites and sequencing of financial liberalisation. The chapter continues by providing a review of the empirical evidence on financial liberalisation and its hypothesised impact on saving, investment and economic growth. The chapter ends by concluding remarks in the light of some developing countries' experience with financial liberalisation.⁷

⁶Cited in King and Levine (1993), *op. cit.*, p. 730.

⁷As parts of the background literature of this thesis do not fit directly in this chapter, e.g. Islamic finance and particular aspects of informal finance, they are included in the relevant chapters.

(2.2) Causes, measures and consequences of financial repression in LDCs:

The financial markets of LDCs have always been subject to substantial government intervention in both the structures and mechanisms of these markets. This intervention is not of regulatory or corrective nature but mainly repressive, if one uses the terminology of the Stanford School. We can distinguish between five main reasons for government intervention in the financial sectors of LDCs, namely:⁸

1. The condition of the LDCs' financial markets after independence. Financial markets in LDCs suffered from different problems attributed to **market failure**⁹. These problems include:
 - a. Financial markets in LDCs suffered from a segmented and shallow structure, in the sense that either some financial services and instruments did not exist at all, or they existed but were in an inadequate form.
 - b. Encouraged by segmentation and shallowness, operating financial institutions behaved in an oligopolistic manner which was allowed in the absence of effective regulatory authorities.
 - c. Asymmetric information, regarding both the services of the financial sector and potential borrowers, was a result of such oligopolistic environment and a cause of other problems, such as adverse risk selection and the application of non-price criteria for credit allocation.¹⁰

2. Regulations against usury: The enforcement of **anti-usury laws** was widespread in LDCs as a result of religious and political objections to high interest rates.¹¹

⁸While chapter (6) in this thesis discusses in details the causes of repressive state intervention in LDCs with emphasis on the Egyptian case, we provide here a concise summary.

⁹See Killick (1993), pp. 254-258.

¹⁰On the issue of asymmetric information and its implications to credit markets, see Stiglitz and Weiss (1981), pp. 393-410.

¹¹On the impact of usury laws on credit markets, see Blitz and Long (1965).

3. During the 1950s and 1960s policy makers in LDCs were influenced by **Keynesian arguments** during its heyday. According to Keynes, excessive liquidity preference pushes real interest rates above the full employment equilibrium level.¹² As a solution for this problem Keynes proposed interest rate ceilings in accordance with his advocacy of the Gesellian stamp tax on money.¹³
4. **The impact of the dominating ideology:** The repression of the financial sector was one of the components of an overall interventionist strategies embraced by the governments of developing countries after independence. During the 1960s state intervention became the conventional wisdom according to which widespread market failure could be corrected and social welfare would be enhanced.¹⁴
5. **Financing budget deficit:** Deficit finance was considered, for a long time, an acceptable financing tool for development.¹⁵ This was justified by the insufficiency of private investment for several political, economic and institutional factors. Therefore augmenting the rate of net investment and executing development plans relied on governments' efforts. However a typical LDC's government lacked sufficient resources and hence resorted to deficit finance.¹⁶ Consequently repressing the financial sector was considered as necessary to provide 'cheap' funding to finance the fiscal deficit and priority projects.¹⁷

¹²See Fry (1988), pp. 5-6.

¹³This stamp tax was suggested by Silvio Gesell in 1929 in order to discourage the demand for liquidity. Accordingly banknotes were stamped each week at post offices. Keynes (1936) advocated the idea and purposed that the stamp tax should be equal to the difference between the actual and equilibrium rates of interest. *ibid.*, p. 5.

¹⁴On the issue of the changing role of the state in development strategies and its implications, see Addison and Demery (1989), pp. 1-37 and Bardhan (1990), pp. 3-7.

¹⁵On the role of budget deficits in development strategies see Harris (1992), pp. 2-5 and Kulkarni (1966), pp. 16-37.

¹⁶See Easterly and Schmidt-Hebbel (1993).

¹⁷Roe (1993), p. 10.

Financial repression has been implemented in LDCs through an array of interventionist measures, including:¹⁸

- Administered interest rate controls through imposing ceilings on nominal deposit and lending rates.
- Subsidised loan rates for particular projects.
- Intervention in the allocation of credit in favour of priority sectors and projects.
- The imposition of high ratios of required reserves against banks liabilities that goes beyond their use as a prudential measure.
- Regulations on the portfolio compositions of banks by requiring banks to hold a minimum of low-yielding government securities.
- Direct state ownership of financial intermediaries.
- Excessive barriers to entry in the financial market, mainly to protect state-owned banks from competition.

The consequences of financial repression are extensively discussed in country studies.¹⁹

We attempt here to summarise the main deleterious effects of financial repression which are emphasised in the financial development literature, and in the writings of McKinnon and Shaw, in particular:

- Ceilings on interest rates, in countries with high and variable inflation rates, have resulted in negative real rates of interest which were not adequately adjusted to changes in economic conditions.
- Low real interest rates have caused a bias in favour of current consumption at the expense of saving, resulting in a shrinking of the volume of loanable funds.

¹⁸ See Hanson and Neal (1986) for an analysis of these interventionist methods in ten LDCs over the period 1970-82. Chapters (3) and (6) deals with these measures in the Egyptian context.

¹⁹ See for example World Bank (1989), Morris (1990), Hanson and Neal (1986) and Page (1993).

- Potential lenders (savers) often engage in relatively low yielding projects instead of depositing their funds in financial intermediaries to channel them to higher yielding investments.
- The low cost of bank funding, under interest rate ceilings, has encouraged the choice of relatively capital intensive projects.
- When inflation accelerates, interest rate ceilings cause destabilising portfolio shifts from financial assets to tangible assets, foreign assets and/or durable consumption goods which would magnify the initial inflationary shock.²⁰
- The repression of the financial sector encourages the emergence or resurgence of informal financial sector activities which substitutes for the formal sector by providing 'depositors' with a financial instrument with higher yields than those repressed in the formal sector. It also allows borrowers to obtain their required credit, though it may be at a higher cost.²¹
- Government direction of credit and the use of non-price criteria in its allocation may result in the accumulation of non-performing loans mainly granted to public sector enterprises and priority sectors.
- High reserve and liquidity requirements reduce the intermediation efficiency of banks and result in high spreads. The problem worsens when there is a lack of competition in the financial system, which is frequently the case in LDCs.

Thus it has been suggested that a sustained financial repression would result in a continued inefficiency of the financial market in terms of both the quantity and quality of financial intermediation and would have adverse consequence for macroeconomic management.²² Moreover, it has been argued that financial liberalisation through the

²⁰ See Fry (1988), p. 15 and see chapter (6) for a discussion of this point in the Egyptian case.

²¹ On the issue of informal finance in Egypt see chapters (5), (8) and (9).

²² See McKinnon and Mathieson (1981) and Roe (1993), pp. 3-4.

removal of repressive measures would promote financial development, increase savings, enhance the quantity and quality of investment and promote economic growth. We discuss below the McKinnon-Shaw framework which provide the theoretical rationale for financial liberalisation.

(2.3) McKinnon-Shaw framework:

It is worth noting that the McKinnon-Shaw framework is not unitary as it consists of two different convictions regarding the role of the financial system and its mechanisms.²³ While McKinnon considers money and physical capital as complementary²⁴, due to the indivisible technology and poor access to external finance, Shaw deals with money and capital as substitutes. Moreover Shaw's debt intermediation analysis is based on an inside money model, developed in Gurley and Shaw (1955), which suggests an increase of lending potential of financial intermediaries, through an increase of available deposits to them, generated by a rise in interest rates. On the other hand McKinnon's analysis is based on an outside money model in which the role of deposits in encouraging self-financed investment is emphasised. According to his analysis, savings in the form of real balances are facilitated through increases in real deposit rates and when these real balances accumulate and reach a minimum required amount they can be invested.

These different views are reflected in the demand for money functions obtained from the analyses of McKinnon and Shaw. Thus McKinnon's demand function can be shown as²⁵:

$$M/P = f(Y, I/Y, d-\pi^*)$$

where M/P = the real money balances, broadly defined;

Y = real GNP;

I/Y = the ratio of gross investment to GNP;

$d-\pi^*$ = real deposit rate of interest.

²³See Zephirin (1990), pp. 11-16 and Studart (1991), pp. 8-9.

²⁴McKinnon (1973), pp. 57-61.

²⁵See Ghatak (1981), pp. 62-65 and Fry (1982), pp. 731-734 for a detailed illustration of these models.

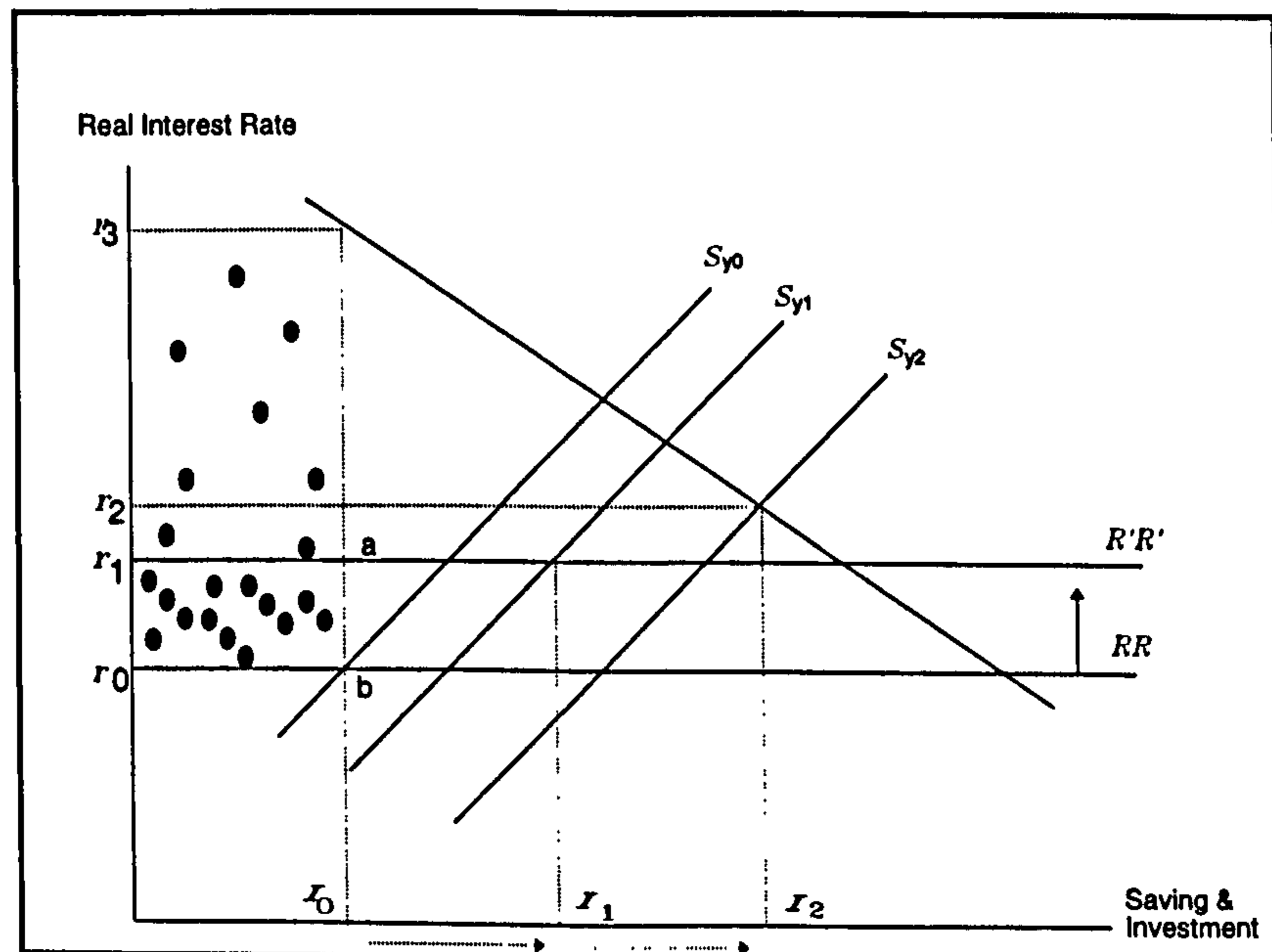
On the other hand Shaw's money demand function can be characterised as:

$$M/P = f(Y, v, d - \pi^*)$$

where v is a vector of opportunity cost, in real terms, of holding money.

Despite these differences in transmission mechanism by which real interest rates affect savings they agree on the general impact of financial repression in LDCs and the need to liberalise their financial markets. Moreover Molho (1986) argues that the two different approaches of the models of McKinnon and Shaw regarding the process of financial assets and liabilities can be considered as "complementary" to each other rather than incompatible or competing.²⁶ However in this thesis we place stress on the common elements of the McKinnon-Shaw models which are illustrated in figure (2.1) below.

Figure (2.1)
Saving and Investment under Interest Rate Ceilings



Source: Fry (1982), p. 733.

²⁶Molho (1986), p. 102 and Fry (1988), p. 22.

The McKinnon-Shaw model (henceforth M-S) illustrated in figure (2.1) uses inside money created as loans to the private sector. Saving S_{y_0} at a rate of economic growth y_0 is a positive function of the real interest rate (nominal interest rate i minus inflation rate P^e , all expressed in proportions). RR represents financial repression in the form of fixed nominal interest rate. Savings of households are distributed, for simplicity, between inflation hedges, e.g. tangible assets, earning P^e and deposits with a return of i . Investment I is a negative function of the real rate of interest.

Assume that a ceiling RR has been imposed on nominal deposit interest rates which keeps the real rate below its equilibrium level. This would produce a bias towards current consumption, and hold saving and hence investment below their socially optimal levels. Moreover potential savers may engage in relatively low-return direct investment, instead of depositing the funds in formal intermediaries for subsequent lending to higher yielding projects.²⁷

As risk premia cannot be charged when ceiling on loan rates are effective and binding, which is the case in the financially repressed economies, this results in two problems. First credit is allocated according to non-price criteria, i.e. lending according to loan size, quality of collateral, political pressure, 'reputation' of clients, and 'benefits' obtained by credit officers. Second bank borrowers who are able to obtain credit at low cost, i.e. low loan rate, will tend to choose relatively capital intensive projects. Projects financed according to these conditions yield returns almost above the interest rate ceiling RR and represented by the dots in the area $r_1 r_0 b a$. Thus the M-S analysis suggest that interest rate ceilings, as one of the widely used measures of financial repression, stifle savings by encouraging current consumption, reduce the quantity of savings below its optimal level and reduce the quality of investment.

²⁷ See Fry (1989), pp. 15-16.

A partial financial liberalisation, by shifting the interest rate ceiling from RR to $R'R'$, increases savings and investment as the changes of real interest rate trace out the saving function. The rise in interest rate ceilings prevents borrowers from engaging in low yielding investments as they become unprofitable at the higher interest rate r_1 . As a result, the efficiency of investment rises and hence economic growth increases from y_0 to y_1 and the savings function shifts to the right and, consequently, the quantity of investment increases from I_0 to I_1 . Full financial liberalisation, by abolishing interest rates ceilings, produces an optimal result of maximising investment and increasing its average efficiency, illustrated in figure (2.1) by higher investment I_2 at a higher rate of real interest r_2 and higher economic growth y_2 .

(2.4) Theoretical extensions of the McKinnon-Shaw framework:

The McKinnon-Shaw framework has been theoretically developed by formal macroeconomic models, mainly those of Kapur (1976), Galbis (1977), Mathieson (1980) and Fry (1988). One common feature of these models is the use of deposit rate of interest, fixed below its free-market equilibrium level as a key instrument of financial repression.²⁸

The macroeconomic model of Kapur (1976)²⁹ assumes a labour-surplus economy with unused fixed capital in a closed developing economy. The model assumes an aggregate production function: $Y = \sigma K$, Where Y is real output, σ is the output/capital ratio and K is total fixed and working capital. As σ is constant³⁰, financial conditions can affect only the quantity of investment ΔK through the credit availability effect. Mathieson (1980)³¹

²⁸Fry (1989), p. 16 notes that same results can be obtained when the loan rate of interest rather than deposit rate is set below its equilibrium level.

²⁹See Kapur (1976), pp. 779-793 and Fry (1988), pp. 29-37.

³⁰In the models of Galbis (1977) and Fry (1988), real deposit rate of interest is allowed to influence σ .

³¹See Mathieson (1980), pp. 361-383 and Fry, op. cit., pp. 37-43.

adopts Kapur's production function but assumes that fixed capital is fully utilised and that a fixed proportion θ of all investment is financed by bank credit. He also models the rate of capital accumulation by firms' savings behaviour s determined by a fixed real return of capital r' and real rate of interest $l-\pi^e$, i.e. $\Delta K = s(r' - (l-\pi^e))$. However the two models of Mathieson and Kapur share the same result that financial liberalisation raises investment and the rate of economic growth.

Galbis (1977)³² develops a two-sector model, based on McKinnon's choice of technique approach,³³ to analyse the effect of financial repression on the average efficiency of capital, i.e. the quality of investment. Sector A is the traditional sector in the economy with a low constant return to capital, while sector B is the modern one with a higher return to capital. The duality in the economy maintained by the coexistence of the two sectors is a symptom of inefficiency caused by financial repression. Total output of the economy can be shown as: $Y = Y_A + Y_B = r_A K_A + w_A L_A + r_B K_B + w_B L_B$.

where r is the return on capital K and w is the wage to labour L .

Galbis shows that the lower the real deposit interest rate is, the higher the, self-financed, investment in the traditional sector A . Higher real interest rate increases demand for money in sector A and reduces their relatively less efficient investment. A greater money stock held by sector A enables an increase in the investment of sector B , which relies on the banking system for funding. Thus the increase in real deposit rate of interest augments the average rate of return on aggregate investment, which lends support to the M-S argument outlined above.

³²See Galbis (1977), pp. 60-69 and Fry, op. cit., pp. 43-46.

³³See McKinnon (1973), op. cit., pp. 19-21.

Fry (1988)³⁴ constructs a model designed specifically for empirical testing. As in the models of Kapur and Galbis and Mathieson, Fry also uses the labour surplus Harrod-Domar model but allows the capital/output ratio σ to be affected by financial conditions. The effect of real institutional interest rate³⁵ in the steady state affect the rate of economic growth through saving and both the quantity and quality of investment. In an open economy national saving may increase as a result of portfolio shifts possibly through a reduction of illegal capital flight as a response to an increase in domestic deposit interest rate. The impact of real interest rate on the efficiency of investment in Fry's model is illustrated as in figure (2.1) above.

Moreover, the dynamic models of Mathieson (1979), Kapur (1983) and Fry (1988) are concerned with the effect of financial liberalisation during stabilisation programmes. This reflects the fact that most LDCs have engaged in liberalisation while adopting stabilisation measures to reduce inflation and control balance of payments deficits at the same time.³⁶ Kapur and Fry use expectations-augmented Phillips curves, under adaptive expectations, in order to model the dynamic behaviour of the economy. Mathieson uses adaptive expectations of the inflation rate and a declining stock of fixed-interest bank loans to allow for dynamic adjustment. On the other hand Kapur and Mathieson introduce the exchange rate as an instrument to open their models, while Fry uses simulations of export promotion and import compression policies. These dynamic models have found benign effects of incorporating financial liberalisation measures in stabilisation programmes. They show that coordination between liberalisation and stabilisation would assist in containing "the contractionary effects of deflation produced solely through monetary deceleration"³⁷.

³⁴See Fry (1988), op. cit., pp. 46-62.

³⁵Fry (1988) mentions that real deposit interest rate can be used as a proxy for all institutional interest rates.

³⁶See Gibson and Tsakalotos (1994), pp. 588-9.

³⁷See Fry (1989), op. cit., p. 18.

The recent introduction of endogenous growth approach³⁸ in theoretical modelling of financial development brings important insights to the analysis. One of the main improvements to the M-S, by using the endogenous growth approach, is the ability to change the constant returns to scale assumption in the aggregate production function.³⁹ The aggregate production function in an endogenous growth model takes the form: $K^\alpha X^\beta$, where K represents a combination of physical capital and knowledge, $\alpha \geq 1$ and X is a factor like land or labour with a fixed supply per capita. Endogenous growth models deal with the role of finance through the functions of financial institutions in evaluating, selecting and funding entrepreneurial activities that lead to growth in productivity.

Levine's (1990) model attempts to explain how specific financial institutions affect the growth rate of per capita output. The model draws on the endogenous growth literature to analyse how liquidity risk, productivity risk, transactions costs, and economies of scale in information and resource coordination create incentives for the emergence of financial intermediaries and contracts. The model shows that the resulting financial structure does influence the steady state growth rate of per capita output in real terms. The influence of financial structures works through providing some form of insurance against liquidity shocks and enabling agents to hold portfolios designed against idiosyncratic productivity shocks. Hence financial structures such as banks, stock markets and mutual funds, through their management of risk, increase investment in firms and their efficiency. Moreover these financial structures improve the allocation of resources by exploiting economies of scale in information gathering.⁴⁰

³⁸ Models of the new growth theory, known as endogenous growth, were stimulated by the works of Romer (1986) and Lucas (1988) which rely on Arrow's (1962) study on the mechanism of learning-by-doing and on Uzawa's (1965) analysis of the role of human capital. These models attempt to explain why, over long periods of time, economic growth accelerates and why some countries perform better and grow faster than others. The main contribution of the new growth theory is the endogenisation of the sources of unbounded economic growth, which is an improvement over the neoclassical growth theory that rely on exogenous factors such as population and technical progress. Models of endogenous growth emphasise the importance of investment in technology and human capital as the main sources of growth. For a discussion of the literature of new growth theory see Helpman (1992), Sala-i-Martin (1990) and Andersen and Moene (1993), and on its main implications for economic development, see Barros (1993).

³⁹ Fry (1993), p. 19.

⁴⁰ See Levine (1990), pp. 23-37.

Bencivenga and Smith (1991), by employing the bank liquidity model of Diamond and Dybvig (1983), and benefiting from the contributions of the endogenous growth theory, develop a model of intermediation and growth. Their main finding is that the development of financial intermediation will increase real growth rates through spill-over externalities leading to social increasing returns to scale in production.⁴¹ King and Levine (1993) develop an endogenous growth model in which they establish the connection between finance, entrepreneurship and economic growth.⁴² Financial institutions in this model influence investment decisions through four mechanisms. First financial institutions evaluate the prospective entrepreneurs. Second they mobilise resources to fund the promising ones. Third they allow investors to diversify the risk associated with innovation activities. Fourth they reveal the advantages and rewards of engaging in innovation. Hence a more developed financial structure accelerates the rate of productivity enhancement and stimulates economic growth.⁴³

(2.5) The neo-structuralists' critique of financial liberalisation:

One of the limitations of the M-S framework and its theoretical extensions is the absence of informal credit markets. This absence is considered a "serious lacuna" in the analysis⁴⁴. Informal credit markets are prevalent in developing countries.⁴⁵ Informal financial intermediation is carried out through moneylenders, merchants, pawnbrokers, loan brokers, money guards, landlords, friends and relatives and Rotating Savings and Credit Associations (RoSCAs). Chapter (8) of this study provides a taxonomy and discusses the different forms of informal finance in detail.

⁴¹See Bencivenga and Smith, pp. 195-202 and p. 207.

⁴²King and Levine (1993), pp. 4-14.

⁴³ibid., p. 28.

⁴⁴Fry (1989), op. cit., p. 19.

⁴⁵On the role of informal finance in LDCs see, for example, World Bank (1989), chapter 8, Adams (1991), pp. 29-42 and Ghate, et al (1992).

One of the most important contribution of the neo-structuralists⁴⁶ to financial development analysis is the introduction of informal credit markets their macroeconomic models. The neo-structuralists' view is based on the proposition that informal credit markets are more efficient than the formal ones. They argue that informal credit markets provide full intermediation, whereas banks provide partial intermediation as some of their funds are absorbed in the form of reserve requirements.⁴⁷

The neo-structuralist models use Keynesian adjustment mechanism. Prices are determined by a mark-up over costs and wages are exogenously determined through class conflict à la Kalecki. They use a cost-push inflation model where relative power of workers and capitalists determines inflation rates. Profits, not wages, determine savings. Moreover the neo-structuralists adopt the Yale-portfolio allocation model developed by Tobin (1969).

Under these assumptions van Wijnbergen's model⁴⁸ analyses the effect of financial liberalisation. Instead of using two assets, as in M-S models, the model assumes that households distribute their wealth between three assets, namely, currency C , time deposits TD and informal loans to business sector L_h^s .

$$C = f^c(p, i, r_{id}, y)W,$$

$$TD = f^d(p, i, r_{id}, y)W,$$

$$L_h^s = f_h^s(p, i, r_{id}, y)W,$$

where p is the inflation rate, i is the nominal rate of interest in the informal credit market, r_{id} is the real rate of interest on time deposits and y is income.

⁴⁶The views of neo-structuralist school on financial development are manifested in the studies of Taylor (1983), Van Wijnbergen (1982), (1983a) and (1983b), Buffie (1984), Kohsaka (1984).

⁴⁷The assumption of the informal market's full intermediation has been subject to criticism and described as "not consistent with widely held views of informal [credit markets] work" see Owen and Solis-Fallas (1989), p. 353. Cho (1990), p. 478 argues that informal lenders may hold reserve funds, as banks do, in order to provide intermediation.

⁴⁸van Wijnbergen (1983b), pp. 435-441.

The real supply of loans by banks to borrowers L^s_b , depends on the level of deposits, required reserve ratio and the demand for excess reserves.

$$L^s_b = b(p, r_L) q \cdot TD,$$

where r_L is the real lending rate and $1-q$ is the required reserve ratio.

The real demand for loans by firms is inelastic with respect to the interest rate in the informal credit market and takes the form:

$$L^d = L(w, y),$$

where w is the real product wage.

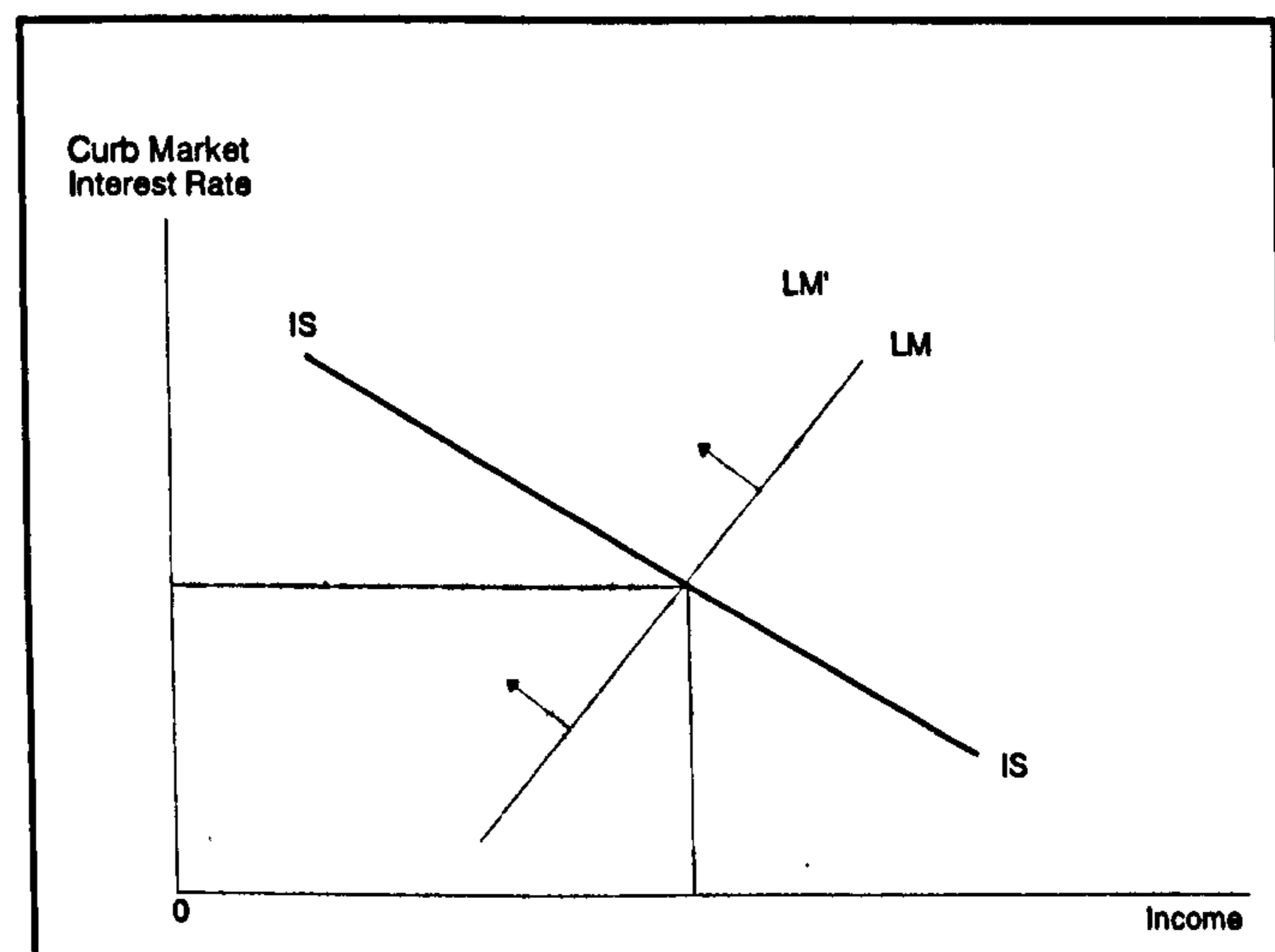
Equilibrium in the informal credit market can be shown as:

$$f^s_h(p, i, r_{id}, y)W = L(w, y) - b(p, r_L) q \cdot f^d(p, i, r_{id}, y)W,$$

This equation can be differentiated to give the LM curve in figure (2.2) below, while the IS curve is obtained by differentiating a Keynesian output equation of the form:

$$y = A(i-p, y); A_i < 0, 0 < A_y < 1.$$

Figure (2.2)
Informal Credit Market
in van Wijnbergen's Model



Source: van Wijnbergen (1983b), p. 439.

As shown in figure (2.2), an increase of time deposit interest rate, leads to an increase in money demand and shifts the LM curve upwards. At the same time, substitution out of currency to time deposits increases the money supply as a result of an increase of its multiplier when the currency-deposit ratio decreases. This causes a downward shift of the LM curve. The net impact depends on the required reserve ratio and the assets of the informal credit market. The neo-structuralists argue that the substitution of deposits for curb market loans is much more important than the substitution of deposits out of currency. As a result, the supply of informal loans falls. Under the neo-structuralists' assumption that informal credit markets provide full intermediation and are "often competitive and agile"⁴⁹, the total supply of working capital falls. Thus the LM curve shifts to the left, the informal credit market interest rate increases and output decreases.

The neo-structuralist models produce predictions regarding the effects of financial liberalisation, which are completely different from those obtained from the M-S models. Consequently the two schools have opposing policy recommendations.⁵⁰ However it may be argued that the predictions of financial liberalisation effects depend on the initial assumptions⁵¹ made regarding which financial market is more efficient, the formal one or the informal?

The message of the neo-structuralists is to reduce the size of the relatively more inefficient and repressed market, which incidently is exactly the same argument put forward by the M-S school. Hence, in essence, the two seemingly opposing schools agree on financial liberalisation but disagree on what to liberalise.⁵² However it may be the case that "formal and informal financial markets have complementary roles to perform in fully

⁴⁹Taylor (1983), p. 92.

⁵⁰Cho (1990), p. 477.

⁵¹Fry (1989), op. cit., p. 19.

⁵²Cho (1990), op. cit., p. 478.

liberalized financial systems"⁵³. Whether the informal credit market is more efficient, or has a bigger role than the formal market remains a subject of empirical investigation. In this study we attempt to analyse the characteristics and mechanisms of both financial markets in Egypt by using a dataset specifically collected for the purpose.⁵⁴

(2.6) The Post-Keynesian response to financial liberalisation:

The M-S framework on financial liberalisation has been subject to a Post-Keynesian challenge mainly on three grounds which focus on the institutional structure of the financial system.⁵⁵ First, the Post-Keynesians are sceptical about the importance given to private savers as a source of investment finance in M-S models; the former consider the banking system as the main source of finance.⁵⁶ Moreover the Post-Keynesians reject the priority of saving over investment in the M-S models and hence reject the functioning of financial markets as pictured in these models. Second, they are concerned with the neglect within M-S models of the possible impact of interest rate changes on effective demand and financial stability.⁵⁷ Third, the Post-Keynesians argue that the M-S framework overlooks the differences in the institutional characteristics of LDCs' financial systems.⁵⁸

The implications of financial liberalisation are examined in a study by Burkett and Dutt (1991) which develops a Kaleckian model of interest rate policy. In a closed economy with excess capacity they show that a rise in the deposit interest rate results in two effects in the short run. First an increase in the supply of deposits and loans. Hence the equilibrium interest rate falls and investment and output increase. Second the rise in

⁵³Kapur (1992), p. 76.

⁵⁴See chapters (8) and (9).

⁵⁵See Studart (1991), p. 9.

⁵⁶See Davidson (1986), pp. 104-106.

⁵⁷On the issue of financial stability see Minsky (1986).

⁵⁸Studart, op. cit., pp. 23-25.

interest rates may increase the marginal propensity to save. They argue that the second effect outweighs the first effect in a way that reduces the aggregate demand. As a result output falls and the rate of profit drops and entrepreneurs being pessimistic about future profits, reduce investment, which would fall substantially. If the acceleration effect is included the impact of financial liberalisation on investment, through the rise in interest rates, would be more negative. Thus using figure (2.1) above, the Post-Keynesians reach completely different results, as the savings and investment functions shift to the left as a response to the fall in output, income and the rate of profit.⁵⁹

Dutt (1991) extends the analysis to cover the long run effect of financial liberalisation by rejecting the loanable funds approach and adopting the principle of effective demand.⁶⁰ The long run impact of liberalisation is found to be more adverse than in the short run as the rise in interest rates increases firms' borrowing costs, and by applying mark-up pricing, this causes a rise in the inflation rate. This in-turn reduces real wages, and hence aggregate demand and long run economic growth will fall. Moreover in an open economy, financial liberalisation may lead to overvaluation of the real exchange rate. This would have a negative effect on the tradeable sector and reinforce the adverse effects of liberalisation on aggregate demand.⁶¹

(2.7) Prerequisites and sequencing of financial liberalisation:

Despite the strong disagreement between the advocates and critics of financial liberalisation, it emerges that they agree on the need to satisfy certain conditions before undertaking any financial reform programme. The critics of financial liberalisation emphasise the need to achieve "realistic exchange rates, balanced budgets and a

⁵⁹ See Burkett and Dutt (1991), pp. 137-144 and Gibson and Tsakalotos (1994), pp. 606-607.

⁶⁰ Dutt (1991), p. 228.

⁶¹ Gibson and Tsakalotos (1994), op. cit., p. 607.

favourable investment climate"⁶², which is not significantly different from the advocates' conditions for a successful financial liberalisation that include "price stability, fiscal discipline, and policy credibility"⁶³.

Price stability should be the main target of monetary policy before liberalising the financial market. High and volatile inflation rates destroy existing financial markets and hinders the emergence of potential ones. Nevertheless, price stability cannot be achieved through monetary control alone but it also requires fiscal discipline in a consistent macroeconomic framework and a credible political environment.⁶⁴

Fiscal discipline should be accomplished before implementing financial liberalisation measures. Revenues extracted from measures of financial repression, e.g. interest rate ceilings and financial restriction, e.g. inflation tax, would be lost upon the removal or reduction of these measures. Thus the tax system should be reformed to compensate for such losses. Public spending as well ought to be controlled to help achieve fiscal discipline and strict budget balance which has now become more necessary than in the past. The current need for tighter fiscal discipline is explained by less favourable expectations on the part of domestic and foreign creditors of the LDCs' governments as a result of several domestic and international debt crises.⁶⁵

Macroeconomic stability goes hand in hand with prudential regulation as prerequisites for financial liberalisation.⁶⁶ McKinnon (1986) emphasises that "successful liberalisation is

⁶²Dornbusch and Reynoso (1989), p. 209; cited in Thornton (1991), p. 15.

⁶³Fry (1989), p. 26; cited in Thornton, op. cit., p. 15.

⁶⁴Fry (1995), p. 454-5.

⁶⁵McKinnon (1991), pp. 4-6.

⁶⁶Villanueva and Mirakhor (1990), p. 521-522 and Khan and Sundararajan (1991), p. 3.

not simply a question of removing all regulations"⁶⁷. Adequate supervision of the financial intermediaries is required under any type of financial system be it repressed or liberalised. Financial intermediaries are subject to moral hazard and adverse selection. Hence investors must undertake a variety of monitoring functions such as screening, auditing,..etc. However these functions are complex and expensive and their duplication by different agents is a form of waste. Therefore there is a need for a representative body to undertake the regulation and supervision functions. Moreover depositors of banks, i.e. holders of banks' debts are often not able or have little incentive to undertake monitoring functions. This, again, emphasises the need for a neutral and professional representative agency to implement the tasks of prudential regulation.⁶⁸

The need for prudential regulation however increases if the financial system is going to be liberalised. Financial liberalisation implies greater freedom for individual bank managers and credit officers in the allocation of loanable funds and the determination of the cost of lending. The role of financial supervision is to detect the weak financial intermediaries and identify fraudulent and unscrupulous credit officers early enough before the start of the liberalisation process. Failure to do so in Chile, as an example, resulted in the engagement of bank managers in perverse behaviour and the adoption of Ponzi scheme⁶⁹ during the early years of its liberalisation programme.⁷⁰

It is worth noting that economic theory suggests that complete liberalisation is superior than partial liberalisation, in terms of efficiency, if the economy is free from market distortions. But given that real economies are not free from various distortions, thus there is a need for liberalisation, as a second best approach, to be partial, instead of full, and

⁶⁷Quoted in Fry (1995), p. 458.

⁶⁸Dewatripont and Tirole (1994), pp. 29-33

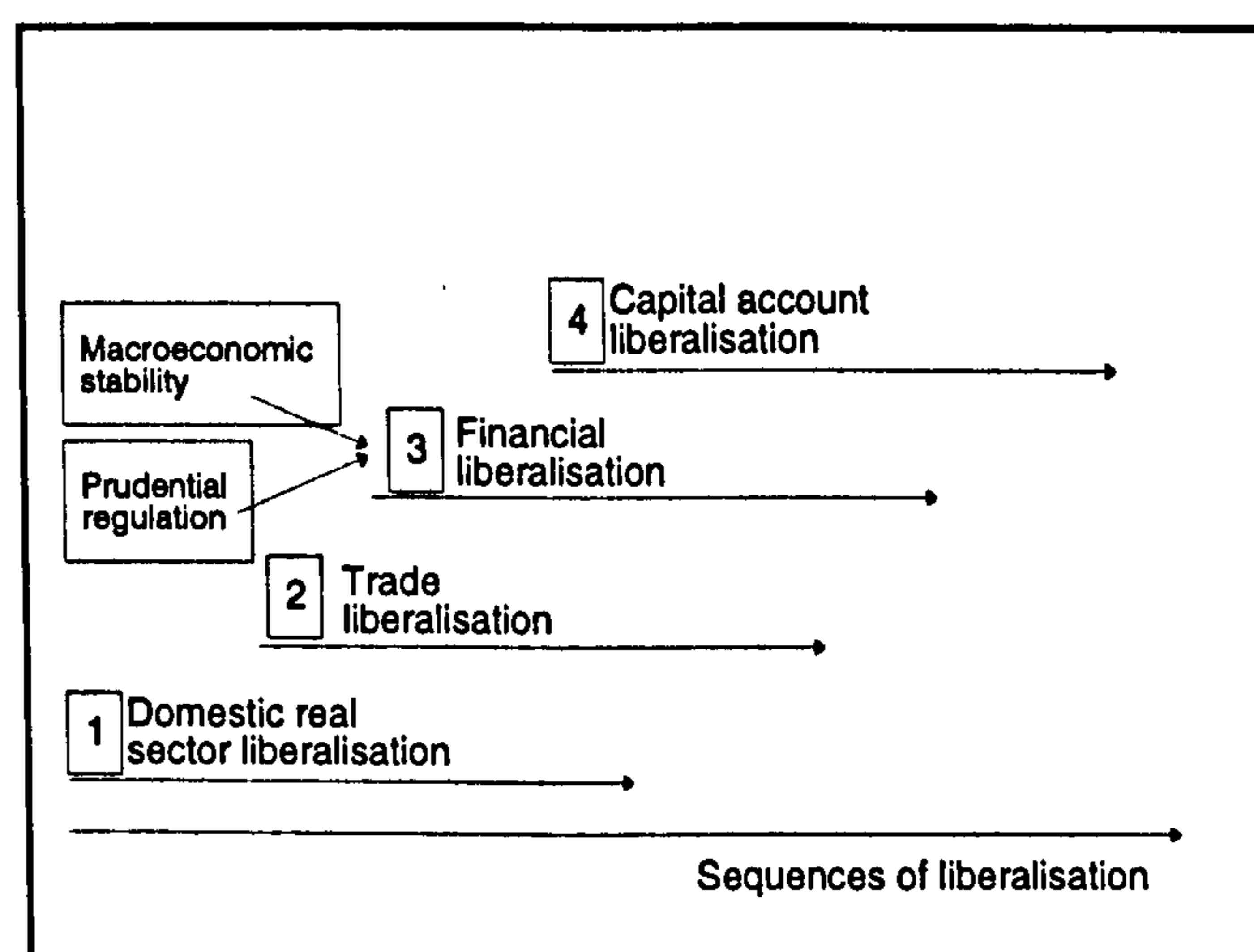
⁶⁹For a discussion of Ponzi scheme see chapter (5) below.

⁷⁰ibid.

gradualist rather than simultaneous or abrupt. Even in the absence of distortions, it might be the case that there are some sectors in the economy that respond faster to reform programmes than others, which add further support to the gradualist approach. Moreover gradualism can be advocated with respect to income distribution issues, as this approach would allow more time for the economic factors, which may be negatively affected as a result of structural adjustment in their particular sectors, to adapt to alternative uses in the same sectors or in other ones.⁷¹

Despite the fact that the literature on the issue of sequencing is still inconclusive⁷², there is however a wide agreement, based mainly on Latin American experience, that the domestic financial sector should be liberalised after the reform of the domestic real sector. It is also widely accepted that controls on capital movements should be maintained until the domestic financial sector and the external trade sector are liberalised and until the stabilisation programme is implemented.⁷³

Figure (2.3)
Sequencing of Economic Liberalisation



⁷¹Greenaway and Morrissey (1993), pp. 256-7.

⁷²Williamson (1993), p. 25. For a survey of the literature on the sequencing of economic liberalisation see Edwards (1992), pp. 1-24.

⁷³ibid., Greenaway and Morrissey, op. cit., p. 257, Gibson and Tsakalotos (1994), p. 591, Hanson (1994), p. 337.

Thus the capital account should be the last in the liberalisation sequences as shown in figure (2.3). Several reasons have been put forward in support of this recommendation:

1. It is argued that capital markets adjust in a faster pace than goods and labour markets and hence need a shorter period to respond to the liberalisation measures.⁷⁴
2. If the domestic financial sector is liberalised before the liberalisation of the real domestic sector then loanable funds will flow to the projects that only considered profitable because relative prices are distorted.⁷⁵
3. If the liberalisation of the domestic financial sector is undertaken before liberalising the trade sector this would result in allocating credit into tradeables sector which may happen to be profitable because of the existence of trade barriers.⁷⁶
4. If capital controls are removed before the full liberalisation of the domestic financial sector then capital flight would be inevitable which was the case of Argentina in the early 1980s.⁷⁷
5. Further to the previous point, capital flows into an economy that lacks an efficient and a liberalised financial system may, be inefficiently allocated.⁷⁸

⁷⁴Greenaway and Morrissey, *op. cit.*, p. 258.

⁷⁵Gibson and Tsakalotos, *op. cit.*, p. 591.

⁷⁶*ibid.*

⁷⁷Edward (1990), p. 2.

⁷⁸Williamson, *op. cit.*, p. 26.

6. If the capital account is liberalised before the external trade sector then capital inflows into the economy would result in an exchange rate appreciation. This, in turn, would undermine the competitiveness of tradeables goods and add more difficulties to trade liberalisation attempts.⁷⁹
7. If the inflow of capital preceded fiscal discipline, normally included as an integral part of stabilisation programmes, this would lead to further complication of the budget deficit problem.⁸⁰

However the suggestion outlined above for sequencing of liberalisation should not be considered a panacea. The initial economic condition, political environment and credibility of government have important contributions to sequencing decisions as well as the extent of success or failure of the liberalisation programme.

(2.8) Empirical evidence:

A body of empirical studies has developed over the past two decades to investigate the main components of the transmission mechanisms in the M-S framework and assess the impact of liberalisation measures on the main macroeconomic variables. Thus empirical evidence examines the effects of financial liberalisation on savings, quantity and quality of investment, and economic growth.

2.8.1 The impact of financial liberalisation on saving:

The first key link in the M-S proposition is that financial liberalisation, through an increase in the real rate of interest will increase savings. The issue of real interest effect on savings in LDCs was studied well before the establishment of the theoretical

⁷⁹Greenaway and Morrissey, *op. cit.*, p. 257-258.

⁸⁰Williamson, *op. cit.*, p. 26.

foundations of financial liberalisation. In a study by Williamson (1968) on the determinants of personal savings in 6 Asian countries, the interest elasticity of savings was negative in 5 countries. Moreover, with the exception of the case of Japan the coefficients were not statistically significant in the regressions that used permanent and transitory disposable income as independent variables. In a study by Gupta (1970), personal saving in India had a positive interest elasticity which was significant at 1 % level when per capita disposable income was used as an independent variable.⁸¹

Encouraged by the M-S proposition that liberalisation has a positive effect on saving and the inclusion of interest rate reform measures in the stabilisation and structural adjustment programmes, several empirical studies have recently been undertaken to test the effects of the real interest rate on saving. Table (2.1) provides a summary of these studies, highlighting their methods of analysis, main findings and implications.⁸²

⁸¹See Balassa (1989), p. 6.

⁸²The design of the table is adapted from Arrieta (1988) and Kitchen (1993).

Table (2.1)
Summaries of the empirical studies on the impact of financial liberalisation on savings

Author(s)	Test	Method	Main findings	Implications for financial liberalisation
Fry (1978)	Impact of real interest rate on national savings in 7 Asian countries.	Estimates a national saving equation by 2SLS using pooled time series data with country dummy variables.	An increase in the real interest rate by 10% would increase the national saving/GNP ratio by 1.4% to 2.1%.	Positive support
Giovannini (1983)	Impact of real interest rate on domestic savings in the 7 Asian countries used in Fry (1978) but for different time periods.	Estimates a Keynesian-type domestic saving equation.	The coefficient for real interest rate is not significant.	Negative
Gupta (1984)	Impact of real interest rates on aggregate and private real savings functions in 12 Asian countries.	Estimates private and aggregate savings functions by OLS method.	The coefficient of real interest rates in the aggregate savings function is significant only for 4 countries. In the private savings equation the interest rate coefficient have a significant effect, in quantitative terms in 4 countries.	Limited support
Yusuf & Peters (1984)	Impact of real interest rate on gross national savings in Korea during 1965-81.	An aggregate savings function is estimated by OLS, and serial correlation was corrected by GLS.	The coefficient of real interest rates on deposits is positive and significant. A 10% increase of real interest rate increases gross national and domestic savings by 11.6% and 5% respectively.	Positive support
Giovannini (1985)	Impact of the expected real rate of interest on the growth rate of consumption in 18 LDCs	Estimates consumption growth rate as an increasing stochastic function in expected real interest rate by using instrumental variables method.	The real interest rate coefficient is positive and significant for 5 out of 18 countries.	Negative
de Melo & Tybout (1986)	Impact of real interest rate on aggregate domestic savings and domestic private savings in Uruguay during 1962-83.	Estimate aggregate savings function similar to Fry (1978) and Giovannini (1983) and a private savings function using annual data.	Real interest rates has a positive but a weak relation with aggregate savings rates and it has an insignificant impact on domestic private savings.	Very limited support
Gupta (1987)	Impact of real interest rates on savings in 22 Latin American and Asian countries during 1967-76.	Estimates an aggregate real savings function, by OLS and 2SLS using pooled time series cross sectional data.	A positive & significant interest rate coefficient is found in the Asian countries while it is insignificant in the Latin American case. The study asserts that pooling across countries is inappropriate.	Little support
Rittenberg (1988)	Effect of positive real interest rates on savings in Turkey during (1961-1985).	Estimates several national and private savings during different sub periods.	The impact of the change in real interest rates is more effective on savings when deposit rate is raised from substantially negative levels and less effective when the deposit rate becomes increasingly positive.	Limited support
Fry (1988)	Impact of real interest rate on national savings in 14 Asian countries over the period 1963-83.	Estimates pooled time series national savings equation in a life cycle model.	Real deposit interest rate exerts a positive and significant effect on national savings.	Positive support
Warman & Thirlwall (1994)	Impact of real interest rate on financial, total and private savings in Mexico over the period 1960-90.	Estimate three different savings functions (financial, total and private) using OLS method and annual data.	The rate of interest has a strong effect on financial savings but its effect on total and private savings is insignificant.	Negative

Source: Individual studies as shown under the author(s).

As shown in table (2.1), there is a mixed evidence regarding the effect of real interest rate changes on saving, nevertheless the sceptical findings are more significant than those in favour. It has been emphasised that arguments which take as axiomatic that saving responds positively to interest rates have no theoretical basis.⁸³ Interest rate changes yield income and substitution effects. The substitution effect causes deposit accounts holders to increase their savings but the income effect implies that fewer savings need to be held in order to maintain the same level of expected income.⁸⁴ The income and substitution effects are very likely to offset each others and hence the net impact on saving is ambiguous.⁸⁵

The differences in the findings of the empirical studies reported in table (2.1) can be attributed to two main problems, first the quality of data and second models specification. The dearth of reliable data is one of the main constraints that hinder empirical research and undermines its credibility. When it comes to the issue of savings and its measurement the problem becomes more severe.⁸⁶

Data on savings in LDCs is subject to considerable error.⁸⁷ Such data is mainly derived from national accounts, as a residual, by calculating the difference between domestic investment and foreign savings or by calculating the difference between national product and consumption expenditure.⁸⁸ Taking the difference between two terms that are estimated with error would magnify the problems in each and hence the bad quality of

⁸³Deaton (1989), p. 87.

⁸⁴Deaton and Muellbauer (1988), pp. 101-102.

⁸⁵Dornbusch and Reynoso (1989), p. 205.

⁸⁶Kotlikoff (1989), p. 34 emphasises that even with the best data answering some savings questions seems quite difficult and the question of what determines savings remains like a good jigsaw puzzle.

⁸⁷Balassa (1989), op. cit., p. 17

⁸⁸ibid., and Arrieta (1988), pp. 592-3.

savings data. Moreover there is a problem associated with the measurement of interest rates used. Most studies use interest rates on financial savings which are not necessarily relevant for the non-financial component of aggregate savings estimated in the studies. Further in the calculation of real interest rates, most studies attempt to use estimates of the expected rate of inflation which is not directly observed. Hence the statistical significance of the real interest rate coefficient may be reduced in the estimation process.⁸⁹

Empirical work on savings can be divided into two classes. First, studies that investigate the direct effect between real interest rates on savings and second, those studies which are concerned with the relation between consumption growth rate and interest rate following the Euler equation approach.⁹⁰ As mentioned above, the theory suggests nothing for the first case and predicts a positive effect for the second.⁹¹ However most of the empirical studies reported in table (2.1) belong to the first class. Moreover constrained by the problem of data in LDCs, several studies specify their models in reduced forms in order to allow for testing, which casts further doubts on their findings.⁹²

2.8.2 The effects of financial liberalisation on investment:

The second key link in the M-S framework, is the proposed positive impact of financial liberalisation on the quantity and the quality of investment. Regarding the quantity of investment, empirical studies tested the impact of financial liberalisation through two channels. The first channel is to test the effect of real interest rate increases, through domestic credit availability on the volume of investment. The second channel is to test

⁸⁹For further discussion of the problems associated with the quality of data see Balassa (1989), *op. cit.*, pp. 17-20.

⁹⁰The Euler equation approach focuses on the relation between consumption growth rate and the interest rate. See Deaton, *op. cit.*, p. 88.

⁹¹Which means a negative reaction between an increase in real interest rate and savings.

⁹²Kitchen (1993), p. 89 and Gibson and Tsakalotos (1994), p. 596.

McKinnon's complementarity hypothesis between money and capital discussed above. As far as the quality of investment is concerned, the few empirical studies available focus on the effect of real interest changes on the efficiency of investment measured by the incremental capital/output ratio (ICOR). Table (2.2) summarises the empirical studies on financial liberalisation effect on the quality and quantity of investment.

Table (2.2)
Summaries of the empirical studies on
the impact of financial liberalisation on investment

Author(s)	Test	Method	Main findings	Implications for financial liberalisation
Fry (1978)	Relationship between money and capital in 10 Asian LDCs, in order to test McKinnon's complementarity hypothesis.	Estimates a demand for money equation by 2SLS and country dummy variables.	Negative and significant coefficient between money and savings ratio, i.e. money and capital are not complementary.	Negative
Fry (1979)	Impact of real interest rate on the quality of investment in Turkey during 1950-77.	Regresses the incremental capital/output ratio on real deposit interest rate by OLS method.	An increase in the real deposit rate is associated with an increase in the IOCR.	Positive support
Fry (1980)	Impact of real interest rate on investment in 61 LDCs during 1965 -1975 through the real credit availability mechanism.	Estimates, separately, 8 investment equations, with and without country dummy variables, by 2SLS.	The credit ratio is significant in 6 equations out of 8, while the change of credit ratio, in logarithmic form, is significant in 7 equations.	Positive support
Gupta (1984)	Tests McKinnon's complementarity hypothesis in 25 Asian and Latin American countries.	A simultaneous equation model is estimated by 2SLS.	Complementarity is not a widely pervasive phenomenon in the sample countries.	Very limited support
Fry (1986)	Impact of the availability of private sector domestic credit on investment in 14 Asian countries during the period 1962-83.	Estimates an investment equation, using a flexible accelerator model, and including the ratio of private sector credit to GNP as an independent variable.	The private sector domestic credit variable exerts a significant and positive influence on the investment rate.	Positive support
de Melo & Tybout (1986)	Impact of real interest rates on private investment for Uruguay during the period 1962-83.	Estimate four separate equations of private investment which include a regime dummy variable and using annual data.	Real interest rate has a negative and weak effect on private investment.	Negative
Jansen (1989)	Effect of real lending rate on private investment in Thailand during the period 1962-84.	Estimate the ratio of private investment to GDP as a function of real lending rate, lagged corporate savings and lagged real growth rate of GDP.	The coefficient of the real lending rate is significantly negative.	Negative
Gelb (1989)	Effect of real interest rate on the efficiency of investment for 34 countries over the period 1965-85.	Estimates an IOCR (incremental output capital ratio) function by OLS using the pooled-sample data of Hanson and Neal (1987).	Real interest rate coefficient has a significant and positive coefficient, indicating a favourable effect of liberalisation on the quality of investment rather than its quantity.	Positive support

Rittenberg (1989)	Impact of real interest rate policy on investment spending in Turkey over the period 1964-86.	Estimates three equations of investment, using a switching model. In the first the real deposit rate is exogenous and in the second is endogenous. In the third equation the real GNP and exchange rate are also assumed endogenous.	Private non-housing investment is highly sensitive to interest rate changes. In the liberalisation period interest rates were too high to foster investment.	Negative
Demetriades & Devereux (1992)	Effect of real interest rate on investment in a panel of aggregate data for 63 countries over the period 1961-90.	Estimate an investment model in financial repression conditions, in an economy with an official market and an unrestricted market with higher rates of interest.	Domestic real interest rate has a negligible and statistically insignificant influence on investment. Moreover interest rate ceilings may reduce the overall cost of capital and lead to higher rate of investment.	Negative
Voridis (1993)	Impact of interest rate ceilings on private fixed investment in Greece over the 1960-1985.	Estimates 3 flexible accelerator investment specifications by the OLS method.	Rises in private sector domestic credit lead, after a delay, to a significant increase in private fixed investment. Declines in real interest rate are associated with reductions in investment. The crucial role of the market structure of the banking industry is emphasised	Positive support
Morriset (1993)	Relationship between real interest rates and private investment in Argentina (1961-82).	Estimates private investment equation by 3SLS and using a modified version of the flexible accelerator model.	The increase of real interest rates does not necessarily involve a positive effect on private investment.	Negative
Warman & Thirlwall (1994)	Real rate of interest effect on gross fixed investment in Mexico 1960-90.	Estimate two gross fixed investment equations, using a switching model in the first.	In the two equations, holding the supply of credit constant, real investment is negatively affected by the rate of interest.	Negative

Source: Individual studies as shown under the author(s).

Table (2.2) shows that while the positive effects of financial liberalisation on the quantity of investment are not satisfactorily supported by econometric evidence, its impact on the quality of investment is significant. It is worth noting, however, that these findings are based on the assumption that the quality of investment is monotonically related to the improvements in the ICOR. Moreover there is a problem of omitted variables as the reported studies, again because of data availability problems, often use a reduced form of the models. Thus the policy implications derived from such studies should be carefully interpreted.

2.8.3 Effects of financial liberalisation on economic growth:

The third key link in the M-S framework is between financial liberalisation and growth via the savings-investment effects analysed above. The early empirical studies test the relation between financial liberalisation and growth by regressing the latter on real interest

rate changes for a single country or a cross sectional sample of LDCs. Recent studies adopt a more sophisticated approach by using an endogenous growth model and resort to larger datasets than the ones used in earlier studies. Table (2.3) provides a summary of the main empirical studies on financial liberalisation and growth, in which it is shown that positive relationship between financial liberalisation and economic growth is more established when other financial indicators than real interest rates are used.

It is worth noting however that whether the causal relationship runs from financial development to growth, the reverse, or both ways still in need for further evidence. For example in the comprehensive study of King and Levine (1993), the partial correlations between growth and the indicators of financial development remain significant even after controlling for core variables such as the level of GDP. This means that the correlations are robust and there is a need to consider policy variables that affect the financial market but are not themselves affected by growth.⁹³

Table (2.3)
Summaries of the empirical studies on financial development effects on economic growth

Author(s)	Test	Method	Main findings	Implications for financial liberalisation
Fry (1978)	Impact of real interest rate of deposits on economic growth in 7 Asian countries over the period 1961-72.	Estimates a model that captures the short run and long run effects of real interest rate changes on economic growth.	As a result of financial recession, 0.5 percentage points is forgone for every 1 percentage point by which real interest rate is set below its equilibrium level.	Positive support
Lanyi & Saracoglu (1983)	Effect of real interest rate on the rate of growth of real GDP IN 21 LDCs.	In the estimated equation, a value of 1 is given to countries with positive real interest rates, 0 to the ones with modestly negative rates and -1 to those with highly negative real interest rates.	The real interest rate coefficient is positive and significant but they describe their results as tentative.	Tentative support
Fry (1986)	Effect of real deposit interest rate on real economic growth in 12 Asian countries over the period 1961-82.	OLS estimates of pooled time series data with country dummy variables.	The real deposit rate coefficient is positive and significant.	Positive support

⁹³For a further discussion of this issue see Pagano (1993), p. 620.

Khatkhate (1988)	Impact of real interest rates on the average real GDP growth in 64 LDCs during the period 1971-80.	LDCs are classified into two groups; above-mean and below-mean real interest rate. Mann-Whitney non parametric test is used in the analysis.	No difference with any statistical significance is found between the 2 groups, regarding the impact on the rate of real GDP growth.	Negative
Gregorio & Guidotti (1993)	The relationship between the degree of financial development and long-run economic growth.	The adopts the endogenous growth approach and uses 2 different data sets. A sample of 98 countries and a panel data set for 12 Latin American countries.	Positive effect of financial development, proxied by private credit ratio, and long run economic growth. In the case of Latin American countries the effect is negative due the extreme experience with liberalisation.	Positive support
Roubini & Sala-i-Martin (1992)	The relation between financial repression and long term growth for 98 countries during the 1960-85 period.	The estimation uses an endogenous growth model in which indices of human capital, political stability, economic distortion and financial repression are included as independent variables.	Financial repression affects growth negatively.	Positive support
King and Levine (1993)	The empirical link between financial development and economic growth for 57 countries over the period 1960-89.	The study adopts endogenous growth model and includes various indicators of financial development, indices for political liberty and stability and regions dummy variables as independent variables.	Real economic growth is positively correlated with indicators of financial development such as the size of formal sector relative to GDP, percentage of credit to the private sector and importance of banks relative to the central bank.	Positive support
Warman & Thirlwall (1994)	Effect of real interest rate on real economic growth in Mexico over the period 1960-90.	Estimate a growth equation by OLS method in which real interest rates, growth of exports, public savings ratio and foreign savings ratio.	The real interest rate coefficient is negative and insignificant.	Negative

Source: Individual studies as shown under the author(s).

(2.9) Concluding remarks:

The main findings of the empirical work discussed above are summarised by Fry (1993):

"The real interest rate has virtually no effect on the level of saving.. An increase in the real interest rate towards its normal free-market competitive equilibrium level .. is associated with higher growth attributable to improved total factor productivity and increased incremental output/capital ratios. Less financial repression as measured by a variety of variables is associated with higher rates of economic growth."⁹⁴

The adverse effects of financial liberalisation in Latin American countries and the relative success in few Asian countries has compelled a re-assessment of financial liberalisation.⁹⁵

Financial liberalisation as applied in several countries has not led to an improvement in

⁹⁴ Fry (1993), op. cit., p. 33.

⁹⁵ See Diaz-Alejandro (1985) on the Latin American experience and Cho and Khatkhate (1989) on the lessons derived from financial liberalisation in Asia.

the market structure, its conduct or performance and financial market continued to behave in an oligopolistic manner.⁹⁶

Even in Korea and Taiwan, two celebrated examples of successful liberalisation, Park (1993) concludes his study by emphasising that it was difficult to identify any significant changes in the behaviour of financial institutions and markets that may indicate a response to the change in financial environment. Moreover there was not any discernible change in the two countries regarding the relationships between the government and financial institutions.⁹⁷

The cost of financial intermediation and interest rate spreads in some cases remained as high as pre-liberalisation, and in other cases there have been evidence of deterioration. Galbis (1993), using a sample of 28 LDCs which, identifies four main causes for high real interest rates associated with the implementation of financial liberalisation programmes. They include inflationary expectations, exchange rate risk, wrong monetary and fiscal policy mix and malfunctioning of the financial sector.⁹⁸

Moreover financial liberalisation in the case of southern cone countries has intensified rather than corrected the problems associated with financial repression.⁹⁹ In several countries, in the absence of macroeconomic stability and adequate prudential regulation, financial repression was substituted for financial crisis. For example in Chile, premature financial decontrol, bad banking practices and desperate borrowers, pushed interest rates amid their liberalisation in the mid 1970s to very high levels. This form of "repressive

⁹⁶Fry (1993), pp. 36-7.

⁹⁷Park (1993), p. 146.

⁹⁸See Galbis (1993), pp. 25-48.

⁹⁹See for example Corbo, de Melo and Tybout (1986), pp. 628-9 and Moretti (1992), pp. 33-8.

liberalisation"¹⁰⁰ undermined the profitability of projects which extended their borrowing to stay in business.¹⁰¹ Eventually, widespread bankruptcies and massive increase of bad loans, including a significant size of consumption loans, signified a major financial crisis in 1981-82 and necessitated government intervention which put the financial system under tight control.¹⁰²

Three main issues can be derived from the experience of financial liberalisation over the past two decades and from the empirical studies reviewed above. First, the empirical evidence suggest that the main channel of transmission from financial liberalisation to growth is the effect on the quality of investment rather than its quantity. Second, a successful financial liberalisation policy is dependent on maintaining sound macroeconomic policies, expedient fiscal practice and controlling the budget deficit. Third, financial liberalisation does not imply removing all regulations. There is a consensus among different financial development schools that adequate prudential regulation is one of the main prerequisites for a successful financial liberalisation.

Accordingly, in this study we find that it is essential to distinguish between government intervention, e.g. by regulatory methods, in response to market failures of the financial system, and intervention that causes distortions and inefficiencies in the financial market through repressive measures.

¹⁰⁰This is the description given for the Chilean reform experience by Araya-Gomez (1990).

¹⁰¹See McKinnon (1991), pp. 38-41 and Roe (1993), p. 9.

¹⁰²See Edwards and Edwards (1991), pp. 53-56.

Chapter (3)

Structure, Regulation and Performance of the Egyptian Banking System

"Commercial activity on the part of the ruler is harmful to his subjects and ruinous to the tax revenue".

Ibn Khaldun (1332-1406)

(3.1) Introduction:

In this chapter we analyse the development of the banking system since its early stages in the mid 19th century. We divide such development to three main phases. The first starts in 1856 with the establishment of the first bank in Egypt and ends in 1952 with the outbreak of the revolution which also marks the beginning of the second phase. In our analysis of this phase we attempt to provide an account of the key developments in the banking system. This review is essential for three reasons. First to understand the distinctive characteristics of the banking system in Egypt that shaped its structure and role before the 1952 revolution and after. Second most of the operating banks in the subsequent periods, including the central bank, were established during this phase which requires some discussion of their historical background. Third, many of the measures taken concerning banking activities in the 1950s and 1960s were, to a great extent, reactions to policies and practices adopted during this phase.

The second phase 1952-74 was a period of heavy government intervention in economic activity and witnessed the Egyptianisation and then the nationalisation of banks. The third phase, which we consider to be a period of partial liberalisation for the reasons given below, starts in 1974 with the adoption of open door policy and ends in 1991 with the start of the application of a financial reform programme supported by the World Bank and the IMF.

Moreover, based on a series of interviews undertaken by the author in 1992 and 1993 with bank officials and experts in the Egyptian financial sector, we discuss the main difficulties that have faced the development of the banking system. Then we analyse the state of prudential regulation and bank supervision, as one of the prerequisites for a successful financial liberalisation policy. Finally the performance of banks is analysed by considering main indicators of bank efficiency compared with those of other countries.

This chapter is mainly concerned with the measures that affected directly the structure of the banking system and its regulation. Moreover the chapter combines an overview of the historical evolution of the banking system with some assessment of its present performance. Other measures with indirect impact on the structure and operations of banks grouped under financial repression, e.g. interest rate policy, reserve requirements, credit control..etc, are analysed in chapter (6).

(3.2) The first phase: 1856-1952

3.2.1 The establishment of foreign commercial banks:

Commercial banks were the first financial institutions to appear in the process of economic development in Egypt. Their establishment in the second half of the 19th century were closely associated with the needs of the extensive cultivation of cotton. Although cotton started to have an important role in the Egyptian agricultural sector from the beginning of the 19th century¹, it did not receive a considerable attention until the time of the American Civil War (1861-1865). American exports of cotton fell during this war, giving an immense motivation to cultivate it in Egypt. Cotton production doubled and its price increased four times during the 1860s. Cotton became the prime Egyptian product and the main source of exports revenue for the following decades, until oil started to take over its position in the 1970s.

¹ Cotton was introduced by Mohammed Ali the Ruler of Egypt (1805-1848). For an overview of this period see Owen (1981), pp. 64-82 and Vatikiotis (1991), pp. 49-69.

Further the Suez Canal was opened in 1869 as an important waterway linking the east with the west and emphasised the potential importance of Egypt in international trade. The Egyptian trade was expanding, mainly due to the increase of cotton production. Foreign trade figures for the 19th century may not be accurate, but they can at least give a rough indication of the trend of foreign trade. The average export value was approximately £E 2.6 million per annum during the 1850s. In the subsequent decade, exports rose by an average of 23.5% per annum to reach £E 8.85 million in 1870².

The chronic shortage of capital was hindering further growth in the Egyptian economy and its trade. Agricultural borrowers were relying on village money lenders. Foreign trade was receiving insufficient funding from a few finance houses similar in their operation to the old merchant bankers of the City of London. There was a manifest need for an organised formal financial system. Developing such a system was hindered for several reasons. Among them was the inability of banks to introduce financial services that do not break the Islamic ban on usury; high financial instability during this period; the modest per capita income, and hence lack of savings; and the limited experience in credit dealings. As shown below, these very reasons, after more than 100 years, still impede the development of the Egyptian financial system. However an attempt was undertaken to establish a government-owned commercial bank in 1830 with a capital of £300,000. This attempt failed, simply because the government could not raise the capital required.

The dearth of finance in Egypt received the attention of foreign financiers who found in the country an attractive outlet for their capital. Foreign capital started to flow towards the country in the form of loans to the government. In 1862 Egypt had its first foreign loan in its modern history. The loan was for £E 3,292,800 million at 7% and redeemable

² See NBE (1948), pp. 8-9.

in 30 years³. Borrowing abroad continued by successive governments in order to finance the repayment of old debts and fund its projects.

Foreign debt accumulated and the country was saddled by a debt burden which it could not manage. Foreign control was imposed on Egypt to manage the repayment of the debt. Thus the *Caisse de la Dette Publique*, was created in 1876 as an exchequer office for the government and was entirely controlled by a commission of foreign creditors. Its objectives were mainly to collect public revenue, service the public debt and engage, at the same time, in commercial transactions.

Foreign financier's response to the growing need for capital in Egypt took also the form of establishing local financial institutions. Thus modern foreign-owned commercial banks were founded to fund the cultivation of crops, mainly cotton, and finance foreign trade. Some of these banks were branches of European banks and a few of them were registered in Egypt. The first of these banks was the Bank of Egypt which was established in 1856 with a head office in London, a main office in Alexandria and a branch in Cairo. There is no agreement between the sources on the size of the capital of this Bank. However it is variously reported to be between £500,000 -£1,000,000 and the paid-up capital was £250,000⁴. Its claimed aim was to encourage trade between Egypt and Britain. The bank was also involved extensively in the purchase of Treasury Bonds which were issued by the government to finance its current spending.

Many foreign banks were established in the following years. Their main activity was the purchase of Treasury Bonds and meeting the increasing credit demands of the khedive. However the debt crisis of the 1870s, the associated establishment of the *Caisse de la*

³ *ibid.*, p. 10.

⁴ See NBE, *op. cit.*, p. 13.

Dette and, then, the putting of Egyptian finance under strict foreign control in 1879, made it difficult for several banks, especially the new ones, to continue. Thus many of these banks were short lived and were liquidated, the remaining ones limited their activities to small scale operations⁵. Table (1) below gives an account of the main banks established during the 19th century and before 1952.

⁵ See Shafi'i (1985), pp. 183-185 and NBE (1948), op. cit., p. 13.

Table (3.1)
Main Banks Established in Egypt before 1952

Date	Name of Bank	Ownership	Main activities	Comments
1856	The Bank of Egypt	British	Commercial	Specialised in financing foreign trade and treasury bonds dealings. Closed down in 1911.
1863	Imperial Ottoman Bank	Turkish and Anglo-French	Agriculture	
1864	Anglo-Egyptian Bank	British-French	Foreign trade	Amalgamated with other banks in 1925 to become Barclays Bank (D., C. and Overseas)
1869	Comptoir National d'Escompte de Paris	French	Commercial	Closed down in 1873, reopened in 1905.
1874	Crédit Lyonnais	French	Commercial	Was bankers for the Caisse de la Dette until its abolition in 1940.
1880	Banco di Roma	Italian	Commercial	Became an Egyptian company in 1922, sequestrated in 1940 because of the War, reopened in 1948.
1880	Crédit Foncier Egyptien	French	Land mortgage	
1887	Cassa di Sconto e di Risparmio	Italian	General commercial	Closed down in 1907.
1889	National Bank of Egypt	British	Central bank activities & general commercial	
1902	The Agricultural Bank of Egypt	British & Egyptian	Agriculture	Closed down in 1936.
1906	National Bank of Greece	Greek	Commercial	
1907	The Ionian Bank	Greek	Commercial	
1911	Banque Belge pour l'Etranger	Belgian	Commercial	
1920	Bank Misr	Egyptian	Universal with emphasis on industry	
1920	Commercial Bank of Egypt	Foreign	Commercial	
1920	Banque de commerce	Foreign	Commercial	
1924	Banca Commerciale Italiana	Italian	Commercial	Sequestrated in 1940 because of the War & reopened in 1948.
1925	Barclays Bank	British and Foreign	Commercial	
1931	Crédit Agricole d'Egypte	Egyptian & Foreign	Agricultural	Became the Agricultural & Cooperative Credit Bank in 1948.
1947	Industrial Bank	Egyptian & Foreign	Industrial	
1948	Agricultural and Cooperative Credit	Egyptian, foreign & cooperative societies	Agricultural	

Source: Compiled from NBE (1948).

Towards the end of the 19th century, it was realised that the *Caisse de la Dette*, would disappear at some stage, after solving the debt problem⁶. On the other hand the financial development of the country was paralysed as there were few operating foreign banks and no Bank of Issue. Thus it was felt that "an institution of the nature of a State Bank would be necessary to carry on the Treasury business of the Government and the work done,..., by the Caisse in respect of the Public Debt"⁷. Hence the National Bank of Egypt (henceforth NBE) was established in 1898 as a commercial bank with a capital of £1 million, and the head office of the bank was based in Cairo. However the bank was owned and managed by British citizens and maintained close ties with England through what was known as the London Committee. This committee was supposed to be of consultative nature but it had a say on transactions exceeding £100,000 and other important decisions.

According to the Khedival decree⁸ the NBE was granted, exclusively, the privilege of issuing banknotes, which were introduced for the first time in the Egyptian monetary system. It is worth noting that before 1885 there was no uniform currency. The monetary system was based on gold and silver as a standard of value and medium of circulation, and several Turkish and European currencies were in circulation. In 1885, in accordance with the demands of the Caisse, a reform law was passed defining the currency unit in terms of gold only, allowing the British sovereign to be the chief instrument of circulation and preventing dealings in any other foreign currency⁹. The NBE participated as well

⁶ As a matter of fact the NBE did not take over the responsibility of the Caisse de la Dette until 1940 when the government reached an agreement with the French and the British government regarding the abolishing of the latter. NBE (1948), op. cit., p. 69.

⁷ Quoted in NBE (1948), p. 16.

⁸ Decree of 25th June 1898.

⁹ Due to the fact that the public was not accustomed to paper money, the circulation of banknotes issued by the NBE was quite slow in the beginning as just 25% of the issued notes went into circulation in 1899 which was the first year of issuance. Circulation gradually increased with growing familiarity of the public with the notes. However banknotes did not become legal tender until the outbreak of the First World War when the government found it necessary to "strengthen the financial situation of the country, by defending public credit against illegal speculation and unjustified panics...[thus] all payments effected by means of banknotes, for whatever reasons and value, will be effective discharge as if they have been made in gold". (Khedival decree of the 2nd of August 1914, quoted in NBE (1948)). For further discussion of the development of the Egyptian monetary system during this period, see Shafi'i, (1985), pp. 175-207.

with the rest of foreign commercial banks to provide short term finance for big cotton cultivators.

The operating banks benefited from the cotton-related boom of the 1902-1907 period. The value of exported cotton increased by 52% during these six years due to a sudden rise in the international market. This favourable shock was accompanied by political stability which stemmed from the Anglo-French agreement of 1904. Consequently the economy observed unprecedented inflows of capital mainly in the form of mortgages secured by agricultural and urban land. To sum up, this period started with excessive speculation in land, shares and cotton and ended with an inevitable crash¹⁰. Further discussion of the developments during this period is provided in the following section.

Many banks faced bankruptcy and closure in 1907 including the Cassa di Sconto. Others were left very vulnerable to any further shocks in the future. Thus the Bank of Egypt was forced into liquidation in 1911 when it faced further problems. It could not call in mortgages on land to pay short term bills borrowed from London. This was a result of the bank's unsound practice of short term borrowing and investing in long term loans secured on agricultural and urban properties¹¹.

As shown in table (1) more commercial foreign banks were established in the following years. Many of these banks focused in serving some foreign communities like the Greek banks. However two aspects were shared by foreign banks. First geographic concentration, as these banks were located in the capital and main ports. Second they either financed large cotton cultivators or foreign trade.

¹⁰ For further analysis of this period, see the following chapter.

¹¹ See NBE (1948), p. 34.

Effectively the country was still deprived of a banking system which would contribute to its broader development. Financing crops other than cotton was neglected. Advancing loans to small cultivators was considered either risky or technically difficult. Funding industrial projects was not compatible with the policy of short term financing adopted by foreign banks. Attempts to change this passive role of the operating banks were undertaken and took the form of government intervention and private initiatives inspired by the independence movement. These attempts, which marked the main developments of the banking system until 1952, are discussed below under their two main objectives, viz. extending agricultural credit and funding industrial projects.

3.2.2 Agricultural Credit:

Owing to the lack of acceptable collateral and high administrative costs, foreign banks generally abstained from lending to small cultivators who continued to borrow from private money lenders, usually brokers and merchants acquainted with local farmers. Due to the nature of informal transactions, it is not known exactly how high the interest rates charged were.

The literature usually describes informal borrowing as being at high exploitive interest rates and at unfavourable terms, which necessitates intervention. We argue that there are two reasons that justify this argument in Egypt. First money lenders used to enjoy monopolistic positions in their respective villages, with the exception of some competition of cotton exporters, who used to advance credit to large cultivators, and the Sugar Company in the south which financed the growers of sugar cane in upper Egypt. The rest of the credit market was left to money lenders. Second, many of these money lenders were actually working as intermediaries between the foreign banks and their clients in rural areas, which means that they added a margin on the bank interest rates. Further it is reported that such money lenders were charged higher interest rates than other bank

clients, e.g. cotton exporters. In a typical year they were charged 5-6.5 per cent while cotton exporters were charged only 4.5 per cent.¹²

The Agricultural Bank of Egypt was established in 1902, by the collaboration of the government and the NBE. The establishment of the Agricultural Bank was based on an earlier successful experience when the government stepped in, during the 1890s, to provide peasants with loans at relatively low interest rates. The Agricultural Bank and the NBE maintained close links. Approximately one third of the capital of £1.25 million of the Agricultural Bank was subscribed by the NBE. The governor of the latter was also the president of the former's board.

The Agricultural Bank's objective was to assist small cultivators, defined then as those who own 5 feddans of land or less. The bank progressed steadily in due course. Its capital increased three times in 10 years and its working capital was soon fully employed.

After the crisis of 1907 and the accompanying instability in the land market, the government intervened to protect small cultivators and enacted in 1911 the 'Five Feddan Law' that forbade the foreclosures of the owners of five feddan of land or less. Such immunity from seizure for debts did protect small landowners but, at the same time, it had a negative impact on their financing arrangements. They could not obtain credit from the Agricultural Bank as they were unable to provide the required collateral. Small cultivators and landowners again had to rely on local money lenders.¹³ Moreover, the Agricultural Bank, as a result of the Five Feddan Law, lost 85% of its business. The bank struggled during the subsequent years with a continuing decline of its activities as

¹² See Issawi (1963), p. 260, footnote 1.

¹³ See Hansen (1991), p. 52.

the total amount of loans fell from £E 7 million in 1911/12 to as low as £E 0.5 million in 1931/32. This led eventually to the liquidation of the bank in 1936¹⁴.

The predominance of small scale farming and the evident requirement for relatively cheap short term credit more than any other form, emphasised, again, the need for a financial institution which caters for small cultivators as well as agricultural cooperative societies. Thus the *Crédit Agricole d'Egypte* was established in 1931 with a capital of £E 1 million, of which the government subscribed one half and the other principal banks the other. The bank was exempted from the Five Feddans Law and utilised the services of tax collectors to recover loans which enabled the bank to reduce costs and ensure repayment. Interest rates charged were quite modest ranging between 1% and 2.5%.¹⁵ The bank was able to charge such low interest rates thanks to a special appropriation of £E 9 million provided by the government at a low rate of 1%.

The credit granted by the bank was predominantly for short term. While total credit was steadily increasing, from £E 16.4 million in 1953, £E 17.4 in 1954 to 19.6 in 1955, medium term and long term credit did not exceed in any year £E 0.5 million¹⁶. Long term loans (3-10 years) were mainly for agricultural machinery and land improvement

Nonetheless, the bank developed rapidly, and by 1940 it had over 100 branches and 500 barns distributed all over the country. It extended its activities to supply fertilizers and collect grain and increased its advances to cooperatives from 5% in 1933 to 29% in 1940. In 1948 the capital of the bank increased by £E 0.5 million, half of which was subscribed by the government and the rest by rural and consumer cooperatives. The bank's name

¹⁴ NBE (1948), *op. cit.*, pp. 26-27.

¹⁵ See Issawi (1963), p. 260-261.

¹⁶ See Ali (1958), p. 65.

changed to Agricultural and Cooperative Credit Bank to emphasise its cooperative function. This function developed as the bank gradually channelled its credit through the cooperative societies which increased from 38% in 1956 to 50% in 1958 and 84% in 1960.¹⁷

3.2.3 Industrial Credit: The case of Bank Misr

As shown in table (1) above, until 1920 several foreign banks were operating in Egypt in addition to the NBE which was legally considered an Egyptian bank, despite the fact that it was founded with British capital. The conditions of the First World War and the outbreak of the Egyptian revolution in 1919 inspired a campaign to establish a pure Egyptian bank as a necessary element of economic independence.¹⁸

Further it was realised that the operating banks with their concentration on short term financing for cotton and foreign trade did not cater for the growing needs for long term industrial credit. Hence Bank Misr was founded in 1920 with an initial capital of £E 80 thousand raised to £E 1 million under a precise condition that only Egyptians could be shareholders and members of the board of directors. The capital of the bank was subscribed by 126 shareholders; mainly large landowners and big merchants who benefited from the economic boom which followed the World War I.¹⁹

In ten years the volume of deposits increased from £E 200 thousand to £E 7 million in 1930 to an impressive total of £E 54 million in 1947 reflecting the confidence of the

¹⁷ Issawi, op. cit. p. 262.

¹⁸ The idea of establishing a pure Egyptian bank dates back to the period following the crisis of 1907 and was discussed in the Parliament in 1911 which passed a recommendation of establishing such a bank but without success. It was Talat Harb Pasha, a leading economic figure who adopted the idea and started a campaign in 1919 to establish the first pure Egyptian bank which was officially inaugurated in May 1920. (see Deeb (1976), p. 70, and for a discussion of the main political developments of this period and its economic implications see Tignor (1976) and Davis (1983).

¹⁹ Davis (1983), op. cit., pp. 108-109 and Deeb (1976), pp. 70-71.

public and the progressing function of the bank which became second only to the NBE²⁰. It is worth noticing that the Bank received support from the government which took the form of annexing Post Office Savings accounts to it in 1927. By this move the contribution of small deposits in financing the activities of the bank increased remarkably till it reached a peak of approximately 75% of total deposits in 1939.

Bank Misr was influenced by the German banking system and its role in the rapid expansion of German industry and trade after 1880. The concept of a *Grossbank* or a universal bank inspired the founders of Bank Misr to apply this idea in Egypt²¹. However we can distinguish between two main methods adopted by Bank Misr in supporting domestic industry.

- First, it was able to take direct participation in the ownership of companies. Through its affiliated companies of Misr Group, the bank played an impressive role in the early industrialisation of the country. The number of these companies reached 27 in 1940 ranging from dairy products, fisheries to spinning and weaving, insurance to airlines covering the Middle East region. The aggregate paid-up capital of the affiliated companies was £E 20 million.²²
- Second, it was able to provide loans and advances. In addition to participation in their capital, Bank Misr advanced credit to some of its affiliated companies. For example in 1936, seven Misr companies received £E 1.5 million. Further, the bank borrowed from the government from 1932 to 1939 an aggregate amount of £E 1.1 million mainly to finance its affiliated companies.²³

²⁰ *ibid.*, p. 145.

²¹ *ibid.*, p. 97.

²² Issawi (1963), p. 274.

²³ *ibid.*, 265.

However, the massive spread of Bank Misr's activities involved high risks and the bank started to face difficulties in the late 1930s. One of Bank Misr affiliated companies was the Société Foncière d'Égypte which was taken over by the bank in 1927. This financial company, following an agreement with the government in 1930, took over the debts of landlords who were faced with foreclosure as a result of their inability to pay mortgages secured on their lands. Due to the continuing drop in cotton prices, outstanding loans were not paid to the Société Foncière and Bank Misr, as a holding company, was held responsible.

Moreover, due to the bank's continued practice of short term borrowing and long term lending,²⁴ the bank suddenly found itself facing a run by numerous depositors of the Post Office Savings accounts and other small depositors when the hostilities of World War II started in 1939. The problem was severe as small deposit accounts comprised 75% of the Bank's total deposits of £E 12.7 million. However the government, under public pressure, intervened to alleviate the bank's difficulties by guaranteeing its deposits and ordering the NBE to provide Bank Misr with the required liquidity.²⁵

The new management of the bank which took over after the crisis of 1939, for political reasons, was not keen to continue the support of the bank that was competing with foreign capital within the Egyptian economy. It was concerned mainly with extracting profit from the bank and its affiliated companies. The distinctive role of Bank Misr started to vanish and the bank effectively lost its *raison d'être*.²⁶

²⁴ Issawi (1963), p. 265.

²⁵ It worth noting that the NBE was reluctant at the beginning to assist Bank Misr as there was political conflict between the management of the two banks. The government under public pressure agreed to help Bank Misr out from this crisis with a condition that Harb Pasha, the founder of the Bank, should resign from his position as a managing director. See Shafi'i (1985), op. cit., p. 315 and Davis (1983), op. cit 166-169.

²⁶ See Deeb (1976), p. 79.

However, after the end of the Second World War the need for industrial credit to small and medium size enterprises was again recognised, especially when Bank Misr ended up acting like the rest of commercial banks. Thus in 1947 the Industrial Bank was established with 51% of its capital owned by the government, 30% subscribed by the operating banks and 20% were in form of shares held by the public. The government guaranteed a minimum of 3.5% of the nominal values of the shares as profits. The aim of the bank was to widen the industrial base by establishing small enterprises or advance credit to them. Until early 1950s the bank was not able to fulfil its objectives. It advanced credit to relatively big projects which were able, anyhow, to obtain credit from commercial banks and was reluctant to advance credit to newly established small projects because of high risk associated with their activities.²⁷

3.2.4 The origins of central banking in Egypt:

As noted previously the NBE, since its establishment in 1898, acted as the bank of the government, a private note-issuing bank, and financial adviser to the government. But the NBE was not functioning as a bankers' bank, last resort lender or controller of credit supply through discount rates and open market operations²⁸.

The powers of the NBE as a central bank were not fully or legally defined. Because there was no law governing its central banking functions, most of the problems were solved through the so-called 'Gentlemen's Agreements' with the managements of the operating banks.²⁹

²⁷ Doghaim (1989), pp. 135-137.

²⁸ See Issawi (1963), op. cit., p.266.

²⁹ An example of these Gentlemen's agreements was the one reached with the clearing houses in Cairo and Alexandria in 1943 which resulted in keeping 15% in cash or deposits with the NBE as a temporary arrangement during the war period. Hansen and Marzouk (1965), p. 215.

Part of Central Bank work was undertaken as well by the *Conférence des Banques*. This association was created in Alexandria in 1937 by an initiative of Crédit Lyonnais³⁰ to render several objects, among them:

- Establishing and maintaining regular relations between the member banks.
- Making the rules of the profession as uniform as possible.
- Studying as a group the laws, decrees and regulations relating to the profession.
- Exchanging information regarding the solvency and 'morality' of clients and traders.³¹

Moreover the *Conférence des Banques*, in which the NBE was just an observer, was responsible for determining tariffs charged for banking services.

The need for a fully-fledged central bank with clearly defined functions was reflected in a draft law prepared for issuance in 1940 giving the NBE officially the status of the Central Bank of the state and empowering it with more functions.³² However, the developments of the Second World War and the occupation of the government with war-time problems postponed the issuance of the law.

Further problems arose when post war difficulties of Britain raised some questions about the issue of linking the Egyptian pound with the sterling. After the war Britain was indebted to Egypt to a total of £430 million³³. These sterling balances were a pressing issue as they could not be converted into goods. Converting debt to goods and financial services was the solution for the £100-£150 million accumulated for Egypt after the First

³⁰ There were 16 founder banks of the association some of them disappeared because of sequestration during World War II and the banks were: the Ottoman Bank, Comptoir National, d'Escompte de Paris, Crédit Lyonnais, Banco Italo Egiziano, National Bank of Greece, Bank of Athens, Ionian Bank, Banque Belge pour l'Etranger, Bank Misr, Commercial Bank of Egypt, Commercial Bank of Near East Ltd., Banca Commerciale Italiana, Barclays Bank, Dresdner Bank, Turkiye Is Bankasi and Yokohama Specie Bank.

³¹ NBE (1948), op. cit., pp. 102-103

³² Draft of the Royal decree of June 1940.

³³ This debt was accumulated during the war as a result of the continuing increase in the difference between British troops spending, financed by the Egyptian government, than British exports to Egypt.

World War. Applying the same solution was not possible because of the magnitude of the balances of Egypt and other members of the Sterling Area on one hand, and the economic difficulties of Britain in the 1940s on the other.

The sterling balances represented Egypt's main monetary reserves that would protect the economy from adverse trade shocks. Further the NBE held 30.5%³⁴ of these balances as a cover for the local note issue. Thus the attempts to scale down the debt, as proposed by the British government, were strongly refused because of fear of severe repercussions on the monetary stability and the economy. In an attempt to solve the problem several agreements were reached but not applied. However, Britain blocked most of the sterling balances and suspended the convertibility of sterling. Confidence in sterling was shaken and provoked the Egyptian calls for leaving the Sterling Area. This eventually took place in 1947.³⁵

Thus the need for a fully-fledged central bank with adequate monetary instruments emerged to take control of the new monetary system and to deal with inflation which was caused by the war and the problem of the sterling balances. These developments led first to the promulgation of Law no 119 of 1948 which authorised the issuance of Treasury bills of up to £E 50 million. These T bills were managed by the NBE and used for covering banknotes and the financing of cotton. Second, in 1951 Law no. 57 was passed to grant the NBE legal status as a central bank authorised to regulate the volume of credit, maintain monetary stability and supervise the banking units in the economy.

³⁴ The distribution £430 million of sterling balances owed to Egypt was as follows: 30.5% for the note issuance department of the NBE; 48.8% for the department of banking operations of the NBE; 10% for other banks; 10.7% for individuals and non financial institutions, see Shafi'i (1985), table (4) p. 205.

³⁵ For an analysis of the Egyptian monetary system in the aftermath of World War II and the problem of sterling balances, see Shafi'i (1985), *op. cit.*, pp. 189-227 and NBE (1948), *op. cit.*, pp. 95-119.

As a result the NBE, which was increasingly Egyptianised since 1940 in terms of management and capital, remained a private commercial bank. However under the new law the NBE was prevented from undertaking small commercial operations and from making advances with the deposited funds with it that belong to other commercial banks³⁶.

The main instruments used by the bank for controlling the credit market in those early days setting of reserve ratios of the commercial banks along with the direct undertaking of some commercial business.³⁷ However the determination of deposit interest rates until 1957 was left to the *Conférence des Banques*³⁸.

(3.3) The second phase 1952-1974:

3.3.1 Egyptianisation:

During the early years after the 1952 revolution the new government, under General Muhammad Naguib, was trying to assure foreign investment about the stability of the economy. Thus the banking system did not observe any unusual changes regarding its structure, activities or the ownership of its institutions.³⁹ Nevertheless the Suez Crisis of 1956 led to the subsequent radical measures of Egyptianisation by the government, under Nasser, in 1957.

We have shown above that there were some Egyptianisation attempts in the past, even before the 1952 revolution. The most important of these were the establishment of Bank Misr in 1920 and the Egyptianisation of the management and capital of the NBE during

³⁶ See Issawi (1963), op. cit., pp. 266-267 and Ali (1958), op. cit., p. 69.

³⁷ See Hansen and Marzouk (1965), op. cit., p. 215.

³⁸ Ali (1958), op. cit., pp. 62-62 reports that in 1955 the Egyptian Bankers Association reduced interest rates on notice deposits from 2-2.5 percent to 1 percent and on time deposits from 3.75-4 percent to 2.5 percent.

³⁹ For an analysis of economic and institutional changes during this period see Mabro (1974), chapter (6).

the 1940s.⁴⁰ However the measures of Egyptianisation, established by Law 22/1957, were far more substantial than any thing that went before. The law stipulated that all operating British and French banks should be sequestrated. The rest of the operating banks had to take the form of joint stock companies, within five years. The paid-up capital of operating banks should not be less than £E 500 thousand, in the form of shares owned by Egyptians.

Small banks which could not fulfil the capital requirements under the new law, either joined one of the Egyptian banks or closed down. As a result of these measures the number of banks decreased from 35 in 1957 to 27 in 1958.⁴¹

3.3.2 Enhancing the Central Bank's authority:

Further the government felt that it had to assume more control over the credit market, so the NBE as a Central Bank was granted more power by the Law No. 163 of 1957. Determining interest and discount rates now became the right of the NBE⁴². We mentioned above that setting interest rates was left previously to the League of Egyptian Banks, which succeeded the *Conférence des Banques* in 1953. The bank's supervisory authority was confirmed, as registration of banks, the opening of new branches and mergers were all put under its charge. The NBE was entitled as well to use reserve and liquidity ratios to control the credit market.

⁴⁰ On the 16th of July 1939 the Minister of Finance, sent an explanatory note included the following: "...The government hopes to see the day when the majority of the share holders [of the NBE] will be Egyptians and trusts that this will come in the not too distant future...It would have been possible for the government to Egyptianise the capital of the bank by buying all or part of its shares. But it is evident that such an operation is beyond our financial resources...With regard to the Egyptianisation of the bank in other directions, ..., We have stipulated that the recruitment of the bank staff will be limited to Egyptians, except in special case...We have made likewise that the Board should have a majority of members of Egyptian nationality...Foreign directors shall be replaced by Egyptians whenever a seat becomes vacant..Finally We have provided that the President of the Board shall be an Egyptian." See the translation of this explanatory note in NBE (1948), op. cit., pp. 85-88.

⁴¹ See NBE (1974), pp. 10-15 & p. 19 and Issawi (1963), op. cit., pp. 249-251.

⁴² Issawi, (1963), p. cit., p 268.

It was recognised that some of the functions of the League of Egyptian banks conflicted with those of the NBE as a Central Bank. Hence the law tried to organise the structure and role of the former. First it made its membership limited to commercial banks only. Second, it put a condition that all the decisions of the league should be authorised by the NBE. Consequently the role of the new League of Commercial Banks in the operations of the banking system and monetary policy became a trivial one. It was left mainly with the role of undertaking banking studies through its technical committee.⁴³

3.3.3 Nationalisation:

Under Law 40 of 1960 both the NBE and Bank Misr were nationalised by converting their shares to government bonds⁴⁴ which could be redeemed after a minimum of 12 years. While the nationalisation of the NBE was justified by the fact that it was the State Central Bank, the nationalisation of Bank Misr was mainly because of the government's anxiety to obtain control over its affiliated companies. However, one year later, all banks were nationalised, under Law no. 117 for 1961 which was one of a group of laws nationalising the main economic establishments in the country to safeguard the creation of a centrally planned economic system as claimed at the time⁴⁵.

In 1961 the NBE was divided into two banks; one kept the same name and carried on as a commercial bank and the other was called the Central Bank of Egypt (henceforth CBE). In 1963, a 'Public Organisation of Banks' was formed, replacing the League of Commercial Banks, to assist the CBE in controlling and supervising the banking units. To avoid dualism in activities, this organisation was later abolished and the CBE acquired

⁴³ Doghaim (1989), *op. cit.*, pp. 46-50.

⁴⁴ Note that Law 263/1957 determined that distributed profits not to exceed 20% of the nominal value of the shares of NBE. Under the new Law 40/1960 shares were converted to bonds bearing just 5% interest.

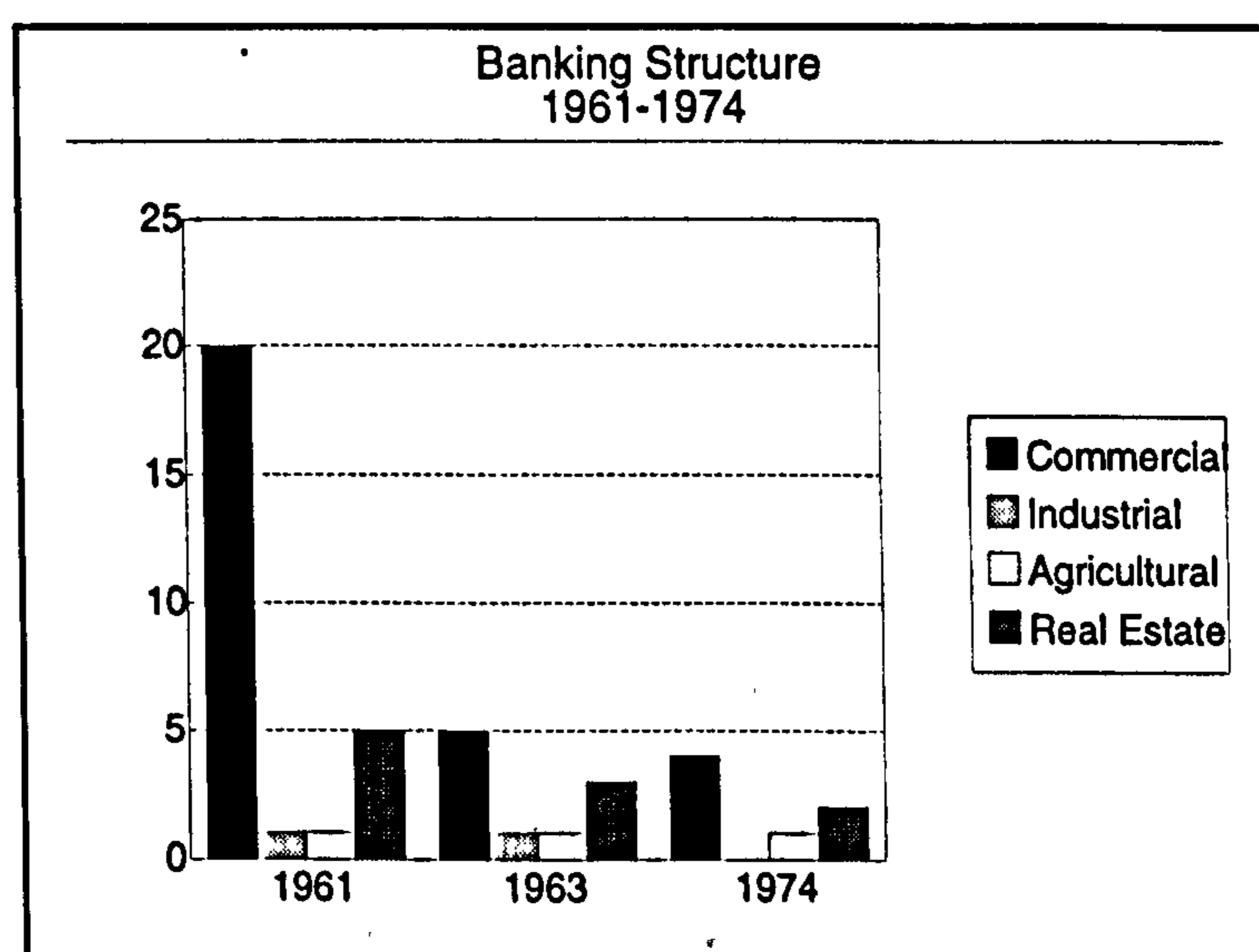
⁴⁵ See Chapter (1) of this thesis for an analysis of the main changes in economic policy in Egypt.

its supervisory functions in 1964. However the Technical Committee which was established by the organisation was left intact to play a consultative role.

3.3.4 The structure of the banking system after nationalisation:

Figure (3.1) below shows the development of the Egyptian banking structure, in terms of the number of operating banks, between 1961 and 1974. After liquidating some of the small banks and merging others, by the end of 1963 the banking system consisted of only five public commercial banks: the NBE, Bank Misr, Banque du Caire, Bank of Alexandria and Port Said Bank; in addition to five specialised banks: an agricultural bank, an industrial bank and three real estate banks.

Figure (3.1)



Source: The Economic Review of the CBE, several issues.

In 1971 several banks were merged: the Industrial Bank into the Bank of Alexandria, Port Said Bank into Bank Misr and the Crédit Hypothécaire d'Égypte into the Crédit Foncier Égyptien⁴⁶. By 1974 there was just four commercial banks and three specialised banks, in addition to 3 unregistered banks with the CBE, which were the only banks established during this period. The first of these unregistered banks was the Arab African Bank

⁴⁶ See NBE (1974), op. cit., p. 19.

which was established in 1964 in the form of a joint stock company, its dealings were confined to foreign currencies. The second bank was Nasser Social Bank which was established in 1971 with the aim of promoting social cooperation and solidarity. Nasser Social Bank is officially classified as an Islamic bank. One of its important functions was the collection of alms tax and charities to assist poor families by helping them to establishing small projects. The third unregistered bank was the International Arab Bank and its dealings were restricted to foreign currencies⁴⁷.

3.3.5 Sectoral and functional specialisation:

Under central planning and the domination of public sector, most of loanable funds mobilised by banks had to be directed towards financing budget deficits and public sector projects⁴⁸. However the government found it necessary to determine how this financing should be achieved. First in 1964 a system of sectoral specialisation among the commercial banks was put forward. Under this system each economic sector had to concentrate its transactions within one particular bank of the five nationalised commercial banks.⁴⁹

The government believed that by concentrating the operations of a sector with a particular bank, the latter would gain a deeper knowledge about the requirements of the sector. This would help the planning institutions and the government in investigating the aspects of strength and weakness in the sectors concerned. It is worth noting too that due to the heavy seasonal financial requirements of main crops, such as cotton and rice, their

⁴⁷See CBE (1984) , p. 285 and note that exemption from registration with the central bank means exemption from banking, credit and exchange rate control laws.

⁴⁸See the following chapter (6) for an analysis of bank finance of public sector projects and budget deficit.

⁴⁹Under the sectoral specialisation system each bank was assigned some sectors to finance:
Thus: Bank Misr specialised in textiles, weaving and light industries;
the NBE was responsible for financing land reform projects , transportation, defence, Suez Canal, Railways and communications;
Bank of Alexandria specialised in financing industrial companies and the Public Organisation of Petroleum;
Bank du Caire financed foreign trade, housing and public utilities, information and tourism;
Bank of Port Said was responsible for financing domestic trade, health and pharmaceutical industry. See Refaie (1989), p. 3.

financing was exempted from the sectoral specialisation system and all banks participated in covering their credit requirements. The system as well did not cover the private sector as its members were free to select the bank they wished to deal with, regardless of their activities⁵⁰.

After eight years of its establishment in 1964, the government realised that the sectoral system was not practical and replaced it with another controversial system known as a functional specialisation system in 1971. Under this system, each bank had to serve a specific economic activity. For example the NBE specialised in foreign trade in addition to issuing and servicing savings certificates; Bank Misr specialised in local trade and agricultural crops; and Bank of Alexandria, in which the Industrial Bank was merged, handled all the agricultural and industrial activities. Financing the services sector was the responsibility of Banque Du Caire, while the Crédit Foncier Egyptien specialised in the construction and housing sector⁵¹.

This system, like its predecessor was not based on any theoretical framework or practical guideline. It was merely an artificial specialisation experiment.⁵² Effectively, banks were granted monopolistic positions in providing credit to economic activities assigned to the respective banks. The banking system consequently suffered from lack of competition and there were calls from the public sector companies to be left free to choose their sources of credit. From the banking system side, there was also a demand for equal opportunities, as it was felt that some banks were allocated more profitable activities than others. As a

⁵⁰ CBE (1984) , p. 284.

⁵¹ SEE CBE (1984), op. cit., pp. 286-287, and NBE (1989), pp. 241-242.

⁵² The two failing systems of sectoral and functional specialisation were two examples of similar ill fated economic decisions that were taken without careful study during this period. Hansen and Nashashibi (1975), p. 8, describe the economic system of the 1960s by highlighting that "It is not clear, however, what the logic of this new system was. Behind the sweeping changes there was no carefully elaborated, coherent, economic and social philosophy".

result this system had to be abolished few years later, in 1975, as part of the introduction of an open-door policy as discussed below.

(3.4) The third phase 1974-1991

3.4.1 Partial liberalisation of the banking sector:

The period of war economy, 1967-1973, witnessed the cancelling of the second five year plan, as economic resources were directed to warfare. This period left the economy with a massive trade deficit and an immense shortage of financial resources needed for rebuilding what the two wars had destroyed and restructuring the malfunctioning economy. It was realised that an improvement in the structure of the banking system and an associated reform of credit policy was essential in order to find new resources of finance and encourage the private and foreign capital to participate in the development process. Hence the government started to adopt in 1974 what has become known as the *Infitah* or open door policy.⁵³

The *Infitah* policy which was accompanied with a windfall of external resources stemming from oil exports, workers' remittances, tourism, the Suez Canal revenues and foreign assistance had a radical impact on the banking system and structure. Under the Investment Law 43 for 1974 and its amendments by Law 32 for 1977, banks were no longer subject to the exclusive Egyptian management rules of the 1960s. Foreign capital was allowed to participate in joint-venture commercial banks, under the no-less-than 51% national ownership condition.

In an effort to overcome obstacles and eliminate restrictions hindering the banks from achieving the targets of the open-door policy, Law 120 for 1975 was issued. It was promulgated with a view to defining the legal status of the CBE and its supervisory and

⁵³See our discussion of this policy in Chapter (1).

regulatory powers over the banking system; giving the banking system more freedom in conducting its business; reinforcing the Central Bank's ability to manage monetary policy; freeing bankers from the laws, decrees and restrictions applicable to government and public sectors employees; and enabling the nationalised banks to compete with those established under Law 43/1974.

According to Law 120/1975, the CBE's role was re-enforced by more provisions than those given to it by Law 163/1957. The Central Bank became an independent legal authority, vested with more powers for defining monetary and credit policies and supervising implementations in accordance with the national plan.⁵⁴ It is worth noting that as a result of a provision in the Civil Code banning the application of interest rates exceeding the rate of 7%, the CBE had not been able to use effectively interest rates in its monetary and credit policies. But with the enactment of Law 120/1975, the CBE was enabled to determine discount rates as well as creditors and debtors interest rates. Consequently the CBE made successive and gradual increases in the interest rate structure ranging between 1% to 3% each time during this period.⁵⁵

After a series of undisciplined actions by some banks which embarked on rash competition to attract the biggest number of clients, along with the increase and spread of banking units, it became necessary to amend the two laws 163/1957 and 120/1975. Thus in March 1984 Law 50/1984 on the central bank and the banking system was promulgated. The law established explicit and firm rules to prevent exploitation of power by members of board of directors of banks and gave the Minister of Economy, on the recommendation of the governor of the CBE, the right to veto the appointments of

⁵⁴ In order to reinforce the CBE independence and its stability Law 120/1975 stipulates that the CBE Governor shall not be dismissed during his term of office and an annual report has to be submitted by him to the People's Assembly within 3 months from the end of fiscal year.

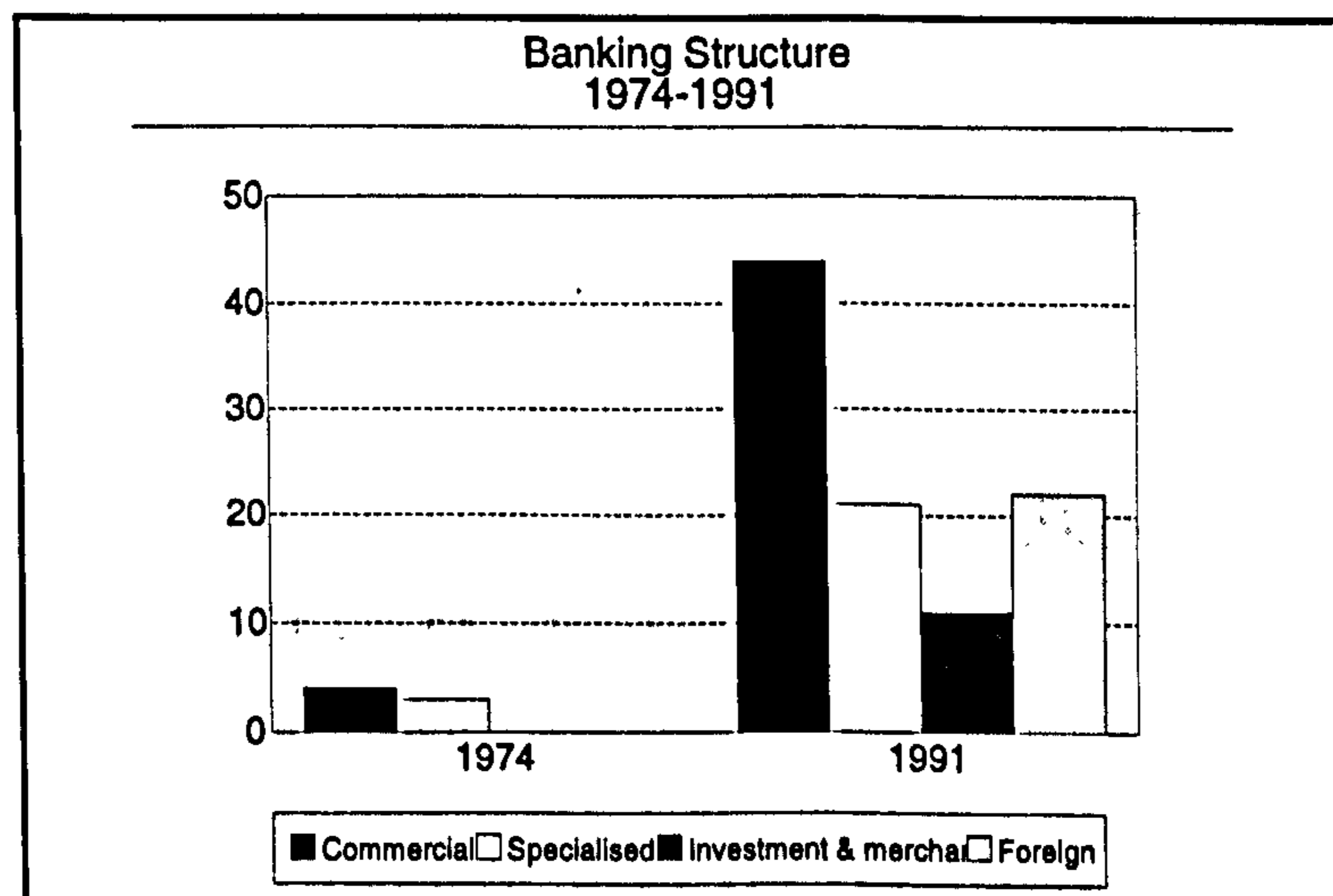
⁵⁵ See our analysis of interest rate policy and its impact in chapters (6) and (7).

members of these boards. Also under this law no bank may grant any single client credit facilities exceeding 25% of its paid-up capital and reserves⁵⁶.

3.4.2 The development of banking structure:

As discussed above the *Infitah* laws encouraged the establishment of foreign and joint venture banks. Hence the number of operating banks increased rapidly from 7 banks in 1974 to 101 banks in 1991. Figures (3.2) below show the development of the number and type of operating banks during this period.

Figure (3.2)



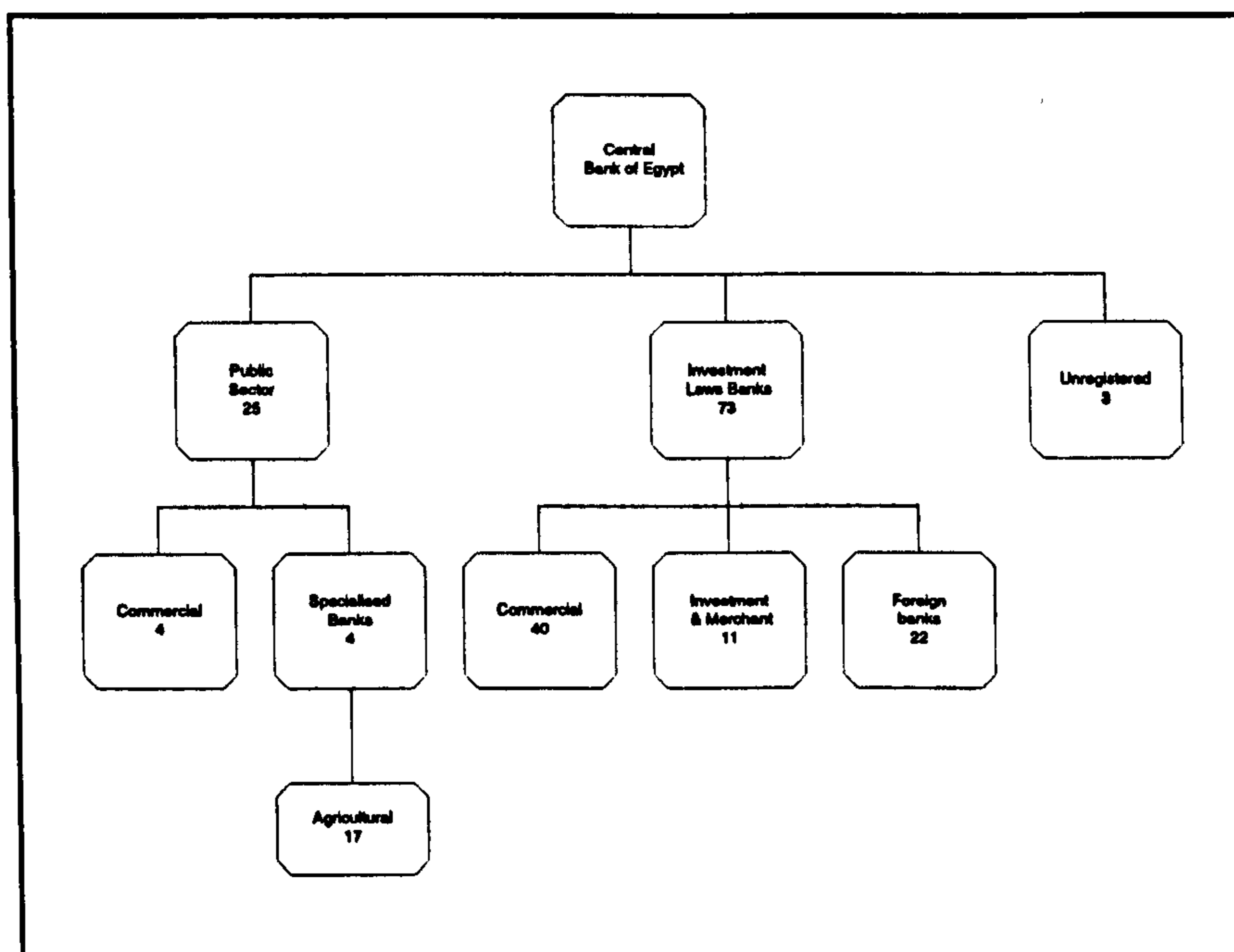
Source: CBE, annual reports, 1975 & 1992.

As shown in figure (3.3), at the beginning of 1991 the banking structure consisted of 44 commercial banks, four of which were public; 33 investment and merchant banks, of which 22 were branches of foreign banks. This was in addition to 21 specialised banks, which included one industrial bank, two real estate, and 18 agricultural banks based in governorates, including the Principal Bank for Development and Agricultural Credit. Three banks were not registered with the CBE⁵⁷.

⁵⁶ This ban does not apply to governmental bodies, public authorities or state owned companies.

⁵⁷ These three banks were: Arab International Bank; Nasser Social Bank and Manufacturers Hanover Trust Company.

Figure (3.3)
Structure of the banking system (1991)



Source: NBE (1991), p. 65.

The increase in the number of banks also resulted in a rise of the number of branches which reached a total number of 1133 branches in 1991, including the 146 branches of the 17 affiliates of the Principal Bank for Development and Agricultural Credit.⁵⁸ However the banking density⁵⁹ was still quite modest. The average of banking density in Egypt in 1991 was 0.2 which is not remarkably better than that of 1967 in the peak of nationalisation and government control which was 0.15⁶⁰. Moreover due to the concentration of branches in Cairo, Alexandria, and the Suez Canal Governorates, 21 of the 26 governorates had a bank density of less than 0.5. The bank density ranged from

⁵⁸ See CBE, annual report 1990/91, p. 132.

⁵⁹ Bank density = (Number of branches * 10000) / Total population. A density of 1 is high, .5-1 moderate and below .5 is low, see Cameron (1967), p. 296.

⁶⁰ Number of branches from CBE (1968), p.2 and population figure from CAPMAS.

a minimum of 0.09 in the Governorate of Beni-Suef to a maximum of 1.25 in the two governorates of North and South Sinai and was 0.48 in Cairo.⁶¹

Moreover branches of the public sector commercial banks dominate the banking system, as they accounted for 58.5% of total branches. The dominance of the public sector is emphasised when we take into account public banks' participation in joint-venture banks which is enforced by bank laws. In terms of bank assets, public sector commercial banks account for 55% and the public specialised banks account for 7%. Other commercial and business banks account for 38%. Thus the share of the public sector reached 62% of total assets in 1991, excluding its part in joint-venture banks.⁶²

This structure of the banking system and the geographic concentration of branches indicate a highly segmented market and lack of competition. The relatively large branch networks of a few public sector banks allow them to dominate the process of savings mobilisation from the public. Other banks target mainly big savers. Financial services are still basic with very limited innovation, though joint-venture banks were in a better position. Lack of innovation and limited instruments are attributed mainly to three factors:

1. Lack of competition, and banks' control over different segments of the market according to an implicit distribution of activities; e.g. public banks serve public sector enterprises and cater for small savers in the Delta and Upper Egypt and other regions; private banks care for upscale customers and are allowed to have a share in the relatively active markets of Cairo, Alexandria and Port Said.
2. Restrictive measures applied by the CBE regarding the charges for banking services did not make financial innovation viable or worthwhile.

⁶¹See El-Refaie (1989), p. 6.

⁶²See World Bank (1992), vol 2, p. 27.

3. The virtual absence of active money and capital markets, which is analysed further in the following section, has prevented banks from diversifying their instruments according to risk and maturity.

Lending by public and other banks has been effectively controlled by the CBE through different measures such as ceilings on interest rate and credit control as discussed in chapter (6). The remaining amount of credit left to the discretion of banks was directed mainly to relatively large enterprises. Lending to small and medium-sized projects suffered from a lack of information and collateral. Further under financial repression, as discussed further below, there was a tendency to lend according to non-price criteria when interest ceilings are binding. Applied lending criteria in such conditions, included the reputation of the client, size of loan and political pressure making large enterprises more likely to obtain credit.

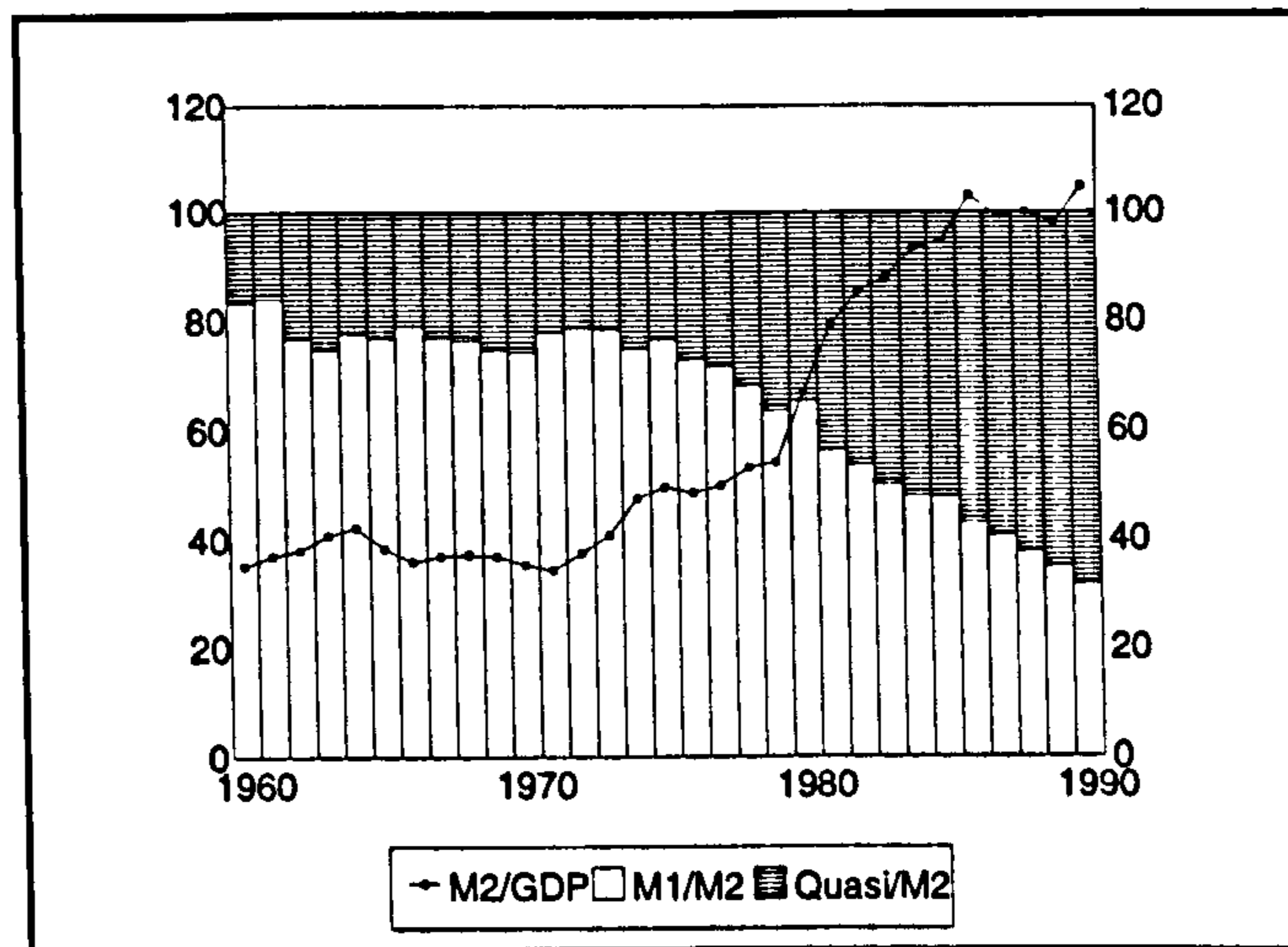
3.4.3 Financial deepening:

The hypothesised positive link between financial development and economic growth dates back to Adam Smith's *Wealth of Nations* as he emphasised that the positive contribution of the establishment of banks to the increase of trade of the city of Glasgow.⁶³ Shaw (1973) argued that financial deepening⁶⁴ is a necessary prerequisite for economic growth. Financial deepening is usually measured as a ratio of domestic liquidity M2 to the GDP. Figure (3.4) gives an account of the development of financial deepening in Egypt over the period 1960-90.

⁶³ Adam Smith (1976), p. 315.

⁶⁴ Financial deepening defined as "the accumulation of financial assets at a pace faster than accumulation of non-financial wealth", Shaw (1973), p. vii.

Figure (3.4)
Financial deepening and
the components of M2. (percent)



Source: IMF, International Financial Statistics, Yearbooks, 1989-1992.

Figure (3.4) shows that the quasi money⁶⁵ component of M2 increased during the 1960-90 period at the expense of M1⁶⁶. In 1960 quasi money as a percentage of M2 was as low as 16.5%. However the ratio improved gradually after the mid-1970s and in 1982 it was half of M2 and in 1990 the ratio reached 68.2% of M2. The main reason explaining the steady decline of the share of M1 in M2 was the persistent inflation under which the components of M1. i.e. currency in circulation and non-remunerated demand deposits cannot be highly desirable assets.

On the other hand we realise that the M2/GDP ratio increased, showing an upward trend, from its modest levels of the 1960s and 1970s averaged 38.0% and 45.2, respectively to a high average of 91.95 during the 1980s. The ratio reached its highest level in 1990 at 104.6%. The ratio is considered high in Egypt given its stage of development and compared with other LDCs in its income group.

⁶⁵Quasi money comprises time and savings deposits; line 35 of the IFS.

⁶⁶M1 is defined as money outside banks and demand deposits, line 34 of the IFS..

Table (3.2)
M2 as percentage of GDP in selected countries

Country	1965	1970	1980	1985	1990
Egypt	35.3	33.5	47.4	76.0	93.2
Indonesia	NA	7.8	13.7	22.7	36.2
Sri Lanka	31.4	22.0	32.9	35.6	32.6
Morocco	29.4	31.1	46.7	50.7	50.5*
Turkey	23.0	27.9	16.7	24.4	21.3
Brazil	20.8	23.0	17.3	21.8	NA
Mexico	27.0	26.9	28.3	26.6	20.4
France	54.5	57.8	70.7	69.9	76.2*
Germany	46.1	52.8	60.3	63.6	66.6
UK	49.0	49.2	46.4	61.0	NA
USA	65.0	60.4	60.6	67.4	66.6
Japan	98.9	94.7	134.0	157.3	183.1

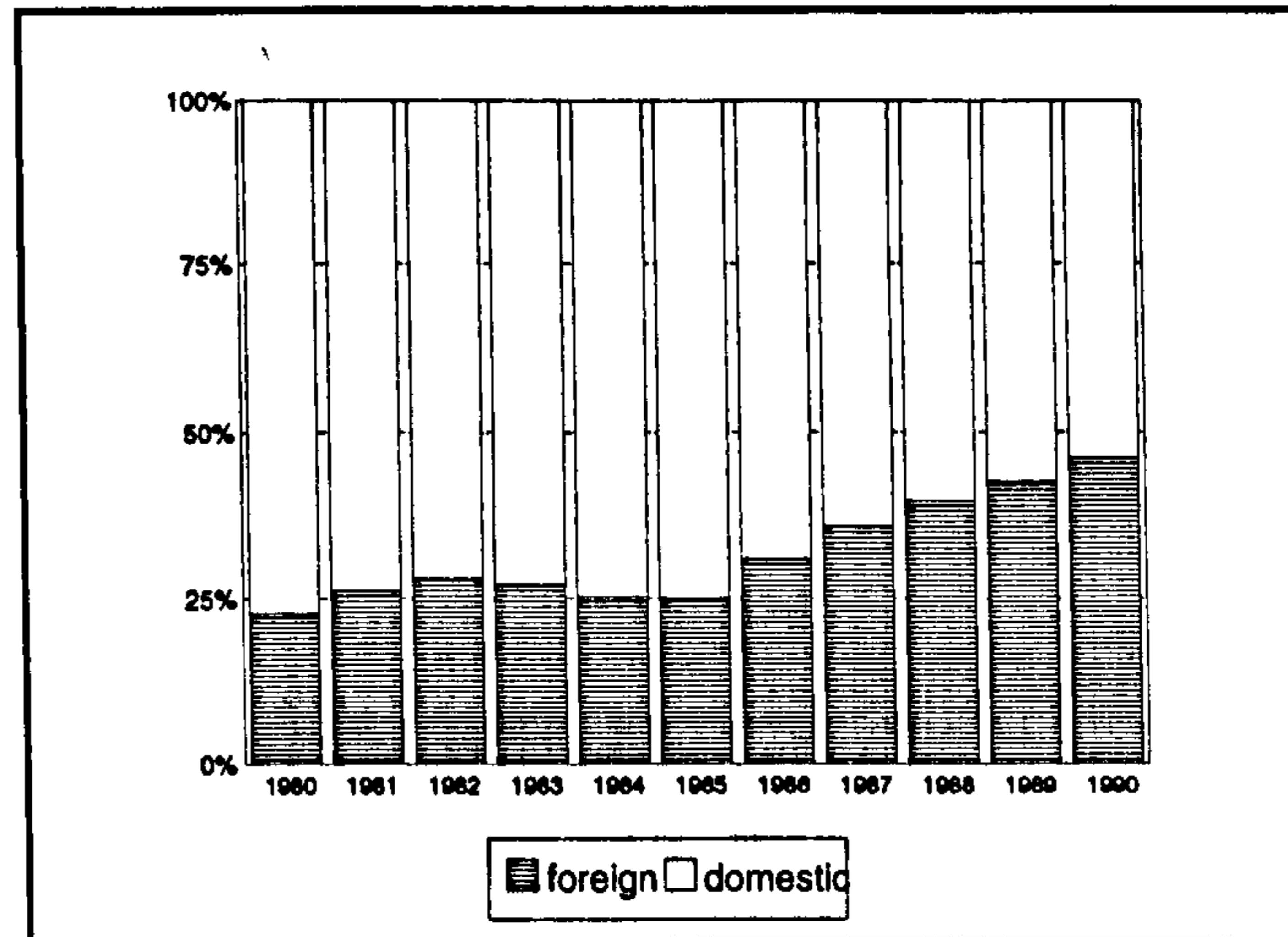
Source: World Bank, World Development Reports, 1987, 1991, 1992 and 1994

* Data are for 1989.

As shown in table (3.2), Egypt had high M2/GDP values compared with those reported for selected developed and developing countries. For all the selected years it had the highest M2/GDP among the developing countries group. In 1990 the ratio in Egypt was even higher than that of developed countries and only second to Japan.

However some factors should be considered when figures for financial deepening in Egypt are considered. First, because of the high degree of money substitution, mainly dollarization, during the 1980s, the share of foreign currency deposits in M2 increased significantly. As shown in figure (3.5) the holdings of foreign currency deposits increased from 22.8% of M2 in 1980 to 46.1% by 1990. The issue of money substitution is discussed further below.

Figure (3.5)
The importance of foreign
deposits in domestic liquidity M2



Source: IMF, International Financial Statistics, Yearbooks, 1989 and 1992.

Second, the value of M2 denominated in Egyptian pounds increased dramatically because of the devaluation policy adopted in the 1980s. The exchange rate against the dollar, at which foreign deposits were valued, fell from 1.42 in 1980 to 0.5 in 1990. Accordingly the corresponding value of these deposits in Egyptian pounds increased and this was reflected in such high ratio of M2 to GDP.

(3.5) Main problems of the banking system:⁶⁷

3.5.1 Preferential treatment of the public sector:

In principal, all banks in Egypt were treated equally as they were governed by the same regulations, and supervised by the same authority. In practice there were various aspects of preferential treatment of public sector banks; we provide below some examples:

1. Branch authorization during the 1970s and 1980s favoured the public sector. When the CBE in the late 1980s adopted a strict policy to control the number of branches, the number of branches per public bank was significantly higher than that of other banks. The biggest joint-venture bank had 20 branches while the biggest public bank had 342 branches.⁶⁸
2. The design of credit ceilings favoured public sector banks as they were imposed on activities mainly undertaken by private banks, like credit to the commercial sector. However we argue that short-term credit for the commercial sector was excessive and concentrated in importing consumption goods. It required some sort of intervention at times when the balance of payment was in its worst condition during the mid-1980s.
3. Public banks had close relations with public sector enterprises in the form of equity stakes and membership of managing boards. Moreover regulations in some public authorities and government institutions did not allow the depositing of funds, like pension and employees' funds, with non-public banks.
4. Payment of interest on current accounts was prohibited, benefiting public sector banks in two ways. First, they did not bear any costs for keeping such deposits

⁶⁷The author is indebted to the following bank experts and executives for invaluable discussions and useful information:
 Mr Ismail Hasan, Governor of the CBE and former chairman of Bank of Alexandria.
 Mr Ali Negm, Chairman of the Delta Bank,
 Mr Abdel Monem Rushdy former Chairman of the NBE,
 Mr Abdel Salam Al-Anwar, General Director of the Hongkong Bank,
 Dr Faika El-Refaie Deputy Governor of the CBE,
 Mrs Madeeha Gaber, Manager, the Nile Bank,
 Dr Hazem Al-Beblawy Chairman of the Export Development Bank,
 Mr Motaz Mansour, Managing Director of the Misr-Iran Development Bank,
 Mr Hamdy Musa, Managing Director of the Export Development Bank.

⁶⁸World Bank (1992), pp. 33-4.

which mainly belonged to the public sector enterprises. Second, private banks were not able to compete for such accounts by offering higher interest rates to depositors. We found that a typical public sector bank like the NBE had 27.1% of total deposits in a form of current account in 1991 while the ratio in the Delta Bank, a joint-venture bank, was only 9.7%.⁶⁹

3.5.2 Entry barriers:

It is argued that contestable markets and potential firms' freedom of entry promote efficiency, encourage innovation and give highly favourable welfare outcomes.⁷⁰ For a market to be contestable there should not be any significant entry barriers. In a contestable environment the only way for incumbent firms to prevent additional entry is to give no incentive for potential entrants to do so. This can be achieved by efficient pricing and allocation of production among incumbent firms to eliminate significant excess profits. However in practice there are different barriers to entry facing potential firms which prevent them from joining the market even in the presence of high excess profits.

Large economies of scale and high sunk costs, in addition to other entry costs are examples of such barriers.⁷¹ But in the case of banking, government regulations through permits and licenses are far more important than these other barriers.

We argue that the Egyptian banking system has suffered from two main problems. The first was the application of financial repression measures, like interest rate ceilings and directed credit which virtually prevented competition among incumbent banks. The second

⁶⁹ Annual reports of the NBE and the Delta Bank 1991.

⁷⁰ For an analysis of contestable markets see Baumol, Panzar and Willig (1982).

⁷¹ On entry barriers see Bain (1956) and Tirole (1989), chapter (8).

was the use of restrictive regulations that prevented new entry and made the incumbent banks far from being contestable. The first issue is analysed in some detail in chapter (6). Here we address the second issue.

As shown above the banking system, after a series of Egyptianisation and nationalisation measures in the 1950s and 1960s, was left with four publicly owned commercial banks and five specialised banks. The market was highly concentrated. Competition was limited further by the application of sectoral and, then, functional specialisation which made the system a sectoral based mono-bank one.

The introduction of *Infitah* policy and the establishment of a large number of private and joint-venture banks resulted in an increase in the number of banking units without a significant decrease in market concentration. As mentioned above, according to the banking law, public banks had the majority of joint-venture banks, so we find that more than 90% of the assets of the commercial banks are publicly owned.⁷² The domination of public banks in a highly concentrated market resulted in frail competition and limited innovation in spite of the *infitah*.

The main reasons behind restrictive regulations regarding new entry can be summarised by five factors:

1. Concerns about "cream skimming" by private and foreign banks. It is argued that the higher profits obtained by foreign banks in Egypt can be explained by cream skimming as these banks concentrated their activities in the low risk-high profit segments in the market. Whether high profits resulted from cream skimming or more efficient banking is debatable and requires evidence which cannot be obtained from bank reports.

⁷²See World Bank (1992), vol 2, p. 4.

2. Fear of acquiring dominant positions in the domestic market. This is a usual concern raised for political reasons and can be justified on these grounds. However we argue that preventing banks from entering the market is not a suitable solution, while applying anti-trust measures may be a better approach to this problem.
3. Concern about hit and run activities. Foreign and, to some extent, private banks are accused of a lack of commitment and that also they withdraw their activities at the first sight of problems. Further the withdrawal of large international banks from the market may be unjustifiably taken as a sign of problems and instability in the domestic market as a whole which in turn may have a devastating impact on the banking environment. The negative expectations and apprehension that followed the recent withdrawal of some American and European banks from the market lends support to this argument. In reality the problems in the home markets of the foreign banks are often behind their withdrawal rather than the difficulties in the Egyptian market.⁷³
4. Protecting the interests of the incumbent banks, especially the public ones. Unlike other arguments, this one is hard to defend. The response to competition cannot be through protecting inefficient banks but rather by improving their efficiency and eliminating the restrictive intervention of the CBE in their decision making and activities.
5. Concerns about allocating most of the domestically mobilised funds abroad. This argument is a widespread complaint in LDCs against foreign banks.⁷⁴ However in the case of Egypt we did not find that public banks were significantly different from foreign ones regarding the geographic allocation of resources. In 1990, 60% of foreign currency deposits in the banking system were allocated abroad, while

⁷³Example of sudden withdrawal of foreign banks is that of Chase Manhattan Bank in mid 1980s and Bank of America in 1994.

⁷⁴For a discussion of advantages and disadvantages of the role of foreign banks see Drake (1980), pp. 158-165.

in 1992 the ratio was as high as 77%.⁷⁵ This finding does not defend foreign banks as much as it criticises the pattern of allocation of funds by the banking system as a whole including the CBE.⁷⁶ Again we do not find the prohibition of entry in the market a remedy for this problem which requires, among other things, improvement in investment opportunities in the domestic market and an enhancement of its stability.

3.5.3 The absence of an adequate exit mechanism:

We argue that an efficient market is not achievable in the absence of an adequate exit mechanism. In Egypt banks were not allowed to collapse. Alas this policy was given effect not through prudential policy or measures that enhance the efficiency of banks. Instead, weak banks were allowed to continue in business using support from the CBE and the rest of the banking system. Fear of a public misunderstanding that the failure of a bank may imply that others will follow in the future, made the banking system adopt a form of collective self-preservation. According to this approach insolvent banks were left to operate through support from the banking system, while adequate measures like restructuring, merging or liquidation were not applied. This policy resulted in the following:

- First, encouragement of inefficient banks to continue their violation of credit standards by indulging in high risk lending and bidding for deposits. Even under the application of interest ceilings, a bank like the Bank of Credit and Commerce International, which was registered in Egypt as a joint-venture bank was paying a higher interest rate on deposits, than the rest of banks, by 0.5-1 percentage points, till its collapse in 1991.

⁷⁵ See the CBE annual reports 1990 and 1992 and Al-Antary (1994), p. 13.

⁷⁶ The CBE relies on the Federal Reserve Bank of New York to manage a significant part of its international reserves. Most of these reserves are in US T bills. The World Bank (1992), vol 1, pp. 80-81.

- Second, failure of the banks' clients to distinguish between an efficient bank and an inefficient one. This is because all banks are supported by an implicit rescue mechanism in which bad banks are cross subsidised by good ones.

It is clear that Egypt has an implicit deposit protection scheme. Under this scheme the depositors of the collapsed BCCI were protected by transferring their accounts to Bank Misr at their full nominal values at the date of the BCCI's collapse. Registered banks were asked to contribute 0.5% of their deposits towards the funding of this operation in addition to a one billion pound interest-free loan to Bank Misr to accept the 'transfer' of BCCI accounts to its branches.⁷⁷

However under this implicit scheme the government is not obliged by law to protect deposits and the extent of coverage is left to its discretion. Moreover it is argued that a " well functioning [explicit] deposit insurance scheme is likely to produce faster, smoother, and more predictable resolutions of failing bank situations than an implicit system"⁷⁸ Thus, it has been argued that it may be appropriate to convert this implicit deposit protection scheme in Egypt to an explicit one, and a deposit insurance fund is now under establishment. Nevertheless it is worth noting that the proposed deposit insurance scheme has its own drawbacks. For example explicit insurance is more costly than the implicit scheme. The former requires the establishment of a separate institution, with its own management and staff, and so high operating costs for monitoring banks and managing its funds. The explicit deposits insurance scheme may create a moral hazard problem⁷⁹ and banks might be involved in riskier operations, which requires further

⁷⁷ I am indebted to Mr Ali Negm, chairman of the Delta Bank and former governor of the CBE for this piece of information.

⁷⁸ Mas and Tally (1990), p. 44.

⁷⁹ It has been argued that deposit insurance was largely responsible of the so frequent collapses of the S&L Institutions in the USA where there has been calls for reforming such scheme. See For example Jaff (1989) and White (1989) .

monitoring. Moreover it may discourage clients from making efforts to distinguish between a weak and a sound bank as both are covered by the same insurance scheme.⁸⁰

To conclude this issue we argue that whereas it is important to remove barriers to entry, it is also crucial to maintain a reliable exit mechanism. Such arrangements are required along with the establishment of satisfactory prudential measures to improve the efficiency and the soundness of the Egyptian banking system.

(3.6) Prudential regulation issues:

Laissez-faire banking cannot provide a stable monetary framework or a sound financial system.⁸¹ There are two arguments normally given to justify the regulation of the financial sector in general and the banking system in particular.

- First, it is argued that banks are inherently unstable and subject to interruption and failure.⁸² Bank failures may generate externalities, in the form of additional losses born by the economic system as a whole. This requires either the intervention of the central bank as a lender of last resort or the establishment of a deposit insurance scheme, or both. Nevertheless such intervention may encourage banks to involve in riskier operations, which in turn requires further intervention to deal with this moral hazard problem, by monitoring banks and reducing excessive risk.⁸³
- Second, the banking service is based on the acquisition of greater knowledge in a way that enables bankers to know much more than customers. In such cases of asymmetric information, conflicts of interest can frequently occur as the separation of the functions of bankers and customers is expensive because of the

⁸⁰For further discussion of the problems of deposit insurance and possible solutions see Dybvig (1993) and Flood (1993).

⁸¹Park (1991), pp. 334-335.

⁸²ibid, p. 335.

⁸³Goodhart (1989), pp. 194-195 and pp. 203-204.

existence of high transaction costs. The customer has little power to assess the qualifications and monitor the performance of the professional, thus necessitating regulatory control.⁸⁴

Prudential regulation, through its impact on innovation, market practices and transaction cost can have a far-reaching effect on the efficiency of the financial system. Prudential regulation differs from country to country according to its overall legal structure, social background, political structure and economic system. Nevertheless the claimed aim of a prudential policy can be summarised in preventing systematic risk and minimising financial instability, and assuring that intermediaries are adequately capitalised and professionally managed.⁸⁵

However in financially repressed economies prudential principles and the quality of supervision might be sacrificed in the cause of channelling loanable funds to priority projects and funding budget deficit. Moreover in such circumstances prudential measures may be confronted with conflicting goals and the role of prudential policy may be ill-defined, which, in turn, would impair the safety and soundness of the banking system.

i) Capital adequacy:

In most LDCs banks are undercapitalised so that capital is insufficient for meeting actual and potential unusual losses.⁸⁶ There are two aspects of capital adequacy in the Egyptian case. First the minimum capital volume required from banks to start business, and second, the minimum capital ratio required to support given levels of operations.⁸⁷

Regarding the first requirement normally referred to as the entry requirement, the CBE

⁸⁴ *ibid.*, p. 195 and p. 207.

⁸⁵ Polizatto (1990), p. 1, World Bank (1992b), p. 13.

⁸⁶ Polizatto (1990), *op. cit.*, p. 4.

⁸⁷ See Morris (1990), p. 65.

imposes an initial capital of £E 100 million on banks as a criteria for their authorization. This is considered sufficient and comparable with international standards of US\$ 15-30 million (approximately £E 50-100 million).

Considering the second requirement, Egyptian banks maintained capital adequacy ratios ranging between 6% and 7% of total assets, i.e. less than the Basle Committee (1988) standard of 8% of risk adjusted assets. Because of the assumption that public banks are by definition owned by the government which is assumed to come to their rescue if necessary, such banks lack incentives to minimise losses. However as a part of the financial reform programme started in 1991, all operating banks were required to raise their capital adequacy ratios up to the risk-based Basle Standard according to an agreed schedule.

ii) Loan provisioning:

Provisioning creates discipline in banks' operations and helps reflect their true financial conditions. We can distinguish between two forms of provisions: general provisions and specific provisions. Under general provisions it is assumed that even the highest quality loans in the bank's portfolio may incur some loss, hence a small percentage, say 1%, of total loans is held by the bank. Specific provisions can be classified into four categories: current, sub-standard, doubtful and lost loans. Accordingly specific provision ranges between zero percent in the case of current loans to 100% in the case of lost loans.⁸⁸

Banks in most LDCs fail to mandate realistic provisions to cover possible losses according to the classification of loans. As a result their balance sheets do not reflect their actual positions and profits are exaggerated and their solvency may be at stake.⁸⁹ It is

⁸⁸ See Morris (1990), p. 60.

⁸⁹ Polizatto (1990), p. 6.

difficult in the case of Egypt to know how serious the issue of solvency is, as information on the non-performing loans and soundness of loan portfolios are not published. Further until 1992 banks did not apply international standards on their loan classification, possibly to avoid provisioning for the public sector nonperforming loans. The application of adequate classification and provisioning of loans still needs to be accompanied by an improvement in the functioning of the legal framework concerning bankruptcy procedure, liquidation of collateral and debt recovery.⁹⁰

iii) Information disclosure:

Publishing an adequate level of information is essential to help depositors and borrowers to distinguish between banks according to their performance and facilitate their scrutiny by relevant authorities and bodies, like rating agencies. Egyptian banks are reluctant to disclose information beyond what they supply in their annual reports. Moreover such reports are not uniform in the information they provide, which makes comparisons difficult.

Some banks publish only balance sheets without income statements in a way that is difficult to determine their financial condition or whether they incurred a profit or loss. Banks faced with difficulties delay the publication of their annual reports and/or hid essential information in fear that the disclosure of negative outcomes might lead to a deposit run and/or to deny them the ability to raise fresh funds.

If banks are to work according to market forces and competition, then their actual and potential clients should be able to choose rationally between them. This necessitates

⁹⁰See World Bank (1992), p. 36.

disclosure of adequate information on their activities.⁹¹ We argue that bank reports in Egypt do not fulfil this objective and hence require extensive modification:

1. Bank reports have to be published quarterly or, at least, biannually to ensure an up-to-date flow of information.
2. It is normally expected to find in banks' reports information on the quality of bank portfolios, adequacy of provisions, detailed outcome. In practice such essential information is hardly to be found in these reports. In spite of the fact that they devote significant space to cover the so called current developments in the world, regional and domestic economies which can be found, in a more rigorous and extensive form, in specialised sources. We suggest that the CBE should provide some guidelines regarding the information published in these reports and ensuring their comparability.
3. Third arrangements should be taken to prevent, or at least minimise, the problem of window dressing, defined as the manipulation of published information by banks to give a better picture than the reality of their condition.⁹²

iv) Quality of supervision:

The main objectives of financial supervision are monitoring bank activities and accounting procedures, assessing the quality of assets, and assuring that banks are professionally managed. Financial supervision is a delicate task as it should be undertaken in a way that promotes the soundness and stability of the banking system without hindering the efficiency and the managerial autonomy of banks.⁹³

⁹¹See Morris, *op. cit.*, p. 67.

⁹²See Allen (1992), for a theoretical and empirical analysis of bank window dressing.

⁹³On the role of prudential supervision in banking, see Pecchioli (1987).

Several conditions are required in order to achieve a sufficient quality of supervision:

1. Supervisors must acquire adequate training and have adequate resources.
2. Supervisors should have sufficient autonomy from political interference and bureaucratic pressures.
3. The supervisory body must have enough power to enforce its decisions without the need to refer to higher authorities. For example, supervisors should be able to impose fines, restrict dividend payments, request administrative actions, force provisions,..etc.⁹⁴

In the case of Egypt, bank supervision is vested with the CBE. Such supervision is undertaken through off-site monitoring and surveillance of the performance of banks, in addition to on-site inspection of their financial condition. Public banks are also subject to further on-site monitoring by the Central Audit Organization (CAO) which coordinates its work with external auditors.⁹⁵ The CBE's supervision is concerned with the degree of compliance with credit controls, tariff schedules, interest rate ceilings and, to a lesser extent, the assessment of bank solvency. The CAO's supervision is more concerned with the compliance of the public banks with the rules that govern the public sector as a whole, rather than with portfolio quality and related aspects of performance.

More generally bank supervision in Egypt suffers from various limitations:

1. The CBE is not fully independent from the government as the selection of most of the members of the board of the CBE, since 1984, has been left to the discretion of the minister of the economy.⁹⁶

⁹⁴On this issue of quality of supervision see Morris (1990), pp. 54-57

⁹⁵World Bank (1992b), pp. 17-18.

⁹⁶Nour-El-Din (1987), p. 10.

2. The huge increase in the number of operating banks, from 7 in 1974 to 98 banks in 1991, was not matched by a corresponding increase either in the staff number of the Bank Control department of the CBE or its resources. As a result, on-site monitoring of several banks was not undertaken and the CBE was content with the periodic reports of such banks on their activities.⁹⁷ These reports were not necessarily adequate in terms of the quantity and quality of information provided in them. Moreover some of the operating banks, especially the foreign ones, were adopting some new banking techniques and computerised transactions which were not fully grasped by the members of the supervision committees, due to lack of training.
3. In many cases the effective supervision of banks, especially the public ones, was compromised by political pressure. Loans to insolvent and ailing public sector companies were allowed under the pressure of their concerned ministries. An example of this problem, is that which took place after the Egyptian pound devaluation in 1985. It resulted in considerable foreign exchange losses even amongst the well-managed companies which were confronted with critical financial difficulties. "The Egyptian banks knew that they did not have the capacity to handle widespread bankruptcy, and also knew that the legal procedures for bankruptcy were unsatisfactory...Hence, their management decision,...., was to provide additional credit facilities to keep distressed companies alive,...., the outcome was a substantially weaker financial sector"⁹⁸. Hence it is not unexpected to find that the Egyptian banking system has suffered from a high ratio of non-performing loans, accumulated over the years because of similar practices. Exact

⁹⁷ *ibid*, p. 11.

⁹⁸ Roe and Popiel (1987), p. 24.

figures for these loans are not available but they are estimated to range between 30%-45%.⁹⁹

4. Privileged private sector borrowers were also allowed to borrow despite their poor financial condition and insufficient collateral. In 1989 the so-called sick balances reached 26% of total advances to private and investment sectors. Of these 56.4% belonged to only 3% of total number of defaulters.¹⁰⁰ Many defaulters fled the country to avoid any legal actions, while others managed to delay legal action against them for very long periods.
5. Although the powers of the League of Banks are much less than those of its predecessor *Conférence des Banques*, discussed above, it still has some functions that often cause conflict with the CBE. For example, the League of Banks is entitled to investigate and verify the complaints of individuals and institutions concerning the activities of any bank and according to its Banking Charter it can also resolve disputes.¹⁰¹ It also has the right to determine bank charges. Thus some of the bona fide functions of the CBE have also been undertaken by another organisation.

We argue that to improve bank supervision the regulatory framework should be clearly defined, the CBE must be more independent, its supervisory teams should acquire necessary knowledge and be empowered with sufficient resources. Improvement in bank supervision should not be achieved at the expense of reasonable autonomy of banking units or interference with their decisions. Parallel reform in accounting and auditing practices, and enforcement of the law in the case of default are also required.

⁹⁹The estimate of the World Bank (1992) is 30% while some bank managers interviewed by the author argue that non-performing loans are as high as 40%-45%.

¹⁰⁰NBE(1989), pp. 142-143.

¹⁰¹Nour-El-Din (1987), p. 13.

(3.7) Performance of the banking units:

Three different types of operating ratios are frequently used as indicators of the performance of banks and their efficiency, namely rate of return on assets (ROA); rate of return on income, i.e. the profit ratio (ROI); and rate of return on equity (ROE). ROA relates net income to total assets; ROI relates net revenues to the total of interest and non-interest income i.e. gross income; ROE is the ratio of net income to average equity.¹⁰²

Three issues are worth emphasising:

- First, these ratios should be considered only as rough indicators of efficiency as these ratios are significantly affected by differences in capital structure, adopted accounting principles and product mix both across countries and banking units.¹⁰³
- Second, bank data in Egypt as in many other LDCs, should be treated with caution. As discussed further below, different banks have different accounting practices regarding their valuation of assets and depreciation. They differ as well in their classification of loans as bad or non performing. Accordingly their provisions and reserves may differ as well.
- Third, some banks may indulge in some form of window dressing. Such practice distorts the quality of information and produces misleading indicators.

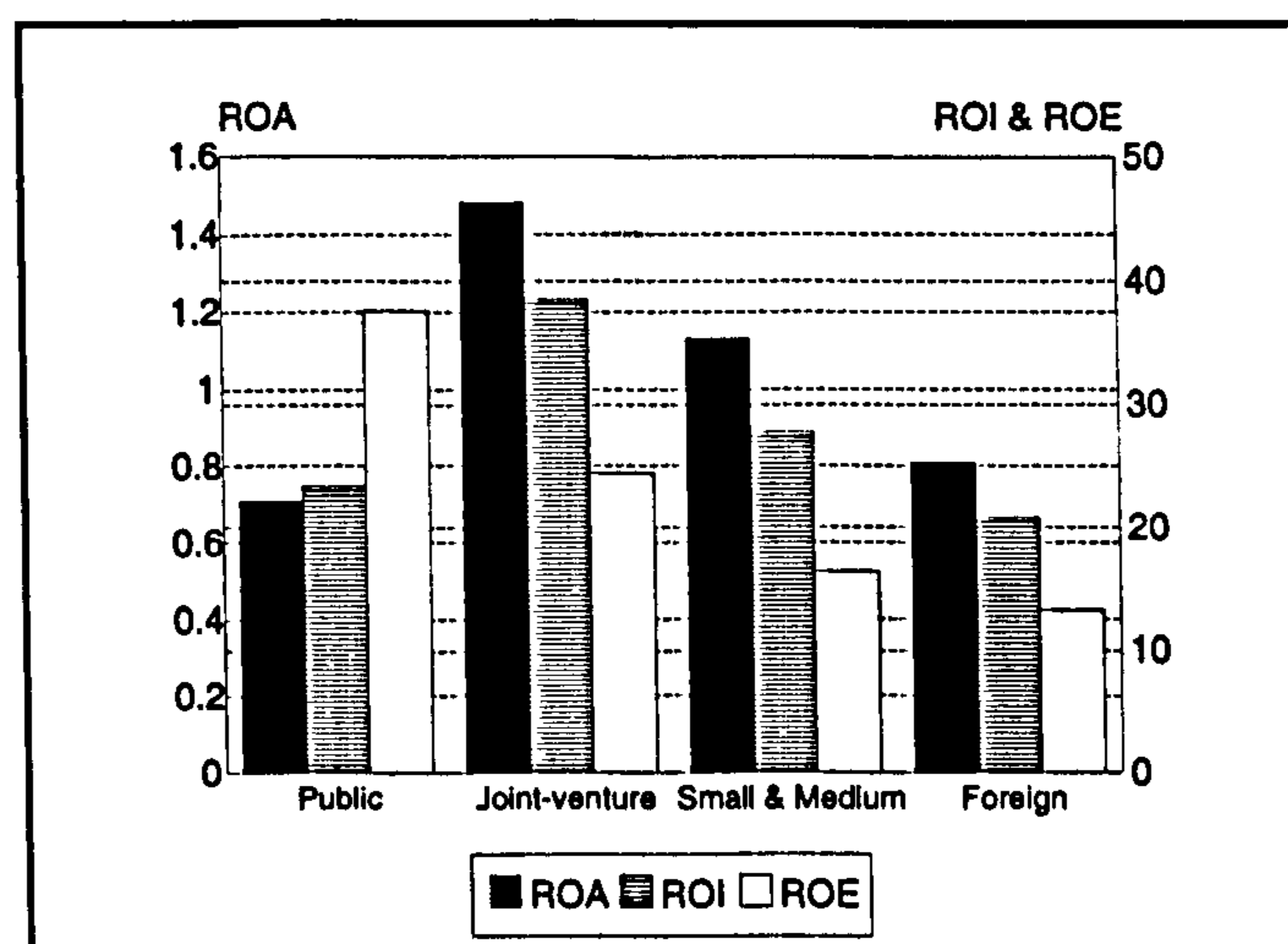
In the case of Egypt essential data on operating ratios of banks that are used as performance indicators are not readily available. However the World Bank (1992c)¹⁰⁴ compiled data on a sample of 24 banks covering the period 1986-1990. The sample includes the four public commercial banks, five large joint-venture banks, eight small and medium size banks in addition to seven branches of foreign banks.

¹⁰² See Brealy and Myers (1991), chapter (27) for an analysis of financial performance.

¹⁰³ See World Bank (1992b), pp. 25-26 and Vitas (1991).

¹⁰⁴ Although the World Bank (1992c) uses the term 'efficiency', the indicators used in the study are more to do with 'performance'. Tobin (1984) provides four different concepts non of them can be adequately measured by the operating ratios used in the World Bank's study. Tobin's four concepts of efficiency are information arbitrage efficiency, fundamental valuation efficient, full insurance efficiency and functional efficiency: see Tobin (1984), pp. 2-3.

Figure (3.6)
Bank operating ratios in Egypt, 1986-90



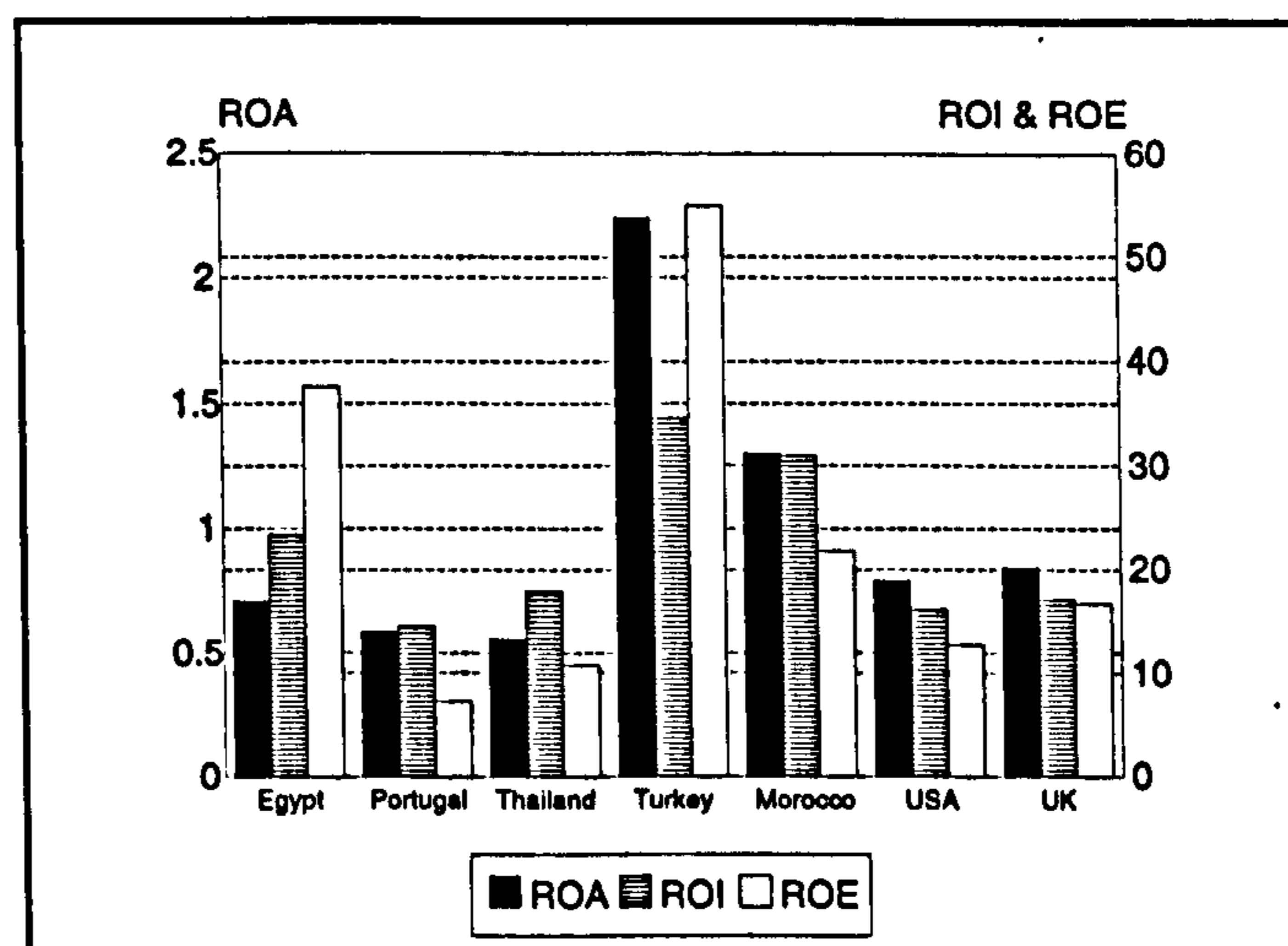
Source: World Bank (1992c), tables: A1, A3 and A5.

As shown in figure (3.4) the before-tax return on assets ROA in the case of public sector banks, at 0.71%, was lower than the rest of operating banks. The Joint-venture banks both the large and the small and medium size (S&M) ones had a quite high ROA at 1.48% and 1.13% respectively. Large joint-venture banks had the highest pre-tax ROI, i.e. profit ratio which reached 38.5%, while that of public sector banks was only 23.4%. However public banks had the highest ROE at 37.6%. Large joint venture banks, (S&M) banks and foreign ones had lower ROEs of 24.4%, 16.4% and 13.3% respectively.¹⁰⁵

By comparing the four public Egyptian banks with other commercial banks in selected developed and developing countries, we realise that they did not perform badly as shown in figure (3.5). The Egyptian banks had the second highest ROE, the third highest ROI among the seven selected countries. However their ROA was low and ranked fifth.

¹⁰⁵World Bank (1992c), tables A1, A3 and A5.

Figure (3.7)
Bank operating ratios
in Egypt and selected countries



Source: World Bank, (1992c), tables A1-A6. Data on Egyptian banks are for 1986-90, on USA, UK, Portugal and Turkey are for 1985-89, on Morocco for 1980-90 and on Thailand are for 1986-88.

It is worth noting however that the reported ratios on Egyptian banks are overestimated and produce a better picture than reality for the following reasons.¹⁰⁶

1. All performance ratios are considered without an allowance for the high level of nonperforming loans.
2. Egyptian data are not inflation rate-adjusted. If such adjustment is made Egyptian ratios would be significantly lower than reported when compared with those of other countries. For example, by using real values, in Egypt the nominal ROE of public sector banks of 37.6% becomes a real ROE of 14.7%. Real ROE in Turkey is only 2% while its nominal ROE is 22%. Real ROE in developed, low-inflation countries range between 10% to 20%.
3. The high ROE of Egyptian banks, especially the public sector ones is chiefly explained by their high leverage. The leverage of public sector banks, measured as long term debt to long term capital at approximately 53% is three times higher

¹⁰⁶See World Bank (1992c) annex II for further discussion.

than that of other operating banks in Egypt. The proposed increase in the capital of operating banks in Egypt is likely to reduce their leverage and hence reduce their ROE, unless measures are adopted to increase banks' profitability.

4. Egyptian banks enjoy high non-interest income in the form of high services charges due to the uncompetitive nature of the market. Such high fee-income share in banks revenues is reflected in the relatively high ROI of Egyptian banks.

Accordingly, nominal ratios may indicate, at their face value, an acceptable performance of Egyptian banks, but the allowance for inflation, nonperforming loans, high leverage and high non-interest income, produces a completely different picture. Egyptian banks in general, and the four commercial banks in particular, have to take measures to improve their performance and profitability. The usual advice for banks in such circumstances is to improve their cost/income ratio in order to generate adequate returns on their assets, income and equity. However the absence of banks' managerial autonomy, dominance of public sector banks and hence the narrowness of the market, lack of competition and contestability were also responsible for the weak performance.¹⁰⁷ Hence reform at the level of banking units is unlikely to be achievable without undertaking necessary reform at the banking system level and its regulatory structure.

(3.8) Summary and conclusions:

In this chapter we have shown that the development of the banking system in Egypt can be divided to three phases. The first phase 1856-1952 the banking system was highly deregulated and dominated with foreign commercial banks that offered short term credit mainly for the cultivation and trade of cotton. The close relationship between the operating banks and the cotton market made them highly vulnerable to the severe and sudden fluctuations in its trade due to external shocks, e.g. the American Civil War, the

¹⁰⁷ On the link between structure, competition and performance in the context of banking industry see Hannan (1991) and the extensive survey of Gilbert (1984).

great depression, the two World Wars,.. etc. The credit market was largely unstable during this phase with large numbers of banks collapsing and the existence of hit and run banking.

This phase witnessed also three important events as far as banking development is concerned, first the evolution of central banking since starting in 1898 with the issuance of banknotes by the NBE which was followed by several decrees enforcing its functions as banker and advisor for the government and, to some extent, bank of banks, although its regulatory power was not clearly established. The second was the establishment of specialised credit institutions in 1902 and then in 1931, to provide the agricultural sector with moderately priced credit and competing with commercial banks and money lenders. The third was the emergence of Bank Misr in 1920 as the first Egyptian-owned bank. The bank was a universal one but was more concerned with the establishment of a diversified industrial base.

The 1952 revolution marked the end of the first phase and the beginning of the second phase 1952-74. This period is characterised by the Egyptianisation of foreign banks in 1957 as a result of the Suez Crisis of 1956, and then the entire nationalisation of the banking system in 1961 which initiated the adoption of central planning. As a result of merging and liquidations of banks the number of operating banks declined from 27 banks in 1961 to ten banks. The functions of the central bank were enforced by the banking law of 1957 and the CBE was established as an independent institution in 1961. This period also observed unsuccessful sectoral and functional specialisation policies which had to be abolished.

In the third phase 1974-1991, the banking system was partly liberalised according to the *Infitah* policy. Foreign and private banks were allowed to operate and the number of banks increased substantially from 7 in 1974 to 98 banks in 1991. Despite this increase

which was reflected in a rise of branches, the banking density at 0.2 is low by international standards and banks were highly concentrated in Cairo and the large cities. But on the other hand financial deepening, measured by the M2/GDP ratio, was 104.6% in 1990 which is considered high given the stage of development of Egypt. Part of the increase of the M2/GDP ratio in recent years is attributed to money substitution accompanied with devaluation measure which result in an increase of the values of foreign denominated assets when measured in terms of the domestic currency. The financial reform programme which started in 1991 with extensive coordination with the IMF and the World Bank marked the end of the third phase.¹⁰⁸

We have shown that the Egyptian banking system, despite the *Infitah* measures still suffers from various problems. Entry barriers, absence of an adequate exit mechanism, and preferential treatment of the public sector banks are the main difficulties that impede the development of the banking system. Moreover there are problems related to inadequate prudential regulation like the problems of capital adequacy, loan provisioning, disclosure of information and the quality of bank supervision. Accordingly performance indicators of the operating banks, especially the public ones, were not impressive. While the nominal values of ROA, ROI and ROE may indicate high performance of banks, adjusting them with inflation and allowance for nonperforming loans, high leverage and high non-interest income reveal a much weaker performance.

We argue that the condition of the banking system requires reform at different levels. First at the banking units level by improving their management, granting them adequate autonomy in decision making, and encouraging training schemes and the acquisition of essential resources for efficient banking.

¹⁰⁸Main elements of the financial reform programme are discussed below.

Second at the banking system level, by encouraging competition and contestability, removing excessive barriers to entry and replacing them with an objective entry criteria, establishing a reliable exit mechanism accompanied with an efficient deposit protection scheme.

Third at the regulatory level, by ensuring the independence of the CBE from political interference and enhancing the quality of its on-site inspection and off-site surveillance; providing a clear regulatory framework including guidelines for capital adequacy, loan provisioning; establishment of uniform accounting standards and disclosure of information.

Chapter (4)

The Egyptian Securities Market

(4.1) Introduction:

The term securities is used as a generic term for financial instruments issued by companies and governments in the form of shares, debentures, stock, bills and bonds which are transferable by sale.¹ Securities markets like the rest of financial intermediaries mobilise savings and allocate loanable funds. They serve four groups of participants: investors, speculators, hedgers and arbitragers. Investors, firms or individuals, purchase financial assets primarily for the income they receive from holding assets in the form of interest payments and dividends. If they are frequently willing to sell their holdings any time to maximise their profits, which constitute primarily their incomes, they are included in the category of speculators. Hedgers hold assets with the expectations that they will have offsetting price movements caused by non-random fluctuations. While an arbitrageur holds a speculative inventory by which he is able to buy and simultaneously sell an asset at higher price. Although the four groups are separated conceptually, in practice individuals or institutions who fit one classification may also fit some or all of the other classifications.²

In this chapter we examine the development of the Egyptian securities market as an integral part of the study the Egyptian financial sector, started by the analysis of the banking system in the previous chapter. We begin by discussing the role of securities markets in LDCs, and highlight their advantages and disadvantages. Then, we provide a critical appraisal of the market-based versus bank based financial systems and its relevance to the LDCs. Then the development of the securities market in Egypt is

¹This definition is adapted from Drake (1980), p. 192.

² See Auerbach (1988), pp. 265-266.

analysed by dividing it into three phases starting with the establishment of Alexandria Stock Exchange in 1883 and ending in 1993 which marks the start of the application of the new Capital Market Law. An analysis of the securities market performance is provided using the main published indicators. Then we examine the main impediments facing the progress of the securities market which determine the sort of policy action required to revive the market.

(4.2) Securities markets in LDCs

For a long time the securities markets in LDCs were considered hard to establish, costly to manage, difficult to supervise and, above all, likely to contribute little to economic development. These views may partly explain the paucity of studies on securities markets in the literature of economic development. Arguments of passive function of the financial sector and the virtual absence of a role for the financial system in the early growth models were also responsible for such scarcity of studies and undermined the importance of building robust financial systems including capital markets.

However a few important studies appeared in the late 1960s and early 1970s emphasising that finance matters. Goldsmith (1969), Shaw (1973) and Mckinnon (1973) established strong arguments regarding a positive link between the conditions of financial development and economic growth.³ The studies of Patrick (1966) and Wai and Patrick (1973) highlighted the mechanisms and microeconomic aspects of capital markets as to their role in the mobilisation of capital and economic growth.⁴

³ See our review of the literature in chapter (2).

⁴ See Fischer and Papaioannou (1992), pp. 2-4 for a concise review of the evolution of academic interest in capital markets.

Supporters of the role of securities markets claim that they would, among other things, improve the quantity of real savings, increase net international inflow of capital, improve the allocation of investable funds and lower the costs of providing capital to projects.⁵

Arguments in favour and against securities markets are each evaluated in turn.

4.2.1) Advantages of securities markets:

(i) Improving real savings:

It is argued that the provision of financial assets separate savings and investment decisions. Thus savings can be accumulated without indulgence in coterminous acts of low return investment. Promised yields may be great enough to attract saving that might be otherwise saved in lower return instruments. The securities market provide various returns on various risk bearing instruments, hence it enables investors to diversify risk⁶. However we argue that securities market may achieve that under a specific propensity to save, i.e. via reallocation given amounts of savings between different instruments according to their returns after adjustment for risks. Arguments which claim that securities markets may also increase savings from given incomes do not have theoretical or empirical support⁷.

(ii) Encouraging capital inflows:

Developing securities market may facilitate international flows of capital as they may be attracted by foreign portfolio holders and managers wishing to diversify internationally. Recently emerging securities markets in Latin America alone helped attracting \$24 billion in 1990 and \$40 billion in 1991. Even if they fail to attract significant foreign capital they may discourage a significant portion of capital outflow.

⁵ See Drake (1977), pp. 74-77.

⁶ See Kitchen (1986), p. 147. and Drake (1977), p. 74.

⁷ See the analysis of this point in our discussion of the effect of changes of real interest rates on aggregate savings in chapters (2) and (7).

(iii) Funding investment:

Given the generally high debt/equity ratio in LDCs, the securities market would enable companies to bypass this constraint by raising fresh equity capital if they wish to expand. The issuance of shares and debentures can be with relatively small administrative costs.⁸

(iv) Allocation of investible funds:

Securities markets offer a hierarchy of rates of return between equities, bonds, etc.. which reflects the cost of capital for issuers which should pay such rate of return reflecting performance of alternative investments and their corresponding risk. Therefore the allocation of investible funds is improved.⁹ Securities markets do not undertake institutional assessment of claims for loanable funds, like those made by credit officers in banks. Thus the allocation of funds is made according to the apparent profits of companies which issue shares and debentures. In the absence of market imperfections, securities market would allocate investible funds efficiently. LDCs however suffer from different forms of market imperfection, e.g. monopolies, credit rationing, import restrictions. Hence the allocative effect of securities markets may be questionable.¹⁰

(4.2.2) Disadvantages of securities markets:

Among the criticisms of securities markets in LDCS, we highlight the following issues:¹¹

1. Securities markets can stimulate rash individual and institutional speculations leading to their collapse. History is full of financial crises caused by imprudent speculations.¹²

⁸ See Kitchen, op. cit., pp. 146-147.

⁹ *ibid.*, p. 147.

¹⁰ See Wai and Patrick, 1973, p. 328.

¹¹ See Kitchen, op. cit., p.148.

¹² See Kindleberger (1989) for a review of financial crises.

2. They may worsen the distribution of wealth and income.
3. Being guided by financial profits of companies, which may not be necessarily profitable for the society, securities market may deteriorate the allocation of resources.
4. They may host unacceptable activities like market-rigging, fraud, insider dealing, misleading offers, ..etc.
5. As argued by Shiller (1993), "stock prices often double or fall in half in a space of a few years, when there seems to be no concrete reason why stock prices *should* have changed at all. Some times speculative prices change dramatically in a matter of days or even hours. On 19 October 1987, ..., the Dow Jones Industrial Average lost 16 percent of its value in the space of under three hours".¹³ The volatility of asset prices can be explained mainly by what so called market psychology¹⁴. Excessive euphoria and optimism or extreme anxiety and pessimism can result in high volatility, and as evident in the 1929 and 1987, might lead to an inevitable crash.¹⁵ The high variability in stock prices would, *inter alia*, increase uncertainty in the economic environment, give rise to instability in the flow of capital, result in sudden losses in asset values, hinder investment and complicate economic decisions.

Figure (4.1) shows that emerging stock markets in LDCs suffered, to various degrees, from high volatility measured roughly by percentage change in the local market indices. Over the period 1983-1992 the change in the local index of the Jordanian market ranged from (-24.6) to 92.9 and in Korea it ranged from (-23.5) to 92.6, showing relatively low variability. Whereas the indices of the stock markets of Brazil and Mexico show high

¹³Shiller (1993), p. 762 in the New Palgrave Dictionary of Money and Finance, Vol 3.

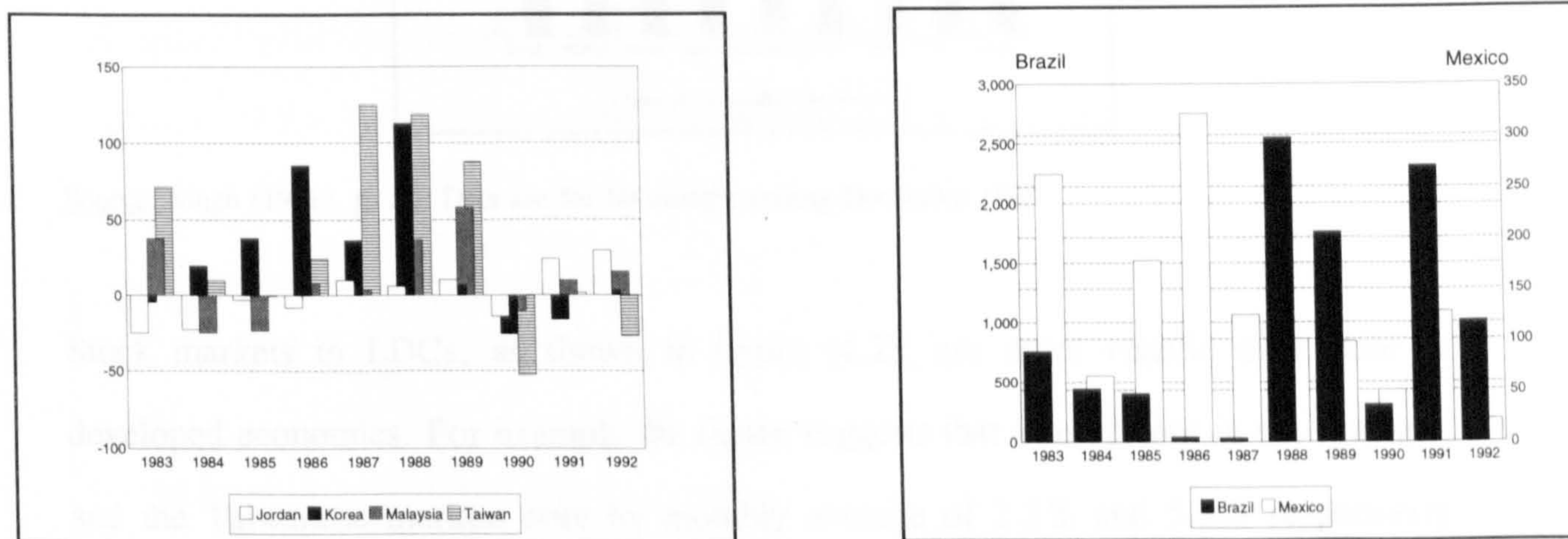
¹⁴Market psychology is defined as the change in public expectations, attitudes and theories about the market. See *ibid*.

¹⁵For a survey of the circumstances of the 1987 crash, see Shiller (1989), chapter (23).

variability as the change in local indices ranged between 21.8 to 320.6 and from 34.9 to 2,549.5 respectively. In Taiwan which has the largest emerging market its TSE index rose by 1,163.2% over the period 1983-89 reaching 9,624.2 but fell to 35% of its value in 1992 (3,377.1).¹⁶

Figure (4.1)

Percent change in local stock markets price indices



Source: International Finance Corporation (1993).

In only two years the Brazilian market capitalisation¹⁷ increased by three times, from US\$ 15.1 billion in 1983 to 42.8 in 1985, but it fell to US\$ 16.9 billion in 1987 losing almost all what it gained in the previous four years. Market capitalisation increased again to reach US\$ 44.4 billion in 1989 but fell to 16.4 in 1990.¹⁸ In Mexico the share price rose

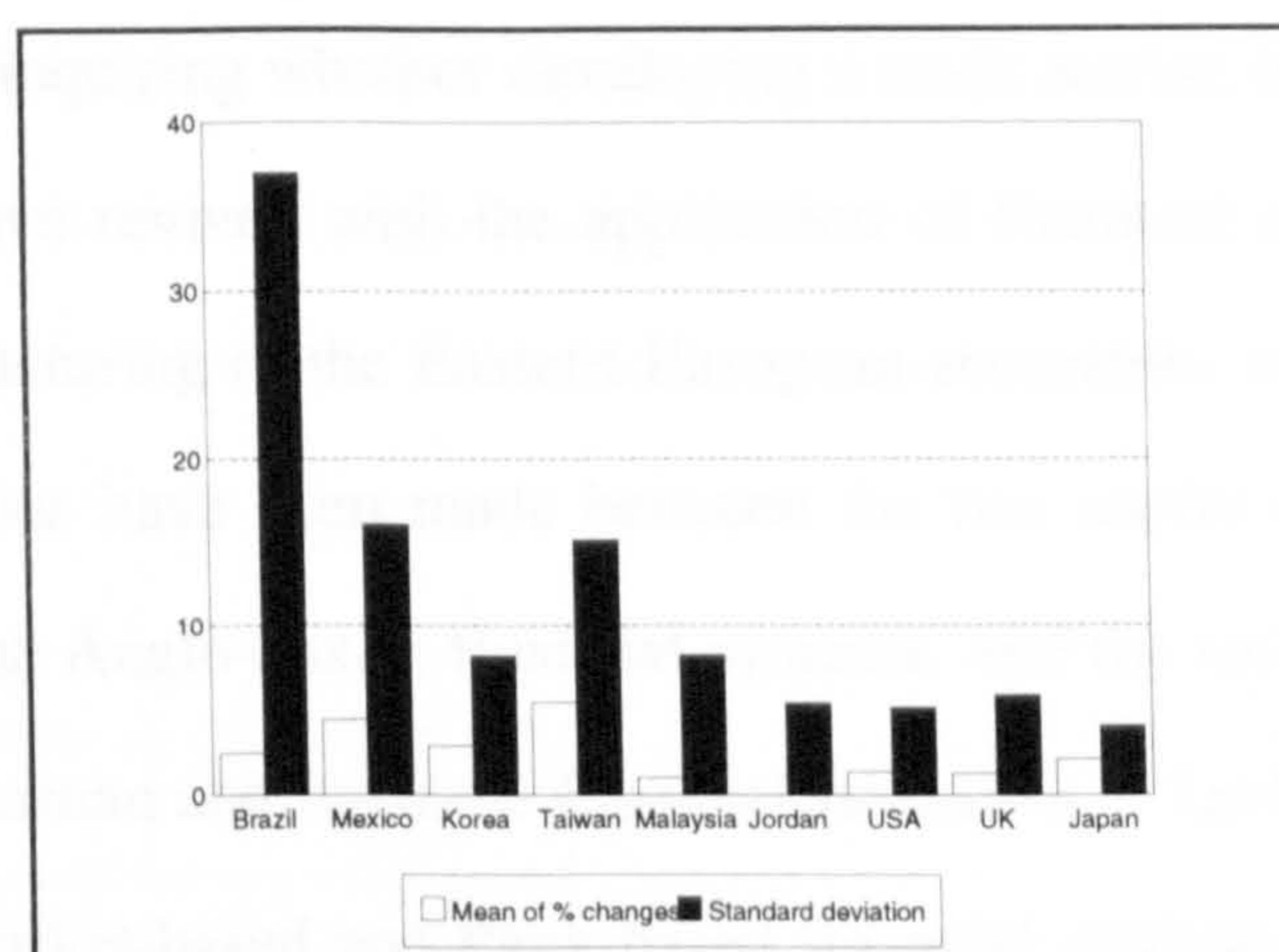
¹⁶See IFC (1993), op. cit., p. 153.

¹⁷Market capitalisation is "the market value of all listed companies at the end of the period. The market value of a company is the share price times the number of shares outstanding".

¹⁸See IFC (1993), p. 97.

six-fold in the nine months before Black Monday in 1987 but after the crash prices fell to only 10% of their pre-crash level.¹⁹

Figure (4.2)
Means of % changes and standard deviations
of share prices indices of selected markets



Source: Singh (1991), p. 52. Data are for 60 months ending December 1989.

Stock markets in LDCs, as shown in figure (4.2), are more volatile than those in developed economies. For example the figure suggests that share prices in the Brazilian and the Taiwanese markets rose by monthly average of 2.5% and 5.5% respectively during the 60 months ending December 1989. While the USA and UK share prices rose by 1.4% and 1.3% per month respectively. However, with standard deviation of 37.1 and 15.15 respectively, the Brazilian and Taiwanese markets displayed more volatility than the USA and UK markets which had lower standard deviation of 5.2 and 5.9.

Such higher volatility in LDCS' stock markets, compared with those of developed countries, is attributed to their segmentation and shallowness, in addition to the lack of adequate information on their activities and performance along with other imperfections.²⁰ Moreover they are vulnerable to the variations and shocks in share prices in the

¹⁹ Singh (1991), p. 51.

²⁰ See Singh (1991), op. cit., pp. 53-54.

international market. It is worth noting that these abrupt valuation changes can radically alter measures of financial depth.

(4.3) Bank-based versus Market-based paradigms:

Mainly because of the possible problems of the securities markets discussed above, arguments emerged inquiring whether developing a stock market is beneficial for LDCs. These arguments have revived with the application of financial reform programmes in LDCs and the restructuring of the Eastern European economies including their financial systems. Comparisons have been made between the two models on offer. The first is market-based à la the Anglo-Saxon financial systems, and the second is bank-based and influenced by the German and Japanese financial structures.²¹ Table (4.1) summarises the properties of the Market-based and Bank-based financial systems.

Table (4.1)
Characteristics of bank-based and market-based systems

Bank-based	Market-based
Concentrated ownership and control	Dispersed ownership
Association of ownership with control	Separation of ownership and control
Control by interested parties (banks, related firms, and employees)	Little incentive for outside investors to participate in corporate control
Absence of hostile takeovers	Costly and Hostile takeovers occur
Other stakeholders are represented	Interests of other stakeholders are not represented
Intervention by outside investors limited to periods of financial failure may encourage collusion	Low commitment of outside investors to long term strategies of firms
	Takeovers may create monopolies

Source: Corbett and Mayer (1989), p. 65.

The arguments in favour of bank-based financial systems mainly reflect the concern that market-based systems have an association with short termism. Hostile takeovers, mergers and leveraged buy-outs, relatively low investment in long run projects including training and R&D characterise the market-based system. These problems can be argued to have

²¹ See Corbett and Mayer (1989), Hellwig (1991) and Singh (1991) for a comparative analyses for the models. See Lewis (1994) for a discussion of the Japanese financial system and Edwards and Fischer (1993) for an analysis of the German financial system.

put the Anglo-Saxon economies at a competitive disadvantage compared with Japan and Germany economies described as bank-based.²²

Moreover critics of market-based financial systems argue that despite their significant sizes in the US and the UK, securities markets do not contribute substantially to the financing of companies. This observation is also found in Germany and Japan which have smaller securities markets. As shown in table (4.2), with the exception of Japan retentions were the major source of finance. In the four countries banks were the dominant source of external finance.

Table (4.2)
Gross financing of non-financial enterprises, 1970-85
(unweighted average %)

	Germany	Japan	UK	USA
Retentions	55.2	33.7	72.0	66.9
Capital transfers	6.7	0	2.9	0
short term securities	0	NA	2.3	1.4
Bank loans	21.1	40.7	21.4	23.1
Trade credit	2.2	18.3	2.8	8.4
Bonds	0.7	3.1	0.8	9.7
Shares	2.1	3.5	4.9	0.8
Other	11.9	0.7	2.2	-6.1
Statistical Adjustment	0	NA	-9.4	-4.1
Total	100	100	99.9	100.1

Source: Mayer (1989), table (3).

Because of these findings and some highlighted characteristics of LDCs' corporate structure such as the small size of firms, imperfections in information systems and high costs of establishing primary and secondary markets, it is suggested that the bank-based systems may be better for LDCs.²³

However we argue that these findings do not justify discouraging LDCs from establishing or promoting their securities markets, for the following reasons:

²²See Corbett and Mayer, op. cit., pp. 64-66 and Singh, op. cit. pp. 9-10.

²³See Cobham (1992), p. 7. and Singh (1991), op. cit., pp. 66-71.

(i) Different choice problem:

We argue that the choice facing a developing country is not between bank-based and market-based financial systems, but rather it is between inserting a sound securities market or not, into a traditionally commercial bank(s)-dominated financial system. An efficient securities market would complement the reform of financial systems, provide saving and investment instruments for individuals and banks and hence enhance the diversification of portfolios and improve the allocative efficiency of financial resources.

(ii) Imperfections are found in both systems:

Imperfections in securities markets do not imply perfection in the banking systems. Distortions and imperfections in the banking system are realised in developed and developing economies but discouraging or eliminating the banking system has never been the suggested solution.²⁴ As there are reform measures for the banking system as discussed in the previous chapter, so too there are measures which can be adopted to eliminate, or at least reduce, the drawbacks of securities markets. For example an effective tax policy can deal with the possible worsening of income distribution and possible conflicts of interest between corporations and society. Further a sound regulatory framework can help reduce the distortive practices and mischievous conducts in the market.

(iii) Optimal allocation of financial resources:

In some circumstances banks would be the optimal allocators of financial resources, in others securities markets would be. Allen (1993) argues that in the case of traditional sectors, such as agriculture, banks are better lenders and monitors by taking advantage of the relatively well-known technologies and production functions. When there is less

²⁴ Singh (1991), p. 69 emphasises that in the absence of prudent and adequate government regulation, "banks has sometimes jeopardised the integrity of the financial system as a whole, however the advice given was to "pay particular attention to questions of proper regulation and to the prevention of the monopolistic abuse by the banks."

consensus on how firms should be managed and how resources should be allocated, a securities market would be a better source of funding and, through its repeated evaluations, is a more efficient monitor and resource allocator than banks.²⁵ In other cases a combination of both banks and securities markets finance would be the optimal one.

(iv) Positive effects of securities markets:

Securities markets have positive effects on economic development which are hard to overlook, as shown by Atje-Jovanovic (1993) in an empirical study on 40 developed and developing economies. They applied the Greenwood-Jovanovic (1990) model to search for growth effects and the Mankiw, Romer and Weil (1992) model to search for the level effects. The study finds that securities markets have a significant impact on subsequent economic development in terms of level and growth. However it did not find a similar effect of bank lending.²⁶

(v) The impact of financial innovation:

Traditionally capital market lending, excluding equities, was long term in maturity, at a fixed rate of interest and with an active secondary market. Bank lending was mainly short term, at a variable interest rate and without a secondary market. Moreover some laws and acts, such as the 1933 Glass-Steagall act in the USA, created a barrier segregating commercial banking from investment banking and separating firms selling brokerage services from banks.²⁷

This distinction has diminished due to the advances in financial innovation and the encouragement of universal banking, and especially after the abolition of the Glass-

²⁵See Allen (1993), pp. 101-102.

²⁶See Atje and Jovanovic (1993), pp. 632-36.

²⁷See Miller and Pulsinelli (1989), pp. 168-169.

Steagall act in 1987. Bank holding companies are now allowed to have brokerages and brokerage firms offer checking accounts.²⁸ Hence there is an overlap between the activities of securities markets and banks which are no longer strictly different in various respects. Both banks and securities markets can offer funding at fixed and floating rates, both for short term and long term. Also, through securitisation, loan swaps and transferable loan contracts, banks started to develop a secondary market for their loanable funds.²⁹ Thus it seems that LDCs are not facing two strictly different models to choose between them.

(vi) Recent findings on the German financial system:

The recent study by Edwards and Fischer (1994) establishes profound challenges to the conventional wisdom regarding the structure, mechanisms and role of the German-style financial system. In contrast with the theoretical claims for a bank-based financial system, outlined in table (4.1) above, the authors found that:³⁰

1. The banking market is not dominated by a small number of banks.
2. The majority of German banks do not have representatives on the boards of firms or proxy votes and hence banks do not affect corporate governance through these methods.
3. Even when banks are represented on firms' boards there is no evidence to suggest that bank representation was used to make loan decisions and generally such representation was not associated with greater use of bank loans.³¹
4. There was a weak relationship between bank proxy voting power and supervisory board representation. Accordingly there is not strong support for the claim that

²⁸ Auerbach (1989), p. 131.

²⁹ See Llewellyn (1992), pp. 19-21.

³⁰ Edwards and Fischer (1994), chapter (5).

³¹ *ibid.*, p. 232.

banks act in Germany as delegated exercisers of equity's power by using proxy votes.

5. The previous findings cast doubt on the argument of exploiting economies of scope by German banks.
6. Evidence on sources of finance in Germany and the UK over the period 1979-89 shows that UK firms depended more on bank loans to finance investment than did the German ones. Moreover German firms did not acquire external finance at lower cost nor did they have greater access to external finance than in the UK.³²
7. The value of equities supplied by German banks to firms is only 3% of the total value of loans advanced to these firms. Thus the majority of bank finance to banks was in the form of debt and not equity.
8. Due to differences in the definitions of loan maturity it is difficult to suggest that German banks offer more long-term loans than the UK for example. Moreover it is not theoretically established that long-term lending is more efficient for investment than short-term lending.
9. German banks do not have special technical expertise to help them make informed decisions regarding investment prospects.
10. Evidence does not lend support to the theoretical claims which suggest that costs of financial distress are lower in Germany and banks are more supportive in difficult times. Given the extensive use of collateral, evidence on banks incentive to reorganise financially troubled firms rather than liquidate is limited.³³

Thus, the widespread argument that higher investment and economic growth rates can be achieved by following the German financial model now seem questionable.³⁴ The

³² *ibid.*, chapter (3).

³³ *ibid.*, pp. 232-233 and chapter (7).

³⁴ *ibid.*, chapter (1).

commonly held views on the role of banks in the German economic performance are not self-evidently correct.³⁵

(vii) Recent changes in the Japanese financial system:

The Japanese financial system is the second celebrated example of a bank-based financial system. The main distinctive feature of the Japanese financial system is the role of the *Main Bank* in financing industry. Under this system banks are the primary suppliers of external funding for projects and the main bank is normally the largest lender. Banks own significant portions of equities in the companies that they finance. The main bank and firms form a so-called enterprise group through which relations include financing purposes as well as the sharing of information, marketing, and R&D projects.³⁶

However the process of financial liberalisation in Japan in the early to mid 1980s changed the financial system and corporate finance in Japan. Financial innovation and deregulation reduced the functional boundaries between different financial intermediaries and distinctions between city, regional, trust and long-term credit banks came under the pressure of competition.³⁷ Banks were assigned to securities houses and vice versa, new instruments were permitted resulting in a change in the pattern of capital flows in the domestic market.³⁸

The Japanese firms, concerned with the rising cost of capital, began to prefer direct finance and raised funds by selling their securities in the market instead of passing them on to their main banks.³⁹ During the deregulation years 1981-85 issues of securities

³⁵Edwards and Fischer (1992), p. 26.

³⁶Lewis (1994), p. 14.

³⁷ibid., p. 11.

³⁸The Economist (1993), p. 6.

³⁹The Economist (1992), p. 17.

accounted for more than 25% of manufacturing companies sources of funds, while in 1989 they made up 70%. As a result the share of bank lending to manufacturing fell from 50% of total funding to 16% in 1990. However total bank lending did not shrink but instead grew during the 1980s as banks found new borrowers from households whose share of bank loans was more than 16% in 1990 i.e. more than the share of manufacturing. Banks lent more to the service sector as its share increased from 5% of total lending in 1970 to 15% in 1990.⁴⁰ Loans to small and medium-sized enterprises also increased as their share in loan portfolios rose from 45% in the early 1980s to 70% in 1992.⁴¹

Thus, the recent changes in the Japanese financial system emphasise the importance of possessing an efficient securities market more than they suggest the opposite. Japan, one of the claimed strongholds of bank-based finance, maintained a securities market which enabled its companies to diversify their source of funding when they needed and allowed individuals to disperse their savings. The question which arises is why should LDCs eliminate these options, and deliberately limit their savings instruments and funding sources?

According to our appraisal of the advantages and disadvantages of securities markets, we argue that the advice for LDCs, including Egypt, should be to encourage their securities markets to develop in an adequate regulatory framework, enabling them to compete freely with the other of financial intermediaries.

⁴⁰See *The Economist* (1993), op. cit., p. 6

⁴¹Lewis (1994), op. cit., p. 11.

(4.4) The case of Egypt:

(4.4.1) The first phase: 1883-1958

The Egyptian securities market (henceforth ESM) was established in 1883 in Alexandria and was then followed in 1890 by one in Cairo. The reason behind its establishment was primarily the need for a stock exchange market to cater for dealings in the deeds of the Egyptian debt⁴².

A league of securities market dealers was established in 1903⁴³ to determine the rules for trading in stocks, organise the relations between the dealers and their customers and resolve the problems of the business. This almost voluntary organisational structure was the only authority available at the time. In 1907 the market had 328 companies and a turnover of £E 91 million. However native Egyptians had a very limited role in the market as most of shareholders and company managers were foreigners.⁴⁴

The ESM was disorganised and operated without a legal structure. But the need for government intervention to regulate the securities market was growing. In 1907 there was a fortuitous sharp increase in the price of cotton the main production of the country at the time. "This increase in cotton prices led to higher property values and land.., began to change hands from day to day at ever-mounting prices while speculation became rife in stocks and shares.., and when the speculative boom reached its height a veritable frenzy took possession of Cairo and Alexandria".⁴⁵

Thus the financial crash of 1907 was inescapable. The crisis resulted in a drop of the value of agricultural land by 70% and a heavy drop of the stock exchange values. It was

⁴² See Ahmad, (1990), p. 30.

⁴³ See Central Bank of Egypt (1987) p. 252.

⁴⁴ See Hansen (1991), p. 102-4.

⁴⁵ National Bank of Egypt (1948), pp. 31-32

then obvious that the main reason that led to the crash is the fact that the market was full of reckless gamblers and irresponsible dealers who were helped by a glut of credit and the absence of regulation. The government intervened in 1907⁴⁶ to regulate the operations of the securities market and issued a law in that year and a general by-law in 1909.⁴⁷ However it took the market approximately ten years after the crash to recover.

Except for a short interruption from 1914 to 1916, because of World War I, the market observed steady progress. The ESM activities fluctuated between the two world wars, in response to changes in the international market. After the end of World War II the private sector flourished and new products were manufactured ranging from household goods, including durable goods and intermediate goods⁴⁸. Many of these companies raised funds through the ESM.

In 1954⁴⁹ a law was issued aiming at expanding the ownership base by reducing the minimum value of issued shares and assuring that the capital of any listed company with capital of more than £E 50,000 should be listed on the stock market and be available to public offering.⁵⁰

Egyptianisation laws that followed the Suez Crisis in 1956 did not seem to have negative effects on the ESM, at least in the short run. These laws, which were enacted in 1957, attracted sufficient domestic investment to replace the foreign. Also in 1957 law number 161 was issued by a presidential decree to put the first comprehensive regulations manual for the securities market.

⁴⁶ See Ahmad(1990), p. 30.

⁴⁷ This bylaw was amended four times in 1910, 1912, 1933 and 1940, see Central Bank of Egypt (1988), p. 252 and Ahmad, p. 31.

⁴⁸ See Mabro (1974), pp 142-3.

⁴⁹ See table (4.3) below for an overview of the main laws and decrees which affected the securities market.

⁵⁰ See Ahmad, op. cit., pp 31-32, Fahmy (1993), p.5 and National Bank of Egypt (1992), pp 8-9.

The market activities peaked during the period 1946-1959 with an average of 1000 transactions daily and increased numbers of listed and floated companies annually. Turnover was approximately 30% of the market value of listed securities in 1955.

In 1958 the number of joint stock companies had reached 925 of which 275 companies were listed. All of these companies offered shares to the public and most of the shares were actively traded⁵¹. The size of the market turnover in 1958 amounted to £E 111.4 million, i.e. 9.1% of GNP. During this period the ESM was one of the busiest markets in the world.⁵²

(4.4.2) The second phase: 1959-1971

Until 1959 government intervention in the securities market took the form of fixing minimum values of shares, ruling out certain operations, e.g. futures operations and enhancing the organisational structure. However in 1959 the government started a series of interventionist and nationalisation measures supported by several laws. The impact of these laws are summarised in table (4.3).

Law 7/1959 had a devastating effect on the confidence of the public in the securities market. The Law determined that distributable profits per share, in any year, should not exceed that of 1958 in addition to a maximum of 10% of the nominal value of the traded security. Moreover any company which was established after the issue date of the law or the companies with profits less than 15% in 1958 were not allowed to distribute in the future more than 10% of the nominal value of the shares.⁵³

⁵¹ See World Bank (1992d) p. 15.

⁵² See World Bank (1992d), p. 3.

⁵³ See Central Bank of Egypt (1988), p. 255.

Naturally this caused general disappointment and pessimism amongst the investors. This resulted in a decline of the size of transactions from £E 111.4 million in 1958 to £E 71.5 million in 1959, and the index number of share prices dropped from 124 points to 106 points during the same period by a rate of 14.5%⁵⁴.

To curb the negative reaction, a ministerial decree was issued in 1959 increasing the 10% ceiling on distributable profits to 20% but this was still subject to the approval of the Minister of the economy. Nevertheless, even after the abolishing of such approval by a presidential decree the conditions of the market did not improve. The size of transactions continued to decline, to only £E 62 million in 1960, and the index number of shares prices fell by an average of 17.9%.

The subsequent legislations of the 1960s, which was started by a temporary closure of the market for two months, resulted in the complete destruction of the ESM. 1961 marked the beginning of Egypt's nationalisation programme combined with sequestration and confiscation measures.⁵⁵ From 1961 to 1963 the government as shown in (table 4.1) managed to nationalise all financial intermediaries; cotton mills and cotton pressing companies; as well as chemical, engineering, metal and pharmaceutical and textiles companies.

The government intervened directly in the operations of the ESM by imposing a maximum limit of £E 10,000 for the market value of shares per shareholder in 139 companies. Amounts in excess of the limit were sequestrated. Moreover the ministerial

⁵⁴ *ibid.*

⁵⁵ See El-Kammash (1968) and Mabro (1974) for a review of the main economic developments during the 1960s.

decree (41/1969) fixed the maximum of distributable profits at 15% of the nominal value of the shares, which was 8.4% in net⁵⁶ terms.

Nationalisation and interventionist measures created an environment of pessimism about the future of the private sector and the prospects of the securities market. Incentives to invest in the ESM vanished. There was totally no confidence in the market and no credibility of the financial authorities.

Between 1961 and 1971, the primary market was effectively paralysed and only four new companies were established.⁵⁷ The number of private sector joint stock companies declined from 925 in 1961 to as low as 36 in 1971. Trading in the Cairo Stock Exchange dropped from £E 43.9 million in 1958 to £E 9.1 million in 1963 to £E 3.6 million in 1971.⁵⁸ Consequently the ESM effectively vanished. However in order to prevent its official closure, the Ministry of the Economy and the CBE agreed to assist the market by a modest annual financial subsidy to the brokerage offices, which remained private. This subsidy was mainly used to pay the salaries of the remaining brokers.⁵⁹

Most of the trading at that time was in government bonds purchased by the Central Bank and commercial banks. The Banking system took almost full control of the mobilisation of savings. In addition to taxes, the financing of the ambitious investment plans of the state was coming from the nationalised banking sector, foreign assistance, the social insurance institutions, the nationalised insurance companies.

⁵⁶ i.e. after tax.

⁵⁷ See Mohamad (1986), p. 2.

⁵⁸ See National Bank of Egypt (1992), p. 11.

⁵⁹ With the decline of the volume of trading the number of brokers declined from 76 representing almost 47 brokerages offices in 1959 to 12 in late 1960s. The remaining stockbrokers claimed their inability to work with continuing losses in their incomes. See World Bank (1992d), p. 16 and NBE (1992), p.11.

The ESM had a trivial role to play in financing public spending. The ESM covered a small part of the public sector borrowing requirements. This took a form of dealings in development and housing bonds and other securities issued or guaranteed by the government. Public sector commercial banks were the main purchasers of these securities which did not attract the private sector. Thus at the end of the nationalisation period the function of ESM in development finance was insignificant.

(4.4.3) The third phase: 1971-1993

At the beginning of this phase the government felt that it had to remedy the negative impact of the nationalisation period and restore the confidence of foreign investment. It issued law 65/1971 which protected all new Arab and foreign investment from nationalisation and sequestration.

Further the government issued Jihad Bonds in 1971 for covering part of its war expenses. There were two important aspects of these bonds, first tax exemption was used as an incentive for buyers. Second, in 1973 some of these bonds were denominated in foreign currencies which was a start for other issued bonds like the more widely issued Development Bonds.

However the most important progress was the promulgation of law 43/1974 which marked the beginning of the open door policy, *infatih*.⁶⁰ In addition to providing all new foreign investments with immunity from sequestration, this law granted foreign investors a five to ten years tax exemption, unrestricted repatriation of profits and other incentives. This law was amended by law 32/1977 to grant investors more privileges and reduce the restrictions in the foreign exchange market to encourage foreign investment in the ESM.

⁶⁰See chapter (1).

A General Capital Market Authority was established in 1979 to regulate and develop the primary and secondary markets, establish a code of conduct, monitor the operations of the market, and attempt to create a favourable environment for investment. Further it aimed at training securities market professionals and building an information system for securities.⁶¹

In 1981 two laws (157 and 159) were promulgated to grant shareholders tax exemptions and ease the establishment of new joint stock companies and facilitate raising fresh capital for the existent ones.

Although Law 146/1988 aimed at regulating the Islamic Investment Companies (IICs)⁶² and protecting the interests of their depositors, it actually tried to benefit from the IICs. It was realised that one of the reasons behind the ability of these companies in mobilising savings was their distribution of variable returns on deposits: an act which gave the impression that they were working under Islamic Law. The authorities found it may be appropriate to follow suit and issue a new instrument in the form of variable return certificates.⁶³

The steps towards enhancing the role of the private sector, and hence the ESM continued in the late 1980s and early 1990s. First there was a reform in the role of the Investment Authority by the issuance of Law 230/1989. The objective of the law was to facilitate the establishment of new investment projects, provide insurance and security against investment risks. It aimed as well at building up an information system and act as a coordinator between investors and different authorities. In 1991 Public Business Sector

⁶¹ See NBE (1992), pp. 12-13 and CBE (1988), p. 257.

⁶² For an analysis of the IICs see chapter (5).

⁶³ See article 15 Law 146/1988 and chapter (5) below.

Law number 203 was promulgated. The law transferred all public sector companies to public holding companies as a step towards full privatisation.⁶⁴ It was argued that these two laws would have a stimulating effect on the capital market through increasing the number of dealt-in securities.

A general capital market Law was approved by the parliament in 1992 and its executive regulations manual was issued in mid 1993. The main objective of the law was to improve the structure, regulations and performance of the ESM as a part of a general economic reform package supported by the World Bank and the IMF.

The law replaced individual brokers by brokerage companies, permitted the establishment of private stock exchanges and fostered the organisation of investment funds for portfolio management. The law allowed as well the issuance of shares in the name of their holders. Moreover, it aimed to encouraging workers and trade unions to own equity shares in accordance with the privatisation programme. However it is still early to analyse the effect of this law.

⁶⁴ See CBE (1993), p. 54.

Table (4.3)
A summary of the main laws which affected the securities market

Law	Impact
26/1954	Reduced the minimum value of issued shares from £E 4 to £E 2. Made stock market listing compulsory for companies with capital of more than £E 50000.
161/1957	Outlined the general regulations manual for securities market.
7/1959	Determined the maximum of distributable profits per the nominal value of the share.
11/1961	Amended law 26/1954. Allocated 25% of net profits to workers.
116/1961	Interrupted dealings in the two exchange markets of Alexandria and Cairo for two months.
117/1961	All banks (18), insurance companies (12) and other companies (52) were nationalised.
118/1961	Stated that 85 companies should have a minimum of 50% public ownership.
119/1961	Determined that the maximum market value of owned shares not to exceed £E 10000 per shareholder in 139 companies. Amounts in excess of the limit were sequestrated.
121/1961	Nationalised the four cotton pressing companies.
38/1963	Nationalised cotton mills.
65/1963	Nationalised the pharmaceutical companies.
72/1963	220 companies specialised in chemical, metal, engineering, textiles products were nationalised.
73/1963	Terminated mining and oil exploring contracts and nationalised mines and quarries.
77/1963	25 of the companies governed by law 118/1961 were fully nationalised, including transport companies.
78-81/1963	Added 20 companies to the list of fully or partly nationalised companies.
65/1971	Aimed at restoring confidence of Arab and foreign investors in the economic system by protecting all new investment from nationalisation.
43/1974 & 32/1977	Granted incentives and privileges to foreign investors. Some of foreign exchange market restrictions were removed to facilitate the purchase of securities.
520/1979	This presidential decree established the General Capital Market Authority.
157/1981	Granted joint stock companies tax incentives
159/1981	Amended law 26/1954 to facilitate the establishment of new joint stock companies and raising funds for the existent ones. Extended most of the tax privileges of law 43/1974 enjoyed by foreign investors to indigenous ones.
146/1988	Regulated Islamic Investment Companies. Allowed the issuance of variable return certificates by ESM.
230/1989	Enhanced the role of the Investment Authority to encourage foreign and domestic investment..
203/1991	Transferred public sector companies to public holding companies as a step towards privatisation.
95/1992	This comprehensive Capital Market Law aimed at stimulating the capital market under the reform programme supported jointly by the World Bank and the IMF.

Source: compiled by the author from different issues of the NBE's Economic Bulletin and the CBE's Economic Review.

(4.5) An analysis of the ESM Indicators:

Despite official attempts throughout the 1970s to revive the ESM, they have not yet resulted in a meaningful improvement in the actual performance of the market. The ESM has been the source of less than 5% of new funding for both the public and private sectors during the period 1989-1991, with an annual average of 1.2%. Further, only 3% of £E 39 billion of savings were mobilised through the securities market channel during the 1989-91 period. These figures are in deep contrast to the performance of the market in the 1958-1961 period, when it provided 25% to 50% of new capital raised by the private sector alone.⁶⁵ Constrained by the availability of data, we evaluate the performance of the ESM by four indicators: Number of listed companies, trading value, market capitalisation and turnover ratio. We compare these indicators for the available years with those of other LDCs.

Figures (4.3) and (4.4) below show the developments of the number of listed companies and the value of trading. Both indicators declined during the nationalisation period until the beginning of 1980s. The listing of new companies during the 1980s could be attributed, *inter alia*, to the *Infitah* laws discussed above, and also to the flow of remittances of Egyptian migrants in the Gulf states. The annual growth rate of listed companies was 28% during the 1981-1990 period. Trading value increased gradually by an average annual change of 18.9% in during the 1980s and early 1990s.⁶⁶ However the turnover ratio⁶⁷ averaged 7.98% during the 1983-1992⁶⁸ period which is significantly lower than the 1950s figures which ranged between 17.58% and 22.46%.

⁶⁵ See World Bank (1992c), p. 18, CBE (1988), p. 254 and CBE (1993), pp. 55-59.

⁶⁶ World Bank (1992c), *op. cit.*, p 104.

⁶⁷ Turnover ratio is defined as " the total value traded to average market capitalisation. Average market capitalisation is the average of end-of-period market capitalisations of the prior and current periods", see International Finance Corporation (1993), p.xi.

⁶⁸ Calculated from IFC data, *ibid.*, p. 176.

Figure (4.3)

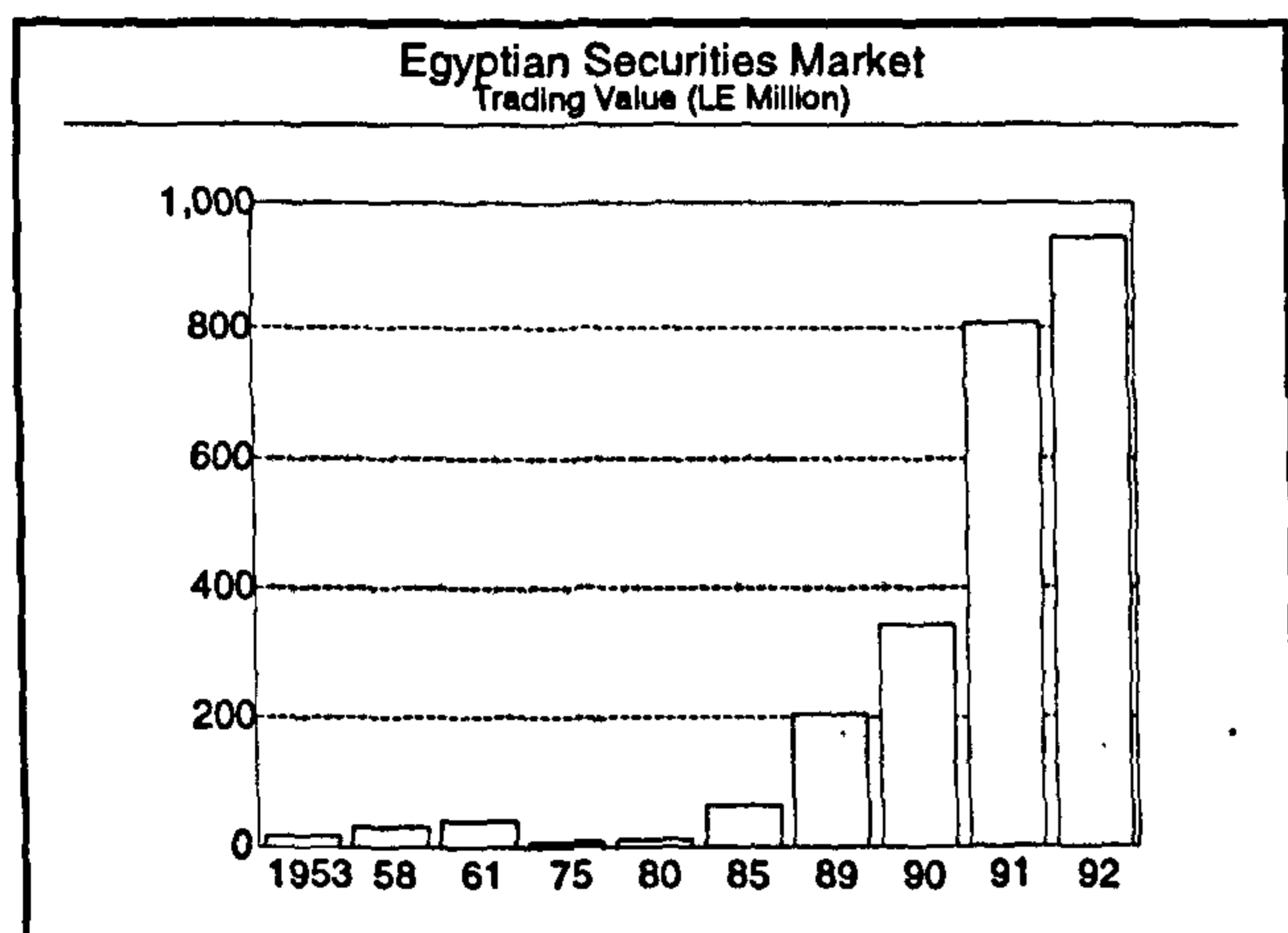
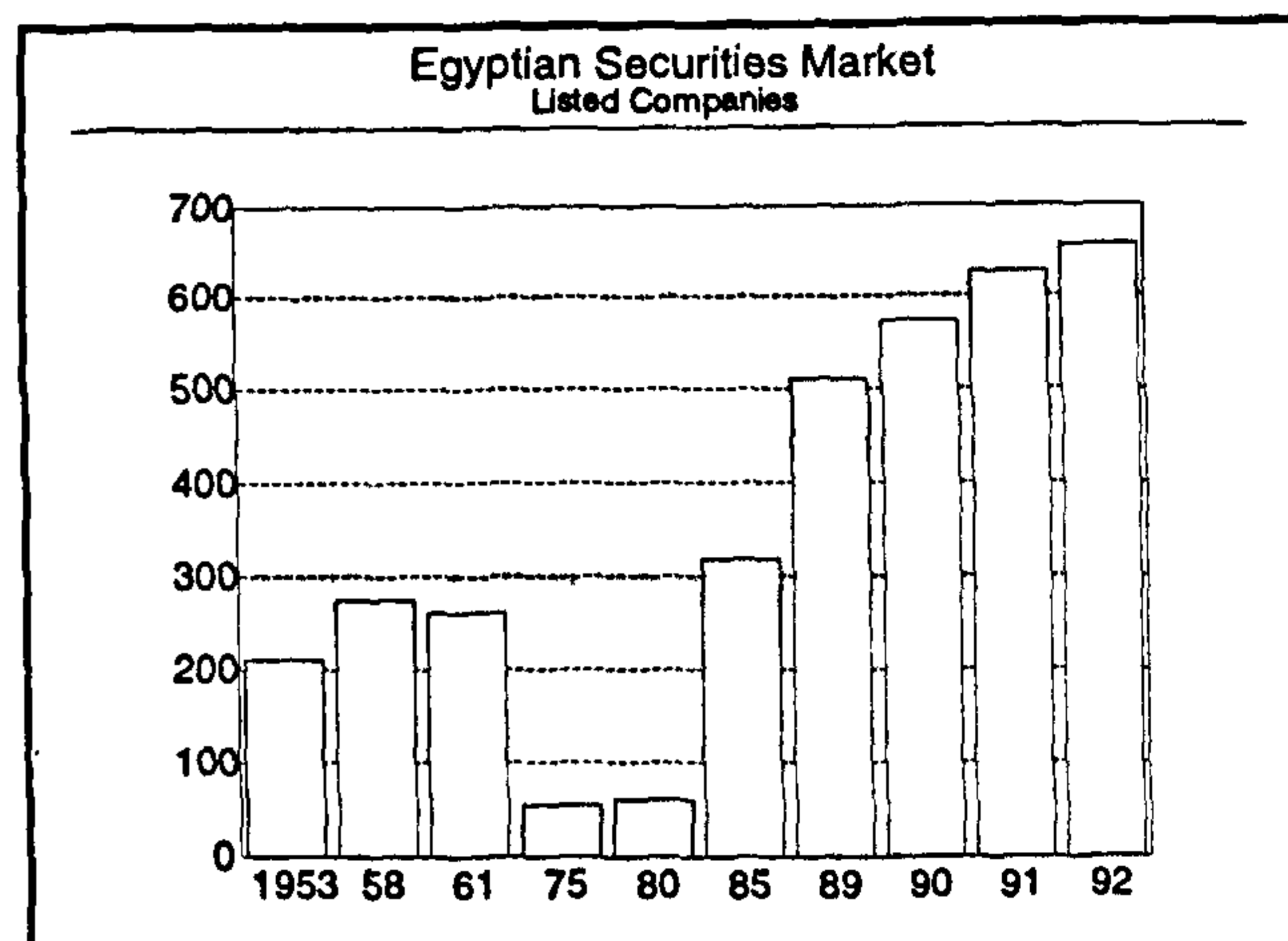


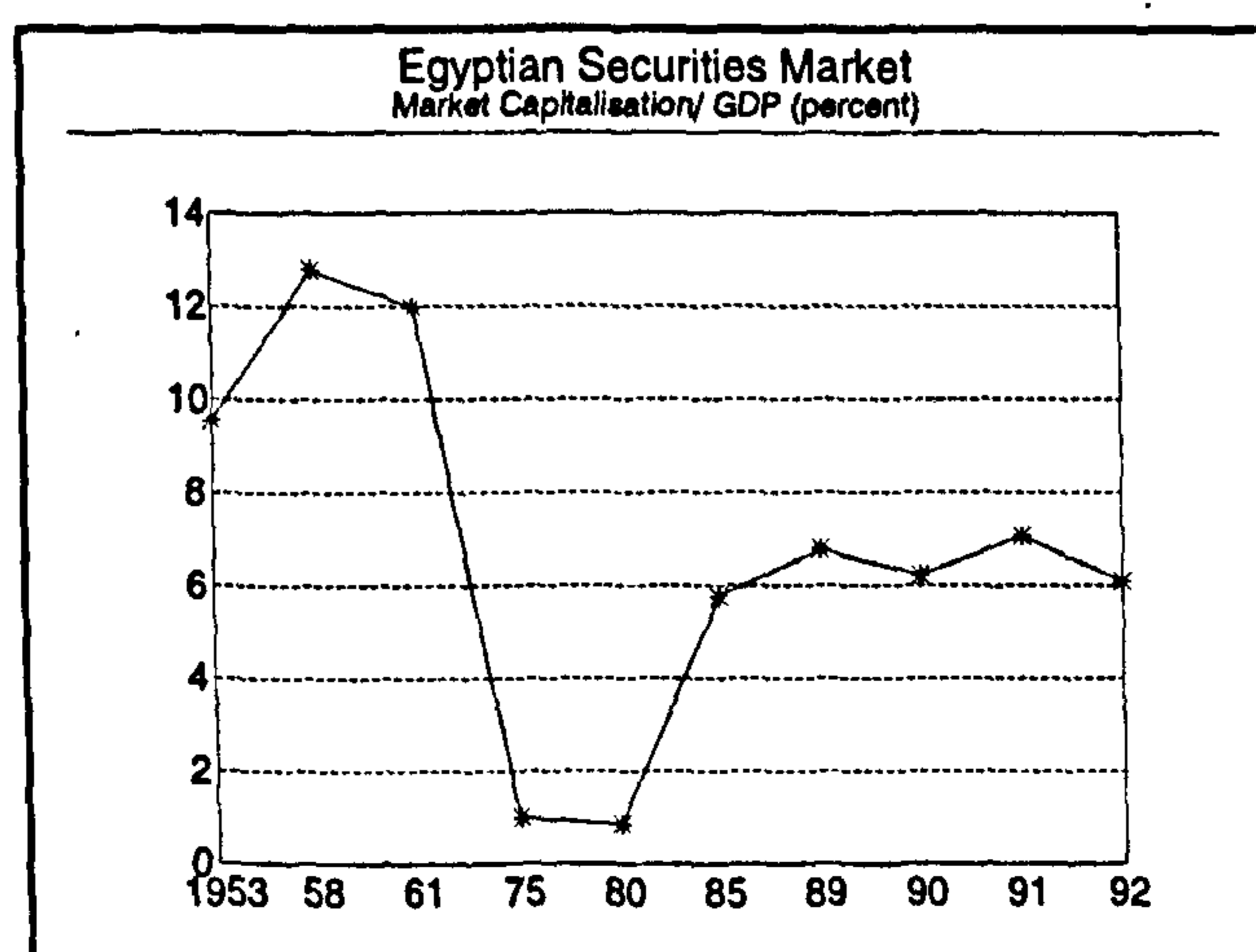
Figure (4.4)



Source: IFC (1993) and World Bank (1992d).

The fact that ESM's current performance is still below that of the 1950s is confirmed by the market capitalisation indicator shown in figure (4.5). Market capitalisation as a percentage of GDP dropped from its highest level of 12.79% in 1958 to its lowest of 0.84% in 1980 and then increased to the modest level of 6.1% in 1992. This indicator revealed what is disguised by the aggregate figures of number of companies and turnover which may give a misleading impression of a rapid growth of the ESM during the 1980s.

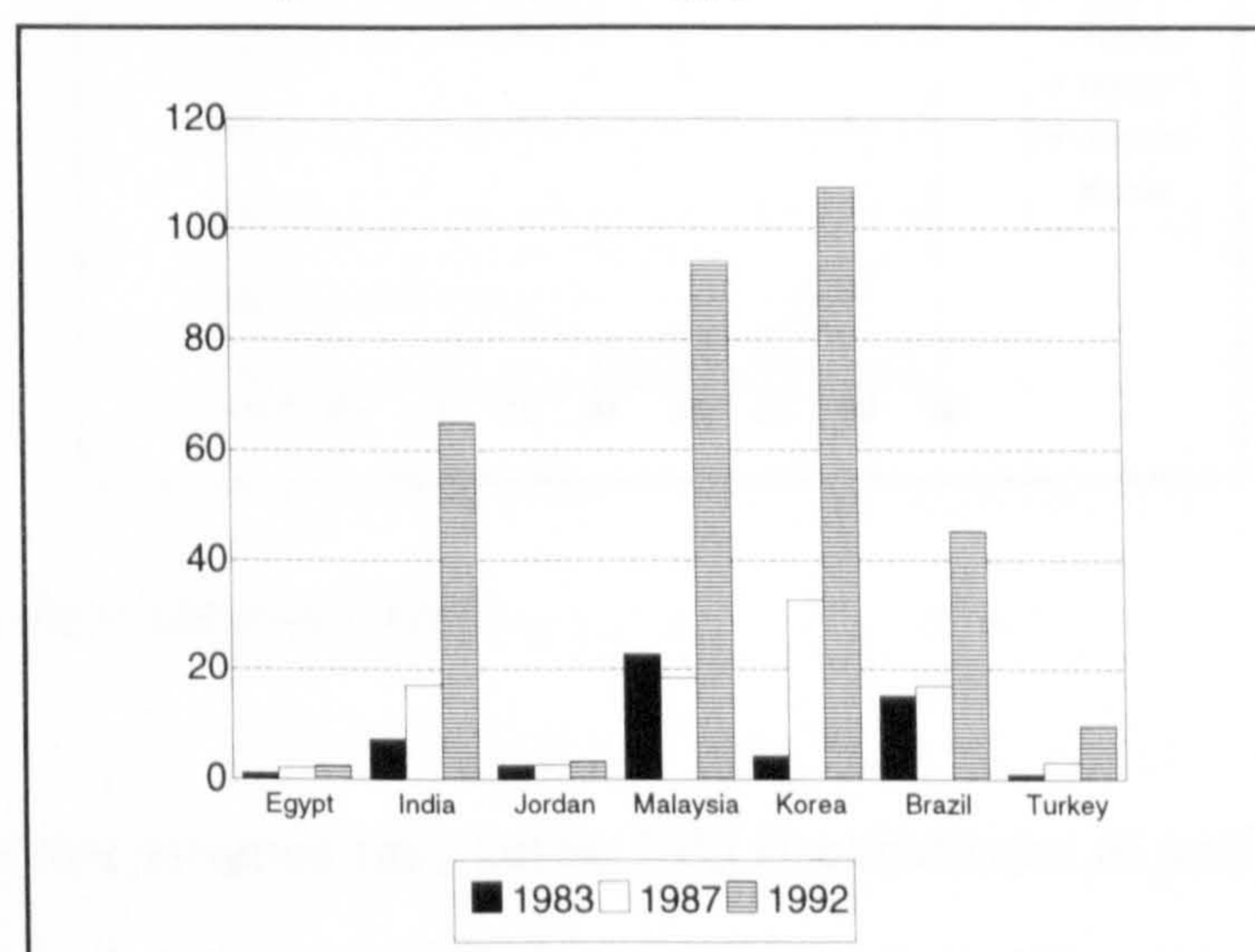
Figure (4.5)



Source: World Bank (1992d) and IFC (1993).

Comparative figures for other developing countries support our argument that the activities of the ESM is small for a country with the economic potential of Egypt. In 1992 the ESM had 656 listed companies. Although this is more than Brazil's 565 (Sao Paulo), the Brazilian market had capitalisation of approximately 45 billion dollars, i.e. 17 times bigger than that of Egypt. Further, ESM listed companies in Egypt were 5.6 times more numerous than those of Jordan and Turkey. Nevertheless each of the two countries had more market capitalisation by 30% and 280% larger respectively. Jamaica managed to achieve similar capitalisation to Egypt with just 48 companies.⁶⁹ Figure (4.6) gives a comparative view of the development of market capitalisation in Egypt and other LDCs.

Figure (4.6)
Market capitalisation in Egypt and selected LDCs



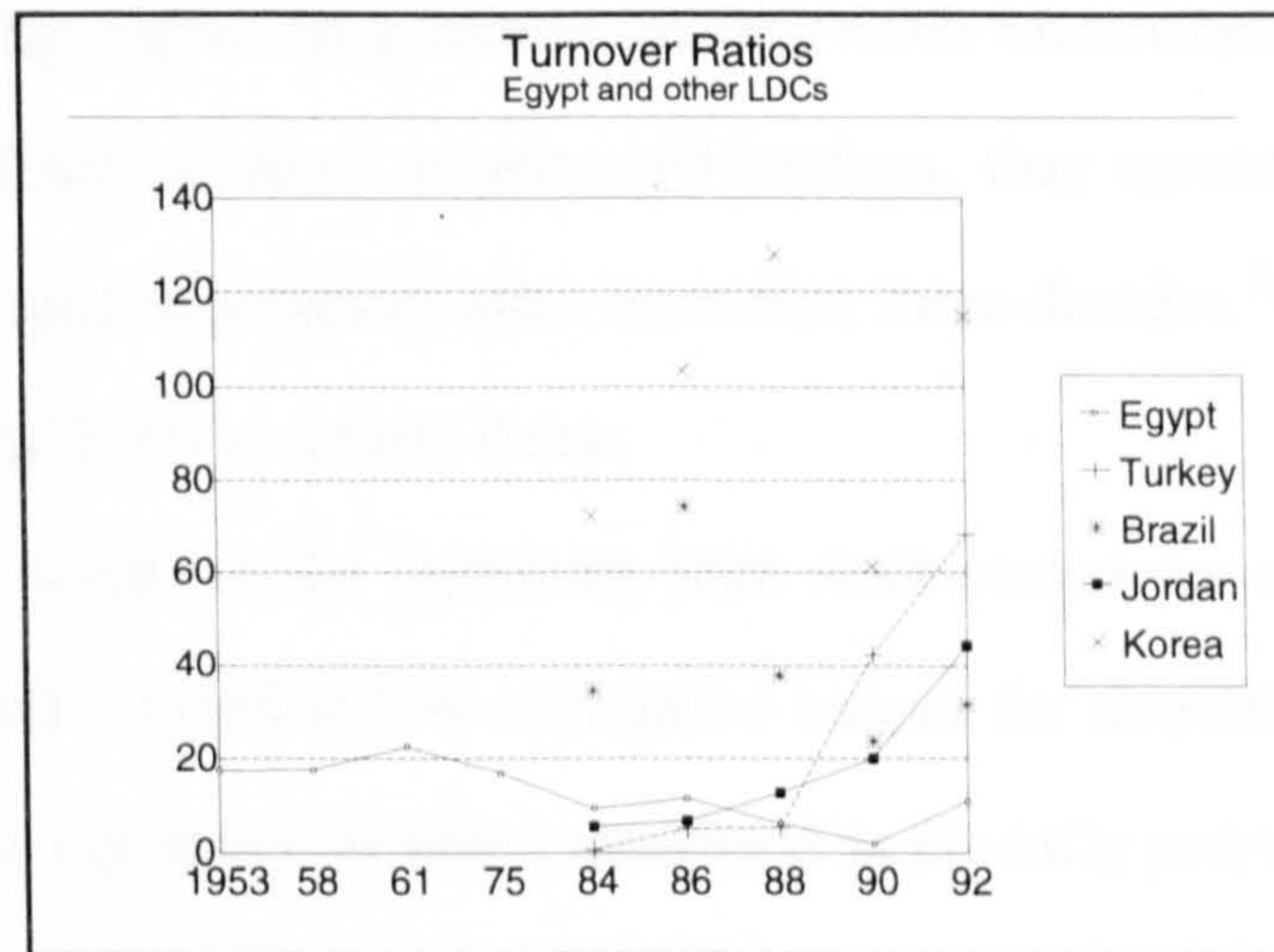
Source: IFC (1993).

The evident contradiction between capitalisation and the number of listed companies in the Egyptian case can be attributed mainly to the dominance of closely held companies which formed 73% of listed companies in 1990 and the limited trading in the securities of the rest of listed companies. Both issues are analysed below.

⁶⁹See World Bank (1992d), p. 26 and International Financial Corporation (1993).

Untraded securities also contribute negatively to the turnover ratio as an indicator of market liquidity. Figure (4.7) gives a comparison between the recent figures of the turnover ratio between Egypt and selected LDCs on one hand, and between the 1950s period and the recent years on the other hand. The two comparisons show that the turnover ratio is currently lower than its pre-nationalisation figures and is the lowest among the six countries compared.

Figure (4.7)



Source: IFC (1993) and World Bank (1992d).

It is considered that a turnover ratio below 10% is an indicator of a relatively shallow and illiquid market which is the case of Egypt throughout the 1980s and early 1990s. The use of this indicator comparatively confirms, again, that the recent growth of securities market aggregates can give a misleading impression about the ESM, which, in reality, is still illiquid and shallow.

(4.6) Impediments facing the progress of the ESM:

In spite of the reactivation attempts, since 1971, the performance of the ESM is poor. We would argue that its negligible role in savings mobilisation and its relative insignificance as a source of capital can be attributed to the following twelve factors.

(i) Credibility problems:

The consecutive measure of Egyptianisation in the 1950s and nationalisation, expropriation and sequestration in the 1960s, created a justifiable lack of credibility years after the start of these measures and despite successive government assurances of protecting ownership rights. In a number of interviews undertaken by the author with several Egyptian financial sector experts and bankers, they agreed that the credibility problem is still a main impediment after more than three decades.⁷⁰ It was fuelled over the years by several factors, among them:

1. The heavy losses in the remaining joint stock-companies in the 1970s and the 1980s which resulted in low or negative returns for shareholders.
2. The hit-and-run activities which flourished in the early years of the *Infitah* policy capitalised on soft regulations and incomplete laws: investors in many companies never recovered their funds because of such activities.
3. Inconsistent government policies, accumulation of foreign debt, expectations of further devaluation of the Egyptian pound, and fears of inflation created a general environment of uncertainty. This in turn reinforced savers' preference for the money market with its higher return in the short run, and foreign currency denominated instruments. Dollarisation, dealings in the informal financial market and depositing funds abroad were all extremely active in such environment, as discussed further below.

⁷⁰ Interviews with Dr Ashraf Shams-Eldin, director of external relations department, CMA in (17 July 1991); Dr Sultan Abu Aly, former Minister of the Economy (16 March 1993); Mr Mohammed Samy, Director of An Underwriting Company, (17/3/1993).

4. The decline of the Islamic Investment Companies which collapsed in the late 1980s resulting in immense losses to depositors' savings.⁷¹
5. Dealing in the securities market is still considered by a large group of potential investors, as a form of gambling, which is prohibited by religion. Moreover the media has for a long time emphasised that heavy speculation, especially in the price of cotton, in the early years of the ESM was behind the bankruptcy of many wealthy families and the collapse of several businesses. It is claimed that the media has exaggerated this discouraging savers in participating in its activities.⁷²

It is not the lack of investors or shortage of capital that make the number of ESM's individual and institutional investors as low as five thousand. The Islamic Investment Companies depositors, numbered more than 500 thousand before the beginning of their collapse in 1988. This reveals that the problem lies principally in the supply side⁷³ as discussed further below.

(ii) The prevalence of state-owned enterprises (SOEs):

As discussed in chapter (1), economic indicators emphasise the continued dominance of the public sector in Egypt. The *infitah* policy launched in the mid 1970s did not change the dominant role of the public sector enterprises. Ten years after the start of *infitah* and attempts to encourage private and foreign investment, the 370 SOEs accounted for 82% of capital stock 70% of total investment, 90% of total exports and 54% of employment in 1985.⁷⁴

⁷¹See the analysis of these companies provided in chapter (5).

⁷²This was emphasized in our interview with Mr Samy.

⁷³In an interview with Mr Motaz Mansour, Managing Director of Misr Iran Development Bank (5/5/1994), he strongly confirmed this point, mentioning that the main effort is needed in the supply side and it is just a matter of time to convince potential investors of the soundness of the ESM, if it is already there.

⁷⁴World Bank (1990b), p. 34.

Since their establishment in 1961, the SOEs relied on the banking sector in financing its capital requirements. The ESM was left to deal in a limited volume of government issued and guaranteed bonds used mainly to finance the budget deficit.

On the other hand, despite the fact that small projects, i.e. those with less than 50 workers, escaped nationalisation measures, the ESM did not serve them particularly well if at all. These projects specialised in services and light industry, with a scale of activity that did not require ESM financing. They were established by own-finance, mostly family finance, and retentions were used for their expansion. When necessary these projects obtained loans from the banking sector.

(iii) Slow pace of the privatisation programme:

The efficiency of the large SOEs has been deteriorating over the years since their establishment mainly in 1961⁷⁵ because of various factors, mainly, government interference in managerial decisions, administered pricing, overstaffing, absence of competition, and lack of accountability of top management. Moreover the overall deficit of the non-financial SOEs was over 8% of GDP by the mid 1980s.⁷⁶ The deteriorating economic conditions in the following years, oil price related external shocks in FY 1986/87, and the increase in foreign debt services signified the problems of the SOEs. The government came under pressure from the IMF and the World Bank to control the budget deficit and reform the SOEs as one of the major causes of deterioration in the fiscal balance.

⁷⁵ Although the role of public sector started to increase after the 1952 throughout the 1950s but it was mainly concentrated in financing infrastructure projects. The nationalisation measures of 1961 marked the official establishment of the public sector enterprises.

⁷⁶ World Bank (1990b), op. cit., p. 34.

As an integral part of the economic reform and structural adjustment programme currently undertaken in Egypt, the government has adopted two approaches to reform the SOEs. First, separation of management from government and treating the SOEs and the private sector according to a unified law applied to both sectors. Thus a new SOE law was approved in July 1991 and most SOEs were separated from their ministries and regrouped under 27 new holding companies. More autonomy was given to the SOE as to management, pricing, obtaining their funding. However employment and suspension decisions were controlled by tight laws and regulations.⁷⁷

Second, the government adopted a programme of privatisation⁷⁸ reflective of the international trend. According to this programme most of the SOEs are offered for sale according to a medium term schedule.⁷⁹ The government claimed that the privatisation programme is capable of improving the efficient use and allocation of limited resources and hence of contributing to more rapid economic growth.⁸⁰ Further it was argued that it would help to correct the fiscal imbalances through enhanced revenues.⁸¹

⁷⁷ See the NBE (1993), pp. 10-11.

⁷⁸ On the concept of privatisation see Hartley and Parker (1991); on the relation between ownership and efficiency see George and Lynk (1992); on the economic implications of privatisation see Vickers and Yarrow (1988) and on the privatisation experience in LDCs, see the volume edited by Cook and Kirkpatrick (1988).

⁷⁹ As described in the World Bank (1991) appendix IV, the first step of privatisation was taken in the FY 1990/91 by selling 2,000 small local government-owned enterprises and the start of selling large hotels.

The second step was programmed for implementation in FY 1991/92 and includes the following:

- Continuation of the sale of local government owned enterprises.
- Sale of public sector shares in Law 230 companies.
- Increase the private sector share in Law 97 companies which have private shareholders.
- Lease of under-utilised production capacity and sale of surplus of assets.
- Entire sale of small profitable public sector companies.

The third step was to continue and reinforce the privatisation programme in FY 1992/93.

For further details of the privatisation programme see the NBE (1994), pp. 9-23.

⁸⁰ The distributional effects of privatisation in Egypt are adequately considered. The only issue addressed by the government in this respect is merely the compensation measures required for those who are likely to directly affected by the programme. It is argued that privatisation programmes are likely to generate more general distributional imbalances which have to be considered in a systematic manner. For an analysis of this issue see Cook and Kirkpatrick (1994).

⁸¹ The government in such claims is following the World Bank's view, expressed in the World Bank (1990b).

However because of the unpopularity of privatisation in Egypt, concerns of political instability, fears of worsening the severe unemployment problem (already 17.5%), privatisation of SOEs has been lagging behind its schedule. On the other hand evaluation of projects prepared for sale, taking sale decisions, methods of privatisation appeared problematic and practically difficult, especially in the absence of an active securities market which has been the backbone of the privatisation process in other countries.

Although there are mutual benefits for the securities market and the privatisation programme, the authorities in Egypt have been trapped in a supply-leading or demand-following problem. Whether to develop first the ESM or privatise the SOEs, has been a main economic policy question since the start of the privatisation programme without a significant practical move in either direction.

(iv) Relatively low costs of bank loans:

The imposition of interest rate ceilings made the costs of the available loanable funds artificially low. Until 1991 the CBE was responsible for determining the interest rate structure according to which lending rates for different sectors were strictly applied.⁸² Such rates were generally below market levels and include substantial subsidies for some borrowers. Under these circumstances it was difficult for the securities market to compete freely with the banking system. If ceilings on interest rates are lifted and the costs of borrowing become more realistic, there would be more of an incentive for companies to rely on the ESM to provide them with their capital requirements.

(v) The problem of closed companies:

In 1993 of the total number of companies listed on the Cairo Stock Exchange of 654, 76.2% of which were closely held companies. Closely held companies are defined as

⁸²See chapters (6) and (7) for an analysis of interest rate policy in Egypt.

those having 15 shareholders or less, usually members of the same family, whose shares are not normally offered for public dealing. These companies had approximately 70% of the £E 8.4 billion total capital of the market.⁸³

As discussed above the legislators in the 1950s perceived the tendency towards a concentration of shares amongst a small number of holders, hence Law 26/1954 was issued demanding public offering of shares by prospectus to be entitled for listing. In the 1980s tax and company laws 157/1981 and 159/1981 encouraged the establishment of joint-stock companies by offering tax incentives for listing and allowed listing of their securities provided that they had three or more shareholders. Consequently around 80% of the listed companies during the period 1981-1991 period were closely held. Shares of closely held companies are exclusively traded among the incumbent holders. The prevalence of such shares contributes very little to the supply of tradable securities.

However, the problem will not be solved by mere legislation against the formation of closed companies. We argue that measures to promote the activities of the ESM and strengthen the investment environment would increase the number of registered companies with openly-traded securities and hence the relative importance of closely held companies will decline. Moreover the elimination of fiscal disincentives and a reduced cost of trading in securities, along with other measures, may encourage the existing closed companies to go public.

(vi) Concentration of ownership

If we look at the ownership structure of the publicly issued companies during the 1980s, we realise that more than 50% of the shares are owned by a small number of holders,

⁸³ Figures are calculated from the 1992/3 annual report of CBE.

usually the founders of these companies. Shares of the founders proved to be less likely to be traded. Only if necessary they are traded within the group of founders.

The concentration of ownership structure and limited trading in the shares of founders along with the dominance of closely-held companies, did not help the attempts of widening the ownership base.

(vii) Distortive incentives:

We argued previously that the listing of joint-stock companies was encouraged by tax incentives. But we realise that such tax incentives resulted in a loss of budget revenue without widening the ownership base. Moreover they caused an "over-listing" of closed companies with untraded securities which affected adversely the performance and growth of the ESM. If such distortive incentives are to be abolished the ESM would witness an improvement in the long run. There may be a loss of ESM listing fees revenue but the ESM can compensate that from dealings-related revenue in the form of transactions costs. Such activity-related revenue will grow over time and be accompanied by a rise in market turnover. Neutrality of fiscal measure proves again to be necessary.

(viii) Market illiquidity

Because of the dominance of the shares of closed companies and their founders, the ESM suffers from a narrow base of tradeable securities. It is reported that in any given year during the 1980s, an average of just 20% of listed securities were traded. Table (4.4) shows that the average trading for listed shares was 19% and ranged from 7% in the tourism and forest products sectors to 50% in the insurance sector.

Untraded securities deplete the administrative resources and do not contribute to market liquidity, adversely affecting the growth of the market. Shortage of adequate liquidity

prevents the ESM from serving potential investors and makes attracting funds of other financial intermediaries difficult.

Table (4.4)
Summary of Listed Securities in 1991

Sector	Number of Companies	Number of shares	% traded
Banking	58	127	36
Finance and investment	30	54	24
Insurance	4	4	50
Transport	15	16	25
Tourism	42	70	7
Real Estate	118	175	15
Food Industries	66	121	18
Metals and Engineering	49	83	12
Chemicals and Paper	32	49	20
Textiles & Clothing	24	37	22
Construction	56	102	15
Mining & Petroleum	13	19	16
Publishing	5	9	22
Retail Trade	44	53	19
Pharmaceutical	19	36	28
Forest Products	8	14	7
Information & Consulting	20	29	14
Total	603	998	19

Source: World Bank (1992d), Annex II.4.

(ix) Insufficient interest of banks in the ESM:

It has been proposed that the banking sector with its excess liquidity problem, can help boost the ESM. For a long time banks and insurance companies were forced to buy government issued bonds, but this does not mean that they have sound portfolio management. There is only one bank, among the 100 registered banks at present, which has reasonable experience in portfolio management⁸⁴.

Public sector banks used to purchase securities upon their issuance and keep them without making any effort to manage them in order to maximise their return. Achieving this however would be difficult given the problems of inadequate information and financial disclosure mentioned above.

⁸⁴ An interview with Mr M Samy, op. cit. and the bank is Bank Misr.

(x) Civil Code determination of return:

A maximum limit of distributable profits of 7% per annum was set forth in the Civil Code. The banking sector managed to avoid compiling with this code since 1975 when the CBE was empowered to determine the discount rate as well as deposit and loan interest rate which granted some limited flexibility of interest rates in the banking sector.⁸⁵ However the ESM continued to be subject to the 7% ceiling. This further bias against the ESM makes the money market instruments, despite restrictions on them, more profitable than ESM securities. The financial sector liberalisation in Egypt which started with partial liberalisation measures in 1974, was unbalanced in the sense that it did not cover all financial intermediaries and instruments. We realise that in Egypt, as in most other LDCs, the speed of reform in the money market was always faster than that of the capital market.

(xi) Tax treatment of securities:

While interest on bank deposits are exempted from all forms of explicit taxes, securities continued to be subject to various taxes. These included taxes on earnings from moveable properties, annual stamp tax and duties on dealings in securities. Moreover a tax of 2% was levied on the difference between selling and buying prices, which combined with the 1% fixed commission on both sides of transactions increased the costs of dealing in securities.⁸⁶

Thus the tax code in Egypt was discriminatory in the sense that it favoured the banking savings instruments, where it should not, in principal, distort the relationship between risk and return.⁸⁷ Under the Egyptian tax structure, income generated from the least risky

⁸⁵ See the previous chapter for an analysis of this point.

⁸⁶ This tax was applied in June 1994 despite the repeated claims by the government for efforts to encourage the ESM. See Al-Ahram Newspaper (16/6/1994).

⁸⁷ On the discrimination against securities markets in LDCs see Van Agtmael (1984), pp. 2-8.

financial instruments, like treasury bills and bank deposits, is not taxed, while earnings from relatively higher risk instruments like corporate-issued shares and bonds are subject to different taxes.⁸⁸ Such a distortion prevented savers from making a rational selection for their portfolios from amongst freely competing financial instruments.

Consequently, the net yield curve with regard to risk and maturity is a declining one. Table (4.5) shows that such tax discrimination makes corporate shares and bonds relatively unattractive instruments for potential savers. A hypothetical corporate bond, *ceteris paribus*, needs to offer a 23% rate on a coupon in order to match the after tax yield on treasury bills, i.e. the hypothetical bond should offer 6% per annum above the medium term lending rate which cannot be acceptable to a corporate borrower.

Accordingly the supply of corporate bonds would not be viable unless this rate is close to the cost of borrowing from the banking sector. On the other hand corporate bonds will not be attractive for individual and corporate investors (purchasers), unless their after-tax, risk-adjusted return is similar to the yields on T. bills and bank deposits.⁸⁹ Thus an improvement of the tax structure aiming at neutrality and non-discrimination is a necessary measure for any meaningful improvement of the ESM.

Table (4.5)
After-Tax rates of return on different Financial Assets

(percent)	Bank Deposits	T. Bills	Development Bond	Common Stock	Corporate Bond (Hypothetical)
Interest or Dividend	17.3	19	9.5	7.8	19.0
(Individuals)					
Effective Tax Rate	0	0	0	21	16
Effective Rate of Return	17.3	19	9.5	6.1*	16
(Corporations)					
Effective Tax Rate	4	4	4	14	8
Effective Rate of Return	16.5	18.2	9.1	6.7*	17

Source: Adapted from World Bank (1992d), Annex IV. * Effective dividend yield - Bank deposits (7 months); Treasury Bills (90 days); Development Bond issue of 1985; Common Stock (Mohandes Insurance Company).

⁸⁸ See World Bank (1992d), *op. cit.*, p. 41 and NBE (1992), p. 21.

⁸⁹ See World Bank (1992d), pp. 41-46.

(xii) Inadequate regulatory and organisational structure:

Adverse effects of imprudent regulation have not been the critical problem in the past, arguably because of the low profile of the ESM and its limited operations. However a more active market does require an adequate regulatory structure. The ESM suffers from several regulatory problems, the critical ones are discussed below:

a) Multifarious supervisory bodies:

The ESM has been suffering from a complex and incomplete legal framework. Four separate authorities have been involved in the supervision of ESM, namely the Ministry of the Economy, the Investment Authority, the Capital Market Authority (CMA) and, to a lesser extent, the Central Bank of Egypt.⁹⁰ Lack of coordination, overlapping of responsibilities and several cross relationships between these authorities left the ESM without an adequate supervision.

The CMA is granted extensive and discretionary powers over the operations of the securities market without being properly accountable for its conduct. Moreover the CMA is effectively a division in the Ministry of the Economy. Its board and president are appointed by the minister of the economy which reflects the great extent of government involvement in the management of the CMA and hence the securities market.⁹¹ We argue that in order to ensure the autonomy of the securities market, its supervisory body should be independent of any governmental affiliations and should be directly accountable to Parliament.

⁹⁰ See NBE (1992), op. cit., p. 22.

⁹¹ See the comment of Mahmoud Wahba on the responsibilities of the CMA, Al-Ahram Newspaper 13/2/1994.

b) Inadequate guidelines for information disclosure:

Despite the smallness of the ESM the information system does not sufficiently cover its activities, while computation of its database and operations has not yet been introduced. Financial information barely exists. Prospectus disclosures are brief, regular financial reports are hard to be found, information on takeovers are kept in the domain of insiders' networks.⁹² This lack of disclosure limits public confidence by conveying the impression that the ESM is an exclusive club

C) Lack of measures to improve operational efficiency:

The inactivity of the ESM over the last three decades is responsible for its undeveloped method of operation. New techniques and modern methods in the profession have not been applied. Transactions and the transfer of securities ownership are manually processed. Securities' documents move via a courier between respective agents seeking signatories. Authorisation of documents go through long bureaucratic procedures resulting in loss and delay costs. Moreover the market suffers from a scarcity of skilled staff, brokers and other professionals.⁹³ The CMA being primarily concerned with amendments in laws and regulations did not pay sufficient attention to the training of required personnel.

d) Absence of a uniform standard of accounting:

There does not exist a unified accounting standard to be followed. Public sector participants in the ESM follow the Code of Accounts supervised by the Central Audit Organisation. Private sector participants are simply required to follow any recognised standard of accounts. Hence there are vital differences between financial statements

⁹² See World Bank (1992d), pp. 22-24.

⁹³ An interview with Dr Shams-El-Din Director of international relations CMA (20/8/1991).

produced by different participants. Investors find it difficult to make any meaningful comparison given such differences.⁹⁴

e) Lack of anti-fraud measures:

It is not clear from the new law 95/1992 and its executive bylaw that adequate provisions were made against possible fraud. Active securities markets normally have anti-fraud measures as they frequently discover various mischievous practices such as: insider trading, nondisclosure of the status of companies in times of trouble, publishing misleading statements, hiding important information e.g. risk involved, transaction fees.

(4.7) Conclusion:

In this chapter we have evaluated the role of securities markets in LDCs by comparing their advantages and disadvantages. We also examined the 'market versus bank' controversy. In the light of recent empirical studies, especially new findings on the German banking system and recent changes in the Japanese financial structure, we conclude that LDCs, including Egypt, should develop their securities markets within a sound regulatory framework and encourage their markets to compete freely with the banks.

Then we analysed the developments in the Egyptian securities market since its establishment in 1883. We divided its development path to three phases. In the first phase (1883-58) the ESM grew rapidly and was remarkably active despite the heavy fluctuations in its performance when it was mainly dependent on the changes in the cotton market and largely exposed to international shocks. The 1959-71 phase was a period of government restriction and intervention in the mechanism of the ESM. As a result of the Egyptianisation and nationalisation measures of this period and the growing reliance of

⁹⁴World Bank (1992d), op. cit, p. 24.

the dominant public sector on the banking sector for funding the ESM was in a state of near official closure. The third phase 1971-93 observed various reviving attempts, most of which were not successful for various reasons which we have documented.

We have analysed the performance of the ESM compared with markets in selected emerging securities markets. Constrained by the availability of data we used the number of listed companies, trading value, market capitalisation and turnover ratio. These indicators suggest that despite the recent improvement in the ESM, since the mid 1980s, its performance is still lagging behind its pre-nationalisation level. Comparisons with other emerging markets accentuate that the ESM, given its potential, is in need of strong assistance to overcome the impediments facing its progress. We have analysed these impediments in turn and our analysis suggests that most of them are supply side ones. However this does not imply that there is no demand side problems. Lack of confidence in the securities, their issuers and ways of distributing profits, fear of sequestration and concern of higher taxes are all examples of the demand side problems. These problems emphasise the need for effective policy measures to make the ESM viable and competitive, raise awareness of its services and restore public confidence in the market.

Chapter (5)

An Analysis of Formal and Informal Islamic Finance in Egypt

(5.1) Introduction:

There has been a surge of interest since the early 1980s in the theoretical and practical aspects of Islamic banking. This has been a response to the revival of Islamic values, the Islamisation of the financial system in Iran, Pakistan and recently Sudan, in addition to the growing number of Islamic banks inside and outside the Muslim world. The first country to have an Islamic bank was Egypt in 1963.

Islamic banking is centred around the principle of the abolition of interest rate which is considered a form of *riba* (usury). The alternative method for financing under the Islamic system is based on profit and loss sharing (PLS) approach. Recent theoretical analyses have established that not only PLS is viable but it has several advantages over the conventional banking system.

In this chapter we discuss the concept of usury and its evolution in economic thinking. Then we outline the Islamic stand regarding the prohibition of usury and its economic implications. We analyse the economic framework of Islamic banking system and construct a model that illustrates its distinctive characteristics. Then we determine sources of funds and their allocation according to the Islamic banking framework. Under the case of Egypt we examine the performance of Islamic banks as we distinguish between public and private intermediaries. The case of Islamic branches of conventional banks is also considered.

This section is concluded by a discussion of the problems of Islamic finance in Egypt and its prospects.

In addition to the Islamic banks and Islamic branches of conventional banks, more than 100 financial institutions claiming to be based on Islamic principles were set up in Egypt in the late 1970s and early 1980s. These institutions were called "*Sharikat Tawzeef Al-Amwal Al-Islamiyyah*" that crudely translates as Islamic Investment Companies, henceforth IICs. We provide an analysis of the IICs as regard to their activities, size and adopted mechanisms in mobilisation of resources. We also discuss the reasons behind their rise and fall during the 1980s and its repercussions.

(5.2) A note on the concept of usury in economic thought:

Usury is a term whose meaning has undergone changes through time. It is clear, however, that usury signified originally the charge of any interest on loans. It is only recently that this meaning has been narrowed down to impute the lending of money at extortionate rates of interest¹. Laws and moral codes regulating the charging of interest can be traced from the code of Hammurabi of Babylon, 1800 B.C., through the Old and New Testaments, to the variety of Medieval prohibitions, to the rules of the Quran and the contemporary regulations of the modern World.²

The issue of usury received a fair share of scholarly comment from Aristotle to Keynes. Aristotle pointed out that "the most hated sort of unnatural money making, and with the greatest reason, is usury, which makes a gain out of money itself, and not from the natural use of it. For money was intended to be used in exchange, but not to increase at interest. And this term usury, which means the birth of money from money, is applied to the breeding of money because the offspring resembles the parent. Wherefore of all modes of making money this is the most unnatural"³. The view of Aristotle on usury

¹See Brett (1945), p. 13.

²Regarding regulations in the modern World, Blitz and Long (1965), p. 608 report that "in the United States all but three of the states have laws governing interest charges..and furthermore there is a federal law [which] prohibits a charge by banks in excess of 7 per cent".

³Quoted in Melitz and Winch (1978), p. 90.

along with that of Seneca the Roman philosopher, canon law, natural law and Scripture and authentic church teachings formed the sources of principles for Aquinas (1225-1274) and the Scholastics doctrine on usury.⁴

The Scholastic economic thought referred to a lender's intention to obtain more in return than the principal amount of the loan as usury. As a general rule any interest taking was usurious. Hence charging of interest was forbidden by law in the beginning of the 12th century and was effective throughout the Scholastic period⁵. As time went on, some pardons were made regarding the charge of interest, such as the case of charging it to political enemies; using it as a penalty on the borrower if he fails to return the principal on the agreed date; using it as a compensation for the lender if he suffered damage during the lending period; compensating the lender for loosing a gain because of the loan; using it in a form of gift as a reward provided by bankers to depositors in the early stages of deposit banking⁶. Such practices became numerous to the extent that they left interest prohibition an empty shell.

With the start of the era of individualism and *laissez faire* the Scholastic doctrine was abandoned. The publication of Bentham's *Defence of Usury* in 1787, in which he emphasised absolute freedom in determining the terms of loans reflected the growing view of his time. Attempts to apply the old usury laws failed during the 19th century which witnessed, in 1854, the abolishment of Usury laws altogether in the UK. Moreover the Code of Cannon Law of 1917 permitted the creditor to accept the legal rate of interest and more than that rate in particular circumstances.⁷

⁴See Roll (1954), pp. 47-49.

⁵See Spiegel (1971), pp. 63-65.

⁶See The New Palgrave Dictionary of Money and Finance, vol 3, p. 745.

⁷The Code of Cannon Law of 1983 went as far as making it a 'duty' to pay interest on an administrator ecclesiastical goods incurs a debt. See *ibid*, p. 744.

However in accordance with his theory of liquidity preference, Keynes argued that the enforcement of ceilings on interest rates would increase investment⁸. This argument, despite the difference in the concept of usury, made him support the Scholastic view on usury control by moral laws and describe it as an "honest intellectual effort to keep separate what the classical theory has inextricably confused together, namely, the rate of interest and the marginal efficiency of capital"⁹.

(5.3) The Islamic ban on usury:

Until the early 1980s the literature on Islamic Economics focused on few topics. Writings were primarily on economic philosophy, principles of economic systems, Islamic critique of contemporary economic theories and systems and some modern readings of the contributions of some Muslim scholars; mainly the contributions of Abu Yusuf (731-798), Ibn Taimiya (1262-1328), Ibn Khaldun (1332-1406), on different issues related to the operation of the economy according to Islamic principles and the role of the Islamic state.¹⁰

However the bulk of the literature on Islamic Economics and Finance has appeared since the early 1980s. Most of the work, which tackled practical issues with more appreciation of theories and tools of mainstream economics, was on the Islamic prohibition of interest rate, operational aspects of Islamic Banking and analyses of Islamisation experiments at institutional and country levels.¹¹

⁸More discussion of this argument is provided in Chapter (2).

⁹Keynes (1939), p. 352.

¹⁰See the extensive survey of Siddiqi (1981).

¹¹See for example the studies of Khan (1986) on Interest-Free Banking; Khan and Mirakhor (1990) on the experiences of Iran and Pakistan; Choudhury and Malik (1992) on the foundations of Islamic political economy; and Mannan (1986) on the theory and practice of Islamic economics.

The concentration on interest-free banking and the scarcity of studies on other aspects of Islamic Economics can be explained by the limited economy-wide applications of Islamic rules in the Moslem World. Apart from the cases of Iran, Pakistan and Sudan, where governments claim that Islamic economic principles are fully applied, the adoption of Islamic principles does not exceed the mere establishment of few financial institutions in the rest of Moslem countries.

However recent writings on the issue of interest-free banking, as one of the harvests of Islamic revival were inspired by the Quran and the Sunnah (teachings and traditions of the Prophet Muhammad). They comprise the two main sources of *Sharia* (Islamic Law) and strongly condemn *riba* (usury).

The prohibition of *riba* is referred to in the Holy Quran in four *surahs* (chapters)¹²:

1) "That which you give in *riba* for increase through the property of other people, will have no increase with Allah: But that which you give for charity, seeking the countenance of Allah, will increase: it is these who will get a recompense multiplied" Surah 30, verse 39.

2) "O you who believe! Devour not *riba*, doubled and multiplied; but fear Allah; that you may really prosper" Surah 3, verse 130.

3) "That they took *riba*, though they were forbidden; and that they devoured Men's wealth wrongfully. We have prepared for those among them who reject Faith a grievous chastisement" Surah 4, verse 161.

4) "O you who believe! Fear Allah, and give up what remains of your demand for *riba*, if you are indeed believers. If you do it not, take notice of war from Allah and his messenger: but if you repent you shall have your capital sums: deal not unjustly, and you shall not be dealt with unjustly. If the debtor is in a difficulty, Grant him time till it is easy for him to repay. But if you remit it by way of charity, that is best for you if you only Knew. And fear the day when you shall be brought back to Allah. Then shall every soul be paid what it earned, and none shall be dealt with unjustly" Surah 2, verses 278-281.

Riba is a generic term which stands literally for all kinds of excesses above the value of a thing¹³. The technical meaning for *riba* is the premium, regardless how small or large, which must be paid by a borrower to a lender in addition to the principal as a condition

¹² The English translation of the Quran is that of Ali, Yusuf (1990).

¹³ Choudhury and Malik (1992), op. cit., p. 103.

for a loan or for an extension of its maturity¹⁴. It is established that all forms of predetermined fixed return which are tied with the size and the length of the loans, regardless of their purpose, are considered by Muslim scholars as *riba*¹⁵.

The prohibition of fixed predetermined interest rates can be explained by Islam's position regarding property rights. Islam recognises two groups of property rights. First those which are an outcome of the combination of individual's labour and natural resources. Second, property rights that are acquired through exchange, inheritance, grants,..etc. A loan is just a transfer of some (or all) of these rights from a lender to a borrower and providing it should not entitle the borrower to an increase in his property rights. Such an increase violates the pivotal rule of transactions according to Islam that is justice. Thus interest on loans is unjustified as it indicates an instantaneous creation, of a claim for the lender on the borrowers property, once the contract is concluded and regardless of the outcome of the project for which the loan was provided¹⁶.

(5.4) A framework of Islamic banking:

Islam permits a wide range of contracts which do not violate the regulations of Islamic law and its position on property rights. Any arrangement in which the returns of the parties involved are contingent with uncertain gains and the parties have symmetric information regarding the outcome of the project is permitted.¹⁷ Thus sharing of risks and uncertainties is the main characteristic of Islamic financial transactions.

The predetermined return on financial transaction is absolutely eliminated but an uncertain return represented by profits is not. Hence if the return of the use of money fluctuates

¹⁴ Chapra (1985), pp. 56-57.

¹⁵ See for example Al-Qaraddawy (1990), Al-Salou (1987) and (1991) and Chapra (1985).

¹⁶ See Khan and Mirakhor (1992), pp. 15-16.

¹⁷ *ibid.*, p. 16.

according to the actual profits made from such use, this would be consistent with the Islamic law. Under Islamic finance the depositor is not guaranteed a predetermined return on the nominal value of his deposit. Instead he is considered as if he were a shareholder of the financial institution and consequently he shares the profits, or losses, made by the institution.

Hence the interest-free financial system can be viewed as a variant of equity participation systems that rely on profit and loss sharing (PLS). However it is worth noting that the Islamic PLS is not completely identical with conventional equity participation schemes as it differs from them in the following aspects. First speculative activities undertaken to maximise capital gains are not allowed hence, an Islamic bank has to allocate its funds in productive investment according to a one-to-one basis between the amounts of bank's funds and the financing of the activity. Second while under conventional equity participation there is a discretion of management to determine returns distributed to shareholders it is not the case with Islamic PLS as it ties the parties to pre-agreed shares of profits or losses. Third, PLS contracts are for a specified investment period and hence they are less liquid¹⁸. Needless to say that funds of Islamic PLS cannot be used in financing the production of goods or services forbidden in Islam, e.g. alcohol, gambling.

Due to the Islamic prohibition of predetermined fixed interest rates, Islamic banks have developed on the basis of profit and loss sharing either in the case of borrowing from depositors or lending to investors. Two conditions should be satisfied for a transaction to be Islamic. First net return on capital should not be predetermined. Second it is not only profit which is shared between the two parties of the transaction but loss as well. The distribution of profits is done according to bargaining between the depositor and the bank on one hand and the bank and the investor on the other.

¹⁸See Khan (1987), pp. 326-327.

5.4.1) The distinctive characteristics of Islamic banking:

We illustrate the difference between a traditional bank and an Islamic Bank by constructing the following model:

In the traditional banking system a person deposits (D) with the bank in a point of time (t_0) in return for a predetermined guaranteed nominal interest rate ($r_d > 0$) at (t_1). In contrast with the traditional bank, an Islamic bank offers its depositor a rate of return (s_d) on his deposits (D) based on the profit of its operations (π) which are distributed between the depositor and the bank according to mutually agreed share (α) fixed in the contract, then

$$s_d = \alpha E(\pi) / D \quad (1)$$

where $\alpha > 0$, E is the expected value and π can either be ≥ 0 or ≤ 0 .

Thus the nominal value of (D) can increase or decrease by the amount of (s_d) depending on the value of (π) which can be positive or negative or zero.

In the lending side of a traditional bank, if a person receives a loan L_0 a point of time t_0 and agreed to return to the bank $L_1 = L_0 + r_l$ in t_1 . The difference between L_1 and L_0 is interest;

$$r_l = L_1 - L_0 \quad (2)$$

where $r_l > r_d$

As in the case of borrowing from depositors, the Islamic bank lends according to profit and loss sharing scheme in which uncertainty is involved. The bank takes an agreed share δ in the profit or loss of the joint project and the investor takes $(1-\delta)$. Thus if the bank funds the project by (F) in (t_0) it will receive in (t_1):

$$s_b = \delta E(\pi) / F \quad (3)$$

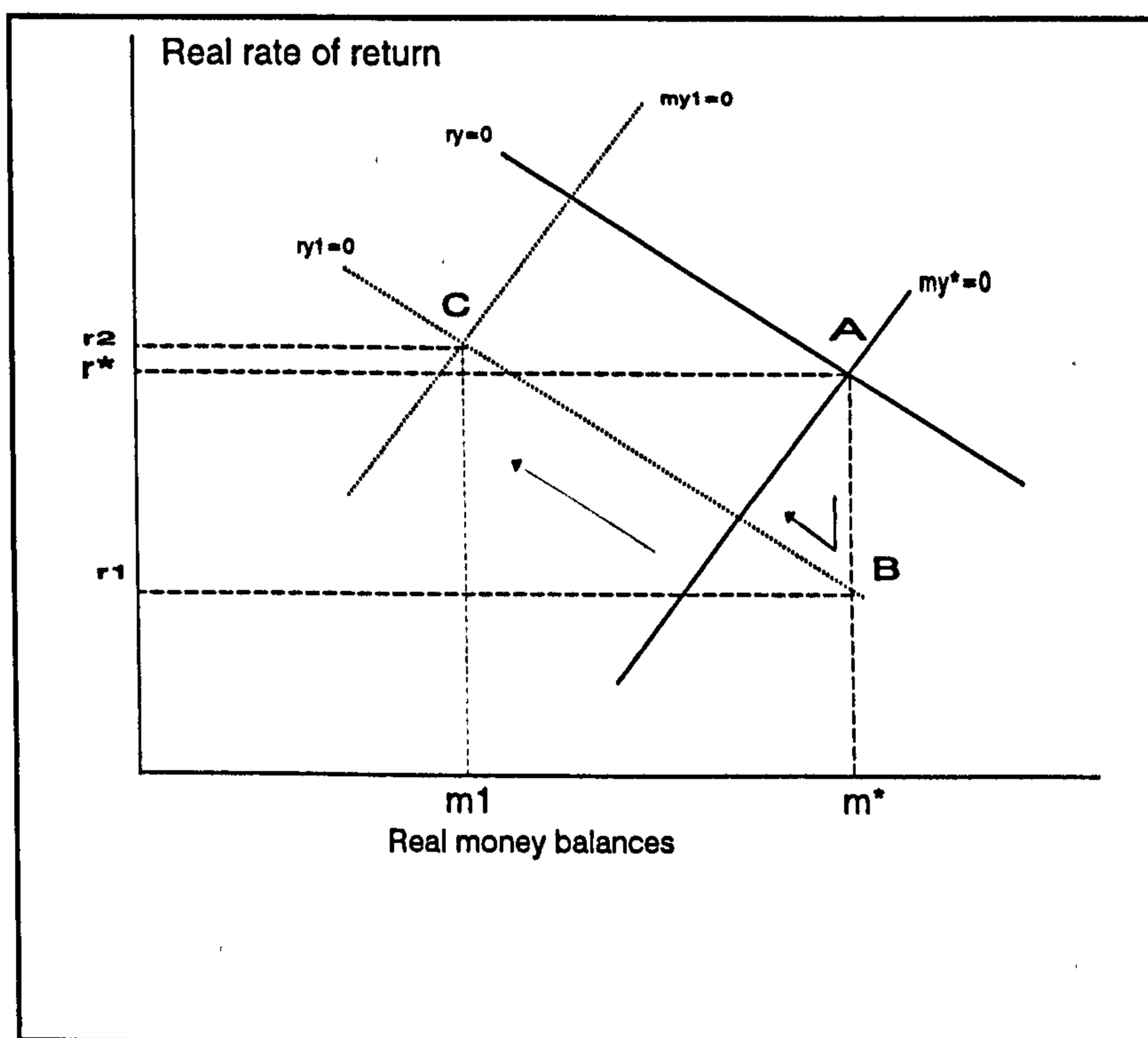
while the investor receives: $s_i = (1-\delta) E(\pi) / F \quad (4)$

where $(\pi) \geq 0$ or ≤ 0 and E is the expected value.

5.4.2) Merits of Islamic banking:

It is argued that an equity based interest free system would be more stable in the context of shocks that can result in banking crises. This argument is supported by Khan's IS-LM model¹⁹. In this model there are no bonds and banks are pure intermediaries. Further there are no transaction deposits and banks do not hold reserves. As shown in figure (5.1) below, following an IS shock the real values of deposits (shares) held in Islamic banks adjust instantaneously.

Figure (5.1)
Adjustment to shocks in an Islamic banking system



Point A represents the steady state equilibrium which yields the values of m^* and r^* . Following an IS shock, e.g. a fall in export volume, real income falls from y^* to y^1 . A new steady state equilibrium is reached at point C, following an adjustment by shifting the schedules of $r_{y^*}=0$ downward and $m_{y^*}=0$ upward respectively. The instantaneous short run equilibrium at point B occurs because of the decrease of real rate of return from

¹⁹ See Khan (1986), op. cit., pp. 10-18.

r^* to r_1 in order to maintain equilibrium at the assets market at m^* and r_1 . Given that there is excess demand for goods at point B, prices increase and real money balances will decrease. Thus the real rate of return increases to reach equilibrium in the money market. Such increase reduces excess aggregate demand. The process continues until the new steady state at point C is reached where $r=r_2$ and $m=m_1$. The reason behind the adjustment path from A to C through B is slow adjustment of prices in the goods market. A direct move from A to C in the economy is possible if the goods market adjust instantaneously.

However the adjustment to the shock, as described above, is possible under the Islamic system as the nominal values of deposits are not guaranteed. Hence, the real values of assets and liabilities would be equal at all points in time. In contrast to the conventional system with guaranteed values of deposits, in the short run there would be a divergence between real assets and liabilities. While the Islamic system adjusts to shocks without the need for government intervention, the conventional system is in a need for such intervention in order to correct the disequilibrium between assets and liabilities. If this did not happen divergence will continue with a possibility of a banking crisis.²⁰

Moreover from the previous analysis we realise that the Islamic system is immune from the myopic behaviour of banks in times of crisis. Such behaviour can take the form of competing for deposits by bidding up interest rates, or the form of rapid reduction of loans to increase reserves at the expense of other banks. This behaviour may lead to insolvency and bankruptcies.

²⁰ *ibid.*, pp. 17-18.

5.4.3) Possible practical problems:

PLS schemes may be compatible with the requirements of depositors who happen to be risk-lovers and apparently the requirements of those who are risk averse are not necessarily served by PLS. This problem, if not resolved by innovating less risky financial instruments, can result in negative impact on the ability of Islamic banks in the mobilisation of savings²¹ at given incomes and propensities to save. Our argument, however, does not imply that predetermined fixed interest rates are better measures than the ex-post determined rates of return provided by Islamic banks in improving the size of aggregate savings. Rather it indicates that in a society with significant percentage of risk aversion the distribution of a given amount of savings would be in favour of conventional banking instruments and at the expense of the Islamic ones.

Moreover the establishment of Islamic banking implies changes in its relation with the government and the Central Bank, which may have practical difficulties. For example an Islamic bank cannot participate in financing budget deficits by lending to the government at interest, regardless how low its rate is. Moreover if the whole financial system become Islamic, the reliance on interest rate as an instrument of monetary policy has to be abandoned in favour of other measures, like direct credit control, a modified form of open market operations under PLS principle, liquidity ratio requirements (without interest bearing securities in banks portfolios).²²

Under profit and loss sharing the fractional reserve requirement system also has to be revised as depositors of the central bank are *de facto* investors who have to share the outcome of the operations of their banks. Further under an Islamic system, credit creation allowed under the fractional reserve system is considered inequitable for the society as

²¹See Pryor (1985), pp. 208-210.

²²On the functions of the Central bank in an Islamic system see for example the report of the council of Islamic Ideology (1983).

a whole, as only the banks and their customers benefit from it leaving the rest of the society suffering from the inflationary effect of credit creation.²³

Some of these arguments are not alien to western economic thinking as we can realise some similarities in the writings that analysed financial crises and questioned the stability of the capitalist economies. Actually the argument of 100 percent reserve requirements was raised by Fisher (1945) and Simon (1948). According to their proposal for the maintenance of 100 percent reserves, the banks' power of creating or destroying effective money will disappear. This power granted to banks under the fractional-reserve system made the financial system inherently unstable as a result of switching from a high powered money to deposit money. Under a 100 percent reserve requirement such a switch will only change the composition of money supply leaving its total constant. This was reason behind Friedman's (1969) support of this argument as he found in it a way of reducing government intervention in the operation of banks and hence a way to increase economic freedom.²⁴

(5.5) Sources of funds and their allocation under Islamic banking:

5.5.1) Liabilities side of the Islamic bank: sources of funds

Obtaining sources of funds and the acquisition of assets by an Islamic bank are undertaken according to the PLS.

The sources of funds for a typical Islamic bank are:

- i) Bank's own capital and equity.
- ii) Transactions deposits which can be considered like demand deposits in the conventional system. Although the nominal value of such deposits is guaranteed,

²³See the comment of Zarqa on Al-Jarhy (1983), p. 98.

²⁴See Khan (1985), p. 8 and on the inherent instability of the capitalist economies see Friedman (1969) and Minsky (1986).

- there is no return on them. As such deposits cannot be used by the bank for its investments, usually a services charge for managing such accounts is imposed.
- iii) Investment deposits form the main source of funding and they are considered like shares. Investment accounts are held by depositors whose motives are not limited, theoretically at least, to transactions or precautionary purposes as in the case of transactions deposits. Investment deposits are normally subject to minimum deposit size and fixed duration determined by the Islamic bank. Moreover, in contrast with conventional banks, where the nominal value of deposits is guaranteed by the bank or the government explicitly or implicitly, such deposits with an Islamic bank are not guaranteed. The depositor in an Islamic system is considered a shareholder who receives an agreed proportion of pooled profit (or loss) incurred by all of the projects of the bank, net of administrative costs, taxes and reserves²⁵.

The Islamic bank can provide its clients with a special investment account as an instrument offered to relatively big depositors. In such accounts the depositor has the option to share the outcome of a particular project to which his contract is exclusively tied. The share can differ from a depositor to another according to the size of participation.²⁶

5.5.2) Assets of the Islamic bank: allocation of funds

In the absence of interest Islamic banks in generating their incomes resort to fees for services, profit sharing from equity participation, trading in commodities and foreign currencies, establishing and managing industrial, agricultural and services projects, in addition to real estates and rental businesses. An Islamic bank cannot keep fixed rate

²⁵Khan and Mirakhor (1987), p. 167.

²⁶See Kazarian (1991), pp. 74-76.

assets on its portfolio. Thus certificates of deposits, government bills and bonds and corporate bonds cannot be dealt in by an Islamic bank²⁷.

The three main forms of Islamic bank financing are *mudarabah* (trust finance) and *musharakah* (partnership or joint venture financing), both are versions of PLS, in addition to *murabaha* (markup contract or differed payment sale).

- i) Under *mudarabah*, funds are provided by the bank to an investor in return for a predetermined percentage of profits. If the project incurs loss, the bank bears the financial loss exclusively and the investor loses the reward for his time and effort but does not bear any financial loss given that he is not negligent. In the past, even before Islam, *mudarabah* provided the means of combining the owner of capital and the entrepreneur in common ground as it coordinates the interests of the two parties without a contradiction with the Islamic system. In modern times it has been applied to include the depositor as a financier, the bank as entrepreneur, if the bank invest directly in its own projects, and has been extended to include three parties if the bank acts as intermediary and provides the funds to an investor who requires funding. Practically the Islamic bank aggregates profits, and losses, from different direct and indirect investments and shares net profits, or losses, with the depositors in strict relation to their capital contributions. *Mudarabah* has been used in projects with short gestation periods, e.g. trade projects²⁸.
- ii) In *Musharakah* two or more parties contribute, in equal or variable proportions to the joint capital of the enterprise. In contrast with *mudarabah*, this financing

²⁷ See Abdeen and Shook (1984), p. 185.

²⁸ See Khan and Mirakhor (1990), p. 355, Kazarian (1991), pp. 69-73 and Abdeen and Shook (1984), pp. 188-189.

form is used in long term investments, like industrial and agricultural projects. In *musharakah*, profits are distributed between the parties according to their respective capital and as in the case of *mudarabah*, losses are born by all parties and not just by the lender alone²⁹. Companies under this form of finance can raise funds by offering certificates, as transferable corporate instruments secured by the companies assets, in the market which would determine their price.

- iii) *Murabaha* financing implies that the bank purchases certain commodities for clients on a pre-agreed profit, under a cost-plus contract. The client may pay the price in instalments and the commodity is used, in this case, as collateral until the price is fully paid. This method of finance has recently become a popular method of finance at the Inter-Muslim Countries level as it has been adopted by the Islamic Development Bank (IDB) since 1977. Member countries of the IDB purchase commodities, usually from other members and the IDB pays the costs on their behalf. The bank is paid subsequently in instalments and generates profits through the agreed markup³⁰. Although this form of finance is widely used by Islamic banks it does not have the same ecumenical acceptance under Islamic law that is enjoyed by *mudarabah* and *musharakah*. As discussed below, *murabaha* is considered by some Muslim scholars as a measure based on implicit *riba*.

5.5.3) Other forms of finance:

Although *musharakah*, *mudarabah* and *murabaha* are the dominant financial instruments employed by Islamic banks, there are some other instruments frequently used by such banks among them:

²⁹Khan and Mirakhor, op. cit., p. 355.

³⁰Abdeen and Shook (1984), op. cit., pp. 189-190.

- *Bai' Salam* (purchase with differed delivery). In this transaction the bank pays the seller in advance the full agreed price of a specified quality and quantity of a commodity that the latter promises to deliver in the future. This form of finance, that is similar to forward purchase, has been employed in the case of agricultural products as their seasonality signifies the need for such finance. It has been applied as well to purchase other goods, e.g. manufacturing products, when the producer require working capital before delivery time.
- *Ijarah* (leasing). Under this form of finance the Islamic bank, as in the conventional system, purchases an asset and leases it to a client, for a fixed period, in return for a monthly or annual rent. An extension of this form is known as *Ijarah wa iqtina* which is similar to a lease-purchase contracts under which the ownership of the asset is transferred eventually to the client by making payments in instalments into a savings account over an agreed period of time.³¹
- *Qard Hasan* (beneficence loan). This form of finance is a solution to consumption loans from an Islamic perspective. These loans are provided by the bank at a zero return for those who need them. A service charge is paid by the recipient to cover only the administrative costs of providing the loan under the condition that this charge is not related to the size of the loan or its time length.³² Part of the funding of such loans can be obtained by using of the revenues of *zakat* (alms tax)³³ collected annually by the Islamic bank from its investors as one of the integrated functions of the bank.³⁴ In an Islamic financial system the revenue of

³¹ *ibid.*, pp. 190-191.

³² Khan and Mirakhor (1990), p. 355.

³³ *Zakat* is the third of the five pillars of Islam which are: Believing that there is no god but Allah and Muhammad is his messenger; performing prayers, paying *zakat*; fasting the month of Ramadan and the pilgrimage to Mekah. *Zakat* is a compulsory levy imposed on all possessions, like cash, agricultural products, gold and silver,..etc. The rate of such tax is 2.5% per annum on the accumulated wealth and net income that exceed the minimum exemptible level. The aim of *zakat* is to achieve social justice. For a detailed analysis of the economic role of *zakat* see Choudhury and Malik (1992), *op. cit.*, pp. 63-101. It is worth noting that the collection of *zakat* is the responsibility of the state not the bank under an Islamic system, and due to the absence of this system Islamic banks took over this responsibility.

³⁴ For a discussion of consumption loans in an Islamic system see for example Siddiqi (1988), pp. 155-165.

the *zakat* should increase as the government under this system have to collect them according to the Islamic Law. Thus some of its revenues can be channelled through Islamic banks to fund the *Qard Hasan*. Moreover the very nature of transactions accounts held by the Islamic bank at zero return for depositors, as discussed above, justifies the proposed role of such a bank to extend zero-return loans for consumption. Further we argue that although transactions deposits are theoretically not used in banks' projects, in practice they are. Hence the return of transactions deposits can be utilised to fund such loans and cover the cases of default if they occur.

In addition to the prohibition of transactions based on interest rates, the Islamic bank should avoid all activities that involve speculation and indulging in the production of any good or service that violate Islamic law. Further the objectives of the Islamic bank should not be limited to profit maximisation alone as it also has social and religious objectives. Needless to emphasise that most, if not all, of the proposed functions and operations of the Islamic bank cannot be suitably applied in the absence of a comprehensive application of Islamic law in all the aspects of the economic system. As shown below, the divergence in practice of many Islamic banks from the theoretical guidelines can be primarily attributed to the limited application of Islamic principles resulting in only a limited number of appropriate financial intermediaries in an incompatible economic system.

(5.6) Islamic banking in practice:

The resurgence of Islamic values in the 20th century, especially during the last two decades has been reflected recently in the economic sphere. There was scepticism and reservations regarding the activities of Interest-based banking systems in Muslim societies which was witnessing shifts towards applying Islam in all aspects of life including financial transactions. We argue that part of the slow pace of financial development in these societies can be attributed to the incompatibility of the western-style banking model

with the prevailing traditions and values.³⁵ However the establishment of financial institutions with Islamic features has been a response to changes in Moslem societies and has capitalised on them to attract those who were discouraged previously from dealing with the formal financial system.

There have been two ways of forming Islamic financial institutions. The first was by restructuring the whole financial system in accordance with Islamic law. Such restructuring either took a gradualist form as in Pakistan which started a cautious programme in 1979/80 or a shock form like in Iran which adopted a rapid process of Islamisation permitted by its Islamic revolution in 1979.³⁶ The government in Sudan has been also experimenting with the Islamisation of its banking system since 1984. However its attempt was not supported by adequate preparation as in Pakistan or by a revolution as in the case of Iran, so initially it did not achieve its objectives. Another attempt has been initiated recently.³⁷

The second way of applying Islamic financial principles took the form of establishing Islamic financial units in countries which adopt otherwise 'conventional' financial systems. This way has been more widespread than the first as is shown in table (5.1). There are approximately 45 countries, including most of the Muslim countries, which now have some form of Islamic financial establishments. The majority of the Islamic financial institutions were a product of cooperative efforts between private entrepreneurs and financial authorities in the countries concerned.³⁸

³⁵This argument is discussed further in our survey of 200 households as we examined their views and opinions regarding the compatibility of formal institutions with their beliefs and moral stands. See chapter (8) and (9).

³⁶For a comparison between the experiences of Iran and Pakistan in Islamic banking, See Khan and Mirakhor (1990) and Iqbal and Mirakhor (1987).

³⁷See Ahmad (1993), pp. 22-23.

³⁸On the circumstances surrounding the establishment of Islamic Banks see Wohlers-Scharf (1983).

Table (5.1)
The biggest Islamic banks

Bank	Location	Year	Capital (\$ million)	
			Authorised	Paid
Al-Baraka	Saudi Arabia	1982	183	..
Al-Rajhi	Saudi Arabia	1983	213	..
Bahrain Islamic Bank	Bahrain	1979	13	13
Bahrain Islamic Investment Company	Bahrain	1981	13	13
Dar al Maal al Islami	Bahamas	1981	1000	316
Bank Islam Malaysia	Malaysia	1983	206	33
Dubai Islamic bank	UAE	1975	14	14
Faisal Islamic bank of Egypt	Egypt	1977	40	38
Faisal Islamic Bank of Sudan	Sudan	1977	77	44
Islamic bank of Bangladesh	Bangladesh	1983	19	0.7
Islamic Bank International	Denmark	1983	4	4
Islamic International Holding Company	Luxembourg	1978	100	26
Islamic Development Bank	Saudi Arabia	1975	1960	1250
Islamic International Bank for Investment & Development	Egypt	1981	12	9
Jordan Islamic Bank	Jordan	1978	10	10
Islamic Investment House	Jordan	1981	10	10
Kuwait Finance House	Kuwait	1977	62	61
Nasser Social Bank	Egypt	1972	29	..
Qatar Islamic Bank	Qatar	1983	55	..

Source: Roy, D. (1991), p. 440.

(5.7) Islamic banking in Egypt:

The process of applying Islamic financial principles took two forms in Egypt: establishment of Islamic banks, both private and public and setting up of Islamic branches of conventional banks; in addition to forming Islamic Investment Companies which belong, according to reasons given below, to the informal sector. In this section we start by examining first the case of formal Islamic banks, as we distinguish between the public and private ones. Second the case of Islamic branches of conventional banks is discussed. Third we discuss the main problems and prospects of Islamic banking in Egypt in the light of their recent experience.

(5.7.1) Public Islamic banks:

(a) Meet Ghamr Bank:

The first experiment in Islamic banking, in the Muslim World, was undertaken in Egypt, in 1963, by the establishment of Local Savings Bank in the semi-rural town of *Meet Ghamr*, in the *Dakahliyah* province, in the Delta. The bank was an adapted model of the

German savings banks to comply with Islamic principles³⁹. It was established by a German grant of DM 780,000 and an Egyptian government contribution of £E 60,000 transferred from the Post Office Savings Fund⁴⁰. During the five years of its operation the Government continued to subsidise the activities of the bank. The subsidies totalled £E 496,000⁴¹. Like the rest of the operating financial intermediaries in Egypt during this period the *Meet Ghamr* Bank (MGB) had to be publicly owned. The bank was not subject to direct supervision from the Central Bank but an especially constituted public authority assumed the supervisory role.

The MGB provided three different accounts. First deposits accounts with a very small deposit minimum and without a maximum. There was no return whatsoever for the holders of such account which can be considered an equivalent of current account in the conventional system. The second type was called "investment with participation accounts" which accepted deposits with a modest minimum and had no maximum. These accounts provided a PLS return to depositors. The third account was the *zakat* and social services account. This account accepted alms taxes from individuals in addition to charities and donations.⁴²

As shown in table (5.2) the number of depositors increased from 17,560 in the first year of its operation to 251,152 by 1966/76, by an impressive average annual rate of 538.3%. Depositors were mainly from the small savers group as the average deposit ranged from £E 2.33 in 1963/64 to £E 7.28 in 1966/67.

³⁹The founder of the bank Dr. Ahmad Al Najar, who became the Secretary-General of the International Association of Islamic Banks, was impressed by the German savings bank while a graduate student in West Germany in the 1950s. When he returned to Egypt he felt that the German model can be modified to conform with the Islamic principles. However, in the socialist period of the 1960s, the Islamic ideas behind the establishment of the *Meet Ghamr* bank had to be hidden and was not advertised in its name. Instead the founder managed to convince the Egyptian authorities by the role of these banks in mobilisation of savings and catering for the poor.

⁴⁰See Al Najar (1993), p.38.

⁴¹Mayer (1985), p. 37.

⁴²See Al-Najar (1993), pp. 44-46.

Table (5.2)
Growth of Savings accounts in the *Meet Ghamr* bank.

Year	Number of depositors	Amount (£E)	Deposit Average Size (£E)
1963/64	17560	40944	2.33
1964/65	30404	191235	6.30
1965/66	151998	879570	5.79
1966/67	251152	1828375	7.28

Source: Al-Ashker (1990), p. 61.

Loans were provided by the bank according to PLS principle to small entrepreneurs for periods ranging from one to five years⁴³. The bank in its second year of operation began to establish small projects of its own. In general, projects financed by the bank were established in the same local area to assure the depositors of the contribution of the bank in the development of their community⁴⁴. In addition the bank provided interest-free small consumption loans, averaged £E 50 per borrower. Although these loans were provided without collateral, the number of defaulting borrowers was small⁴⁵.

The remarkable success of the bank convinced several governorates to apply for the establishment of similar banks. The number of applications exceeded seventy but the management of the bank was not able, due to shortages of trained staff, to open more than seven branches located in the Delta and in Cairo.⁴⁶

Despite the success of the MGB the Government found it necessary to put the bank under direct control. The call for such control was a response to two main concerns. First, it was realised that the bank was operating under rules which contradicted those applied by the rest of financial intermediaries. The government was suspicious that such a contradiction might bring a dispute amongst the public regarding what should be

⁴³ Al-Ashker (1990), p. 60.

⁴⁴ The bank managed to establish several projects in the Meet Ghamr area for example: brick factory, semi-mechanised bakery, a dairy, a macaroni factory, a mechanised irrigation project and a private school.

⁴⁵ See Mayer (1985), p.38.

⁴⁶ Al-Najar (1993), p. 58.

considered as Islamic and what should not, which may affect the operations of the dominant conventional banks. Second, the government found in the bank a threat to its socialist ideology and its management of the economy which was based on central planning. In the socialist period, a bank being a mixture of a capitalist model and an Islamic character was naturally a target for government intervention.

As a result the MGB lost its operational autonomy and eventually was closed down in 1968. Its operations, which became interest-based, were assumed by the National Bank of Egypt and the Central Bank.⁴⁷ The Meet Ghamr bank, despite the difficulties it faced, provided an applicable model for other Islamic banks which were established subsequently.

(b) The Nasser Social Bank:

One of the Islamic banks that benefited from the experience of the MGB is the Nasser Social bank (NSB). This bank was formed in 1971 and began its operations in 1972. The bank has been established as a public institution for social welfare and its capital, which reached £E 20 million in 1990, was provided by the government. However the NSB is not registered⁴⁸ with the Central Bank and hence it was exempted from its supervision and regulation.⁴⁹ The NSB has a wider functions, through its 23 branches, than the MGB as it operates at the national level but has applied almost the same rules as its predecessor. The annual collection of *zakat* constitutes the main source of funding for the bank in addition to an annual subsidy from the government.

⁴⁷ For details of how the bank came to an end see Al-Najar (1993), pp. 59-66.

⁴⁸ Its registration with the CBE has recently been considered.

⁴⁹ Law 66 of 1971 stated that the operations of the Nasser Bank are not regulated by law 163 of 1957 regarding the Central Bank and its authorities.

In its early years the NSB was free to provide credit without the need to comply with the credit ceilings imposed by the government. Loans provided by the NSB took two forms; productive loans and social loans. It is worth noting that the NSB does not share the profits or losses of its borrowers. It requires them to return the principal in addition to 1% charge. This charge is considered as 'cooperative insurance'.⁵⁰ The NSB subsidise its loans from the *zakat* fund and, to some extent, from the profits it makes from its direct investment.

Nevertheless the NSB has recurrently breached its own regulations. It is reported that the bank undertook several interest-based transactions with other financial intermediaries. Moreover it deposits some funds with conventional banks in return for interest.⁵¹ As discussed below, this problem can be attributed to the conditions of an Islamic bank which operates in a predominantly conventional system. On the other hand in the case of NSB, its management was not always convinced about the role of an Islamic bank and its distinctive rules.

(5.7.2) Private Islamic banks:

There are now two private Islamic banks in Egypt. The first is the Faisal Islamic Bank of Egypt (FIBE) which started its operations in 1979. The special act number 48 of 1977 gave the bank independence from all governmental authorities but put it, however, under the supervisory role of the Central Bank. The bank was granted several privileges similar to those granted under the investment law 43 of 1974 and enjoyed more generous tax treatment than that already given by this law⁵². In 1993 the bank had 14 operating branches in the major cities. The authorised capital of the FIBE is \$500 million and the

⁵⁰ Mayer (1985), p. 41.

⁵¹ Al-Najar (1993), pp. 117-118.

⁵² See our discussion of law 43/1974 in Chapter (1). Note that upon its establishment the FIBE was granted a fifteen years exemption from all taxes and was then reduced to two years.

paid-up capital is \$100 million in 1993, with an Egyptian participation of 51% and a Saudi Participation of 49%⁵³.

The second bank is the Islamic International Bank for Investment and Development (IIBID) which was established in 1980 in accordance with the investment law 43 of 1974 and started its operations in 1981. In 1990 the bank had 7 branches located in the biggest cities and 4 branches were under construction. The authorised capital of the IIBID is \$100 million and the paid up capital is \$60 million in 1992⁵⁴. Although the FIBE was established as a commercial bank and IIBID as a business and investment bank, in practice the difference between them is not significant as shown in Table (5.3) below.

Table (5.3)
A Comparison between the FIBE and the IIBID

	FIBE	IIBID
Current account	Without overdraft facility	Similar to FIBE
Savings account	Not available	Offers a small return at the discretion of the bank but does not bear any losses incurred by the bank; less risky than investment accounts.
Investment accounts	Funds should be deposited for a specific period from 6 months to 3 years with a PLS return.	Similar to FIBE, but has another account which is a combination of investment and savings accounts as the depositor can withdraw up to 40%
Main Methods of finance	- Short term (<i>Murabaha</i>) - Medium and long term (<i>Mudarabah</i>)	Similar to FIBE
Social services	Wide range of services funded through its <i>zakat</i> account and from the bank in its own capacity.	Similar to FIBE.

(a) Mobilisation of savings:

As shown in Table (5.4) during the first five years of their business, the two Islamic banks achieved remarkably high rates of growth of deposits. The size of deposits in FIBE increased by 20 times to reach more than £E 2070 million while the IIBID managed to keep £E 535 million. During this period deposits' growth was higher in the two banks

⁵³ Annual report of FIBE (1994).

⁵⁴ Annual report of IIBID (1993).

than the average growth achieved by the commercial bank as a group and by the National Bank of Egypt (NBE), the biggest commercial bank in Egypt.

Table (5.4)
Deposits and their growth in FIBE, IIBID, NBE
& all Commercial Banks
1980-1992

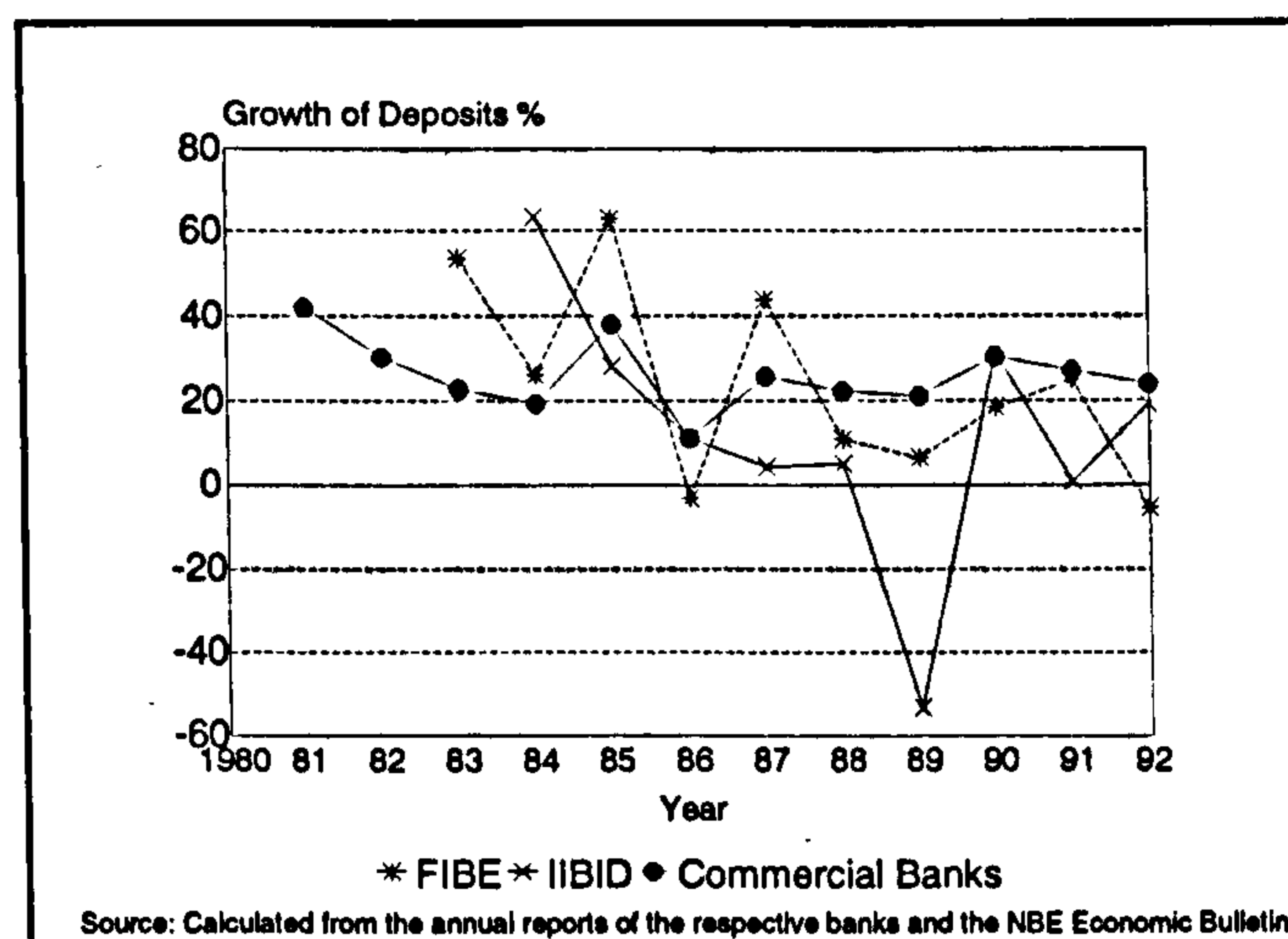
Year	FIBE*		IIBID		NBE		All Commercial Banks	
	Deposits	Growth	Deposits	Growth	Deposits	Growth	Deposits	Growth
1980	98.1	-	-	-	1796.1	-	6987.1	-
1981	354.1	261.1	6.0	-	2161.2	20.3	9932.5	42.2
1982	657.8	85.8	61.0	916.7	2364.2	9.4	12928.4	30.2
1983	1009.9	53.5	256.0	319.7	3031.4	28.2	15864.3	22.7
1984	1271.6	25.9	418.0	63.3	3625.2	19.6	18925.9	19.3
1985	2073.5	63.1	535.0	28.0	4824.5	33.1	26124.6	38.0
1986	2011.7	(-3.0)	596.0	11.4	6587.4	36.5	29065.2	11.3
1987	2892.1	43.8	622.0	4.4	7327.0	11.2	36525.1	25.7
1988	3210.3	11.0	654.0	5.1	9681.0	32.1	44637.0	22.2
1989	3424	6.7	306.6	(-53.1)	11763.0	21.5	54053.1	21.1
1990	4057	18.5	403.2	31.5	15004.0	27.6	70482.9	30.4
1991	5059	24.7	406.9	0.9	23683.0	57.8	89558.9	27.1
1992	4785	(-5.4)	484.9	19.2	30684.1	29.6	110999.2	23.9

Source: Annual reports of FIBE, IIBID, NBE and the NBE Economic Bulletin.

* Figures for FIBE are converted from US\$ to £E by using the annual banking sector exchange rate.

However as shown in figure (5.2), after 1985, average growth rates in the two Islamic banks started to decrease and became lower than that of commercial banks. While the traditional banks continued to have a continued growth of their deposits, the FIBE had negative growth rates in 1986 and 1992. Even more seriously the IIBID suffered a loss of more than half of its deposits in 1989 as a result of difficulties analysed below.

Figure (5.2)
Growth of Deposits in FIBE, IIBID & all
commercial banks



Despite the growth of deposits in the Islamic banks in their early years, the total size of deposits in the two banks combined did not exceed, even in their peak years, 10% of total deposits in the commercial banking sector.

(b) Reasons for the growth of deposits:

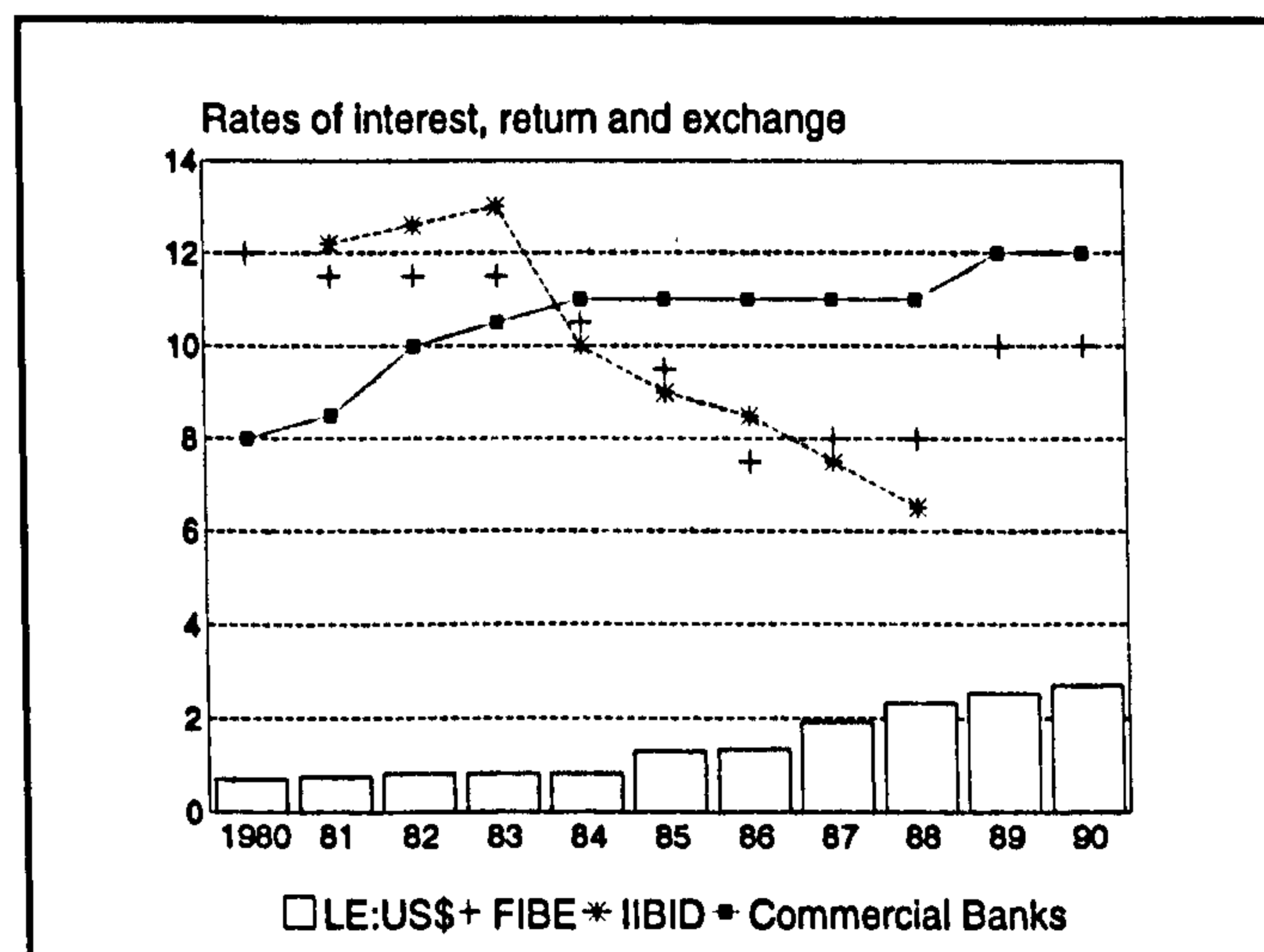
The exceptional growth of deposits in the two Islamic banks in their early years can be attributed mainly to the following factors:

1. High rate of return. As shown in figure (5.3) below, in the first four years of their operation the Islamic banks distributed relatively high rates of return on deposits ranging from 1 to 3 higher than the controlled interest rates offered by conventional banks. We argue that Islamic banks offered such high rate of return to attract depositors.
2. The religious incentive. The sharp increase of deposits in the early years of the establishment of Islamic banks reflected the need for a significant group of depositors for banks that do not deal with interest in a period marked by religious revival; i.e. it was a one-for-all stock adjustment. The contribution to the welfare of Muslims through the *zakat* fund emphasised the Islamic character of these

banks. However it is hard to separate the religious effect from other factors contributed to the growth of deposits, especially the high rate of return mentioned above.

3. Foreign currencies account. The two banks kept a high proportion of deposits in foreign currency, mainly US dollars. They distributed a return on these deposits quoted in the respective foreign currencies. This attracted more depositors in a time when the local currency interest rate was low and the Egyptian pound was facing gradual devaluation, as shown in figure (5.3). The massive devaluation of the Egyptian pound during the period 1980-1990 by approximately 350% contributed to the growth of deposits denominated in foreign currencies when they are accounted in Egyptian pounds. The Share of foreign currencies accounts in total deposits was 74% in the FIBE in 1990 and 68% in the IIBID in 1988.⁵⁵

Figure (5.3)
Rates of interest, return and foreign exchange



Source: Kazarian (1993), p. 148 and CBE annual reports. Exchange rates are obtained from the CBE annual reports.

⁵⁵ See Kazarian (1993), pp. 146-147.

(c) Reasons for the recent deterioration of deposits growth:

1. The establishment of other Islamic financial institutions. This took the form of the informal Islamic Investment Companies (IICs)⁵⁶ and the branches of formal conventional banks. The former claimed their compliance with Islamic law and were active in 1980s. They distributed high rates of return, almost the double of official interest rate. It has been reported that these companies attracted about 22% and 30% of depositors of the FIBE and IIBID respectively.⁵⁷ On the other hand Islamic branches of conventional banks were formed as a response to the early success of the Islamic banks. It is argued that they also deprived the Islamic banks from some of their depositors.
2. The decline of rates of return: As shown in figure (5.3) above since 1984 rates of return distributed by the two banks began to be lower than interest rates offered by conventional banks and consequently rate of growth deposits declined in the former. The recent figures of the FIBE show a negative growth of deposits by 5.4% and 13.3%⁵⁸ in 1992 and 1993 respectively which can be attributed, inter alia, to the relative low rate return in comparison with the prevailing nominal interest rates after the 1991 liberalisation programme.⁵⁹
3. The impact of the recent controversial *fatwa*⁶⁰: In 1989 a *fatwa* given by the *Mufti*⁶¹ of Egypt stated that interest rate is not a form of *riba*. Thus dealings with conventional banks became lawful from an Islamic perspective for those who accept this *fatwa*. Despite strong opposition to this opinion from the majority of

⁵⁶ See our analysis of these companies below.

⁵⁷ Kazarian (1993), p. 149.

⁵⁸ Annual reports of the FIBE (1993) & (1994).

⁵⁹ See our analysis of interest rate determination in the following chapter.

⁶⁰ A *fatwa* is a formal religious opinion declared by an authoritative religious leader.

⁶¹ A religious leader appointed by the state in most Moslem countries and granted the authority of giving formal religious opinions to the state and the individuals.

Muslim scholars, Islamic banks lost further depositors who followed the opinion of the *Mufti*⁶².

4. Irregular distribution of return: One of the major factors which contributed to the heavy withdrawal of deposits from the IIBID in 1989, approximately 53% of total deposits, was the long delay in the distribution of returns in 1988 and 1989. This gave an impression that the bank was facing intense difficulties.
5. The collapse of Islamic Investment Companies: The IICs affected negatively the Islamic banks twice. First during their rise as discussed further below and second, during their fall. After the collapse of the IICs, 'news'⁶³ were spread associating Islamic banks with the IICs and that consequently the bank suffered heavy losses because of this relationship. Notwithstanding these news some of the customers were concerned that these banks might have been indulged in the same activities of the IICs, like heavy speculation abroad. These problems combined with the IIBID's irregular distribution of returns led to the heavy withdrawal of deposits, as mentioned in the previous factor.

(d) Growth of assets:

The first four years of operation of the two Islamic banks saw an exceptional growth of total assets with an annual average of 103% for the FIBE and 254% for the IIBID, compared to 24% in the commercial banking sector. The high growth rates of Islamic banks can be partly attributed to the fact that their assets positions started from very modest levels; £E 155 million in the cases of the FIBE and Just £E 12 million in the case of the IIBID. Nevertheless this does not deny that the growth of total assets reflected the

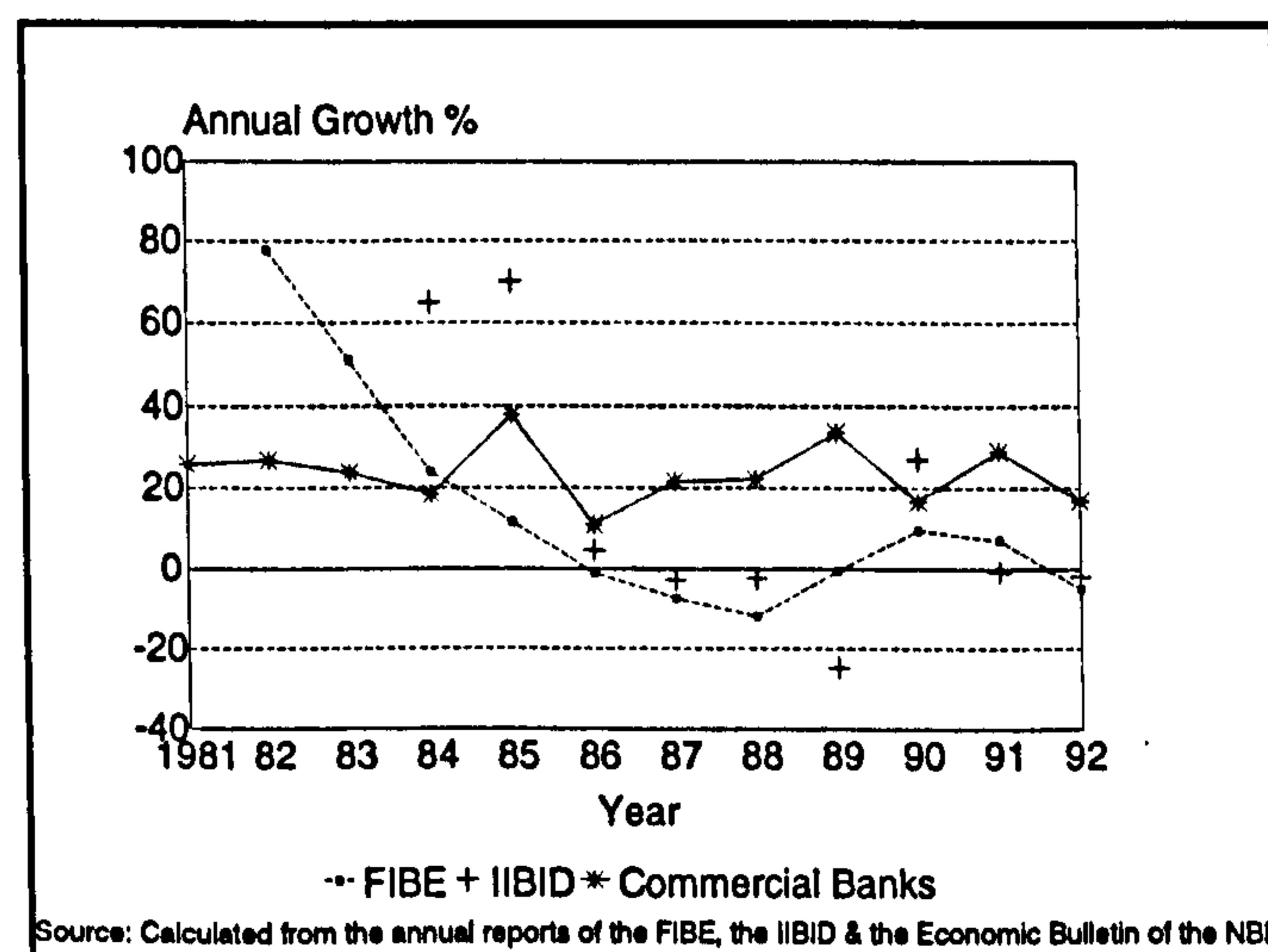
⁶²The *fatwa* was given on the 8th of July 1989 regarding the interest rates of Investment Certificates and Post Office Savings Fund. It was extended afterwards to cover some more interest rates-based transactions. It is worth noting that the Imam of Al-Azhar and other distinguished scholars opposed this *fatwa*. The *fatwa* is published in Tantaway (1991) and for an example of opposing arguments see: Al-Salous (1991a) & (1991b), Al-Qaraddawy (1990). It is ironic to find that a similar *fatwa* was obtained in the past under comparable circumstances with the present. In the 1920s when the government tried to encourage the establishment of rural credit societies it sought the assistance of the Mufti to overcome public scepticism. The government managed to obtain a favourable opinion from him in a form of *fatwa* which stated that there is a difference between interest and *riba*. See Von Pischke (1991), p. 195 and Davis (1983), pp. 100-101 for further details.

⁶³The IIBID annual report for the financial year 1989 describes them as irresponsible.

achievement of the two banks in the mobilisation of deposits and other liabilities in their early years of establishment.

However since 1986 the growth rates of total assets started to decline and were negative in some years. As shown in figure (5.4) the growth rates of Islamic banks' assets were generally lower than that of the commercial banking sector after 1985. The financial year 1986 was a bad one for all banks, as the growth rate dropped from its highest level of 38% in 1985 to its lowest level of 11% in 1986. In the beginning of 1986 the economy suffered from an external shock amid the drop of oil prices which affected negatively the main revenues of the economy, namely the Suez Canal, the remittances of workers in the Gulf states, tourism and oil exports.⁶⁴ The 1986 external shock was responsible for the poor performance of banks generally, but as shown in the figure below, the Islamic banks were affected more by it arguably because of their closer links with the Gulf oil states.

Figure (5.4)
Growth of Assets in IIBID, FIBE &
Commercial Banks (1981-1992)



The decline of the growth of assets of the Islamic banks after 1986 can be attributed also to the mismanagement problems more than anything else. In the case of the IIBID, the

⁶⁴For more discussion of this point see chapter (1).

growth of assets suffered from the bank's 1989 problems, which eventually necessitated a Central Bank intervention, with the cooperation of the four public sector commercial banks in order to recapitalise the bank.⁶⁵ On the other hand the FIBE was negatively affected by the collapse of the Bank of Credit and Commerce International (BCCI) which collapsed in 1991⁶⁶ The FIBE lost an amount of US \$343.7 million, approximately 17.6% of its assets⁶⁷, deposited with the BCCI under especial arrangements. These deposits did not appear in the BCCI's records and it was difficult to prove their existence to the liquidators. These problems were reflected in the Islamic banks assets as shown in figure (5.4).

(e) Allocation of funds:

Figure (5.5) reveals that the FIBE had a significant percentage of its assets, ranging from 33.4% to 60% of total funds, deposited in banks abroad in return for a LIBOR on these deposits, despite its claimed compliance with Islamic law⁶⁸. Recently the FIBE reduced the size of funds deposited abroad and allocated them domestically. However this shift towards the domestic market was in the form of deposits with the Central Bank and commercial banks. As shown in figure (5.6) from 1980 to 1990 deposits with the banking sector averaged 46.1% of the domestic allocation of funds, while the average of deposits with other banks for all commercial banks was just 39% during the same period. Again the FIBE received interest as a return on such deposits.

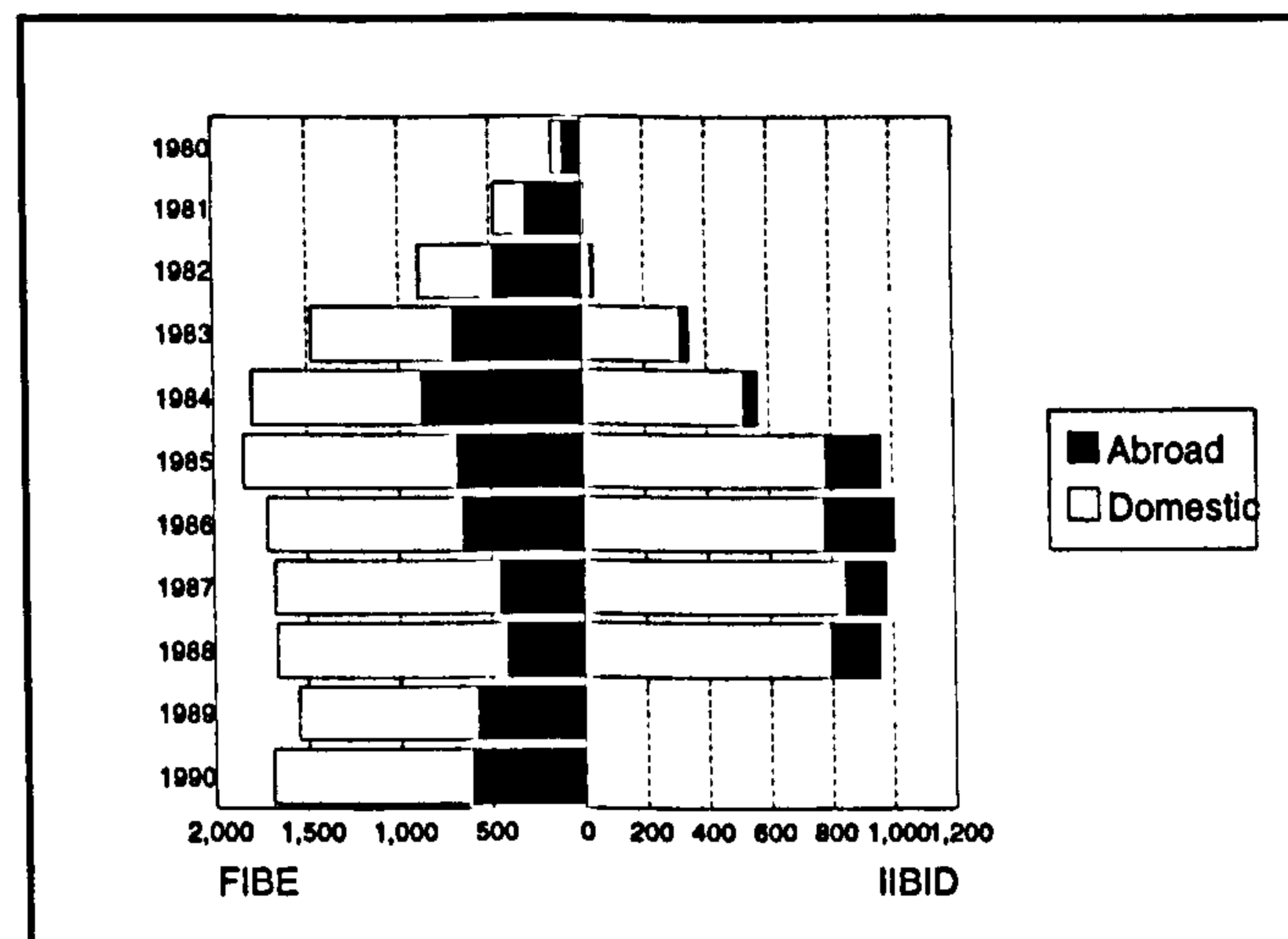
⁶⁵ See the annual reports of the IIBID for 1991 and 1992. It is reported that the four public commercial banks own 79.83% of the capital of the IIBID as a result of their intervention to help the IIBID out from its problems. This, we argue changed the status of the IIBID from being a private and Islamic bank to become a publicly owned conventional bank, despite its Islamic title.

⁶⁶ The Bank of England stopped the BCCI's appertains on 5/7/1991 and was liquidated by a court order issued on 14/1/1992.

⁶⁷ See the Annual reports of the FIBE of 1991 and 1994.

⁶⁸ Kazarian (1993), p. 162. The problem of Islamic banks' indulgence in interest-based transactions was highlighted by Al-Najar, the former Secretary General of the International Association of Islamic Banks in his (1993) lecture in Asseala (Morocco).

Figure (5.5)
Allocation of funds of the FIBE and IIBID



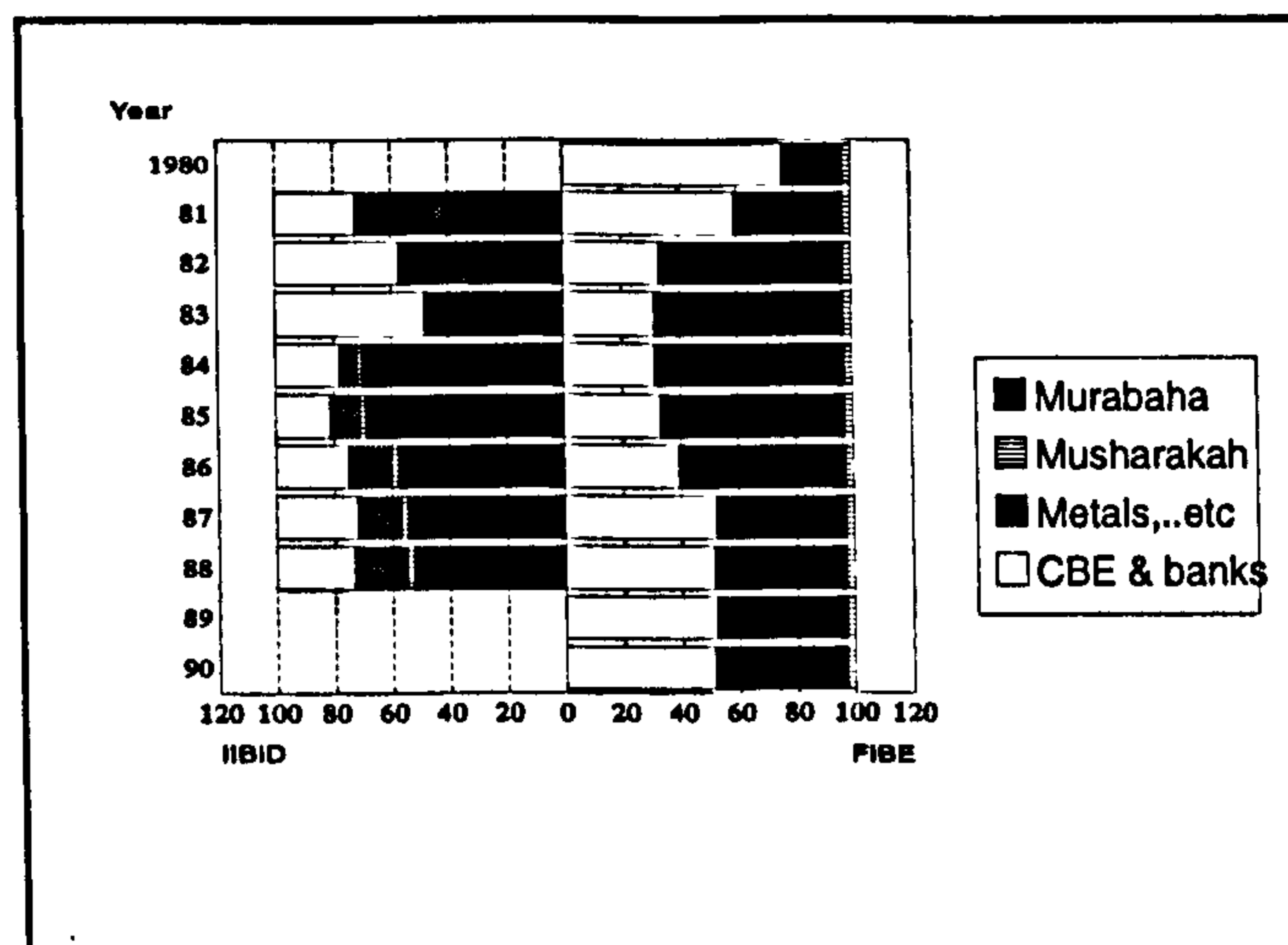
Source: Annual reports of the FIBE and the IIBID.

The IIBID differed from the FIBE in terms of the share of funds deposited with foreign banks as this share did not exceed 32% in any year from 1981 to 1988. As shown in figure (5.6), the IIBID had a lower share of its funds deposited with the CBE and other banks as its annual average was 30.1% during the studied period, but, like the FIBE it did receive interest on these deposits. The IIBID differed from the FIBE in another aspect as it allocated a share of its fund, ranging from 4.3% to 31.3% to speculative operations in foreign currencies, precious metals and other goods in the domestic and foreign markets.⁶⁹ Due to heavy losses, the bank has recently stopped its speculation in precious metals and reduced the size of the other operations.⁷⁰

⁶⁹Kazarian (1993), p. 164.

⁷⁰Speculation activities are forbidden in Islam and the bank was advised to stop such activities. It is worth noting that the word *mudarabah* has two meanings in the Arabic language, the first is trust finance which is adopted in this thesis, the other means speculation. While the first is religiously allowed the second is not. Thus its often to find that the first is described by the *shar'iah* (legitimate) to distinguish between the two of them. Some banks however do not distinguish between them in their reports, possibly to grant their speculation activities with legitimacy.

Figure (5.6)
Pattern of the domestic allocation
of funds of the FIBE and IIBID



Source: Author's own calculations from the annual reports of the FIBE and the IIBID.

Beside depositing its funds with domestic and foreign banks, the FIBE's main activity was providing *murabaha* (markup) and *ijarah wa iqtina* (lease-purchase) finance. These two forms of finance comprised, on average, 51% of the bank's domestic funding from 1981 to 1990. In the case of the IIBID, lease purchase and markup financing comprised 53% of the bank's domestic funding from 1981 to 1988. These two forms of finance were for short term purposes with a period ranging from three months to one year. Costs of funds were determined by the bank in advance according to the size and duration of funding. Funds were secured by collateral which was the asset, usually a durable good or a real estate, purchased by the bank for the client.

While *mudarabah* (trust finance) was completely absent from the portfolios of the IIBID and the FIBE, there was very limited use of *musharakah* (equity participation) by the two banks, as shown in figure (5.6). *Musharakah* comprised a constant share of 3% of the FIBE's domestic allocation of funds. The IIBID made as well a very limited use of *musharakah* as its share in its portfolio ranged from 0.7% in 1981 to 2.2% in 1988.

Musharakah as a risky long term form of finance was mainly used by the two Islamic banks in their own direct investments. In the case of the FIBE 73% of *musharakah* funding was used in the bank's own projects, e.g. food processing, household products, investment and consultancy firms, private schools and hospitals, housing, pharmaceutical production,.. etc⁷¹. The rest of this type of funding, 27%, was allocated in joint projects similar in their activities to the ones owned entirely by the bank.

Generally the share of agricultural and industrial sector financing in Islamic banks funding was small. As shown in table (5.5) trade and services were favoured for their higher returns and shorter gestation periods.

Table (5.5)
Sectoral allocation of funding (%)

Sector	FIBE (1983-88)	IIBID (1985-88)
Trade and Services	56.5	25.8
Foreign currency dealings	18.7	4.6
Construction and housing	17.3	11.1
Industry	6.7	-
Agriculture	1	-
Unidentified markup finance	-	58.5

Source: Compiled from Kazarian (1993), p. 171.

The table shows the dominance of trade and services sector in the case of the FIBE where it comprise 56.5% of total domestic funding during 1983-88, while the industrial and agricultural sectors did not receive more than a share of 7.7%. Although it seems that the IIBID had less of its investments in these activities, in fact it was not too different from the FIBE. Given the characteristics of the unidentified markup finance of the IIBID that mainly relates to household durable goods and real estate, as discussed above, then most of the 58.5% markup finance during 1985-88 can be classified under trade and services.

⁷¹ Annual reports of the FIBE (1994), pp. 16-17 and (1991), pp. 43-47.

(5.7.3) Islamic branches of conventional banks:

As a response to the success of Islamic banks in attracting depositors, in their early years of establishment, many conventional banks formed Islamic branches. Bank Misr was the first conventional bank to set up an Islamic branch which started its operations in 1980.⁷² Apparently the bank was concerned that the newly established FIBE would attract away some of its potential business as well as existing depositors.

At the end of 1990 there were 62 Islamic branches of 23 conventional banks. Just 12 of these branches were of private while 26 of them belong to public banks and 24 to joint venture banks, i.e. owned partly by public banks. Total assets of Islamic branches reached £E 2.2 billion and the total of deposits was £E 1.82 billion. The size of these branches was small compared with the assets and deposits of the three major operating Islamic banks, including Nasser Bank, which reached £E 6.1 billion and 5.1 billion respectively.⁷³

Most of Islamic branches' depositors were individuals who used to have deposit accounts with the same bank⁷⁴. They simply transferred their accounts to the Islamic branch of their bank for three reasons: first it offered the same return as the main bank, and in some cases even more. Second it had an Islamic image which fulfilled, according to the perception of these depositors, the religious aspect of the dealing. Third these branches were fully supported by their well established main branches, some of them, like Bank Misr, had had a good banking profile for more than seventy years, in contrast with the newly established Islamic banks or Islamic Investment Companies.

⁷²See Mayer (1985), p. 47.

⁷³Kazarian (1993), p. 135.

⁷⁴In an interview with Mrs Madeaha Gaber, the manager of the foreign department, at the Nile Bank which has two Islamic branches and fourteen other branches, on 1/5/1993 she confirmed this point. Also Kazarian (1993), p. 184, points out that 97% of Islamic branches' depositors interviewed by him transferred their accounts from a traditional branch to an Islamic one for the same reasons given above.

It is difficult to analyse the performance of Islamic branches as they do not have separate balance sheets or accounts as the outcome of their operations are integrated with the rest of the activities of their parent banks⁷⁵. This problem however reflects the fact that the resources of these branches are mixed with the rest of the banks' funds and directed towards financing the banks' activities⁷⁶. Even in the few cases where some of the Islamic branches were granted some autonomy in the allocation of their funds, in practice the branches found it difficult to utilise fully their resources. Not more than 20% of their deposits were allocated directly in the form of *murabaha*, the rest was deposited with main branches. Thus they did not comply well with the Islamic principles.

Moreover Islamic branches did not share the features of Islamic banks in two important aspects from the religious viewpoint: first they did not have a board of religious scholars to verify the banks' operations and assure their compliance with Islamic law in all transactions, second they did not have a *zakat* account which emphasised the Islamic character of the intermediary.

We argue that the establishment of Islamic branches of conventional banks is a form of product diversification.⁷⁷ They were established to benefit from the Islamic resurgence and avoid loss of customers to the growing Islamic financial institutions. The establishment of a limited number of Islamic branches of big conventional banks which had large network of branches and outlets, like Bank Misr, was not a part of a gradual Islamisation of the banks concerned, but rather it was meant from the beginning to keep the number of Islamic branches as small and symbolic as possible. In practice the Islamic

⁷⁵The Nile Bank, for example, in its annual report of 1992 did not mention any thing regarding its two Islamic branches apart from their names and locations.

⁷⁶In the Interview with Mrs Gaber she mentioned that her bank does not distinguish between its branches and all of them including the Islamic ones direct their funds to the bank's activities.

⁷⁷In interviews with Mr Ali Nigm the former Governor of the CBE and Chairman of the Delta Bank and Mr Motaz Mansour, Managing Director of Misr Iran Development Bank, they supported this argument.

branch was not more than a branch without any significant difference from any conventional branches other than in name.

We consider the very existence of these branches an evidence of the general confusion concerning what is Islamic and what is not, as far as financial transactions are concerned. The contradicting *fatwas* regarding interest and whether it is a form of usury, as discussed above, was responsible, *inter alia*, for this bewilderment.

(5.7.4) Problems of Islamic banking in Egypt:

1) The dominance of short term *murabaha* finance:

As pointed out above *murabaha*, markup, finance dominated the portfolios of Islamic banks. We argue that this is a reflection of an inefficient allocation of funds, mainly because funds under this scheme are directed towards the purchase of, usually imported, durable consumption goods. This type of finance was favoured by Islamic banks along with *ijarah wa iqtina*, purchase-lease, contracts which do not differ in principle to *musharakah* and applied mainly in the purchase of real estate. The very dominance of such contracts make one sceptical about the claimed developmental role, usually stressed by Islamic banks in their bylaws and annual reports.

Moreover *musharakah* finance,⁷⁸ in the way it is applied by Islamic banks, is considered controversial from the Islamic perspective. It is often described by Islamic economists as a device by which some 'Islamic' banks bypass the restriction on usury.⁷⁹ Interest rates are charged implicitly in the form of the predetermined cost of providing the funds by the

⁷⁸ It seems that Islamic banks are not interested in revealing their *murabaha* bias. They used to aggregate all their funding operations under one item in the assets sides of their balance sheets called *musharakah*, *mudarabah*, commercial and productive *murabaha* and real estate investments, so it is difficult to know the relative importance of these different forms of funding from reading the balance sheets. Acquiring such information is difficult as it has to be obtained directly from the concerned banks or the Control Department of the CBE. Reasonable itemisation of the data is required for any careful analysis of the operations of Islamic Banks.

⁷⁹ See Al-Najar (1993), pp. 589- 591.

banks. Moreover it does not differ from the same practice applied by conventional banks when they provide loans under lease or lease purchase schemes⁸⁰.

2) The limited practical role of PLS contracts:

Despite the emphasis given in Islamic financial literature regarding the importance of the *mudarabah* (trust finance) and *musharakah* (equity participation), in practice our enquiry within the banks found that the former was completely absent and the latter had a very limited presence in the portfolio of Islamic banks in Egypt. Similar problem was realised in other countries.⁸¹

This problem can be attributed to the fact that these two forms of PLS finance require an extensive bank effort to ensure that the outcome of the projects are accurately reported. For example the prevalence of tax evasion in LDCs and the associated problem of double bookkeeping for firms make it difficult by the participating bank to find out the actual outcome of the project concerned. Even in the absence of the double bookkeeping problem the PLS contracts may be subject to a principal-agent problem arising from asymmetric information. Thus while profit sharing may increase bank efficiency as it separates administrative control from institutional interest rates, it generates more difficulties, at the same time, on its monitoring activities⁸².

Nevertheless conventional banks are not themselves immune from such problems. If the profit outcome of a project is stochastic, this gives project managers an informational

⁸⁰The Economist magazine (6/8/1994), made a comparison between explicit borrowing from conventional banks and obtaining funds under *murabaha*. The Economist mentions that "The Koran says you cannot borrow \$100m from the bank for a year at 5% interest, to buy the new machinery your factory needs? Fine. You get the bank to buy the machinery for you- cost \$100m- and then you buy the stuff from the bank, paying it \$105m from now. The difference is that the extra \$5m is not interest on loan, [...] but your thanks to the bank for the risk it takes of losing money while it is owner for the machinery [...] Since with modern communications the bank's ownership may last about half a second, its risk is not great." Thus there should not be a surprise that Muslim scholars reject this form of finance, alas, widely adopted by Islamic banks.

⁸¹See for example Khan and Mirakhor (1990), Iqbal and Mirakhor (1987) and Anwar (1992) for a discussion of this problem in the two cases of Iran and Pakistan.

⁸²See Fry (1988), 266 and Goodhart (1992), p. 53.

advantage over the bank.⁸³ A solution for an Islamic bank can be through establishing a long term relationship, as argued in our comparison between bank-based and market-based financial systems, through equities in projects financed by the bank according to *mudarabah* or *musharakah*, they would then have "insider's information" about the operations and outcomes of such projects.⁸⁴

As has been established recently, the *Mudarabah* contract between managers and the bank might act as an efficient revelation device, giving the bank more information about the project⁸⁵. Further if the contract is designed to make the share of the entrepreneur in the outcome of the project, i.e. $(1-\delta)$ in equation (4) above, a variable one depending on the level of effort instead of being a predetermined fixed share, this would reduce the incentive issue associated with the principal-agent problem. Indeed the practical solution for the problem lies in the hands of Islamic banks which had to abandon, or at least reduce, their concentration on short term financing under *murabaha* or markup contracts and enhance the role of PLS.

3) Limited developmental role of Islamic banks:

Our analysis of Islamic banks implies that their role in economic and financial development was limited. The reasons behind this can be summarised in the following factors:

- First, their heavy concentration on short term credit in trade and services sector which had high and rapid return. Short-termism would result in an inimical effect on investment and growth.

⁸³Presley and Sessions (1994), p. 590.

⁸⁴See Chapter (4) of this thesis and Goodhart (1992), op. cit., p. 53.

⁸⁵See Presley and Sessions (1994), pp. 587-595.

- Second, mainly because of the previous problem, Islamic bank investments are biased against the Agricultural and Industrial sectors whose projects tend to have longer gestation periods than trade and services.
- Third, the share of small and medium size projects was modest as most of the banks' projects were characterised by being big and capital intensive⁸⁶.
- Fourth, the considerable share of foreign allocation of funds which were mobilised from the domestic economy.
- Fifth, There is a problem of extensive financing of imported durable consumption goods through *murabaha*.
- Sixth, the concentration of their activities and branching policies⁸⁷ in urban areas, already congested with bank branches, excluded a significant number of potential depositors by geographic filtering income filtering. On the other hand the determination of a deposit minimum excluded further number of depositors by income filtering.

4) Violation of Islamic law:

We have shown that the two banks dealt with interest as they deposited funds with other banks in the country and abroad. This clearly is a violation of shari'ah and a contradiction with the very reasons supposedly behind the establishment of such banks. In the case of an Islamic branch of a conventional bank without separate accounting or operational identity, the violation is a general situation not merely an exception. The carrying out of speculative activities was another breach of Islamic law, and further it resulted in heavy losses.

⁸⁶ See the list of the FIBE's companies in its 1991 report. The capital size of industrial and agricultural projects ranged from \$ 0.6 to 23 million.

⁸⁷ See the branches lists of the two banks in their annual reports. In the case of the FIBE five out of its fourteen branches were established in Cairo, the rest were located in the capitals of few governorates.

(5.7.5) Reasons behind the problems of Islamic banks:

The experience of Islamic banking in Egypt presents an aberration from the theoretical framework of Islamic finance and a clear deviation from its objectives.

The gap between the theoretical foundations and practice can be explained mainly by two factors: lack of qualified management and limited application of Islamic banking; both, to a great extent, are of transitional nature.

1) Lack of qualified management: Given the fact that the Islamic experiment was new in Egypt, it was hard to find skilful bankers who believe, at the same time, in the role of an Islamic bank. As indicated by several Islamic economists,⁸⁸ Islamic banks in their early years had to compromise. Thus most of the management can be divided in two groups; 'believers' in Islamic banking with limited banking skills, and professional bankers with lack of interest in Islamic banking. Very few had the skill and the conviction. Consequently mismanagement problems and violation of Islamic law occurred.

2) Limited application of Islamic banking: Despite the growth of Islamic banks and 'branches' during the 1980s, the banking system in Egypt was still dominated by conventional banks. In 1990 the number of branches formed by Islamic and conventional banks was 104 while the total branches of banks was 1034. The totals of deposits and assets of Islamic intermediaries were merely 10% and 8% of the deposits and assets of the whole banking sector respectively. Being governed by the same rules of the CBE like the rest of operating banks and considered as part of it, the Islamic banks found it difficult not to deal with the rest of financial system. Such dealings were not necessarily undertaken according to the rules of Islamic banks as a minority.

⁸⁸ An interview with Prof Fathy Sakr on the 17th of April 1993; and see Al-Najar (1993).

An understanding of this problem can be obtained from the experience of labour-managed firms in the capitalist economies⁸⁹. Many capitalist economies, including the British, had a version or more of labour-managed firms, e.g. cooperatives. These firms had different character and objectives from the capitalist firms.⁹⁰ However in economies dominated by profit-maximising firms, the labour managed firms ended up acting like the dominating ones or at least they tended to degenerate into quasi-capitalist firms.⁹¹ Similarly, under the prevailing circumstances, Islamic banks could end up behaving like conventional banks, or at least degenerate into quasi-conventional banks.

It is worth arguing however that even if such adequate support can be provided within the economy, it is difficult to maintain at the international level, as can be learned from the experiences of Iran and Pakistan. Despite these countries Islamisation of the whole banking system which minimised the violation of Islamic law, the two countries could not achieve the same with their international financial transactions which normally involved interest. Under a so-called financial globalisation, we argue that the maintenance of pure interest-free financial transaction would be more difficult even at the national level.⁹²

(5.8) The Case of the Islamic Investment Companies (IICs):

The IICs are considered informal due to the fact that they escaped any form of regulation and did not come under the monetary authority's supervision or even company laws. Most of IICs' practices can be easily classified under the parallel and black markets activities of the informal sector⁹³; for example, tax evasion, bribery, theft of state land,

⁸⁹For an analysis of labour-managed firms see Vanek (1970) and Ireland and Law (1982).

⁹⁰While the capitalist firm is described as a profit maximiser, the labour-managed firm maximises income per worker over a planning period.

⁹¹For a coverage of this point see Ireland and Law (1982), op. cit., 173-174.

⁹²On the issue of financial globalisation see for example O'Brien (1992).

⁹³For further discussion of the concepts informal finance and a taxonomy of its activities see chapter (8).

violation of import restrictions, illegal foreign exchange dealings. Further, they adopted a pyramid scheme⁹⁴ to pay outstanding dividends out of late comers' deposits.

5.8.1) The rise of IICs:

The IICs grew in a spectacular manner during the 1980s.⁹⁵ The estimated number of these companies was 105 at the end of 1988. As discussed further below, the exact number of these institutions, like the size of their deposits and the number of their depositors, has never agreed upon. However if we consider the latest official number of depositors of 502,826 and given that the dependency ratio in Egypt is 5.6, this means that almost 3 million people was affected directly by the activities of the IICs. Total deposits held with the IICs was estimated at £E 3.8 billion in 1988, i.e. 7.8% of GDP, the equivalent of 17% of public commercial banks deposits and approximately 10% of total deposits of the banking sector.⁹⁶ Most of these deposits were collected in less than three years; from 1985 to 1988.

The flourishing of the activities of IICs, mainly collection of households' savings, is ascribed to several factors.

- As in the case of Islamic banks these institutions managed to capitalise on the Islamic resurgence and its impact on public opinion regarding specific financial transactions that involve usury. They launched a massive advertising campaign assuring that they work in accordance with Islamic principles. Company names⁹⁷ were carefully chosen, with Islamic terminologies like *mudarabah*, trust

⁹⁴ Also known as Ponzi schemes, named after Charles Ponzi's financial ploy in 1919-20 in the USA. See Train (1985), pp. 11-16 for a historical background.

⁹⁵ The first Islamic Investment Company was *Al-Sharif*. It was established in 1958 but did not go public until 1978, when it announced that it would open the door for the public to invest in the enlargement of the company's operations with promises of high returns in the form of dividends according to Islamic principles.

⁹⁶ The figures of deposits and depositors are those published by the offices of the Attorney General and the Socialist Attorney after the collapse of the IICs in June 1988.

⁹⁷ If we look at the names of some of the big companies, we would find that they meant to have an Islamic indication like Al-Rayan, the name of one of the doors of paradise, Al Huda: the right path, Badr: the first battle in the history of Islam.

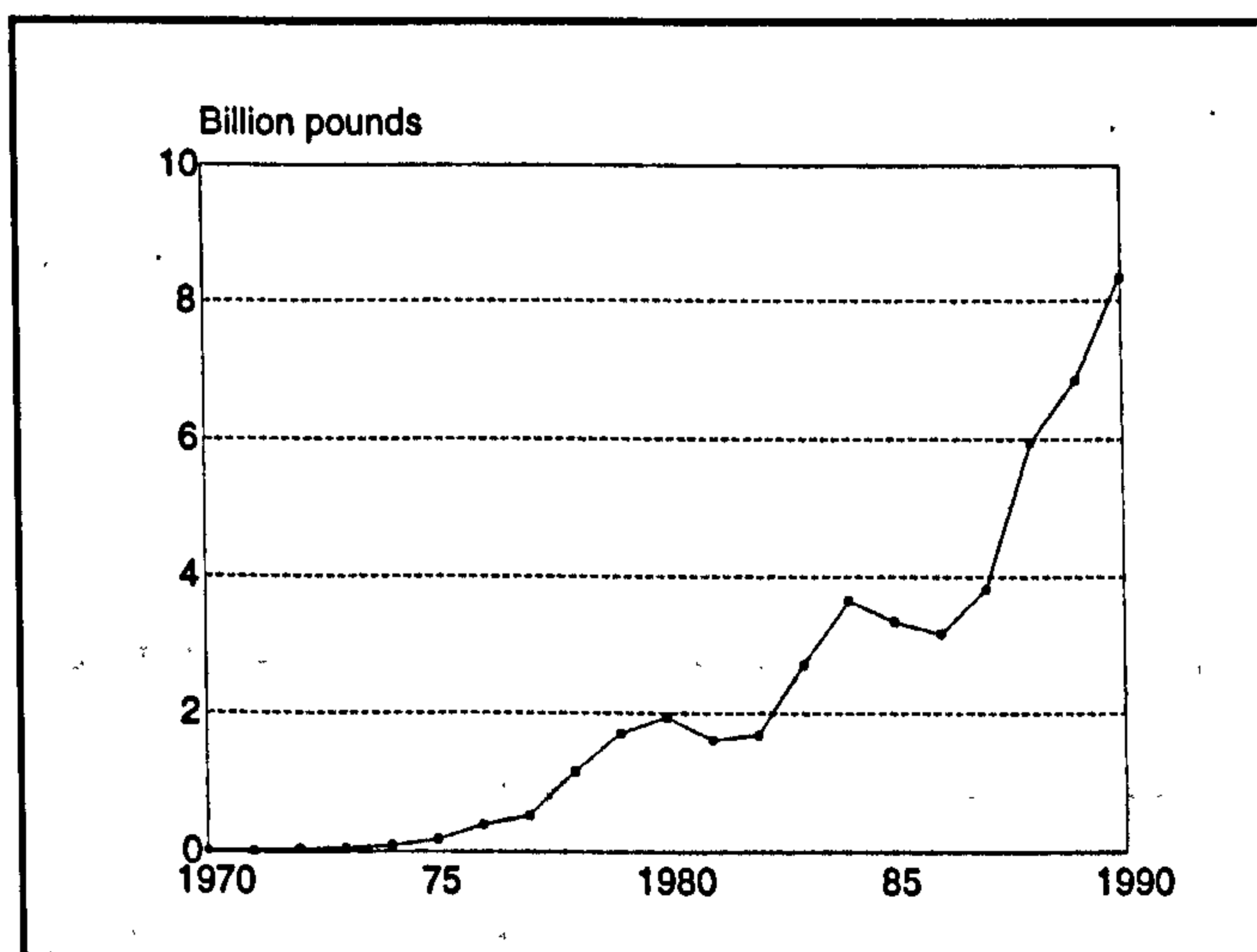
financing, and *musharakah*, joint-venture, being employed to emphasize the claimed identity.

- These institutions had a wide network of low operating cost branches, open almost 24 hours a day, reaching areas neglected by the traditional banks. Bureaucratic procedures were kept to a minimum and the process of depositing funds was simple and short for the convenience of uneducated depositors.
- Depositors, particularly small savers, flocked to them, attracted not only by Islamic slogans but by the fact that the dividends distributed by the IICs were more than double the 12 percent rate of interest then offered by the conventional banks. These banks also seemed to provide a hedge against inflation, as it was 4 percentage points higher than the official figure of inflation in 1988.
- These companies innovated a new method for distributing dividends. They offered the depositors an average of 1.5 to 2 percent monthly return, on credit, until the accounts are settled at the end of the year. The idea was an appealing one to a lot of depositors who want to receive a specific monthly flow of money without any worries about fluctuations in expected return on funds invested according to profit and loss sharing à la Islamic principles. The method attracted a range of depositors; pensioners, widows, persons on low income, ex-emigrants in the gulf states,.. etc.
- Catering for small depositors was one of the factors leading to the success of these companies in attracting savings. This group of people has never been put seriously on the agenda of the formal banking system. Some of the banks set a minimum to open a deposit account which disqualified a large number of potential depositors. Other banks did not deal in domestic currency which disqualified a further number of potential depositors. Maltreatment of customers in some branches of public banks and insolent staff in some branches of foreign and joint-venture ones discouraged a significant number of potential depositors.

Under these conditions and with the prevalence of negative real interest rates at the time, different kinds of inflation hedges would be a plausible alternative. IICs seemed to take account of these problems and managed to appear as a good substitute for other inflation hedges for small depositors.

The increasing role of the IICs in the Egyptian economy in general and the financial sector in particular can be equally attributed to some other factors for which they were not responsible but managed to exploit. As shown in figure (5.7), Egypt at that time was witnessing a remarkable increase in the remittances of Egyptian workers abroad, primarily in the Gulf states.

Figure (5.7)
Workers' Remittances 1970-90, (£E billion)



Source: World Bank, World Tables, 1991 and 1992.

Moreover, various restrictions in the official foreign exchange market, the overvalued exchange rate of the pound, and the incapability of the formal financial sector, with its limited instruments, to cope with the requirements of those emigrants. Hence many of the emigrants preferred to deal in the foreign exchange black market. Many of the founders

of the IICs started as foreign exchange black marketeers⁹⁸. They had plenty of cash in hand and found themselves surrounded by businessmen who could not finance imports through the formal channels. Furthermore, the government itself sought the help of black market traders in order to finance the imports of some essential goods.

However, as a way of reducing risk involved in illegal transactions, setting up a 'legal' façade appeared then as a plausible idea. Hence, the first companies were established like *Al-Rayan* and *Al-Saad*.⁹⁹ The founders of both companies were at the top of the list of the 55 main foreign exchange black market traders.

The IICs emerged in a financially repressed environment with, effectively, a non functioning capital market and a malfunctioning banking sector. Potential investors faced several bureaucratic, legislative, and regulation difficulties when dealing with conventional institutions. In such circumstances, a significant number of potential savers and investors preferred to deal with these new companies for higher rates of return in a seemingly placid way.

The experience of the IICs can be related to the two main arguments¹⁰⁰ that are usually adopted regarding the reasons behind financial dualism and the very existence of the informal financial sector. The first argument considers the informal financial sector a response to the imperfections and weaknesses of the repressed formal sector. The tight regulation of financial intermediaries and various restrictions imposed on their activities push potential savers and investors to find other instruments of savings and sources of credit outside the formal sector.

⁹⁸ See Sadowski (1991) pp. 229-231.

⁹⁹ Two of Al-Rayan brothers and the chairman of Al-Saad were number 2,3 and 4 respectively on the interior ministry's list of the biggest foreign exchange black marketeers.

¹⁰⁰ See Germidis (1990) and Kitchen (1986).

The second line of argument states that the existence of the informal financial sector can be explained by inherent dualism in the economic and social structure of the whole society. In other words the informal sector would flourish when a significant part of the population is still attached to traditional values regardless of the condition of the formal sector.

The case of IICs suggests a combination of the two arguments for an explanation of their existence. On the first hand, they support Goodhart's law¹⁰¹ by being the unregulated substitute for a heavily regulated formal financial sector. On the other hand they appeared as institutions working according to the dominating religious and traditional values. This clearly supports the second argument; an argument completely neglected by the western style financial intermediaries and not utilised effectively enough by the formal Islamic banks.

Moreover, we argue that the IICs exploited the soft regulatory structure. These companies were allowed to be established and operate for almost a decade without coming under any recognised form of regulation or supervision. Thus the growth of the IICs was not only a response to financial repression but it was also a demonstration of the weaknesses of regulatory framework, in addition to the incompatibility of formal financial services with the needs of a significant segment of savers in Egypt.

5.8.2) The size of IICs:

Deposits held by IICs reached a figure estimated to be between £E 3.4 billion and £E 4.6 billion in 1988. The number of depositors in the biggest 5 companies was 391,000 according to one of the estimates, and 525,000 according to another. The total number

¹⁰¹ See Goodhart (1984), p. 96.

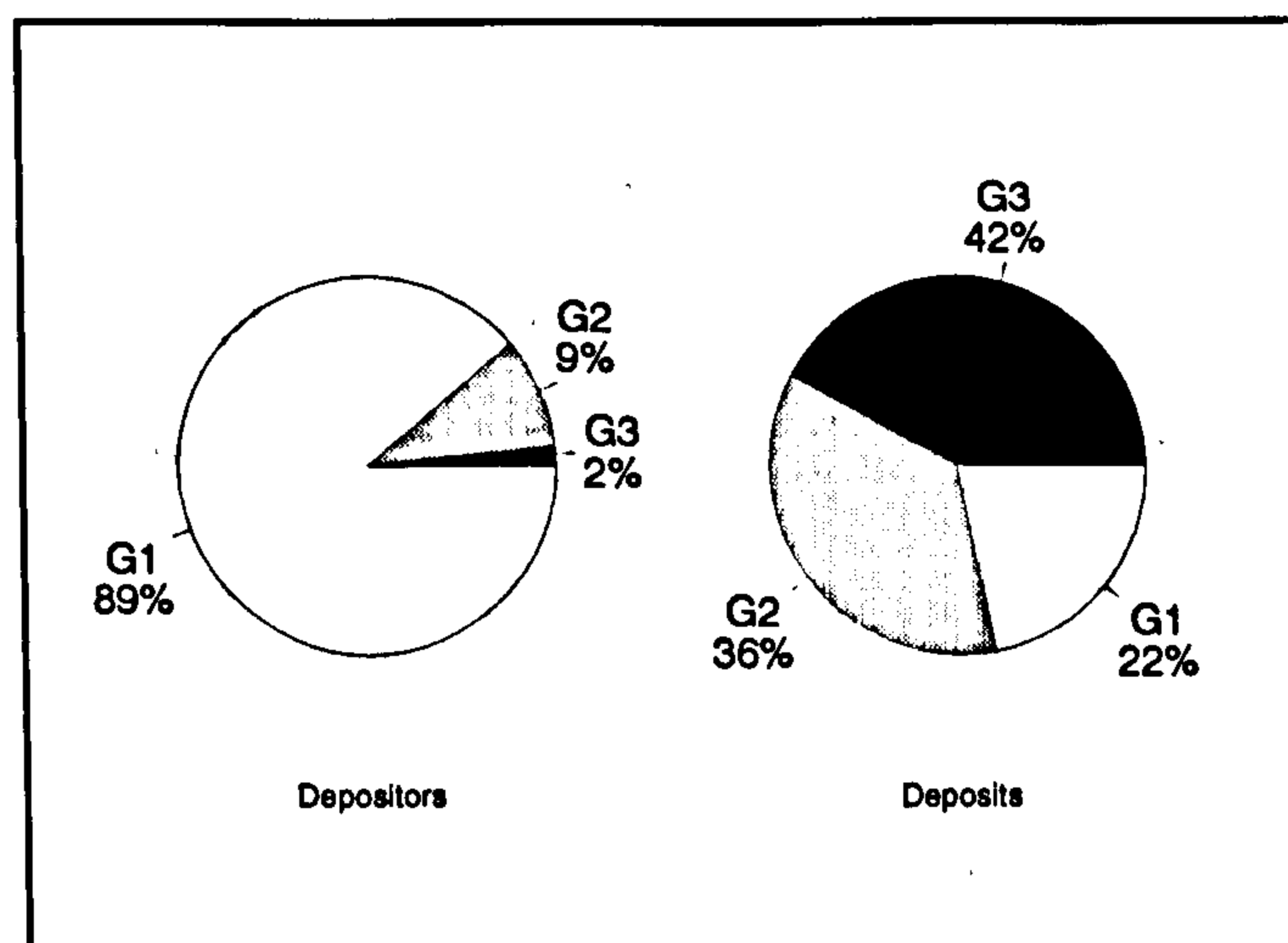
of IICs' depositors was estimated to range between 406,000 and 648,000¹⁰². The deviation in figures is quite compatible with the nature of informal sector establishments. Organized book-keeping, clear records and a reasonable degree of disclosure of information were never considered by the IICs. There was no need for that when there was no supervising authority to monitor their activities.

These companies accepted almost any amount of money as deposits; from as small as £E 100 to £E 2 million.¹⁰³ As shown in figure (5.8), in one of the biggest IICs, *Al Huda Misr*, we can distinguish between three main groups according to the average size of deposits. First 15,000 small depositors (G1) with an average size of deposits of £E 2700, who made up 89% of the total number of depositors and had a share of 22% of the whole volume of deposits. Second a group of 1600 depositors (G2) who had an average size of deposits of £E 40,825 constructed 9% of total depositors and 36% of total deposits. The company also managed to attract in addition 400 big depositors (G3), with an average deposit size of £E 188,000, who formed 2% of the total number of 17,000 depositors, and held 42% of the total size of deposits.

¹⁰² See Abdel Fadil, op. cit., pp. 15-17 for an estimate of the size of deposits and number of depositors.

¹⁰³ See Al Jumhooryah newspaper 3/8/1993 p. 11.

Figure (5.8)
Distribution of depositors & deposits in
Al-Huda Misr



Source: Compiled from the published lists of depositors' shares in liquidation revenues.

Thus the IICs appealed to different groups regardless of income. The occupations of depositors proves that they also managed to break through class barriers. The means for that were mainly religion and the high returns promised on funds deposited.

5.8.3) The IICs' adoption of pyramid scheme:

The question that arises here is what sort of activities enable the companies to pay their depositors 24% per annum on deposits in local and foreign currencies?

We argue that a pyramid scheme is the plausible explanation for the high rate of distributed profits of IICs.¹⁰⁴ O'Connell and Zeldes (1988), define a 'rational' pyramid scheme as 'a sequence of loan market transactions with positive net present value to the borrower'.¹⁰⁵ Generally according to the pyramid scheme cash payments on debts,

¹⁰⁴ And indeed it is the explanation for the current high interest rate paid by the government on treasury bills in Egypt.

¹⁰⁵ See O'Connell and Zeldes (1988), p. 434.

deposits, are met mainly by increasing the amount of debt outstanding by fresh borrowing and debts are backed not by real assets but rather by future debts¹⁰⁶.

Unquestionably, speculation and pyramid schemes, to a certain extent, might be a recognised feature of the operations of many formal financial institutions as argued by Minsky (1986)¹⁰⁷. But speculation, in the words of Keynes (1949), may cause no damage as bubbles on a steady stream of enterprise. But in the case of IICs the case was serious as they became 'the bubble on a whirlpool of speculations'¹⁰⁸.

The recent history of financial fiascos is full of examples of wide-scale pyramid schemes, from the Ponzi scandal in the early 1920s¹⁰⁹ in the USA, to the MMM crash in Russia in 1994.¹¹⁰ In the two incidents, as in the case of the IICs, there was misrepresentation and violation of implicit and explicit trust, if one uses the expression of Kindleberger.¹¹¹ Moreover in the three cases of Ponzi, MMM and IICs there was a heavy reliance on slick advertising campaigns, in which a seemingly genuine activity appeared as a façade. In the case of Ponzi it was arbitrage opportunities in international postal coupons, in the MMM case it was the trade in privatisation vouchers, and in case of the IICs, it was the establishment of holding companies involved in a variety of production and services activities as a smoke screen.

¹⁰⁶ See Minsky (1986) p. 206-14 and Kindleberger (1978) p. 79.

¹⁰⁷ It is ironic to find that the annual interest yield on treasury bills reached 20%. T Bills interest rate was quite close to the rate of return in IICs. It seems either that the government was wrong when it restricted nominal interest rates in the first case and allowed the informal sector to benefit from that, or it was wrong when it provided such a high interest rate on T Bills in the second case, conceivably under a government backed pyramid scheme. Supposedly the government was wrong in both cases.

¹⁰⁸ See Shafik (1989) p. 303.

¹⁰⁹ See Train (1985), pp. 11-16.

¹¹⁰ On the MMM crisis see the two issues of *The Economist*, of 30/7/1994 and 10/9/1994.

¹¹¹ See the contribution of O'Connell and Zeldes (1992), in the *New Palgrave Dictionary of Money and Finance*.

5.8.4) The fall:

The IICs enjoyed no supervision or regulation until the symptoms of problems appeared on the surface after immense losses of some IICs in speculating on gold and foreign currencies in the international markets in November 1986. This was followed by a series of similar problems and concluded with the international financial crisis on black Monday in October 1987, marking the beginning of the fall of these companies.

These problems along with others forced the government to intervene to regulate these companies. There were some cases of security problems when crowds of depositors marched on *Al Rayan's* branches to withdraw their deposits after the news of their losses in November 1986 and 1987. *Al Rayan* was rescued by an immediate liquidity transfer from a financial company in the Gulf¹¹² and managed to cover all withdrawal requests, estimated at £E 25 million a day. But this drew attention to the importance of formal monitoring of these companies.

These companies were accused of financing the Islamic candidates campaign in the 1987 general elections, which made the government more interested in regulating them. However the government did not intervene quickly enough. The delay in intervention was due partly to the fear of accusation of being anti-Islamic and believing that a major run on the IICs would endanger banks and government agencies that had dealings with them. Further, at that time the government did not have even an approximate figure of the number of these companies or their depositors. In order to enhance their bargaining power with the government, IICs' managers claimed that there were around 575 operating companies with 15 million depositors.¹¹³

¹¹² Shohaib (1989) and several newspapers.

¹¹³ Al Shaab newspaper 21/6/1988.

Moreover IICs established a complex network of loyal journalists, government officials, former ministers and governors, police and army officers, and religious personalities. Many of them served the objectives of IICs by exploiting information they gained while they were in their powerful positions and abusing the confidence of the public in their views. This network delayed the government action against the IICs. In return for their services members of the network were allocated consultancy jobs in IICs with high salaries or paid higher returns on their deposited funds with the companies or both.¹¹⁴

It was clear that these companies escaped any direct control of any of these authorities by exploiting the two compliant Laws¹¹⁵ of 159/1981 and 43/1974 concerning joint stock companies and investment and other laws concerning limited liability companies and limited partnership companies.¹¹⁶ Effectively, there was no law to regulate the IICs and hence there was no authority governing them.

Meanwhile, some companies were unable to sustain their high dividends and faced a liquidity and solvency crises. An attempt was made by *Al Rayan* and *Al Saad*, two of the biggest IICs, to solve their problems by merger in what was known then as the merger of the giants¹¹⁷. However, this merger was a violation of commercial law. The government capitalised on that and passed a feeble law no 89/1986 which was enforced and augmented after 2 years by law no 146/1988. According to the latter law investment fund business is restricted to joint-stock companies, a minimum capital standard was imposed and regulatory oversight was vested with the Capital Market Authority.

¹¹⁴ A group of these consultants and advisors were known after the collapse of the IICs and revealing of some files as the group of the 'lists of blessings', *kushouf al-Barakah*, as they were paid special rates of returns on funds deposited for them with the IICs. To the knowledge of the author the case was closed without adequate investigation.

¹¹⁵ See chapter (1) for a brief discussion of the background of the promulgation of these two laws.

¹¹⁶ For a legal discussion of the activities of IICs see Ahmad (1990) pp 77-79 and 91-95.

¹¹⁷ Al-Ahram Newspaper 17/4/1988 p. 18.

However this movement of the government was too late and did too little to reform the companies and help them adapt to the new rules. At the same time the government action might have contributed to their early collapse as they were heavily regulated and effectively denied access to fresh capital.

After more than 5 years of regulation, and hence the collapse, of IICs in 1988, depositors in some companies received just 10% of their funds valued as at June 1988 according to a slow timetable managed by 2 legal authorities the Attorney General and the Socialist Attorney. Other depositors did not receive even the 10% as their companies' assets were difficult to liquidate or not adequate to cover any deposits. Those who had banked with big IICs learned that it would take years to recover their deposits, while those who had their deposits in the small IICs discovered that their funds not only had decreased in real terms, like those of big firms, but evaporated in nominal terms. Moreover the adverse experience of IICs has undermined the confidence of potential savers in collective investment institutions and has been hampering attempts to develop mutual funds in the Egyptian formal financial system ever since.

(5.9) Concluding remarks:

The theoretical framework of Islamic finance challenges some of the main fundamentals of mainstream thinking regarding the mechanisms of financial transactions. The rejection of a predetermined interest rate, as a form of the disallowed *riba*, implies a change to profit and loss sharing principle (PLS) in conducting financial intermediation. In this chapter we have provided a simple model to illustrate the difference between an Islamic bank and a traditional one.

The analytic conceptualisation which has developed since the 1980s, has established that the Islamic financial system has several advantages over the conventional one, mainly:

- It is more equitable as it establishes a direct relationship between lenders and borrowers through which they share the outcome of the 'partnership' be it profit or loss.
- There is a close and direct relationship between the return on savings and investment.
- The Islamic system offers a flexible adjustment mechanism in the case of unanticipated shocks.
- It ensures that the real values of assets and liabilities will be equal at all points in time.
- The rate of return is determined by the real sector, and not by the financial sector.
- It protects the exchange/transaction role of a banking system by limiting the risk on deposit balances

However, further impartial analysis of the Islamic financial model is needed for a better understanding of its concepts, mechanisms and objectives. We argue that such analysis will not only develop the Islamic model to a more fully fledged one, but may offer as well some different insights to the field of economics.

In principle the framework provides Islamic banks with a variety of savings instruments and funding schemes. In practice Islamic banks in Egypt, as in other Muslim countries, performed relatively better in the mobilisation of funds than in their allocation. They suffered from a bias towards the controversial short-term *murabaha* finance concentrated in trade and services sectors, whereas the *mudarabah* and *musharakah* schemes were virtually neglected.

The future of Islamic financial institutions in Egypt relies on their ability to learn from the problems of recent years and find answers for intricate questions mainly:

- How to innovate instruments to attract risk averse depositors? Under the current practice Islamic banks avoided this problem by distributing rates of return close to the prevailing interest rate and not declaring explicitly that depositors may lose part of their nominal principals in the case of loss. With more transparency required, under the financial reform programme currently adopted, can Islamic banks keep their risk averse depositors and attract potential ones?
- How to overcome the dominance of short-termism and *murabaha* contracts in their portfolios?
- What kind of training is required for their current and future personnel to ensure an efficient functioning of Islamic banks in accordance with their distinctive rules and constraints?
- The case of the IICs emphasises the need for a prudential regulator and adequate supervision and rejects the calls for complete deregulation of the financial system or lenient monitoring. The question however is how to establish a suitable regulatory framework for Islamic financial institutions in a predominantly 'conventional' financial system?
- Further to the previous point is what sort of relationship Islamic banks will have with the Central Bank, including the issue of 100 percent reserve requirements?
- Should they be part of a deposit insurance scheme or is that another breach of Islamic law?
- Finally, how to conduct their transactions with conventional banks and the international markets without violating their Islamic principles?

Chapter (6)

Financial Repression in Egypt 1960-90: Causes, Measures and Impact

"If as in the 18th century, the existing mercantilist economy seemed to be inefficient, then the prevalent mood was for greater freedom. If as in the late 19th century, the existing liberal economy was perceived not to have solved the problems of poverty and insecurity, then the mood was for intervention. If as today, the interventionist economy is perceived as having failed and governments having grown too large, then the mood is for liberalism." R. M. Hartwell (1989)¹

(6.1) Introduction:

The financial market in LDCs has always been subject to substantial government intervention. Such intervention is not always justified by regulatory purposes and/or intentions for correcting market failure. In most cases government intervention in LDCs can be considered repressive, as far as the financial market is concerned. Governments impose an array of measures that deviate the operations of the financial system away from the market discipline and result in various distortions.

Financial repression can be explained by different arguments, such as the condition of the financial system in LDCs after independence, the impact of the dominating ideologies during the late 1950s and 1960s, and/or anti usury laws, but the main common cause for repression, we argue, was financing the budget deficit.

Financial repression in Egypt took different forms such as setting ceilings on interest rates, high reserve requirements, directed credit schemes, ownership of banks, intervention in the portfolio composition of banks in addition to extracting revenues from the inflation tax.

¹Hartwell (1989), p. 118.

In this chapter we analyse the causes of financial repression in Egypt over the period 1960-90. We discuss the impact of the adopted methods of repressions and estimate the government revenues generated from particular repressive measures, like the inflation tax, seigniorage, interest rate ceilings. Moreover we discuss the main consequences of financial repression such as capital flight, money substitution, hoarding gold as an inflation hedge and informal financial transactions.

(6.2) Reasons for financial repression in Egypt:

(6.2.1) The Condition of the financial system after independence:

One of the reasons behind the Egyptian government's intervention in the operations of the financial market can be attributed to a market failure problems and its negative effects on the efficiency of financial intermediation, i.e. the mobilisation of savings and the allocation of loanable funds.²

When Egypt started to modernise its economy in the 1950s, after gaining its political independence, the financial system was comprised of foreign owned commercial banks, with the exception of Bank Misr and some scattered Egyptian shares in some financial units.³ The activities of these banks were concentrated in short-term trade and commercial credit.⁴ There was also geographical concentration as most of the banks were established in Cairo and Alexandria with very few branches in other big urban centres. The financial system was segmented and shallow in the sense that either some financial services and instruments did not exist at all in some areas, like insurance services, or they existed but were in an inadequate form, e.g. agricultural credit banking.

²See Killick, 1993, pp. 254-262, for further analysis of market failure problem and its impact on the financial system.

³See chapter (3) of this thesis.

⁴ibid.

Encouraged by segmentation and shallowness, operating banks behaved in an oligopolistic manner. This was facilitated by the absence of a formal legislator. The National Bank of Egypt, as an acting Central Bank, was not adequately empowered to exercise the known functions of a well established monetary authority in terms of supervision and regulation.⁵

Asymmetric information, regarding both the services of the financial sector and potential borrowers, was a result of such oligopolistic environment and a cause for other problems, such as adverse risk selection and the application of non-price criteria for the allocation of credit, i.e. depending on the reputation of the borrower, political pressure,.. etc.⁶

All these characteristics are symptoms of market failure which called for corrective intervention by the government. However the intervention, especially during the 1960s was not necessarily corrective as it was mainly driven by ideological motives, which left the entire financial system publicly owned and managed as discussed in chapter (3) above.

(6.2.2) The impact of ideology:

The repression of the financial sector was one of the components of overall interventionist policy embraced by the government in the 1960s under the conviction of socialist ideas as a remedy for economic problems.⁷ According to these ideas, the public sector was considered the engine of economic growth. Whereas the private sector was regarded as both economically inefficient, in undertaking the large projects of the ambitious development plans, and politically unreliable because of its close association with the former regime. Hence there was a series of Egyptianisation measures, *de facto*

⁵ibid.

⁶See Killick (1993), op. cit, p. 256.

⁷The background of the adoption of socialist policies during the 1960s is discussed in our overview of the Egyptian economy in chapter (1).

nationalisation, of foreign owned enterprises, including financial intermediaries in late 1950s and the comprehensive nationalisation measures of early 1960s.⁸

Consequently publicly-owned banks comprised the entire financial system until 1975 and despite the allowance for some foreign and private banks to operate, public banks have been its dominant component afterwards. Although owning financial intermediaries by the state cannot be always considered a facet of financial repression, we argue that the way they functioned in Egypt, as in other LDCs, made them a catalyst for repression and a promoter for its unfavourable effects. In this environment the private sector found it hard to compete for credit, simply because credit is administratively allocated to the priority projects as discussed further below.

(6.2.3) Regulations against usury:

Imposing controls on interest rates were consistent with religious and political objections to high interest rates which are considered as usurious. Although Islam considers the charge of an interest rate, regardless of its level be it high or low or high, as a form of usury⁹, Egyptian authorities do not adopt this view. Rather they seem more influenced by the view that high interest rates are usurious while relatively low rates are not, hence their advocacy of interest rate ceilings.

In addition to the religious rationale, usury laws were advocated for a long time by policy makers, who accepted the view of Adam Smith (1776) which stated that usury ceilings would direct loanable funds to 'productive investments' and away from 'poor-risk

⁸See Chapter (3) and chapter (4) for further discussion of Egyptianisation and Nationalisation laws.

⁹See our discussion of Islamic view on interest rate in chapter (5).

spendthrift' borrowers.¹⁰ This view can be considered as an early precaution of today's ideas about adverse risk selection.

(6.2.4) The influence of Keynesian ideas:

Egyptian policy makers, like many others in the rest of the developing world, were influenced by Keynesian arguments during its heyday during the 1950s and 1960s. According to Keynes, excessive liquidity-preference pushed real interest rates historically above the full-employment equilibrium level. As a solution for liquidity-preference, described as "the outstanding evil [and] the prime impediment to growth of wealth"¹¹, Keynes proposed interest rate ceilings. This proposition was in accordance with his advocacy of the Gesellian stamp tax on money which was designed to reduce the demand for liquidity by raising the opportunity cost of holding money.¹²

Further, Tobin (1965) in his model of money and economic growth demonstrated that a higher return on capital relative to money leads to a higher capital/labour ratio, higher productivity of labour and improvement in per capita incomes. This necessitates either a reduction in deposit interest rates or taxing money à la Gesell.¹³

The views of Keynes and Tobin, among other economists, constructed a general wisdom, in most developed and developing countries including Egypt, that low nominal interest rates are necessary for growth. This sat well with the notion of that time that physical capital accumulation was the critical element in successful development. Hence the widespread use of interest rate ceilings as a main tool for financial repression.

¹⁰On the impact of usury laws on credit availability and allocation see Villegas (1989) and Blitz and Long (1965).

¹¹See Keynes (1936), p. 351.

¹²On Gesellian Stamps and its support by Keynes see: Keynes (1936), pp. 353-8, Shaw (1973), p. 93. and Fry (1988), p. 5.

¹³For a discussion of this point see Fry (1988), pp. 5-6.

It is worth noting that repressive measures seemed to be working in some countries. For example, repressing the financial sector in S. Korea during the 1970s helped finance the budget deficit, in a non-inflationary manner, by imposing restrictions on money substitutes. Moreover, in time when the financial market was underdeveloped and in absence of reliable market information, the Korean government by owning financial units and controlling capital outflow, managed to influence favourably economic variables and achieved the maintenance of economic stability and reduced capital flight to a minimum, in periods of economic and political uncertainty, e.g. early 1980s.¹⁴

Moreover financial repression helped reducing the velocity of circulation, using M2, in Portugal from 1.5 in 1962 to 1.1 in 1973; and in Turkey from 5.3 in 1963 to 3.7 in 1970.¹⁵ However, evidence does not suggest that Egypt achieved an equivalent success in controlling the velocity of circulation. It is also interesting to notice that figures for velocity of circulation show that it was higher during the period of 1960-74, which witnessed heavy government intervention in the financial sector, than it was during the partial financial liberalisation period, 1975-90. We argue that controlling the velocity of circulation was not the prime objectives of repressing the financial sector; financing the budget deficit was however the main objective.

(6.2.5) Financing the budget deficit as a main reason for financial repression:

As in the case of most LDCs, deficit finance in Egypt was considered for a long time as an acceptable financing tool.¹⁶ The frequent use of deficit financing was justified by the insufficiency of private investment for several political, economic and institutional factors. Therefore augmenting the rate of net investment in the economy depended on

¹⁴ See Dornbusch and Park (1987), pp. 417-18 and on the different stages of financial development in Korea see Cho (1989), pp. 88-102.

¹⁵ See Fry (1988), p. 15.

¹⁶ Thingan (1986), p. 364, one of the widely used Development Economics textbooks in developing countries, describes deficit finance as "the most useful method of promoting economic development in LDCs".

government's efforts. But the Egyptian government lacked sufficient resources to finance public investment and spending, by using conventional taxation, hence it normally resorted to deficit finance.¹⁷

Despite realising that deficit finance has adverse effects, e.g. its inherent inflationary potential, it was argued that such effects can be contained if deficit financing is used within safe limits. Such limits depend on different factors, e.g. the growth rate of the economy, the degree of monetisation in the economy, the extent of restrictions imposed on the close substitutes for government money.¹⁸

However it was difficult to adhere to these limits, and recently budget deficits received much of the blame for mixed economic problems that troubled developing economies in the 1970s and 1980s.¹⁹ Depending on the means of financing, i.e. printing money, domestic borrowing, and/or foreign borrowing, budget deficits show up in one or more of macroeconomic imbalances: inflation, foreign exchange shortages, crowding out of private investment and/or foreign debt crisis.

In time these problems led to a call for revising the role of deficit finance, which was once seen as natural and even essential instrument for financing development.²⁰ Cutting budget deficits of LDCs has now become the *sine qua non* of stabilisation and structural adjustment packages proposed by the IMF and the World Bank. Moreover, the controversy among rival schools is not about the issue of keeping a high budget deficit

¹⁷For further discussion of deficit financing and its role in economic development see Kulkarni (1966), pp. 16-37.

¹⁸On the related issue of inflationary finance see Nichols (1974), pp. 423-30.

¹⁹See for example: Easterly and Schmidt-Hebbel (1993), pp. 211-213.

²⁰Deficit finance and Keynesian economics were linked together for a long time because of the Keynesian proposition that output is driven by demand which can be altered by government action, via taxation and public spending. Despite such association it has been recently established that Keynes himself did not recommend government deficits as a tool of economic policy. See *The New Palgrave* (1988), pp. 764-5 and Kregel (1985), p. 32.

or not, but mainly it is about two questions. First, what is the appropriate size of budget deficit in terms of consistency with stability? Second, how deficit cuts should be done with minimum negative effects?²¹ Needless to emphasise that the perceived change regarding deficit finance is part of the whole review of the function of the state in economic development.²²

(6.3) The development of the Egyptian budget deficit and its finance:

In the case of Egypt several factors have contributed to the variation of the magnitude of the Egyptian budget deficit during the study period 1960-1990²³, which can be summarised as follows:

- The instability of government revenues due to the fact that the main sources of revenue in the economy, to a great extent, are exogenously determined. These revenues are oil receipts, the Suez Canal dues, remittances of Egyptian workers abroad, and tourism, in addition to foreign grants.
- The economy's exposure to external shocks, e.g. the worsening of terms of trades during the 1970s and 1980s, the increase in international interest rates in early 1980s.
- The extent of government intervention in the economy and its control over expenditure, e.g. food subsidies.
- The malfunctioning of the tax system, the accumulation of tax arrears and the relatively large length of collection lags.
- The impact of political issues on the budget deficit are hard to neglect in any country as they may force the government to spend more than it should and/or tax less than it can. In Egypt political aspects influenced the size of the budget deficit further in the sense that they delayed, and even prevented, specific budget reform measures. For example the

²¹See Dornbusch (1990), p. 29 and On the issue of deficit reduction and its effects see Taylor (1990), pp. 223-8.

²²See the World Bank (1988), pp. 43-54.

²³For further discussion of the problem of budget deficit in Egypt see for example Ahmad (1984), Carr (1990), Hosny (1986).

riots of 1977 prevented the government from proceeding with an IMF stand-by-agreement, aiming at reducing subsidies to control the budget deficit.

- The method of financing the budget deficit had also an impact on the size of the deficit, i.e. the inflationary impact of money creation and the increase of vulnerability to external shocks associated with external financing.

In this chapter we are concerned with financing the given fiscal deficits over the period 1960-90 and its contribution to the repression of the financial sector.

Figure (6.1) shows the development of the budget deficit in Egypt over the period 1974-90.²⁴ The average budget deficit as a percentage of GDP was 21.8% and ranging from 15.9% to 30.5%. As shown in the figure, data obtained from the IMF's Government Financial Statistics, which used different deficit definition from the one used by the country's statistical authorities, show lower deficits with an average of 12.5%. But, as shown in figures (6.1) and (6.2), even according to these conservative figures, the Egyptian budget deficit was higher than that of Turkey, Brazil, Chile and Korea, and was high by most international standards.

²⁴ Before 1974, data on budget deficit appear in a form of index numbers. In this chapter we use actual figures, available from 1974, to show the development of the deficit as a percentage of GDP.

Figure (6.1)
Egyptian budget deficit as a Percentage of GDP,
according to two different sources

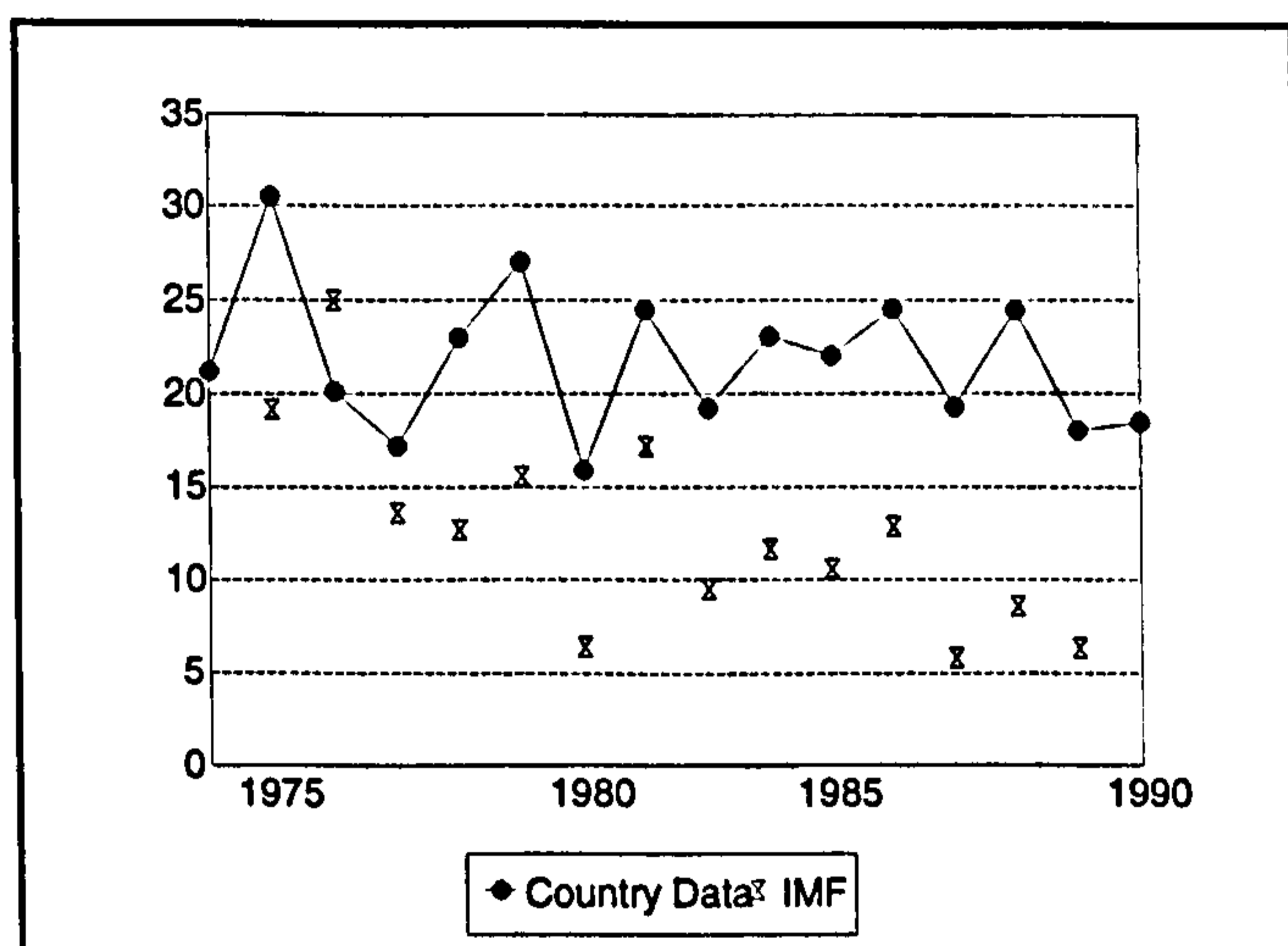
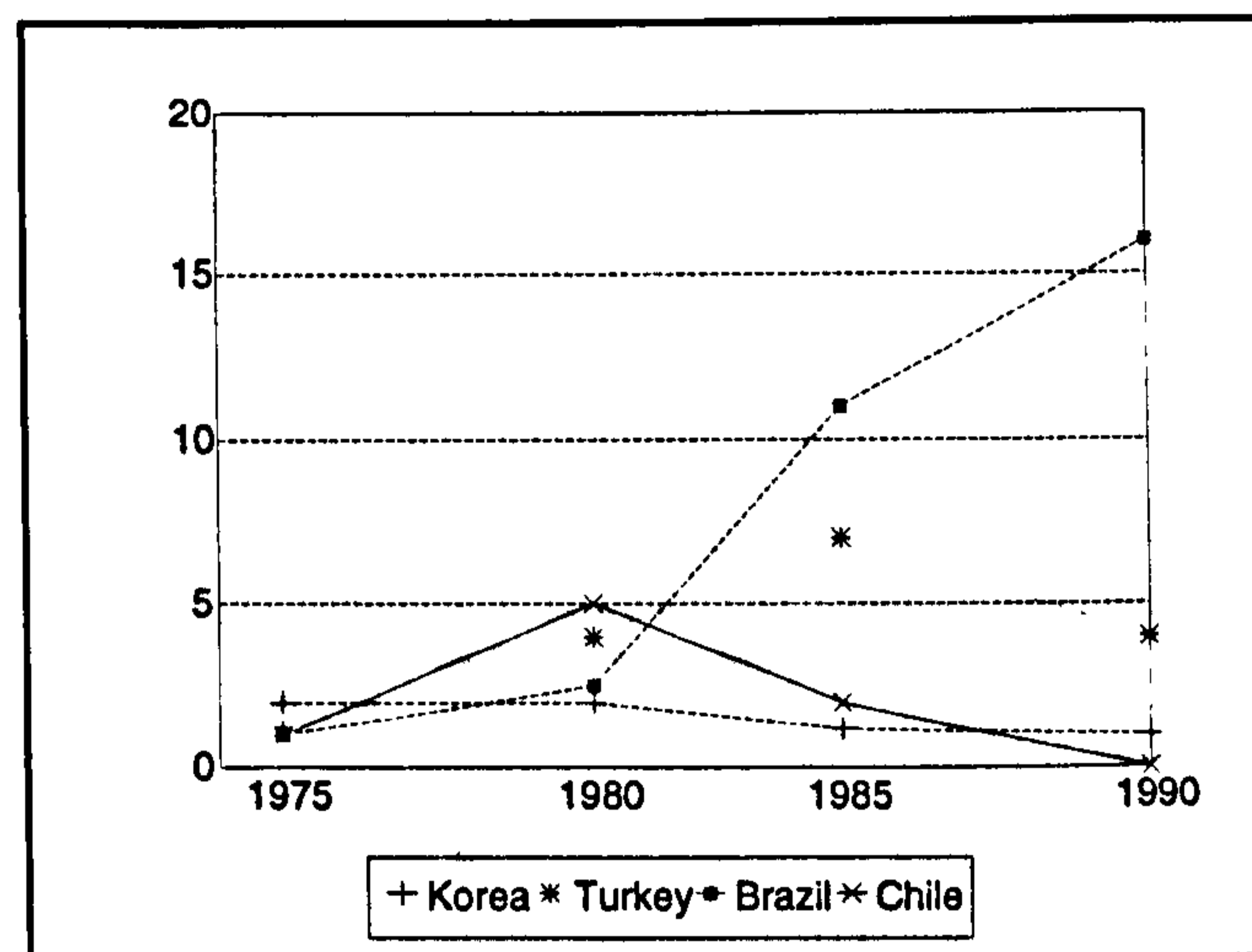


Figure (6.2)
Budget deficit as a percentage
of GDP in selected LDCs



Sources: Data for figure (6.1) are obtained from the World Bank Country reports on Egypt 1988 and 1990, and from Ministry of Finance (shown as country data), and from the IMF Government Financial Statistics (shown as IMF). Data for figure (6.2) are from the IMF Government Financial Statistics.

6.3.1) Methods of financing the Egyptian budget deficit:

The extent of reliance on any of the methods of financing the budget deficit, i.e. foreign, bank and non-bank financing varied over the period of 1960-90. According to table (6.1) and figure (6.3) deficit financing was predominantly domestic. The government relied heavily on non-bank and bank financing, contributing respectively by an average of 39% and 38% of the total budget deficit. Part of the financing came from borrowing abroad,²⁵ especially during late 1970s and 1980s, and contributed by an average of 23% during the study period.

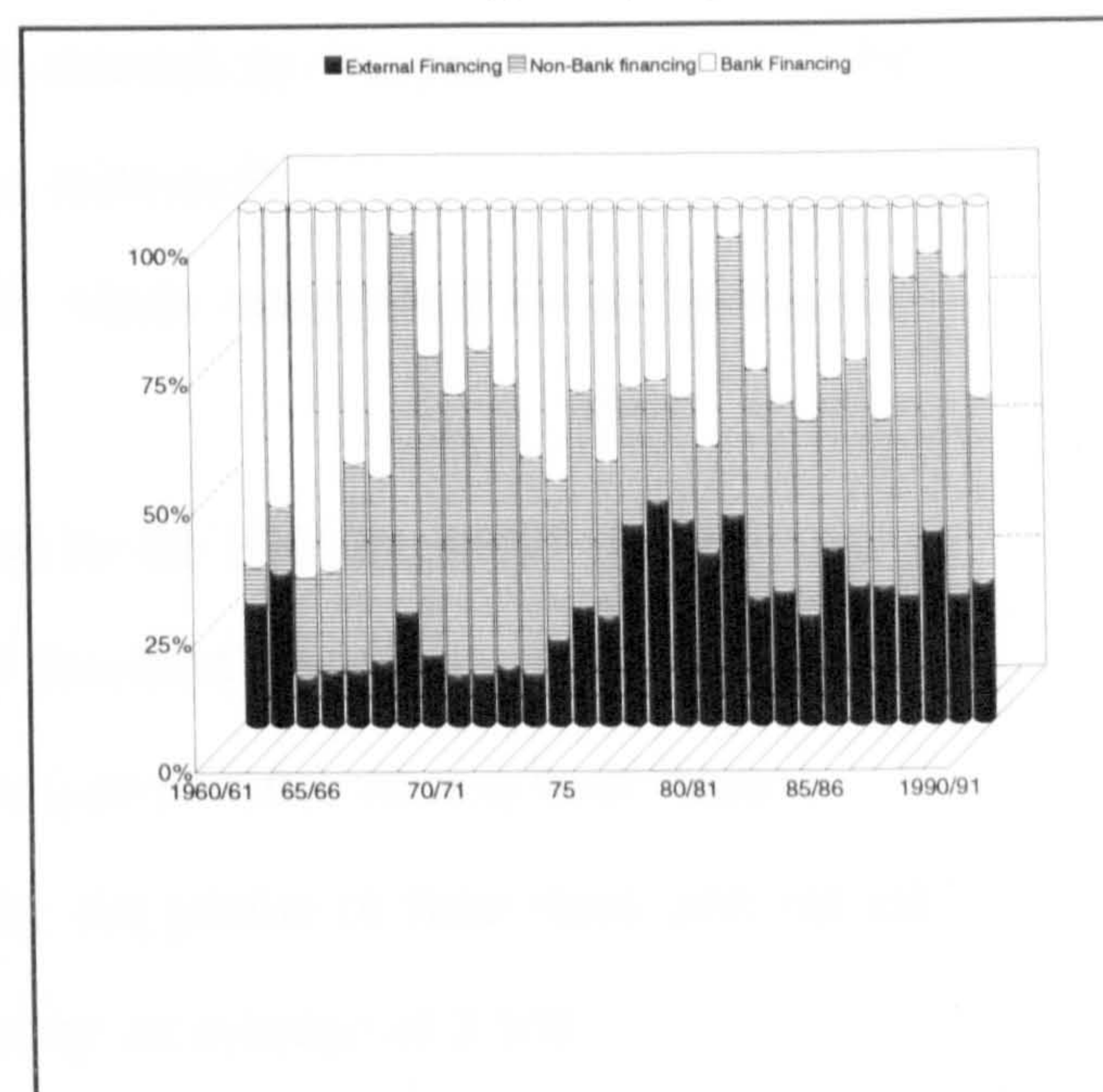
²⁵On the external debt problem in Egypt see for example Kheir-El-Din (1988), Boutros-Ghali (1989) and Zaki (1984).

External and domestic financing
as a percentage of total budget deficit
1960/61-1990/91

Table (6.1)

Year	External Financing	Non-Bank Financing	Bank Financing
1960/61	23.8	7.3	68.9
61/62	29.8	12.6	57.6
63/64	9.5	19.5	71
64/65	10.6	19.6	69.8
65/66	10.7	40	49.3
66/67	12.5	35.5	52
67/68	21.8	73.5	4.7
68/69	13.7	57.9	28.4
69/70	9.8	54.3	35.9
70/71	10	62.8	27.2
71/72	11.3	54.4	34.3
72/73	10.1	41.7	48.2
1974	16.6	30.7	52.7
1975	22.8	41.8	35.4
1976	20.8	30.2	49
1977	38.6	26.9	34.5
1978	43	23.7	33.3
1979	39.2	24.1	36.7
1980/81	40.3	54.1	5.6
81/82	24.5	44.1	31.4
82/83	25.8	36.1	38.1
83/84	21.1	37.6	41.3
84/85	33.9	33.1	33
85/86	26.9	33.4	29.7
86/87	26.5	32.3	41.2
87/88	24.83	61.41	13.76
88/89	37.04	53.68	9.28
89/90	24.8	61.41	13.76
1990/91	27	35.47	37.33
Minimum	9.5	7.3	4.7
Maximum	43	73.5	71
Mean	23.4	38.99	37.65

Figure (6.3)



Source: Compiled from IMF, Government Financial Statistics; and National Bank of Egypt, Various issues.

6.3.2) A note on non-bank financing of the deficit:

Domestic non-bank borrowing usually occurs when there is an unexpected shortfall in revenues or to cover emergencies such as defence requirements²⁶. So it is argued that borrowing substitutes for increases in taxation and that the impact of domestic borrowing

²⁶ See Ahmad and Stern (1989), pp. 1023-5.

is equivalent in terms of behaviour and welfare to that of taxation according to the Ricardian equivalence theorem.²⁷

However in LDCs non-bank borrowing is often compulsory and governments rely on it extensively to finance budget deficits. In Egypt with an average of 39% of total deficit during the 1960-90 period it was the major source of finance as shown in table (6.1) and figure (6.3).

The major sources of non-bank funds, channelled through the National Investment Bank (NIB)²⁸, were according to relative importance as follows:²⁹

- (i) the surplus of social insurance funds which contributed by an average of 65.8% of total non-bank finance.
- (ii) savings certificates which were issued by the NBE on behalf of the treasury in 1964/65 and contributed by 12.2% of non-bank finance.
- (iii) Post Office savings fund with an average of 4.0% of non-bank finance.
- (iv) The revenue of the 5% levied on the net profits of Joint-stock and limited partnership companies which contributed by an average of 3.9%.

The NIB provides these funds to the government³⁰ at low, below market interest rates. For example while the bank lending rate was 15-17% in 1989 the NIB lending rate to the government including, public sector companies was 9.5%.

²⁷ On Ricardian Equivalence see the seminal paper of Barro (1974), pp. 1095-1117 and on its relevance to LDCs see for example, Corden (1989), pp. 276-278.

²⁸ The NIB, on paper is the largest financial institution with total balance sheet of more than £E 35 billion compared to £E 23 billion for the NBE the largest commercial bank. The reason behind such big size the monopoly of the NIB of social insurance funds and the rest of the revenues generated from the non-bank sources outlined above in addition to its issuance of development bonds and other sources of funding. The reason behind excluding it from the banking system is the fact that the NIB is far from being a financial intermediary. It is rather a large accounting unit of the Ministry of Planning responsible for directing funds and implementing the investment programme of the government and monitoring the progress of projects.

²⁹ Figures calculated from data obtained from the NBE, Economic Bulletin various issues and Abdel-Lateef (1990).

³⁰ Here government stands for central government, local governments, public services authorities (e.g. health and education, public utilities (e.g. water) and public companies (now called public business companies).

6.3.3) Bank financing of the budget deficit:

Although the term bank financing is used in literature to indicate deficit financing through money creation, in practice there is a difference between the two. The Central Bank of Egypt (CBE), like any other central bank does not resort to money creation unless its reserves of liquid assets are not sufficient. The CBE accumulates these assets mainly through its imposition of reserve requirements ratios on the deposits held with the banks, which is discussed below, and by borrowing excess liquidity of commercial banks. Normally the central bank borrows from deposit banks at a lower rate of interest than the rate it receives from the government for purchasing its issued bonds.³¹

(6.4) Measures of Financial Repression:

(6.4.1) Seigniorage:

The Egyptian government revenue from money creation (seigniorage)³² was an important source for financing the deficit. Following Fischer (1982) we calculate seigniorage (S) as an incremental change of monetary base (M)³³ over a discrete period divided by the value of nominal GDP (Y) over the same period.

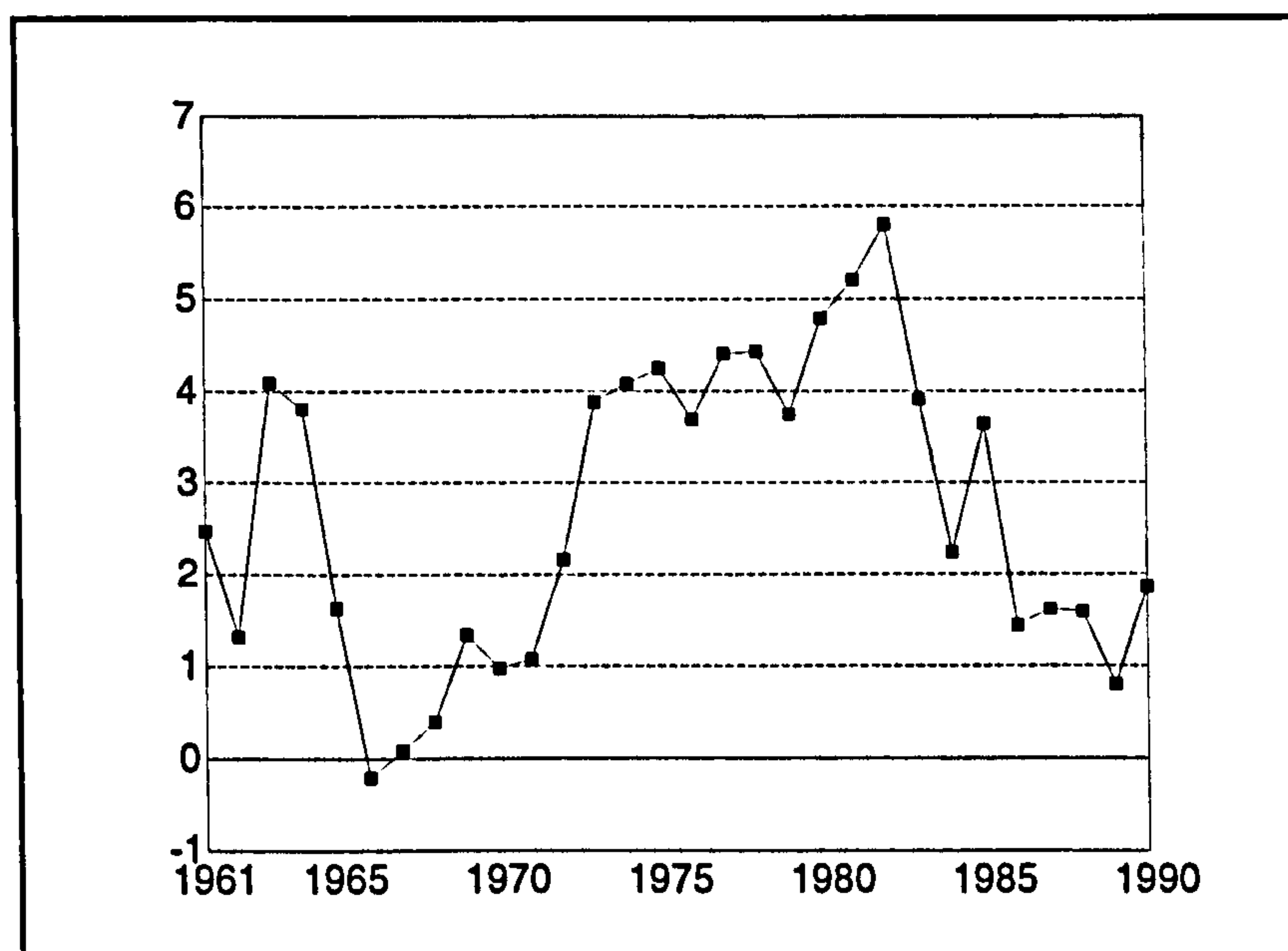
$$S = \Delta M / Y \quad (1)$$

³¹Noshy (1990), pp. 2-3.

³²For further discussion of seigniorage see Fischer (1982), Mankiw (1987) and Klein and Neumann (1989).

³³Note that for the value of M we use the end-of-year currency outside banks.

Figure (6.4)
Revenue from seigniorage as a percentage of GDP:
Egypt 1961-90



As shown in figure (6.4), seigniorage revenue varied considerably during the period under study. During the 1960s it was, on average, low and reached its highest levels in the late 1970s and early 1980s. But generally the ratio of seigniorage to GDP is high by international standards as shown in table (6.2).

Table (6.2)
Average Revenues from seigniorage as a percentage of GDP
in Egypt and selected LDCs

Year	Egypt's Seigniorage	Seigniorage Revenue and Inflation in other LDCs, average for 1980-1985					
1960s	1.66						
1970s	3.27						
1980s	2.99						
1961-90	2.69						
<u>1980-85</u>		Low		Moderate		High	
	Egypt	Korea	Nigeria	Mexico	Turkey	Argentina	Bolivia
Seigniorage	4.26	0.5	0.8	1.5	1.2	4.0	6.2
Inflation	15.2	9	16	58	46	274	506
Currency/GDP	25.1	4.3	7.2	3.7	3.8	3.8	6.1

Source: For Egypt: the author's own calculations; data obtained from IFS lines 14a, 64 and 99b.

For the other LDCs: World Bank (1988), table 3.1, p. 61.

The World Bank (1988) classified LDCs into three groups according to the level of their seigniorage revenues: low, moderate and high. Using the same method and data sources our results for Egypt show that it lies in high seigniorage group. It was second highest after Bolivia which had an extremely high inflation rate that exceeded 500%. Further Egypt's seigniorage was higher than that of Argentina which had an inflation rate approximately 18 times higher.

Generating a high seigniorage revenue with a relatively modest average inflation rate of 15.2% is explained by the high ratio of currency holdings to GDP which had an average of 25.1% during 1980-85 compared with 3.8% and 6.1% for Argentina and Bolivia.

The impact of the relatively high monetary ratio to GDP on government revenues can be explained further by analysing the extent of reliance on inflation tax in Egypt over the period 1960-90.

(6.4.2) Inflation tax:

As argued by Blanchard and Fischer (1989), inflation tax is "related but not necessarily identical to seigniorage"³⁴. Inflation tax as a loss of the value of real balances M/P can be presented as $\pi M/P$, where π is inflation rate. While seigniorage is $\mu M/P$ where μ is money growth. Thus inflation tax and seigniorage can only be equal when $\pi = \mu$ which holds in the steady state, i.e. economic growth is zero, and not generally³⁵.

Thus we calculate the inflation tax for Egypt over the period 1960-90 as follows:

$$I = M [\pi/(1 + \pi)] \quad (2)$$

³⁴ Blanchard and Fischer (1989), p. 198.

³⁵ *ibid.*

Where M is reserve money defined here as the monetary base, which consists of notes and coins in circulation outside banks + vault cash held by banks + banks' deposits with the CBE i.e. reserve requirements.

π is the change of the consumer price index CPI. Our results are presented in figure (6.5) and table (6.3).

Figure (6.5)
The Inflation tax as a percentage of GDP
1960-90

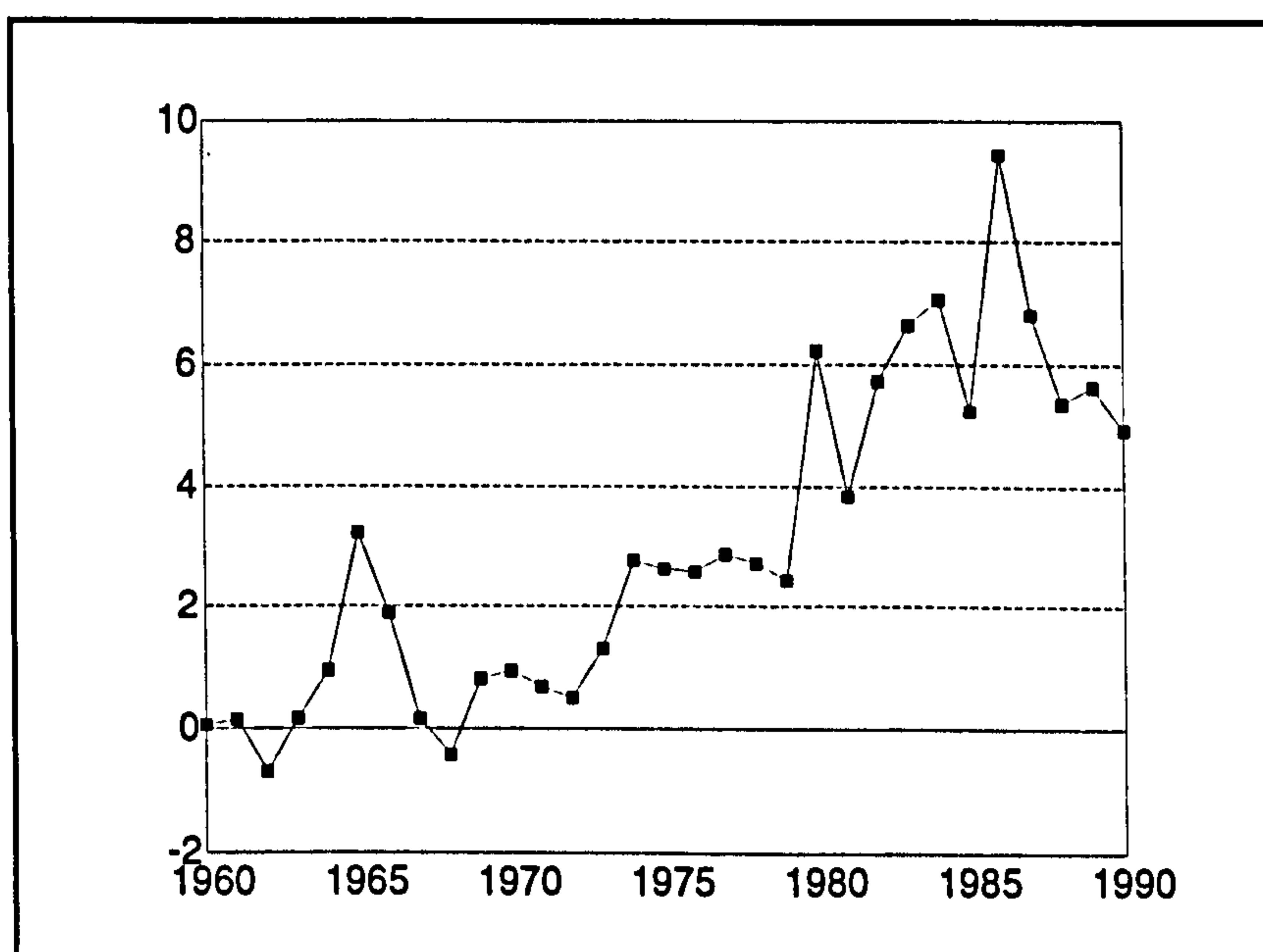


Figure (6.5) shows inflation tax as a percentage of GDP. Inflation tax with an average of 0.6%, was relatively low during the 1960s, with the exception of 1965 due to an increase in inflation rate. In 1962 and 1968 the inflation tax was surprisingly negative, because the change in the CPI during these two particular years was negative.³⁶

³⁶ Although we accept that published figures on inflation suffer from a downward bias over the period under study due to technical and political reasons, we find that the negative inflation figures for 1962 and 1968 are really unusual in any economy especially if it is a developing one. One possible reason behind these irregular figures is the fact that the country suffered from some political drawbacks in the two preceding years 1961 and 1967. In 1961 there was the political and economic unrest because of the mass nationalisation measures, in 1967 there was the problem of the war. While we doubt that these two reasons had a lagged disinflationary impact on the economy, we argue that the data were used to give an impression of stability in the economy. However we had no choice but to use the published figures: Our data source is the IFS, 1990 and 1991 Yearbooks, line 64.

Because of a rise in inflation rates and the ratio of reserve money to GDP, the 1970s observed a rise in inflation tax but it was relatively moderate as its average was 1.9%. However the inflation tax did not reach its high levels until the 1980s. The average during this period, 6.1%, was extremely high and reached its peak in 1986 at 9.5% of GDP.

Table (6.3)
Average inflation tax revenue in Egypt
1960-90

Period	Inflation tax / GDP %	Inflation rate	Reserve money / GDP %
1960s	0.63	2.86	23.8
1970s	1.93	7.78	25.5
1980s	6.09	17.31	41.8
1960-90	2.98	9.57	31.1

Source: the author's own calculations; data obtained from IFS lines 14, 64, and 99b.

As shown in table (6.3) because the average of both of inflation rates and reserve money ratio were high during this period, this resulted in a high level of inflation tax. However it is the high ratio of reserve money which enabled Egypt to maintain high inflation tax at relatively low inflation rates. To clarify this point we make a comparison between Egypt and other LDCs.

Table (6.4)
Inflation tax in Egypt and selected LDCs as percentage of GNP

	Egypt	Argentina	Ghana	Mexico	Nigeria	Peru	Turkey	Zaire
Inflation tax/GNP	8.6	4.0	2.0	3.7	0.9	4.8	2.8	4.2
Inflation rate	23.9	174.8	34.2	159.2	9.7	114.5	55.1	106.5
Reserve money/GNP	44.8	6.3	7.9	6.0	9.6	9.1	7.9	8.2

Source: For Egypt: the author's own calculations; data obtained from IFS lines 14, 64, and 99a.

For the other LDCs: World Bank (1989), table 4.5, p. 63.

For comparison reasons we consider here the inflation tax as a percentage of GNP. From table (6.4) it is clear that Egypt had the highest inflation tax revenue compared to the selected countries. Further it exceeds the value of inflation tax in countries with substantially higher inflation rates such as Argentina, Mexico, Peru and Zaire. The

Egyptian authorities via tight control over domestic prices, including interest rates and exchange rates, as discussed below, extracted a high enough inflation revenue from the inflation tax without the need to increase money printing excessively and by that it did not experience a Latin American inflation rate.³⁷

Even if we accept that inflation rate data are not necessarily accurate in Egypt, we realise that the most aggressive estimates did not exceed 50% in any year during the study period. It is indeed the wide inflation tax base in Egypt that enabled the government to extract a substantial revenue at relatively low inflation rate. As shown in the table (6.4), while Egypt had one of the lowest inflation rates among the selected countries, it had the highest ratio of reserve money at 44.8% which was approximately seven times higher than that of Argentina or Mexico.

Clearly if the size of reserve money was lower in Egypt, the inflation rate required to reach the same inflation tax, should have been several times higher. It seems that there was an implicit contract between the holders of domestic money balances as a group and the government. Under this contract the latter keeps inflation under control and the former keep their deposits even under relatively low rates of interest.³⁸

While the issue of how Egypt managed to keep such high ratio of money balances is discussed further in the following section, we show here what would happen if reserve money balances were lower. We provide a simulation for the inflation rates required to reach the actual inflation tax at different reserve money ratios in the corresponding years.

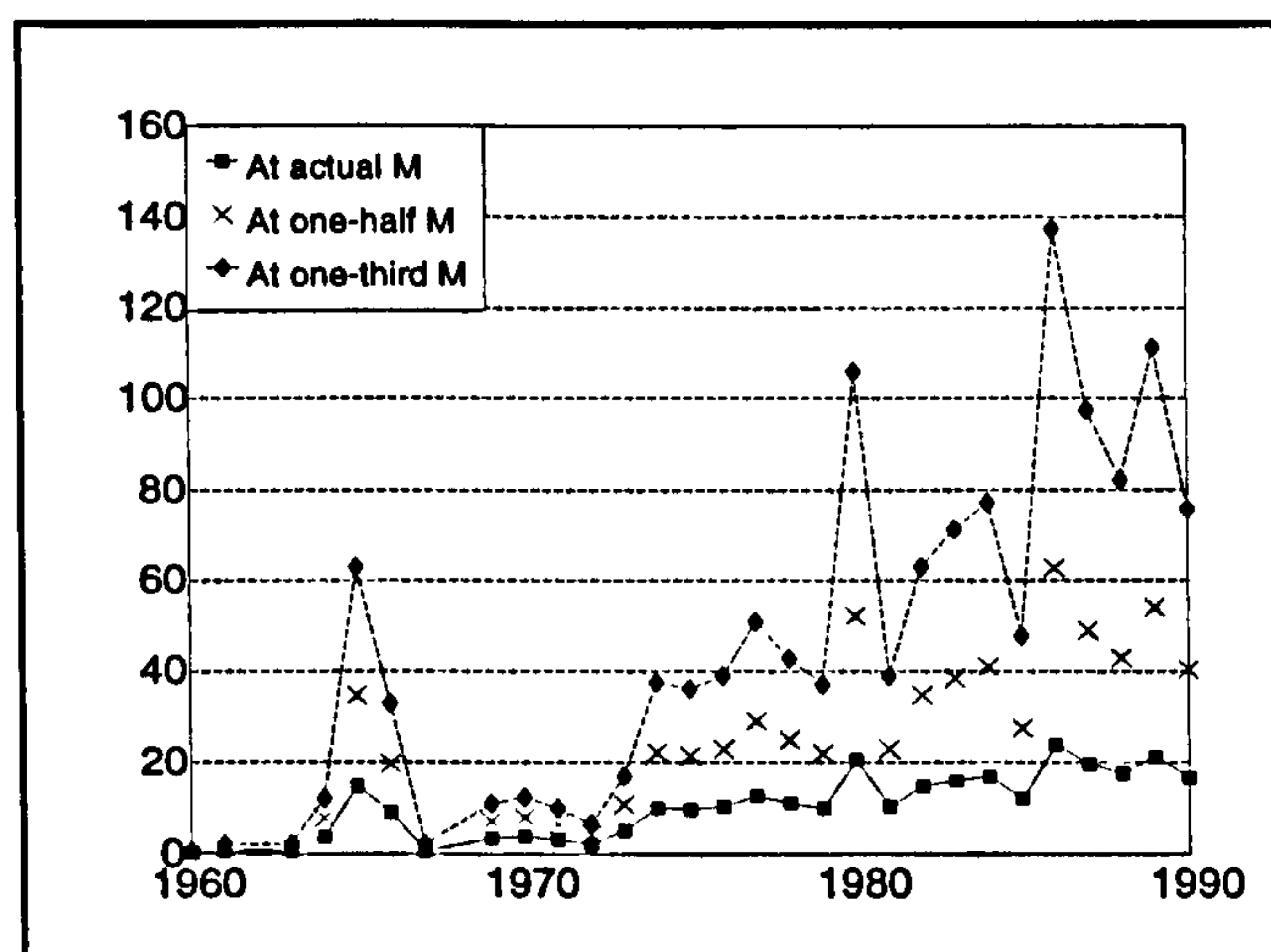
We exclude the two years which had negative inflation rates and calculate the inflation rate π , from equation (2), as $\pi = (I/M)/[1-(I/M)]$ (3)

³⁷ See Dinh and Giugale (1991), p. 10.

³⁸ It is observed that socialist economies which have administrative controls on the acquisition of goods and financial assets, tend to have high holding of money. For example Caprio and Honohan (1993), p. 527 report that Yemen PDR, China and Bulgaria had a M2/GDP ratio of 175%, 65% and 105% respectively.

Where I is the inflation tax and M is reserve money.

Figure (6.6)
Inflation rate for alternative reserve
money balances M



Over the period 1960-90, we find that at one-half the size of reserve money holding, inflation rates should increase from the actual average of 10.4% to 25% in order to extract the same inflation tax revenue. At one-third of reserve money, average inflation rate should rise to 45.7%. In the fiscal year 1987, which had the highest inflation tax at an actual inflation rate of 23.9%, at one-half and one-third of reserve money the inflation rate in this year would have been 62.8% and 137.4% respectively.³⁹

(6.4.3) Interest rate ceilings:

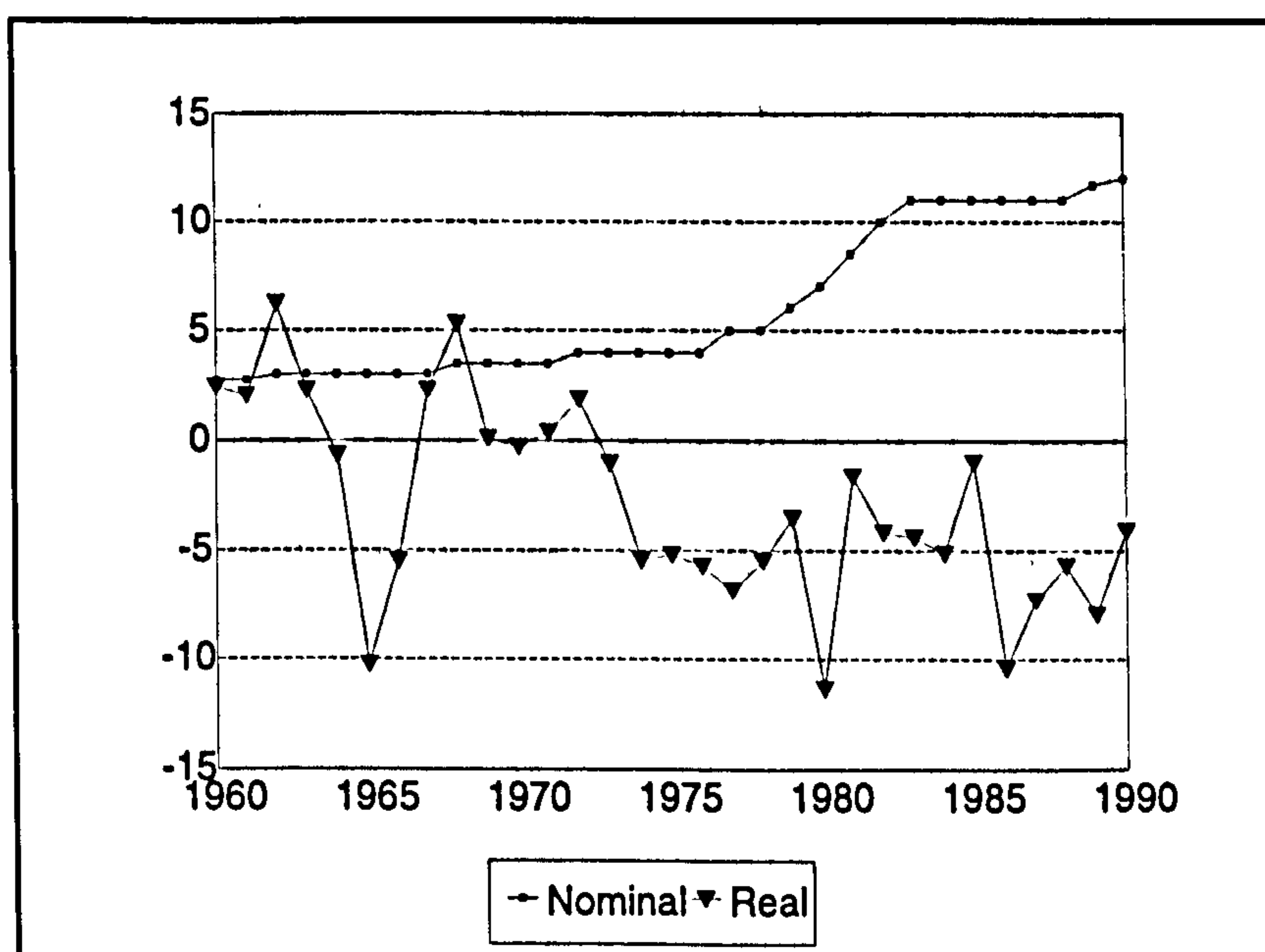
Unless a country faces unlimited supply of foreign finance, the budget deficit competes by one way or another for scarce domestic loanable funds.⁴⁰ Egypt, like several other LDCs, adopted various measures to limit this competition. One of these measures was the imposition of interest rate ceilings, to keep the cost of its borrowing low.

³⁹This assumes a non-inflation sensitive money demand equation. Results would be different if we use, for example, a Cagan money demand equation.

⁴⁰Fry (1992), p. 7.

For a long time, deposit interest rate in Egypt was controlled by a Civil Code which did not allow returns on deposits to exceed 7% per annum. In accordance with the *Infitah*, open door policy, the Central Bank of Egypt, in 1975, was exempt from applying the Civil Law regulations regarding the low maximum of 7%⁴¹. Nevertheless deposit interest rate, did not reach this figure until 1979, as a result of the CBE adoption a policy of gradual increase of interest rate as shown in figure (6.6). Gradual increase of nominal interest rate continued until 1982, but from this year to 1988 the rate was fixed at 11%, and the rate reached its maximum at 12% in 1990.

Figure (6.7)
Nominal and real interest rates



Source: The Central Bank of Egypt and the IMF, International Financial Statistics

⁴¹This was possible after issuing law no. 120 for 1975.

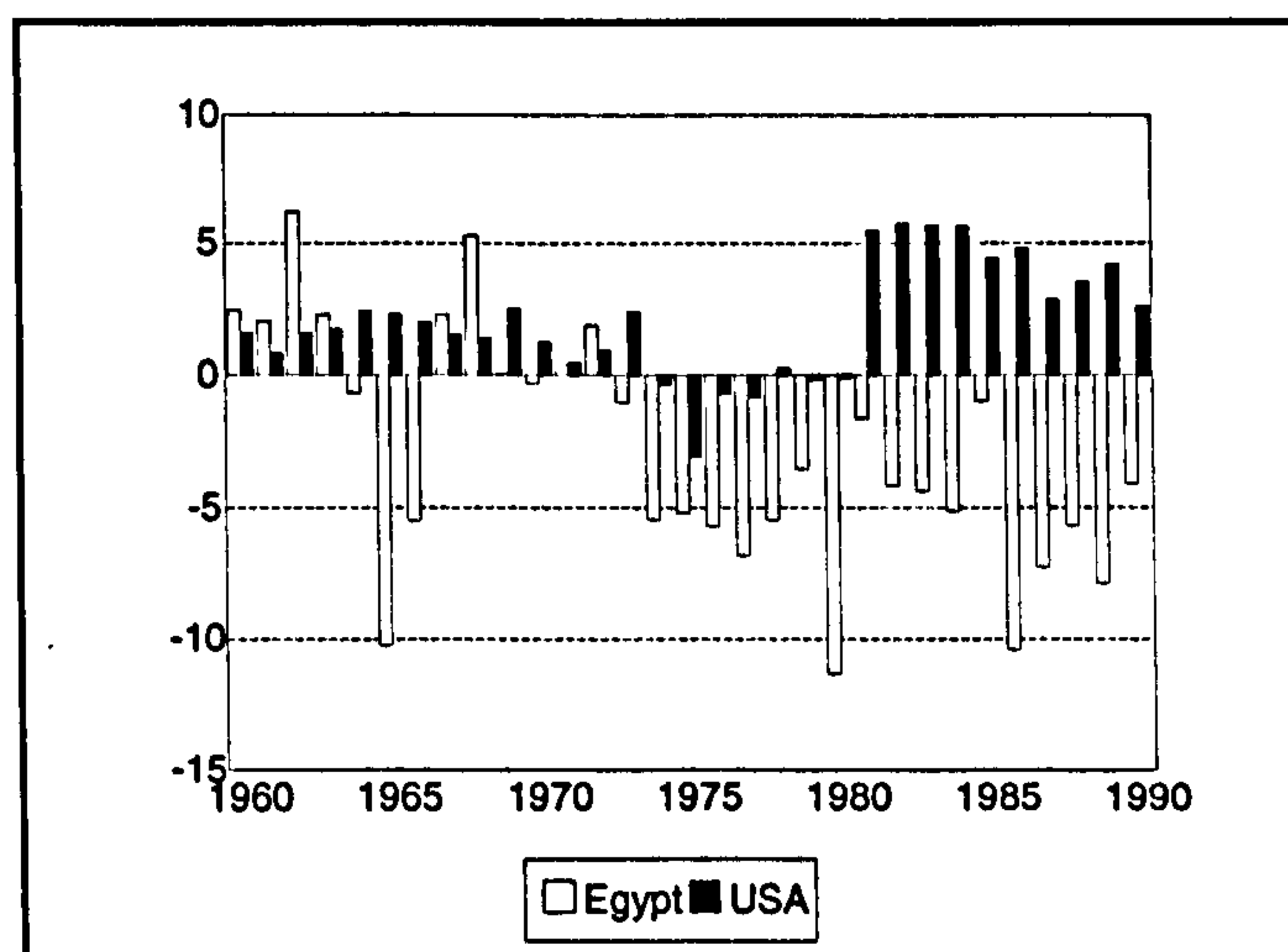
Due to the exceptionally low inflation rates of the 1960s and the early 1970s real interest rate was positive in some years.⁴² However real interest rates were mostly negative during the study period. The gradual rise of nominal interest rates, during the partial liberalisation period that accompanied the *Infitah* policy did not prevent the real interest rate from being negative and declining during the 1970s and 1980s.⁴³ It is interesting to find that real interest rates during the *Infitah* period of 1975-90 were generally lower than in the socialist period of 1961-74.

This problem can be explained by several factors: First, the inflationary pressures that resulted mainly from external shocks, the devaluation of the pound, freeing the prices of some goods and services and reducing the volume of subsidies. Second the *Infitah* policy did little to the liberalisation of the banking system. As discussed above, despite the rise in the number of foreign and private banks, the public sector banks continued to dominate the banking system. Further, by law, public banks had shares in the capital and participated in the management of the newly established private and foreign banks which were only allowed to be established as joint ventures. Thus competition was extremely lenient. Third, price competition was not possible under the existence of interest rates ceilings. Hence the growth of nominal interest rate was far behind the accelerating inflation rate.

⁴² Real interest rate was surprisingly higher than nominal interest rate in 1962 and 1968 because of the unusual negative change of the CPI during these two years which is discussed above.

⁴³ We argue that real interest rates in Egypt were lower than what reflected in figure (6.7) and table (6), simply because of the downward bias of official inflation rates. Such bias is mainly due to two problems: first the exclusion of many items from the basket of goods and services used to calculate the CPI, many of these excluded items, e.g. leisure goods, private vehicles and their maintenance, private schooling and private health care, their prices changed drastically during the study period. Second the reporting only of the changes of administered prices and neglecting their actual change which occurs in the active black market. But as mentioned earlier the highest estimate for inflation in Egypt did not bring it near the Latin American figures and thus real interest rate were lower, but not substantially so, than the presented figures.

Figure (6.8)
Real interest rates in Egypt and USA
1960-90



Source: IMF, International Financial Statistics, 1990 and 1992 Yearbooks and the CBE annual reports.

Figure (6.8) compares deposit real interest rate in Egypt and the USA, which can be considered a rough proxy for international interest rates. While real interest rates in the USA were positive in the most of the period 1960-90 as they averaged 2.03%, they were mostly negative in Egypt and averaged (-2.91). Whereas real interest rates in Egypt were more volatile with a standard deviation of 4.45, in the case of USA standard deviation was just 2.13. Such variability of real interest rates has adverse effects on the preference of financial assets in savings portfolios as opposed to other substitutes like commodities.⁴⁴

Table (6.5) provides a comparison between real interest rates in Egypt and selected countries for specific periods. During the period 1970-80 real interest rates for all selected countries, except Egypt, were lower than the 1980s. However the Egyptian figure, compared with that of Turkey, Peru and Uruguay, during the 1970s can be considered moderate. During the 1980s rising inflation with almost fixed nominal interest

⁴⁴See Seck and El Nil (1993), pp. 1873-4.

rate resulted in the deterioration of the average real rate of interest in Egypt, while the rest of the selected countries witnessed increases in their real rates of interest.

Table (6.5)
Average real interest rates for selected countries

Country	1970-80	1980-90	1985-90
Egypt	-3.8	-5.73	-6.06
Turkey	-21.67*	-4.04	-3.7
Chile	--	8.23	4.68
Korea	0.16	2.7	4.87
Kenya	-5.79	0.22	2.66
Peru	-17.13	--	--
Uruguay	-15.71	--	--
UK	-4.86	2.4	2.5
USA	0.01	4.08	3.72

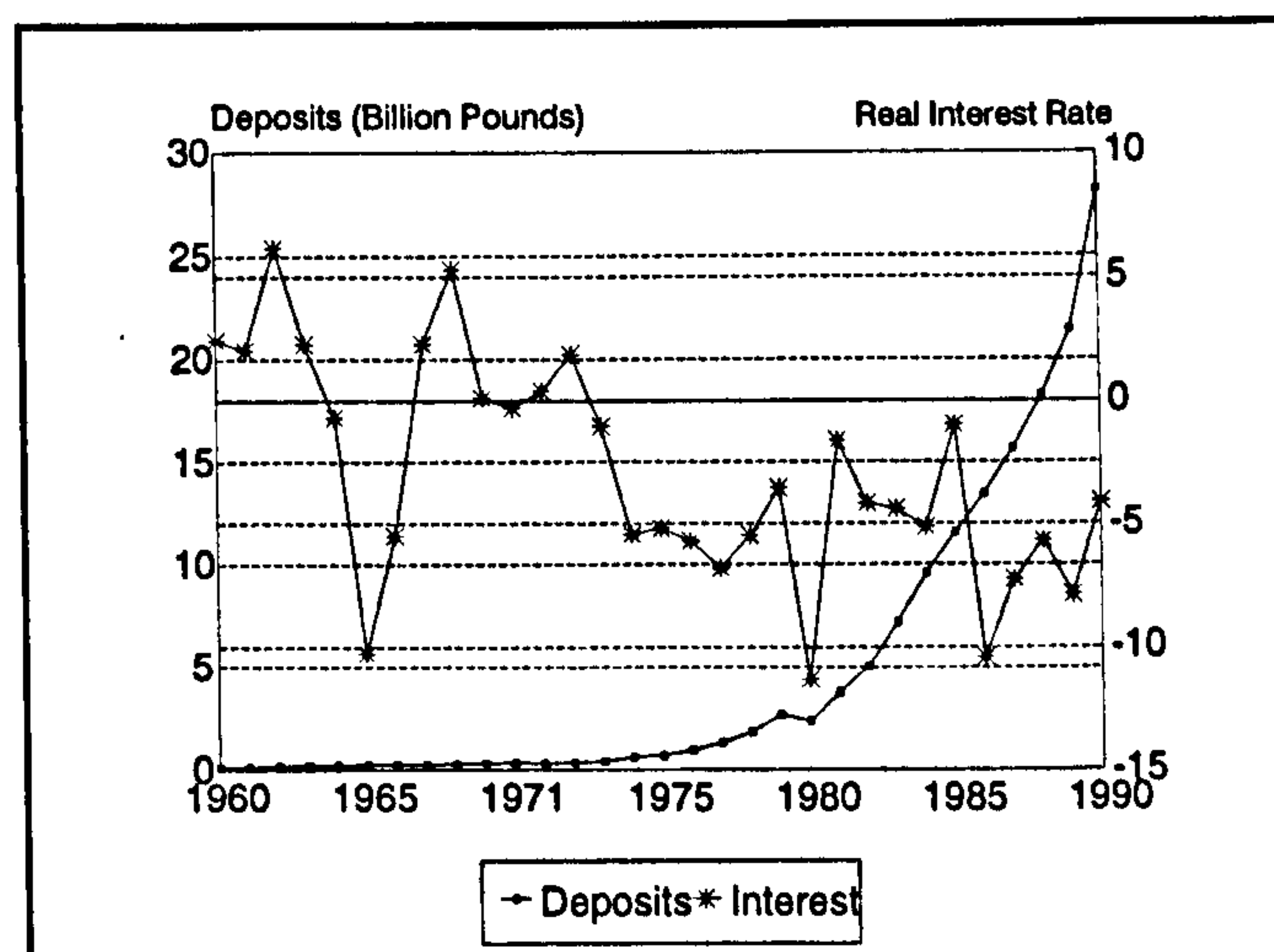
Calculated from IMF, International Financial Statistics Yearbooks, 1989-91; figures for Peru and Uruguay are from Hanson and Neal (1986). * Figure for Turkey is for 1974-80.

By looking in the figures of financial savings during the period under study we realise from table (6.6) and figure (6.9) that a group of depositors was not deterred by the negative real interest rates. Figure (6.9) shows that financial savings in the form of domestic currency deposits continued to grow, with very few exceptions, despite the negative returns in the respective years. Table (6.6) provides average real interest rates and growth rates of financial savings during sub-periods. This phenomenon can be explained by one or more of these factors: money illusion, inflation as a motive for saving, a favourable return-risk relationship, lack of alternatives, and relatively moderate inflation rates, in addition to the so-called widow-orphan type of depositors. We discuss these factors in turn below.

Table (6.6)
Rates of real interest and growth
of domestic currency deposits in Egypt

Period	Real Interest Rates	Growth of domestic currency Deposits
1960s	0.19	12.5
1970s	-3.13	24.8
1980s	-5.17	28.8
1960-90	-3.1	21.2

Figure (6.9)
Domestic currency deposits
and real interest rates 1960-90



Source: IMF, International Financial Statistics, Yearbooks, 1990 and 1992.

(6.4.3.a) Reasons for keeping bank deposits, despite their negative real return:

While the relation between real interest rates and financial savings is analysed by econometric methods in the following chapter, we discuss here the factors that explain why an individual deposits his wealth in an asset that deteriorates in real terms, i.e. bank deposits. Further we discuss the alternatives that were available for those who wanted to avoid these losses.

(i) Money illusion:

A possible and simple explanation is that deposit holders suffer from money illusion, which in the words of Fischer the 'failure to perceive that the dollar, or any other unit of money, expands or shrinks in value'⁴⁵. Thus the rise in nominal interest rate according to this argument may explain part of the increase in financial savings with the formal sector. But negative real interest rate is not a recent phenomenon in Egypt rather it has

⁴⁵Fischer (1928), p. 4.

a long history.⁴⁶ So can we assume that all depositors, during all these years, were not informed about the negative impact of inflation on their deposits, i.e. they fall in the money illusion trap? It is clearly difficult to accept this assumption. But if depositors were informed why did they adopt this 'seemingly' irrational behaviour? While we do not rule out the possible existence of some form of money illusion, the following factors may provide further explanation.

(ii) Inflation as a motive for saving:

As noted in Kitchen (1986) in description of financial savings development during the 1970s, the size of deposits with banks rose even when real interest rates were negative, because saving for security rose as 'inflation itself is a cause of insecurity'⁴⁷. People do save for security motives as well as gain purposes, and some may not know other way to save but banks.

(iii) The return-risk relationship:

We argue that the decision of selecting a particular asset is taken according to the relationship between its return and risk⁴⁸. It seems that such a relationship in the formal sector satisfied a large number of depositors and hence they chose it. Since the sequestration of deposits that accompanied the Egyptianisation and nationalisation laws of the 1957 and 1961, the formal financial sector was stable and did not suffer any major crises. The monetary authority was quick to rescue ailing units and managed to contain the possible damages of failing banks, like in the recent case of the liquidation of the BCCI, under a notion of collective responsibility amongst all of the operating banks.⁴⁹

⁴⁶For a similar argument, see Giugale and Dinh (1990), pp. 12-15.

⁴⁷Kitchen (1986), p. 84.

⁴⁸On the relationship between risk and return and their impact on financial decisions, see for example Brealey and Myers (1991) and Levy and Sarnat (1990).

⁴⁹An interview with Mr Abd Al Moneim Roshdy, former chairman of the NBE.

Under this implicit insurance mechanism and government explicit support of the banking system, bank deposits were associated with low risk which satisfied risk-averse savers, despite its relatively negative real returns. Further interest on deposits with banks was tax-exempt which attracted more depositors.

(iv) Lack of alternatives:

Related to the previous point, with the absence of an active capital market, as discussed earlier, bank deposits were the only available savings instruments for large number of savers. Those who took the risk and saved with the Informal Islamic Investment Companies during the 1980s, realised, when they collapsed in 1988, that they took the wrong decision⁵⁰.

(v) Restrictions on other alternatives:

Only since 1980 was it possible to keep foreign denominated deposits with banks. Foreign deposit holders earned the LIBOR rate in addition to their gains of devaluation which was accelerating during the 1980s. However converting the Egyptian pound to foreign currencies in the heavily regulated official market was difficult. Thus only those who earned their incomes in foreign currencies, e.g. workers abroad. Obtaining foreign currencies in the black market was penalised and depositors were normally asked for the source of their hard currency which should be proved by formal documents. On the other hand transferring money abroad was restricted as well. This left a lot of savers, who abided by law and regulations, with no choice but to accept the negative real returns on domestic currency deposits. Nevertheless we do not imply that such restrictions eliminated the activities of the black market in particular or the informal market in general as discussed below. Rather we argue that such restrictions merely reduced the acceleration of dollarisation and increased the risk of informal transactions.

⁵⁰ See our analysis of Islamic Investment Companies in chapter (5).

(vi) Moderate inflation rates:

Low inflation rates can provide an explanation of depositors behaviour. Even if we take into account the downward bias in official rates, inflation in Egypt which averaged 9.57% over the period 1960-90, is considered moderate compared to other LDCs.⁵¹ We argue that if the inflation rates were higher in Egypt, *ceteris paribus*, and real interest rates were as a result, substantially negative, the behaviour of savers regarding the selection of bank deposits would be much different.⁵²

(vii) Characteristics of some depositors:

Of relation to the previous factors, is the fact that many of the formal sector depositors are without entrepreneurial skills or lack the ability to invest or manage their savings, even with the existence of alternatives. The standard example of such depositors are widows, orphans and pensioners. Regular predetermined returns that are offered by banks may suit these depositors better than any other form of savings which may suffer from irregularity or high variability.⁵³

(6.4.3.b) Government revenue from interest rate ceilings:

While there is no explicit tax levied on deposit interest rates, since 1981, the gap between the administered rate and the market rate can be viewed as a tax.⁵⁴ The government managed to extract this implicit tax revenue over the period 1960-90, by setting ceilings on interest rates below market clearing rates. When there is also a ceiling on lending rates additional implicit tax is levied. Depending on the availability of credit and the terms of borrowing from the banking sector, the private sector can obtain part of tax revenue in

⁵¹ See table (5) above for a comparison between inflation rates in Egypt and other LDCs.

⁵² El-Sheikh (1986), in his study of financial asset holdings, reaches similar conclusions regarding the impact of moderate inflation in Egypt, that averaged 3.5%, on keeping time deposits over the period 1952-73.

⁵³ See our discussion of this issue under our analysis of the household portfolio structure in chapter (8).

⁵⁴ See Chamley and Honohan (1990) for a discussion of explicit and implicit taxation of the financial assets.

the form of a subsidised lending rate. However as noted in the works of McKinnon and Shaw⁵⁵, under the credit rationing associated with the distortion of interest rates, only few favoured borrowers share with the government in its implicit tax revenues extracted from ceilings on borrowing and lending rates.

Constrained by the availability of data⁵⁶, we focus here on the government revenue from financial repression through deposit interest rate ceilings. By adapting the method used by Giovannini and de Melo (1991), we calculate such revenue, as a percentage of GDP, by considering the difference between foreign and domestic real interest rates multiplied by the stock of financial savings held with the formal sector over the period 1960-90. Given that deposits denominated in foreign currencies, mainly US dollars, receive the LIBOR rate we exclude them and consider only those denominated in the domestic currency.

Thus we calculate the revenue from repressing interest rates (RT) as follows:

$$RT = D \cdot (\delta_d - \delta_i + x); \quad (3)$$

where D is domestic currency deposits

δ_d is real domestic interest rates

δ_i is real international interest rates (returns on US T. Bills)

x is the appreciation or devaluation of the Egyptian pound against the US dollar.

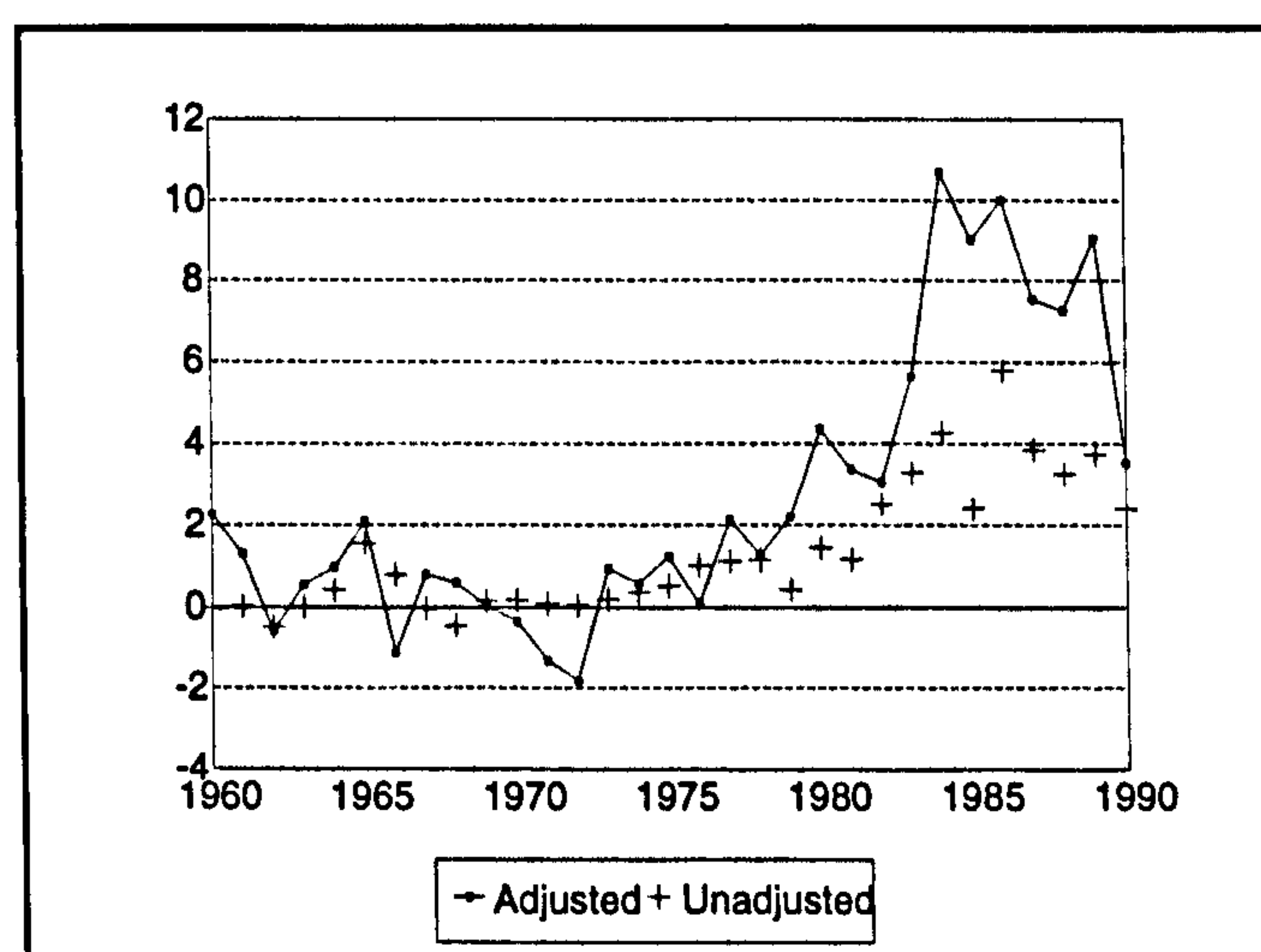
Figure (6.10) shows the evolution of these revenues as percentage of GDP over the 1960-90 period. They were higher in the 1970s and 1980s than in the 1960s, for two reasons

⁵⁵ See our literature review in chapter (2).

⁵⁶ In a study by Giovannini and de Melo (1991) they measured the government revenue from financial repression as the difference between the foreign and the domestic cost of borrowing multiplied by the stock of domestic government debt. They consider such difference as an implicit tax on government debt holders in an environment characterised by restrictions on the international flow of capital and different forms of financial repression. They put two criteria for the inclusion of countries in their analysis, first keeping a stock of commercial debt that exceeds \$ 200 million. Second the availability of disaggregated data on the stock and cost of domestic debt. Egypt, which matches the first criterion, was not among the selected countries presumably because it failed the second criterion along with other 13 LDCs out of 38.

first the lower real interest rates during these two periods as discussed above, second the increase in the base of the implicit tax base, i.e. the domestic currency deposits.

Figure (6.10)
Government revenue from interest rate ceilings
as percentage of GDP



Moreover adjusting interest rate differentials with the parallel market exchange rate⁵⁷ produces higher revenues. Hence by imposing exchange rate restrictions and controls over the flow of capital, the government managed to increase its revenue from given size of deposits and interest rate ceilings.

It is surprising to find negative revenue from repression in some years. For the non-exchange-rate-adjusted figures, this is attributed to the exceptionally high positive real interest rates, i.e. when the change in the CPI was negative in 1962 and 1968. For the

⁵⁷We use here parallel market exchange rate because they are more realistic than the official rates. See appendix (2) for parallel market exchange rate figures and sources.

exchange-rate adjusted figures, the negative revenue can be attributed to the same reason in addition to the appreciation of the pound during these particular years.

Table (6.7) gives the average of government revenue from repressing deposit interest rates for different periods. The non adjusted figures give lower average revenues for all periods than the figures adjusted with the official and the parallel market exchange rates.

Table (6.7)
Government revenue from deposit
interest rate ceilings as a percentage of GDP

Period	Adjusted with free exchange rate	Adjusted with official exchange rate	Not adjusted
1960-90	2.76	2.90	1.34
1960-69	0.70	0.42	0.21
1970-79	0.51	1.23	0.52
1980-90	6.69	6.67	3.11
1980-85	6.02	2.53	2.12
1986-90	7.48	11.6	3.82

Source: Author's own calculations; data obtained from: The CBE annual reports and Economic Review and International Financial Statistics.

We realise that the average revenue reached its highest levels during the 1980s which witnessed further decline in the domestic real interest rates and the adopted policy of devaluation. It is worth noting however that the official exchange rate-adjusted figures were higher than the figures adjusted with the free market exchange rates. This is attributed to the series of sudden official currency devaluation of the pound. So while the parallel exchange rate was decreasing gradually, the official rate decreased in an abrupt manner during the late 1980s and in 1990 until the gap between the two rates narrowed. At the end of the period the two rates were almost equal thanks to the foreign exchange market reform measures and the unification of the exchange rates in 1990/91. This was reflected in the adjusted figures of the repression revenue as shown in table (6.7).

With appreciation of the difference of the implicit tax base in our study and that of Giovannini and de Melo (1991), we consider their results here as an indication for the significance of the financial repression tax. They found that the revenue of this tax, as

percentage of GDP, ranging between 0 in the case of Indonesia to 6% in the case of Mexico and Zimbabwe. The unweighted cross-country average was about 2% of GDP. In our study which considers only one type of interest rate differentials, that of deposit interest rates, and one type of assets, i.e. bank deposits, the average was 2.76% of GDP for the 1960-90 period. The average revenue was much higher during the 1980s, reaching 6.69%. Thus depending on the availability of data, if the wider approach of Giovannini and de Melo is used, we argue that the repression tax in Egypt would be among the highest in LDCs.⁵⁸

While interest rate controls were the most formidable source of financial repression in Egypt, several other measures were in operation during the study period and considered below.

(6.4.4) Reserve requirements:

In most of the LDCs the use of reserve requirements against banks liabilities goes beyond their traditional role as a monetary instrument and a prudential measure. They have been used to control the quantity of money and credit; affect the liquidity of the banking system; tax financial intermediaries; and most importantly generate revenues to finance budget deficit.⁵⁹ Reserve requirements proved to be more flexible way of generating income than changes in taxation for example.

However high reserve requirements decrease loanable funds available for investment by reducing the fraction of given volumes of deposits and by reducing the equilibrium

⁵⁸See country results for repression tax in Giovannini and de Melo (1991), pp. 31-35 and also (1993), p. 960.

⁵⁹See Morris, et al (1990), pp. 44-45.

volume of deposits through decreasing the profit-maximising deposit rate.⁶⁰ Hence they are considered as a leakage in the intermediation process.

Only under especial characteristics of the demand and supply for assets and liabilities of banks, as shown in Courakis's partial equilibrium model,⁶¹ the adverse effect of reserve requirements on the volume of deposits may not hold. The profit maximising deposit rate and hence the volume of deposits may increase with a rise in the required reserve ratio if the demand for loanable funds is interest inelastic relative to their supply. However this case is considered an exception.

Reserve requirements, as one of the components of the monetary base, contribute to the government revenue from the inflation tax. On the other hand they reduce bank profits by the size of the difference between the interest paid on reserve requirements by the central bank and the opportunity cost. Further, depending on the elasticities of the demand for deposits and the demand for loans, the bank can pass part or all of the tax burden to depositors and borrowers in the form of a bigger spread between rates of deposit and lending.

Reserve requirements carry a very low or zero interest rate in LDCs. Hence they are viewed as an implicit tax, and the higher the reserve requirement ratio, the bigger the distortion imposed on financial assets. They are set at high levels in many LDCs not mainly for prudential purposes but rather for financing the budget deficit.

The magnitude of reserve requirements indicates whether they are used for prudential purposes and an instrument of monetary policy, or mainly for generating income for the

⁶⁰See Fry (1988), p. 108 and Courakis (1987), p. 150.

⁶¹See Courakis (1984) and (1987).

budget. In developed economies the ratios of required reserves are much less than LDCs. For example, as at of 1992, in the USA on the first \$42.2 million the reserve requirement is 3%, for amounts in excess of \$42.2 the ratio is 10%. For Canadian chartered banks the reserve requirement is 10% on demand deposits and the monetary authority has been considering a policy to phase out reserve requirements.⁶² In the UK the bank of England imposes a reserve requirement ratio as low as 0.35% of deposits to finance its operations.⁶³ In contrast we realise that the reserve requirement ratios in most LDCs are much higher as shown in table (6.8).

Table (6.8)
Required reserve ratios in selected LDCs

Country	Year	Ratio	Remuneration
Bahamas	1991	5	No
Bolivia	1991	20	Yes
India	1992	15	Yes
Kenya	1993	8	No
Paraguay	1993	30	No
Peru	1991	15	Yes
Sri Lanka	1992	12	No
Tunisia	1992	2	No
Venezuela	1993	12	No

Source: Compiled from Hardy (1993), Appendix I, pp. 25-31.

Reserve requirements in Egypt were imposed on both local and foreign currency deposits in the form of reserve balances with the CBE. While required reserves on the former were not remunerated, on the latter they were remunerated at the LIBOR.

Required reserves were computed with the lagged accounting system widely practised in other countries.⁶⁴ Applying this system prevented banks from rushing to meet the end of the period Reserve requirements which may cause abrupt shifts in the inter-bank interest rates. The penalty for non compliance was twice the discount rate.

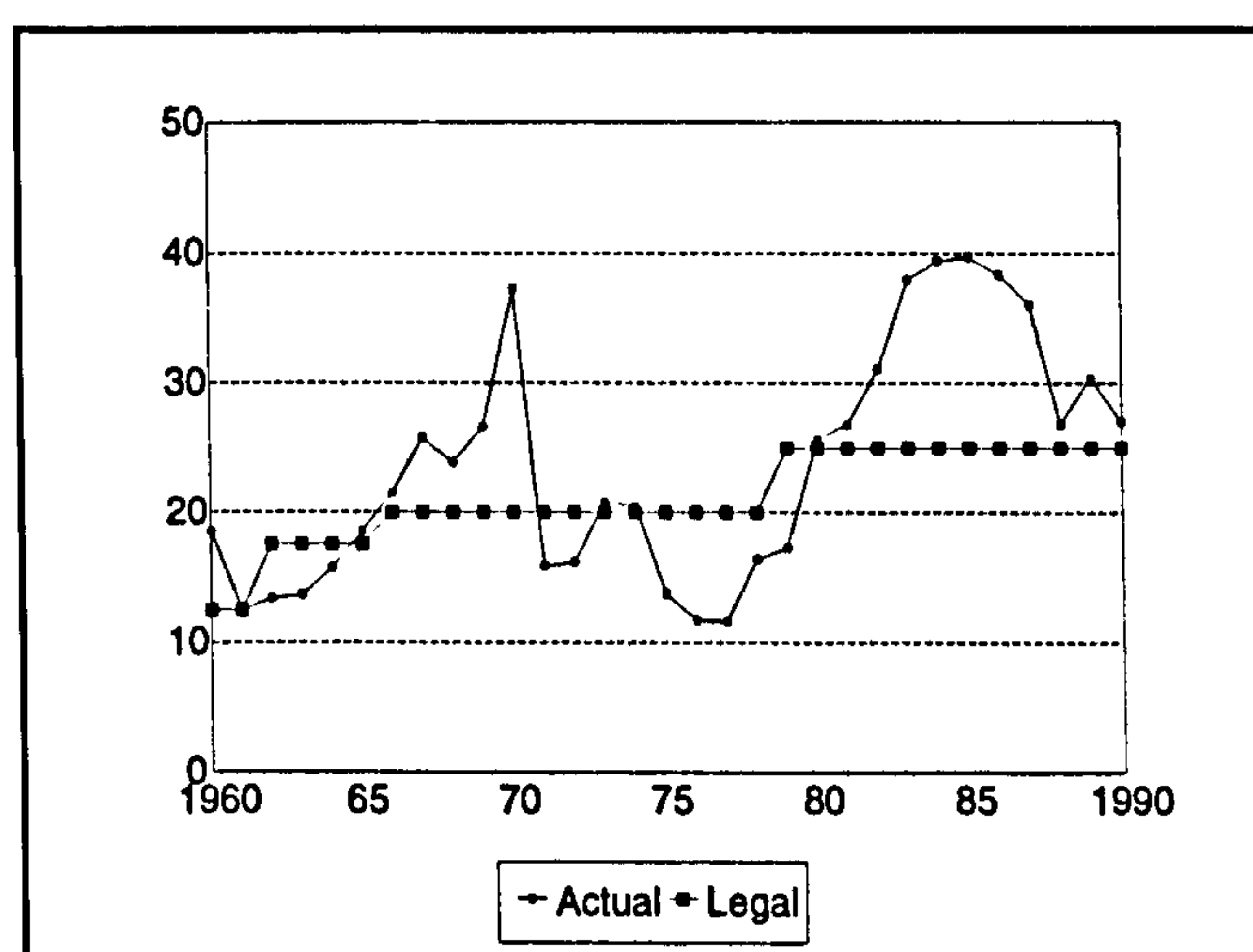
⁶²Champ and Freeman (1994), p. 121.

⁶³See Hardy (1993), p. 10.

⁶⁴World Bank (1992), p. 22.

As shown in figure (6.11) the required reserve ratio was set by the CBE at a relatively low level in 1960 at 12.5%, then in 1962 it increased to 17.5% of deposits. During the period 1966-1978 it became 20% and then reached its high level of 25% during the period 1979-90. It is interesting to realise an increasing use of one of the financial repressive measures during the *Infitah* period of the 1970s and 1980s more than the socialist period of 1960s.

Figure (6.11)
Actual and Legal Required Reserve Ratio
1960-90



The actual required reserve ratios were higher in several years than the legal ratios, which were already high by international standards. While the average of the legal ratio was 21.1% over the period 1960-90 the actual ratio was 23.6%. Moreover the latter was more variable as its standard deviation was 8.95 whereas the standard deviation of the legal ratio was 3.6 which added difficulties to the decision making of banks.

While the contribution of reserve requirements to the Egyptian government revenue from the inflation tax is analysed above, we show here their impact on interest rate spread.

Following McKinnon and Mathieson (1981), in a perfectly competitive banking system in which profits are zero, the relationship between real lending rate i_l and deposit rates i_d is:

$$i_l = [1/(1-k)] i_d \quad (5)$$

where k is equal the required reserve ratio.

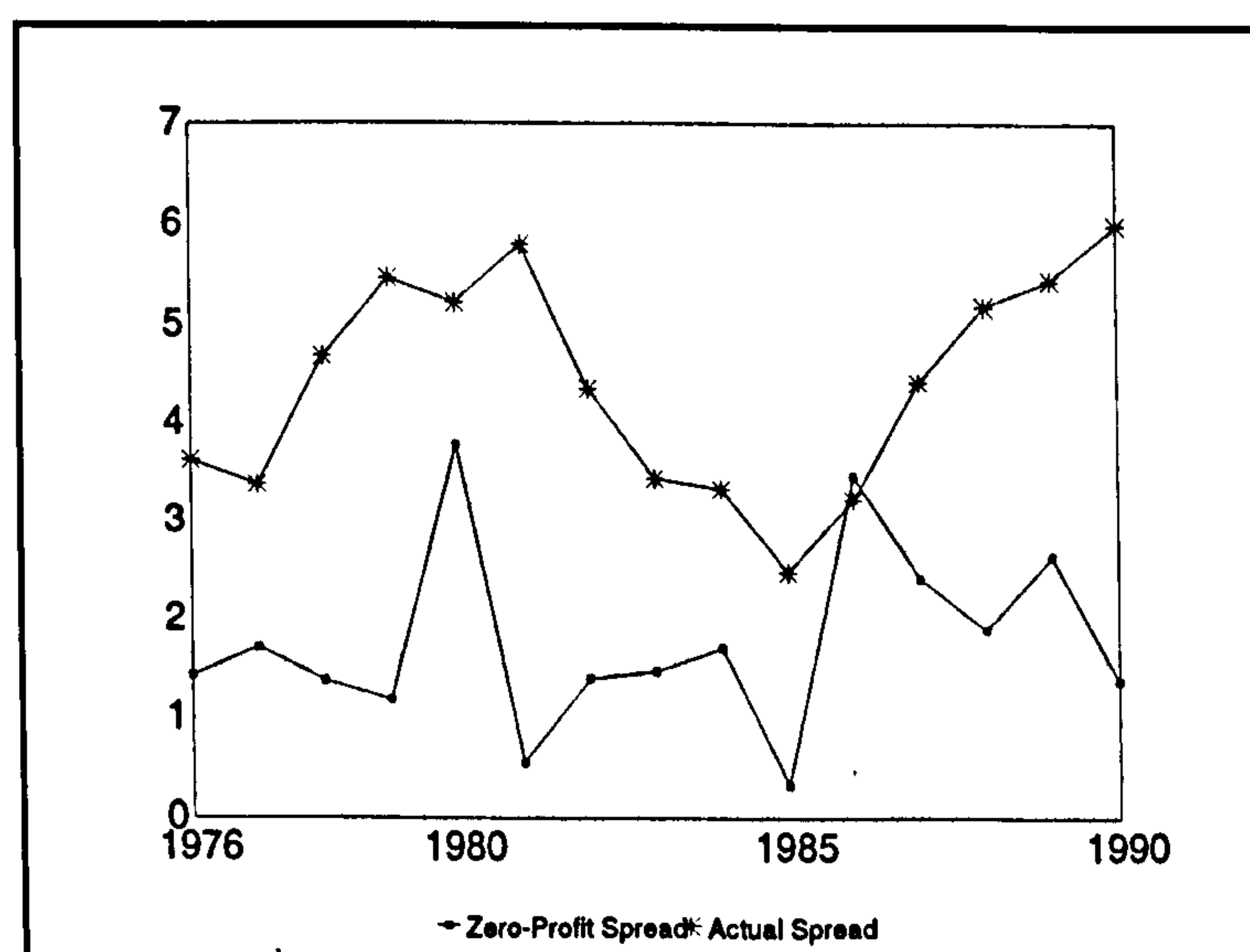
Therefore from equation (5) the spread is:

$$i_l - i_d = [k/(1-k)] i_d \quad (6)$$

Hence the spread increases if k increases. Also if deposit rate rises so does the spread.

Figure (6.12) below shows the evolution of real interest rates spread during the period 1976-90⁶⁵. Given the levels of real deposit rates and required reserve ratio, the average spread under zero-profit assumption, was 1.7 percentage points. However the actual spread was as high as 4.4. The difference between the actual and zero profit spread, which was on average 2.62, can be explained, in addition to bank profits, by high intermediation costs and/or banking inefficiency.

Figure (6.12)
Zero-Profit and Actual Spreads
1976-90



⁶⁵Lending rates before 1976 are not available.

The spread in Egypt is high compared to other countries as shown in table (6.9). With the exception of Turkey, the spread in Egypt was higher than the rest of the selected countries, more than three times higher than that in the case of the USA. This can be considered a reflection of the reserve requirement implicit tax.

Table (6.9)
Real interest rates spreads in selected countries (1987)

Country	Real Spread
Korea	0
Portugal	4.4
Singapore	3.2
Turkey	15
Japan	3.4
UK	0.2
USA	1.3
Egypt	4.43

Source: for Egypt is IMF International Financial Statistics Yearbook (1992), for other countries Seck and Nil (1993), p. 1868.

In the Egyptian case the required reserve ratio was reduced from 25% to 15% in 1991, in accordance with the recent financial reform measures, nevertheless this was not reflected in a significant reduction in the spread. As shown in table (6.10), the zero-profit spread decreased from 1.37 in 1990 to 0.61 in 1992 because the reduction in the required reserve ratio was higher than the increase in real deposit rate. The actual spread decreased as well to 2.78.

Table (6.10)
Zero-profit and actual spreads before and after reform

Year	Zero-profit spread	Actual Spread	Difference
1976-90	1.78	4.40	2.6
1990 (before reform)	1.37	5.99	4.6
1992 (after reform)	0.61	2.78	2.2

Nevertheless the difference the actual and the zero-profit spreads at 2.2 in 1992 was significantly different from its average during the 1976-90 period. Such high differences between zero profit and actual spreads, before and after reform, are symptoms of lack of competition in the banking system and high intermediation costs. While the reform measures aimed towards improving some variables like increasing nominal interest rates and reducing the required reserve ratio it was not profoundly concerned with the

uncompetitive conditions of the banking system and its oligopolistic structure dominated by the big four public banks.

(6.4.5) Intervention in credit allocation:

Several LDCs's governments intervened in the allocation of credit, directly or indirectly, to specified sectors and large projects chosen by economic planners. In a sample of eleven Asian countries Fry (1992) distinguishes between six categories of intervention: Subsidised loan rates for priority sectors, differential rediscount rates, directed budget subsidies, credit floors, credit Ceilings and the proliferation of specialised financial institutions. Subsidised loan rates for priority sectors was the most extensively used instrument in all sample countries.⁶⁶

The World Bank (1989) reports extensive use of directing credit in different countries through various schemes: In Pakistan 70% of new lending was targeted by government in 1986. In India 50% of bank assets had to be placed in government bonds and 40% of the remainder had to be directed to priority sectors at controlled interest rates. In Brazil the government in 1987 extracted 70% of the outstanding credit. In early 1980s in Turkey 75% of advances made according to government direction or preferential rates or both.⁶⁷

Such intervention may restrict funds available to other sectors and raise the costs of the remaining loanable funds. If there is a use of ceilings on lending rates costs of borrowing will not rise but credit would be allocated according to non-price criteria i.e. quality of collateral, political pressures, reputation, loan size and possibly 'benefits' to credit officers.

⁶⁶The sample included Bangladesh, India, Indonesia, Korea, Malaysia, Nepal, Pakistan, Philippines, Sri Lanka, Taiwan and Thailand, Fry (1992), pp. 11-13.

⁶⁷World Bank (1989), p. 55.

Hence government intervention in the allocation of credit may result in the following:

- Directing most of the available loanable funds to finance budget deficit and crowding out private investment.
- The concentration of the remainder of credit among the privileged groups in the society.⁶⁸
- Privileged recipients of credit may apply a round-tripping mechanism⁶⁹ by exploiting the complex set of differentials in borrowing and lending rates.
- The rest of credit applicants may be forced to resort to informal sector money lenders.
- Further credit rationing may occur through the excessive use of non-price criteria as a form of credit rationing.⁷⁰
- Rent seeking behaviour on the part of credit officers may be encouraged in such environment.
- Unless directed credit schemes are effectively and carefully managed they may affect adversely income growth and its distribution.⁷¹

In Egypt intervention in the credit market took different methods according to a convention that market forces are not efficient allocators of resources.⁷² Credit control methods were used to augment other quantitative control measures that were in use, like the required reserve ratio. Further the use of some repressive measures necessitated the use of credit control methods to contain their adverse effects. For example interest rate ceilings made lending rates low and hence resulted in an artificial excess demand for

⁶⁸Killick (1993), p. 271.

⁶⁹Roe (1989)b, p. 79.

⁷⁰Fry (1988), p. 18.

⁷¹For examples of successful directed credit schemes e.g. when there is a lack of venture capital, see World Bank (1989), pp. 57-59

⁷²For a discussion of selective credit controls in LDCs, see Coats and Khatkhate (1980), pp. 25-28.

credit. This problem called for the CBE's intervention through a rigid system of rationing on credit available for the private sector.

From table (6.11) we can distinguish between two main instruments used to control credit. First an overall credit ceiling of 65% of deposits until 1988, lowered afterwards to 60%. Second a supplementary method of sub ceilings on credit to the commercial private sector.

Table (6.11)
Methods of controlling credit expansion

Year	Method	Comments
1974-75	Maximum of the quantity of credit advanced.	The CBE determined the size of credit available for the private, public and cooperative sectors.
1976	Fixed loan-to-deposit ratio of 65%.	The CBE adopted this method in 1976 without determining the sectoral share of credit.
1977	Fixed change in credit-to-change in deposit of 40%	Governmental sectors were excluded.
1978	Fixed loan-to-deposit ratio 56% to the private sector.	Private and joint venture banks were allowed a greater limit of 75% for private sector loans.
1981-88	Fixed loan-to-deposit ratio of 65%	This instrument was supplemented by sub ceilings on credit to the commercial private sector of 12% and the household sector of 10%.
1988-90	Fixed loan-to-deposit ratio of 60%	The instrument was supplemented by a maximum of 8% growth rate per annum for loans advanced to the commercial private sector.

Source: Central Bank of Egypt, various reports on credit and banking developments.

Moreover the government determined the structure of lending rates according to the type of the economic sector. The two main determinant factors of interest rate structure are first the social return on investment estimated by the Ministry of Planning and second the gradual increase in deposit interest rates i.e. the cost of funding. Table (6.12) shows the development of lending rates.

Table (6.12)
Structure of interest rates on loans

Sector	1977	1978	1979	1980		1981	1982	1987	1989*
				1/4	1/6				
<u>Agriculture & Industry</u>									
One year							-	11-13	13-15
One to two years							to	12-14	14-16
More than two years							13	13-15	15-17
	8	9	10	11	12	13			
<u>Services</u>	to	to	to	to	to	to			
One year	9	11	12	13	14	15	13	13-15	15-17
One to two years							to	14-16	16-18
More than 2 years							15	15-17	17-19
<u>Trade</u>									
One year							16	16-	18
One to two years							to	17-	to
More than two years							-	18-	-

(-) denotes no upper or lower limit

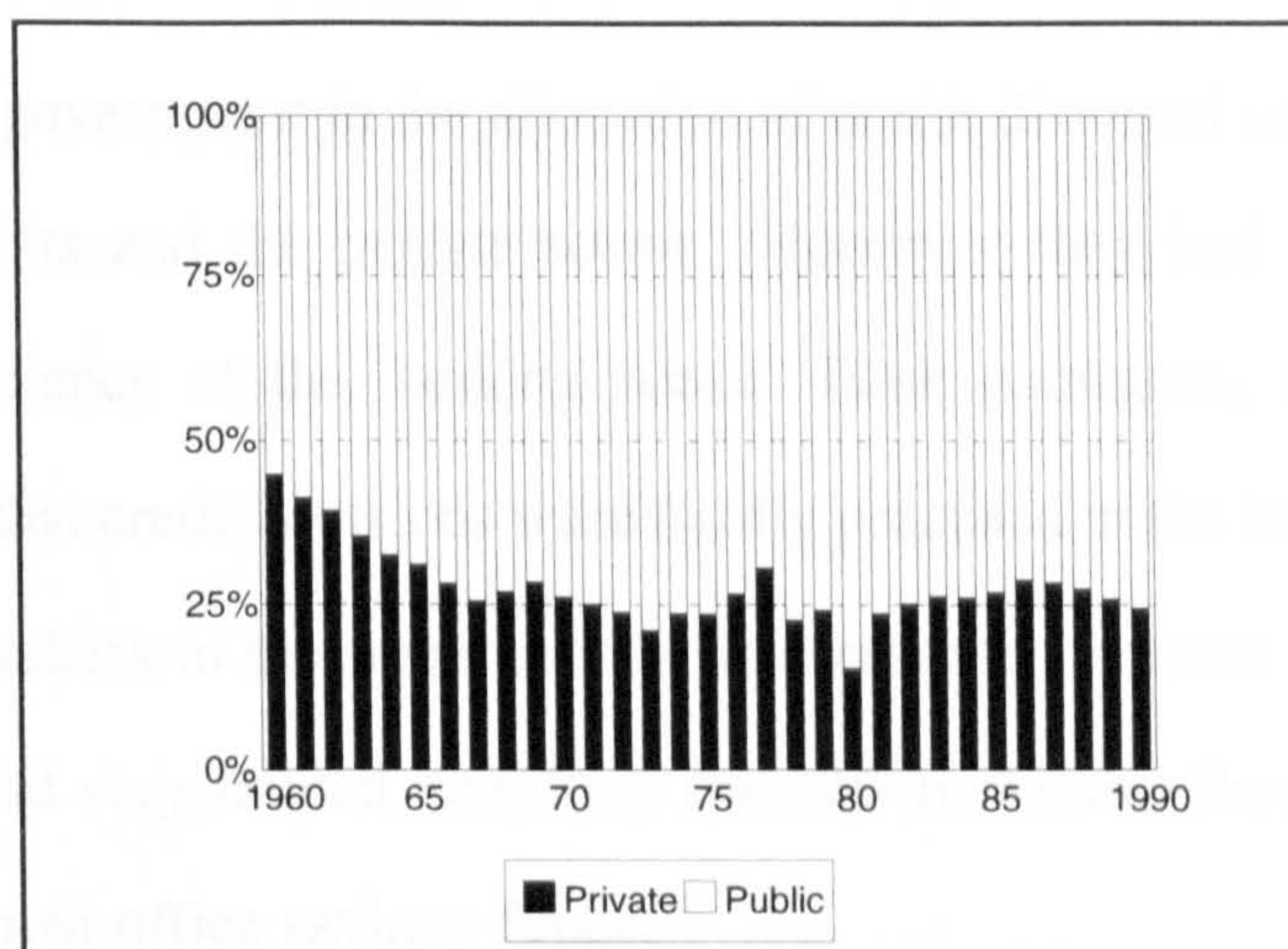
(*) The interest rate structure of 1989 continued till January 1991 when the CBE took a decision to liberalise interest rates leaving banks free to determine the interest rates on loans and advances as part of the recent financial reform programme.

Source: Central Bank of Egypt, Economic Review vol 28 no. (2) and vol 32 no. (1)

From 1977 to 1981 the CBE set specific floors and ceilings on lending rates to all sectors, leaving banks with limited range of one to two percentage points. From 1982 to 1989 the CBE intervened further by determining interest rates for credit advanced for each sector according to maturity of loans, leaving banks with even more limited discretion regarding credit decisions.

The distribution of credit between the private and public sectors reflects the government policy towards both sectors and their perceived role in development. Over the period 1960-90 the private sector extracted an average 27.8% of bank credit while the rest, 72.2%, was directed to the public sector. As shown in figure (6.13), in 1960 the private sector obtained 44.9% of total credit but with the adoption of socialist interventionist policies from 1961-74 the private share in total credit deteriorated.

Figure (6.13)
Private and public credit in Egypt 1960-90



Source: IMF, International Financial Statistics, Yearbooks 1989-92.

We notice that the government claims concerning the encouragement of the private sector, since the launching of *Infitah* measures, were not reflected in a significant improvement in the allocation of credit between the public and private sectors.⁷³ The private sector's share in loanable funds continued to decline until it reached a minimum of 15.5% in 1980. It improved slightly during the 1980s but was far behind its pre-socialist period level. The impact of financial repression on the availability of credit to both the public and private sectors and investment is analysed in chapter (7).

It is worth noting however that privileged private sector borrowers were subsidised by the difference between the repressed interest rate and the free market rate of interest. Moreover some of private sector borrowers were allowed to consider interest rate paid

⁷³ It is worth noting that the private sector's share of credit is not a sufficient evidence for crowding out. In a recent study it has been shown by using the error correction approach and the unrestricted dynamic modelling, that "the government did not crowd out established firms in the credit market and by maintaining artificially low interest rates, implicitly subsidised their borrowing..[and] made many inefficient investments financially profitable". See Shafik (1993), p. 94.

on loans as deductible expense, i.e. not taxable. This reduced further the real cost of borrowing below that of the free market.⁷⁴

The intervention of government in the allocation of credit distorted competition amongst the public sector units and the private sector. Moreover they had adverse effects on innovation and efficiency of the banking sector. Bank managers, interviewed by the author, pointed out that credit decisions were hardly practised in the banking units. Credit officers were price takers in the sense that the interest rate structure was determined by the CBE and they had very limited margin to manoeuvre within. Banks to a great extent were working like post office savings funds.⁷⁵

Unless there is a need for corrective government intervention to overcome market imperfections, the elimination of directed credit system, is advocated for two main reasons. First, in order to improve the allocative efficiency of credit. Second, to improve the portfolio problems of banks that resulted from lending to projects irrespective of their returns or economic viability.

Nevertheless we argue that a hasty abolition of direct controls on the allocation and the expansion of credit may have its detriments. If most of the credit officers are inadequately trained and lack experience in a credit market, which for a long time had its prices and quantities determined by the CBE, it would be critical to leave the allocation of credit suddenly to their discretion. On the other hand the credit market in Egypt requires more than sufficiently trained bankers, as discussed above it is hard to ignore the importance

⁷⁴ See Harvey and Jenkins (1993) for a discussion of the issue of taxation and its implications for interest rate policy and financial reform programmes in LDCs.

⁷⁵ Interviews with Mr Abd-Al-Salam Al Anwar General Manager of Hong Kong Egyptian Bank (5/5/1993) and Mr Hamdy Musa General Manager of Export Development Bank of Egypt (22/3/93).

of prudential regulation, monitoring and screening of credit transactions, given the costs of default, asymmetric information, uncertainty.⁷⁶

(6.4.6) Regulations on the portfolio composition of banks:

This is another widely used repressive measure. In the study of Hanson and Neal (1986), they emphasised that all countries in their seven representative low and middle income countries⁷⁷ applied this method to direct credit mainly to finance budget deficits and large projects.

In Egypt banks were required to hold a minimum of government securities as one of the components of the compulsory liquidity ratio. The liquidity ratio of 30%, imposed on domestic and foreign currency deposits, was introduced in 1958 and did not change until 1991 when it was reduced to 20% as part of the reform programme. The components of the liquidity ratio are defined as shown in table (6.13).

Table (6.13)
Components of the liquidity ratio

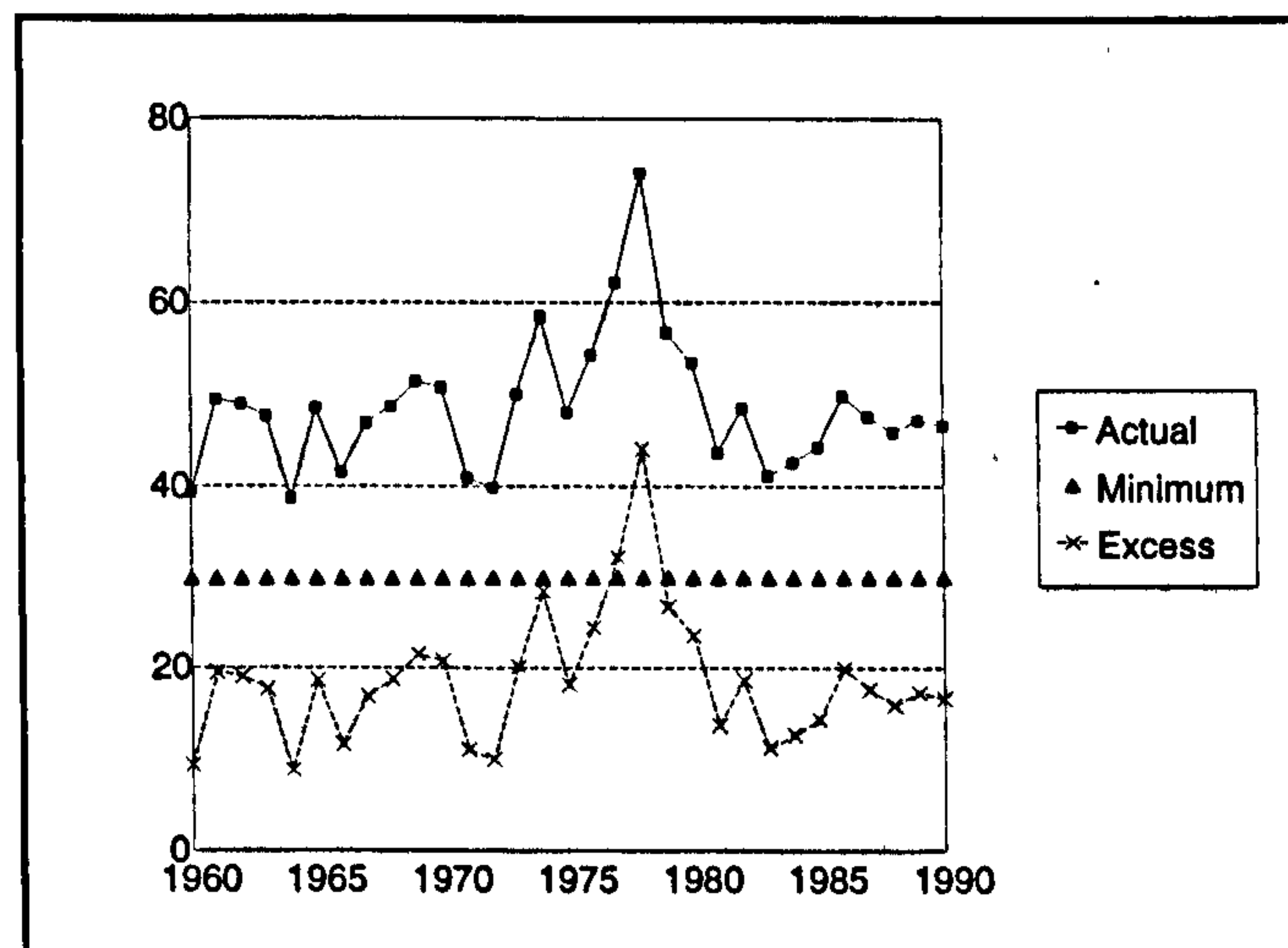
Components of Numerator	Components of denominator
Cash	Outstanding cheques, transaction drafts,.. etc.
Balances with the CBE	
Gold	Banks' claims on others
Cheques, transaction drafts, coupons, securities and foreign currencies under collection	Deposits
Treasury bills	Uncovered values of banks' letters of guarantee
Discounted commercial papers	
Government securities, gold, and government guaranteed securities	
Others' claims on banks	

Although the minimum liquidity ratio did not change over the 1960-90 period and remained at 30% the actual spread was highly variable as shown in figure (6.14) and its average was 48.7% i.e. there was an average of 18.7% excess liquidity during the study period. In some years the actual liquidity was even more than the double of the minimum liquidity ratio.

⁷⁶On risk and financial fragility associated with credit markets see the comprehensive study of Davis (1992).

⁷⁷These countries were Bangladesh, Kenya, Nigeria, Peru, Thailand, Turkey, and Uruguay.

Figure (6.14)
Minimum, actual and excess liquidity ratios
1960-90



Excess liquidity in Egypt⁷⁸ can be attributed to several factors that support the arguments of the financial repression school regarding the adverse effects of government intervention in the mechanisms of the credit market:-

- First, the inclusion of government securities and bonds in the components of the liquidity ratio, to the extent that they became major items in banks' portfolios. Government securities and bonds are less risky than lending to the private economic sectors.
- Second, the rising usage of treasury bills by the government to finance its budget deficit especially when the foreign credit market became more restrictive in the 1980s. Banks were normally attracted to the risk-free treasury bills as they offer offer high, tax-free interest rates.
- Third, the application of credit ceilings and restrictive policy of sectoral credit allocation imposed limits on banks' lending abilities.

⁷⁸For a discussion of the problem of excess liquidity in other LDCs see for example Nissanke (1993).

- Fourth, under asymmetric information banks, fearing to face problems of moral hazard and adverse risk selection, may choose not to raise interest rates, within the limits of CBE interest structure, when there is an excess demand for credit.⁷⁹
- Fifth, like high reserve requirements, high liquidity ratios may reflect the monetary authority's concern regarding low capitalization and insolvency of some of the operating banks, and thus restore to this easy method, which in fact penalise the solvent banks, instead of requiring insolvent banks to improve their capital requirements and keep adequate provisions⁸⁰.
- Sixth, excess liquidity in banks portfolios can be a reflection of unstable economic environment and increase perceived risk on the part of investors and banks.
- Lastly, excess liquidity may also reveal inefficiency in the intermediation process that force banks to hold relatively high proportions of liquid assets.

(6.4.7) Government ownership of banks:

The dominance of government-owned banks in developing countries are identified with familiar problems which take two forms: First, internal management problems resulted from lack of incentives, political interference, overstaffing and lack of managerial and banking skills. Second, the general economic environment and policy background according to which public banks are assumed to operate.⁸¹

The conditions of government owned financial intermediaries in India which, more or less, describe prevailing conditions else where were summarised as follows:⁸² (i) low resource mobilisation; (ii) low profitability; (iii) low capitalization ratios and insolvency; (iv) complicated bureaucratic procedures for loan processing and operating inefficiency;

⁷⁹See Stiglitz and Weiss (1981).

⁸⁰See World bank (1992), p. 13.

⁸¹Fry (1990), p. 15.

⁸²Cited in Fry (1991) from a study by Morris (1985) on the Indian financial system.

(v) allocation of resources on the basis of non-economic criteria; (vi) reduced autonomy; (vii) poor quality of personnel, overstaffing and weak management.⁸³

Although the Egyptian banking system⁸⁴ consists of 98 banks, as at 1990, the four large public sector banks accounted for 55% of the total assets of the banking system, apart from their participation in joint venture and specialised banks. These banks through their relatively large networks of branches dominate the retail business. Public banks were protected by an array of regulations and preferential treatment⁸⁵:

- Branching by private banks was more restricted than branching of public sector banks.
- Credit ceilings were set in a way that favours public banks.
- Payment of interest on demand deposits was prevented to prevent private banks from attracting such deposits.
- Private banks were denied the opportunity to provide certain financial service to the public sector companies without the acceptance of their public banks.
- Pension funds of the public sector had to be deposited with public banks.
- Private banks were denied to have stakes in public sector companies

Public banks in Egypt like in other LDCs were more prone to government interference in credit and planning decisions than private banks. Consequently they had relatively high levels of nonperforming loans, most of them are theoretically government-guaranteed. Data on non-performing loans were not published and hence does not allow for analysis

⁸³On bank efficiency losses and rules for restructuring banks in transitional economies see Andrew Sheng (1990).

⁸⁴See chapter (3) for an analysis of the market structure of the financial system in Egypt.

⁸⁵For further details see World Bank (1992), pp. 1-41.

for the solvency of banks but they are estimated to range between 30%-45% of books loans.⁸⁶ Their portfolios were poorly diversified and suffered from excess liquidity.

Although Egyptian banks in general, during the period 1986-90 report low operating ratios by international standards according to a World Bank study⁸⁷, private banks were more efficient and profitable than public banks.

Publicly-owned banks, as part of the whole state owned enterprises, had its profits and losses internalised in the state budget. Under this system the state and profit-making enterprises cross-subsidise the loss-making projects, in a way that discouraged efforts to maximise efficiency.⁸⁸

Incentives to maximise profits, or even to minimise losses, barely existed. In the words of Flemming (1993) "If losses will be covered,...., why should management minimise them? If loss-making enterprises will be bailed out in the end why should bank manager discriminate on his lending between good and bad risks?"⁸⁹ Thus non-performing loans and bad debts were accumulated to the extent that it was difficult to clean up the balance sheets of such banks. It is worth mentioning that this particular problem is one of the main reasons behind the reluctance of the government to privatise banks.

Moreover public banks lacked managerial autonomy and like the rest of government sectors units in Egypt they had no effective power regarding staffing decisions.⁹⁰ Egyptian

⁸⁶The 30% estimate is the World Bank's (1992), p. 36. with reference to other countries with similar structure to Egypt, the range 40-45% of total loans are personal estimates of some of the bank managers interviewed by the author.

⁸⁷See World Bank (1992), pp. 31-33.

⁸⁸For a similar argument in the context of transitional socialist economies, see Sheng (1990), p. 13.

⁸⁹See Flemming (1993), p. 9.

⁹⁰See World Bank (1992), p. 37.

public banks had high staff per branch ratio of 38 while commercial banks carrying more extensive operations in the OECD countries had about 25 staff per branch.

Nevertheless we argue that the remedy of such problems does not lie necessary in changing the ownership of banks. It is established that it is not the type of ownership *per se* which determine whether a bank would be an aspect of repression, it is rather the mechanism according to which public banks operate that emphasise the negative effects of repression and hinders competition.⁹¹ Evidence from Canada, Sweden and the Netherlands show that state ownership can be compatible with low operating costs and high intermediation efficiency.⁹²

As discussed above what the Egyptian banking system suffers from is the mixture of both the domination of public banks and the high degree of concentration which discourages competition on one hand, and the heavy barriers to entry which makes incumbent banks uncontestable on the other hand. Thus reform measures should be taken at two levels. First at the banking system level to enhance competition, make banks contestable and assure prudential regulation. Second at the bank level to maintain managerial autonomy and efficiency.

(6.5) Impact of repressive intervention in the financial sector:

Definitely not all savers in Egypt accepted the prevailing formal real interest rates and held bank deposits. We argue that the formal sector persuaded significant group of savers to search for alternatives. Such alternatives can be grouped under inflation hedges⁹³ and informal sector dealings, in addition to capital flight. Thus, with the exception of

⁹¹Killick (1993), p. 272.

⁹²See chapter (3).

⁹³An Inflation Hedge is described as 'an asset that enables households and other investors to reduce the risk of loss of purchasing power stemming from uncertainty about the prices of consumer goods'. Gold, indexed financial assets, commodities, real estates are considered forms of inflation hedges. See the New Palgrave Dictionary of Money and Finance (1992), Vol 2, p. 405.

depositing money abroad, the portfolio selection model faced a saver in Egypt is comprised of similar categories of assets described by Tobin (1965) and adopted in the Neo-structuralist models⁹⁴. We analyse the main alternatives to bank deposits below. Other effects of financial repression are highlighted in chapter (7) below.

(6.5.1) The thriving of informal financial activities:

The existence of the informal financial sector can be attributed to two main factors. The first factor can be explained by a broad application of Goodhart's law that states that 'any observed statistical regularity will tend to collapse once pressure is placed upon it for control purposes'⁹⁵. Thus the informal financial sector, being the unregulated sector in the economy, attracted several depositors for its higher returns on 'deposits'. The second factor can be ascribed to dualities in the economic, social and cultural structures. Hence informal transactions occur regardless the state of development or the conditions of the formal sector.⁹⁶

The informal financial activities reached its peak in Egypt by the establishment of the Islamic Investment Companies (IICs) in the early 1980s. While the exact figures, by the very nature of informal activities, are not known estimates for the number of their depositors reached half a million, deposited approximately £E 4.5 billion in 1988, i.e. the equivalent of more than 12% of time and savings deposits held with the banking sector.⁹⁷

However, the IICs are just part of the whole informal financial sector that include other agents and different activities: e.g. money lending, pawn broking, RoSCAs, .. etc. While it is not possible to know the exact size, significance and impact of such transactions at

⁹⁴For example Taylor (1983), Van Wijnbergen (1983) and Buffie (1984), see our review of the literature in chapter (2).

⁹⁵Goodhart (1987), p. 96.

⁹⁶See chapter (9) of this thesis.

⁹⁷See chapter (5) of this thesis.

the macro level we conduct a survey to help us to analyse informal transactions at the household and village levels. See our analysis of informal finance in rural Egypt in chapters (8) and (9).

(6.5.2) Inflation hedges:

In the absence or lack of savings instruments inflation hedges like gold, real estates and durable goods become substitutes. Even with the availability of savings instruments like bank deposits, the importance of such substitutes as saving instruments cannot be ignored. For example hoarding of gold continues in the presence of bank deposits for several reasons. First tradition may slow the transition to new forms of saving⁹⁸. Second low and/or negative real returns of formal saving instruments, or unstable political and economic environment may keep gold as a viable store of wealth. Third, gold helps fulfilling other motives which can not necessarily met by keeping other assets.

The private demand for gold is controlled by different motives⁹⁹.

First, Saving motive. According this motive, gold can be liquidated at any time as it help, like any other saving instrument, smoothing consumption over time.

Second, insurance motive. Following this motive gold can be only liquidated in the case of unexpected shock.

Third, ostentation. According to this motive gold can be used as a indication of wealth and societal status. The satisfaction that stems from the possession and display of gold is hard to ignore especially in developing societies under what known as the psychic income.¹⁰⁰

⁹⁸See Kettel (1982), p. 119.

⁹⁹Generally the demand for gold can be divided into industrial use of gold and speculative demand, see Lipschitz and Otani (1977) for an estimate for the demand of gold.

¹⁰⁰See Drake (1980), p. 127.

Fourth, speculation. As in particular assets and commodities gold can be kept with a motivation that its price will appreciate in the future.

Fifth, safekeeping.¹⁰¹ Traditionally gold is purchased and hoarded as a way of safekeeping, especially when the banking habit is weak, taxation is excessive and/or the financial system is not stable.

Thus, negative real interest rates in Egypt contributed to hoarding gold as an efficient store of value. Where banking services were not adequately available, like in remote areas, gold again can play its traditional role. Even if banks were available, according to the view that dealing with interest rates is a form of usury, gold continued to be the 'lawful' substitute. Egypt for a long time had an active gold market which added to the desirability for gold as store of wealth. Buy-back arrangements and pawnbroking were widely practised making gold highly liquid.¹⁰² However we argue that gold functions effectively within certain limits of wealth. If the accumulated wealth is so big to the extent that hoarding gold would be costly, unsafe and risky, savers move to other inflation hedges like real estate. Further analysis of gold and other inflation hedges is provided in chapter (8) under our analysis of household's portfolio selection in rural Egypt.

(6.5.3) Currency substitution

The case in which local residents hold part of their wealth in foreign money, is known as currency substitution. When there is extreme instability, e.g. high inflation, rapid devaluation, foreign currency may be used as a medium of exchange not just a store of value.¹⁰³

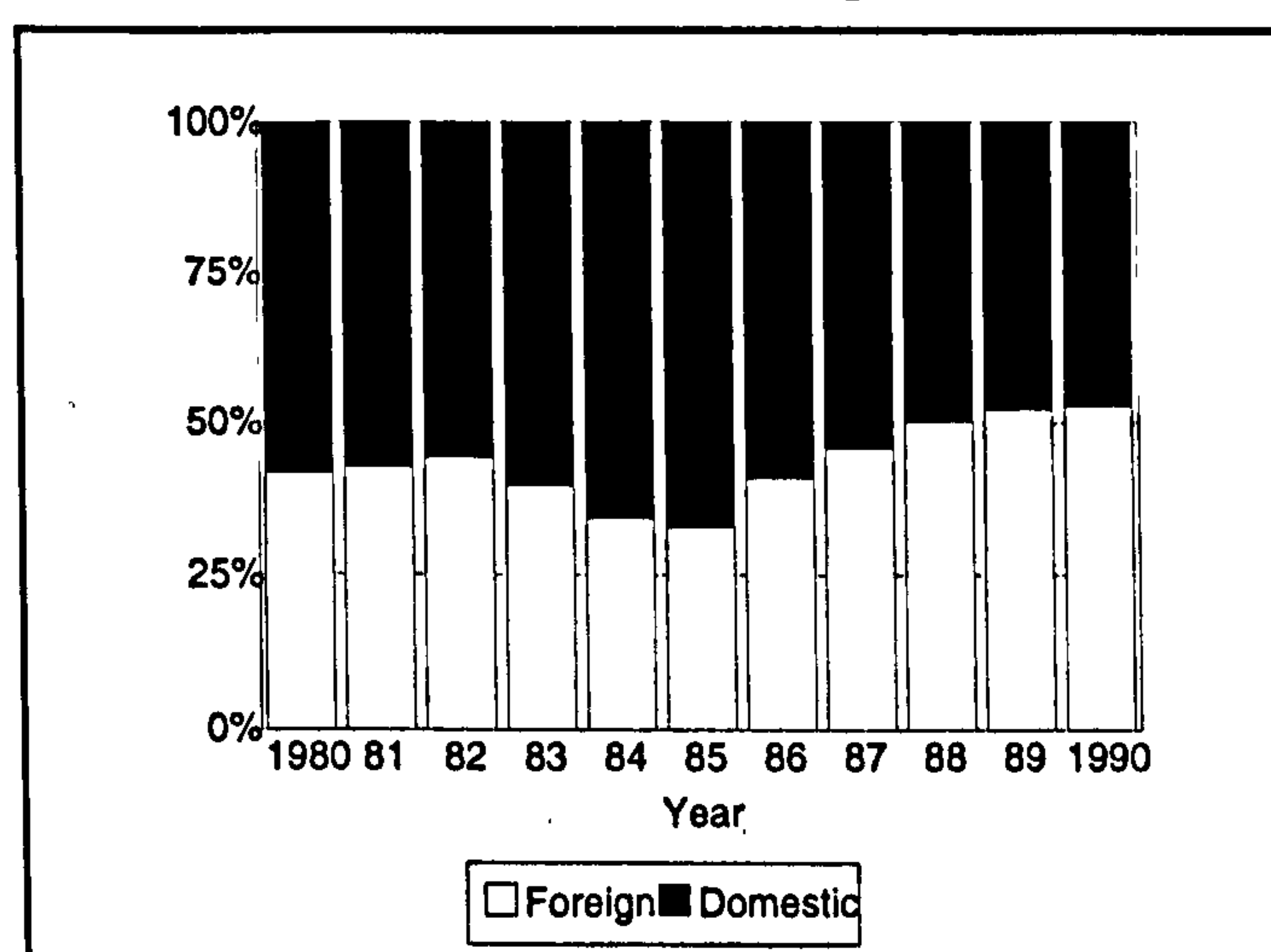
¹⁰¹Kettel, op. cit., p. 119-121.

¹⁰²Drake (1980), p. 126.

¹⁰³Sachs and Larrain (1993), p. 237.

In Egypt while the return on domestic currency deposits was controlled by ceilings, foreign currencies deposits, introduced since 1974, received internationally competitive returns. Accounting for exchange rate depreciation shows that the return on domestic currency was significantly lower than foreign currencies. In this environment money substitution was active.

Figure (6.15)
Foreign and domestic deposits 1980-90



Source: IMF, International Financial Statistics, Yearbooks 1990 and 1992.

Figure (6.15) shows that private sector holdings of foreign currencies deposits increased rapidly since 1980¹⁰⁴ from 41.6% of total deposits to 52.9% in 1990. After 1985 the speed of money substitution increased due to further devaluation of the pound and decline in real rates of interest. The growth of money substitution, *de facto* dollarisation, during this period cannot be attributed solely to negative real interest rates as at it was in general a period of deteriorating financial and economic conditions. The economy suffered from inflationary pressures, worsening external position because of the burden of debt and greater political uncertainties.¹⁰⁵ Money substitution was possible because of the inflow

¹⁰⁴ Figures for the 1974-80 period are not available.

¹⁰⁵ El-Erian (1988), pp. 92-93.

of remittances of Egyptian workers abroad, tourism and the increase of the number of foreign companies that pay salaries in foreign currencies.

(6.5.4) Capital flight:

Since the declaration of the Bank of International Settlements, BIS, in 1984 that total deposits of Latin American individuals ranged between 30-40% of the external debt of their countries,¹⁰⁶ the phenomenon of capital flight attracted significant interest in research. Nevertheless estimates of capital flight vary considerably, due to its nature and methods of estimation.

To distinguish between normal capital movement and the phenomenon of capital flight the analysis should be undertaken in the context of the state of development of the economy and in consistency with the economic and policy question of the country concerned.¹⁰⁷

The phenomenon of capital flight is influenced by several economic and political determinants. The degree of economic and political stability and the efficiency of policy management were some of the main determinants of the phenomenon. For example under the so-called the revolving door, Boyce (1992), shows that there is debt-driven and debt-fuelled capital flight. The first is when capital flees the country in response to economic circumstances that accompany the build up of external debt, e.g. artificial overvaluation of the currency followed by devaluation. The debt-fuelled capital flight is the case when debt provides corrupted officials with the resources needed for capital flight.¹⁰⁸

¹⁰⁶See the annual report of the BIS (1984).

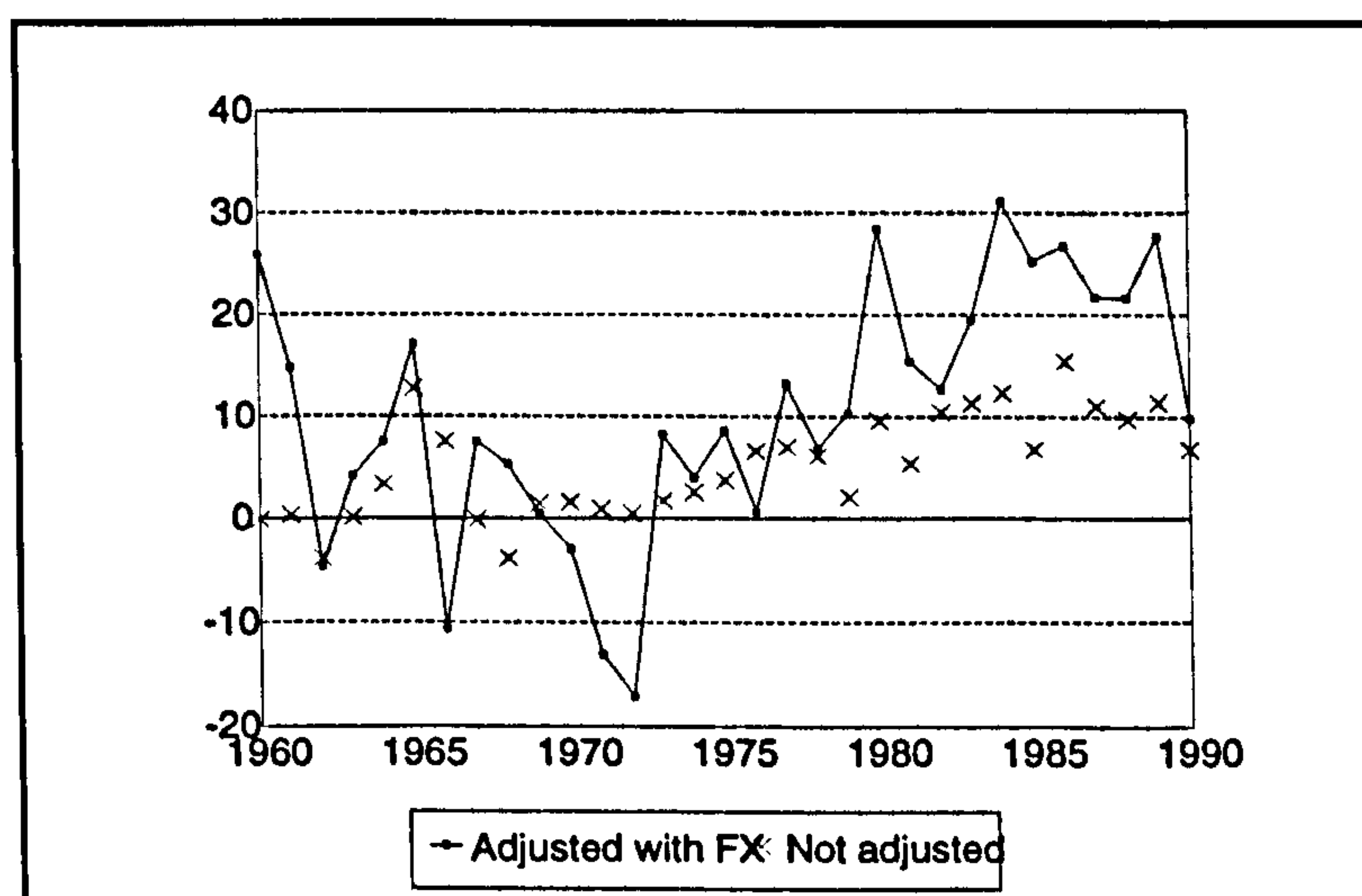
¹⁰⁷Pastor (1990), p. 2.

¹⁰⁸Boyce (1992), pp. 337-9.

Negative real interest rates provide savers with reasons for searching for alternatives for domestic bank deposits. Depositing money abroad is clearly one of these alternatives. Figure (6.16) shows the difference between international and domestic real interest rates. The difference is calculated as $(\delta_i - \delta_d + x)$; where δ_i is real international interest rates (returns on US T. Bills); δ_d is real domestic interest rates; and x is the appreciation or devaluation of the Egyptian pound against the US dollar.

We have seen already that, in almost all years of the study period, real international interest rates were significantly higher than the Egyptian rates. On average the real interest rate in Egypt was lower by 5.21 percentage points. Adjusting interest rate difference with changes in foreign exchange, yielded higher gap as the domestic real interest rate was on average lower by 10.6 percentage points over the period 1960-90.

Figure (6.16)
Interest rate differentials 1960-90



Thus real interest rates differentials provided savers with an incentive to deposit their deposits abroad. However this incentive cannot fully explain the high capital outflow because, as mentioned above, foreign currency deposits with internationally competitive returns were introduced as part of the *Infatih* measures. Generally, political instability, gloomy expectations regarding the performance of the economy, lack of credibility in

government policies in addition to corruption can explain, along with interest rate and exchange rate mischievous policies, the high estimates of capital outflow.

In one study the estimate of capital flight was approximately 34% of external debt during the period 1976-82.¹⁰⁹ The other estimate was approximately US\$ 40 (£E 70.4) billion in 1988 which was close to the total of the outstanding external debt.¹¹⁰

Following Dooley et al. (1986), also Pastor (1990), we calculate capital flight for Egypt during the period 1980-90.

$$CF = (\Delta OD + FI) - (AC + \Delta RS) \quad (4)$$

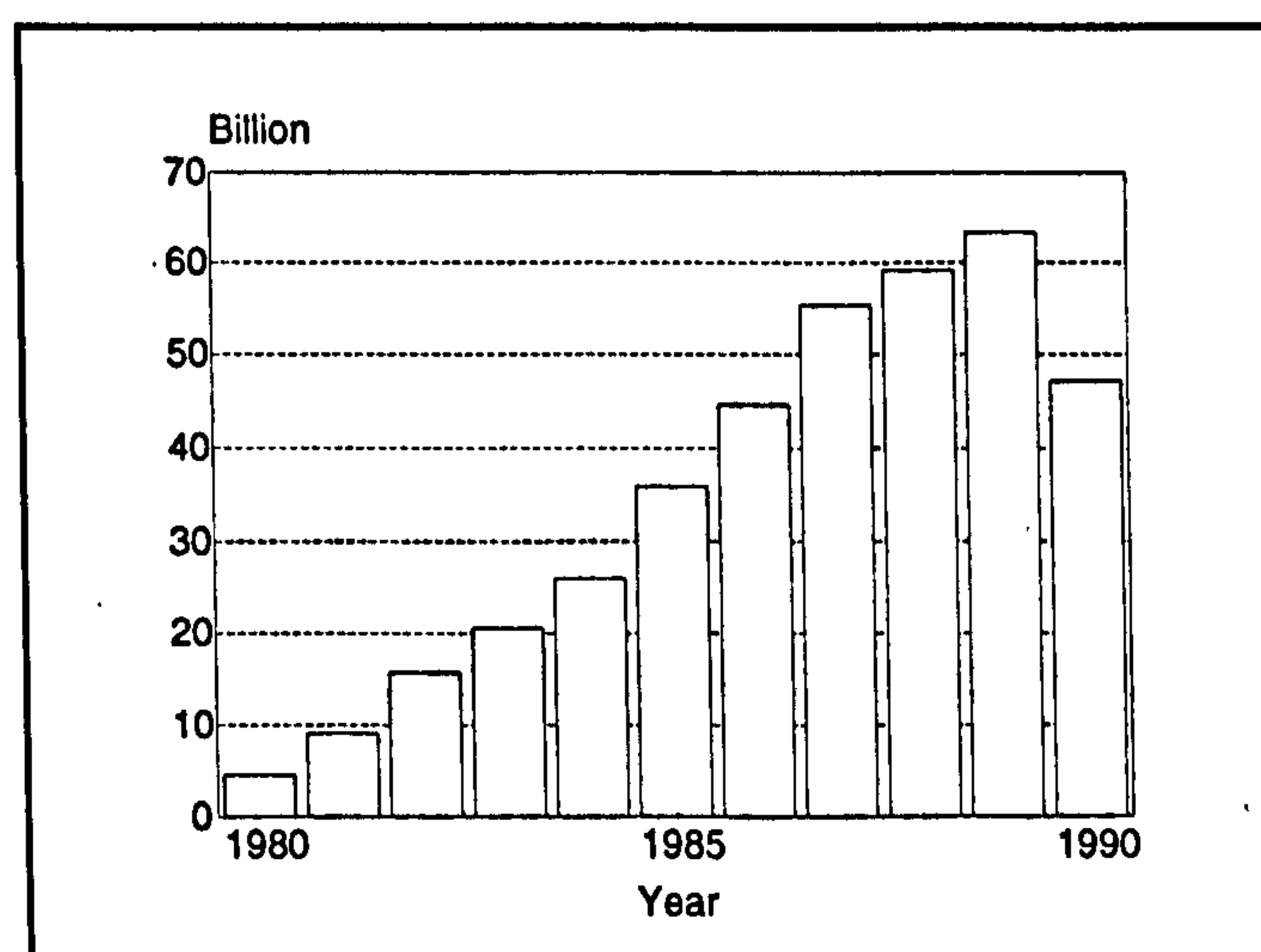
Where ΔOD is the change in outstanding debt,

FI is foreign direct investment,

AC current account deficit/surplus, and

ΔRS is change in reserves.

Figure (6.17)
Capital flight from Egypt 1980-90



Source: Author's own calculations, data obtained from the World Bank, World Tables.

¹⁰⁹ See NBE (1988), p. 239.

¹¹⁰ *ibid.*, 231. This estimate is close to an estimate given by a former prime minister of Egypt who was in office in mid 1980s.

We realise, from figure (6.17) that the accumulation of capital flight increased during the 1980s reaching its maximum in 1989 with an estimated figure of £E 63.32 (US\$ 32.6) billion. However due to a decrease in the outstanding debt in 1990, thanks to the Paris club negotiations and the writing of some of the debt by the USA and the Gulf states during the Gulf war, and an improvement in the current account deficit capital flight decreased.

Table (6.14)
Estimates of capital flight in Egypt and selected LDCs

Country	Period of estimation	Average capital flight in percentage of change in external debt
Argentina	1973-87	61.3
Brazil	1973-86	16.1
Chile	1973-87	-19.3
Mexico	1973-87	63.9
Peru	1973-87	19.9
Venezuela	1973-87	132.1
Egypt	1980-90	152

Source: For Egypt as in figure (6.17), for the rest of the countries, Pastor (1992), P. 3.

From table (6.14) we realise that with the exception of Chile which had a negative capital flight. All countries experienced capital flight but with various magnitudes. Egypt had the highest ratio of capital flight to the change in external debt. Both Egypt and Venezuela had estimates of capital flight that exceeded the change in their external debt by 52% and 32.1% respectively.

Given its estimated magnitude, we argue that the remedy for the capital flight problem in Egypt does not rely only on the improvement of real interest rates. This reform measure would be useless in the presence of distortions in the foreign exchange rate market, expectations for further devaluation and higher inflation rate, poor investment climate and/or corruption. Hence reforms are needed at both the economic and political levels to reduce the size of capital flight. Such reforms are required to bring confidence in the economy and credibility of the economic policy.

(6.6) Concluding remarks:

Not only was financial repression prevalent in Egypt over the 1960-90 period, the government had an incentive to maintain it given the large budget deficit which was main cause for repressing the financial sector.

The bank financing of budget deficit took explicit forms like extracting revenue from money creation and the inflation tax. The average seigniorage revenue was as high as 2.69% of GDP during the 1961-90 period while the inflation tax averaged 2.98% of GDP during the 1960-90 period. Both are substantially high by international standards. However Egypt managed to generate such high revenues at low inflation rates thanks to the relatively large monetary base.

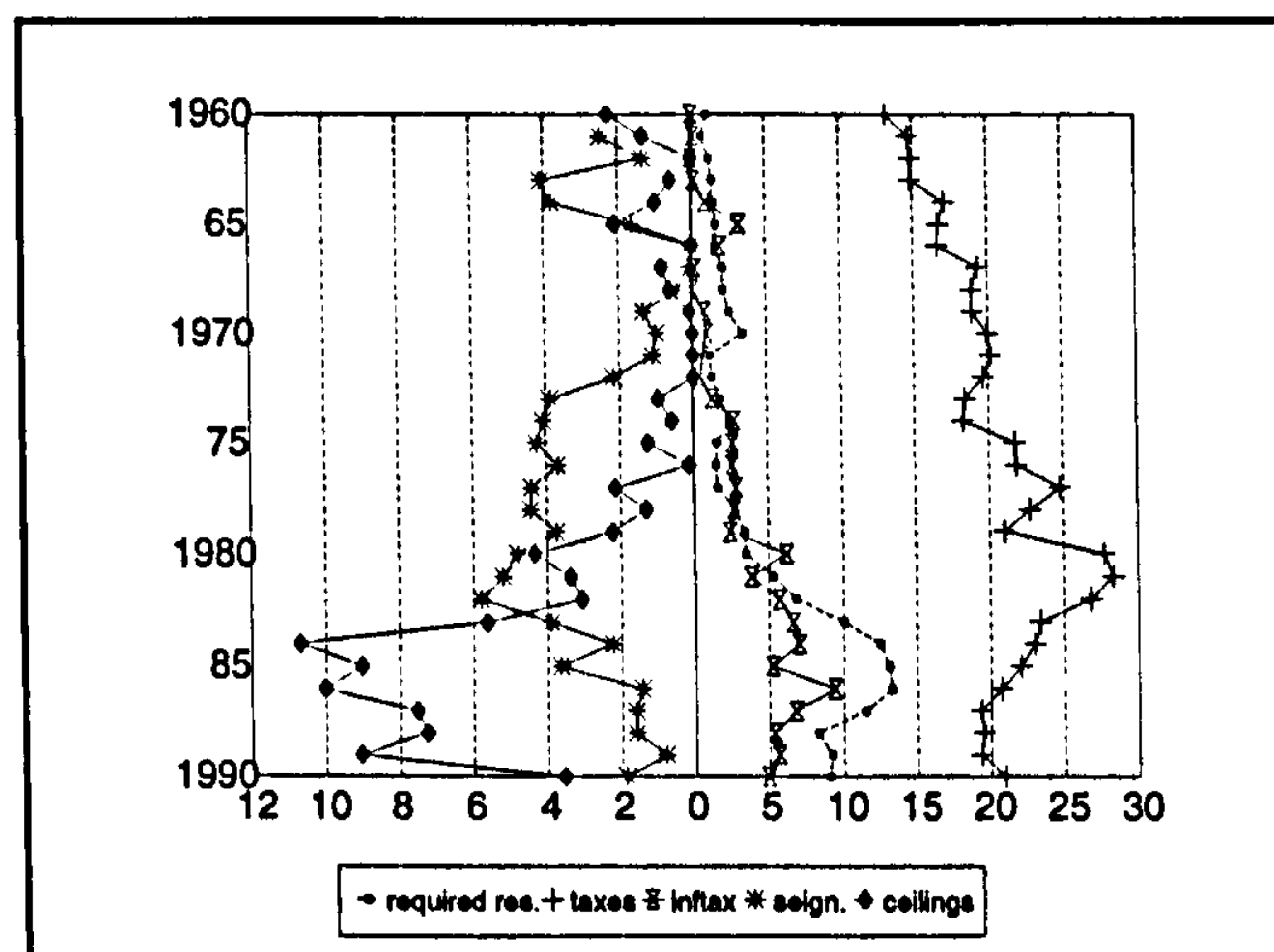
By imposing ceilings on deposit rates the government managed to generate additional revenue from financial repression estimated at 2.76% of GDP over the period 1960-90. The negative real interest rates did not prevent some growth of financial savings, attributed *inter alia* to different factors like money illusion, lack of alternatives and restrictions on substitutes.

There was an extensive use of the required reserve ratio beyond its function as a measure of monetary policy and a prudential method, mainly to finance budget deficit. This resulted also in a relatively high spread. Government intervened as well in the allocation of credit and the composition of bank portfolios to fulfil the same objective, financing the large fiscal deficit. Moreover to facilitate its control over the credit market government owned some financial intermediaries through nationalisation.

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Figure (6.18) compares government revenues extracted from the repressive measures analysed above with explicit, direct and indirect, taxes¹¹¹ over the period 1960-90, as a percentage of GDP. It should be noted that the some of the financial repression do overlap, e.g. inflation tax and reserve requirements, hence caution is required when comparison is made between them.

Figure (6.18)
A comparison between government revenue from financial repression and taxation (% of GDP)



Source: Author's own calculations, where required res. is required reserves, taxes are direct and indirect taxes, inftax is inflation tax, seign. is seigniorage and ceilings are interest rate ceilings.

Financial repression had unfavourable consequences, such as the increase of hoarding gold, and the contribution to the problems of money substitution and capital flight in addition to the rise of informal financial activities especially those of the Islamic Investment Companies. It also adversely affected both the internal management of banks, their solvency and operating efficiency, and the condition of the banking system as a whole which suffers from lack of competition, high interest rate spreads, high ratio of non performing loans, in addition to various distortions in the credit market.

¹¹¹Data on taxes are obtained from the World bank (1992c).

Given the conditions of the credit market, financial liberalisation would not be a remedy for the problems. Several measure should be taken prior to and along with liberalisation. Sound macroeconomic policies, expedient fiscal practice and controlling the budget deficit are items of one bundle of prerequisites. The second bundle includes prudential regulation and adequate monitoring and supervision without the interference with the managerial autonomy of intermediaries. Moreover institutional restructuring is required to support liberalisation, in addition to the improvement of managerial skills and staff training.

Chapter (7)

An Econometric Analysis of the Impact of Real Interest Rate on Saving, Investment and Economic Growth In Egypt: 1960-90

(7.1) Introduction:

As the previous chapter has shown, the Egyptian financial system during 1960-1990 was repressed in the sense that the government intervened in its mechanisms by setting ceilings on deposit and lending interest rates, imposing a relatively high ratio of required reserves and determining the allocation of credit to particular projects according to economic plans.¹ Since the mid 1970s, under partial liberalisation of the banking system, as discussed above, nominal interest rates have increased gradually, but the real interest rate has continued to be slightly negative.

Despite the negative real interest rates, financial savings in the formal sector grew steadily by an average annual rate of 23.9%.² Such growth can be chiefly attributed to the windfall of foreign resources, i.e. the dues of Suez Canal, revenue of oil exports, remittances of Egyptian workers in the Gulf States, and earnings from tourism, during the 1970s and 1980s. It is worth noting however that the large amount of foreign currency denominated in the total deposits contributed to this increase as their value in domestic currency rose alongside the gradual devaluation of the Egyptian pound.

In January 1991, Egypt started, in accordance with the IMF and the World Bank, an economic reform programme with financial liberalisation as one of its central components. While it is still early to judge the outcome of these recent reform measures, an analysis of the financial repression period of 1960-90 should help to give an

¹See chapter (6) for an analysis of different forms of financial repression in Egypt.

²Calculated from the IMF (1989) and (1990), International Financial Statistics, Year Books.

understanding as to whether the country is proceeding with the appropriate model for reform and what are the possible consequences.

In this chapter we examine by econometric methods the determinants of financial and total saving, investment and economic growth in Egypt during the period of 1960-90. All regressions are carried out using ordinary least squares, and where necessary, the Cochrane-Orcutt procedure is used to deal with first order serial correlation problem.

The results of our estimation of the models, which takes a logarithmic form³, are presented in the form of a table. Different versions of the model are achieved by altering the combinations of explanatory variables, due to the multicollinearity of the variables.

(7.2) A note on data:

Undertaking any meaningful empirical analysis of a developing country like Egypt, that suffers from a dearth of reliable information, is a daunting task. Some of the essential information is not available as a complete series, while some can be found but, alas, is not consistent. This is probably the reason why Egypt is empirically under-researched. Main points on the data used in our estimates are discussed below. Further, our database with the relevant sources is provided in appendix number (2).

• The only available indicators of the development of financial intermediation in Egypt, as in the case of other LDCs, are the intermediation ratios in financial assets. The aggregation of interest-bearing and non-interest bearing financial assets results in estimation problems that arise from the use of 'too broad' an index of financial deepening.⁴ Thus following Gupta (1984) and Himani (1992) we consider the values of

³Natural variables are used when the variable has negative observations as in the case of real interest rate (π) and interest rate differentials (Z).

⁴See Gupta (1984), p. 11.

these two kinds of asset separately. Other indicators of the development of financial intermediation and deepening, like banking density, and other intermediation ratios as suggested by Goldsmith (1969) are not available for all the years under study.

- The consumer price index, CPI, from which the inflation rate is calculated, as its percentage change, may not always be representative of actual selling prices in Egypt, for several reasons: first, sampling is not undertaken frequently. Second, administered rather than actual prices of goods and services are used. Third, politics may intervene, so an 'adjusted' rather than 'actual' change of the index may be reported⁵. Thus we frequently find that there is more than one inflation rate in different official reports.

- The interest rate used to calculate the real interest rate is the upper margin offered on fixed term deposits for less than one year. We used the same rate as a proxy for the cost of investment. While the lending rate may be a more relevant measure, it is not available for the whole series. Applying a sector-based interest rate structure in some of the recent years added to the difficulty of obtaining a 'unique' lending rate for the recent years.⁶

- Real interest rate calculated as: $[(1 + i_d)/(1 + \pi^*) - 1]$ where i_d and π^* are deposit interest rate and expected inflation respectively. We assume rational expectations, i.e. the expected rate of inflation equals the actual rate of inflation measured as the percentage change of CPI .

- Rates on US treasury bills are used for the relevant years as a proxy for international interest rates.

⁵In some years, in the 1960s, we found a negative inflation rate, see appendix (2).

⁶See the previous chapter for a discussion of this point.

- We used the parallel market exchange rate premium as a proxy for expected devaluation of exchange rate since proved to be more realistic than the officially determined exchange rate.
- The measures of gross domestic product, GDP, and hence gross national product, GNP, for some years suffer from inconsistency with gross sectoral outputs, public finance and balance of payments statistics.⁷
- Measurement errors in savings figures are well known in LDCs,⁸ and Egypt is not an exception. Saving being calculated as the difference between domestic investment and foreign saving, both of which are subject to measurement error, may result in misleading estimates. However we use the ratio of gross national saving in preference to other measures of saving for analytical and practical reasons. First, as argued by Fry (1988),⁹ national saving reflects the country's capability of mobilising savings at home and abroad, while domestic example would underestimate this effort as net factors income from is excluded from it by definition. Second the net value of national saving in Egypt suffers from inconsistent and arbitrary use of depreciation measures during the time series under research, so the gross value of national saving is used. Third, we found that the data on gross national saving is probably the most reliable and complete when compared to other measures of saving.

⁷This problem was also alluded to in the IMF's (1992) country report on Egypt, p. 80.

⁸On the issue of measurement error of saving see for example Gupta (1984), p. 215 Gersovitz (1988), pp. 413-418, and Balassa (1989), pp. 17-18.

⁹See Fry (1988), p. 133.

- Disaggregated data on credit are not available in a complete series, so we are not able to test the impact of interest rate policy on private and public sector separately or at a sectoral level. Moreover the impact of government intervention in credit policy, via allocation of loanable funds to different sectors and projects, is difficult to analyse due to the unavailability of data.

- It is important to examine the effect of after-tax real interest rates¹⁰ on the macroeconomic variables considered in this analysis. However in the case of Egypt the return on all deposits has been exempt from taxes since 1981.¹¹ Before 1981 various kinds of deposit accounts were also not taxable while others were not. In the case of borrowing some companies established according to the *infitah* laws were offered tax holidays from five to ten years.¹² Moreover some other borrowers were allowed to consider interest as a deductible expense, i.e. it was not taxable. Thus as there is not a universal tax rate on all interest earning, before 1981, and because of the discrepancy in the treatment of borrowers we were not able to include the 'effective' real rate of interest in our models.

- Data on net national investment may suffer, as in the case of saving, from arbitrary use of depreciation allowances, so we use gross national investment. However it is only the impact of interest rate policy on the size of investment which is tested; the effect on the quality of investment, one of the powerful arguments of the financial liberalisation school, was not analysed because reliable data, even on the frequently used indicator of investment quality, i.e. the incremental capital-output ratio¹³, were not available.

¹⁰On this issue see Boskin (1978) and Harvey and Jenkins (1993).

¹¹See chapter (6).

¹²See chapter (1).

¹³However there is a problem in the use of the ICOR under the assumption that the average efficiency of investment is monotonically related to it.

We undertake this study bearing in mind the data limitations and constraints which require caution in interpreting the results of our estimations.

(7.3) Models and estimation results:

(7.3.1) The demand for non-interest bearing assets:

The demand for non-interest bearing assets is estimated using the following equation:

$$(M/Y)_t = \alpha_1 + \alpha_2 (i_d - \pi)_t + \alpha_3 (M/Y)_{t-1} \quad (7.1)$$

Where:

M is currency outside banks and demand deposits

Y is GNP

$(i_d - \pi)$ is the real interest rate.

In equation (7.1) the impact of financial liberalisation on non-interest bearing financial assets is measured through the inclusion of the real interest rate as a dependent variable.

We notice that there are two effects in operation. First a higher real interest rate, according to the McKinnon-Shaw approach, would lead to a shift from non-interest bearing to interest bearing financial assets; second, a negative real interest rate would result in reducing financial deepening in all assets. Hence the sign of the coefficient of the real interest rate will be determined by the dominant factor.

Table (7.1)
Demand for non-interest bearing assets $\ln(M/Y)$

Eq. No.	Constant	$(i_d - \pi)$	$\ln(M/Y)_{t-1}$	D-W F	R^2	\bar{R}^2
1	-0.1435 (-1.055)	0.0125 (0.028)	0.86 (7.511) ^c	1.38 43.257	0.76	0.43

\ln is the natural logarithm.

Figures in parentheses are t statistics.

^c indicates significance at 99% confidence level.

D-W is the Durbin-Watson test. Note that Durbin's h statistic¹⁴ is reported instead of D-W in the case of the presence of a lagged dependent variable in the model.

As shown in table (7.1), the impact of the real interest rates on non interest bearing financial assets is positive but statistically insignificant.

¹⁴Durbin's h statistic is computed using SHAZAM Econometric Program version (6.1).

(7.3.2) Financial saving and its determinants:

We make a distinction between financial saving and total saving, noticing that the former is just one type of the latter and hence we test the impact of the real interest rate on them separately.

To test the impact of the real interest rates on the demand for interest bearing financial assets, we consider the total of financial saving, as a ratio to GNP. In addition to the real interest rate $(i_d - \pi)$ and per capita income (y) as independent variables, we also include an independent variable (Z) which equals $[(i_d - \pi) - (i_d - \pi)' - \phi]$. The variable (Z) measures the difference between domestic real interest rate $(i_d - \pi)$ and international real interest rate $(i_d - \pi)'$ adjusted for expected devaluation (ϕ) of the Egyptian pound. Again, under the assumption of rational expectations, the expected rate of devaluation equals its actual rate. As a proxy for the international real interest rate we continue to use the rate of return on US treasury bills.

The demand for interest bearing financial assets takes the form:

$$(FL/Y)_t = \alpha_4 + \alpha_5 (i_d - \pi)_t + \alpha_6 (FL/Y)_{t-1} + \alpha_7 y_t + \alpha_8 Z_t \quad (7.2)$$

Table (7.2)
Demand for Interest bearing financial assets $\ln(FL/Y)$

Eq. No.	Constant	$(i_d - \pi)$	$\ln(FL/Y)_{t-1}$	$\ln y$	Z	D-W F	R ²	\bar{R}^2
2	-4.9569 (-24.080) ^a	1.0987 (1.007)		0.63771 (15.414) ^a		0.575 165.37	0.92	0.28
3	-1.1078 (-1.993) ^b		0.78209 (6.905) ^a	0.15287 (2.188) ^b		1.49 463.33	0.97	0.32
4	-1.2158 (-2.194) ^b	0.87529 (1.526)	0.77484 (6.928) ^a	0.17629 (2.478) ^b		1.51 318.16	0.97	0.37
5	-1.3280 (-2.362) ^b	1.1231 (1.711) ^a	0.73595 (6.280) ^a	0.18132 (2.551) ^b	-0.29354 (-1.077)	1.75 240.38	0.97	0.44

\ln is the natural logarithm.

Figures in parentheses are t statistics.

^a, ^b, and ^c indicate significance at 90%, 95% and 99% confidence levels respectively.

D-W is the Durbin-Watson test. Note that Durbin's h statistic is reported instead of D-W in the case of the presence of a lagged dependent variable in the model.

Table (7.2) shows that although the effect of the real interest on financial saving is positive, as hypothesised by the M-S school, it is only statistically significant in one equation (6) and only at 90% confidence level. Though somehow surprising this evidence is consistent with our analysis in the previous chapter regarding the growth of financial saving, despite the negative real interest rate.¹⁵ However a positive impact of real interest rate, if any, does not imply an increase in net saving in the economy, rather it might result from a portfolio shift from real assets and/or from assets held abroad.

The coefficients of per capita income and lagged financial intermediation ratio have the expected positive signs and are statistically significant in all equations. Moreover we realise that the sign of the devaluation adjusted interest rate differentials (Z) is negative but insignificant. A possible explanation is that the outflow of capital was offset by an inflow in the form of workers' remittances. Another explanation might be that the holding of foreign currency denominated assets with internationally competitive returns, which is included in the value of FL in equation (7.2), leads to such a lack of impact from interest rate differentials on financial savings.

(7.3.3) Total saving and its determinants:

To test the impact of the real interest rates on saving we estimate the ratio of national saving as a function of the real deposit interest rate ($i_d - \pi$), per capita income (y), the term (Z) which is defined as in equation (7.2). The two ratios of (M/Y) and (FL/Y), as measures for financial deepening, are used to test McKinnon's hypothesis regarding the positive impact of the degree of financial intermediation on saving. Further we include two dummy variables DUMLIB and DUM87. The first measures the impact of economic liberalisation policies started in 1974¹⁶. We argue that such policies started to operate in

¹⁵Chapter (6), pp. 223-226; see particularly figure (6.9) and table (6.6).

¹⁶See our discussion of the economic liberalisation measures, which has started in 1974, in chapter (1).

1975, so DUMLIB takes the value of (1) for the years 1975-1990 and (0) otherwise. The second dummy variable (DUM87) represents the effect of the sharp fall in oil prices in 1985,¹⁷ and its accompanying decline in the main foreign revenues from the Suez Canal, remittances of Egyptian workers in the Gulf states and tourism.

$$(S/Y)_t = \alpha_9 + \alpha_{10} (i_t - \pi)_t + \alpha_{11} (M/Y)_t + \alpha_{12} (FL/Y)_t + \alpha_{13} (S/Y)_{t-1} + \alpha_{14} Z_t + \alpha_{15} y_t + \alpha_{16} \text{DUM87} + \alpha_{17} \text{DUMLIB} \quad (7.3)$$

Table (7.3)
Saving functions $\ln(S/Y)$

	Const.	$(i_t - \pi)$	$\ln(M/Y)$	$\ln(FL/Y)$	$\ln(S/Y)_{t-1}$	Z	$\ln y$	DUM87	DUMLIB	D-W F	R ²	\bar{R}^2
6	-0.8643 (-0.43)		2.081 (2.56) ^b	-0.838 (-1.89) ^a	0.581 (3.8) ^c		0.147 (0.59)			2.39 16.7	0.73	0.54
7	-0.8766 (-0.420)	0.068 (0.03)	2.087 (2.45) ^b	-0.842 (-1.80) ^a	0.582 (3.7) ^c		0.150 (0.54)			2.39 12.8	0.73	0.69
8	-0.9681 (-0.43)	0.159 (0.06)	2.069 (2.34) ^b	-0.860 (-1.71) ^a	0.577 (3.5) ^c	-0.13 (-0.1)	0.154 (0.54)			2.39 10.3	0.73	0.66
9	1.1554 (3.2) ^c	-0.72 (-0.5)			0.626 (7.5) ^c		0.471 (1.74) ^a	-1.646 (-6.7) ^c	0.898 (4.4) ^c	1.76 52.2	0.91	0.79
10	1.8347 (1.47)	-0.46 (-0.4)	0.950 (1.80) ^a	-0.095 (-0.33)	0.569 (6.7) ^c		0.439 (1.87) ^a	-1.658 (-7.0) ^c	0.732 (3.2) ^c	1.80 41.3	0.93	0.82

\ln is the natural logarithm.

Figures in parentheses are t statistics.

^a, ^b, and ^c indicate significance at 90%, 95% and 99% confidence levels respectively.

D-W is the Durbin-Watson test. Note that Durbin's h statistic is reported instead of D-W in the case of the presence of a lagged dependent variable in the model.

The results of our estimation show that the sign of the real interest rate coefficient is positive, in equations (7) and (8) and negative in equations (9) and (10), is at all times statistically insignificant. Clearly the McKinnon-Shaw argument of a positive effect of real interest rates on saving is not supported. The sign on interest rate differentials is negative but also insignificant.

¹⁷ Note that although the drop in oil prices occurred in 1985, we consider the dummy variable for 1987 for two reasons: first because of the lagged effect of such external shock. Second, part of 1986 is included in the dummy as the fiscal year in Egypt starts runs from July to June.

Our findings regarding the insignificant effect of the real interest rate is consistent with the argument that "the offsetting income and substitution effects of increased interest rates imply that the net impact on saving must be ambiguous"¹⁸. Moreover our results are similar to those of several other econometric studies which found no real interest rate effect on saving.¹⁹

On the other hand, the estimates show that while the sign on the coefficient of non-interest bearing financial assets is positive and strongly significant, the sign on the interest-bearing assets is negative and significant, at a 90% confidence level, in equations (6), (7) and (8) and insignificant in (9). This cannot give us either firm support or rejection of the impact of the development of the two financial intermediation ratios on saving, which is hypothesised to be positive by the M-S school. On the other hand we note that the sign of the per capita income is positive in all equations but statistically significant only in equations (9) and (10).

As in the case of financial saving equation, the impact of the devaluation adjusted interest rate differentials (Z) was insignificant. A study by El-Erian (1988) on currency substitution in Egypt also demonstrated that changes in the proxy for interest rate differentials were not significant. The reason given was that the repressed interest rate is 'a poor indicator of available alternative returns to holding domestic balances'²⁰. Examples of these available alternatives in Egypt during the study period are the foreign currency denominated deposits in the banking sector and funds held with the informal IICs as discussed above.

¹⁸Dornbusch and Reynoso (1989), p. 205. For further analysis of this issue see Deaton and Muellbauer (1988), pp. 101-103.

¹⁹See for example Giovannini (1983) and Warman and Thirlwall (1994). For a review of empirical evidence see chapter (2) of this thesis.

²⁰See El-Erian (1988), pp. 98-99.

As expected, the sign of the overall economic liberalisation measures in the period (1975-1990) is positive and strongly significant. Nevertheless, it is worth noting that this period witnessed the rise in government revenues from 'exogenous' sources in the sense that they were not necessarily related to the economic policy regime, like the rise in oil prices and workers remittances' and Suez Canal dues. However one may argue that a restrictive policy would have denied the country the benefits of such exogenous resources. Preventing foreign oil companies from undertaking exploration projects, not granting permission to potential workers in the Gulf states and imposing tight restrictions on the transfer of capital are examples of measures undertaken in the 1960s. These would have been sufficient, we argue, to deny the country the benefits of such exogenous sources should they have been in operation in the 1970s and 1980s instead of what is known as *infitah*, open door, measures. Regarding the impact of the international oil price shock of 1986/1987, our estimates show that it had an adverse impact on saving as its coefficient is negative and strongly significant.

(7.3.4) Investment and the impact of the real interest rate:

i) The real interest rate and credit:

The impact of the real interest on investment works through indirect and direct channels. By indirect we refer to the impact of real interest rate on investment via the supply of credit. Thus in equation (7.4) we estimate the supply of total credit as a ratio to GNP (CRD/Y), as a function of the real interest rate ($i_d - \pi$), the ratio of effective reserve requirements (RR), and the overall liberalisation dummy variable DUMLIB. We estimate a similar equation (7.5) for the supply of private credit (PRCR).

Total credit:

$$\begin{matrix} (\text{CRD}/\text{Y})_t = \alpha_{18} + \alpha_{19} (i_d - \pi)_t + \alpha_{20} (\text{CRD}/\text{Y})_{t-1} + \alpha_{21} y_t + \alpha_{22} \text{RR}_t + \alpha_{23} \\ \text{DUMLIB} \end{matrix} \quad (7.4)$$

Private credit:

$$\begin{matrix} (\text{PRCR}/\text{Y})_t = \alpha_{24} + \alpha_{25} (i_d - \pi)_t + \alpha_{26} (\text{PRCR}/\text{Y})_{t-1} + \alpha_{27} y_t + \alpha_{28} \text{RR}_t + \alpha_{29} \\ \text{DUMLIB} \end{matrix} \quad (7.5)$$

Table (7.4)
Total Domestic Credit Functions $\ln(\text{CRD}/Y)$

	Constant	$(i_r - \pi)$	$\ln(\text{CRD}/Y)_{t-1}$	$\ln y$	$\ln \text{RR}$	DUMLIB	D-W F	R^2	\bar{R}^2
11	-0.912 (-2.558) ^a	0.6733 (1.553)	0.4944 (3.167) ^c	0.1316 (2.293) ^b		0.15535 (2.668) ^b	1.91 199.3	0.97	0.43
12	-0.0386 (-0.580)	0.5898 (1.330)	0.6314 (5.189) ^c		0.1207 (1.867) ^a	0.2707 (3.441) ^c	2.01 187.3	0.97	0.39

Table (7.5)
Total Private Credit Functions: $\ln(\text{PRCR}/Y)$

	Constant	$(i_r - \pi)$	$\ln(\text{PRCR}/Y)_{t-1}$	$\ln y$	$\ln \text{RR}$	DUMLIB	D-W F	R^2	\bar{R}^2
13	-1.1970 (-2.839) ^c	1.071 (1.319)	0.6503 (4.851) ^c	0.1228 (2.801) ^c			1.99 41.13	0.83	0.33
14	-0.45577 (-2.110) ^b	1.3918 (1.675)	0.7091 (6.117) ^c		0.0668 (0.876)	0.2396 (3.0444) ^c	2.23 32.424	0.84	0.41

\ln is the natural logarithm.

Figures in parentheses are t statistics.

^a, ^b, and ^c indicate significance at 90%, 95% and 99% confidence levels respectively.

D-W is the Durbin-Watson test. Note that Durbin's h statistic is reported instead of D-W in the case of the presence of a lagged dependent variable in the model.

Table (7.4) and table (7.5) show that the indirect impact of the real interest rate on total and private investment, measured respectively as a ratio of total credit and private credit to GNP, is positive but statistically insignificant. This finding indicates that the credit policy is not chiefly influenced by interest rate but rather by other measures, such as government intervention in credit allocation and subsidies, discussed in chapter (6).

We also note that the reserve requirements ratio is positive, but significant only in the case of total domestic credit equation (12). The positive coefficients of per capita income and lagged credit ratios dominate the equations. The same goes for the positive coefficient of the overall liberalisation dummy variable.

ii) The determinants of Investment

The direct impact of the real interest on investment is estimated by two methods: the first by equation (7.6) and the second by a switching model described in equation (7.7). In equation (7.6) we consider the ratio of gross national investment to GNP (I/Y), as a

function of the real interest ($i_d - \pi$), the supply of credit (CRD/Y), the two ratios of financial intermediation (M/Y) and (FL/Y), and the two dummy variables DUM87 and DUMLIB.

$$(I/Y)_t = \alpha_{30} + \alpha_{31} (i_d - \pi)_t + \alpha_{32} (I/Y)_{t-1} + \alpha_{33} (M/Y)_t + \alpha_{34} (FL/Y)_t + \alpha_{35} (CRD/Y)_t + \alpha_{36} \text{DUM87} + \alpha_{37} \text{DUMLIB} \quad (7.6)$$

Equation (7.6) is used as well to test McKinnon's 'complementarity' hypothesis which assumes a positive relationship between the accumulation of cash balances and physical capital based on an assumption that the former should precede the accumulation of physical capital due to its indivisibility.²¹ If the sign of the coefficient of $(i_d - \pi)$ is positive the complementarity hypothesis is accepted, while if it is negative the hypothesis is rejected, which means an acceptance of the 'asset-competing' effect with the well known negative relationship between investment and interest rate.²²

Table (7.6)
Investment functions $\ln(I/Y)$

	Constant	$(i_d - \pi)$	$\ln(I/Y)_{t-1}$	$\ln M/Y$	$\ln CRD/Y$	$\ln FL/Y$	DUM87	DUMLIB	D-W F	R ²	\bar{R}^2
15	-0.415 (-1.74) ^a	-0.633 (-0.624)	0.7336 (5.01) ^c		0.051 (0.47)				1.64 23.0	0.73	0.29
16	0.023 (0.052)	-0.643 (-0.69)	0.575 (3.82) ^c	0.804 (2.70) ^b	0.105 (0.34)	-0.129 (-0.83)			1.65 18.9	0.79	0.43
17	-0.578 (-1.291)	-0.579 (-0.75)	0.2468 (1.43)	0.882 (3.57) ^c	-0.526 (-1.58)	0.047 (0.34)	-0.3801 (-2.77) ^b	0.4662 (2.600) ^b	1.82 21.8	0.87	0.48
18	-1.045 (-3.34) ^c	-0.848 (-1.10)		0.953 (3.86) ^c	-0.613 (-1.8) ^a	0.034 (0.24)	-0.3985 (-2.86) ^a	(0.644) (4.88) ^c	1.78 24.0	0.86	0.67

\ln is the natural logarithm.

Figures in parentheses are t statistics.

^a, ^b, and ^c indicate significance at 90%, 95% and 99% confidence levels respectively.

D-W is the Durbin-Watson test. Note that Durbin's h statistic is reported instead of D-W in the case of the presence of a lagged dependent variable in the model.

As shown in table (7.6) all equations show that the real interest rate is statistically insignificant. Thus McKinnon's complementarity hypothesis is rejected. This econometric

²¹McKinnon (1973), pp. 57-61.

²²For a discussion of this point see Gupta (1984), pp. 12-18.

evidence adds to the scepticism, already present in the literature,²³ regarding the validity of M-S hypothesis on the positive effect of the real interest on investment.

On the other hand, in equations (16), (17) and (18) we find that the ratio of financial intermediation in non-interest bearing financial assets is significantly positive but that of interest-bearing assets is not. Again we cannot accept the argued proposition of a positive impact of financial deepening on the quantity of investment.

Moreover the insignificant coefficient of financial saving ratio, (FL/Y) , raises doubt regarding the efficiency of the formal financial sector in the allocation of loanable funds in a way that augment investment. We realise that the positive impact of the real interest on financial saving held with the formal sector did not have the expected positive effect on investment. This casts some doubts on the proposed advantages of raising the real interest rate of the formal sector as put forward by the M-S school. Some of the possible results of an insufficiently high real interest rate regime in Egypt are the discouragement of investment, increasing the perceived default risks and worsening the problem of excess liquidity in the banking system that may force banks to indulge in imprudent decisions.²⁴

We argue that a *ceteris paribus* increase of the real interest rate may be as deleterious as setting it too low. As clearly stated by several authors, determining the appropriate interest rate is dependent on the specific institutional, macroeconomic and financial conditions as well as the historical characteristics of the country concerned.²⁵

²³ See for example Diaz-Alejandro (1985), Dornbusch and Reynoso (1989), Rittenberg (1991), Demetriades and Devreux (1992) and Warman and Thirlwall (1994). For a review of these studies see Chapter (2).

²⁴ Because of the recent increase in deposit interest rates, after applying the financial liberalisation programme in January 1991, commercial banks have had an excess liquidity problem. This problem pushed banks into ruthless competition to offer personal loans, mainly for consumption purposes. As reported by senior bank officials, in Al-Ahram Daily Newspaper, 14/8/1994, defaults have been due to imprudent credit decisions by banks anxious to overcome the problem.

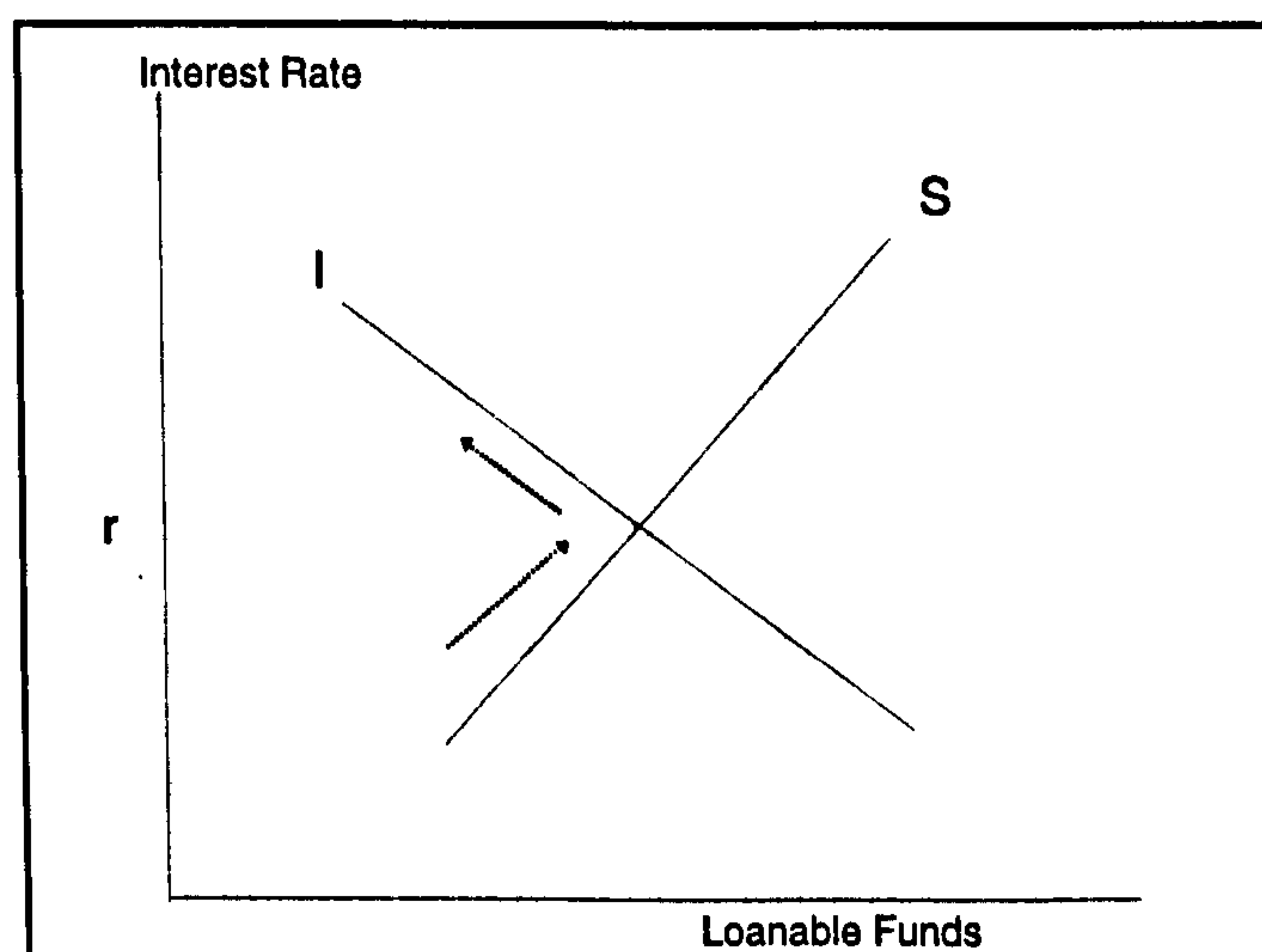
²⁵ For analysis of the issue of the appropriate interest rate, see Roe (1982), pp. 214-219, Calvo (1990), pp. 7-14 and Rittenberg (1991), p. 164.

However the explanatory variables which appear to have an influence on investment are: lagged investment, in equations (15), and (16); the dummy variable of oil prices shock with its expected negative sign, and the dummy variable for overall economic liberalisation with its expected positive sign, as shown in equations (17) and (18).

iii) A switching regime model for investment:

This second method is used to analyse the determinants of the level of gross fixed investment during the period 1960-1990. As mentioned briefly above, Interest rate has two conflicting effects on investment; first it has an indirect positive effect through its impact on the mobilisation of financial saving. Second interest rate, as a cost of credit, has a direct negative effect on investment.²⁶ However, according to the classical theory, as shown in figure (7.1), if the real interest rate lies above its equilibrium level, investment is negatively correlated with interest but if the interest rate is below its equilibrium level, investment will be constrained by saving and become positively correlated with interest.

Figure (7.1)
Supply and Demand for Loanable Funds



²⁶Warman and Thirlwall (1994), pp. 637-639 and Rittenberg (1991), pp. 154-158.

Another explanation for positive correlation between investment and the real interest rate is attributed to the problem of imperfect information, a characteristic prevalent in most LDCs including Egypt. Because of this problem, as argued by Stiglitz and Weiss (1981), the equilibrium interest rate may not necessarily be the rate which equates investment and the supply of loanable funds. Banks may not increase interest rates even if there is an excess demand for credit as banks' profits would fall if interest rates exceed an optimum interest rate due to higher defaults.²⁷

Thus, from the above discussion, to calculate the net impact of the real interest rate on investment, the two opposing effects, as well as the relationship between interest rate regimes and equilibrium, should be determined. This suggests the use of a switching regime model as developed by Quandt (1958).²⁸

Accordingly we estimate a linear spline investment function for Egypt, for the period 1960-1990, which takes the form:

$$I = \beta_1 + \beta_2 (i_d - \pi) + \beta_3 [(i_d - \pi) - (i_d - \pi)^e] D + \beta_4 X + E \quad (7.7)$$

Where I is gross fixed investment

$(i_d - \pi)$ is the real interest rate

$(i_d - \pi)^e$ is the equilibrium interest rate at the switching point

D is a dummy variable which takes the value of (1) when $(i_d - \pi) > (i_d - \pi)^e$ and (0) otherwise

X is a vector of other variables that affect investment

E is the error term

The vector X includes total supply of credit (CRD) and the lagged change of gross domestic product $\Delta(\text{GDP})_{t-1}$ which is used to measure the accelerator effect on investment. Further the two dummy variables, DUMLIB and DUM87, are included as in the previous investment equation (7.6).

²⁷Rittenberg, op. cit., p. 157.

²⁸The same model has been recently applied by Rittenberg (1991) on Turkey and Warman and Thirlwall (1994) on Mexico.

By substituting in equation (7.7) for vector X, we obtain:

$$I = \beta_1 + \beta_2 (i_d - \pi) + \beta_3 [(i_d - \pi) - (i_d - \pi)^e] D + \beta_4 CRD + \beta_5 (\Delta GDP)_{t-1} + \beta_6 DUMLIB + \beta_7 DUM87 \quad (7.8)$$

The equilibrium interest rate $(i_d - \pi)^e$ was not known, so it was determined by a trial and error process, searching for the value of $(i_d - \pi)^e$ which minimises the sum of squared residuals by fitting equation 6.8 to the data. A programme written in FORTRAN was used to do this process, see appendix number (1). A summary of the results is presented in table (7.7).

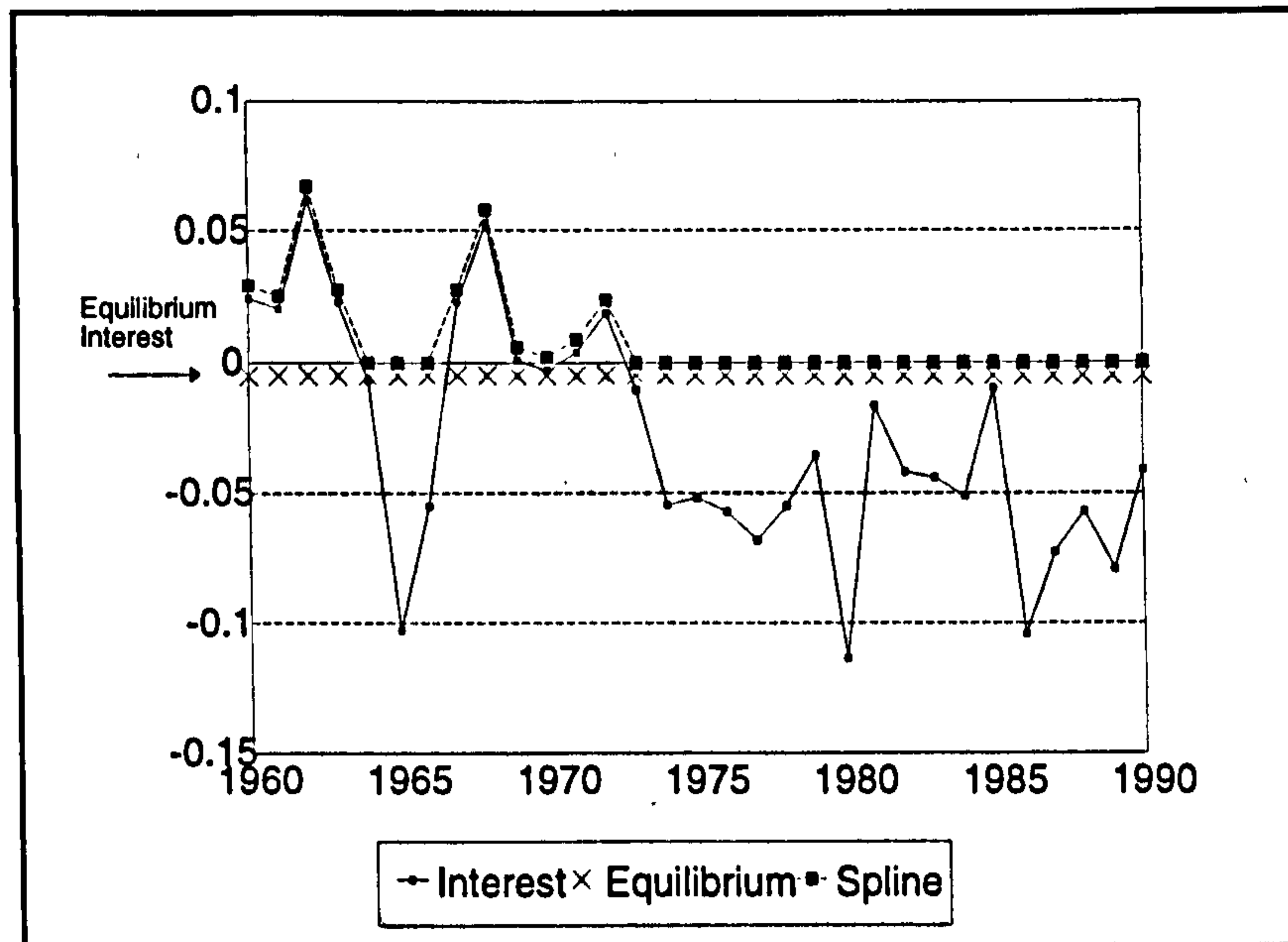
Table (7.7)
Values of Real Interest Rates and Sums of Squared Residuals

Equilibrium real rate of interest $(i_d - \pi)^e$	SSR
-0.0250	0.6301718
-0.0200	0.6301718
-0.0150	0.4941985
-0.0100	0.5655931
-0.0050	0.4892879
0.0000	0.6057563
0.0050	0.7095131
0.0100	0.7095131
0.0150	0.7095131
0.0200	0.7133105

As shown in table (7.7) above, the value of $(i_d - \pi)^e$ which minimises the sum of squares is (-0.005). This value may seem low, but we should be aware that it represents the value of the equilibrium real deposit rate which is used a proxy for the cost of credit. The lending rate, given the relatively high interest spread in Egypt, should be several points higher.²⁹ Figure (7.2) shows that apart from a few exceptional years in the 1960s, the actual real interest rate was generally, though not substantially, negative and below its equilibrium rate.

²⁹ Note that the equilibrium real rate of interest was also low in the two studies of Rittenberg (1991) and Warman and Thirlwall (1994) being zero for both studies, see Rittenberg p. 164 and Warman and Thirlwall, p. 637.

Figure (7.2)
Actual and Equilibrium Real Rate of Interest and the
Linear Spline



The estimated investment equation adopting Quandt switching model and using the Cochrane-Orcutt procedure to correct for the problem of first order serial correlation³⁰, (t statistics in brackets).

$$\ln(\text{INV}) = 0.4904 - 0.9119 (i_d - \pi) - 2.7189 [(i_d - \pi) - (i_d - \pi)^c]D +$$

(1.4949) (0.8953) (2.2497)^b

$$0.7305 \ln \text{CRD} + 0.05422 (\Delta \text{GDP})_{t-1} + 0.3846 \text{DUMLIB} -$$

(15.478)^c (2.7781)^b (3.767)^c

$$0.15275 \text{DUM87} \quad (19)$$

(2.067)^b

^a, ^b and ^c indicate significance at 90%, 95% and 99% confidence levels respectively.
Number of iterations³¹ = 7 at $\rho = 0.725$

$$D-W = 1.86 \quad F = 70.2 \quad R^2 = 0.98 \quad \bar{R}^2 = 0.967$$

³⁰ See for example Maddala (1988), pp. 194-196, Pindyck and Rubinfeld (1991), pp. 141-142 and Judge, et al (1988), pp. 392-393.

³¹ For this procedure we used SHAZAM Econometrics Program, (White et al (1989)).

Equation (19) is well determined and shows that the coefficient of the real interest rate is negative but statistically insignificant. The sign of the coefficient of $[(i_d - \pi) - (i_d - \pi)^c]D$ is negative and significant. This again suggests a rejection of the complementarity hypothesis. Equation (19) also reveals that coefficients of the lagged accelerator effect $(\Delta GDP)_{t-1}$ and the supply of credit are significantly positive. The two dummy variables were also significant and have the expected signs, negative for the oil shock dummy and positive for the overall liberalisation dummy. Similar results have been obtained by the study of Warman and Thirlwall (1994) on Mexico, except that the sign on the spline was not significant³².

Equation (20) gives an estimate of the investment function without the spline. The results are the same as in equation (19).

$$\begin{aligned} \ln(\text{INV}) = & 0.4369 - 0.35989 (i_d - \pi) + 0.7281 \ln \text{CRD} \\ & (1.4311) \quad (0.7597) \quad (15.695)^c \\ & + 0.0568 (\Delta \text{GDP})_{t-1} + 0.4146 \text{DUMLIB} - 0.1507 \text{DUM87} \quad (20) \\ & (2.691)^b \quad (3.853)^c \quad (1.819)^a \end{aligned}$$

^a, ^b and ^c indicate significance at 90%, 95% and 99% confidence levels respectively.

Number of iterations = 8 at $\rho = 0.634$

D-W = 1.93 F = 86.7 $R^2 = 0.987$ $\bar{R}^2 = 0.975$

Our finding of an insignificant role of interest rate on investment behaviour is realised in other empirical studies on both developed and developing countries. "uncertainty about internal rates of return, unsophisticated investment decision procedures, the long run decisions compared to short run fluctuations in interest rates, and the possibility that changes in borrowing costs are overshadowed by variations in demand"³³ would be an explanation for the weak results for the cost of funds in empirical studies of investment determinants.

³² see Warman and Thirlwall (1994), pp. 639-640.

³³ See Shafik (1992b), p. 92.

The insensitivity of investment to interest rate policy can be explained by the existence of other measures that subsumed its role as a market clearing device, which is already weak, in a financially repressed economy. Government subsidies to public investment projects, including subsidised credit costs, and administered allocation of credit may provide an explanation for the interest rate insensitivity of public investment. Regarding the insignificance of interest rate in decisions of private investment, a recent empirical study on Egypt, during 1960-1986, showed that there are demand and supply sides explanations. On the demand side there were the practice of mark-up pricing and the preference of internal funds for investment financing³⁴. On the supply side banks, which had excess liquidity in most of the period under study, applied non-interest-rate criteria for the allocation of credit, such as the reputation of the applicant, the size of the loan or political pressure.

(7.3.5) Real interest rate and economic growth

Finally the impact of the real interest rate on real economic growth (g) is tested in equation (21).

$$g = 0.0536 + 0.2729 (i_d - \pi) \quad (21)$$

(4.545) (1.258)

$$D-W = 1.26 \quad F = 1.588 \quad R^2 = 0.05 \quad \bar{R}^2 = 0.32$$

The coefficient of real interest rate is positive but not significant. Further the relation between real interest and economic growth cannot be determined because the overall regression relation is insignificant.

However this finding is consistent with several studies which found an undetermined relation between interest and growth. For example in a recent paper by Khatkhate (1988)

³⁴ *ibid.*, pp. 92-93 and Shafik (1992a), p. 275.

on a sample of 64 developing countries divided into two groups, below average and above average real interest rates, the main finding was that the real interest rate has little or no impact on economic growth.³⁵

(7.4) Conclusions:

Real interest rate is considered a central variable in the arguments of the financial liberalisation school and those of its critics. A rising positive real interest rate, as explained in chapter (2) of this thesis, is assumed to have a positive impact on the mobilisation of savings, investment and hence economic growth. We have tested these assumptions for Egypt during the period 1960-1990.

It is worth noting that the variation in the real interest rate over the 1960-90 period in Egypt are mainly attributed to changes in the inflation rate rather than the nominal interest rate.³⁶ The latter was kept constant for long periods of time under the imposition of interest rate ceilings as shown in the previous chapter.

Apart from a very tentative evidence of a positive impact on financial saving, we find no evidence to support the argument that the real interest rate has a significant effect on the selected macroeconomic variables of total saving, investment and economic growth.³⁷ We argue that the impact of real interest rate on financial saving works through portfolio shift from tangible assets and/or from assets held abroad. The insignificant effect of real interest on the total saving ratio may be explained by the fact that the substitution and income effects are offsetting each other.

³⁵ See Khatkhate (1988), p. 587. A sceptical view of real interest rate on growth can also be found in Dornbusch and Reynoso (1989), p. 206.

³⁶ See chapter (6) for further discussion of this issue.

³⁷ It is worth noting that the empirical studies, which found a significant effect of real interest rates on the macroeconomic variables were multi country studies in which there was a significant variation in the interest rate over time and/or across countries. Our data set however lacks such variation over the study period. For a review of the empirical studies, see chapter (2).

Further, the econometric results suggest that the real interest rate does not support the complementarity hypothesis, nor does it explain credit policy or investment behaviour in Egypt. This is explained by the extensive use of internal funds, existence of subsidies, Government intervention in credit allocation, and the non-price criteria adopted by banks in their allocation of loanable funds in a repressed environment in the presence of excess liquidity. The insignificant impact of financial saving, mobilised by the formal sector, on investment forces us to question the efficiency of this sector under financial repression in allocating resources. Finally we found that the relation between the real interest rate and real economic growth cannot be determined for Egypt during the period under research.

Accordingly we argue that the problems of the Egyptian economy under financial repression cannot be simply solved by an increase in the real rate of interest, which would lead, *inter alia*, to a discouragement of investment and a further deepening of the problem of excess liquidity of the banking system, which, in turn, would force banks to apply imprudent activities. Further comprehensive institutional and policy changes are required; in the words of Shaw: "the quantum gain in stability must come from concurrent liberalisation of financial, fiscal and international policy"³⁸.

³⁸Shaw (1973), p. 251.

Chapter (8)

Formal and Informal Credit Markets in Egypt: A Survey of four Villages

(8.1) Introduction:

From December 1992 to mid April 1993, the author undertook a survey in four Egyptian villages. The survey was devised to investigate the following issues: household's (HH) portfolio selection in the surveyed area; the HH own valuation of different types of saving instruments; analysis of formal and informal transactions and their determinants; the importance of inflation hedges¹; the role of collective arrangements through Rotating Savings and Credit Associations (RoSCAs) in the four villages; the HH's reaction to the changes in the financial system and monetary policy after January 1991; the possible changes of spending and/or saving decisions as response to hypothetical changes in wealth or income.

There are several reasons for adopting a household focus in the analysis. First, as mentioned above, macroeconomic data on the implications of the financial liberalisation programme of the formal financial sector has not yet been available. Second, due to the nature of informal financial transactions, there is little reliable and systematic evidence is available for detailed scrutiny, whereas it is more likely to get reliable information on informal finance through a household survey. Third, although the reform programme is mainly macroeconomic oriented, an understanding of the microeconomic mechanisms is essential for a better perception of the impact of the programme. The recent growing interest in the microeconomic foundations of macroeconomic policies, including structural adjustment lends support to this argument. Fourth, household survey data can provide direct measures of the impact of changes in economic policy, and highlight the

¹Inflation hedges are defined as assets which enable households and other investors to reduce the risk of loss of purchasing power stemming from uncertainty about the prices of goods. See The New Palgrave Dictionary of Money and Finance (1992), p. 405.

household's reactions to these changes. Fifth, in an area still largely under-researched, particularly in the Egyptian context, a household based analysis may discover some important aspects and explore new areas for research.

This chapter starts with a discussion of the concepts of informal finance and provides a taxonomy of informal financial transactions. Then it discusses the sampling method, the questionnaire and highlights the socio-economic characteristics of the four surveyed villages. The chapter continues by examining the household portfolio structure with an emphasis on the relative importance of different saving instruments.

(8.2) Informal finance in LDCs:

Different terms like parallel, black, underground, shadow, fragmented, unregulated, segmented, curb and informal have been used in the literature to describe miscellaneous forms of economic transactions that survive outside the officially regulated sector.² The multiplicity of the terms has led to confusion about the meaning of them. This confusion has been attributed to the fact that these terms are often employed interchangeably, while they actually describe different features of markets in developing economies.³

Despite the abiding recognition that informal financial markets, (henceforth IFMs), exist on an extensive basis in developing economies,⁴ there is disagreement over their role in the development process.⁵ On the one hand there is the view that IFMs play a negative role in economic development; that they are dominated by usurious money lenders who exploit their market power; that they are fragmented and could be absorbed into the formal sector during the financial development process. This view has led to the

² See Montiel, Agénor and Haque (1993), pp. 7-8.

³ See Jones, Lindauer and Roemer (1991), p. 11 and Peattie (1987), pp. 857-858.

⁴ See Besley (1993), pp. 15-17, for a discussion of the characteristics of financial markets in LDCs and the importance of informal finance.

⁵ For a review of the arguments of the neo-liberals and neo-structuralists regarding the activities of IFMs, see chapter (2).

disparagement of the role of IFMs in the financial development literature and to an increasing emphasis on that of the official intermediaries⁶. According to this view, government policy should restrict the activities of IFMs.

On the other hand, the opposing view claims that IFMs have played an important role in serving those who have fallen outside the purview of the formal financial sector, and that they maintain very low transaction costs because of their comparative advantage in information acquisition and lower administrative costs. Further, they are considered competitive and agile⁷, improving the allocative efficiency of loanable funds. Hence, informal financial markets should be protected from excessive government intervention and regulation⁸.

Much of this disagreement is due to the following issues:

1. Informal financial transactions by their very nature occur outside the domain of the legal system. Thus little reliable and systematic evidence is available for detailed scrutiny.
2. The activities of the informal sector are often defined in a residual manner, namely "all activity that lies beyond the pale of official regulation or control is considered to be informal in nature"⁹. Treating informal financial activity as a residual is, partly, responsible for the dearth of in depth analysis in the financial development literature.
3. The understanding of the operation of IFMs is influenced by a limited number of empirical studies on informal finance that are dominated by research in the Indian sub continent. There has been a drift towards a generalisation of the findings of

⁶ This is clearly realised in the works of Goldsmith (1969), Shaw (1973) and Mckinnon (1973).

⁷ See Taylor (1983) p. 92 and our literature review in chapter (2).

⁸ For further details of this view see for example: Pischke, Adams and Donalds (1983).

⁹ Montiel, Agénor and Haque, *op. cit.*, p. 8.

these limited studies, giving a possibly erroneous and inaccurate view of IFMs in essentially different economic and cultural environments.

4. Labelling the informal financial sector by epithets like 'black', 'underground' and 'hidden' has resulted in making this sector subject to ideological debate and ensued a difficulty in undertaking an impartial analysis of its role, growth or implications¹⁰.

(8.3) A taxonomy of informal finance:

Informal financial transactions are heterogeneous and occur in several sub markets that make up the informal financial market. Indeed, some types of transaction are not 'market' determined, like private transfers and interest-free loans between relatives and friends which are governed not by market mechanisms but rather by social relations.¹¹

However for the purposes of this study we distinguish between four categories of informal finance: (1) occasional lending; (2) regular lending; (3) interlinked credit, (4) finance through collective arrangements and (5) informal finance at a corporate level.

(1) Occasional lending covers all direct intermittent loans by individuals with a temporary surplus of funds¹². This type of lending arises in the absence of personal consumer credit and small enterprise loans. Friends and relatives are the main source of such loans. Depending on the strength of the relationship with the borrower and the purpose of the loan, these loans are predominantly interest free for consumption purposes and are governed by the principle of profit and loss sharing in the case of production purposes. Generally they tend to be state-contingent with flexible terms and no collateral.

¹⁰ *ibid.*, pp. 8-9.

¹¹ On non-market financial transactions see Cox and Jimenez (1990), and their role as an alternative to formal social security programmes in LDCs see Cox and Jimenez (1992).

¹² See Ghate (1992), p 23.

(2) Informal lending can take a **regular form**¹³. This requires the existence of specialised moneylenders or pawnbrokers. A typical money lender utilises his close knowledge of the borrower and often faces no competition in providing the service given this information advantage he possesses. Consequently loans obtained from this source tend to be relatively expensive, as the demand curve is inelastic. Such loans are considered by potential borrowers as a last resort¹⁴. Relatively high interest rates are charged and justified by the cost of acquiring information, monitoring and high default risk.

Unless the loan is obtained from a pawnbroker, physical collateral is not of great importance in this type of informal finance. Informal lenders may substitute physical collateral by obtaining personal informal information and an enforcement mechanism that relies on a web of social relations, as shown below. A pawnbroker however lends against an asset, customarily a household good. The pawned item is forfeited to the pawnbroker if the principal and the interest are not paid at the agreed dates. The risk in the case of pawnbroking is limited to the skill in estimating the market value of the pawned item in the case that it is not redeemed by the debtor.

(3) **Interlinked credit** occurs when two or more interdependent exchanges are simultaneously agreed upon in the form of a bundled deal¹⁵. The lender extends credit to the borrower against the latter's commitment to sell crops, in the case of trader-farmer relationship, or providing labour service, in the case of employer-worker. Under interlinked credit arrangements, the continuing relationship in the other market acts as a substitute for collateral and reduces transaction costs and default risk.

¹³ See Timberg and Aiyar (1984) for an extensive analysis of this type of informal finance in India.

¹⁴ See Montiel, Agénor and Haque, *op cit*, p. 13.

¹⁵ see Bell (1988) for a comprehensive analysis of interlinked transactions.

(4) Informal finance may take the form of **collective arrangements**. An example of these arrangements is credit unions in which a group of individuals regularly, or irregularly, deposit funds with a chosen leader. The pooled savings or a share of it is lent to the group members, and in some cases to non members, when they apply for a loan. Members are charged no interest or very low interest. The most common form of collective arrangements is Rotating Savings and Credit Associations which are known in the financial development literature by the acronym (RoSCA)¹⁶.

RoSCAs have an extended history in developed and developing economies and are found in countries as diverse as Japan and India in Asia, Niger and Ethiopia in Africa and Bolivia and Mexico in Latin America¹⁷. RoSCAs are considered to be one of the oldest financial innovations and they predate monetisation¹⁸. RoSCA continues to be an important instrument of savings and a significant source of credit.

(5) Informal finance can be in a **corporate form**. The so-called Finance Corporations in India provides an example of this form. These companies are widespread in several provinces in India and function as unregulated banks. A Finance Corporation can be a family or a business partnership, starts by utilising own funds for lending and expand by accepting deposits in the form of cash certificates and cumulative deposits for specified periods with relatively high interest paid on them. They normally lend to relatively high risk borrowers who do not have access to the formal intermediaries and those who are geographically remote from the domain of formal services.¹⁹

¹⁶ The world Bank (1989) and other studies report different names of RoSCAs in different countries; e.g. tand in Mexico, chit in India, tontine in Niger, hagbad in Somalia, chilimba in Zambia, kou in Japan, pasanakus in Bolivia and gameyah in Egypt, see World Bank (1989) p 114 box 8.2; Adams and Canavesi (1989) p 223; and Mrak (1989) p 65.

¹⁷ See Adams and Canavesi, *op. cit.*, p 220; and Miracle, Miracle and Cohen (1980) pp 704-705.

¹⁸ See Von Pischke (1991), p 14.

¹⁹ For a description of the activities of these companies in India, see Nayar (1982), pp. 5-39.

Finance and Loan companies in Korea are an example of this form of finance. These unregulated companies were established in the 1960s as a response to the then tight monetary policy. They apply a sophisticated system for risk evaluation and specialise in small credit for working capital to small retailers and consumption loans.²⁰

Moreover the Islamic Investment Companies (IICs) in Egypt which flourished and, then collapsed, during the 1980s can be considered another example of informal finance at the corporate level. However there is a further difference in the case of IICs as their 'depositors' were not aware of its informal nature which was based on a pyramid scheme.²¹ In Egypt however the IICs were only informal borrowers as they directly 'allocated' their funds while in Korea and India informal financial corporates were borrowers and lenders, i.e. full intermediaries.²²

(8.4) Village Selection:

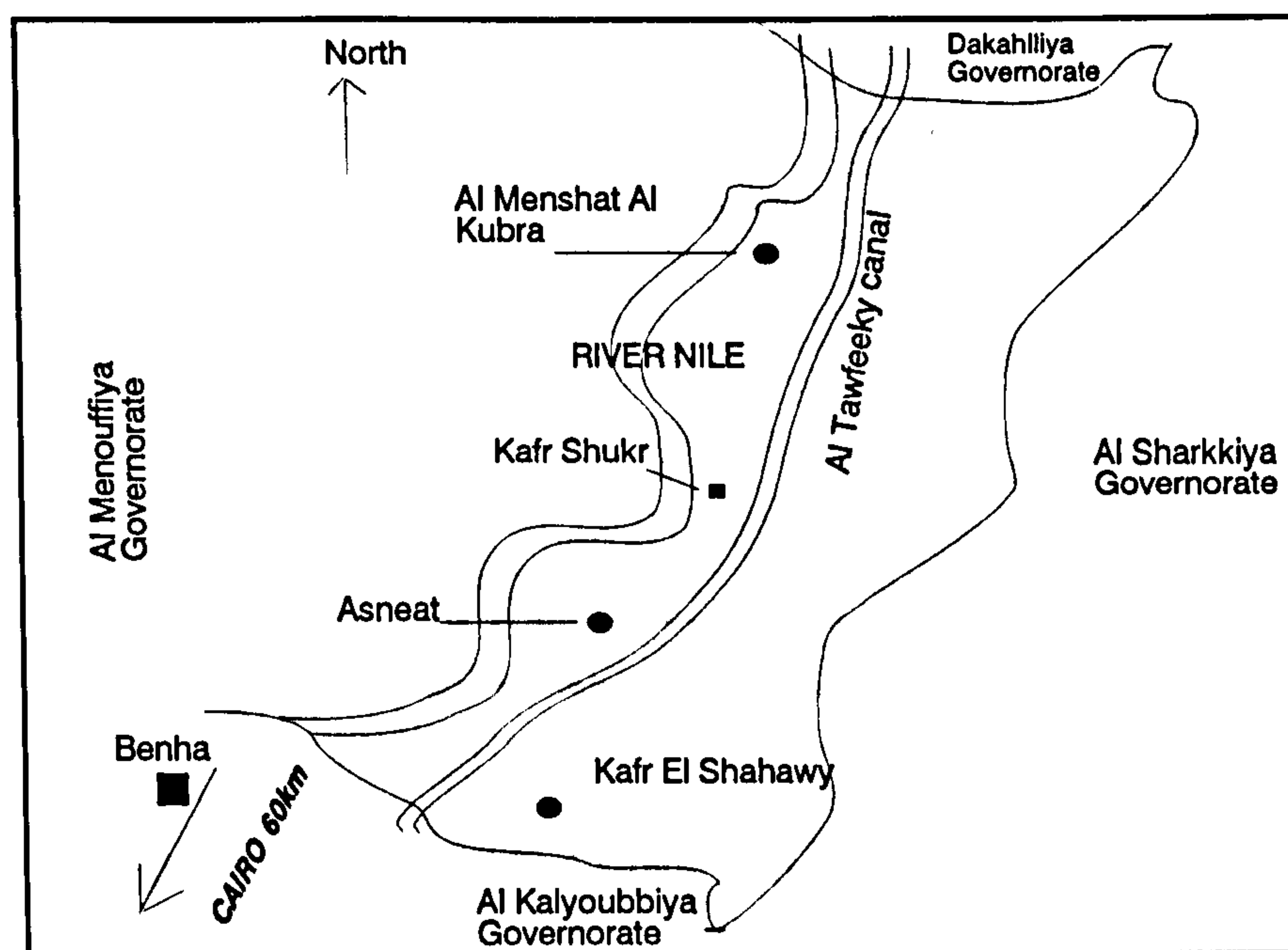
The initial plan was to choose one Governorate in southern Egypt and another in the north to allow for inter-Governorate comparative analysis. Alas, the security problems in southern Egypt, during the period of the study, prevented that from happening. Thus, the decision was to focus on inter-Village comparisons and concentrate the research in one Governorate, that is the Kalyoubbiya Governorate, a rural province in the delta, located about 60 Kilometres north east of Cairo as shown in figure (8.1).

²⁰ See Hahm (1989), p. 17.

²¹ See chapter (5) for an analysis of these companies.

²² As shown in our analysis of the IICs, we should be careful with the term allocation of funds as they were mainly used in a pyramid scheme.

Figure (8.1)
A map of the location of the Kalyoubbiya Governorate and
the four surveyed villages



The population of the Kalyoubbiya Governorate was roughly 2.9 million in 1992²³, occupying an area of 1001 Km². This makes the population density as high as 2897 person/Km², the fifth highest in Egypt. Approximately 43 percent of the population live in urban areas. Of the governorate's urban population, some 66 percent live in the southern industrial area, close to Cairo, where some firms were first established in the second and third decades of this century. Later in the 1960s, during a period of heavy industrialisation, this area became one of the main industrial locations in the country. The rest of the urban population lives in the Governorate's capital, Benha, and some other under-developed cities.

²³ Estimated for 1992 from 1986 Census.

Kalyoubbiya, as shown in table (8.1) and like her neighbouring Governorates in the fertile delta²⁴, is characterised by a high level of farm fragmentation and the prevalence of small landholding (less than one feddan)²⁵.

Table (8.1)
Kalyoubbiya 1990: Distribution of Land Ownership

Feddan	Owners	%	Land (feddan)	%
Less than 1	133,594	74.1	44,522	21.8
1-	18,718	10.3	24,365	11.9
2-	13,149	7.2	27,010	13.2
3-	4,486	2.4	18,056	8.8
4-	4,526	2.5	19,542	9.5
5-	3,235	1.7	17,634	8.6
10-	1,616	0.8	19,935	9.7
20-	751	0.4	17,534	8.6
50-	131	0.07	8,152	4
100-	38	0.02	6,931	3.4
Total	180,244	100	203,681	100

Source: CAPMAS (1992), p. 75.

The problems of land fragmentation and small land ownership²⁶ in Kalyoubbiya, as in the rest of Egypt can be attributed mainly to four factors:

1. The land reform laws. The first law promulgated in 1952, limited the ownership of agricultural land to 200 feddans per family. The subsequent law of 1961 reduced the ceiling to 100 feddans.
2. The impact of Islamic law regarding inheritance which divides the inherited land, according to specific shares, among the inheritors.
3. The slow progress in land reclamation projects which lags far behind the growth of population.

²⁴ See Commander (1987) p 46 for a description of the main similar characteristics of 3 other governorate in the delta.

²⁵ 1 feddan = 24 qirats = .43 hectares = 1.038 acres.

²⁶ It is quite ironic that in the beginning of the century Lord Cromer ordered the Bank of Egypt to forgive the impoverished debtors who own 5 feddans or less during a bad time in the cotton market. An order that led to the collapse of this once successful commercial bank. In contemporary Egypt this category of owners is 95.8% of the total number of land owners. Under the dominance of those who own less than 1 feddan, the owners of 5 feddans are called sarcastically today's feudal lords.

4. The scarcity of entrepreneurs with sufficient funds and interest in agriculture: This problem forces land sellers to fragment their land further in order to find a buyer.

What the table cannot reveal is the fact that, traditionally, families tend to register their land ownership under the name of the person who looks after it. This practice is widely applied in order to facilitate servicing the land, obtaining credit and selling the product, especially in the case of the so called absent owners, i.e. those who live away in urban Egypt.

However, the proximity of the Cairo market, which serves more than 10 million consumers, has led the agricultural sector of the Governorate to specialise in relatively high earning fruit and vegetable production and has recently, since mid 1970s, diversified into poultry production.

During the last three decades several infrastructure projects were implemented to provide many of the inhabitants of the Governorate, especially those who live in the urban areas, with tap water, electricity, schooling, health centres and district hospitals and a reasonable network of roads.²⁷ As a result, in addition to the common categorisation of regions to urban and rural, many parts of Kalyoubbiya can be described as semi-urban or semi-rural depending on the level of urbanisation and type of activities of the population.

²⁷ Despite the bias in spending towards Cairo, Alexandria and the Suez Canal Governorate, Kalyoubbiya managed to get a relatively reasonable share of government spending on infrastructure projects, this could be attributed mainly to its proximity to Cairo.

After selecting the Governorate²⁸, the next step was to select a district. This was the district of **Kafr Shukr**, a new administrative district established in 1963 and occupying the north east part of the Governorate²⁹. The Damietta branch of River Nile draws its western boundary with Menoufiya Governorate, Sharkiya Governorate lies to the east and Dakahliya Governorate to the north of the district. Al Tawfeeky Canal runs through the district which is linked together with bridges and simple ferryboats. The district of Kafr Shukr consists of 24 villages including '*Kafr Shukr*', which was given city status in 1968.

(8.5) The Sample Size:

In a textbook approach to the determination of sample size³⁰, the researcher works from a model of sampling errors to compute the expected sampling variance in relation to sample size and fixes this variance depending on the degree of precision required. However, in practice, this approach does not necessarily lead to very clear cut results because of the multiplicity of analytical objectives.

Further, it has been realised that a better approach would be to start from resource constraints, e.g. cost and time.³¹ The latter approach may determine a smaller sample size than that determined by the former. It is widely accepted that "a small well designed and executed study is superior to a large study that has been botched"³². Thus, in an attempt to obtain high quality and comprehensive data on sensitive issues, researched under time

²⁸ The Kalyoubbiya Governorate is administratively divided to *Marakez* (counties or districts), and the *Marakez* in their turn are divided to *Qura* (villages). This administration structure combines features of both local administration and local self government. There are two councils at each administrative level: an elected council and an appointed executive council. These councils do exercise some legislative power and perform a wide variety of functions in education, health, housing, public services and the distribution of subsidised food and goods. However the councils are directly and strongly controlled by the central government which funds their budgets, appoints the members of the executive council and influence the selection of the members of the 'elected' council.

²⁹ See map no (1).

³⁰ For a discussion of the determination of the sample size see for example Foreman (1991), Levy and Lemeshaw (1991), Babbie (1990).

³¹ See Sudman (1976) pp 85 - 89 for a discussion of financial and non financial costs as constraints that face applied researchers with particular reference to the case of Ph.D dissertation and see Foreman op. cit. for a review of different issues affecting sample design.

³² Sudman op. cit. p 9.

and cost constraints, the number of villages and the size of the sample had to be kept as small as possible.

The sampling unit, as mentioned above, is the household. The conceptual problem of the term 'household' is well known³³. Two main concepts are usually used; the *de jure* and the *de facto*. According to the latter everyone who slept in the family home on the night before the interview is a household member. According to the former it is required that individuals sleep and take their meals in the household over a minimum specified period of time.

Given the fact that actions taken by those who are only occasionally present in the household, apart from the household head, hardly influence its credit and financial decisions, the study rejects the *de facto* approach in favour of the *de jure*.

The specified minimum period for a person to be a member of the household is six months. Due to the necessity of having information on the household's head, he or she is considered a member of the household, even if he or she was absent for more than six months.

Thus, in this study the household can be one person or a group of people who live in the same dwelling, for at least the previous six month to the interview, eat from the same pot, and share resources for the purpose of pursuing their mutual well-being.

Applying a two stage random sampling method³⁴ produced 200 households distributed in 4 randomly chosen villages. At the first stage, the 4 villages were selected from a sample

³³ See Bryant (1990) pp 1-4 and Casley and Kumar (1988) p 60, for a discussion of the conceptual problem of household and Scott et al (1980), for a view on the possible consequences of the conceptual problem on the results of field studies.

³⁴ For further details on multistage sampling, see for example, De Vaus, op. cit. pp 52-69; Jolliffe, op cit 27-57; Levy and Lemeshow 212-244.

frame. The frame is a compiled list of the 24 villages in the district of Kafr Shukr. They are 'Al Menshat Al Kubra', 'Asneat', 'Kafr El Shahawy' and 'Kafr Shukr', henceforth Menshat, Asneat, Shahawy and Shukr respectively. Figure (8.1) above shows the locations of the four villages.

The second stage was to take a sample of households from each of the four villages. This stage was rather difficult because the latest national census of 1986 was not available in a disaggregated form. Moreover, after six years, the census is considered out of date, as far as our research is concerned. Thus we had to find a more reliable sampling frame.

In order to achieve this objective, we applied the following procedure: for the two relatively large villages of Shukr and Asneat we relied on the updated electricity board register which includes the names and addresses of not only those who already have electricity but also the names and addresses of those who apply for the service. Further we augmented this register with the list of parents of compulsory primary schools pupils. To form a sampling frame for the two smaller villages of Shahawy and Menshat we undertook a household count. Table (8.2) below shows the number of the randomly selected households for each of the four villages.

Table (8.2)
Population and sample size of the four villages

	Shukr	Asneat	Menshat	Shahawy
Population (1986)*	15144	8911	5859	1922
Population (1992)**	17257	11179	6676	2190
Number of Households***	3522	2281	1362	446
Sample Size	80	50	40	30
Sample size / population %	2.27	2.19	2.93	6.72

* Source: CAPMAS, National Census 1986.

** Calculated for 1992 with 2.2 net average population growth rate.

*** Household sample size is approximately 4.9 for the Kalyoubbiya Governorate: CAPMAS National Census (1986).

It is worth noting that the household size in the rural areas is greater than the 4.9 average for the whole Governorate which includes rural and urban areas. In the urban areas the household size tends to be smaller due to several factors, including education, size of the dwelling, the influence of family planning programmes and the absence of the role of the extended family. In a recent study by CAPMAS on income and expenditure 1990/91, the average household size was 6.7 in the rural delta. In this study the average household size is 5.66. Thus, the Sample/Population % per village, in our study, is actually larger than the figures shown in table (8.2).

(8.6) The Questionnaire:

In order to accomplish the objectives of the study, a pre-coded questionnaire³⁵ was designed to provide a complete picture of each household and its asset and debt status. The questionnaire was written in Arabic and consists of the following main sections, which are described in further details below.

1. A household roster which provides a list of HH members, their sex and age.
2. A record of the Household's members which provide data on marital status, education and employment.
3. Standard of living component which shows the details of type of the dwelling, and its possession; water supply; fuel used, possession of a toilet inside the dwelling; a record of owned durable goods and the HH type of transport .
4. Income level and main sources of income.
5. An asset holding record contains agricultural land and non agricultural land, other real estate, livestock, farming equipments and other miscellaneous assets.
6. Size of savings, and saving instruments already used by the HH and their relative importance.

³⁵ The author benefited from the following references in constructing the pre-coded questionnaire: Fowler (1984), Babbie (1990), Grootaert (1986), Cody and Smith (1987), Delaine et al (1992) and de Vaus (1987).

7. Main details of deposit accounts with the formal sector, e.g. type of bank, deposit size, reasons for opening an account.
8. Borrowing from the formal sector component which provides details of the loan, e.g. size, source, cost, collateral, duration, cases of default.
9. HH reservations and views on the services of the formal financial sector.
10. An inflation hedges component that provides information of the HH possession of inflation hedges, such as gold, foreign currencies, durable goods, hoarding of specific consumption goods, building materials.. etc. A record of the changes in inflation hedges, and reasons for keeping/liquidating them.
11. An informal sector component that covers in details the borrowing and/or lending transactions.
12. A component on the characteristics of collective financial arrangements through RoSCAs.
13. A section on the effect of a hypothetical net increase of income and wealth on saving behaviour of the households.
14. A section on the HH's reaction to the main changes of the formal sector services, and the impact of the increase of nominal interest rates on the portfolio selection of the HH.
15. A record of the changes of the size of formal and informal loans since January 1991.

To test the reliability and consistency of the answers of the interviewees some additional questions were included in the questionnaire³⁶. Moreover a pilot study of 30 HHs, in the research field, was conducted to test the relevance of the questions and discover any flaws in the questionnaire lest they affect the main study. The findings of the pilot study led to minor modifications in the initial version of the questionnaire. However, the pilot study

³⁶ See the questionnaire number (1) and the list of variables in appendix number ().

was a good opportunity to examine the responsiveness and cooperation of the potential interviewees which were quite promising.

All sample households were interviewed by the author³⁷. An informed guide³⁸ from each village was chosen. The guides' responsibilities were to allocate the addresses geographically, to inform the household head of the date and time of interviewing him or her and to introduce the author to the members of the households.

The average interview lasted for around 2.5 hours. This normally included an introduction to the household members, serving tea and informal chat with the household's leader about the purely academic purposes of the study and some other issues. This was quite useful as a warming up session before starting the questionnaire.

(8.7) Socio-economic characteristics of the four villages:³⁹

Due to the coexistent urban and rural features of Shukr and Asneat, we consider the former as semi-urban, while the latter as semi-rural. Menshat and Shahawy, with insignificant urban features, are typical examples of a traditional Egyptian village. These classifications are reflected in the socio-economic indicators of the four villages provided in table (8.3).

The mean HH size in the four villages was 5.66 and that of individual villages did not significantly deviate from this figure as it ranged from 5.45 in Menshat to 6.07 in

³⁷ On survey interviewing rules, see Fowler op. cit pp 107-122 and Babbie op. cit 187-201.

³⁸ As expected some of the villages' roads had no names and some of the buildings had no numbers, so it was essential to get the assistance of someone who knows the people by name and location. In the case of Menshat and Shahawy the guides were voluntarily selected by each village's chief, in the case of the other two villages, a guide was recommended by leaders of households who were interviewed in the beginning.

³⁹ For further analysis of the socio-economic characteristics of rural Egypt and the main economic changes in it during the last three decades, see Abdel Fadil (1975), Adams (1985), Commander (1987).

Shahawy. The average age of the HH head was approximately 46 years, again without significant difference between individual villages.

The different stages of urbanisation in the four villages are reflected in terms of education and occupation of HH heads. Shukr outperformed the rest of the villages in terms of lowest illiteracy rates and higher percentages of HH leaders with formal degrees. Only 22.5% of HH heads in Shukr were directly dependent on agriculture, i.e. landlords, agricultural labourers and fellahs⁴⁰, while 31.3 of them were government or public sector employees. Agricultural labourers at 33.3% and 30% formed the biggest groups of HH heads in Shahawy and Menshat respectively. Government and public sector employment was significant in all villages; its lowest figure was in Asneat at 16%.

Unemployment rates ranged between 2.5% and 6% which in a country with 17.5% is remarkably low. Two factors are behind such low figures of unemployment in our sample. First unemployment is generally lower than average in rural Egypt. Second, and more importantly, the unemployment estimated here is that of the HH heads who belong to relatively high age groups (the mean age is 46 years).

⁴⁰We prefer to use the Arabic word fellah instead of farmer or peasant as it more describes the socio-economic characteristics of the Egyptian fellah.

Table (8.3)
Main socio-economic indicators of the sampled villages

	Shukr	Shahawy	Asneat	Menshat	All villages
Number of households	80	30	50	40	200
Mean household size	5.71	6.07	5.5	5.45	5.66
Average age of household's leader	46.5	46	45.8	45.2	46
Education of the HH's leader (%):					
1. Illiterate	20	33.3	34	22.5	26
2. Reads and Writes	28.7	30	26	40	30.5
3. Below G. Certificate	17.5	10	18	12.5	15.5
4. General Certificate	21.3	20	18	12.5	18.5
5. University Degree	12.5	6.7	4	12.5	9.5
Occupation of the HH's leader (%):					
1. Land Lord	5	3.3	8	5	5.5
2. Agricultural Labourer	5	33.3	20	30	18
3. Artisan	17.5	6.7	18	10	14.5
4. Merchant	13.8	6.7	6	7.5	9.5
5. Government/publicsector	31.3	20	16	22.5	24
6. Private Sector	7.5	3.3	6	2.5	5.5
7. Fella (farmer/peasant)	12.5	23.3	18	15	16
8. Unemployed	5	3.3	6	2.5	4.5
9. Others	2.5	0	2	5	2.5
Mean value of household's assets	246222	64838	88880	82377	146910
Mean income of household per annum	7040	3950	5550	4600	5716
Mean savings per annum	2061	745	1655	923.7	1535
Land holding: (Feddan)					
1) Mean land ownership	3.31	0.71	0.99	0.69	1.82
2) Mean rented land (from others)	0.08	0.19	0.36	0.14	0.18
3) Mean rented land (to others)	0.09	0.01	0.10	0.11	0.08
Available facilities ⁴¹					
Agricultural Bank (PBDAC)	Main branch	Agency	Village bank	Agency	
Commercial bank	Yes	No	No	No	
Medical centre	Hospital	No	Centre	Centre	
Primary school	Yes	Yes	Yes	Yes	
Preparatory school	Yes	No	Yes	Yes	
Secondary school	Yes	No	Yes	No	
Paved road	Yes	No	Yes	No	
Bakery	Yes	No	Yes	Yes	
Veterinary station	Yes	No	No	Yes	
Post Office	Yes	No	Yes	No	

Source: Survey data and the district council of Kafr Shukr.

Encountering various problems in the process of collection and calculation of asset and income data is expected in a predominantly agricultural region. Most of the households, directly or indirectly earn their living from agriculture which is subject to seasonality, weather change, disease, and so forth, which increase uncertainty in yields and, even in

⁴¹We follow the classification of Commander (1987), p. 51.

the most stable periods, generate fluctuations in incomes.⁴² Moreover the different intervals of earning income. While the receiving of regular wages and salaries is relatively easy to record and recall by respondents, irregular incomes such as in the case of agricultural labourers are more difficult to compute.

Further some respondents may report false figures for incomes and assets, even if the true figure are known by them. For example a low income respondent may feel embarrassed to report his actual income and may overestimate it, while a high income respondent, fearing envy, avoiding questioning about the source and/or concern of taxation may underestimate his income, regardless of any kind of assurance given to him.

However we attempted to minimise these problems by double checking the reported income and assets figures against expenditure items and a list of indicators of standard of living, such as durable goods possessed, means of transportation,.. etc, included in our questionnaire.⁴³ Moreover obtaining the information directly by the author and visiting the household dwelling enabled us to apply these checking procedures and assisted in obtaining better information than otherwise.

Table (8.3) shows that the mean value of household's assets⁴⁴ in the four villages was approximately £E 147 thousand. The figure reached £E 246.2 thousand in Shukr, which was higher than the general mean by 68%, while the mean for Shahawy was less than the average by 56%. There was a remarkable difference in the three types of agricultural land

⁴²See Deaton (1992), p. 99.

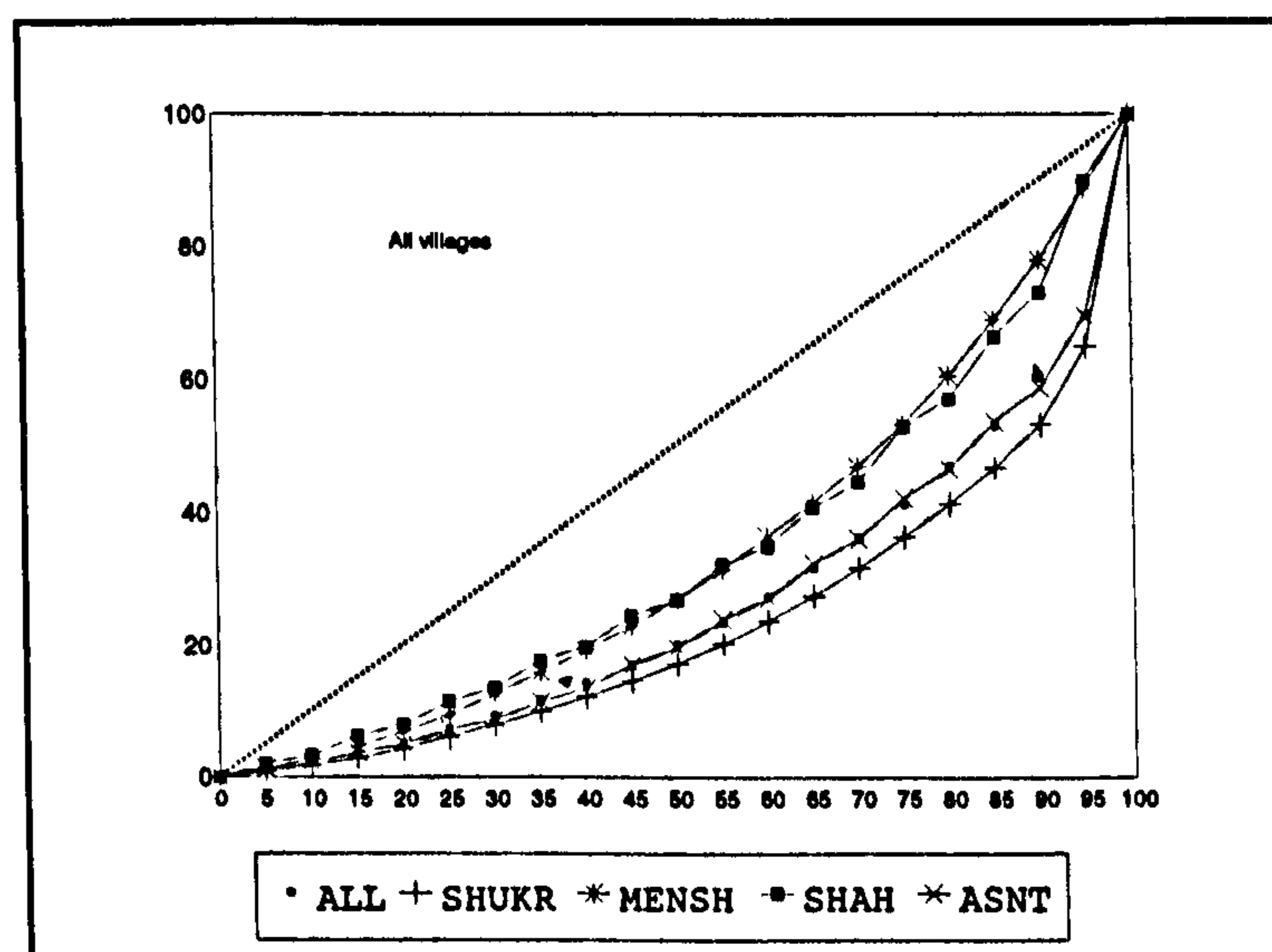
⁴³See the translation of the main items in the questionnaire in appendix (#).

⁴⁴Assets value include the values of holdings of agricultural and building lands, dwellings, stores, shops, livestock, equipments and other assets.

holdings across villages. Shukr has the greatest mean of land ownership at 3.31 feddan⁴⁵ while Shahawy had the lowest mean at 0.71.

The average income per HH for the four villages was £E 5716 per annum.⁴⁶ Shukr had also the highest mean income at £E 7040 per annum which was higher by 26.9%, 53.0% and 78.2% than that of Asneat, Menshat, Shahawy respectively. Accordingly Shukr had the highest mean savings per annum, as shown in table (8.3). However we found that the two low income villages had a better distribution of income than the high income ones. By using Lorenz curves⁴⁷ for the individual villages, figure (8.2) shows that Shahawy and Menshat had a better distribution of income than Shukr and Asneat.

Figure (8.2)
Lorenz curves of the four surveyed villages



Source: Survey data.

⁴⁵ In order to facilitate calculations we are using the feddan and not the qirat (1/24 feddan) as a unit of account for agricultural land.

⁴⁶ According to our estimates per capita income was approximately £E 1009.9 which is 50.02 % of the per capita income estimated from national accounts which was £E 2013, see IMF (1992). While we argue that such discrepancy may be partly attributed to conceptual and estimation procedures in the two different approach, it is worth mentioning that per capita incomes are lower in rural Egypt than the economy average.

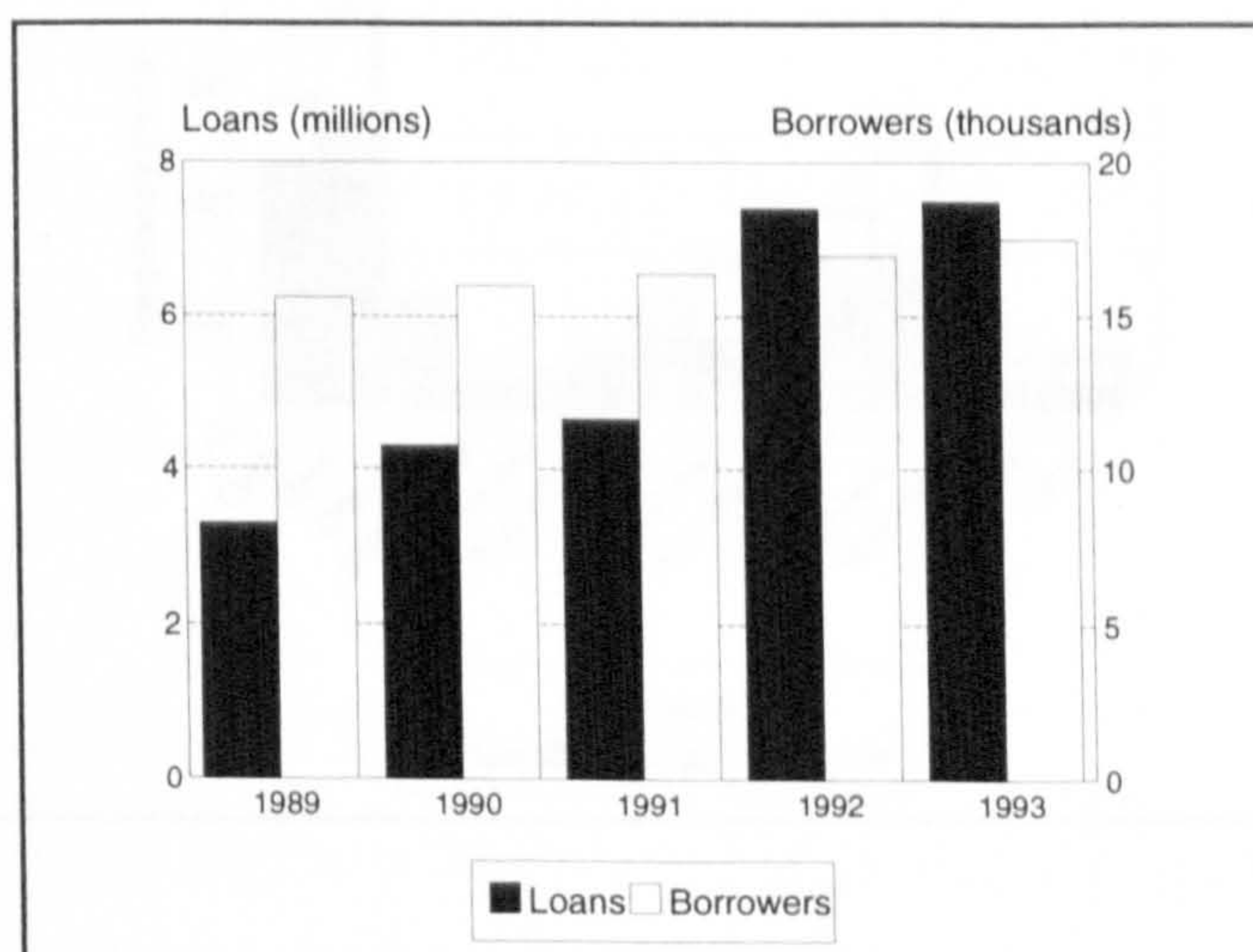
⁴⁷ On the size distribution of income and its presentation see Lambert (1989), chapter (2).

As shown in table (8.3), Shahawy is the least developed village with very limited facilities while Shukr is the most developed amongst the four villages. However in terms of access to agricultural credit we realise that the four villages had a fair access to the services of the Principal Bank of Development and Agricultural Credit PBDAC through its branches and representative offices.

At the country level the PBDAC has 17 affiliated banks based in Governorates, including Kalyoubbiya, with a network of 800 village banks and 4300 agencies distributed all over rural Egypt.

Figure (8.3) shows the development of total loans advanced by the PBDAC in the district of Kafr Shukr and number of borrowers over the period 1989-93.

Figure (8.3)
Size of agricultural loans
and number of borrowers (1989-93)



Source: The PBDAC branch in Kafr Shukr.

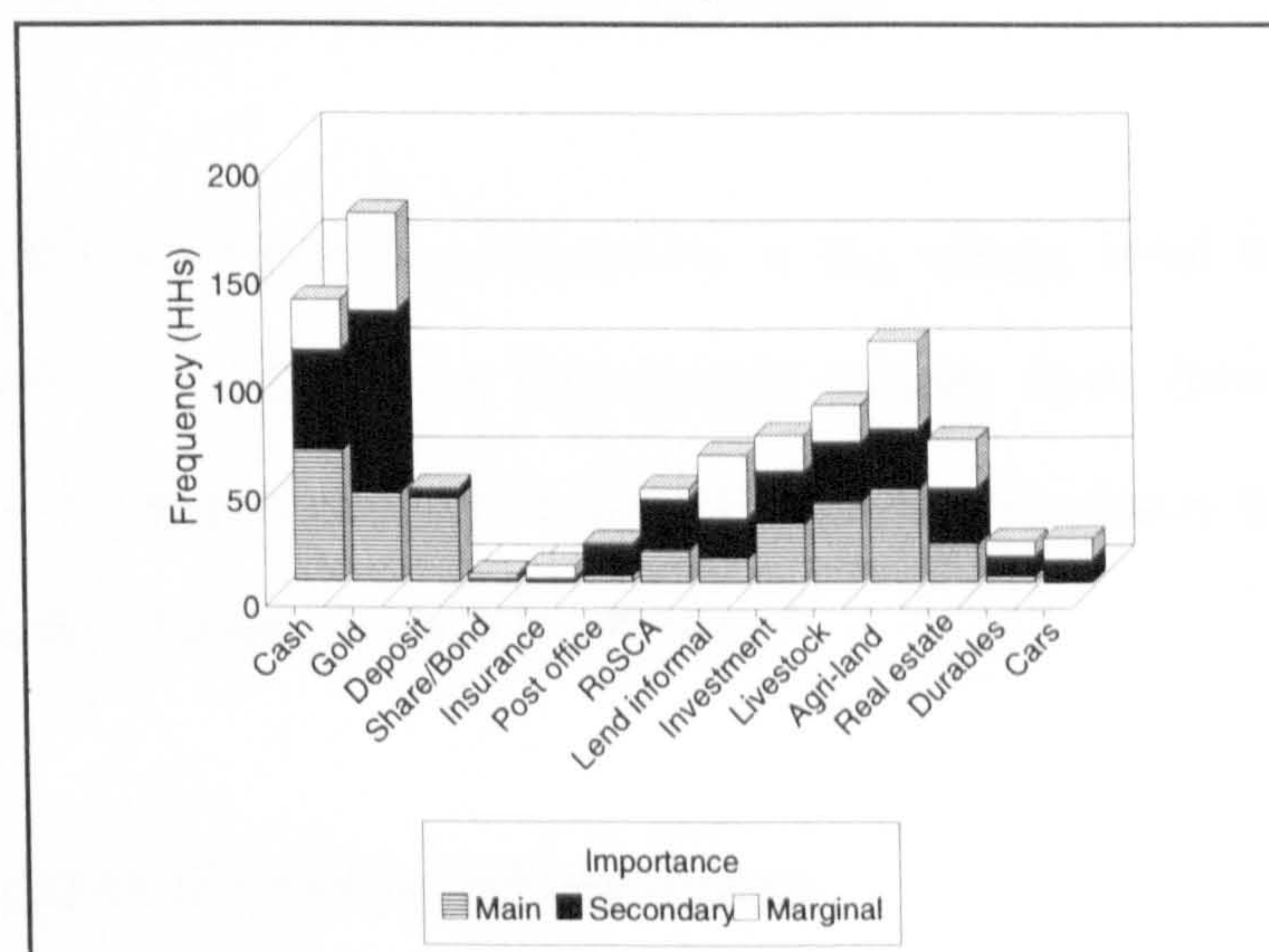
(8.8) Household portfolio structure:

In the absence of risk and transactions costs and the presence of perfect divisibility of assets which have exclusively a financial yield, there would be no need for holding multi-asset portfolios as acquiring a single asset would be sufficient. However these four

requirements for not holding a portfolio cannot be met except in a perfect imaginary world. In the real world there is a risk problem, there are various forms of transactions costs, assets may not be perfectly divisible and an asset may have additional non-financial yields such as the pleasure gained from owning a painting or a house.⁴⁸ Hence holding a single asset would not be sufficient and holding a portfolio of assets is essential to overcome these four problems including diversification of risks.

In rural Egypt however we suggest that it is by happenstance more than deliberation that households 'select' their portfolios. This is attributed to various economic and cultural factors which are highlighted by examining the components of the household portfolios in the four villages shown in figure (8.4).

Figure (8.4)
Household portfolio selection



Source: Survey data.

We asked the respondents to report all instruments used for saving purposes and rank them according to their importance in their portfolios. By focusing on assets classified as of 'main' importance in household portfolios we established the dominance of cash,

⁴⁸Baumol (1970), p. 3.

agricultural land, gold and livestock as principal assets which can be considered first category components. Possessing a formal deposit savings accounts, establishing a project, normally agricultural-related, participation in a RoSCA⁴⁹ ownership of real estates and lending in the informal sector were also significant in the portfolios and form the second category.

The insignificance of shares and bonds is expected according to our analysis of the problems of the Egyptian securities market in chapter (4). Mainly due to religious reasons, insurance policies were also very insignificant in the HHs' portfolios. Against a widespread view regarding the importance of durable goods as an inflation hedge in Egypt we did not find them significantly important. This is attributed mainly to the use of other inflation hedges such as gold and real estates in rural Egypt. Moreover none of the respondents who possess a car considered it a main asset in their portfolios and ranked as being of secondary or marginal importance.

When we examined the portfolio composition at the village level we noticed that the relative importance of assets did not significantly change, apart from the fact that cash and not gold was the dominant asset in Menshat. Moreover shares and bonds were not present in the Shahawy and Menshat portfolios.

(8.9) The importance of gold in HH portfolios:

As shown in figure (8.4) gold was the third 'main' asset in HH portfolios, after cash and agricultural land, and the first asset if we include all categories. Traditionally Egypt maintained an active gold market which added to the desirability for gold as a store of wealth. Easily accessible markets, which facilitated purchase, sale, and pawnbroking arrangements were widely practised making gold highly liquid. The following description

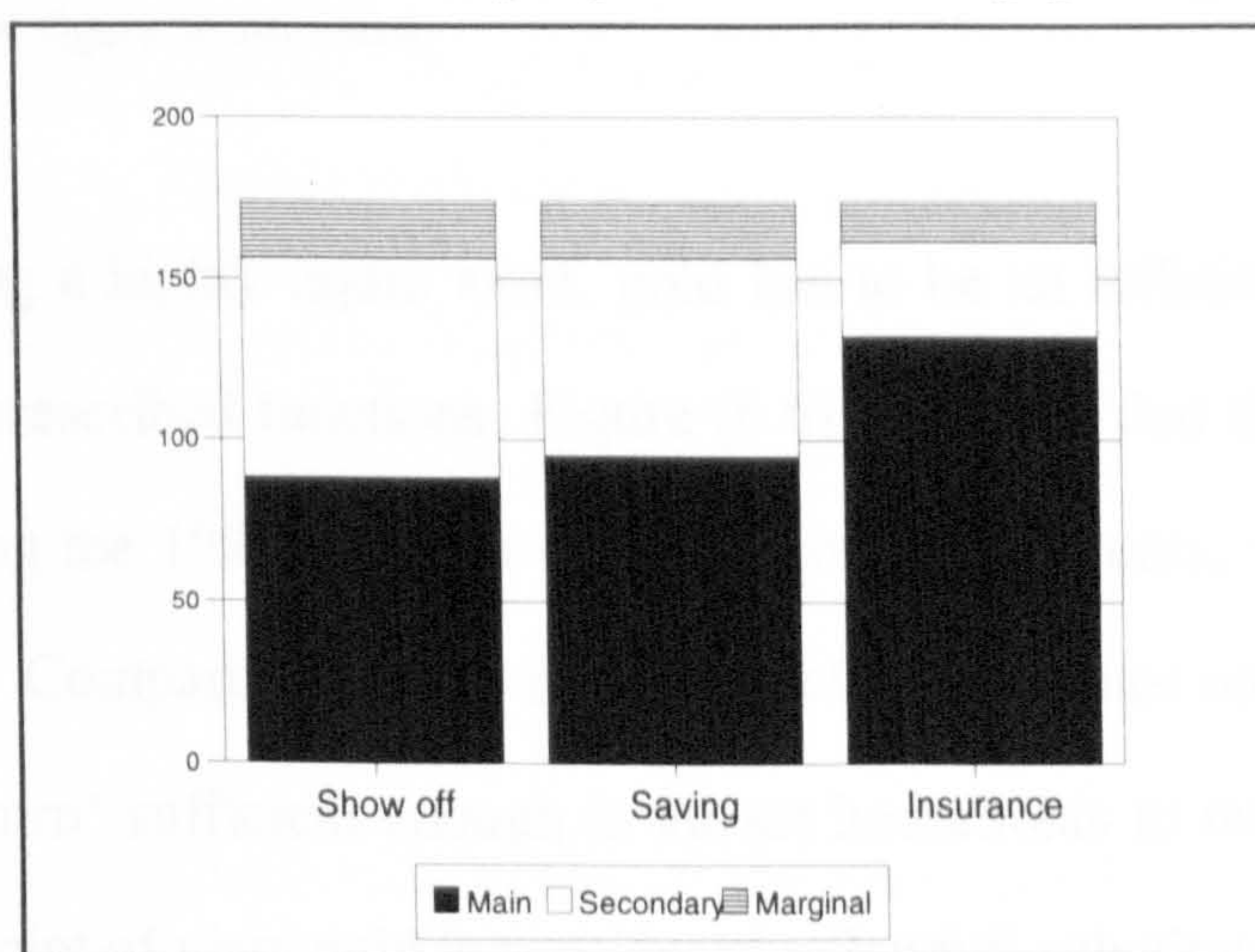
⁴⁹ A detailed analysis of RoSCA in Egypt is provided below.

of the activities of the gold market in Cairo summarises the importance of gold compared to other assets:

"A visit to Cairo gold market, for instance during the daily rush hours.. is quite instructive to the economist. The fellahin of the villages arrive with their bank notes and return after a few hours with their choice of coined gold or gold jewellery. The motive of the hoarders is not just to substitute one form of wealth with another, but to increase the degree of safety of their savings without reducing the liquidity of this investment. Gold fulfils this purpose but also fits other purposes well. The custom has become established owing to satisfactory experience of many generations acting in the same way. For the same reason, appeals to the peasants to use banking facilities for their cash surplus have so far had only a limited effect".⁵⁰

Our survey shows that 87.0% of the 200 households possess some gold. As shown in figure (8.5) households normally distinguish between three main different purposes for keeping gold, namely showing off; saving and insurance.⁵¹

Figure (8.5)
Main purposes of holding gold



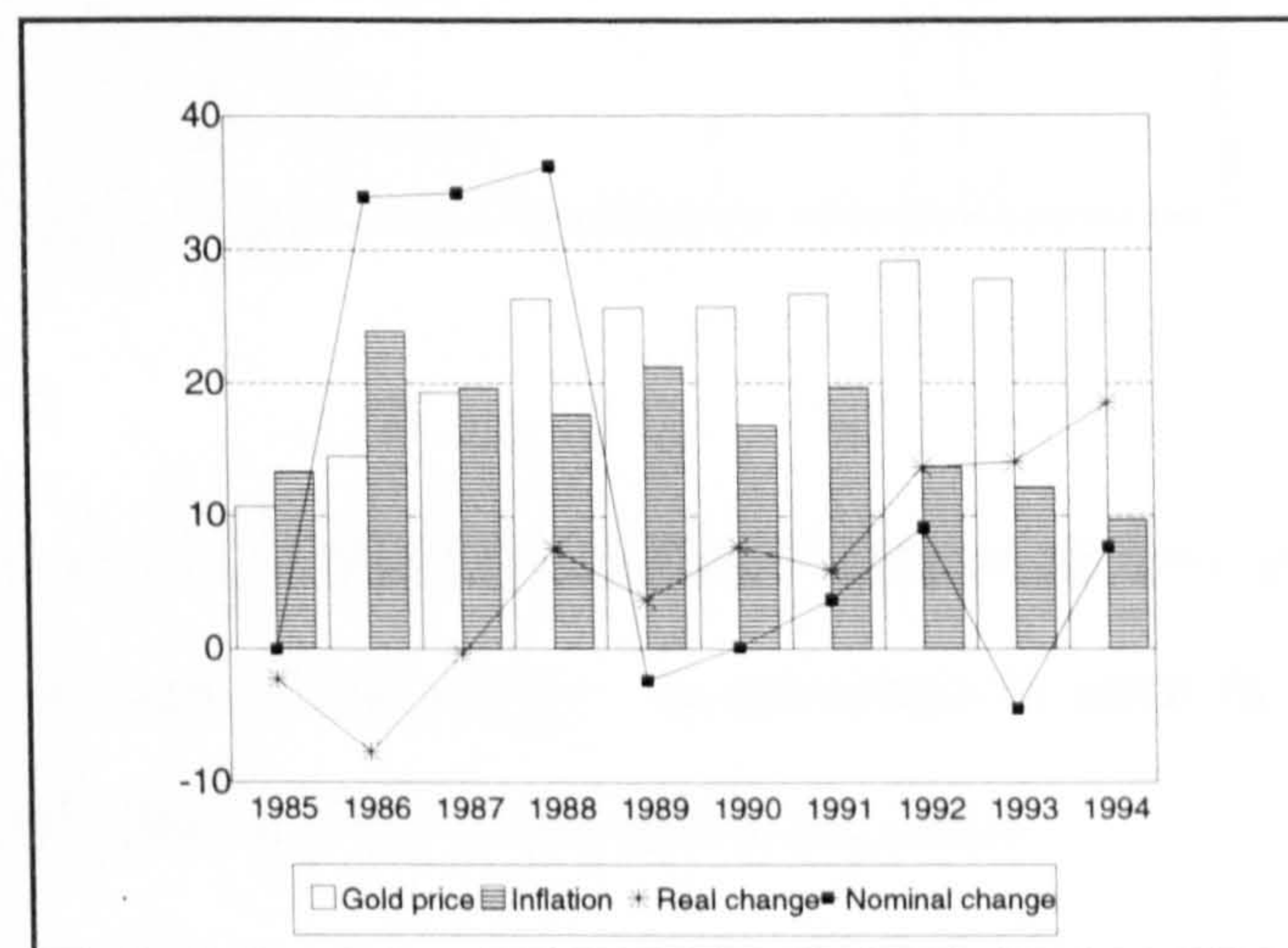
Insurance against unexpected shocks was the primary purpose for hoarding gold, saving to smooth consumption over time comes second and showing off comes third. However keeping gold for a purpose does not prevent it from facilitating others, e.g. a gold item

⁵⁰Bonné (1957), p. 198; quoted in Drake (1980), p. 126.

⁵¹See chapter (6) for a discussion of the motives for keeping gold.

may be purchased mainly for showing off but may be liquidated to cover some unexpected expenses.

Figure (8.6)
Gold as an inflation hedge



Source: Gold price is the average retail price per one gramme of 18 qt. gold as published in Al-Ahram Newspaper, at the last Monday of January of each year. Inflation is the annual change in the CPI index obtained from the CBE; the 1994 figure is estimated.

In addition to being a highly liquid asset, gold has to be an inflation hedge in order to accomplish these prescribed functions. Figure (8.6) illustrates that the real change in the price of gold during the 1985-94, with the exception of two years, was positive with an average of 6.05%. Compared with the negative real interest rates on bank deposits, gold had a positive 'return' sufficient enough to attract households to owning it.⁵² Moreover from the Islamic point of view gold is considered a 'lawful' substitute for interest-bearing financial instruments given the abolishment of *riba*, usury, as analysed in chapter (5).

⁵² Chandavarkar (1961), pp. 139-40, argues that the role of gold as an inflation hedge in an under-developed economy is distinctly subsidiary. He contends that in a subsistent economy where incomes are generated from non-monetary activities households are protected from high inflation to the extent that they are not aware of costs and risks associated with inflation to seek a hedges against it, and even if they are aware they may not have the sophistication to do so. We argue that this view is not applicable in the case of Egypt for several reasons, first the Egyptian economy, as shown in the previous chapters, is highly monetised and in our surveyed region there a trivial role of subsistence economy. Inflation as shown in chapters (6) and (7) cannot be described as low and prices were highly unstable which called for provisions against the associated risk and cost. Third, hedging by purchasing gold does not necessarily require high skills and sophistication, especially, as we were informed by several households, gold owners do not follow the daily or even the monthly changes in the *relative* price of gold, instead they mark a specific time in the year, normally after harvest, to consider their selling, buying, or holding decisions.

Table (8.4)
Purposes of liquidation of gold

Purpose	Percent
Starting or expanding a project	25.0
Contribution to daily expenses	20.7
Medical expenses	15.2
Purchase or renew dwelling	14.0
Marriage expenses	7.6
Purchase of a durable good	6.5
Working abroad	4.3
Buying a piece of land	2.2
Depositing the value in a bank	2.2
Other	2.2

Source: Survey data.

52.9% of gold owners reported that they liquidated some or all their gold during the two years that preceded the time of the survey. As presented in table (8.4), in most of the cases the liquidation of gold was for consumption purposes.

(8.10) Interim Conclusion:

In this chapter, we have provided a taxonomy of informal finance in LDCs, distinguishing between five main forms, namely, occasional lending, regular lending, tied credit, credit associations and corporate finance. Then the approach adopted in the analysis is outlined by highlighting the two stage sampling method, village selection, the sample size and the design of the questionnaire.

Based on the survey data, we have discussed the socio-economic characteristics of the four villages. Moreover we have examined the household portfolio structure. A typical household portfolio in the surveyed region is dominated by cash and gold. The importance of gold can be attributed to traditional factors as well as the availability of an easily accessible and active gold market. The surveyed households distinguish between three main different reasons for keeping gold, namely ostentation, saving and insurance. In the following chapter we analyse the formal and informal financial transactions in the surveyed villages.

Chapter (9)

Analytical Aspects of Formal and Informal Financial Transactions in Rural Egypt

*"Go with me to a notary, seal me there
Your single bond, and, in a merry sport,
If you pay me on such a day,
In such a place, such sum or sums as are
Expressed in the condition, let the forfeit
Be nominated for an equal pound
Of your fair flesh, to be cut off and taken
In what part of your body pleaseth me."¹
W. Shakespeare (1598)*

(9.1) Introduction:

The coexistence of formal and informal credit markets is a widespread phenomenon in LDCs. As argued by Hoff and Stiglitz (1993):

"There typically exists a dual rural credit market in developing countries. In the formal credit market, institutions provide intermediation between depositors (or the government) and lenders and charge relatively low rates of interest that usually are government-subsidized. In informal credit markets, money is lent by private individuals- professional moneylenders, traders, commission agents, landlords, friends, and relatives- generally out of their own equity".²

The coexistence of the two markets is attributed, in the financial development literature, to certain factors such as the degree of asymmetry of information between the formal and informal credit markets, the difference in the cost of loanable funds in each of the markets, and the heterogeneity of borrowers.³

The objective of this chapter is to analyse the distinctive characteristics of the credit market in rural Egypt. We provide an empirical analysis of this market based on survey data collected for this purpose, as shown in chapter (8). We attempt to determine the

¹Shakespeare (1598/1967), p. 84.

²Hoff and Stiglitz (1993), p. 33.

³See Jain (1993), pp. 1-3.

relative size and importance of informal and formal transactions. Conditions of borrowing and lending in the formal and informal credit markets are also highlighted, i.e. size and length of loans, purposes, role of collateral and contracts, default problems..etc.

The chapter also highlights the case of RoSCA in Egypt as an example of informal finance through collective arrangements. We analyse its structure, mechanism and role in financial intermediation and discuss its limitations.

The chapter continues by analysing the determinants of formal and informal borrowing. In order to do so, we construct two models with village dummy variables. The models are estimated using Tobit analysis. The chapter ends with an examination of the initial impact of the financial liberalisation programme on households' financial decisions and their asset and credit positions.

(9.2) Informal finance in rural Egypt:

(9.2.1) Relative size of informal transactions:

Our survey reveals that 86% of the 200 households in the survey did borrow and/or lend, in the formal and/or informal markets over the 12 months that preceded our survey. The rest of the households, 14%, did not have any relation whatsoever with the two markets.

Table (9.1) shows that households who had deposit and current accounts with the formal banking sector are just 22.5% of the sample, while those who obtained loans from the same sector were 30%. The households who had borrowing and lending relations, simultaneously, with this sector were as low as 6%. Those who had no relation, whatsoever, with the formal sector were 53.5% of the sample.

From the same table we find the informal sector was relatively more active than the formal one, as 69.5% of the households lent and/or borrowed in the informal financial

market. Those who lent and borrowed, simultaneously, were 13% of the sample, whereas 27% of the households extended informal credit to others and 29.5% borrowed from others. Just 30.5% of the households had no links at all with the informal financial sector.

Table (9.1)
Formal and informal transactions

	Formal Sector (100%)		Informal Sector (100%)	
	Borrowed	Didn't Borrow	Borrowed	Didn't Borrow
Lent	6	16.5	13	27
Didn't Lent	24	53.5	29.5	30.5

Note: Proportion of households in each cell; n=200.

Source: Survey data.

Having some access to the formal credit sector did not prevent 46.7% of the households from also obtaining some loans from informal sources. Moreover, 13.3% of those who had deposit accounts with the formal sector borrowed from the informal credit market. 12% of the households reported that they borrowed from the formal sector and lent in the informal sector. Nonetheless there is no reason to believe that they used formal resources in informal lending, especially, as we shall see below, most of the informal loans were interest free. Further, the sample shows that 49% of the households neither lent in the informal nor the formal markets and 41.5% did not receive any formal or informal loans.

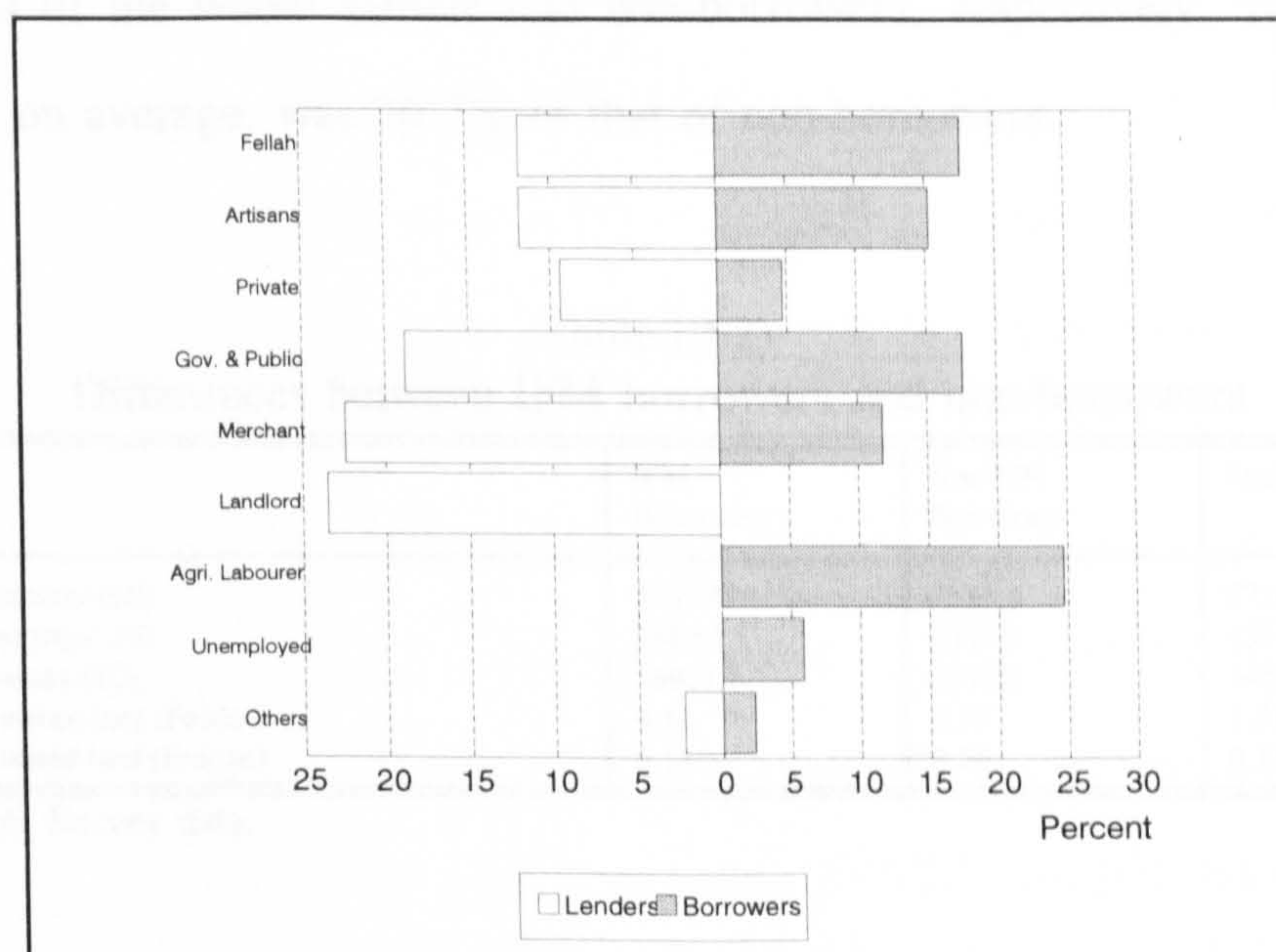
By focusing on the borrowing side we find that the relative size of informal credit obtained by the households was 30.6% of total credit. Taking into account that a single client in our sample received 34% of formal credit, by dropping this particular loan, we find that in the remainder of our sample the share of informal credit is approximately 40.0% of total credit.⁴

⁴ Note that this figure excludes tied credit and RoSCA funds.

(9.2.2) Characteristics of borrowers:

With reference to the socio-economic groups we find that none of the landlords in the sample borrowed. Agricultural workers and the unemployed were the most active in borrowing. 58.3% and 55.6% of them respectively obtained informal loans. Merchants, Fellaheen, 'government and public sector employees' and 'artisans and other manual workers' were active in borrowing as 52.6%, 46.9%, 45.6 and 44.8% of their respective totals received loans from the informal credit market. In addition, 36.3% of those who are employed in the private sector borrowed from the IFM. Figure (9.1) shows the relative importance of the above 8 groups in the informal credit market as percentage of the totals of informal borrowers and lenders.

Figure (9.1)
Informal lenders and borrowers



Source: Survey data.

The average size of a borrower's household (5.64 members) was no different from that of a non borrower household (5.68 members). However, it is worth noting that the households which are bigger in size did borrow more from the IFM; 58.3% and 66.7%

of the 7 and 8 member households, respectively, acquired informal loans while 31% and 39.5% of the 4 and 5 member households did.

The IFM borrowers were dominated by those who had no formal education qualifications. While they were 56.5% of the sample they comprised 63.5% of the 85 IFM borrowers; exactly half of them were illiterate. On the other hand the sample shows us that 31.6% of those who had higher education, 27% of persons with the Certificate of General Placement Examination or its equivalent and 48.3% of those who had primary or preparatory education obtained loans from the IFM.

Table (9.2) shows that the mean income of the borrowers was £E 3365.9, i.e. 36% less than the mean income of the sample and half the mean income of those who did not borrow informally. The mean savings of borrowers was only 23.3% and 14.9% of the mean savings of the whole sample and non-borrowers, respectively. The borrowers' assets value, on average, was 26.7% of that of non-borrowers.

Table (9.2)
Differences between IFM borrowers and non-borrowers

	IFM Borrowers	Non IFM Borrowers	Sample
Mean income (£E)	3665.89	7231.3	5716
Mean savings (£E)	358.82	2403.9	1534.8
Mean assets (£E)	56924.7	213421	146910
Mean owned land (Feddan)	0.52	2.77	1.81
Mean rented land (Feddan)	0.15	0.20	0.18

Source: Survey data.

IFM borrowers average ownership of land was 0.52 feddan, i.e. 71% less than the mean ownership of land in the sample as a whole. The mean owned land of non-borrowers was 2.8 feddan, i.e. 5.6 times greater than land owned by borrowers. Mean rented land held by borrowers was 75% and 83.3% of the mean rented land held by non borrowers and the whole sample households respectively. Further, the sample shows us that 74.1% of

IFM borrowers did not own agricultural land, 77% did not hold rented land and 57% were not landholders, i.e. with no *hiyaza*.

More than half of the respondents who had tried to borrow from the banking sector and had their applications refused, managed to secure loans from the IFM. Needless to say that many of those who borrowed from the latter did not go initially to the formal sector because they assumed that their applications would be refused.

Our data indicate that 60% of the applications refused by banks were not backed by adequate collateral. The purpose of the loan was the second greatest cause, 25%, of refusal, e.g. personal consumption lending was not allowed. Bad experience with the client was the reason in 15% of the cases for not extending new credit by banks.

When asked about their views on the services of the formal financial sector, 56.5% of the IFM borrowers mentioned that the lack of collateral was the biggest deterrent.

Cost of borrowing was another problem as 58.8% reported that high interest rates prevented them, among other things, from borrowing from the formal sector.

Approximately 29.4% reject dealing with the formal banking sector on religious grounds and a further 27.1% mentioned that they are not quite sure if the banking sector is working according to the teachings of Islam or not.⁵ Based on a belief that information passes freely between different formal institutions, 27.1% of the IFM borrowers reported their fear that obtaining formal loans would make them subject to taxation in the future.

⁵ When the author asked the branch manager of the Principal Bank of Development and Agricultural Credit in Kafr Shukr about this problem, he presented a copy of the *fatwa* given by the Mufti concerning bank dealings and mentioned that he just refers to it whenever someone argues with him about the issue of interest rate and whether it is a form of usury which is prohibited in Islamic Law. It is worth mentioning that many of the scholars, including the Imam of Al-Azhar oppose the view of the Mufti and consider charging interest rate an explicit form of usury. It is ironic to find that when the government started to promote rural cooperative societies in the 1920s, "the British obtained favourable opinions from the Mufti in Egypt and rulings from Malay sultans that the interest arrangements of cooperative credit did not contravene Islamic Law" see Von Pischke (1991) p 195.

(9.2.3) Sources of informal credit:

Figure (9.1) above shows that landlords and merchants are the dominant lenders, forming 23.5% and 22.4% respectively of the total number of lenders. Government and public sector employees account for 18.8% of lenders, 11.8% of lenders were *fellaheen*⁶ while 11.8% were artisans and other manual workers. Lenders from the private sector made up 9.4%. Agricultural workers and the unemployed in general had no surplus to lend.

However none of those who lend in the IFM should be considered as professional money lenders because the definition of the latter cannot be applied to them. Money lenders are defined as individuals who spend most of their time lending money⁷ and the major source of their income is generated through this activity.

In our survey we found that informal lending was intermittent. Lenders and borrowers are known to each other; 41.2% of the borrowers obtained loans from their relatives, friends or close neighbours and 36.5% received loans from individuals from the same village. When there was no close relation assistance from others in the form of recommendation to the lender was obtained from a relative or a friend,..etc, in 28.2% of the cases. Help was given free, except in one case when the guarantor asked for a fee.

(9.2.4) Purposes of loans:

The purposes of formal loans were predominantly for production; 51.7% of the credit was for agricultural operations, 16.7% for trade, 3.3.% for agri-industrial projects. The shares allocated to consumption and social events were 10% and 6.7% respectively. The rest of the credit, 11.7%, was classified under other purposes.⁸ From our own

⁶ Plural of *fellah*.

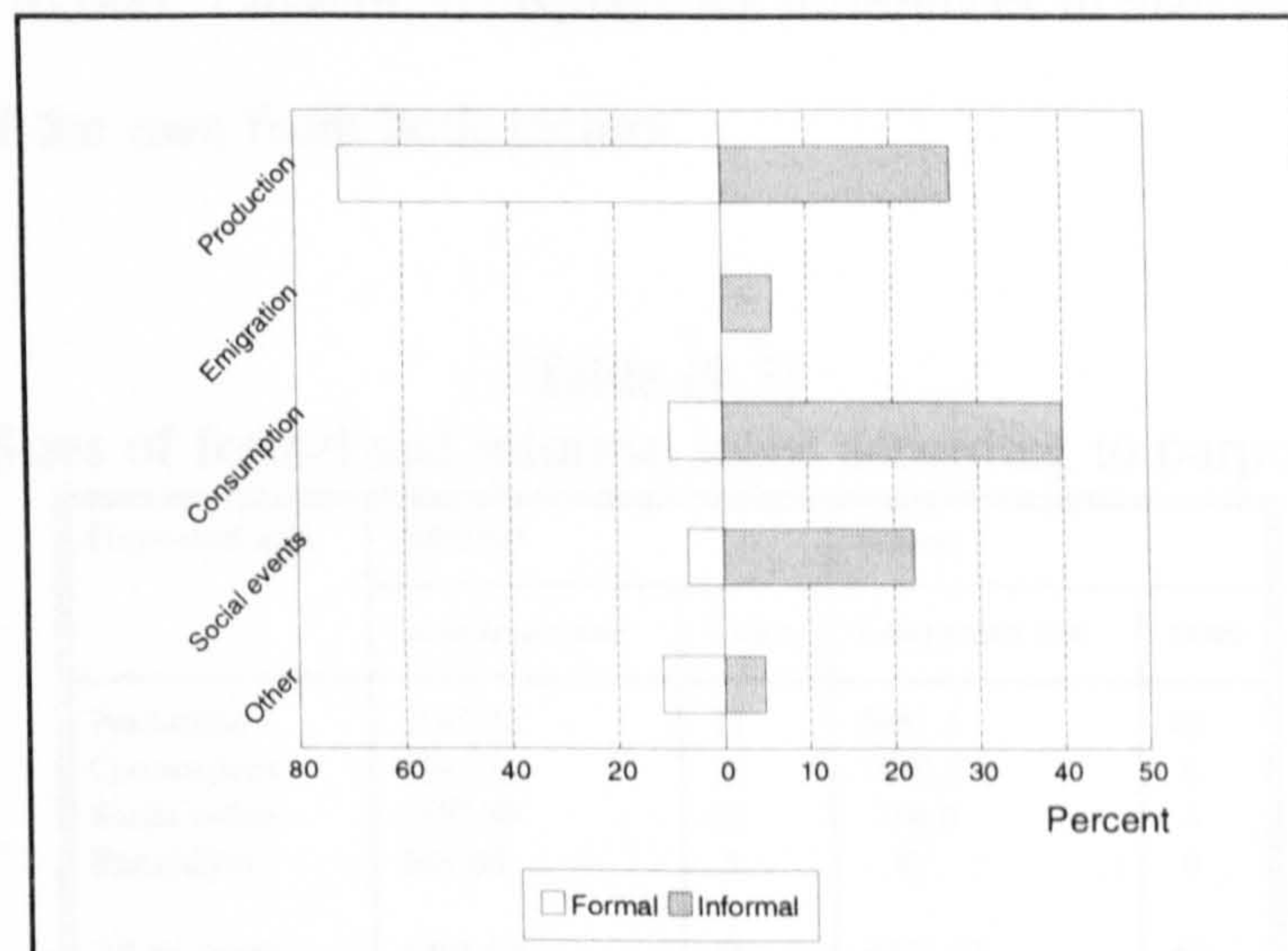
⁷ See Adams (1991), p. 31.

⁸ A possible reason why loans classified under other purposes are high, 11.7%, is that some borrowers from the formal sector may use the loans for different purposes than those declared in their application forms.

observation and inquiries most of these unclassified loans are used for building or renewing houses.

The branches of the Principal Bank for Development and Agricultural Credit (PBDAC) were the main source of formal credit available to our sample of households, accounting for 80% of the loans, commercial banks participated with 5% of the loans and employees' funds were the source of 15% of credit.

Figure (9.2)
Purposes of formal and informal loans



Source: Survey data.

By contrast, spending on different consumption items and preparing for social events were the dominant reasons behind obtaining an informal loan. 40% of the households reported that they borrowed for the former reason and 22.4% for the latter. Informal credit was also a source of working capital, both for starting a new project and enlarging an existing project. 27.1% of the households borrowed for these purposes. Financing emigration expenses accounted for 5.9% of informal credit. Thus we find that there is a consumption bias in informal credit, which is justified by several demand and supply

factors including: the nonexistence of formal personal credit designed for consumption needs, the limited role of the insurance market, lack of collateral, the fact that in many cases the amounts required tended to be too small to cover formal administrative costs and finally the costs of formal borrowing, which are considered high and/or usurious⁹.

(9.2.5) Credit characteristics:

The average size of formal loans was £E 4,927.17 with a minimum of £E 300 and a maximum of £E 100,000. Although the number of loans from the IFM was greater than those from the formal sector, the average size of an informal loan tended to be much less than formal one, with an average of £E 1,231.94, a minimum as small as £E40¹⁰ and a maximum of £E 20,000. Table (9.3) displays the differences in loan mean size according to the purpose of the loan from both sectors.

Table (9.3)
Sizes of formal and informal loans according to purpose

Purpose of loan	Informal		Formal	
	Loan mean size	Cases	Loan mean size	cases
Production	2165.22	23	5961.6	43
Consumption	539.71	34	1080.0	6
Social events	1557.89	19	750.0	4
Emigration	563.00	5	0	0
All purposes	1231.94	85	4927.17	60

Source: Survey data.

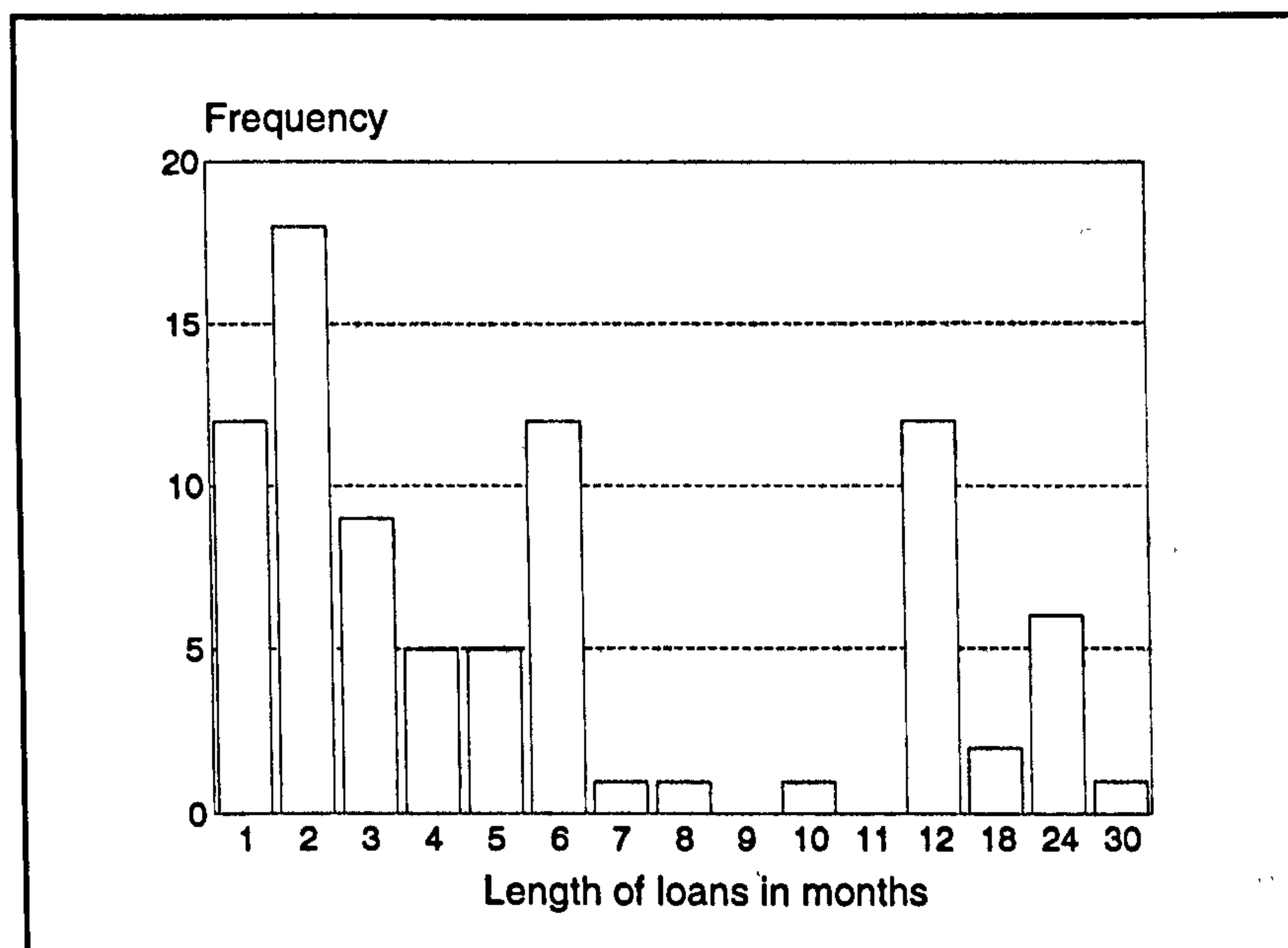
As shown in figure (9.3), IFM loans were held, on average, for 6.7 months. 71.8% of the loans were for a period of less than 7 months. The IFM loans, therefore, both in size and duration were associated with relatively short term consumption and working capital needs. The mean length of consumption loans was 4.7 months, while production loans

⁹ Usury here follows the Islamic concept, i.e. any charge of predetermined fixed interest rate, see chapter (5) for a further discussion of this issue.

¹⁰ I have been told by some of the interviewees that they frequently borrow and/or lend small amounts of cash as low as five or ten Egyptian pounds but they do not record or recall them because of their insignificance. Given their frequent recurrence we presume that if such loans are included, the relative size of informal credit would be bigger than the figure reported above. However these small transactions are hard to trace, simply because they are overlooked by the respondents.

mean duration was by 2.2 months longer. The mean lengths of loans for emigration and social events were 10.8 and 8.4 months respectively.

Figure (9.3)
Length of loans obtained from the informal sector



Source: Survey data.

Our sample shows that 90.6% of informal loans were interest free, 6% were with a return determined according to a profit and loss sharing principle while for the remainder, 3.6%, the return was in kind.

The dominance of interest free transactions and profit and loss sharing contracts is attributed to the strong Islamic prohibition on usury and the solid cultural view against it and those who deal with it. Allah the Almighty says in the Holy Qur'an: *"Oh, you who believe! Fear Allah and give up what remains of usury if you are indeed believers, If you do it not, take notice of a war from Allah and his Messenger."* (2:278)

The average return on profit and loss sharing contracts was 1.7% per month with a minimum of 0.3% and a maximum of 2.6%. This was more than the prevailing interest rate on formal deposits and less than loan interest rates which benefited both IFM lenders and depositors. However, as mentioned above, we found a few transactions in which the interest rate was charged implicitly. This occurred through taking a productive collateral from the borrower.

In one case a portion of land was taken from the borrower who was an agricultural worker, until he returned the principal of the loan (£E 600) after 5 months. The loan was used for spending on some essential consumption items during illness. The realised interest rate received by the lender was 16.7% during 5 months. In two other cases a cow was taken as a collateral. In the first case, the loan was for covering some consumption needs and its size was £E 150. The realised interest rate was 0.56% per day. In the second case the size of the loan was £E 240 and was also used for consumption. The realised interest rate was 0.18% per day.

Usufruct loans¹¹, like these three, are used to limit the consequence of information asymmetries and increase the probability of repayment. They are used in different forms in many developing economies. In Thailand these loans are used to finance migration and the lender normally occupies the land until the borrower returns and pays the principal. In Nigeria similar transactions are called tree pledging as the lender has the right to harvest the borrower's trees.¹²

¹¹ These transactions are known in The Egyptian Governorate of Menouffiya as *Mougharaqa*.

¹² See Adegboye (1983), pp. 269-275 for further details of the Nigerian case and Hoff and Stiglitz (1990) p. 243 for a brief discussion of the case of Thailand.

(9.2.6) Collateral:

In formal credit markets secured loans are commonplace. They provide the creditor with a priority claim on a particular asset, i.e. collateral, in addition to a general claim on the other assets of the debtor¹³. Collateral has two main functions. First it shifts the risk involved in the transaction from the lender to the borrower and second it enhances the borrower's incentives to repay the loan. In other words it limits the moral hazard problem.

In rural regions, the amount of loan a borrower can obtain is dependent on the size of land he owns. Given that land is the main source of income of rural households, they are reluctant to utilise it in loan transactions and tend to consider it as a last resort.

Moreover land is not equally distributed and there is a significant ratio of landless households who may try to get loans. Thus other forms of guarantee appear as a substitute.

It is remarkable to find in our sample that 92.9% of the informal transactions were undertaken without marketable tangible collateral. Similar evidence regarding the rare use of collateral in rural northern Nigeria was found by Udry¹⁴. In his study collateral was used in only 3 percent of the loans.

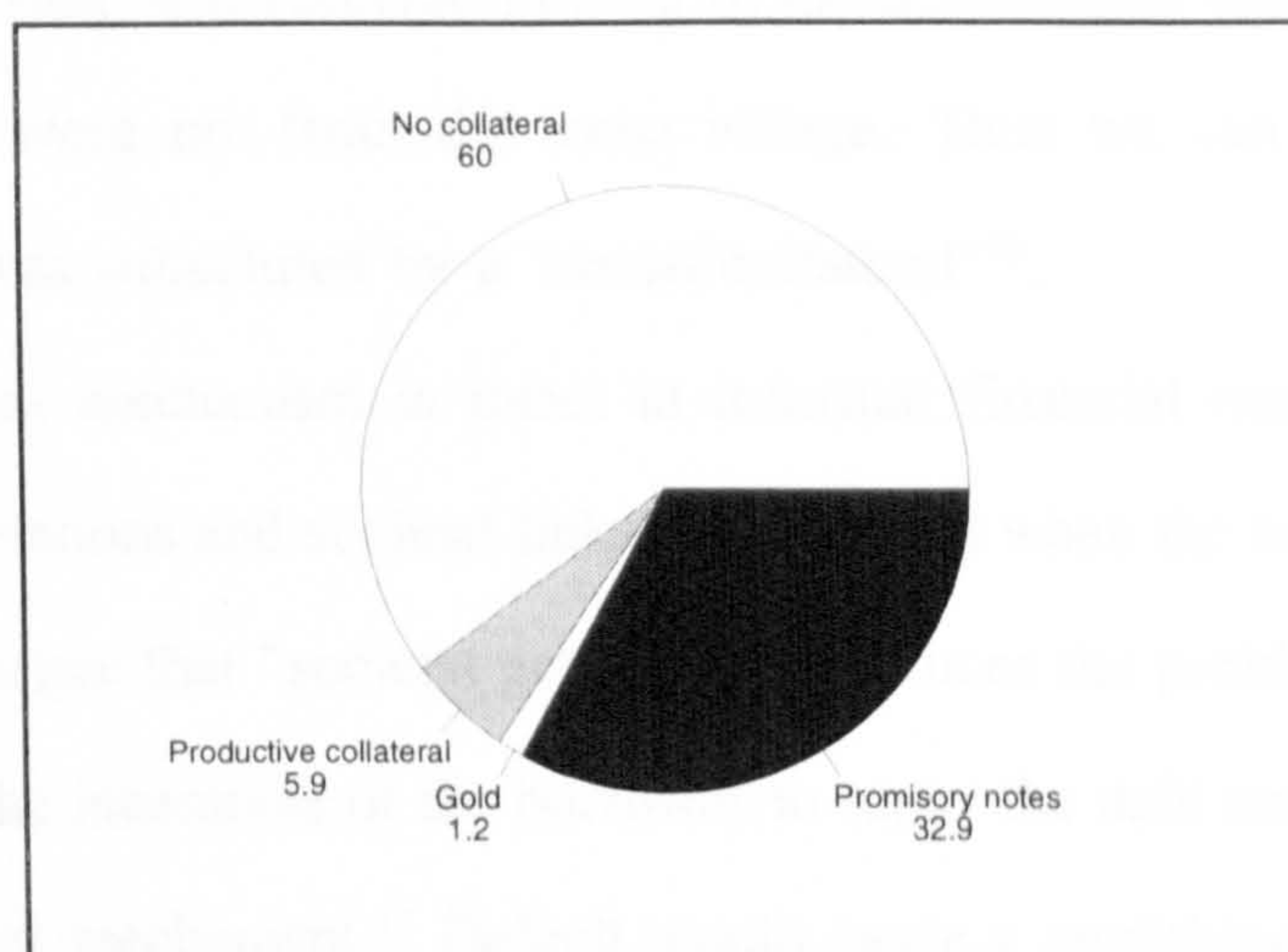
However as shown in figure (9.4) promissory notes were used as a form of collateral in 32.9% of the transactions. A promissory note has no market value, but it can be passed to a third party who may agree to take over the debt obligation specified in it, and it can be used if the lender wants to take a legal action in the case of default. Even if we

¹³ See the New Palgrave Dictionary of Money and Finance, vol (1) pp. 381-383.

¹⁴ See Udry (1990) p. 260.

include promissory notes, we realise that 60% of the informal credit was extended against no collateral whatsoever.

Figure (9.4)
Type of collateral used in informal borrowing



Source: Survey data.

On the other hand, in 5 cases, i.e. 5.9% of loans, a productive collateral was taken. We discussed three such cases of them above under the issue of interest rates and in the other 2 cases productive collateral, agricultural tools and equipments, was taken but not used by the lender. Gold jewellery was taken as a collateral in another case.

Moreover, our sample shows that in 61.2% of the transactions no contract was written. When a contract was written, a collateral, including promissory notes, was also taken in 94% of the cases.

The phenomena of limited use of collateral is attributed mainly to the following two factors:

1. Information flows freely between lenders and borrowers in relatively small communities that occupy small geographic areas. We found in our survey that

77.7% of the loans were obtained from friends, relatives, neighbours or village co-residents. In the rest of the loans we found that some of the borrowers were known closely to their lenders. Accordingly there was an informational advantage available to lenders. In the case of having no direct relation with the borrower, a third party who possessed information about the borrower was used as a guarantor. Help was received in 63% of the transactions when the borrower and the lender were not from the same village. Thus we can argue that tangible collateral was substituted by a "social collateral"¹⁵.

2. Enforcement mechanism is intact in informal financial markets.¹⁶ The role of personal relations and societal links does not end when the borrower receives the loan. We argue that "societal governance" reduces the problem of screening and enhances the incentives of the borrower to repay the debt and establishes a direct enforcement mechanism.¹⁷ Default would cause a tarnishing of reputation and a denial of access to future loans from the same lender and possibly from other lenders as well.¹⁸ Hence a rational individual will try not to violate the implied social code of conduct unless there is a genuine reason behind default; in such a case the society would intervene to assist the defaulter by extending credit and/or period of repayment.

(9.2.7) Default:

Our sample shows that default occurred frequently as 55.3% of the loans were not repaid on the agreed dates. But after allowing the borrower some more time for repayment there was a fall of default cases to 11.5%. This emphasises the fact that loans in the IFM tend

¹⁵This concept is introduced in Besley and Coate (1991).

¹⁶Besley (1994) defines enforcement problem as "a situation in which the borrower is able but unwilling to repay".

¹⁷ See Hoff and Stiglitz (1990) for a discussion of the problems of screening, incentives and enforcement.

¹⁸ Areetey and Udry (1994), p. 16, report that in some cases informal lenders have no effective means of dealing with those who default except making them "live with the stigma" of being known to be defaulters.

to be state-contingent. When insurance markets are absent or incomplete, informal credit markets play a significant role as they allow pooling of risk over time. Potential borrowers apply for loans more when they face an adverse shock.

Repayment depends on the state of their financial condition. State-contingency facilitates the pooling of risk as the current lenders may be future borrowers¹⁹. This is enforced by a complex nexus of personal relations, societal governance and the prevailing tradition and religion. Allah the Almighty says in the Holy Qur'an:

"If the debtor is in a difficulty, then grant him time, till it is easy for him to repay". (2:280)

Accordingly we find that in 70% of the 'default' cases the borrower was granted more time by the lender to assist him in repaying the loan in full. Some of the lenders, 6.4%, extended further credit to the borrower. Nevertheless we found that in 12.8% of the cases the borrower had to obtain a new loan from another lender to repay the old loan. A legal action was taken in 10.6% of the default cases, i.e. in 5.9% of all credit transactions.

Table (9.4) shows repayment and default cases before granting borrowers further time for repayment. It shows that writing contracts and/or obtaining collateral may help in reducing default, as 61.6% of default cases occurred in the absence of them. But one should state that 34% of default occurred even when the transaction was backed by collateral and specified in a contract and more than 52% of the fully repaid loans were obtained without taking a collateral or writing a contract.

¹⁹ See Udry (1990) pp. 261-263.

Table (9.4)
Repayment and Default (before time concession)

	Repayment (No Default) (44.7%)		Default (55.3%)	
	Collateral	No Collateral	Collateral	No Collateral
Contract	17.6	1.2	18.8	1.2
No Contract	2.4	23.5	1.2	34.1

Note: Proportions of households in each cell; n=85.

Source: Survey data.

(9.3) A note on Interlinked Credit:

Interlinked arrangements reduce transaction costs, enhance borrower's incentives to repay the loan and limit moral hazard and monitoring problems²⁰.

The most recognised form of interlinked credit in rural Egypt is trade credit.²¹ Nevertheless, none of those who were involved in interlinked credit considered it as a loan of any kind. This may be due to the fact that the credit arrangement is incorporated in the trade contract to the extent that the two parties may not realise that they are two separate agreements.

In our sample, under trade credit, buyers of land products made advances to producers to help them in financing agricultural operations. For example in the case of citrus fruit the contract is typically signed during the months of June and July. Upon signing it the wholesale trader pays the producers around 20% of the agreed value of the product. The rest is distributed in four equal instalments, 20% each, in the months of January, February, March and May. The trader normally starts selling the product, when it is ripe, by the beginning of October and may not get the full revenue of the trade before June of the following year.

²⁰ See Bell (1988), pp 798-803.

²¹ It is worth mentioning that sharecropping is not common in the surveyed villages and most rentals are in cash, which is the case elsewhere in Egypt as noted by Richards and Martin (1983), p. 4.

This transaction is not strictly a credit transaction but rather a forward sale motivated by the producer's need for credit during the period between June and October each year. The price at which the citrus fruit is valued will be less than the prevailing market price when the fruit is ready for sale. The difference is the implicit rate of interest, usually justified by the risk of losing some, or all, of the product during the waiting period, on average five months.

We found that 18% of the households with owned and/or rented land were involved in tied credit arrangements. The mean owned land under tied credit was 9.3 feddan; almost five times more than the mean owned land of the sample as a whole. There are three reasons for this; first that tree products, such as citrus fruit, the main agricultural product of the region, are cultivated on relatively large land. Second, traders who are capable and willing to extend credit specialise in relatively large scale production. Third, most crops cultivated on a smaller scale had to be delivered to the government's marketing board and until quite recently it was a crime to sell them directly on the market.

(9.4) Informal finance through collective arrangements: The case of RoSCA

Informal finance can take a form of collective arrangements. One of the examples of these arrangements is Rotating Savings and Credit Association known in financial development literature by the acronym (RoSCA)²². In this section we will try to describe the main characteristics of RoSCA in Egypt and analyse its structure, design, mechanisms and limitations.

(9.4.1) Characteristics of RoSCAs:

In a typical RoSCA individuals voluntarily construct together a club to pool regularly their savings in order to create loanable funds for the members of the club. The distinguishing feature of RoSCAs is the intermittent pooling of the deposits collected from members to be made available exclusively to each member in turn. When there are (n) participants, each contributes (x) at the beginning of the agreed period (t), normally a month or a week, where the number of periods should equal (n), and each one will receive, in turn, (x.n). At the end of the cycle, i.e. after (n) regular intervals, each member will have received (x.n) which is equal exactly to the sum of funds he or she has contributed with during the cycle of the RoSCA²³.

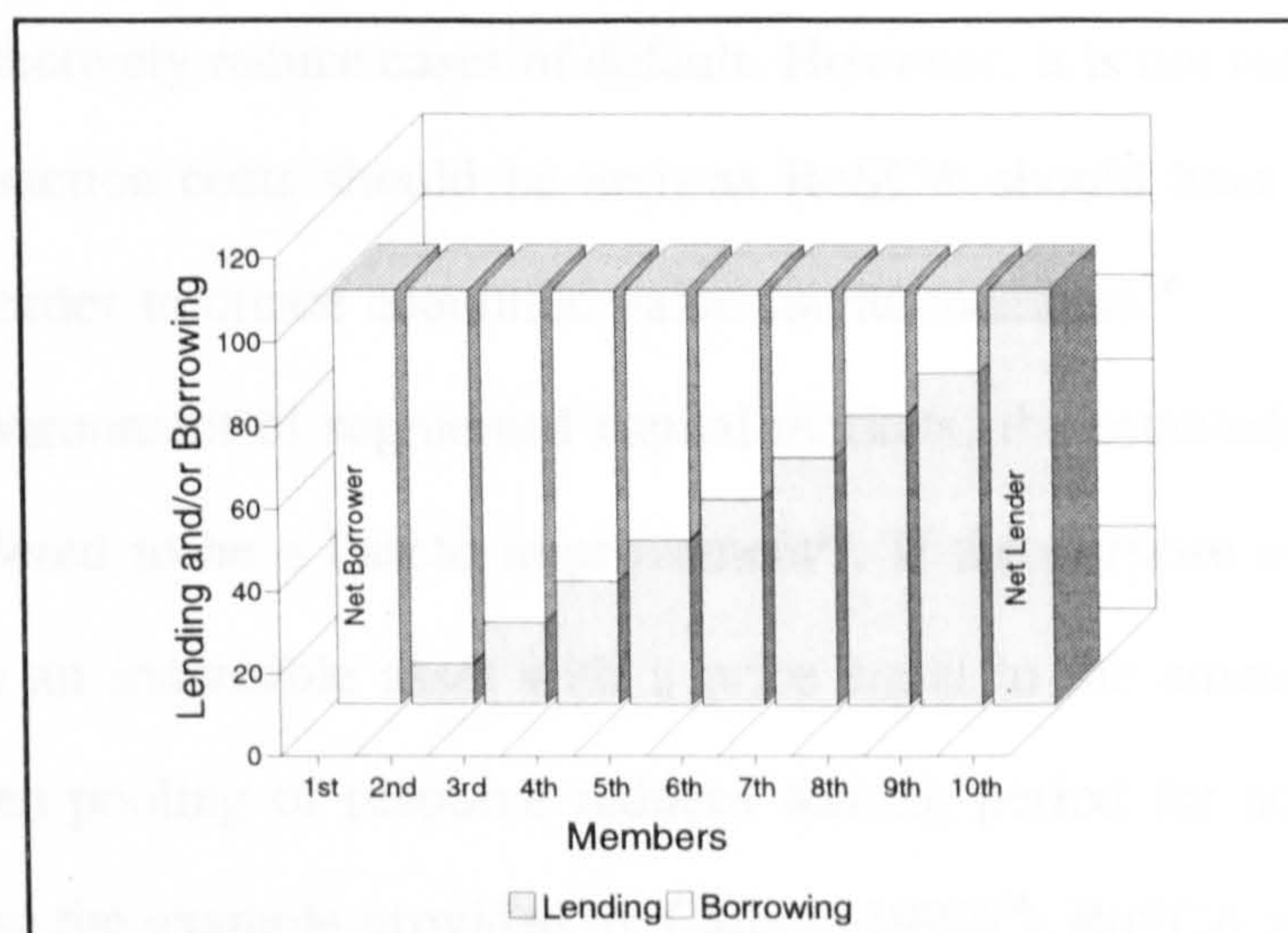
The above example shows RoSCAs in their simplest form, where no interest rate is charged, no compensation is paid to the organiser and no competitive bidding is considered for the fund.

As shown in figure (9.5) below the first member in the cycle gets credit, interest free, from the rest of the members, while the last member in the cycle extends credit to the RoSCA members. Other members' positions alternate between borrowing and lending.

²² The world Bank (1989) and other studies report different names of RoSCAs in different countries; e.g. tand in Mexico, chit in India, tontine in Niger, hagbad in Somalia, chilimba in Zambia, kou in Japan, pasanakus in Bolivia and gameyah in Egypt, see World Bank (1989) p. 114 box 8.2; Adams and Canavesi (1989) p. 223; and Mrak (1989) p. 65.

²³ See Bouman (1983), p. 262.

Figure (9.5)
Lending and/or borrowing
during a typical cycle of RoSCA



(9.4.2) Merits of RoSCAs:

1. The RoSCA practice enables a person with small savings to accumulate a greater sum as he has a clear awareness that his small periodic savings will eventually be accumulated into a relatively large lump sum.
2. A RoSCA member manages to save such a lump sum in a shorter period than when saving on his own. We argue that even if he is allocated at the end of the cycle he may still reach that large sum earlier than he would otherwise have done, simply because the commitment of contributing regularly to the common fund would prevent him from spending it on trivial consumption items. Hence the saving behaviour of the individual may improve, *ceteris paribus*, due to the "RoSCA saving incentive".
3. RoSCAs are responsive to the economic conditions and social requirements of their members in terms of the amount of each member's share, duration, order of rotation, consistency of rules and procedures with the prevailing socio-economic norms.

4. RoSCAs enjoy, like many other informal arrangements, low transaction costs, which may be close to zero in some cases. There are no administrative expenses, no information costs, and monitoring is left to strong social ties and pressure which effectively reduce cases of default. However, it is not reasonable to assume that transaction costs should be zero as RoSCA should bear some transactions costs in order to create economic value for its members²⁴.
5. In an environment of segmented capital markets, the establishment of a RoSCA is considered to be a Pareto improvement²⁵. If the purpose of the RoSCA is to purchase an indivisible asset with a price equal to the amount of the common fund, then pooling of resource reduces waiting period for acquiring that asset. Following the example provided by Callier (1990)²⁶; RoSCA reduces the average waiting period $W = (n+1)/2n$, i.e. as a fraction of the duration of the entire cycle of RoSCA, by close to 50% of the time needed by participants if they save individually. Note that Callier assumes that the saving behaviour of the individual is the same in RoSCA and outside it. However due to the RoSCA incentive highlighted in point (2) above, we argue that the saving behaviour may improve. Hence even the last one in the cycle would benefit from a reduction of the waiting period compared with autarky.
6. It is clear from the previous point that it is not just the RoSCA members who benefit from the scheme, as those who are attached to producing and selling the indivisible product, e.g. durable goods, in the absence of credit schemes will benefit as well without bearing any form of risk.

²⁴ Von Pischke, *op. cit.*, pp. 16-17.

²⁵ See Besley, Coate and Loury (1990) pp. 4-6 and Callier (1990) p. 274.

²⁶ See Callier (1990) pp. 274-275.

7. RoSCAs do not only play a financial and economic role but also have some social benefits. Members get together regularly and at such meetings they may exchange views, contacts are strengthened and other transactions may take place.
8. Nevertheless, accessibility of RoSCAs can be considered as the most important ingredient of its attainment. There are no excessive regulations or rules but those observed by the society, no collateral is needed, and no deposit minimum as one can participate at a level that caters for each individual's income and credit needs. If the periodic share is still higher than one's saving ability, he may participate with another member in one share²⁷.

(9.4.3) RoSCAs in Egypt:

i) Structure:

According to our sample, 45 households, 22.5% of the sample, reported that they participated in a *Gameyah*, RoSCA. As can be seen from table (9.5) below, the average size of RoSCA was 10.82 members, with a minimum of 6 and a maximum of 20.

The mean average age of members was 35 with a range from 26 to 45. The minimum average age may be higher than expected, but there are four reasons for that.

1. First, the minimum age here is the minimum average age in each RoSCA so the minimum age for a member is lower than 26.
2. Second, the commitment of contributing regularly to the common fund cannot be achieved unless there is a stable source of income that is sufficient to allow for monthly regular savings. Given the high unemployment rate among the youth in Egypt, obtaining such a regular and sufficient income is a privilege for only a few of them.

²⁷ See Bouman, op. cit., p. 263.

3. Third, one of the main reasons for joining a RoSCA, as shown below, is preparing one's home for marriage. However due to unemployment the age of marriage has risen recently. Even if a person is getting married early, it is still considered the responsibility of the family to finance most, if not all, of the marriage expenses. So parents may be the ones who join a RoSCA to help finance the expenses of the marriages of their children, which pushes the average age higher.
4. Fourth, the purchase of durable goods, which is the main objective of joining RoSCA, is not related necessarily to age.

Table (9.5)
Characteristics of RoSCA in Egypt

Item	Mean	Standard deviation	Min	Max
Number of Members	10.82	6	6	20
Average Age	35.02	5.4	26	45
Duration of the Cycle (month)	9.51	2.34	6	12
Share Size	42.89	24.32	10	100
Fund Size	474.22	353.27	90	1800
RoSCA Fund to Income (%)	12.22	9.9	1.76	48

Source: Survey data.

In contrast to the familiar view in Egypt which implies that the main participants of RoSCAs are women, the survey shows that just 8.9% of RoSCAs were exclusive to them, while 22.2% were exclusive to men. However, 68.9% of RoSCAs comprise men and women with a significant participation of the latter.

I have been told by several interviewees that in the past, RoSCAs were considered as women's clubs, but during the 1970s and 1980s this view has changed to the extent that we find men dominating them. We surmise that the reasons behind this change can be summarised by three factors. First, the purpose of RoSCAs is no longer limited to consumption reasons, as many persons join it for productive purposes as shown below. Second, the success they have achieved with very limited default cases has encouraged a lot of people to increase the shares and hence the funds. Taking the decision to increase

participation, necessitates the involvement of men directly in the activities of RoSCAs. Third, under the revival of religious influence, formal credit schemes are viewed as usurious and hence prohibited, "zero-interest-rate" RoSCAs appear as plausible substitute for such schemes.

Our survey results indicate that 40% of the members are neighbours, while 35.6% of them are colleagues at work, 15.6% are friends, 4.4% are relatives, while 4.4% have no relation with each other. According to our survey we realise that RoSCA was popular amongst government and public sector employees as 33% of the 45 RoSCAs were constructed predominantly by them. Getting their salaries in monthly terms and meeting each other regularly at the work place makes forming a RoSCA a feasible arrangement among these employees. Farmers and agricultural labourers come second, then private sector employees, then artisans and merchants. Landlords seem to have no interest in RoSCAs. There were no unemployed members in any of the 45 RoSCAs, possibly because they cannot meet the obligation of regular payments to the fund.

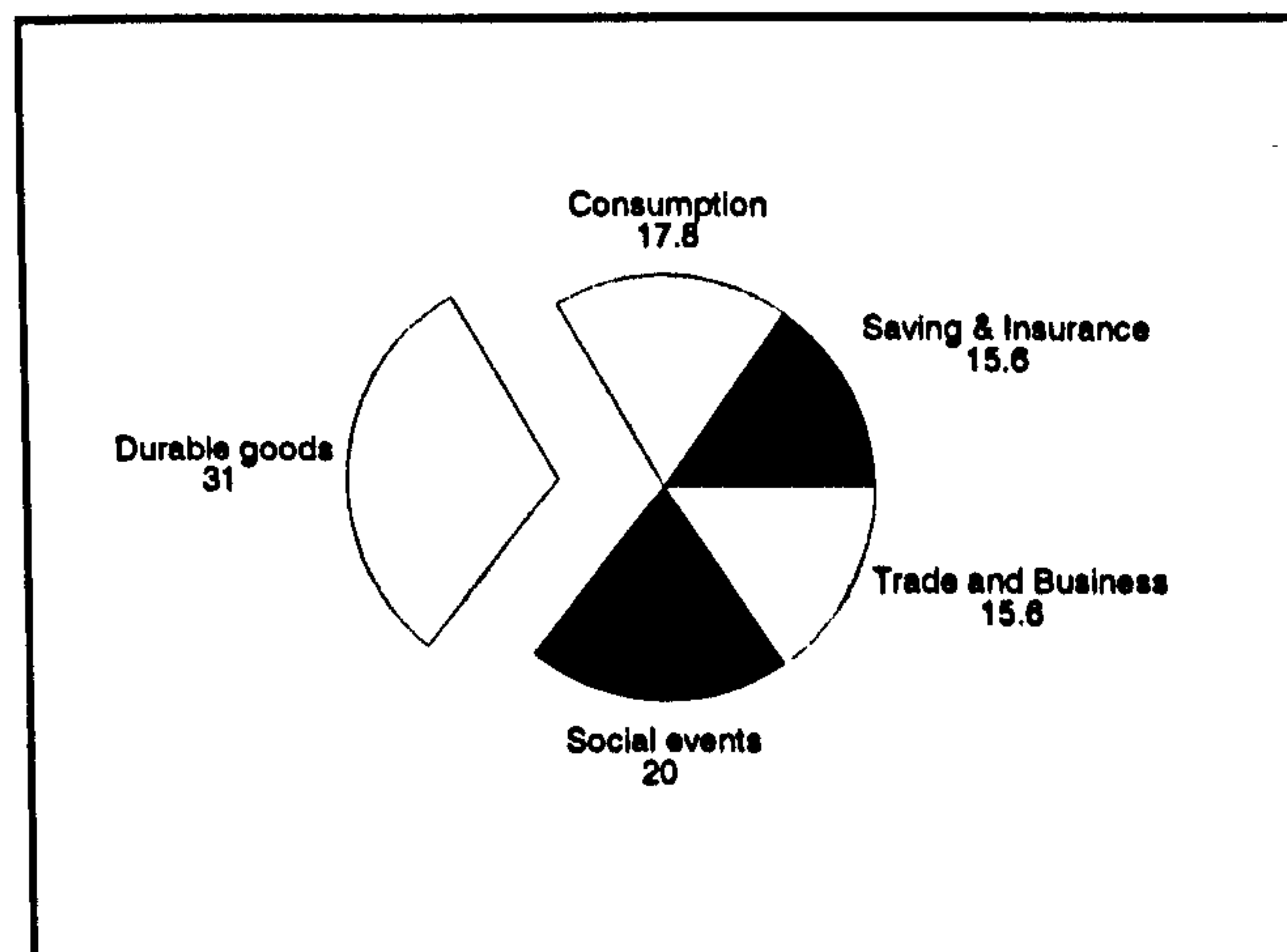
It is worth mentioning that 91% of the members had neither current or deposit accounts with the formal sector and two thirds of them did not borrow from the same sector. The third who had loans from the formal sector borrowed these from the Agricultural Development Bank i.e. the loans were limited to agricultural use. 62% of the members reported that they have religious considerations that prevent from dealing with the formal sector.

ii) Purposes:

Figure (9.6) below shows that purchase of durable goods, mainly television sets, washing machines, electric fans and items of furniture, was the dominant reason for joining a RoSCA, as 31.1% joined RoSCA for that purpose. 20% of RoSCA members mentioned that preparation for social events like marriage and engagement ceremonies and paying

dowries was the reason behind their participation. The third most important reason reported by 17.8% of RoSCA members was the use of funds for meeting occasional expenses , e.g. purchase of wholesale food, paying bills, buying school uniforms and books. Accumulation of capital for starting a business or expanding an existing one was the fourth reason in importance for joining a RoSCA as 15.6% of members had this reason. Another 15.6% of the members reported that they use of the funds for saving for a rainy day i.e. for insurance purposes.

Figure (9.6)
Purposes of RoSCAs



Source: Survey data.

iii) RoSCA design:

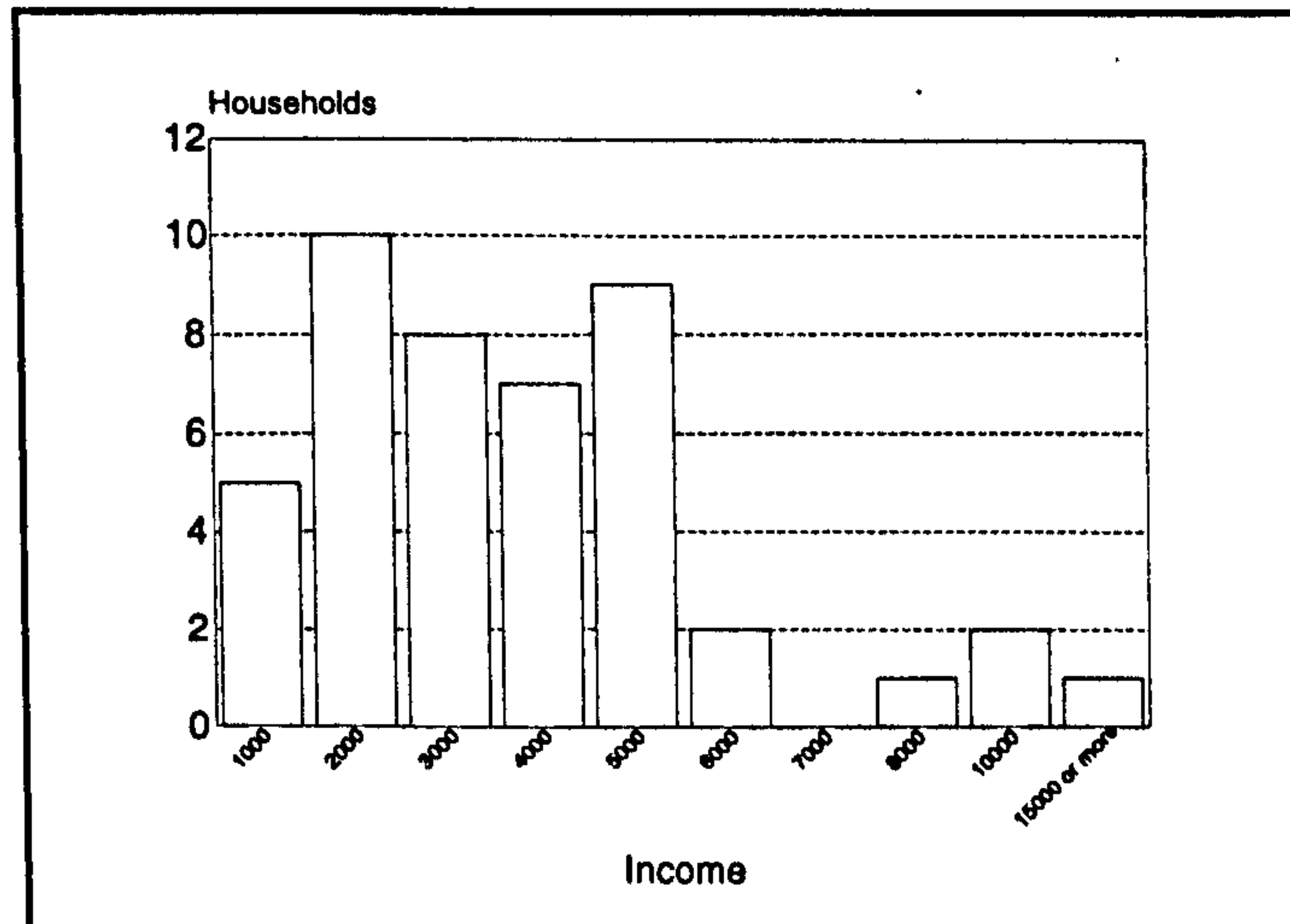
The average cycle of the RoSCA, as shown in table (9.5), is 9.5 months with a minimum of 6 months and a maximum of 12 months. The Deviation between the number of months and the number of members is due to 2 reasons. First, more than one member participated in one share. Second, shares were collected weekly in 6.7% of RoSCAs while the rest were collected monthly. Weekly shares were generally paid by traders who joined RoSCAs for productive purposes. There were no daily shares.

Average share size was £E 42.9 with a minimum of £E 10 and a maximum of £E 100 and the average size of the fund ranged from £E 90 to £E 1800. Obviously, such a big difference between the minimum size and the maximum size is attributed to the differences in the number of members and the size of their contributions. Nevertheless, the purpose of joining a RoSCA is an important factor behind the size of the fund; the common funds of traders' RoSCAs tend to be much bigger than those established for consumption purposes.

From table (9.5) it is evident that the average size of a RoSCA fund is 12.22% of the annual income of the households with a minimum of 1.76% to 48%. However, the importance of RoSCA as a saving instrument does vary from a household portfolio to another. However 53.3% of RoSCA participants in our survey consider it of secondary importance in their portfolios, 35.6% report that it has a main importance, while it was marginal in 11.1% of the cases.

On the other hand, figure (9.7) below shows that, according to income classification, RoSCA members are mainly found among the (£E 2000 to £E 5000) income groups, with less members from the higher and lower income recipients. The biggest participation, however, comes from the (£E 5000 to £E 6000) income group as 50% of this group participated in RoSCA. while 31.8%, 24.2% and 27% of the three preceding groups, respectively, joined RoSCA. A relatively smaller number, 14%, of the lowest income group (£E 1000 to £E 2000), were members in RoSCA. Fewer number of high income earners did participate in RoSCA.

Figure (9.7)
Participation in RoSCAs
according to income groups



Source: Survey data.

Given that the average income of the household is £E 5716, hence RoSCA can be considered an informal financial arrangement undertaken primarily among the middle income and low middle income groups. Low income groups may not have enough regular savings to participate with and high middle income and high income groups may have better access to formal credit, or undeniably, may not be in need for credit at all.

iv) Determination of the rotation:

Analysts distinguish between RoSCAs according to the way of determining the rotation of access to the pool of collected deposits. They distinguish between random RoSCA and bidding RoSCA.²⁸

According to Besley, Coate and Loury (1990) and (1993), the rotation can be determined randomly. Members (n) put a fixed sum of money into a common fund (F) for each

²⁸ See for example: Besley, Coate and Loury (1993); Montiel, Agénor and Haque (1993). and Callier (1990).

period of the cycle (t). Members meet regularly at agreed dates $\{t/n, 2t/n, 3t/n, \dots, t\}$ and at each meeting every member contributes a share of (F/n) . Members draw a lot and the pooled contributions (F) are allocated to one of the members. The process is repeated in the beginning of the subsequent periods with the previous receivers excluded from the draw, until each member receives the lot and the RoSCA's life comes to an end. According to this type of RoSCA each member considers his turn in receiving the pot as a random variable, (r), with a uniform distribution on the set $\{t/n, 2t/n, 3t/n, \dots, t\}$. By forming a random RoSCA, without a change in their saving behaviour, all members, but one, raise their expected lifetime utilities as they manage to accumulate (F) , $t(n-1)/2n$ sooner than saving on their own. However if our suggestion of the improvement of saving behaviour under RoSCA is accepted then all members including, the last one in the cycle, would perceive this improvement in the expected utility over the life of the RoSCA.

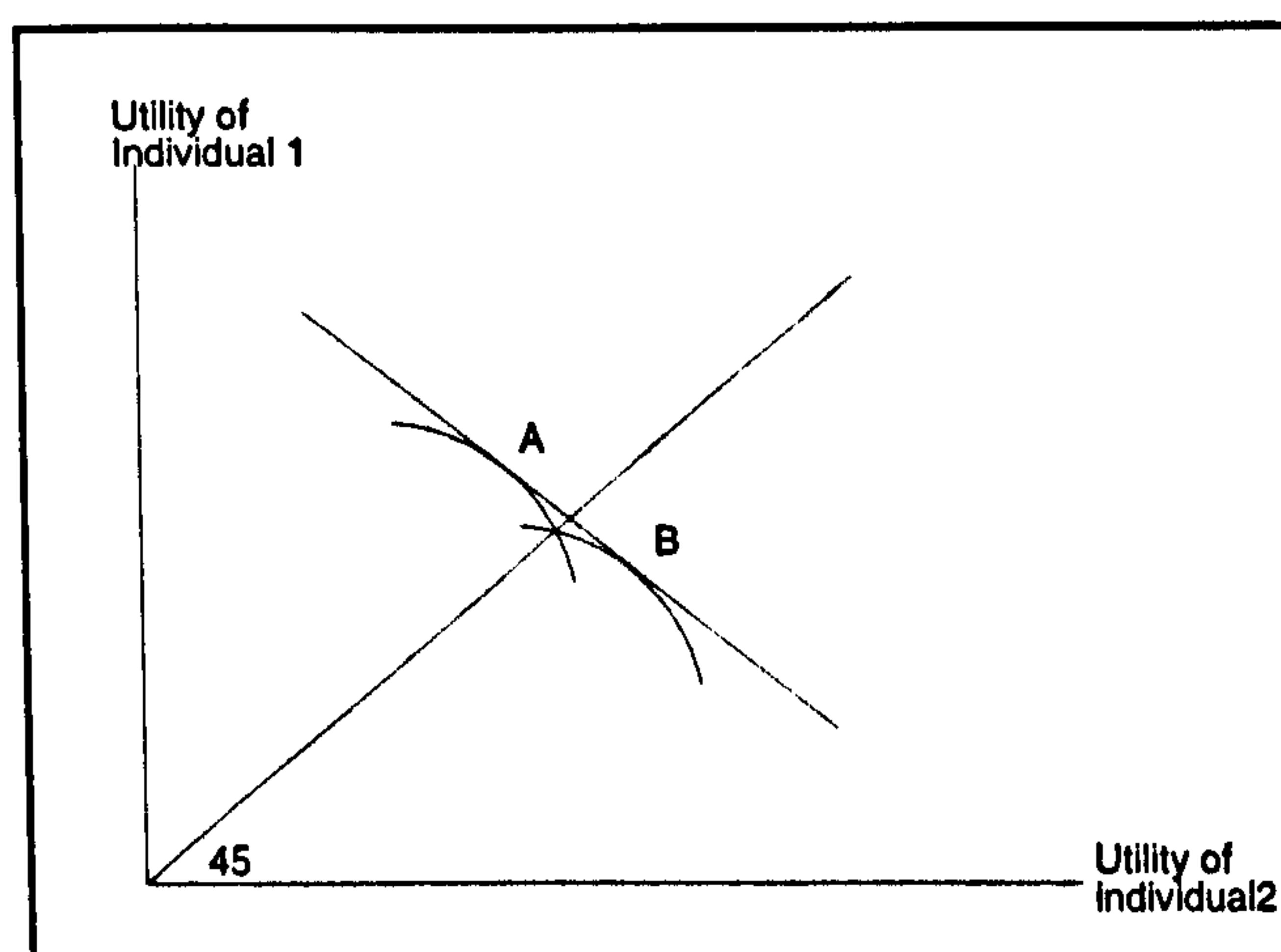
The second way of determining the rotation of the RoSCA is by bidding when the RoSCA is formed, i.e. at time (0). The potential member n_α indicates his demand for the common fund (F) in a specific date $d \in [0, t]$ by offering higher contribution in the future at a constant rate $b(n_\alpha)$. The member with the highest offer receives the common fund first and then the person with the second highest offer follows him in rotation and the cycle continues. In this type of RoSCA funds are usually linked to the market interest rate. However members of bidding RoSCAs, as in random RoSCAs receive the common fund only once. Thus, the bidding procedure just decides the priority of receiving the common fund²⁹, as well as the effective interest rate.

As with a random RoSCA a bidding one allows its members to utilise their savings more effectively than under autarky. However it is proved theoretically that a random RoSCA is more efficient than a bidding RoSCA. Bidding under the rule of making utilities of all

²⁹ See Besley, Coate and Loury (1990) op. cit., pp. 1-3 and Montiel, Agénor and Haque, op cit, pp. 15-16.

member equal, results in saving at a higher rate by early recipients i.e. forgoing of consumption. As shown in figure (9.8), the utility allocation in a two-member random RoSCA is at point A if individual 1 wins the first pot or point B if individual 2 wins. But in a bidding RoSCA the utility allocation, in order to make utilities equal, has to be at the intersection point of the two frontiers, which is lower than A and B.

Figure (9.8)
Allocation of utility in a two-person RoSCA



Source: Adapted from Besley, Coate and Lury (1993), p. 801.

However in our survey we have found that there is a third type of RoSCA common in Egypt, let us call it "non-random RoSCA". In this kind of RoSCA the determination of the rotation lies fully in the hands of the organiser. Different factors are considered by the organiser when deciding the rotation: the creditworthiness of the member; how desperate is he for receiving the common fund early; and his relation to the organiser. The most important factor of these is creditworthiness as the default risk problem begins once a member receives the common fund.³⁰

³⁰ See Christensen (1993), p. 726.

In an environment where the absence of tangible collateral is not uncommon, the organiser has to rely on a substitute for collateral. Reputation of the potential member can be used as a form of social collateral. If he is not known directly by the organiser, then one or more of the members, who may possess better information about him may be considered as a guarantor and a peer monitor of the potential member³¹.

Given that the utility of default is higher for early recipient members in the cycle, this has to be minimised by different measures. The first is to allocate members with high creditworthiness at the beginning of the cycle and vice versa. Second, to keep the number of participants small to lower the monitoring effort. The average size of a RoSCA in different countries is reported to be between 6 to 40 members³² and in the case of our survey it was 10 members. Third, to accept members who are known well by the organiser and/or other members of the association as a guarantee of their fidelity. Fourth, to keep share contributions small.

Accordingly, in a standard non random RoSCA, the organiser usually takes the common fund first and priority is given to those who are frequent members to receive it after him. Those who join it for the first time are allocated at the end of the cycle. In the first meeting of the cycle, it is not uncommon to find that the members are 'bidding by their problems' to justify their demand for priority. However, many of these RoSCAs have more than one cycle. This allows for some form of compensation to the late receivers of the common fund in one cycle, by allocating them a better position in the following one.

³¹ On peer monitoring and substitutes for tangible collateral see Stiglitz (1990) pp. 351-366 and Sarap (1991) pp. 167-188.

³² See the World Bank (1989), *op. cit.*, p. 114 box 8.2.

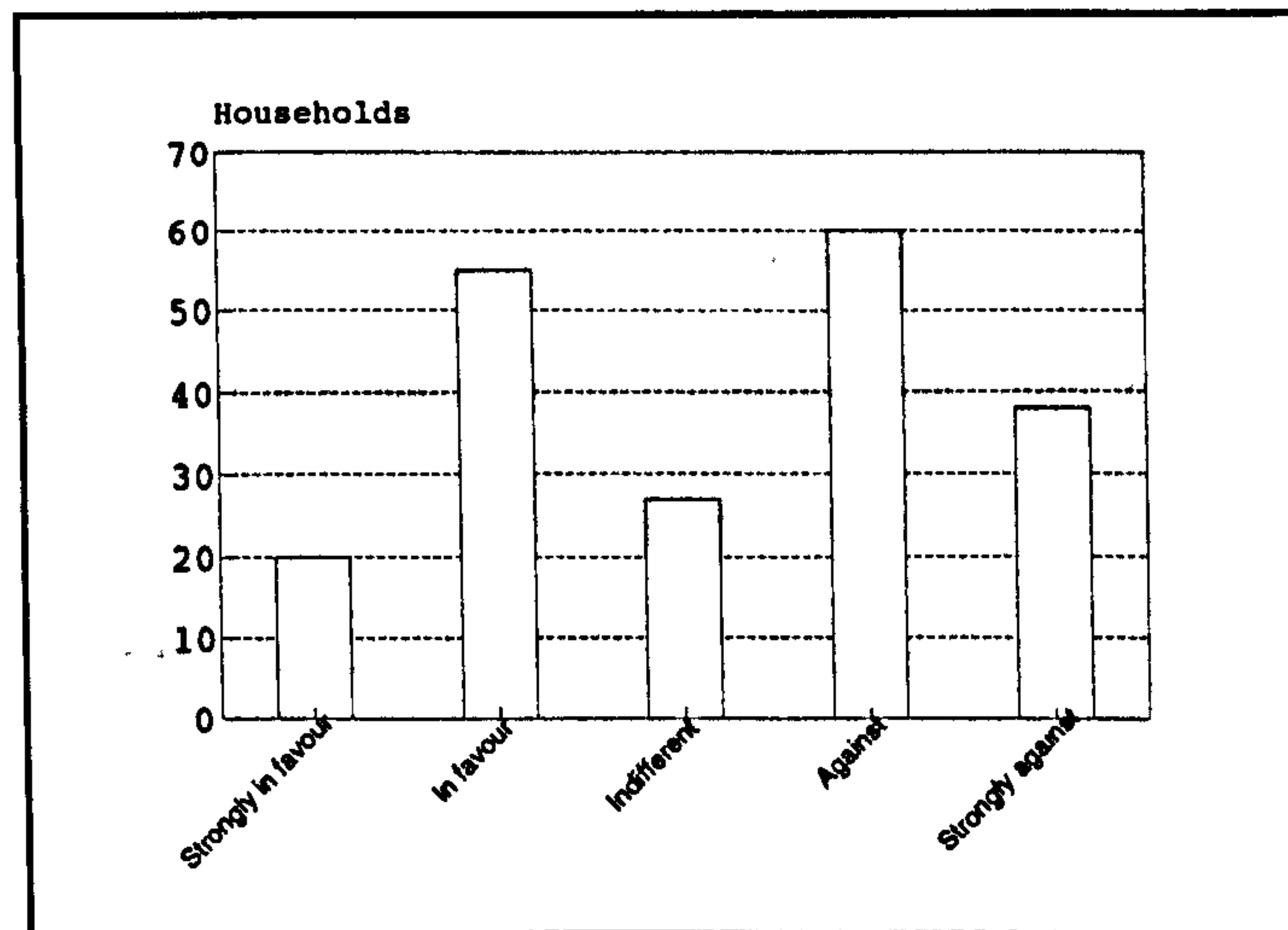
According to our sample, in 62.2% of the 45 RoSCAs,³³ the organiser received the pot first and it was him who decided, according to the three factors described above, the rotation of the cycle. In 6.7% of the RoSCAs the organiser received first and then a random procedure determined the position of the rest. It is worth noting that receiving the pot first was the only compensation given to the organiser for his effort. However, in another 6.7% of RoSCAs, the one who participates with more than one share received the pot first, and then the rotation was determined randomly. It was interesting to find that in 24.4% of the RoSCAs, the person in most need of the fund received first, and then negotiations among the members determined their positions in the cycle. Bidding on the pot did not take place in any of the RoSCAs. Hence, the discretion of the organiser and negotiations were the two main methods of determining the rotation of the RoSCA. It is worth noting that no interest rate was involved in any of the Egyptian RoSCAs.

(9.4.4) Further remarks on RoSCAs:

Built on trust, RoSCAs have proved to be a good example of the informal collective arrangements that rely on preestablished social relations and ties. However, when asked about their view on participating in RoSCA, the interviewees' responses were not entirely in favour. As shown in figure (9.9), just 20 of the 200 households had a very positive view about RoSCAs as an instrument of savings. 55 of them mentioned that they favour it. 27 households said that they were indifferent. Those who do not favour it were 60 households and 38 reported that they strongly do not favour it.

³³Note that the number of RoSCAs may be less than 45 as some of the respondents may be members in the same RoSCA.

Figure (9.9)
Respondents' views on RoSCAs



Source: Survey data.

Thus the number of those who have reservations on RoSCAs was much greater than the enthusiasts. This can be attributed to the following factors:

1. Lack of law enforcement in the case of default or disagreement.
2. Lack of confidence in organisers and/ or members.
3. Lack of compensation for the late receivers of the pot.
4. The start of new credit schemes which allow increasing numbers of customers to buy durable goods by instalments with zero interest rate due to the recession.
5. The occurrence of default cases in some RoSCAs in the past. In the 45 RoSCAs mentioned above there was just 3 default cases. In one of them one member did not pay his last share after receiving the pot. The other two were in the form of a delay in payment of the share which the organiser did not manage to cover so 2 members received incomplete funds. However, the reported 3 cases should not cause consternation among potential participants as the default cases are just 0.62 per cent. But it seems that the collapse of Islamic Investment Companies³⁴ which

³⁴See our analysis of these companies in chapter (5).

were built mainly on trust, discouraged a lot of potential members to engage in similar arrangements. Moreover one of the RoSCA organisers in the village of Menshat, received the pot and disappeared. This is reflected in the views of the households of this village on RoSCAs. This village had a low number of participants as 20% of its households participated in RoSCAs, while in the village of Shahawy, which shares the main economic and social characteristics with Menshat, 36.7% of the households were RoSCA members. If anything this emphasises that the issue of confidence and trust goes both ways.

Finally, a RoSCA can be considered a successful financial intermediary given the following conditions:

- First, it has to be kept small and simple. Increasing its size will jeopardise its main ingredients of success, that is low transaction costs attributed to low costs of collecting information and monitoring. Larger numbers of participants would mean, in addition to greater transaction costs, an increasing need for measures against default risk, like the use of tangible collateral. This would exclude a significant number of potential participants and on the other hand would place RoSCAs in competition with formal intermediaries which are more capable of handling collateral-based transactions.

An example of the evolution of RoSCAs can be found in the development of building societies in the UK. In the 18th centuries these societies were simple clubs formed of groups of neighbours and friends "who saved regularly to finance the purchase of their own houses"³⁵. Nowadays they become sophisticated financial institutions that do not significantly differ, from banks, with barriers to entry and regulations that limit accessibility. Thus, any attempt to make the RoSCA evolve into a large scale financial

³⁵Davies (1994), p. 326.

intermediary would result in a loss of its *raison d'être* namely to serve those with no access to financial intermediaries, simply because it ends up acting like them.

- Second, a simple zero-interest rate RoSCA has to operate in a low inflation environment. High inflation rates, when there is no interest rate involved to compensate the late receivers, would discourage participation. Similarly when there is a devaluation process applied in the economy, potential members will hesitate to participate, unless they choose a relatively more stable foreign currency or make the transactions directly in inflation hedges like some of the durable goods. For example in Bolivia a country with a high inflation rate, averaging 220% during 1980-92,³⁶ an attempt to avoid the inflation obstacle, RoSCAs were conducted in US dollars.³⁷

- Third, in the Egyptian context, we find that the launching of credit schemes to promote the sale of household goods has a negative impact on forming RoSCAs, which are organised primarily, as mentioned above, for the purchase of durable goods. However recent attempts by merchants, in various countries including Egypt, to use RoSCAs in promoting the sale of their goods, mainly durable consumption goods, may contribute to the forming of RoSCAs. This arrangement benefits the merchant by improving his trade and lowering monitoring costs, compared with conventional credit sale, as he exploits the enforcement mechanism of RoSCA in a way that reduces default risk. The arrangement also benefits the members of RoSCA, in addition to the usual advantages of RoSCAs discussed above, it provides them with bargaining power with the trader and ensures, under inflation and risk, that each member will receive the durable good that he is saving for. However finding the sufficient number of potential members who need the same

³⁶World Bank (1994), table 12, p. 184.

³⁷See Adams and Canavesi (1989), p. 225.

durable good, or one with the same price, is one of the possible problems of this type of RoSCA.

- Fourth, like the rest of informal financial transactions, the operation of RoSCA relies upon the existence of different risk groups in the society as it caters for those considered by the formal intermediaries as high risk customers. Improvement in information collection in the formal sector and law enforcement on defaulters will have a negative impact on the significance of RoSCAs and their viability.

- Fifth, economic development and urbanisation may not be encouraging to RoSCAs. The former would result in increase of income and better accessibility to credit markets.³⁸ While the latter would weaken social ties which is one of the main pillars of the foundation of RoSCAs. In Japan RoSCAs, or Kou, had a role to play till the beginning of this century, economic development, market integration³⁹ and urbanisation resulted in their current disappearance.

(9.5) An estimation of the determinants of formal and informal borrowing:

(9.5.1) Specification of formal and Informal borrowing functions:

We construct two models in order to estimate the determinants of formal and informal borrowing. In the first model we consider formal borrowing B_F , as a dependent variable defined as the sum of loans received by the household from formal financial institutions over the 12 months before the survey.

The model includes five categories of explanatory variables: (i) Village dummy variables, as a proxy for the effects of socio-economic and infrastructural differences between

³⁸ It is established in a study by Besley, Coate and Loury (1992) that despite that a RoSCA allows for improvement in utilities compared with autarky, it does not, in general, provide a better allocation of resources than credit markets. The reason given is that credit markets are more flexible than a RoSCA which is constrained by simple structure.

³⁹ See Callier, op cit, p. 275.

villages. (ii) A vector of economic conditions of the HH which includes income, savings, volume of deposits held with the formal sector, land and non-land wealth and ownership of gold. (iii) A vector of social characteristics of the HH that includes the size of the HH, and age, education and occupation of the head of the HH. (iv) A vector of problems encountered with formal financial intermediaries, namely cost of borrowing, collateral problems and religious reservations. (v) Finally in an attempt to find a link between the formal and informal sectors, we include a dummy variable that indicates whether the HH borrowed from the IFM.

$$B_F = \alpha_1 + \alpha_2 Dum_1 + \alpha_3 Dum_2 + \alpha_4 Dum_3 + \alpha_5 Dep + \alpha_6 Inc + \alpha_7 Sav + \alpha_8 Ast + \alpha_9 Lnd + \alpha_{10} Gld + \alpha_{11} sze + \alpha_{12} Age + \alpha_{13} Edu + \alpha_{14} Occ + \alpha_{15} Col + \alpha_{16} Cst + \alpha_{17} Rel + \alpha_{18} Inf \quad (9.1)$$

where,⁴⁰

Dum₁, *Dum₂* and *Dum₃*: Village dummy variables.

Dep: Volume of saving deposits held with banks.

Inc: HH income.

Sav: HH savings.

Ast: Non-land assets or wealth.

Lnd: Land holding.

Gld: Ownership of gold.

Sze: Size of the HH.

Age: Age of HH head.

Edu: Education of the HH head.

Occ: Occupation of the HH head.

Col: Collateral problems with the formal sector.

Cst: Cost of borrowing from the formal sector.

Rel: Religious reservations.

Inf: Informal borrowing.

In the second model we estimate the determinants of informal borrowing. Defining informal borrowing simply as the amounts borrowed may produce bias⁴¹ and does not reflect the actual position of many households who engage simultaneously in borrowing

⁴⁰For a detailed definition of the variables see appendix (3).

⁴¹See Iqbal (1983), pp. 69-70.

and lending in the IFM.⁴² Hence we define the dependent variable B_t as the value of loans received minus loans advanced by households during the 12 months before the survey.

Moreover, to investigate links between the formal and informal sectors, we included in the explanatory variables $Fdep$ which indicate whether the HH has a formal deposit account, and Fln which indicates whether a formal loan was obtained. Apart from excluding Dep and Inf from (9.1) the rest of the explanatory variables are the same.

$$B_t = \beta_1 + \beta_2 Dum_1 + \beta_3 Dum_2 + \beta_4 Dum_3 + \beta_5 Inc + \beta_6 Sav + \beta_7 Ast + \beta_8 Lnd + \beta_9 Gld + \beta_{10} Sze + \beta_{11} Age + \beta_{12} Edu + \beta_{13} Occ + \beta_{14} Col + \beta_{15} Cst + \beta_{16} Rel + \beta_{17} Fdep + \beta_{18} Fln \quad (9.2)$$

The dataset consists of 200 observations for each variable. In the estimation of the two models we use Tobit analysis. The general formulation of the model⁴³ is usually given as:

$$y^* = \beta' x + \underline{\varepsilon}, \quad (9.3)$$

$$y = 0 \quad \text{if } y^* \leq 0,$$

$$y = y^* \quad \text{if } y^* > 0.$$

The results of the two models are shown in table (9.6).

⁴²That is excluding RoSCA funds and IICs deposits.

⁴³For an extensive analysis of Tobit analysis and Censored and truncated models see Amemiya (1984); Maddala (1983), chapter (6), and Greene (1990), chapter (21).

Table (9.6)
Determinants of formal and informal borrowing

Variable	Formal borrowing/1000	Informal borrowing/1000
Constant	-15.475 (-1.626)	-2.9922 (-1.844) ^a
Shahawy dummy	2.8066 (0.788)	0.8761 (1.397)
Asneat dummy	4.2498 (1.317)	-0.8762 (-1.577)
Menshat dummy	0.5665 (0.171)	-1.5667 (-2.380) ^b
Deposit volume/1000	-1.0079 (-6.385) ^c	
Household income/1000	2.1082 (2.839) ^c	0.7272 (6.722) ^c
Savings/1000	-1.8442 (-1.180)	-2.0374 (-6.480) ^c
Assets/1000	0.0434 (0.987)	0.0064 (0.725)
Land holding/1000	0.0209 (2.915) ^c	0.0024 (2.232) ^b
Ownership of gold	-2.5989 (-0.653)	1.6634 (2.657) ^c
HH size	-0.2542 (-0.408)	-0.2217 (-1.978) ^b
Age of HH head	0.1168 (1.099)	-0.0211 (-1.060)
Education of HH head	0.3440 (1.225)	-0.0192 (-0.366)
Occupation of HH head	-0.4017 (-0.720)	0.0496 (0.476)
Collateral problems	-1.2923 (-0.363)	-0.0385 (-0.061)
Cost of borrowing	-2.4403 (-0.692)	0.8314 (1.125)
Religious factor	-5.8703 (-2.311) ^b	-0.0341 (-0.069)
Informal borrowing	2.3740 (0.945)	
Possessing a formal deposit account		-0.7019 (-0.878)
Obtaining a formal loan		0.6457 (1.323)
σ	11.624 (10.514) ^c	2.319 (11.724) ^c
Log-Likelihood	-279.5842	-229.5916

t-ratios are in brackets.

^a indicates significance at 10% level.

^b indicates significance at 5% level.

^c indicates significance at 1% level.

(9.5.2) Estimation results:

(I) Formal borrowing:

The village dummy variables were not significant. This indicates that intervillage socio-economic and infrastructural dissimilarities were not strong to an extent that can be reflected in significant differences in loans obtained from the formal sector. After all, the formal sector services embedded mainly in those of PBDAC⁴⁴, were available at almost the same level in all villages, in a way that its services were geographically accessible to

⁴⁴The Principal Bank for Development and Agricultural Credit.

all villages, and non of the villages can be considered particularly disadvantaged because of its inferior infrastructural status or socio-economic characteristics.

The coefficient on the possession of a saving deposit account, as expected, is significantly negative. Instead of borrowing at a higher cost from the formal sector the household can withdraw from their deposits to meet their consumption or production requirements.

The positive sign on household income is some indication of the ability of the HH to return the principal of loan and to service it. Although the savings coefficient is not significant it has the expected a negative sign which may be explained by the same reason given in the case of formal deposits. Assets as an indication of wealth has a positive sign but again it is not significant. Most of HH assets consists of items which are not recognised by banks as collateral as it is difficult under the bankruptcy laws in Egypt to liquidate specific assets like houses. However holding agricultural land, owned and/or rented, is a significant determinant of borrowing from the formal sector which mainly advance loans for agricultural purposes as discussed above.

The coefficient of ownership of gold is with an insignificant negative sign again because gold is not recognised by the formal sector as a form of collateral. Moreover the coefficient of the size of HH is insignificant. This can be explained by the fact that the size of the HH is not related to demand for formal credit which is essentially for agricultural purposes. Age, education and occupation of the HH head, that construct the rest of social characteristics vector, are also insignificant.

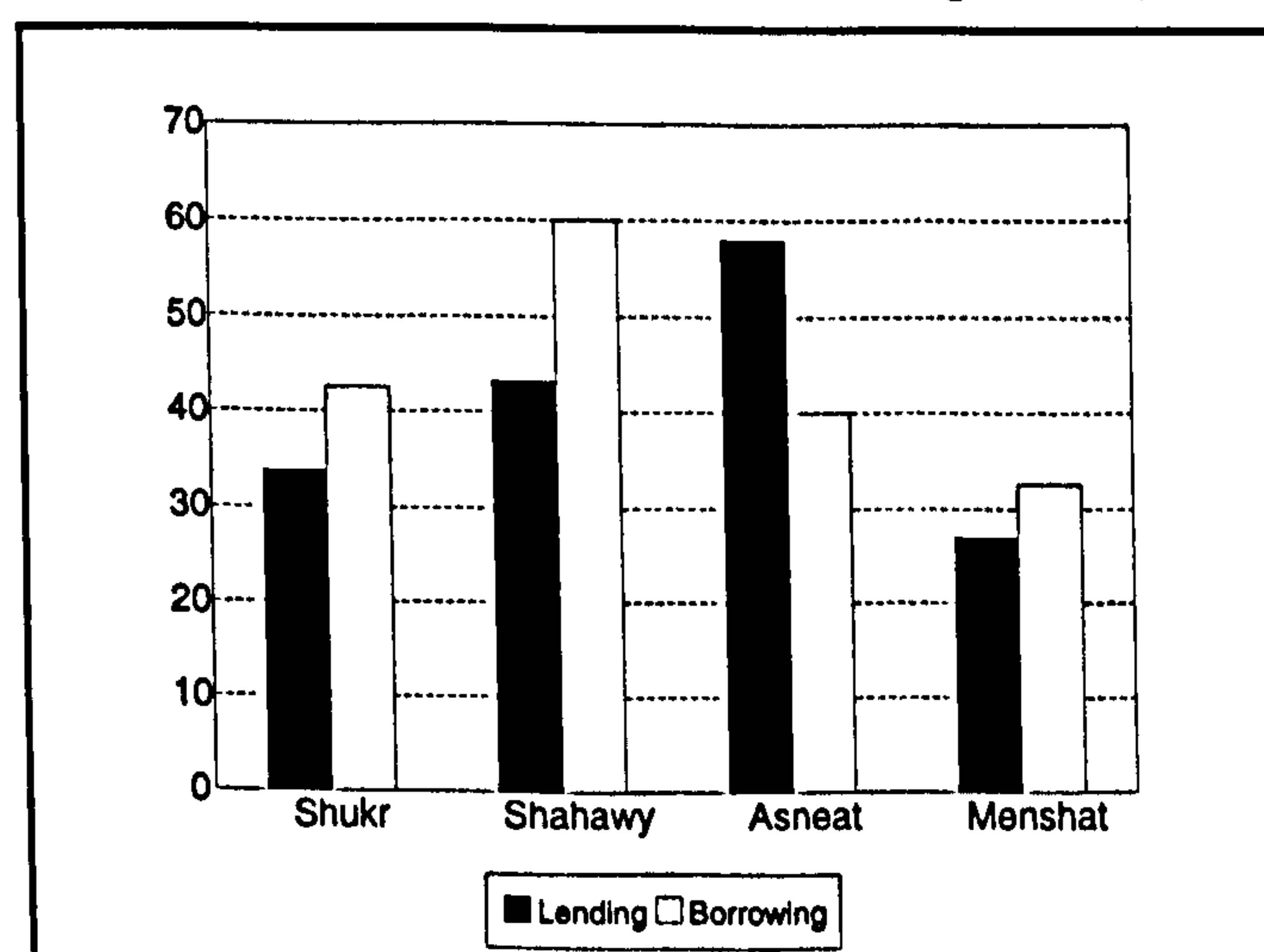
The three variables of cost, collateral and religion that indicate whether HHs have problems with formal borrowing all appear with negative coefficients. However the only significant one among them is the religious factor. As discussed in chapter (5) obtaining a formal loan which involves interest rates payment, is considered as a form of the

prohibited usury in Islam. Thus the religious factor with a significant negative sign. The dummy variable of informal borrowing is positive but insignificant. This finding does not help us in determining the type of interaction between the formal and informal sector.

(II) Informal borrowing:

Turning to the determinants of net informal borrowing with reference to table (9.6) we find the following. Only the coefficient of Menshat dummy variable is significant and is negative. While Menshat shares with Shahawy the main characteristics which can be captured with the dummy variables, they are different in a main aspect that is the stronger links with a more affluent village which Shahawy enjoys. Many of the Shahawy HHs informal transactions were carried out with borrowers and lenders from Asneat. Lack of equivalent access to an active IFM may be the reason for limited informal transactions, as shown in figure (9.10), and hence the negative coefficient of Menshat which indicates that its households are less likely to be involved in informal borrowing despite their similar conditions to those of Shahawy.

Figure (9.10)
Cases of lending and
borrowing in the IFM (percent)



Source: Survey data.

As in the case of formal borrowing, income has a significant positive coefficient indicating the ability of the borrower to honour the obligations of the loan. Savings has an expected negative coefficient which, by contrast with the case of the formal borrowing, is strongly significant. A possible explanation for this difference is that formal loans tend to be bigger in volume than informal ones, as shown above. Hence while savings may be sufficient to cover expenses, mainly consumption, that may be otherwise met by informal borrowing, they cannot, given their small size, fully substitute for the expenses, mainly production, that are covered by formal borrowing. Assets and land holding have positive coefficients, but the former is not significant while the latter is. The same reasons given under formal borrowing apply.

Ownership of gold, as an acceptable collateral in the IFM, is a positive determinant of net informal borrowing. On the one hand, gold is an indication of the ability of the borrower to repay his debts. On the other hand, a gold owner may prefer borrowing against his gold instead of liquidating it, either to avoid the loss of part of its value in a quick sale or because of non-price value of the gold item or both.

There is a significant negative relation between HH size and net informal borrowing. Although it is expected that an increase in the size of the household implies a rise in family obligations, which in turn may increase the needs for informal borrowing; it is actually the demand, and not the mere need, for loans which is considered in our analysis. As discussed above, even in the informal sector, demand for loans, in order to be effective, should be supported by factors that fulfil the requirements of a successful loan applications. It may be the case that some bigger HHs cannot fulfil these requirements, e.g. social collateral. Another explanation can be considered under the familiar arguments of demand for children who can be, after a specific gestation periods,

a source of income in extended families.⁴⁵ Therefore the rise in the HH size may not necessarily be accompanied with an increase in its informal borrowing requirements.

The coefficients of HH head's age, education and occupation are not significant. This result however support our analysis of the characteristics of borrowers in the IFM, which demonstrates that informal borrowing passes through socio-economic boundaries. Moreover the dummy variables included to display link with the formal sector, were insignificant which suggests that there is no simple correlation between obtaining a formal loan and an informal one.⁴⁶

⁴⁵See for example Bauer (1991), pp. 25-26.

⁴⁶Similar findings, regarding the undetermined relation between the formal and Informal sectors, were obtained in Mohieldin and Wright (1994) by using a Probit and bivariate Probit analyses.

(9.6) The impact of financial liberalisation: some early reflections

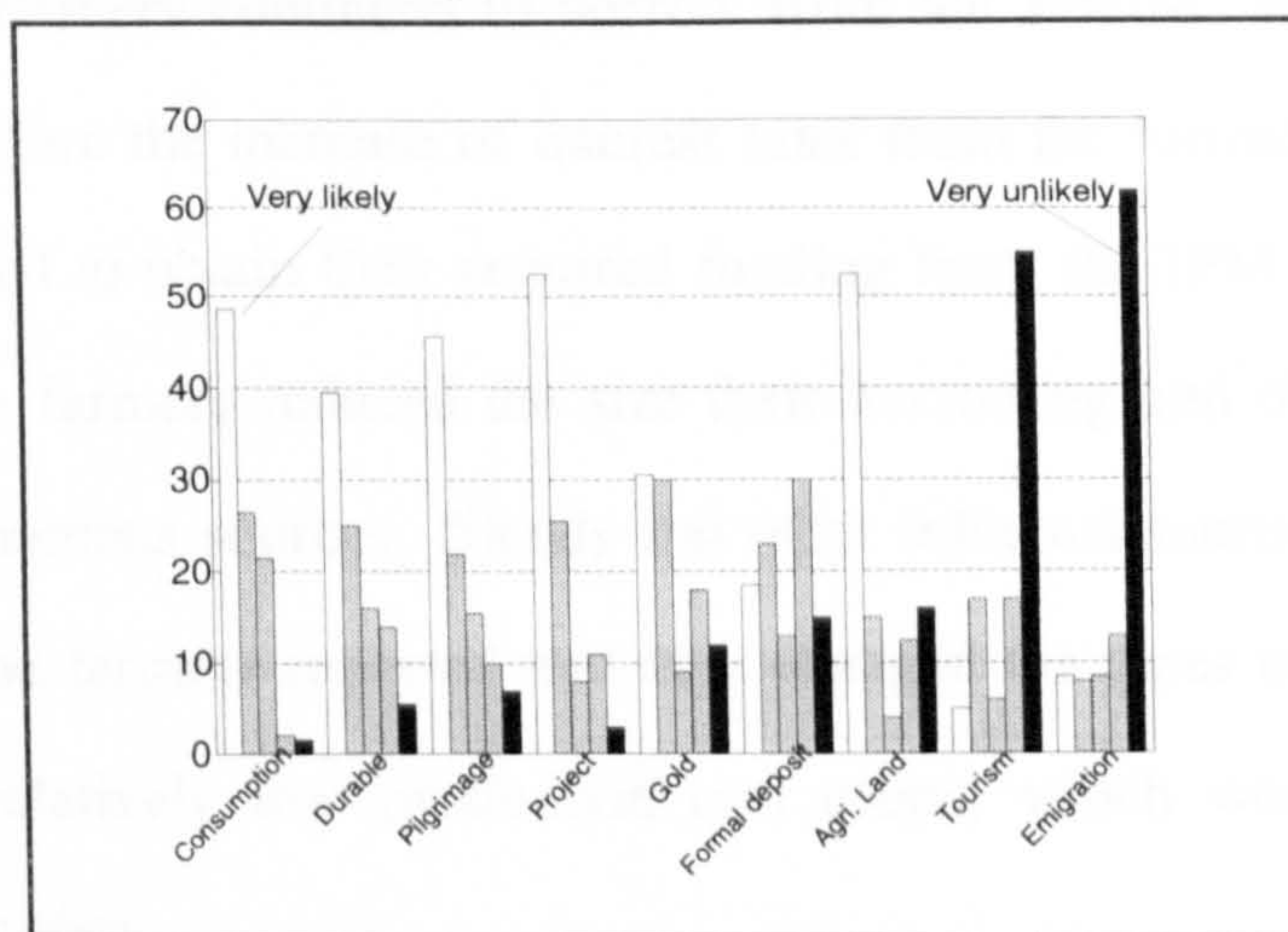
Since January 1991, i.e. 23 months before undertaking the survey, some liberalisation measures have been introduced in the Egyptian banking sector. Perhaps the most important of them was lifting interest rates ceilings. However our survey which was conducted approximately two years after the launching of the new 'reform' measures does not show a positive response to them.

- 81% of the households reported that their views regarding the unsatisfactory services of the formal financial sector did not improve.
- Just one household mentioned that he opened a new account with the banking sector during the period between 'reform' and the survey.
- In terms of financial savings we found that 42.2% of formal sector depositors reported that they saved more to benefit from the increase in interest rate on deposits, but 22.2% mentioned that they spent more, thanks to the high interest rates. 35.6% witnessed no change in their saving behaviour. This finding supports the view that arguments which take as axiomatic that saving responds positively to interest rates have an ambiguous empirical basis. Changes in interest rates generate income and substitution effects that offset each others and the net impact on savings by rise of real interest rate is ambiguous⁴⁷.

Although these 'short run' responses to the reform measures might be disappointing to the financial liberalisation advocates, we find them compatible with the saving behaviour of rural household highlighted in our discussion of their portfolio selection in chapter (8). Moreover this is reflected in the answers of HHs to a group of questions included in the questionnaire to investigate the HH likely response to a supposed net increase in income.

⁴⁷ See Deaton and Muellbauer (1980), pp. 101-103.

Figure (9.11)
Households' response to net increase in income



Source: Survey data.

As shown in figure (9.11), the HHs' show a preference to spending on consumption goods, including the durable items and pilgrimage if they witness a net increase in income. Financing emigration to work abroad was rejected by 75% of the respondents; this was primarily because they had no reason to emigrate, having already achieved an increase in income.

Establishing own projects, and buying agricultural land were favoured as forms of productive spending. While buying gold was only rejected by 30.5% of the HHs, depositing funds in the formal sector, was rejected by 45% of them, despite the then high interest rate, of approximately 18.5%. Clearly there are issues additional to a mere increase in nominal interest rates that are required to make the formal sector more attractive to potential depositors in rural areas. As shown above they may have other savings and hedging instruments available to them, which may not necessarily be the case for urban households.

However we suggest that the finding which may cause some alarm is possibly related to the farmers' reaction to the increase of the cost of agricultural loans. We found that:

- 15.3% of farmers continued to borrow from the PBDAC the same amounts of loans as before the increase of interest rates from the formal financial sector.
- 6.3% started to obtain their required funding from the IFM.
- 59.5 of the farmers reduced the size their borrowing and obtained supplements from autonomous sources, friends and other informal sources.
- 1.8% of the farmers reported that they changed the types of crops they used to grow to relatively low production cost crops, which were with the inferior economic value.
- 17.1% of the farmers were not affected as they never obtained loans from the PBDAC branch.

Moreover several farmers anticipated the return of usurious moneylenders, *Al muraboon*, if the cost of borrowing remained as high. Professional moneylenders were quite active in Egypt until the 1930s when they started to disappear with the growth of the short term subsidised loans provided by the *Crédit Agricole d'Egypte* established in 1931 and developed to be an agricultural cooperative bank in 1948.

Despite the repressed financial system, farmers in Egypt managed to obtain their funding from the PBDAC, at a subsidised interest rate.⁴⁸ However with the PBDAC starting in 1991 to charge 'commercial' interest rates on agricultural loans, problems of arrears and defaults began to increase. Historically the PBDAC had an excellent record in debt recovery with an average of 99% over 1987-92. However this ratio decreased upon the initial rise in interest rate in 1991 to 94% and is expected to decline further,⁴⁹ with

⁴⁸On the role of PBDAC and its subsidised credit see Arcand (1992) and Sadowski (1991), chapter (6).

⁴⁹World Bank (1993), pp. 65-6

estimates showing that arrears in payment ranged in 1992-93 between 30%-45%.⁵⁰ In turn this made the bank more fastidious about the collateral required for new loans. As the PBDAC became closer in its lending to commercial banks, it started to lose its distinctive features as a specialised development bank.

It should be noted however that the only development in the supply of agricultural credit was merely its rising cost. The PBDAC remained almost a sole provider of agricultural credit in rural areas despite the existence of other banks which had a minimal involvement. In 1991 it provided 75% of total lending to agriculture⁵¹ with a higher share in lending to small land holders. Hence competition as one of the main pillars of liberalisation was effectively absent in the agricultural credit market.

The PBDAC did not enhance its institutional structure. It did not make significant effort to lower transaction costs, innovate methods for the mobilisation and allocation of funds, or improve the skills of its personnel.⁵² The bank continued in its old approach keeping a low profile in saving mobilisation and relying on the government for subsidised funding. But with the withdrawal of government it obtained credit from commercial banks with relatively higher cost which increased the interest rates charged.

Given these developments, the IFM may flourish with the revival of the old activities of professional moneylenders which vanished in the past because of the establishment of agricultural banks.⁵³ Rising default and collateral problems with the formal sector would provide professional moneylenders with potential clients.

⁵⁰The government realised that default started to increase and bankruptcy was inevitable in several cases so intervened by forgiving parts of some of the debts and rescheduling others. However this remains a temporary solution.

⁵¹See World Bank (1993), p. 65.

⁵²See Yaron (1992) for a discussion of the ingredients of a successful agricultural bank even in the absence of government subsidies.

⁵³See chapter (3) for a discussion of the background of the government intervention in agricultural credit.

It is empirically evident that informal finance flourishes under both repressive and liberal financial policies.⁵⁴ However our concern is about the type of informal activities in the Egyptian context would thrive under liberalisation.

(9.7) Concluding remarks:

In this chapter we have analysed different aspects of formal and informal transactions with an emphasis on the latter. The formal and informal credit markets are active in the surveyed four villages as 86% of the 200 HHs reported that they did borrow and/or lend in the formal and/or informal markets over the 12 months that preceded the survey.

However we realise that, in terms of the number of participants, the informal sector was relatively more active than the formal one as 69.5% of the 200 HHs lent and/or borrowed in the informal financial market, whereas only 46.5% of the HHs had borrowing and/or lending relations with the formal sector. Nevertheless the average size of a formal sector loan was approximately four times greater than the average informal loan. Moreover informal sector loans were associated with relatively short term consumption and working capital needs.

Formal loans were predominantly for production purposes as banks were constrained to provide consumption credit. Interlinked credit was not significantly recognised in the four surveyed villages. The closest transactions to this kind of credit are found in wholesale trade of citrus fruit. However these transactions are not strictly considered as credit transactions but rather forward sale.

Informal transactions in our sample can be classified as intermittent mainly, undertaken amongst friends, relatives, and neighbours. It is remarkable to notice that 90.6% of the

⁵⁴See Aryeetey and Udry (1994), p. 8.

informal loans were, implicitly and explicitly interest free, which is attributed mainly to the strong Islamic prohibition on usury and the solid cultural view against it. It is also interesting to find that 92.9% of informal transactions were undertaken without marketable tangible collateral.

Rare use of collateral can be explained by the free flow of information between lenders and borrowers and the fact that the informal financial market is governed by a complex nexus of personal relations which establish an effective enforcement mechanism in the case of default.

In this chapter we have also highlighted the case of RoSCA in Egypt as an example of informal finance through collective arrangements. 45 households reported that they participated in a RoSCA during the previous year to the survey. These households belong mainly to the middle and low middle income groups. The average number of RoSCA participants was approximately 10 with a mean age of 35 years. Members were mainly colleagues at work and friends. The average RoSCA fund was approximately 12% of the member's income.

The dominant reason for joining a RoSCA was the purchase of a durable consumption good. Preparation for social events, e.g. marriage, saving and accumulation of capital for production purposes were also reported as reasons for participation. The type of RoSCA which we found common in the surveyed villages is what we call a "non-random" RoSCA. In order to continue its role in informal financial intermediation RoSCA we argued that it has to be kept small, otherwise default risk would increase. Moreover we argued that free-interest rate RoSCAs such as the ones found in Egypt need to operate in a low inflation environment. If inflation accelerates, members allocated at the end of the cycle have to be compensated.

We also found that 4.5% of the sample households had deposit accounts with the Islamic Investment Companies (IICs).⁵⁵ In terms of occupation 6 of the 9 IICs' depositors were from the group of government and public sector employees, 2 landlords and an artisan. The average size of their deposits was relatively small, £E 22,111, i.e. 63% of the mean size of the sample deposits at the banking sector. 33.3% of the IICs' depositors stated that the high return was their main motive for dealing with these companies. However 66.7% of the depositors mentioned that three factors of compatibility with religion, high return and the uncomplicated procedures, combined together are the reasons for their dealing with the IICs. Dealing with the IICs did not prevent 77.8% of the households to hold deposit accounts with the formal banking sector.

Thus informal finance in our surveyed region took three main forms, namely, occasional borrowing from friends and relatives..etc, participation in RoSCAs and dealing with the IICs.

To investigate the determinants of formal and informal borrowing we have estimated two models, with village dummy variables, using Tobit analysis. In the case of formal borrowing the village dummy variables were not significant which indicates that inter-village socio-economic and infrastructural dissimilarities were not strong to an extent that can be reflected in significant differences in loans obtained from the formal sector.

If we focus on the significant coefficients we realise that land holding, owned or rented, is a positive determinant of borrowing, explained by the fact that the formal sector, in the surveyed region, mainly advances loans for agricultural purposes. The coefficient of HH income was also positive which is some indication of HH ability to repay the loan. Deposit at the formal sector had a negative coefficient indicating that instead of borrowing

⁵⁵See Chapter (5) for an analysis of these companies.

at a higher cost the household can withdraw from their deposits to meet their production or consumption requirements. The religious factor also had a negative coefficient which reflects the rejection of obtaining a loan with an interest rate, which is considered a form of usury. The type of interaction between the formal and informal sectors could not be determined as the relevant coefficient was not significant.

In the case of informal borrowing we have found that the coefficient of the dummy of the relatively poor village of Menshat was significant and negative. This indicates that the HHs of this village are less likely to be involved in informal market transactions. Although Menshat shares the village of Shahawy a lot of socio-economic characteristics, the households in the latter enjoy a greater accessibility to the active IFM market of the more affluent village of Asneat. Both income and savings have significant coefficients. However the former is positive, as in the case of formal borrowing, while the latter is negative. Land holding, as in the case of formal borrowing, has a positive sign. Ownership of gold as an acceptable collateral in the IFM is a positive determinant of informal borrowing.

The relationship between HH size and net informal borrowing was negative in our estimation. There are two explanations for this unexpected relationship. First, in our model we estimate the actual demand and not the mere need for informal loans and it may be the case that some bigger HHs cannot fulfil the requirements for a successful loan application despite their need, e.g. lack of social collateral. Second given that children can be a source of income in extended families, the HH size need not always be associated with an increase in informal borrowing requirements. Again, as in the case of formal borrowing, the dummy variables included to display links with the formal sector were not significant which indicates that there is no simple correlation between obtaining a formal loan and an informal one.

Our findings regarding the households response to financial liberalisation measures do not suggest a positive response to them. Households' views regarding the unsatisfactory services of the formal sector did not improve and there was not either any meaningful improvement in their relation with this sector. Moreover we argue that if the rise in the cost of formal borrowing continued to be the main change brought by liberalisation, the IFM will continue to exist in Egypt, but with a change in its structure, rules, scope and mechanisms.

Chapter (10)

Summary of Principal Results and Concluding Remarks

This thesis has dealt with the issue of financial development in Egypt at the sectoral, macroeconomic and household levels over the period 1960-93. First at the sectoral level we have analysed the structure and performance of the banking system, securities market and the formal and informal Islamic sectors. Second at the macroeconomic level we have investigated the causes, measures and impact of financial policies and tested the effect of the real interest rate on saving, investment and economic growth. Third at the household level we have analysed financial transactions in rural Egypt and the impact of formal financial measures on the households' borrowing and lending decisions in both the formal and informal credit markets. Egypt has provided an interesting case study in which the formal and informal financial transactions coexist, with a significant Islamic influence on both sectors.

In chapters (3) and (4) we have analysed the development of both the banking system and the securities market in Egypt with emphasis on their institutional structure, regulation and performance. We have highlighted the fact that the partial liberalisation measures of the *infatih* policy, which was adopted from 1974 until the start of the current economic reform programme, did not result in significant change in the structure or regulation of the banking system. Its impact was merely to increase the number of operating banks and their branches which did not bring a significant change in the behaviour of financial intermediaries. The formal credit market continued to operate in an oligopolistic manner within a repressive environment.

After a series of interventionist measures, the securities market was near official closure. The reform attempts undertaken since 1971 did not succeed in reviving the market whose

performance continued to lag behind its pre-nationalisation level. We argued that the problems of the securities market lie mainly in the supply side.

Our analysis in chapters (3) and (4) emphasised the importance of prudential regulation and the need for the restructuring measures of the financial sector. These are necessary steps which should be implemented before the undertaking of financial liberalisation and then maintained during its process.

In chapter (5) we have highlighted the main differences between Islamic and conventional finance by constructing a simple model for this purpose and presenting the distinctive characteristics of Islamic financial intermediation. Islamic finance, through the application of PLS principle, has several advantages over conventional funding schemes. It is more equitable in the sense that it establishes a direct relationship between lenders and borrowers who share the outcome of the partnership, be it profit or loss. The rate of return is determined by the real sector and not by the financial sector. There is also a close and direct relationship between the return on savings and investment. The Islamic financial system ensures that the real values of assets and liabilities will be equal at all times. Moreover the PLS offers, at the macroeconomic level, a flexible adjustment mechanism in the case of unanticipated shocks.

However the practice of Islamic banking lags behind its promising theoretical framework. In Egypt, as in other Muslim countries, Islamic banks performed relatively better in funds mobilisation than in their allocation. In the case of the two private Islamic banks there was a significant bias towards the controversial short-term *murabaha* finance, which was concentrated in trade and service sectors. *Mudarabah* and *musharakah* finance were virtually non-existent. Moreover there was some evidence of breaches of Islamic regulations in the form of dealing, implicitly and/or explicitly, in interest rate in both the international and domestic markets.

The fast rise and the sudden fall of the IICs, which adopted a pyramid scheme, during the 1980s emphasise the presence of three main problems in the Egyptian financial system during this period. First, the soft regulatory structure which allowed these companies to be established and operate for almost a decade without coming under any recognised form of regulation or supervision. Second, the problem of financial repression which, according to Goodhart's law, pushed a significant number of depositors away from formal banks and their controlled negative real interest rates to an unregulated substitute, in this the IICs. Third, the insufficiency of formal Islamic banks and the incompatibility of the interest-based saving instruments, in the formal sector, with the requirements of a large segment of savers who were encouraged to look for an alternative. The case of the IICs stresses the need for prudential regulation, liberalised financial sector and a compatible financial system with the cultural environment. Alas, the last issue, despite its importance, is often neglected.

We argue that the future of Islamic financial intermediaries in Egypt relies primarily on their ability to overcome several critical problems. First, they have to deal with the dominance of short-term contracts and *murabaha* schemes in their portfolios. Second, there is a need to innovate instruments to attract risk averse depositors. Third, the relationship between Islamic banks and the central bank has not been adequately settled. Whether Islamic banks should be subject to the fractional reserve requirement system, or be part of a deposit insurance scheme are two important questions which have not been addressed in the Egyptian case, where Islamic banks are treated like conventional ones. Fourth, in a world dominated by conventional banks, Islamic banks should decide how to conduct their transactions with other banks without violating their Islamic principles.

In chapter (6) we have shown that five main reasons can explain the state intervention in the financial market in Egypt, namely market failure, anti-usury laws, the impact of the socialist ideology during the 1960s, the influence of Keynesian arguments and, more

importantly, the financing of the budget deficit. State intervention was not corrective but repressive in the sense that the financial market was distorted in several ways. Financial repression took several forms namely: interest rate ceilings, high reserve requirements, a high liquidity ratio, directed credit schemes, regulation on the portfolio composition of banks and government ownership of banks. In addition the government extracted high revenues from seigniorage and inflation tax, albeit at relatively low inflation rates thanks to the large monetary base. Through these measures the government managed to impose high implicit taxes on the financial sector and direct significant amounts of loanable funds to finance the budget deficit and priority projects.

Despite the negative real interest rates, financial savings in the form of domestic currency deposits continued to grow over the period 1960-90. We attributed this phenomenon mainly to money illusion, inflation as a motive itself for saving, lack of alternatives to bank deposits, relatively modest inflation rates, a favourable risk-return relationship, in addition to the existence of the widow-orphan type of depositors.

However the repression of the financial sector resulted in several unfavourable consequences including capital flight, the resurgence of informal financial activities especially those of the IICs, currency substitution and the increase of the hoarding of gold. Moreover the banking profession was adversely affected by financial repression in the sense that interest rate ceilings and government intervention in the allocation of credit for more than three decades left the banking sector without adequate credit officers, both in terms of number and quality.

Chapter (7) has been concerned with the impact of real interest rates, as a central variable in both repression and liberalisation policies. A rising positive real interest rate, according to the McKinnon-Shaw school, as discussed in chapter (2), is assumed to have

a positive impact on the mobilisation of savings, investment and hence economic growth. We have tested these assumptions for Egypt over the period 1960-1990.

We have found that the real interest rate had a very tentative positive impact on financial saving, possibly through a portfolio shift. However we have found no evidence to support the argument that the real interest rate has a significant positive effect on total saving. The insignificant effect of real interest on total saving ratio may be explained by the fact that the substitution and income effects are offsetting each others.

Further our results point towards the rejection of the complementarity hypothesis. Moreover real interest rates changes did not explain credit policy or investment behaviour in Egypt. The insignificant impact of financial saving, mobilised by the formal sector, on the volume of investment raises some scepticism regarding the efficiency of this sector under financial repression in the allocation of loanable funds. Finally we have found that the relation between the real interest rate and real economic growth cannot be determined for Egypt. These results emphasise that more than the mere increase in real interest is required to reform the financial sector. They also highlight the importance of comprehensive institutional measures and credible policy changes.

In Chapters (8) and (9) we have dealt with the issue of the coexistence of formal and informal credit markets. In chapter (8) we have provided a taxonomy of informal finance in which we have distinguished between five main types of informal transactions, namely occasional lending, regular lending, interlinked credit, finance through collective arrangements and finally informal corporate finance. In our analysis of financial transactions we have used household survey data collected for the purpose. We have adopted a two-stage random sampling which produced 200 households in four villages in the Kalyoubbiya province in the Egyptian delta.

We have shown in chapter (8) that the HH portfolio structure in the four surveyed villages is dominated by gold and cash. The importance of gold can be attributed to traditional factors as well as the availability of an easily accessible and active gold market in Egypt. The surveyed households distinguish between three main different reasons for keeping gold viz. ostentation, saving and insurance. The last factor was the primary reason for hoarding gold.

In chapter (9) we have analysed different aspects of formal and informal transactions with an emphasis on the latter. The formal and informal credit markets are active in the surveyed four villages. 86% of the 200 HHs reported that they did borrow and/or lend in the formal and/or informal markets over the 12 months that preceded the survey.

In terms of the number of participants, the informal sector was relatively more active than the formal one as 69.5% of the 200 HHs lent and/or borrowed in the informal financial market, whereas only 46.5% of the HHs had borrowing and/or lending relations with the formal sector. Nevertheless the average size of a formal sector loan was approximately 4 times greater than the average informal loan.

Moreover informal sector loans were associated with relatively short term consumption and working capital needs. Formal loans were predominantly for production purposes as banks were constrained to provide consumption credit.

Informal transactions in our sample can be classified as intermittent mainly, undertaken amongst friends, relatives, and neighbours. It is remarkable to notice that 90.6% of the informal loans were, implicitly and explicitly interest free, which is attributed mainly to the strong Islamic prohibition on usury and the solid cultural view against it. It is also interesting to find that 92.9% of informal transactions were undertaken without marketable tangible collateral.

Rare use of collateral can be explained by the free flow of information between lenders and borrowers and the fact that the informal financial market is governed by a complex nexus of personal relations which establish an effective enforcement mechanism in the case of default. Default cases at 11.5% of total transactions were relatively low, compared to the default rate in the formal banking sector. Informal lending and borrowing in our sample tends to be state-contingent, as in many cases, borrowers were granted more time by their lenders to assist them in repaying the loans. In some cases borrowers obtained new credit from their lenders before repaying the existing loan.

We argue that the informal financial market has its own barriers to entry which implies that entry is restricted, particularly in the case of borrowing, for those who do not satisfy certain requirements, e.g. social collateral. This casts some doubt on the claim that the informal financial market acts as a safety valve in countries with repressed financial systems. Moreover even if accessibility to the IFM is secured, this does not mean that loan applicants will get what they demand as the IFM does not have an unlimited supply of funds and does have its own credit constraints. Hence claiming that the Informal financial market can be a safety valve or a 'lender of last resort' for those rejected by the formal sector is not self evidently correct in the case of Egypt.

In chapter (9) we have also highlighted the case of RoSCA in Egypt as an example of informal finance through collective arrangements. 45 households reported that they participated in a RoSCA during the previous year to the survey. These households belong mainly to the middle and low middle income groups.

The dominant reason for joining a RoSCA was the purchase of a durable consumption good. Preparation for social events, e.g. marriage, saving and accumulation of capital for production purposes were also reported as reasons for participation. The type of RoSCA which we found common in the surveyed villages is what we call a "non-random"

RoSCA. In this type of RoSCA the determination of the rotation lies fully in the hands of the organiser. Instead of bidding or randomly determining the rotation of the RoSCA, the organiser in the non-random RoSCA decides the order of the recipients of the fund according to the creditworthiness of the member, how desperate is he for receiving the fund and his relation to the organiser. In a standard non-random RoSCA the organiser usually takes the common fund first and priority is given to those who are frequent members.

For a RoSCA to be successful in financial intermediation it has to be kept small. Larger numbers of members would mean, in addition to greater transaction costs, an increasing need for measures against default risk. This would exclude a significant number of potential participants and place RoSCA in competition with formal intermediaries which are more capable of handling collateral based transactions. Further free-interest rate RoSCAs such as the ones found in Egypt need to operate in a low inflation environment. If inflation accelerates, members allocated at the end of the cycle have to be compensated; alternatively RoSCA should be linked directly to a durable good or denominated in a foreign currency as an inflation hedge.

To investigate the determinants of formal and informal borrowing we have estimated two models, with village dummy variables, using Tobit analysis. In the case of formal borrowing the village dummy variables were not significant which indicates that inter-village socio-economic and infrastructural dissimilarities were not strong to an extent that can be reflected in significant differences in loans obtained from the formal sector.

If we focus on the significant coefficients we realise that land holding, owned or rented, is a positive determinant of borrowing, explained by the fact that the formal sector, in the surveyed region, mainly advances loans for agricultural purposes. The coefficient of HH income was also positive which is some indication of HH ability to repay the loan.

Deposit at the formal sector had a negative coefficient indicating that instead of borrowing at a higher cost the household can withdraw from their deposits to meet their production or consumption requirements. The religious factor also had a negative coefficient which reflects the rejection of obtaining a loan with an interest rate, considered as a form of usury. The type of interaction between the formal and informal sectors could not be determined as the relevant coefficient was not significant.

In the case of informal borrowing we have found that the coefficient of the relatively poor village of Menshat was significant and negative. This indicates that the HHs of this village are less likely to be involved in informal market transactions. Although Menshat shares the village of Shahawy a lot of socio-economic characteristics, the households in the latter enjoy a greater accessibility to the active IFM market of the more affluent village of Asneat. Both income and savings have significant coefficients. However the former is positive, as in the case of formal borrowing, while the latter is negative. Land holding, as in the case of formal borrowing, has a positive sign. Ownership of gold as an acceptable collateral in the IFM is a positive determinant of informal borrowing.

The relationship between HH size and net informal borrowing was negative in our estimation. There are two explanations for this unexpected relationship. First, in our model we estimate the actual demand and not the mere need for informal loans and it may be the case that some bigger HHs cannot fulfil the requirements for a successful loan application despite their need, e.g. social collateral. Second given that children can be a source of income in extended families, the HH size need not always be associated with an increase in informal borrowing requirements. Again, as in the case of formal borrowing, the dummy variables included to display links with the formal sector were not significant which indicate that there is no simple correlation between obtaining a formal loan and an informal one.

Our findings regarding the households response to financial liberalisation measures do not suggest a positive response to them. Households' views on the unsatisfactory services of the formal sector did not improve and there was not either any meaningful improvement in their relation with this sector. Moreover we argue that if the rise in the cost of formal borrowing continued to be the main change brought by liberalisation, the IFM will continue to exist in Egypt, but with a change in its structure, scope and mechanisms.

According to our survey we can distinguish between four factors that explain the coexistence of the informal and formal financial sector. The first factor is the condition of the formal sector. IFMs are regarded as a reactive disequilibrium phenomenon since they occur as a result of exogenously imposed restrictions on the formal financial sector. If the formal financial sector is heavily regulated, repressed and inefficient this will leave a leeway in which the informal sector will flourish. Potential depositors would find that dealing in the informal sector brings a higher return on their funds. Potential borrowers, once rejected by the rationed formal credit market, may obtain their required credit, albeit at a higher cost, from the informal sector. Therefore, through substitutability, the informal financial market will coexist with the formal one as a parallel market.

The second factor is attributed to transaction costs. Even if the formal sector is liberalised and efficient there will still be a space for the informal sector to work in. For example it may not be economically viable to extend the branches of the formal sector to remote and underpopulated areas with potentially few customers. High marginal monitoring costs for providing particular customers with credit may be a deterrent to the formal sector. These high costs may be due to the high risk involved or an incomplete information set that is costly to improve. Hence, even in the absence of the distortions mentioned under the first factor, transactions in the IFMs might result as an equilibrium phenomenon. Accordingly, we argue that through complementarity, informal financial transactions, which are universally demand driven, would coexist with formal ones.

The third factor is the cultural environment. The role of religion and tradition may discourage potential customers from dealing with the formal sector. Western style financial intermediaries may not necessarily be adequate in relation to the requirements of other societies. For instance, the Islamic ban on usury is one of the major reasons behind the abandonment of the formal sector in many Muslim societies. Thus informal financial activities as a market response of economic agents to their cultural background would have an active role.

The fourth is the lack of credibility in the political and economic system as a whole. Several developing societies have witnessed frequent changes in regime that have had an adverse negative effect on their confidence in formal institutions. The confiscation and freezing of funds held in the formal sector, retrospective taxation of returns on deposits, sudden bankruptcies, and the unanticipated devaluation of national currencies are, *inter alia*, behind this lack of confidence in the formal financial sector. Credibility problems lead to the shifting of transactions outside the formal sector.

Further, we argue that there is a "critical minimum" of informal financial transactions which will always exist in developing and lagging economies irrespective of the condition of the formal sector. This will vary between countries depending on the above mentioned factors. The level of informal activities will peak if all four factors are in operation. But improvement in the efficiency of the formal sector, a positive attempt by the formal intermediaries to cater for the different financial requirements of the less developed economies and an increase in the credibility of the regime will push this level down to its critical minimum. This critical minimum can be ascribed to the complementarity and cultural factors mentioned above. Whilst we argue that the critical minimum can be reduced through perceptive economic and social development programmes, it will never be eliminated.

Accordingly, financial liberalisation, by eliminating interest rate ceilings can, *ceteris paribus*, reduce some of the reactive parallel financial transactions of the informal sector. Other measures designed to improve the efficiency of the formal financial sector and monetary management may reduce the reactive informal transactions further. Nonetheless 'reform' measures that lead to high real interest rates without a realised change in the accessibility to the formal credit market would result in a resurgence of usurious moneylending and hence an increase in reactive informal transactions. It requires more than liberalisation to limit the problem of transaction costs. Moreover, financial liberalisation can have no effect on the cultural environment or the credibility of the regime.

In conclusion, this thesis highlights the importance of a liberalised financial system for economic development in Egypt. However it argues that financial liberalisation, on its own, is not a sufficient remedy for the problems encountered in the financial sector. Macroeconomic stability and prudential regulation are considered to be essential prerequisites for liberalisation. In addition the thesis strongly emphasises the need for the restructuring of the financial system and the ensuring of its compatibility with the cultural environment to enable the full realisation of the benefits of financial liberalisation.

Future research on the Egyptian financial market could investigate the impact of the recent financial liberalisation programme on the structure, condition and performance of the market. The effect of financial liberalisation on the efficiency of intermediation of the operating units and their viability could also be analysed. The analysis of the impact of the recent changes in prudential regulation and supervision, including the introduction of an explicit deposit insurance scheme on the behaviour of financial intermediaries and their performance, in addition to the stability of the financial system as a whole would be of considerable value.

The prospects of Islamic finance in Egypt under financial liberalisation including the relation of Islamic banks with the monetary authority could also be addressed.

Should financial liberalisation alter the characteristics of Egyptian financial system which have been identified by the 'seemingly symbiotic' coexistence of formal and informal financial sectors is also an interesting area for research which has to focus on the microeconomic foundations of the financial market. A larger household survey, than the one undertaken in this study, is required to extend the analysis to cover different areas in Egypt and allows for inter-regional comparisons. A panel survey would be considerably useful in examining the changes over time in the households' financial decisions in response to different measures of financial liberalisation and to analyse the possible variation in the relative size, structure and mechanisms of the formal and informal credit markets in Egypt.

The new advances in the endogenous economic growth theory could be utilised, subject to the availability of data, to address the issue of the relationship between financial development and economic growth in Egypt. Whether financial liberalisation improves the quality of investment is also an important topic. The intended improvement in the Egyptian economic database associated with the current economic reform programme may permit the analysis of some or all of these proposed topics in the future.

Appendix (1)
A FORTRAN Programme to determine
the Equilibrium Real Rate of Interest
which minimises the Sum of Squared Residuals

```

double precision x(100,6)
$ , re, z, b(30), yssq, essq, betahat(10), DET, y(100),
$ xx(100,10),
$ chk(5,5), a(5,5), ainv(10,10)
integer i, j, t, NZ, ID, d(50), n, ir, k, lr
COMMON/NR/Z(30,30)
DIMENSION NEX(30)
open(50,file='try1.dat',status='unknown')
open(60,file='try1.out',status='unknown')
print*, ' input # of ind. var = '
read*, k
print*, ' input nobs = '
read*, n
do 1000 t = 1, n
    read(50,*) y(t), (xx(t,i), i = 1, k)
    x(t,1) = 1.0
1000    continue
    print*, ' input range '
    read*, lr
    do 9561 ir = -lr, lr
        re = real(ir)/200
        do 40 j = 1, n
            if( (xx(j,1) - re) .le. 0.0 ) then
                d(j) = 0.0
            else
                d(j) = 1.0
            endif
            x(j,2) = xx(j,1)
            x(j,3) = d(j)
40        continue
            do 70 i = 4, k+2
                do 75 t = 1, n
                    x(t,i) = xx(t,i-2)
75                continue
70            continue
                do 110 i = 1, k+2
                    do 120 j = 1, k+2
                        z(i,j) = 0.0
                        do 130 t = 1, n
                            z(i,j) = z(i,j) + x(t,i) * x(t,j)
130                        continue
                            a(i,j) = z(i,j)
120                        continue
110                    continue
                        do 140 i = 1, k+2
                            b(i) = 0
                            do 150 t = 1, n
                                b(i) = b(i) + x(t,i) * y(t)
150                            continue
140                        continue
                            call mxinv(k+2, det, nex, ID)

C===== check I =====
C
C                do 123 i = 1, k+2
C                    do 124 j = 1, k+2
C                        ainv(i,j) = z(i,j)
C124                    continue
C123                continue
C                    do 200 i = 1, k+2
C                        do 201 j = 1, k+2
C                            chk(i,j) = 0.0
C                            do 202 t = 1, k+2

```

```

c                               chk(i,j) = chk(i,j) + a(i,t) *
ainv(t,j)
c202                               continue
c201                               continue
c200                               continue
c      do 400 i = 1 , k+2
c      write(*, 1) (chk(i,j), j = 1 , k+2)
c400                               continue
c1      format(5(f8.4,3x))
C=====
      yssq=0.0
      do 160 t = 1 , n
160          yssq = yssq + y(t) * y(t)
              continue
      do 170 i = 1 , k+2
          betahat(i) = 0.0
      do 180 j = 1 , k+2
180          betahat(i) = betahat(i) + z(i,j) * b(j)
              continue
170          continue
          essq = 0.0
      do 190 i = 1 , k+2
190          essq = essq + betahat(i) * b(i)
              continue
          essq = yssq - essq
          print*, re, essq
9561      write(60,*) re, essq
              continue
          end
C===== Matrix inverse =====
      subroutine mxinv(nz,det, nex, ID)
      DOUBLE PRECISION Z,DET,ZERO,TEMP,BIG
      INTEGER I,K,J,NZ,NBIG
      COMMON/NR/Z(30,30)
      DIMENSION NEX(30)
      det=0.0
      ZERO=DABS(DET)
      DET=1.0
      DO 10 I=1,NZ
      BIG=0.0
      NBIG=0
      DO 11 J=I,NZ
12          TEMP=DABS(Z(J,I))
          IF(BIG-TEMP) 12,11,11
              BIG=TEMP
      NBIG=J
11          CONTINUE
      IF(BIG-ZERO) 13,14,14
13          DET=0.0
      RETURN
14          IF(NBIG-I) 15,17,15
15          DO 16 K=1,NZ
              TEMP=Z(I,K)
              Z(I,K)=Z(NBIG,K)
16          Z(NBIG,K)=TEMP
              DET=-DET
17          NEX(I)=NBIG
              DET=DET*Z(I,I)
              TEMP=1./Z(I,I)
              Z(I,I)=TEMP
              DO 20 J=1,NZ
                  IF(I-J) 21,20,21
21                  Z(J,I)=-TEMP*Z(J,I)
20          CONTINUE
              DO 30 J=1,NZ
              DO 30 K=1,NZ
31          IF(I-J) 31,30,31
              IF(I-K) 32,30,32

```

```
32           Z(J,K)=Z(J,K)+Z(J,I)*Z(I,K)
30     CONTINUE
DO 40 J=1,NZ
IF(I-J) 41,40,41
41           Z(I,J)=TEMP*Z(I,J)
40     CONTINUE
10     CONTINUE
I=NZ+1
50     I=I-1
IF(I) 56,56,52
52     J=NEX(I)
IF(I-J) 51,50,51
51     DO 55 K=1,NZ
TEMP=Z(K,I)
           Z(K,I)=Z(K,J)
55           Z(K,J)=TEMP
GO TO 50
56     RETURN
END
```

Appendix (2)
Real and Financial variables of Egypt
1960-1990 (£E Million)

	1	2	3	4	5	6	7	8
Year	M1	Quasi Money	M2	M3	Population	GDP	GNP	Gross Investment
1960	405	80	485	531	25.92	1373	1376	192
1961	455	86	541	589	26.58	1459	1461	229
1962	443	134	577	642	27.26	1513	1513	263.9
1963	516	173	689	758	27.95	1685	1679	325.8
1964	621	179	800	883	28.66	1888	1881	372.7
1965	655	197	852	943	29.39	2214	2199	414
1966	684	181	865	960	30.1	2403	2381	415.9
1967	707	210	917	1006	30.91	2481	2457	363.9
1968	722	223	945	1033	31.69	2533	2497	330.2
1969	746	253	999	1089	32.5	2696	2652	367.2
1970	783	270	1053	1147	33.33	2971	3059	426.6
1971	846	239	1085	1186	34.08	3146	3417	428.7
1972	989	266	1255	1368	34.84	3337	3403	418.3
1973	1205	331	1536	1662	35.62	3757	3634	500
1974	1503	497	2000	2147	36.42	4190	4085	975
1975	1863	567	2430	2595	37.23	4886	4738	1741
1976	2239	822	3061	3249	37.87	6276	6409	1910
1977	2943	1160	4103	4306	38.79	8210	8643	2434
1978	3553	1659	5212	5453	39.82	9788	10765	3101
1979	4354	2490	6844	7140	40.98	12610	13395	4173
1980	6775	3589	10364	10716	42.29	15470	17231	4539
1981	7646	5920	13566	14008	43.47	17150	18462	5111
1982	9552	8240	17792	18385	44.67	20881	21327	6250
1983	10933	10884	21817	22570	45.92	24834	26051	6944
1984	12443	13486	25929	26800	47.5	27886	30605	7834
1985	14696	15980	30676	31739	47.8	32516	35892	8838
1986	15973	21129	37102	38322	48.2	36039	39397	9093
1987	18241	26637	44878	46440	49.8	45249	46818	8150
1988	20579	33970	54549	56318	51.4	54553	56122	13187
1989	22471	41623	64094	66118	52.9	65577	70101	15269
1990	26205	56303	82508	84631	54.4	78907	80907	17276

Columns 1, 2, 3, 4, 6, and 7 are obtained from the IMF Financial Statistics Year Book, different issues.

Column 8 is obtained from The World Bank, World Tables.

Column 5 is from the National Bank of Egypt, Economic Bulletin.

	9	10	11	12	13	14	15
Year	Fixed Investment	Gross National Savings	Domestic Credit/ GNP	Private Credit/ GNP	CPI	Nominal Interest Rate	Parallel Exchange Rate £E:\$
1960	171	186.3	0.3942	0.186	15.6	0.0275	1.96
1961	226	177.2	0.4199	0.179	15.7	0.0275	1.45
1962	251	165.8	0.4579	0.192	15.2	0.03	1.24
1963	300	201.3	0.4948	0.189	15.4	0.03	1.25
1964	372	264	0.4896	0.175	15.9	0.03	1.2
1965	358	306.7	0.4673	0.154	18.3	0.03	1.15
1966	377	324.7	0.4785	0.140	19.9	0.03	1.1
1967	359	262.7	0.5032	0.132	20.1	0.03	1.3
1968	292	200.7	0.5113	0.144	19.7	0.035	1.2
1969	333	233.1	0.4963	0.150	20.4	0.035	1.09
1970	353	235.1	0.4952	0.129	21.2	0.035	1.1
1971	405	251	0.5168	0.122	21.9	0.035	1.15
1972	462	243	0.5284	0.125	22.3	0.04	1.31
1973	462	308	0.5171	0.113	23.5	0.04	1.54
1974	643	282	0.5780	0.144	25.8	0.04	1.44
1975	1228	707	0.7293	0.186	28.3	0.04	1.42
1976	1385	1278	0.6527	0.179	31.2	0.04	1.35
1977	1825	1673	0.6200	0.178	35.2	0.05	1.43
1978	2638	1878	0.8444	0.166	39.1	0.05	1.34
1979	3707	2835	0.8277	0.179	43	0.06	1.33
1980	4062	3404	0.9105	0.126	51.8	0.07	1.22
1981	5108	2767	1.1108	0.230	57.2	0.085	0.99
1982	5469	3198	1.1384	0.260	65.7	0.1	0.89
1983	6399	4919	1.1573	0.264	76.2	0.11	0.87
1984	6596	4848	1.1869	0.269	89.2	0.11	0.8
1985	7158	4149	1.256	0.283	100	0.11	0.65
1986	7209	3331	1.1798	0.327	123.9	0.11	0.53
1987	8050	629	1.1668	0.318	148.3	0.11	0.47
1988	13037	2036	1.1634	0.309	174.4	0.11	0.42
1989	15029	1533	1.1612	0.291	211.5	0.117	0.37
1990	16916	1251	1.2675	0.302	246.9	0.12	0.31

Columns 9, 13, 14 are obtained from the IMF, International Financial Statistics, Year Book, different issues.

Column 10 is obtained from the World Bank, World Tables.

Columns 11 and 12 are calculated from the IMF, International Financial Statistics.

Column 15 is obtained as follows: 1960-1980: Scobie, G. (1983), table 17, p. 52; 1981-1990: Pick's Currency Yearbook, various issues.

Appendix (3)

The Household Survey Questionnaire: Description of variables

The questionnaire was designed to provide a complete picture of the household's demographic characteristics, income, assets, living standard, 'portfolio' selection, preference of savings instruments, financial transactions in the formal and informal sectors. In addition, specific sections in the questionnaire were designed to analyze the activities of ROSCAs, the importance of inflation hedges in the 'portfolios' and to test the net effect of the increase of income and wealth on the saving behaviour of the households. Part of the questionnaire was designed to examine the main changes of the households relations with the financial sector since the launching of the liberalisation programme. Finally, an attempt was made to assess the main changes in the volume of formal, informal and agricultural loans.

A description of the variables included in the questionnaire is provided below. Note that some of the variables are considered for examining the reliability and consistency of the answers of the interviewees.

1. HHCcode: Household code; 3 digits starting with the village code.
2. Occup: Occupation of the leader of the household; 1 digit (from 1 to 9).
3. HHSize: Size of the household (de facto defined) from 1 to 12.

Household (HH) Roster

- | | |
|---|--------------|
| 4. LRltn1: Relation to the leader of the HH; from 1 to 9. | |
| 5. Sex1: Sex of the first member of the HH; 1 or 2. | |
| 6. Age1: Age of the first member. | |
| 7. Educ1: Education of the first member of the HH; from 1 to 6. | |
| 8. Socl1: Marital status of the first member from; 1 to 5. | |
| 9. Empl1: Employment condition of the first member; from 1 to 12. | |
| 10. LRltn2: | 40. LRltn7: |
| 11. Sex2: | 41. Sex7: |
| 12. Age2: | 42. Age7: |
| 13. Educ2: | 43. Educ7: |
| 14. Socl2: | 44. Socl7: |
| 15. Empl2: | 45. Empl7: |
| 16. LRltn3: | 46. LRltn8: |
| 17. Sex3: | 47. Sex8: |
| 18. Age3: | 48. Age8: |
| 19. Educ3: | 49. Educ8: |
| 20. Socl3: | 50. Socl8: |
| 21. Empl3: | 51. Empl8: |
| 22. LRltn4: | 52. LRltn9: |
| 23. Sex4: | 53. Sex9: |
| 24. Age4: | 54. Age9: |
| 25. Educ4: | 55. Educ9: |
| 26. Socl4: | 56. Socl9: |
| 27. Empl4: | 57. Empl9: |
| 28. LRltn5: | 58. LRltn10: |
| 29. Sex5: | 59. Sex10: |
| 30. Age5: | 60. Age10: |
| 31. Educ5: | 61. Educ10: |
| 32. Socl5: | 62. Socl10: |
| 33. Empl5: | 63. Empl10: |
| 34. LRltn6: | 64. LRltn11: |
| 35. Sex6: | 65. Sex11: |
| 36. Age6: | 66. Age11: |
| 37. Educ6: | 67. Educ11: |
| 38. Socl6: | 68. Socl11: |
| 39. Empl6: | 69. Empl11: |

Living Standard

70. Hous: Type of dwelling; from 1 to 6.
 71. Posn: Possession of the dwelling; from 1 to 6.
 72. Watr: Water source; from 1 to 4.
 73. WC: Toilet in the dwelling; from 1 to 3.
 74. Elec: Electricity; from 1 to 3.
 75. Durbl1: Possession of a Cooker (1 or 2)
 76. - 2: Coloured TV
 77. - 3: B&W TV
 78. - 4: Refrigerator
 79. - 5: Video Player
 80. - 6: Washing Machine
 81. - 7: Immersion Heater
 82. - 8: Electric Heater
 83. - 9: Electric Fan
84. Comm(1): Possession of telephone
 85. - (2): Private car
 86. - (3): Motor-Bicycle
 87. - (4): Bicycle

Income And Assets

88. Income: HH income per annum; from (less than 1000) to (more than 30000).
 89. Sourc1: Main source of income; from 1 to 8.
 90. Sourc2: Secondary source of income; from 1 to 8.
91. LivStd: An index of the HH standard of living obtained; from 70 to 90.
92. OwnLnd: HH owned land in feddans and qirats (1 qirat is 1/24 and 1 feddan is 1.038 acre = 0.42 hectares = 4200. 83m²)
 93. RntLndTO: HH Rented Land to others in feddans and qirats.
 94. RntLndFrm: HH Rented Land from others in feddans and qirats.
 95. OwnLndV: Value of owned land in £E.
 96. RntLndTV: Value of rented land (to others) £E.
 97. RntLndFV: Value of rented land (from others) £E.
 98. BldLnd: Value of non agricultural land in £E.
 99. Houses: Value of owned dwelling.
 100. Stores: Value of owned stores.
 101. Shops: Value of owned shops.
 102. LivStck: Value of livestock.
 103. Equip: Value of owned equipments.
 104. OAssets: Value of other assets.
 105. Total: Total value of assets.
106. Savings: Savings during the last 12 months (from 0 to more than 10000)

HH Portfolio Structure:

107. Cash: Importance of cash in the portfolio (1/2/0; Main/Secondary/Zero)
 108. Gold: Gold
 109. DpstA/C: Deposit accounts
 110. Bnk: Type of the Bank (1/2/3)
 111. Currency: Local or foreign currency.
 112. Shr/bnd: Shares and/or bonds

113. Post:	Post office account.
114. ROSCA:	Participation in a ROSCA.
115. Lending:	Lending in the informal sector.
116. Invstmnt:	Investment in a project.
117. Blvstck:	Ownership of livestock.
118. Agrlnd:	Ownership of agricultural land.
119. REstat:	Real estate.
120. Durbles:	Durable consumption goods.
121. Car:	Ownership of a private car(s).

Personal preference of the HH to the following.

From 1 (strongly favoured) to 5 (strongly not favoured)

122. Vcash:	Cash
123. VGold:	Gold
124. VF/Curr:	Foreign currency
125. VDurabl:	Durable goods
126. VCars:	Cars
127. VDPstA/C:	Bank deposit account.
128. VPost:	Post office account.
129. VInsrnc:	Insurance policies.
130. VShr/Bnd:	Shares and bonds.
131. VROSCAS:	ROSCA.
132. Prtcpt:	Participation in a project.
133. Estblsh:	Establish a project.
134. VBld:	Building land.
135. VRAsset:	Real estate.
136. VLvStck:	Livestock.

Deposit accounts

137. When:	The year of opening the account.
138. Vol:	Volume.
139. Occasn:	Reason for opening the account.

Formal loans

140. Floan:	Formal loans obtained.
141. FSourc:	Source from 1 to 4.
142. FPrpos:	Purpose from 1 to 7.
143. FSize:	Volume of loan(s) during the last 12 months.
144. FIntrst:	Interest paid (nominal)
145. FClltrl:	Collateral from 1 to 7.
146. FHlp:	Assistance received from a friend or others to get the loan.
147. FRpay:	Repayment of loan and interest.
148. FRfus:	If an application for a loan was refused.
149. Freasn:	Reason for refusal.

Reasons for not dealing with the formal financial sector

(1,2 or 3)

150. Relign:	Religious reasons.
151. Dstanc:	Distance from the financial intermediary.
152. Trtmnt:	Treatment of the staff.
153. Burcrac:	Bureaucracy.
154. Cost:	Cost of borrowing.
155. Collatrl:	Collateral problems.
156. Bnkrpcy:	Fear of bank bankruptcy.
157. Confisc:	Fear of confiscation.

158. Taxes: Fear of being taxed.
 159. Noneed: Noneed for dealing.
 160. Othr3: Other reasons.

Inflation hedges

161. OwnGld: Ownership of gold.
 Reasons for ownership of gold:
 162. Shw: to shaw off from 1 to 3.
 163. Savng: saving from 1 to 3.
 164. Time: hedging against risk from 1 to 3.
 165. Othr4: Other reasons.
 166. whnBy: Occasion of buying gold
 167. Pwn/Cllt: If it was used as a collateral or pawned.
 168. Liquid: If it was liquidated.
 169. For: Reasons for liquidation from 1 to 11.
170. FCurr: Ownership of foreign currencies.
 171. REst: Ownership of real estate.
 172. Hoard: Hoarding of consumption goods.
 173. BldMat: Storing of building material.
 174. DurCon: Ownership of durable goods.
 175. Sell: Selling any of the above inflation hedges after the increase of interest rates.
 176. Chang: If a decision to buy an inflation hedge was changed after the increase of interest rates.

The Informal sector

177. ITwzF: 'Deposits' with Islamic investment companies.

178. DepSize: Volume of the 'deposit'.

179. Rsn: Reason for dealing with them (from 1 to 5).

180. ILend: **Lending in the informal sector**
 181. ISize: Size of the loan.
 182. Durtn: Duration
 183. Reltn: Relation with the borrower.
 184. IHelp: Assistance received by the borrower to get the loan.
 185. FPaid: Charged for this assistance.
 186. IBOccup: Occupation of the borrower.
 187. IPurpos: Purpose of the loan.
 188. IInterst: Interest paid.
 189. IntVal: Nominal value of the interest paid.
 190. Contrct: Contract written.
 191. ColtVld: Valuation of collateral.
 192. ColtTkn: Collateral taken.
 193. ColtKnd: Kind of collateral.
 194. ColtUsd: Collateral used.
 195. IRpay: Repayment of the loan.
 196. INtRpay: Action taken in the case of default.

197. IBBorrow: **Borrowing from the informal sector**
 198. IBSize: Size of the loan.
 199. IBDurtn: Duration.
 200. IBrltn: Relation with the lender.
 201. IBHlp: Help received to get the loan
 202. IBPaid: Charge for that help.
 203. IBOccup: Lender's occupation.
 204. IBPurpos: Purpose of the loan.
 205. IBintrst: Interest paid
 206. IBintval: Nominal value
 207. IBcntrct: Contract
 208. IBVColt: Collateral valued.
 209. IBTColt: Collateral taken.
 210. IBKColt: Kind of collateral.
 211. IBUColt: Collateral used.
 212. IBRpay: Repayment of the loan
 213. IBFair: Action taken by the lender in the case of default.

Rotating Savings and Credit Association

214. PROSCA: Participation in a ROSCA.
 215. Number: Number of members.
 216. AvgAge: Average Age of members.
 217. M/F: Sex of members.
 218. RRltn: Relation between members.
 219. Duratn: Duration of the association.
 220. instlmnt: Instalments per month, week, other.
 221. Val: Value of the instalment.
 222. RReason: Reason for participation.
 223. Intrst: Interest paid.
 224. Prvlg: Privilege to any of the members.
 225. Knd: Type of the privilege.

226. Othr5: Comments.

The effect of net increase in income or wealth

227. Spend: Increase of spending.
 228. BDurbl: Increase of buying durables.
 229. Plgr: Pilgrimage.
 230. Prjct: Starting or developing a project.
 231. BGld: Buy gold.
 232. SveFrml: Saving in the formal sector.
 233. Mrrge: Marriage.
 234. Blnd: Purchase of land.
 235. Torsm: Tourism.
 236. Immgrt: Immigration.
 237. Othr6: Others.

238. Intst91: The net impact of the increase of the nominal interest rate on savings and consumption for those who have a deposit account.

Main changes of the services of the financial sector and their impact on the HH

239. Brnch: Increase of branch numbers.
 240. Encourg: Encouragement by the financial sector.
 241. A/C: Account(s) opened since January 1991.
 242. Vchnng: Change of views towards the financial sector.

The impact of the increase of nominal interest rates on the portfolio selection of the HH.

243. Liquid: Liquidation of inflation hedges.
 244. InfReluct: Reluctance to lend in the informal sector.
 245. Trans: Effects on private transactions (Non Market financial transactions).
 246. Hedges: Change in a decision of buying an inflation hedge.
 247. Durabl: Change in a decision of buying a consumption durable good.
 248. ROSCA/i: The effect on participation in a ROSCA.

Change in the size of loans since Jan 1991.

249. FrmLoan: Change in the volume of formal loans after Jan 1991.
 250. InfLoan: Change in the volume of informal loans during the same period.
 251. AgrLoans: The impact of increase on nominal interest rates on Loans obtained from the Agricultural bank.

Appendix (4)
Descriptive Statistics of the Household Survey Data

Variable	Mean	Std Dev	Minimum	Maximum	N
OCCUP	4.47	2.10	1.0	9.0	200
HHSIZE	5.66	2.02	1.0	11.0	200
LRLTN1	.00	.00	.0	.0	200
SEX1	1.04	.20	1.0	2.0	200
AGE1	45.98	12.41	21.0	79.0	200
EDUC1	3.55	1.31	2.0	6.0	200
SOCL1	3.05	.51	2.0	5.0	200
EMPL1	2.97	1.64	2.0	10.0	200
LRLTN2	1.30	.73	1.0	6.0	199
SEX2	1.96	.20	1.0	2.0	199
AGE2	38.64	12.93	12.0	83.0	199
EDUC2	2.98	1.15	2.0	6.0	199
SOCL2	3.01	.47	1.0	5.0	199
EMPL2	8.70	2.88	1.0	11.0	199
LRLTN3	2.52	1.54	1.0	9.0	191
SEX3	1.49	.50	1.0	2.0	191
AGE3	20.95	14.06	1.0	70.0	191
EDUC3	3.42	1.39	1.0	6.0	191
SOCL3	1.95	.96	1.0	5.0	191
EMPL3	7.08	4.31	1.0	12.0	191
LRLTN4	2.86	1.73	2.0	9.0	171
SEX4	1.56	1.08	1.0	14.0	171
AGE4	16.20	10.52	1.0	60.0	171
EDUC4	3.30	1.35	1.0	6.0	171
SOCL4	1.66	.81	1.0	5.0	171
EMPL4	7.27	4.43	1.0	12.0	171
LRLTN5	2.64	1.27	2.0	7.0	142
SEX5	1.49	.50	1.0	2.0	142
AGE5	13.92	12.60	1.0	80.0	142
EDUC5	2.88	1.48	1.0	6.0	142
SOCL5	1.53	.83	1.0	5.0	142
EMPL5	6.65	4.67	1.0	12.0	142
LRLTN6	2.66	1.52	1.0	7.0	104
SEX6	1.46	.50	1.0	2.0	104
AGE6	13.03	10.90	1.0	69.0	104
EDUC6	2.76	1.34	1.0	5.0	104
SOCL6	1.53	.75	1.0	5.0	104
EMPL6	7.02	4.68	1.0	12.0	104
LRLTN7	2.92	1.76	1.0	7.0	64
SEX7	1.48	.50	1.0	2.0	64
AGE7	14.97	13.29	1.0	80.0	64
EDUC7	2.77	1.21	1.0	6.0	64
SOCL7	1.66	.86	1.0	5.0	64
EMPL7	7.69	4.35	1.0	11.0	64
LRLTN8	3.07	1.91	2.0	7.0	29
SEX8	1.48	.51	1.0	2.0	29
AGE8	17.52	18.39	1.0	70.0	29
EDUC8	2.76	1.24	1.0	5.0	29
SOCL8	1.86	1.13	1.0	5.0	29
EMPL8	7.10	4.66	1.0	11.0	29
LRLTN9	2.89	1.71	2.0	7.0	18
SEX9	1.61	.50	1.0	2.0	18
AGE9	16.72	18.77	1.0	80.0	18
EDUC9	2.56	1.29	1.0	4.0	18
SOCL9	1.89	1.08	1.0	5.0	18
EMPL9	5.94	4.80	1.0	11.0	18
LRLTN10	3.67	2.06	2.0	7.0	9
SEX10	1.56	.53	1.0	2.0	9
AGE10	15.78	24.84	1.0	80.0	9
EDUC10	2.44	1.33	1.0	5.0	9
SOCL10	1.78	1.39	1.0	5.0	9
EMPL10	5.67	4.92	1.0	11.0	9

LRLTN11	5.80	1.64	4.0	7.0	5
SEX11	1.20	.45	1.0	2.0	5
AGE11	11.40	10.04	2.0	24.0	5
EDUC11	2.00	1.00	1.0	3.0	5
SOCL11	1.80	.84	1.0	3.0	5
EMPL11	7.00	5.52	1.0	12.0	5
DWLL	2.37	.98	1.0	5.0	200
POSN	1.33	.84	1.0	6.0	200
WATR	1.47	.84	1.0	4.0	200
WC	1.19	.47	1.0	3.0	200
ELEC	1.00	.00	1.0	1.0	200
COOKER	1.30	.46	1.0	2.0	200
TVC	1.66	.48	1.0	2.0	200
B W	1.50	.50	1.0	2.0	200
FRG	1.50	.50	1.0	2.0	200
VID	1.91	.29	1.0	2.0	200
WSH	1.28	.45	1.0	2.0	200
BWAT	1.63	.48	1.0	2.0	200
EHET	1.69	.46	1.0	2.0	200
EFAN	1.43	.50	1.0	2.0	200
TELE	1.78	.41	1.0	2.0	200
CAR	1.90	.29	1.0	2.0	200
MBIK	1.84	.37	1.0	2.0	200
BIK	1.37	.49	1.0	2.0	200
INCOME	5716.00	8859.90	1000.0	80000.0	200
SOURC1	3.12	2.03	1.0	8.0	200
SOURC2	2.14	2.33	.0	8.0	200
PERCAP	1207.09	2340.33	125	23333	200
OWNLND	1.82	11.18	.00	150.00	200
RNTLNDTO	.08	.48	.00	5.00	200
RNTLNDFM	.18	.41	.00	2.50	200
VOWNLND	100600.00	659071.77	.0	9000000.0	200
VRNTLNDT	2326.25	13990.62	.0	150000.0	200
VRNTLNDF	3702.75	8037.53	.0	38000.0	200
BLDLND	4520.00	13381.14	.0	100000.0	200
HOUSES	24062.50	35058.74	.0	300000.0	200
STORES	1168.00	4960.00	.0	40000.0	200
SHOPS	1972.50	9201.84	.0	100000.0	200
LIVSTCK	1803.25	4814.21	.0	60000.0	200
EQUIP	4282.50	22105.70	.0	270000.0	200
OASSETS	2472.50	17263.49	.0	200000.0	200
TOTAST	146910.25	710748.16	.0	9585000.0	200
SAVINGS	1534.75	4609.21	.0	40000.0	200
CASH	1.11	1.01	.0	3.0	200
GOLD	1.72	.97	.0	3.0	200
DPSTA_C	.25	.51	.0	3.0	200
BNK	.41	.80	.0	3.0	200
CURRENCY	.25	.48	.0	2.0	200
SHR_BND	.04	.34	.0	3.0	200
INSUR	.11	.55	.0	3.0	200
POST	.17	.56	.0	3.0	200
ROSCA	.39	.80	.0	3.0	200
LENDING	.69	1.13	.0	3.0	200
INVSTMNT	.63	.98	.0	3.0	200
BLVSTCK	.72	.99	.0	3.0	200
AGRLND	1.10	1.17	.0	3.0	200
RESTAT	.69	1.07	.0	3.0	200
DURBLES	.22	.69	.0	3.0	200
CARS	.26	.78	.0	3.0	200
VCASH	2.12	1.37	1.0	5.0	200
VGOLD	2.16	1.21	1.0	5.0	200
VF_CURR	3.10	1.41	1.0	5.0	200
VDURBL	3.74	1.14	1.0	5.0	200
VCARS	3.64	1.07	1.0	5.0	200
VDPSTA_C	2.94	1.52	1.0	5.0	200
VPOST	3.71	1.24	1.0	5.0	200
VINSRNC	3.88	1.00	1.0	5.0	200
VSHR_BND	3.93	.96	1.0	5.0	200

VROSCAS	3.20	1.30	1.0	5.0	200
PRTCPT	2.54	1.35	1.0	5.0	200
ESTBLSH	1.71	1.27	1.0	5.0	200
VAGRLND	1.84	1.21	1.0	5.0	200
VRASSET	2.41	1.45	1.0	5.0	200
VLVSTCK	2.65	1.52	1.0	5.0	200
FRMLA_C	1.78	.42	1.0	2.0	200
WHEN	11.49	6.92	1.0	30.0	45
VLM	34702.22	64210.04	600.0	300000.0	45
OCCASN	3.76	1.92	1.0	7.0	45
FLOAN	1.70	.46	1.0	2.0	200
FSOURC	2.25	.77	1.0	4.0	60
FPRPOS	2.67	2.25	1.0	7.0	60
FSIZE	4927.17	14524.53	300.0	100000.0	60
FINTRST	19.02	5.12	4.0	30.0	60
FCLLTRL	2.27	1.25	1.0	7.0	60
FHLP	1.90	.30	1.0	2.0	60
FRPAY	1.30	.46	1.0	2.0	60
FRFUS	1.71	.46	1.0	2.0	68
FREASN	1.90	1.29	1.0	4.0	20
RELIGN	2.23	.86	1.0	3.0	200
DSTANC	2.86	.42	1.0	3.0	200
TRTMNT	2.78	.53	1.0	3.0	200
BURCRAC	2.63	.72	1.0	3.0	200
COST	1.87	.97	1.0	3.0	200
COLLATRL	2.15	.96	1.0	3.0	200
BNKRPCY	2.60	.68	1.0	3.0	200
CONFISC	2.57	.71	1.0	3.0	200
TAXES	2.49	.78	1.0	3.0	200
NONEED	2.71	.69	1.0	3.0	200
OWNGLD	1.13	.34	1.0	2.0	200
SHW	1.60	.67	1.0	3.0	174
SAVNG	1.56	.68	1.0	3.0	174
TIME	1.32	.61	1.0	3.0	174
WHNBY	1.36	.48	1.0	2.0	174
PWN CLLT	1.95	.21	1.0	2.0	174
LIQUID	1.47	.50	1.0	2.0	174
FOR	6.01	2.95	1.0	11.0	92
FCURR	1.93	.25	1.0	2.0	200
REST	1.71	.45	1.0	2.0	200
HOARD	1.70	.46	1.0	2.0	200
BLDMAT	1.96	.21	1.0	2.0	200
DURCON	1.98	.12	1.0	2.0	200
SELL	1.97	.16	1.0	2.0	200
CHANG	1.81	.39	1.0	2.0	200
ITWZF	1.95	.21	1.0	2.0	200
DEPSIZE	22111.11	25741.23	5000.0	80000.0	9
RSN	3.33	1.00	2.0	4.0	9
IEND	1.60	.49	1.0	2.0	200
ISIZE	913.88	1896.09	10.0	12000.0	80
ITRANS	1.41	.81	1.0	6.0	80
ITVOL	945.75	1885.65	20.0	12000.0	80
DURTN	4.49	4.75	1.0	24.0	80
RELTN	2.03	1.16	1.0	6.0	80
IHELP	1.95	.22	1.0	2.0	80
FPAID	2.00	.00	2.0	2.0	4
ILOCCUP	4.82	2.09	1.0	9.0	80
IPURPOS	2.28	.75	1.0	4.0	80
IINTERST	2.77	.64	1.0	3.0	80
INTVAL	.06	9.29	-70.0	22.0	80
CONTRCT	1.70	.46	1.0	2.0	80
COLTVLD	1.94	.24	1.0	2.0	80
COLTKN	1.68	.47	1.0	2.0	80
COLTKND	3.00	.00	3.0	3.0	26
COLTUSD	2.00	.00	2.0	2.0	26
IRPAY	1.53	.50	1.0	2.0	80
INTRPAY	2.33	.93	1.0	3.0	42
IBBROW	1.58	.50	1.0	2.0	200

NTRANS	2.25	1.19	1.0	6.0	85
IBSIZE	1231.94	2762.30	40.0	20000.0	85
TVOL	1537.24	2708.13	80.0	20000.0	85
PROP	27.86	40.09	.7	254.5	85
IBDURTN	6.72	6.82	1.0	30.0	85
IBRLTN	2.49	1.16	1.0	4.0	85
IBHLP	1.72	.45	1.0	2.0	85
IBPAID	1.96	.20	1.0	2.0	24
IBOCCUP	4.85	3.36	1.0	11.0	85
IBPURPOS	2.38	1.23	1.0	5.0	85
IBINTRST	2.85	.50	1.0	3.0	85
IBINTVAL	4.67	23.97	.0	204.4	85
IBCNRCT	1.61	.49	1.0	2.0	85
IBVCLT	1.87	.34	1.0	2.0	85
IBTCOLT	1.60	.49	1.0	2.0	85
IBKCOLT	2.74	.75	1.0	4.0	34
IBUCOLT	1.76	.43	1.0	2.0	34
IBRPAY	1.55	.50	1.0	2.0	85
IBFALR	1.57	1.02	1.0	4.0	47
PROSCA	1.78	.42	1.0	2.0	200
NUMBER	10.82	3.07	6.0	20.0	45
AVGAGE	35.02	5.40	26.0	45.0	45
M F	2.47	.84	1.0	3.0	45
RRLTN	3.24	.93	1.0	5.0	45
DURATN	9.51	2.34	6.0	12.0	45
INSTLMNT	1.13	.50	1.0	3.0	45
VAL	42.89	24.32	10.0	100.0	45
RSUM	474.22	353.27	90.0	1800.0	45
RREASON	3.31	1.79	1.0	6.0	45
INTRST	2.00	.00	2.0	2.0	45
PRVKND	1.76	1.05	1.0	4.0	45
SPEND	1.82	.94	1.0	5.0	200
BDURBL	2.21	1.25	1.0	5.0	200
PLGR	2.11	1.28	1.0	5.0	200
PRJCT	1.87	1.14	1.0	5.0	200
BGLD	2.52	1.41	1.0	5.0	200
SVEFRML	3.00	1.37	1.0	5.0	200
MRRGE	2.27	.94	1.0	4.0	200
BLND	2.25	1.57	1.0	5.0	200
TORSM	4.00	1.32	1.0	5.0	200
IMMGRT	4.12	1.34	1.0	5.0	200
INTST91	1.93	.89	1.0	3.0	45
BRNCH	1.58	.50	1.0	2.0	200
ENCOURG	1.70	.46	1.0	2.0	200
A C	2.00	.07	1.0	2.0	200
VCHNG	1.81	.39	1.0	2.0	200
LIQUI	1.94	.24	1.0	2.0	200
INFRLUCT	1.80	.40	1.0	2.0	200
TRANS	1.80	.40	1.0	2.0	200
HEDGES	1.85	.36	1.0	2.0	200
DURABL	1.81	.40	1.0	2.0	200
ROSCA I	1.79	.41	1.0	2.0	200
FRMLOAN	1.70	.46	1.0	2.0	200
INFLOAN	1.67	.47	1.0	2.0	200
AGRLOANS	1.66	1.73	.0	5.0	200

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