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THE ROLE OF MONETARY POLICY IN A DEVELOPING COUNTRY:

THE CASE OF GREECE 1950 - 1970

by

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A thesis for the degree of Master of Philosophy
submitted to the Council for National Academic Awards.

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I wish to acknowledge the help and guidance provided by Mr. D. Croome and Dr. G. Koolman throughout this research and to express my thanks for their indispensable suggestions and criticisms. Many thanks are also due to P. Arestis for his helpful contribution and practical assistance.

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ABSTRACT

The purpose of this study is to assess the degree of importance of monetary policy in a developing economy taking the case of Greece in the period 1950-1970, as a case study. The institutional framework of the Greek monetary sector is examined to determine the policy tools available to the monetary authorities. In addition, the relationship between the various monetary variables and their interaction with the real sector is considered in detail in order to provide the necessary analytical basis for evaluating the monetary policy pursued over the twenty year period. It is argued that the problems faced by a country such as Greece, which is at an intermediate stage of development, are of a type which cannot be effectively tackled by anything short of a comprehensive and multidimensional long term policy. Within the framework of such a policy the role of monetary policy is the auxilliary one of ensuring that funds are available for financing this long term policy. Even the short term stabilisation role of monetary measures is restricted by the institutional and economic conditions prevailing in Greece. The allocation of a leading role to monetary measures, instead of a complementary one, is criticised on the grounds that monetary policy cannot serve as an adequate substitute for a general policy often involving direct government intervention. Disproportionate reliance on monetary measures, it is argued, has meant that few of the basic structural weaknesses of the economy have been removed with consequent retardive effects on growth. Consequently, rather than attributing an exaggerated importance to monetary measures, it is maintained that monetary policy should be viewed in its correct perspective as an important but auxilliary tool of an overall policy for growth.

CHAPTER I

The Greek Economy: Background to the Study.

The purpose of this study is to examine the degree to which monetary policy can offer a positive contribution to the economic progress of a country which in terms of development stands midway between the severely underdeveloped countries, such as those of the third world, and the highly industrialised or advanced countries. The specific country under inspection is Greece; a country whose intermediate position on the scale of development is reflected in the simultaneous appearance of features normally associated with either underdeveloped or advanced countries. Greece then is a developing economy, i.e. an economy with a relatively low level of per capita income which has entered into the process of raising this economic variable.* The scope of this thesis is such that the process of development need be considered only with respect to this one aspect of development - the growth of economic magnitudes - even though this represents only one facet of the multidimensional process of development.

An assessment of the degree of importance of monetary policy or the role which it can play in the general process of development in an economy requires that two major factors be considered. First, the mechanism of the monetary system must be understood, i.e. the relationship between the various monetary variables must be isolated and examined, and second, the relationship or degree of interaction between

* This is not necessarily the only criterion which can be used to judge the level and rate of development. Social, political, cultural and efficiency criteria may be considered equally important. See for example, Harbison (1).

the monetary sector and the real sector must be assessed. This enables the impact of monetary changes on the economy to be gauged and hence allows the pursuance of the optimum monetary policy with respect to economic development.

At this juncture it must be stressed that there is an important distinction between economic growth based on a foundation which will, in the long run, lead to the alleviation of the acute problems faced by a developing economy, and on the other hand, a rise in the level of economic magnitudes such as G.N.P. achieved at the cost of an exacerbation of the structural imbalances of the economy, e.g. an aggravation of the balance of payments deficit and hence an increase in the degree of foreign indebtedness and economic dependence which will create difficulties in the future. This point is emphasised because of the presentation by successive Greek governments, of statistics showing a reasonably rapid rate of growth of G.N.P. as proof of a healthy developing economy, while a share of the credit is accorded to monetary policy for its role in maintaining stable prices.* However a detailed analysis of the full range of government statistics shows that the structure of the Greek economy has not been significantly improved since 1950's and current increases in the level of national income have been incurred at the expense of increasingly uneven development of the basic sectors of the economy. In this chapter a brief account of the Greek economy in general is given in order to present a picture of the framework within which the monetary authorities have had to operate between 1950 and 1970. This will bring out the basic deficiencies of the Greek economy

* This can hardly be contended since September 1973 when an accumulation of economic mismanagement plus the general monetary crisis has resulted in the largest price increases since the wartime inflation.

and illustrate the imbalances which need to be tackled by a government policy designed to facilitate and accelerate the development process. Thus it will give an indication of the objectives of monetary policy in its auxilliary role within the context of overall government policy.

The period in question has been characterised by a steady rise in the level of national income. This has been accompanied by a more than proportional rise in the level of consumption. Private consumption stood at 27.183 billion drachmas in 1950 (G.N.P. 32.266 b. dr.) and by 1970 it had risen to 192.227 b. dr. (G.N.P. 286.174 b. dr.). The average annual rate of growth of consumption over this period being 11.1% per annum as opposed to an average annual rate of growth of G.N.P. of 6.2% per annum. The rapid urbanisation and growth of the middle class has resulted in the attitudes of a "consumer society" becoming prevalent, a trend fostered by most Greek governments, the mass media etc. The rapid growth in building activity, tourism and other activities plus the gross income inequalities to be found in Greece, have contributed to the rapid rise in the level of expenditure. Contrary to what might be expected there is little evidence to support the view that the higher income groups have a greater marginal propensity to save than the lower income groups, since the former have been particularly prone to conspicuous expenditure. D.Psilos in his study of the capital market in Greece, analyses the sources of savings and shows that there is a tendency for wage and salary earners, and to a lesser extent farmers (many of whom have extremely small incomes), to contribute an ever increasing share of savings deposits - the chief form in which savings are accumulated. Conversely, the entrepreneurial and professional classes contribute a decreasing proportion of savings and Psilos concludes that these higher income groups have a greater marginal propensity to consume than the former group (2,3). This trend in the source of

savings deposits has continued. There has, therefore, been an ever growing market for all forms of consumer goods including consumer durables and luxury goods.

The rate of total investment has been rising but the structure of the investment which has taken place has not been such as to improve the imbalances of the Greek economy. Specifically, the rate of growth of investment in manufacturing and in the agricultural sectors has been disproportionately low compared with that in other sectors. Table 1.1 shows the average annual rate of growth of investment in various sectors for the 5 four year periods since 1951. If we exclude the period 1951-58 which covers war reconstruction, the rate of growth of investment in both the above sectors has been lower than that of other less vital areas.

TABLE 1

Average Annual Rate of Growth of Gross Fixed Capital Formation

	Inv./ GNP	Agri- cult- ure	Manu- fact- uring	Mining & Quar- rying	Energy water Sewage	Trans- port & Commu- nications	Housing
1951-54	16.4	-	-16.0	33.6	66.8	29.7	7.2
1955-58	18.4	29.9	18.7	30.6	8.4	33.4	8.6
1959-62	27.2	9.3	7.1	-0.7	14.0	17.4	5.6
1963-66	27.4	7.5	13.7	26.6	13.1	18.5	13.9
1967-70	33.4	10.4	10.5	14.8	10.0	11.6	9.8
	1 Other build- ing	2 Other const- ruction	3 Trans- port means	Shipp- ing	Gross Fixed Capital Forma- tion	Total Govt. Capital Forma- tion	Total Private Capital Forma- tion
1951-54	6.1	-2.0	52.0	155.3	-0.5	-10.4	6.1
1955-58	11.7	20.5	54.2	44.9	15.2	13.2	15.9
1959-62	18.1	16.0	18.0	26.1	9.9	16.0	7.9
1963-66	11.3	10.8	28.1	87.7	12.7	8.1	14.6
1967-70	14.8	10.3	11.3	30.3	10.5	11.4	10.7

Source: Nefeloudis (4), (constant 1960 prices).

1. Offices, commercial and industrial buildings, hotels.
2. Mainly public and municipal works.
3. Includes shipping.

Consequently the output of these sectors has lagged far behind the demand for their products which has had to be satisfied by a rapidly growing level of imports. Further, this means that the relative volume of investment in the various sectors has not changed. As Table 2 shows, there has been no significant trend in the contribution to total investment of investment carried out in the agricultural and manufacturing sector while building continues to attract a disproportionately high proportion of total investment.

TABLE 2

Gross Investment in Selected Sectors as a Percentage of Total Investment

	<u>Agriculture</u>	<u>Manufacturing</u>	<u>Building</u>
1951	13.05	19.42	40.15
1955	7.86	10.15	56.24
1960	12.87	6.63	32.81
1966	10.68	10.41	41.73
1970	10.99	10.37	42.41

Source: National Accounts of Greece 1948-70.

The structural changes achieved have been inadequate and this has had significant repercussions for the course of development. Industrial exports have risen rapidly since the mid-sixties from 1,350 m. dr. to 7,890 m. dr. in 1970. This increase has been chiefly the result of three large projects, which are mainly controlled by foreign interests, for the exploitation of aluminium, iron and steel and ferro-nickel. In addition to these exports, some traditional domestic industries such as

clothing and footwear have lately turned towards foreign markets, although their contribution towards the increase in exports has been small. Thus the degree of export diversification has not been great and industrial exports still consist largely of processed raw materials and simple manufactured commodities. Only five per cent of exports are composed of highly finished products.

This is a direct consequence of the structure of realised investment in the manufacturing sector and the conditions under which it has taken place. These factors can be more important than the rate of growth of manufacturing investment. Over the period in question investment in basic and mixed* industry has been rising at a faster rate than investment in light industry. The output of the former (which comprises chiefly chemicals, minerals, metals and their products) has been rising at an average annual rate of 15.6% per annum over the 20 year period as opposed to an average annual rate of 8% for light industry. The contribution of the output of light industry to total manufacturing output has fallen from approximately 76% in 1952 to 55% in 1970 while the contribution of basic and mixed industry has risen by a corresponding amount. This shift in the structure of manufacturing industry has caused a large increase in the demand for capital goods but there has not been a corresponding increase in the size of the capital goods industry hence increased demand for capital goods has been met by rising imports.

The increase in the size of basic and mixed industry, especially extraction and processing of raw materials, since the beginning of the

* Industries producing processed raw materials and capital goods but also goods for final consumption are designated as mixed industries. E.g. Chemical industry.

1960s has been largely due to the development of these industries by foreign multi-national firms, e.g. Esso-Pappas (oil refining, aluminium, chemicals, iron and steel); Pechiney (aluminium and nickel), Unilever, Krupp, Mobil Oil etc. Even firms which were domestically owned during this period have since been acquired by foreign firms. The reason for the dominance of foreign firms in this field has been the relatively low cost of labour but chiefly the concessions granted to such concerns by successive Greek governments. Concessions include such advantages as complete freedom of repatriation of profits, import duty exemption on imported capital goods, exemption from local taxes and subsidised electricity supplies, many of these constitutionally endorsed. These concessions plus the low level of wages have made it extremely profitable for such firms to invest in Greece. In addition, credit has often been extended to these firms by Greek commercial banks and the development banks such as E.T.B.A. so the amount of capital imports Greece has gained has often been relatively low. The result of this policy has been a skewed development of the industrial sector with many small labour-intensive firms at one end of the scale and a few large multi-national monopolies at the other end.

In contrast to the industrial sector, the structure of the agricultural sector has undergone little change. The output of cereal crops has not increased significantly while the rearing of livestock has actually decreased despite the large increase in the demand for meat and dairy produce as incomes have risen. There has been a small increase in the output of cotton and tobacco, while the other traditional products, currents and raisins have also shown a slight increase. There has been no significant change in the output of olives and olive oil. Citrus fruits are the only major product which has exhibited a steady rise in output, being in 1970 about three times as large as in 1954. The

contribution of agriculture to G.N.P. has fallen from 34% in 1950 to 18.4% in 1970. (see Table 3).

TABLE 3

Contribution of the various sectors to G.N.P. (at 1958 prices).

	<u>1950</u>	<u>1962</u>	<u>1966</u>	<u>1970</u>
Agriculture	34.0	24.3	21.3	18.4
Secondary Production	25.0	26.1	28.9	33.2
Services	41.0	47.0	47.8	45.6
Income from abroad	-	2.6	2.8	2.8
G.N.P.	100.0	100.0	100.0	100.0

Source: I Elliniki Ekonomia (Annual Surveys of Greek Economy by Bank of Greece).

This reduction in its relative contribution to G.N.P. is inevitable as the industrial sector has gained in importance, however, the fact that the composition of the agricultural product remains unaltered has had serious consequences for the economy since neither domestic demand has been adequately met nor has a sufficient contribution been made to exports in order to help meet the rising import bill. Greece is still producing traditional commodities like raisins, currents, tobacco etc, the world demand for which has risen by very little. During the sixties world trade in these commodities rose by only 2 per cent as opposed to trade in all agricultural products which increased at more than twice this rate (5). In addition there has been a shift in consumers' tastes away from some of these products e.g. turkish tobacco, which has aggravated the situation further. Over the past ten years the contribution of agriculture to exports has fallen from over 80 per cent to approximately 50 per cent and in absolute terms there has been only a very small increase in the volume of these exports. With the exception of citrus fruits, there has been no movement towards the production of commodities with greater export potential while at the same time there has been no

serious attempt to produce products to satisfy domestic demand for food products, which is being increasingly met higher imports.

The services sector is one which has grown steadily so that its relative contribution to GNP has remained practically unchanged as can be seen from Table 3. The activities encompassed within the general heading of services are diverse and vary considerably with respect to their direct relevance to economic growth. Certainly the growing contribution of the services sector (tourism, shipping etc.) to the balance of payments has been important. Nevertheless, the persistent pressure on the balance of payments cannot be continually met by this sector. The ever widening gap on the balance of payments, which has reached unprecedented dimensions in recent years, indicates that this problem cannot be overcome unless structural changes in production (in both the agricultural and industrial sector) are made which will allow import substitution and contribute to the payment of necessary imports. Tourism in particular is strongly affected by international economic conditions since the travel industry is very sensitive to changes in the level of income in the rich countries from which most tourists originate. Overdependence on foreign exchange earnings from tourism could therefore have severe repercussions for the Greek economy in a time of recession.

The public sector does not present any significant changes over the twenty year period under examination although government expenditure has been rising rapidly. The level of expenditure on current account has risen from 12.876 billion drachmas in 1957 to 42.4 billion drachmas in 1970 and the relative size of the different categories of expenditure has undergone some change as can be seen from Table 4. Current receipts of the government sector have been rising at a faster rate than current expenditures and the budget on current account has always been

in surplus. The major source of government receipts has been indirect taxation which has contributed between 55.2% and 59.4% of total receipts. Direct personal taxation has contributed approximately 34% of receipts over the period while direct company taxation amounts to about 1.6% of total receipts, and income from government enterprises has been approximately 5%. Capital formation by the government has since 1955 accounted for just over a quarter of total investment or approximately 26% of total government receipts over the same period. It has mainly taken the form of improvements to basic infrastructure e.g. transportation, electrification works, irrigation and land reclamation etc. (6). The overall budget has always been in deficit and this deficit has risen from 2.99 billion drachmas in 1957 to 8.4 billion drachmas in 1970. The deficit at the beginning of the period was largely financed from foreign sources in the form of loans or aid. Over the years, the contribution of domestic financing has risen to approximately two thirds of total deficit financing requirements.

The Greek balance of payments has shown a persistent deficit over the whole period. In 1950 the deficit stood at 278.8 million U.S dollars. It was greatly reduced in 1953 to 24.8 million dollars as a result of the 50 per cent devaluation of the drachma. (The par value of the drachma is 30 drachmas = 1 U.S. dollar). Between 1954 and 1958 the balance of payments deficit stood at approximately 100 million dollars (except for 1955 when the deficit dropped to 40.5 m. dollars as a result of strict import restrictions and an above average rise in invisible and export earnings). The following year saw a rapid rise in the deficit to 112 m. dollars and this wide gap continued until 1959 when import quotas were introduced and the absolute value of imports fell below the previous year's level for the first time. After this year the gap in the balance of payments began to rise steadily as the balance of trade widened increasingly year by year.

TABLE 4Government Expenditure on Current Account. (% of total).

	Adminis- tration	Defence	Justice	Education, Health, Welfare	Other	Total
1951-54	21.2	48.8	3.8	14.9	11.3	100
1955-58	23.2	46.2	5.3	15.9	9.5	100
1959-62	25.0	39.2	5.3	20.1	10.4	100
1963-66	25.3	32.4	5.3	24.3	12.6	100
1967-70	23.5	38.5	4.5	22.7	10.8	100

Source: National Accounts of Greece 1948-70.

Although there was a rising surplus on the balance of invisibles, it. increased at a much lower rate and was unable to offset the widening trade deficit. This surplus on the balance of invisibles was due to sizeable tourist and shipping earnings and emigrants' remittances. In November 1962 the Association Agreement with the EEC was brought into force and tariffs on imports from EEC countries were reduced by 5% for goods also manufactured in Greece and by 10% for goods not manufactured in Greece. A further 10% reduction was effected on the latter category of goods in 1964. By 1966 the deficit stood at 264 m. dollars and rose to 410.4 m. dollars by 1970.

The structure of imports over the period has undergone significant changes over the years. In 1952 foodstuffs accounted for 21.3% of total imports, raw materials for 28.0%, capital goods for 12.6% and manufactured consumer goods for 19.7%. In 1970 foodstuffs were 13.1% of imports, raw materials 21%, capital goods, 30%, and manufactured goods 28%. The structure of exports has also undergone some change. The contribution of agriculture to total exports has dropped from 76% in

1952 to $40\frac{1}{2}$ in 1970, while manufactured goods have risen from approximately 7% in 1955 to 30% in 1970.

The persistent deficit over the period has been covered in several ways. At the beginning of the period direct American aid and war reparation funds provided the major means of covering the external financing requirements but their importance diminished rapidly and capital inflows acquired increasing moment. Suppliers' credit and loans from foreign banks and organisations came to cover a growing part of the deficit. Capital imports for direct investment have varied considerably but have usually accounted for less than a third of total inflows. The financing of the deficit has therefore posed a continuous problem and the servicing of foreign debt particularly of the relatively large volume of short term loans, and suppliers' credit has been rising steadily and, particularly over the last eight years, they have made up a growing part of outflowing capital.

The above brief account of the Greek economy gives an indication of the background against which monetary policy has been operated and of the kind of obstacles impeding the course of development. The problems related to growth have been intensified by the uneven development of the country. The regions differ considerably from the main urban centres and surrounding areas with incomes in the former being markedly lower than in the urban areas (7). In addition the regions exhibit heightened social and cultural problems. Unemployment and underemployment have been prevalent and have been alleviated only by large scale emigration and migration towards the urban areas. Although emigration has helped the balance of payment as a result of workers' remittances from abroad, mass emigration represents a wastage of potentially valuable resources. This is particularly true in view of the fact that many workers who intend to return to Greece are unable to obtain skills which would be

useful on their return, since most workers in Germany, Belgium and other countries are employed in unskilled or semi-skilled jobs. Moreover, the consequent depopulation of the countryside has caused the potentially dynamic agricultural sector to stagnate. On the other hand there has not been a sufficiently great improvement in the industrial sector to offset this. The lack of long term planning for the whole economy has therefore had severe repercussions. Piecemeal improvements in limited sectors have proved unable to provide the momentum necessary to lead to balanced growth.

Economic growth entails raising the country's productive capacity through a sustained process of investment. A government policy which has growth among its primary objectives must be such as to raise the level of investment directly by increasing public investment and indirectly by encouraging an increase in private sector investment. The serious obstacles to domestic private initiative which exist in developing countries indicate a need for significant public sector activity. Further, it is implied that for maximum effect, public investment should be diversified and not limited solely to providing basic infrastructure. Of course the latter remains a vital prerequisite for growth. As already indicated above, Greece is no exception to the rule. Severe imbalances in the economy, political and economic uncertainty and inadequate government planning have contributed to the low level of productive investment.* At the same time funds have been readily

* The term "productive investment" is used throughout to denote investment in those sectors of the economy whose output will contribute towards satisfying the extra demand generated. This can occur either by an increase in productive capacity which will satisfy demand directly, or indirectly by raising exports to pay for higher imports.

attracted to those activities which bring quick gains and provide openings for speculation and profiteering.

There are a number of theories used to explain the volume of investment. Thus some argue in favour of some sort of flexible accelerator theory linking planned investment with changes in aggregate income or demand (e.g. 8). Another factor which determines investment is profits (9), although profits and aggregate income are related and it is not always possible to distinguish between the two variables in statistical analysis. Probably the most important determinant of the level of investment however, is expectations of future profits and the risk attached to investment projects. Both these factors are generally influenced by past and current economic conditions (although in a developing country non-economic factors are particularly likely to have a greater influence on expectations than in a more advanced country where generally, political stability is greater). A government then attempts to regulate private investment by manipulating the economic variables which influence investment decisions.

Fiscal measures which result in a higher level of income and directly stimulate demand hence provide an inducement for private potential investors to increase their activity. Again, tax incentives for investment increase the profitability of investment projects. In contrast monetary measures impinge on investment decisions in a much more indirect way. If it is desired to increase investment by implementing an easy money policy then this merely ensures that investment decisions are not frustrated by lack of finance. There is no reason of course why availability of finance alone should have a significant effect on investment decisions since even if finance is readily available, businessmen will not invest unless they expect to make profits. Of course to the extent that monetary measures influence aggregate demand

then naturally they can provide an incentive for investment in the same way as increasing disposable income by for example, reducing taxation.

However, there is evidence that in Greece investment decisions are influenced to a significant degree by expectations which are in turn often generated by non-economic factors (as is often the case in developing countries). This factor reduces the effectiveness of purely economic incentives to investment unless they are sufficiently great to counterbalance the large risk attached by businessmen to long term projects as opposed to high profits plus small risk involved in building, trading etc. Under such conditions monetary measures are bound to be even less effective in positively promoting investment than in countries where psychological and political factors have a smaller influence on investment decisions. In the situation prevailing in Greece the way to raise investment is for direct public investment to take place in conjunction with other measures to raise confidence in economic conditions, for example by adequate long term planning. In this event monetary measures are important in ensuring that investment decisions are not hindered by finance bottlenecks rather than in influencing investment decisions in advance.

So far investment has been discussed in general terms, as being necessary for raising the productive capacity of a developing country. In a country with limited primary resources it will probably be the case that investment will be concentrated in the industrial sector. The process of raising national income has been usually linked in practice to a process of industrialisation, so that the adjective "industrialised" has become synonymous with "developed". It is true that certain countries have achieved a very high level of per capita income mainly through the exploitation of primary products; either agricultural products, as for example in Denmark, or raw materials, as

in the Arab oil States, (obviously distribution of income is not being considered here, but potential per capita income). However, since the market for many primary products is often subject to significant changes either in supply or demand the world prices of such products often fluctuate severely. A country therefore, which relies on primary product exports to finance the rising demand for manufactured consumer and capital goods which accompanies rising income and changing behavioural characteristics, may find itself in difficulties if its exports are faced with falling world prices. There is evidence that on the whole the terms of trade of Mediterranean countries (where agricultural exports make up a significant proportion of total exports) have deteriorated since 1955 (10) and certainly the agricultural exports of Greece have suffered from the reduction of demand on the world market (11). A further reason for some degree of industrialisation is to reduce foreign dependence. Generally, relying on export earnings can place a country in an unfavourable situation of economic and political dependence. This is particularly so if there is one main importer or small group of importers for its products. Thus a programme of development and growth implies some degree of diversified industrialisation for most countries, Greece included.

This does not mean that the Greek agricultural sector should be neglected. On the contrary a policy aimed at raising productive capacity in agriculture would facilitate the building of a strong manufacturing sector, a consideration which applies to many developing countries (12). Agricultural output can be raised by methods which do not require imports of capital goods and raw materials on the scale required by the industrial sector and increases in productivity can occur rapidly (13). If therefore the output of agricultural products (e.g. meat and dairy foods) with a high income elasticity of demand were increased then Greek

food imports could be reduced. In addition the cultivation of those agricultural products which are potentially more suitable for export than traditional crops would further reduce the adverse effects on the balance of payments of the high level of capital goods imports required by the manufacturing sector.

Similarly if investment in the industrial sector is concentrated in those areas whose output has a high income elasticity of domestic demand, thus substituting imports, as well as in sectors which can compete on the world market, then growth can occur with the minimum of adverse effects on the balance of payments. Thus it can be seen that the type of investment realised is as important as its actual volume. A government policy for growth has therefore to ensure that investment takes place in the appropriate sectors. The contribution of monetary measures to regulating the structure and volume of investment can only be indirect.

The purpose of this study, as already indicated, is to illustrate that monetary policy can only have an auxilliary role in a systematic, comprehensive long term policy for growth. In order to assess the extent of this auxilliary role it is necessary to examine the institutional framework of the monetary sector since this is instrumental in determining the effectiveness of monetary measures as well as the type of measures which can be employed. If there are no suitable financial intermediaries, financial bottlenecks will be a constraint on growth. The other factor which has to be examined in order to evaluate the importance of monetary policy is the relationship between the various monetary variables and in turn their relationship to the real sector. Consequently the following chapter examines the development and current structure of monetary institutions in Greece. Chapter 3 then summarises the policy tools which are available, given the institutional back-

ground of the monetary sector, and describes the ways in which they have been used by the Greek monetary authorities. The two chapters, 4 and 5, deal with the relationships between the various monetary variables and their effect on real variables. The conclusions derived will be discussed in the final chapter.

CHAPTER 2

The Institutional Framework

2.1 Introduction

An economy such as Greece is faced with a variety of economic, social and political problems similar in nature to those faced by a more advanced country but which generally appear in a more acute form. A sustained growth in the level of national income can only be achieved by a steady process of investment, so that by sacrificing current consumption the productive capacity of the economy will be increased. One of the major problems involved in this process is the raising of the level of savings and their subsequent mobilisation. Although the accumulation of savings in Greece has proceeded at an ever increasing rate there have been persistent difficulties in mobilising them in the direction desired by the monetary authorities. Savings have often been hoarded, particularly during the first decade of the period in question or employed in ways which do not offer a direct contribution to economic growth. What is needed then is the channelling of funds into productive projects i.e. projects which help to raise the country's productive capacity. However, lack of confidence and security due to political and economic instability over this period has led to a reluctance to invest. Trading and quick gains have been preferred to investment, say, in manufacturing which requires a longer period of gestation and therefore involves greater risk. Both the experience of hyperinflation in the immediate post war period and successive political disruptions have contributed to this reluctance to endanger funds in long term projects.

The problem then, has been twofold. First the initial accumulation of funds and second their mobilisation into suitably productive

outlets. The monetary authorities in Greece have tried to cope with this in a dual fashion. They have attempted to encourage the development of private financial intermediaries through which accumulated savings could hopefully be directed into investment projects, and to a limited extent they have participated directly in this latter process themselves, via state agencies. At the same time they have tried, according to repeated policy declarations, to create a financial and economic environment which will stimulate private investment and help the financing of government investment projects. This policy has been pursued against a background of adverse economic conditions caused by the structural deficiencies in the economy pointed out in the previous chapter many of which lie beyond the scope of monetary action. For example, the development of those sectors whose output is subject to more favourable terms of trade than the traditional agricultural exports of Greece can be achieved only by a suitable overall government policy in which the role of the monetary authorities can only be a relatively minor one. Similarly an increase in production in order to satisfy rising domestic demand again needs an overall policy designed to raise the output of the sectors which have the highest income elasticity of demand, or to raise the output of exporting sectors which can help to pay for the importing of commodities in high demand. The absence of an adequate overall policy designed to resolve these structural deficiencies impedes the implementation of policies for the raising of the level of investment and saving and limits the role of the monetary authorities to offsetting the consequences of inadequate structural adaptation.

The ways in which the monetary authorities can contribute to the control of the economy depend to a large extent on the institutional framework of the monetary sector. For example, a small capital market precludes the use of open market operations. As the institutional

framework develops so the tools of monetary management increase. The fact that the monetary sector is underdeveloped and has relatively few financial institutions, implies that a more direct participation of the monetary authorities in the economic activity of the country is required than is usually the case in more advanced countries. This direct action generally takes the form of direct financing of those sectors of the economy faced with severe shortages of funds and direct measures to promote the development of private financial intermediaries. Both types of action are necessary if economic growth is to proceed at the highest rate permitted by the potential supply of savings. It takes a long time for private institutions to develop sufficiently to play the role of financing development and social attitudes often place severe impediments to their rate of growth. Consequently the initiative for setting up and extending the scope of such institutions has to come from the monetary authorities themselves (14). In such a setting therefore the central bank has a wide range of activities beyond those exercised by a central bank in a more advanced country. An examination of Greek monetary institutions gives an outline of the scope and methods of monetary control available to the authorities.

The monetary sector in Greece today exhibits an asymmetrical development. Certain monetary institutions such as the commercial banking system are well developed and organised while others such as the capital market are so small as to be of much less significance. The monetary authorities' attempts to promote the development of such institutions have not met with any large degree of success so far. As a result of this the burden of "filling the gap" and supplying the finance necessary for the development process has been taken up to a certain extent, by the central bank and to an ever increasing extent by the commercial banks, which today are the most important suppliers of credit.

TABLE 2.1.

Private Deposits with the Commercial Bank
(m. drachmas)

	Total		Current		Savings		Time	
	m. dr.	%	m. dr.	%	m. dr.	%	m. dr.	%
1956*	4,319		1,898		1,757		227	
1960	12,543		2,952		8,128		1,064	
1961	14,499	15.6	3,204	8.5	9,347	14.9	1,418	33.2
1962	17,892	23.4	3,691	15.2	10,791	15.4	2,879	103.0
1963	21,786	21.7	4,028	9.1	13,453	24.7	3,799	32.0
1964	23,987	10.2	4,641	15.2	14,972	11.3	3,128	17.7
1965	26,377	10.0	5,199	12.0	16,382	9.4	4,215	34.8
1966	32,178	22.0	5,544	6.6	20,641	26.0	5,396	28.0
1967	35,112	9.1	5,495	-0.8	22,633	9.6	6,361	17.9
1968	45,920	36.8	6,774	23.3	30,296	33.9	8,188	28.7
1969	56,052	22.1	7,574	11.8	36,294	19.8	11,241	37.3
1970	70,422	25.6	9,069	19.7	45,401	25.1	14,709	30.8

	Blocked		GNP	
	m. dr.	%	m. dr.	%
1956*	437		84,094	
1960	399		105,650	
1961	531	33.0	119,793	13.4
1962	531	0	127,686	6.6
1963	488	-0.8	140,128	9.7
1964	547	12.1	156,815	11.9
1965	582	6.3	177,208	13.0
1966	598	2.7	195,746	10.5
1967	622	4.0	213,109	8.9
1968	663	6.6	231,020	8.4
1969	942	42.1	258,206	11.8
1970	1,242	31.8	286,174	10.8

Source: Bank of Greece Monthly Statistical Bulletin (current prices).

* Figures for this year include deposits with the special credit institutions.

2.2. The Commercial Banking System.

The commercial banking system in Greece today is fairly well developed and consists of two large multibranch banks and five smaller banks. The system is highly monopolised with the two largest banks, the National Bank of Greece and the Commercial Bank of Greece*, accounting for about 90% of total banking business. Since the war, after a period of severe price instability, the size and extent of the banking network has grown at a fairly rapid rate as deposits began to increase with the gradual restoration of monetary stability. Up to about 1956, the banking system was faced with considerable difficulties since the level of bank deposits was very low and savings were hoarded in the form of gold sovereigns or invested in real estate. However, as can be seen from Table 2.1 there has been a steady and persistent growth in the level of deposits. The three main types of deposits are current, savings and time deposits. Current deposits are similar to those in the U.K. and other countries although cheque payments are usually restricted to business transactions. Interest rates of these deposits have fallen from 7% in 1956 to 0.75% since 1966. Savings deposits are equivalent to deposit accounts and although formally they are subject to a withdrawal notice, in practice cash can be withdrawn on demand. The rate of interest on savings deposits has also dropped from 10% in 1956 to 5.0% since 1966 (Since 1970 it has risen to 5.5%). Time deposits are deposited for a predetermined length of time ranging from 6 months to 2 years and over. These earn the highest interest rates, usually 1-2% higher than rates on savings

* Both these banks are privately owned. The National Bank of Greece must not be confused with the Bank of Greece which is the central bank of the country.

deposits. Blocked deposits are the deposits of foreign citizens (in drachmas or foreign exchange), cooperatives and other bodies and include interbank deposits. Interest rates are set by the monetary authorities and they have adopted a policy of reducing these over time in order to enable lending rates to be reduced thus encouraging investment.

Private savings deposits in the earlier part of the period, increased at a faster rate than the other types of deposits and now constitute the main source of commercial bank funds. Both the size and number of individual deposits has increased, although the main urban areas still contribute a large proportion of total deposits (15). The ratio of total deposits to GNP has risen from approximately 5% in 1956 to over 21% in 1970. As can be seen from Table 2.2., the commercial banks have consistently attracted a major part of the savings of the economy, with the Postal Savings Bank being next in importance.

TABLE 2.2.

	<u>Distribution of Savings Deposits</u>								
	1963	1964	1965	1966	1967	1968	1969	1970	1971
Commercial Bank	72.4	69.9	69.0	69.3	69.2	69.6	70.1	70.7	72.0
Postal Savings Bank	22.9	24.9	26.0	25.0	25.6	25.6	25.3	24.9	23.8
A.T.E.*	4.5	5.0	4.8	4.6	4.8	4.4	4.2	4.0	3.7
Others	0.2	0.2	0.2	0.3	0.4	0.4	0.4	0.4	0.5
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

* Agricultural Bank of Greece.

Source: "I Elliniki Oikonomia" Bank of Greece.

The remaining deposit liabilities of the commercial banks apart from private deposits are the deposits of public entities, public enterprises, specialised credit institutions and deposits in foreign exchange.

These comprise a small proportion of total deposits and have grown at a slower rate than private deposits (See Table 2.3.)

TABLE 2.3.

Other Deposit Liabilities
(m. drachmas)

	1965	1966	1967	1968	1969
Public entities deposits	940	776	877	1096	1423
Public enterprises deposits	183	742	546	651	632
Specialised credit institutions	1891	2325	1605	1895	1709
Deposits in foreign exchange	1241	1425	1600	2135	2793

Source: "I Elliniki Oikonomia", Bank of Greece.

The commercial banks extend both short and long term loans to the private sector. The lack of developed specialised credit institutions has resulted in the monetary authorities trying to induce banks to engage in business which they would normally avoid. The inducement employed has been mainly the instrument of allowing reserve requirement concessions against long term financing, (especially of industry). Further, since 1966 the banks have been obliged to set aside 15% of total deposits for medium and short term loans to industry. Accordingly, much of the domestic private investment carried out is financed by banks, although the low level of industrial investment has resulted in the under utilisation of available bank funds, of which a significant proportion has remained in interest bearing deposits with the Bank of Greece. Total bank credit has more than quadrupled over the last ten years, but as is shown by the breakdown of credit, by sector, given in Table 2.4., although about half of total commercial bank credit goes to industry, only a small proportion are in the form of long term loans. The major

types of credit extended are short term loans for the financing of current expences of the industrial sector and trade credit.

TABLE 2.4.

Commercial Bank Credit by sector
(m. drachmas)

	Grand Total	<u>Industry & Mining</u>					
		Total	Bills Discounted	Working capital	Long Term	Handi- crafts	Trade
1960	12,432	6,098	1,831	3,670	597	1,251	4,046
1961	14,213	7,154	1,933	4,267	954	1,220	4,259
1962	17,764	8,621	1,911	5,334	1,376	1,338	5,634
1963	23,317	10,381	2,109	6,410	1,861	1,776	7,036
1964	25,651	11,979	2,070	7,413	2,496	1,898	7,647
1965	26,819	12,774	2,161	8,160	2,454	2,120	7,842
1966	30,762	15,205	2,389	10,181	2,634	2,506	8,503
1967	37,017	18,679	2,906	12,859	2,913	3,091	9,226
1968	42,327	21,811	3,198	15,137	3,475	4,051	10,274
1969	50,437	25,618	5,063	16,337	4,218	5,310	12,347
1970	60,296	30,673	5,960	19,681	5,031	6,705	14,090
<hr/>							
	<u>Other*</u>						
1960	1,037						
1961	1,580						
1962	2,172						
1963	4,124						
1964	4,127						
1965	4,084						
1966	4,548						
1967	6,020						
1968	6,192						
1969	7,162						
1970	8,827						

Source: Bank of Greece, Monthly Statistical Bulletin.

* Mainly loans to public enterprises and long term loans to tourist and transport enterprises.

TABLE 2.5.

Annual Growth of Commercial Bank Credit by Sector

%

	Grand Total	<u>Industry and Mining</u>				Handicrafts
		Total	Bills Discounted	Working Capital	Long term	
1961	14.3	17.3	5.6	16.3	59.8	-2.5
1962	25.0	20.5	-1.1	25.0	44.2	9.7
1963	31.3	20.4	10.4	20.0	35.3	32.7
1964	10.0	15.4	-1.9	15.7	34.1	6.7
1965	4.6	6.6	4.3	10.1	-1.7	11.7
1966	14.7	19.0	10.6	24.8	6.8	18.2
1967	20.3	22.9	21.6	26.3	23.3	23.3
1968	14.4	16.8	10.0	17.7	31.1	31.1
1969	19.2	17.5	58.3	7.9	24.3	31.1
1970	19.6	19.7	17.7	20.5	19.3	26.3

	<u>Trade</u>	<u>Other</u>
1961	5.3	52.4
1962	32.3	37.5
1963	24.9	90.0
1964	8.7	0
1965	2.6	-1.0
1966	8.4	11.4
1967	8.5	32.4
1968	11.4	2.9
1969	15.7	15.7
1970	14.1	23.3

The commercial banks are obliged to hold interest free deposits at the Bank of Greece. Up to 1966 these were calculated as a fixed proportion of total bank deposits. Since that year however, reserve deposit requirements have been calculated on the basis of credit extended to the various sectors of the economy. A lower reserve requirement is

made against credit extended to what the monetary authorities consider to be priority sectors than is the case with, for example, trade credit. This is intended to offer an incentive to commercial banks to finance long term investment projects. In addition, the banks are compelled to invest a proportion of their current and savings deposits in government bonds and treasury bills. Almost the entire issue of government paper is taken up by the commercial banks and as government deficit financing requirements have risen, the size of these supplementary reserves have increased steadily from 10 per cent in 1959 to 34.5 per cent in 1970. Apart from government securities the commercial banks' portfolio of assets consists of the securities of public and private enterprises, although these play only a supplementary role. Other assets include deposits by commercial banks with the special credit institutions.

The most important source of finance for capital formation and the main medium through which savings are mobilised, are the commercial banks. However, only a small proportion of their funds are used to finance long term industrial investment. The financing of government investment, mostly indirectly through the purchase of government securities, exceeds the credit extended to industry. This may be due to a low demand for investment funds but undoubtedly the banks seem to be reluctant to lend on a long term basis, particularly to small and medium sized firms in need of investment funds.* Thus the banks have not adequately filled the gap in the credit system and the development of institutions capable of financing development remains a matter of priority.

* The conditions which have to be met by applicants for loans are very strict and by virtue of this many small firms in need of finance are excluded. This is often the case in advanced countries as for example the U.K. "Macmillan gap" which led to the formation of special institutions for financing small firms.

Even though the commercial banking system is fairly extensive there is no coherent and organised money market in Greece. Although broadly speaking the term - money market - encompasses all financial institutions, a sophisticated money market as exemplified by the London money market, is characterised by a highly specialised, integrated structure of markets dealing in liquid assets such as treasury bills, bills of exchange and other commercial paper (16). Not all developed countries have a money market as sophisticated as the London market, nor do all countries need one. It has even been argued, by Sayers for example, that a money market has acquired a prestige value for some countries so that they have introduced one even where it is not warranted by economic conditions (17). The advantage of an organised money market is that it offers a wide range of liquid assets which enables financial intermediaries like the commercial banks to hold lower cash reserves since adjustment into and out of these assets can be quickly realised. This enables the banks to make more efficient use of their funds. Perhaps the high level of reserves held by Greek banks is to some extent explained by the absence of alternative highly liquid assets, although the central bank has always been ready to safeguard the liquidity of the banking system via the discount mechanism or by direct loans and grants in exceptional circumstances. Many of the specialised functions of non-bank financial intermediaries can in fact be carried out by development banks or commercial banks. Certainly a complex money market could not function in Greece as the demand for short term funds by the various financial institutions on the government in present conditions, is inadequate. The factors which influence commercial bank behaviour in Greece will be examined in more detail in a later chapter. This will enable an evaluation of the policy of encouraging the banks to

play a role in the credit system normally fulfilled by other types of credit institutions, either private or state owned.

2.3. The Capital Market.

Most developing economies lack an organised system for the transfer of capital funds from the sources of accumulated savings to prospective investors whether these be private individuals or the state itself. An adequate mechanism for the allocation of these funds is of prime importance. In the absence of such a system there is often a misdirection of funds into speculative dealings in property, trade and stocks or into foreign capital markets etc.

The capital market in Greece is of small proportions. As can be seen from 2.5., the volume of new issues of securities floated by private enterprises each year has been consistently negligible compared to long term loans granted by commercial banks. Most of the securities on the market which is small in size and limited in extent, are government bonds and public enterprise bonds, although the latter were withdrawn from the market in 1969. Issues of shares are limited and consist largely of bank shares. The major part of the new issues of securities are taken up by the commercial banks. During the year 1969-70 approximately three quarters of the total issue of government paper were covered by the obligatory holdings of the banks. It has been suggested that the fact that the banks are obliged to devote an ever increasing share of their resources to the covering of government issues may, to some extent be responsible for the small volume of the private flotations since the size of the market is limited and in addition, since it is difficult for a private enterprise to compete for funds on equal terms with the government (18). A more significant factor appears to be a behavioural one, namely the reluctance of Greek business-

men to lose control of their firms which are generally family concerns. They therefore avoid resorting to the capital market for their external financing requirements (19).

TABLE 2.5.

New Issues of Securities
(m. drachmae)

	<u>B o n d s</u>		<u>B o n d s</u>	
	<u>Government</u>	<u>Public enterpr.</u>	<u>Private enterpr.</u>	<u>Total</u>
1961	-	740	-	740
1962	990	500	110	1,600
1963	1,500	-	22	1,522
1964	600	800	107	1,507
1965	-	800	-	800
1966	900	1,300	123	2,323
1967	1,500	1,000	-	2,500
1968	1,800	1,248	50	3,098
1969	2,000	-	100	2,100
1970	2,200	-	73	2,273
1971	3,850	-		

	<u>S h a r e s</u>		<u>S h a r e s</u>	
	<u>Banks</u>	<u>Others</u>	<u>Total</u>	<u>General Total</u>
1961	52	87	139	879
1962	542	50	592	2,192
1963	-	38	38	1,560
1964	52	71	123	1,630
1965	24	246	270	1,070
1966	42	52	94	2,417
1967	-	39	39	2,539
1968	-	86	86	3,184
1969	6	72	78	2,178
1970	245	189	434	2,707
1971	378			4,242

Source: Bank of Greece. Annual Report of the Governor of the Bank.

Similar factors which discourage private issues on the capital market have not prevented the growth of a capital market in Italy for example. Here for tax reasons businessmen have been reluctant to enter into the market for bonds, which consequently is dominated by the public sector. On the other hand there is a high level of demand for long term financing by private enterprises due to the rapid rate of growth of investment. This demand has been met by special credit institutions such as state investment and development banks which in turn have obtained the necessary funds by issuing bonds. Thus the capital market in Italy has served as a means of channeling funds to investment projects, albeit indirectly via the special credit institutions (20). Institutional investors are of negligible account as in Greece but the commercial banking system and households absorb about 40% respectively of all new issues. The experience of Italy indicates that once a high rate of investment takes place in a country, ways are found of overcoming institutional and other obstacles to the financing of such investment. On the other hand institutional improvements are not by themselves able to resolve the conditions which cause a low level of demand for investment funds.

This point is made because of the disproportionate importance attached by the monetary authorities to recent measures designed to improve the working of the capital market. These had been prepared by the Bank of Greece a few years previously and were finally introduced in 1967. The measures are intended to provide safeguards as well as incentives, mainly tax incentives, to both borrowers and lenders on the capital market. However too many hopes appear to have been pinned on such measures of institutional reform. In the absence of any long term policies to encourage investment in those fields which are considered most important, say for example manufacturing industry, the

improvement of institutional arrangements cannot be expected to bring about any significant change in the demand for investment funds.

The problem in Greece has not been only one of accumulating and distributing funds but also a problem of finding suitable investment outlets. The commercial banks and the special credit institutions have persistently held excess reserves of funds potentially available for the investment purposes. Undoubtedly these financial institutions have been reluctant to lend to the smaller firms in need of external financing but there has also been a general avoidance of long term investment projects in the priority sectors on the part of private enterprise. It is also important to note that those firms which have had difficulty in obtaining funds from the various banks are also these which by virtue of their size are largely excluded from the capital market. The problem then is the dual one of creating the conditions which will encourage investment and seeing that funds are available for the implementation of investment plans. This means that measures must be implemented to reduce the relative attractiveness of certain sectors in which a disproportionately high level of activity has taken place over most of the period under consideration. Only in conjunction with such a policy can institutional reforms be successful in facilitating investment.

As far as demand for securities is concerned, recent measures have been mainly concerned with stimulating demand by offering incentives and by encouraging institutional innovations such as unit trusts. Again, it would seem that the main problem is one of ensuring an adequate supply of attractive securities i.e. by providing conditions in which investment will take place thus making it necessary to resort to external financing on the capital market. Recent activity on the Stock Market in Greece indicates that when people judge it

profitable they are willing to buy financial assets.* Even if demand is not sufficient to meet a possible future supply of securities the experience of other countries shows that government participation in the capital market is possible and facilitates the efficient allocation of scarce funds (See ch. 3.2.). In the face of existing behavioural obstacles to the growth of a capital market, however, an alternative possibility is to ensure that the credit institutions do in fact perform the objective of performing an efficient allocation of resources.

2.4. Other Financial Intermediaries.

Specialised non bank financial intermediaries which supply credit to specific areas of the economy or for specific purposes are few in Greece and are of limited size, the major role in financial intermediation being played by the commercial banks. This means that much of the controversy regarding the effects of the rapid expansion of non bank financial intermediaries on monetary control is not applicable to Greece. It also means that many useful facilities such as those provided by building societies in the UK are not available. Government attempts to promote the growth of non bank intermediaries has been limited mainly to the Development Bank and more recently to institutions intended to aid the development of the capital market, namely unit trusts etc.

The most important of the non bank intermediaries, on the basis of total volume of deposits, is the Postal Savings Bank. This attracts approximately a quarter of the economy's savings since Postal

* Between 1967 and 1970 the general index of share prices rose from 410.7 to 1,215.3 (1952=100) while the index of bank share prices rose even more rapidly from 520.5 to 2,793.6 over the same period. This was due to an upsurge of speculative activity probably stimulated by the 1967 measures.

Savings deposits yield a higher rate of interest than commercial bank deposits. The Postal Savings Bank/^{is} controlled by the Ministries of Public Works and Transport. It extends credit to the public sector, grants loans to civil servants for housing as well as small loans to the general public. Since 1956 its funds have been deposited with the commercial banks in order to increase the liquidity of the latter.

Other specialised financial institutions include the Agricultural Bank of Greece (A.T.E), the Greek Industrial Development bank (E.T.B.A), the National Mortgage Bank of Greece and the Consignations and Loans Fund, all of which are state institutions. The Agricultural Bank of Greece is the medium through which the agricultural policy of the government is implemented. It caters for the special credit requirements of the agricultural sector by providing the seasonal credit necessary for short term financing of agricultural production and also administers fertilisers, seed etc., to farmers. Long term loans for investment in this sector are also extended. However, because of the absence of any long non agricultural development programme, no structural changes of any consequence have been achieved and the demand for long term loans remains low. The Agricultural Bank has been unable to attract sufficient deposits, mainly because farm incomes are low and hence loans from the Bank of Greece provide the major part of its funds.

The Greek Industrial Development Bank was formed in 1964. Three existing state institutions: the Economic Development Financing Organisation, the Industrial Development Organisation and the Tourist Credit Organisation, were then merged to form E.T.B.A., in an attempt to provide a more efficient means of allocating funds. Although again, E.T.B.A., has not managed to attract a high volume of deposits, it has adequate capital and reserves of its own and is also provided with funds by the Bank of Greece and other external sources. Despite the

fact that its aim is to finance industrial development either directly by granting long term loans to firms or indirectly by participating in share capital, the low level of industrial investment has resulted in the underutilisation of its available funds.

The National Mortgage Bank grants loans to private individuals for housing and has come to participate to an ever increasing extent to tourist installations. In addition it extends credit to public enterprises. The main sources of its funds are the Bank of Greece although prior to 1963 American Counterpart Funds were more important. Deposits form only a relatively minor source of funds. The Consignation and Loans Fund is the local authorities' banker and also accepts savings deposits from the public. It grants loans to local authorities and public entities as well as housing loans to civil servants. It also holds and administers the capital of public entities.

Private non bank financial intermediaries are few. There are two private investment banks controlled by the two major commercial banks of Greece, which have not yet provided a significant volume of direct or indirect long term financing of investment. Life insurance organisations are of insignificant proportions. Less than one per cent of savings are attracted to the few organisations, controlled by the commercial banks, which do exist. This compares with 38 per cent in the UK or 20 per cent in the United States. It has not therefore been possible to accumulate a stable supply of funds for the indirect financing of investment via the capital market. Other institutions which in advanced countries also attract funds for the purchasing of securities, such as unit trusts and mutual trusts were non existant over the period considered. Although in 1967 the monetary authorities announced provisions for the setting up of this type of intermediary, there is no evidence that these will under existing conditions succeed in attracting funds directly from the public. With the exception of the

Postal Savings Bank, none of the other specialised financial institutions have in the past attracted sufficient savings and the central bank, the government and foreign loans have provided the funds necessary to cover their needs.

2.5. The Central Bank.

The Bank of Greece is legally a private entity although the government receives a share of its profits and also appoints its Governor. The Bank is responsible for enforcing the decisions of the Currency Committee whose duty it is to formulate monetary and credit policy, and to play a significant role in the consideration of balance of payments policy. (The Currency Committee consists of the Governor of the Bank and the Ministers of Coordination, Finance, Trade and Industry, and Agriculture). In addition the Bank of Greece performs the remaining traditional functions of a central bank by providing banking services to the government and the commercial banks, controlling the currency issue, holding the reserves of foreign exchange and of the banking system and acting as lender of last resort.

The operations of the central bank in the market for government bonds and treasury bills consists of unloading the volume of these securities necessary for covering government deficit financing requirements. There is no use of open market operations to bring about changes in the supply of money and hence bank liquidity, the supply of government paper and currency being determined largely by the need to finance government expenditure. The main policy instrument employed for the regulation of the volume of credit and its distribution has been that of direct selective controls. Interest rate policy is directly implemented. The complicated structure of differentiated interest rates throughout the monetary sector is administered by the Bank of Greece.

Since interest rates are used as an incentive for investment rather than as a means of influencing aggregate demand, the rate of interest on various categories of loans are set with the view of encouraging investment in those sectors which the monetary authorities consider to be of greater importance e.g. exporting industries. The ever increasing liquidity of the banking system over the period under consideration which has been due to the continuous need to finance rising government expenditure by increasing money supply as well as government debt, has made general monetary measures inappropriate . Direct quantitative and qualitative controls on the credit extended by the banks have been used in conjunction with interest rate policy. The monetary authorities fix ceilings on credit to the various sectors of the economy and set the maximum repayment periods in an attempt to channel credit to the priority sectors.

On the foreign exchange market the Bank of Greece is obliged to act in order to maintain the exchange value of the drachma between the narrow limits set by the IMF. It grants import and export licences (also granted by the Ministry of Commerce and certain authorised banks) and allocates the appropriate foreign exchange. Payments and receipts from countries with which Greece has bilateral agreements are made through accounts controlled by the central bank, with the U.S. dollar as the unit of account. The persistent balance of payments deficit throughout this period has meant that there have been strict controls on foreign exchange in an effort to preserve the precarious reserve position.

The Bank of Greece acts as lender of last resort to the banking system by rediscounting the bills portfolio of the commercial banks and by providing temporary overdraft facilities. The bank rate in Greece is used to influence bank borrowing from the central bank and as a

psychological weapon indicating the state of the economy and the restrictiveness of the monetary policy being enforced. It is not used to alter the pattern of interest rates throughout the monetary sector, since there are fixed by the Bank of Greece itself.

The central bank has had to engage in activities other than those normally performed by a central bank in an advanced economy. Apart from measures designed to help the development of private banking, such as providing funds to the commercial banks in times of crisis when reserves have fallen, the Bank of Greece has been involved in direct financing of sectors of the economy particularly short of finance. Thus in the early part of the period under consideration direct credit was extended by the central bank to agriculture for example since due to wartime and post war inflation bank deposits were very low. Even today, the Bank of Greece still provides a major part of the funds of the special credit institutions. The monetary authorities also took the initiative in forming the Industrial Development Bank, E.T.B.A., as well as introducing measures intended to help the growth of a capital market. In its attempt to encourage the growth of deposits, particularly in the 1950s the central bank also tried to discourage hoarding in the form of gold sovereigns. Hence its policy of intervention on the market to maintain the price of gold near to international levels thus preventing speculative activity in gold sovereigns. This policy was not particularly effective and eventually a system of restricted transactions was introduced. Residents are free to buy gold sovereigns from the Bank through licensed brokers at prices set by the central bank itself. Buyers are registered and have to sign a declaration to the effect that they will only resell the gold to the Bank of Greece or the licensed brokers. The Bank also accepts sovereigns which were obtained on the free market in force

before December 1965, without formality and at the official rate, since its aim is to reabsorb as much gold as possible. This policy has been reasonably effective in inducing people to part with gold.

The Bank of Greece however, has not been directly involved in the monetary sector to such an extent as might have been expected given the severe deficiencies in the credit system and the emphasis placed on development. The structural changes required by the Greek economy for sustained growth on a healthy basis necessitate a great deal of long term investment. The short description of the monetary institutions already given, indicates the problems involved when the commercial banks are expected to finance such investment. The profit motive does not necessarily lead to the optimum allocation of resources from the standpoint of society. Yet the central bank and the monetary authorities have persisted in attempting to cajole and coerce the commercial banks, via direct and indirect controls, to perform a function to which they are far from being suited. The initiative of state institutions in this field has been conspicuous by its absence, although the nature of the problem is such that criteria other than profit and risk are necessary in order to finance projects which are important in terms of economic development.

CHAPTER 3

The Monetary Policy Implemented in Greece 1950-1970

3.1. Policy Tools.

As is evident from the preceding chapter, the tools of monetary policy available to the Greek monetary authorities are not as general as those available in a country with a more sophisticated monetary sector such as the U.K. The most important policy instruments in these countries are open market operations, reserve requirement changes and the use of the discount mechanism. In addition there are the relatively infrequently used tools of selective controls, direct action and moral suasion, although selective controls have become more important in the U.K. for example. Open market operations are particularly important in more developed countries both to bring about changes in the money supply, and to alter the pattern of interest rates. However, this type of operation is ruled out in Greece because of the small size of the market in short and long term government securities.

A similar tool is that of changes in reserve requirements. This is used like open market operations to transfer deposits directly from the commercial banks to the central bank and vice versa thus directly affecting the ability of the banks to lend. The severe shortage of funds experienced by the banks during the earlier part of the twenty year period precluded the use of reserve requirement changes, however following the rapid rise in deposits this became a relevant instrument which could be used in place of open market operations as many writers have advocated for underdeveloped countries (eg. 21,22). The fact that banks have generally held reserves in excess of the minimum requirement throughout most of the twenty year period appears however to reduce the

the value of this tool (which has not been extensively used in fact) unless these reserves were voluntarily held by the banks, as being the actual amount of reserves required for safety. This question of reserves will be examined in greater detail in a subsequent chapter.(4.3). Nevertheless a variation on this instrument was introduced in 1966. In an attempt to employ a qualitative as well as quantitative indirect control on bank lending, a new system of calculating reserves was announced. Instead of reserve requirements being calculated on the basis of the deposits of the commercial banks, they are now calculated on the basis of credit extended by the banks, with a variable percentage according to the category of loans, e.g. banks have to deposit with the central bank an amount corresponding in value to 10 per cent of loans extended to industry, 25 per cent of loans to domestic and import trade etc. This to a large extent compensates for one of the disadvantages of changes in reserve requirements as opposed to open market operations, namely that the latter enable the authorities to influence the direction of credit by operating in the appropriate maturity sectors. For example if they wish to restrict short term loans they will sell treasury bills on the open market thus directing bank funds away from short term loans. The way of calculating reserve requirements introduced in 1966 overcomes this objection since it provides a more precise means of encouraging loans to certain sectors than open market operations.

The discount rate is potentially another indirect tool of monetary control in Greece. Changes in this rate have generally been in the downward direction over this period as part of the policy to reduce interest rates and hence encourage investment. Upward changes in the discount rate have been used chiefly for their "announcement effect" when restrictions have been applied. Although the Bank of

Greece has placed ceilings on the amount of commercial bank borrowing via the discount mechanism, it has raised this ceiling when the banks have been short of reserves, or made overdraft facilities available to meet such a shortage. Since all interest rates are fixed by the monetary authorities, discount rate changes have not been a means of affecting other rates of interest. As with changes in reserve requirements, the effectiveness of this tool is dependent on the extent to which the excess reserves held by the commercial banks have been voluntary.

The major instruments of monetary management in Greece have been direct selective controls. These have been quantitative and qualitative in nature. Credit ceilings have been set on various categories of loans while credit to some sectors has been completely prohibited at times. Credit to the "priority sectors" like export industry and manufacturing has always been subject to few restrictions. Interest rates set by the central bank on loans to the various sectors have also always been lowest in these "priority sectors". The use of selective controls has been criticised by some writers. It is argued that selective controls used to offset large increases in the supply of money can have a distortive effect on economic growth and should therefore only be used in conjunction with a general policy of restriction (23). Further, these controls even if successful in directing credit into the appropriate sectors, do not allow the monetary authorities any control over the subsequent monetary expansion (24). In addition, the time lag between the extension of credit and the resultant increase in real output means that inflationary pressure can still be caused (25). The main problem in Greece, with these controls has been the inability to implement these controls effectively.

Credit leakage has been a persistent feature throughout the period under examination. As as former Governor of the Bank of Greece,

X.Zolotas, has admitted, credit controls even of the severe type existing before 1963 did not prevent funds from flowing into undesirable sectors (26). Short term credit extended to industry for working capital appears to have been the main source of credit leakage. Indicative of such credit leakage is the considerably faster expansion of short term credit compared to the rate of growth of industrial output. The leakage has occurred mainly in the direction of consumer goods import financing and installment credit sales.

Another problem reducing the effectiveness of credit controls has been the development of an unofficial credit system which has developed parallel to the official financial system, and is beyond the field of action of the monetary authorities. Thus construction, trade and other sectors to which strict credit rationing has been applied, are financed largely on a system of promissory notes and bills of exchange which enable operators in these fields to overcome the shortage of funds. This system therefore facilitates and reinforces credit leakage to the non-priority sectors which divert a large volume of funds away from other sectors in which they could be potentially used.

In conclusion, it would seem that the control of credit by the methods chosen by the monetary authorities has not been successful. It might be useful at this point to examine the example of a different approach to the problem of economic development offered by Israel. Financial institutions in Israel have developed rapidly but have been dominated by the government via the central bank. The capital market - although well developed is virtually controlled by the government which has purchased more than half of total financial assets,* the figure for

* This policy of government participation in the equities of private firms is to ensure that borrowed funds are used for investment in appropriate activities but usually the government owns less than 50% of total equity capital of any one firm.

1967 being 67.2% of total assets owned by the state (27). During the fifties every firm needing external funds had to apply for direct loans to the state. Since then although development banks have been set up, they are subject to strict scrutiny and have to comply with the directives of the monetary authorities. This has been carried out against the background of an overall government development programme which makes long term productive investment an attractive proposition. Of course strict controls of this sort are effective only if the authorities themselves have the right priorities. In the case of Greece, which lacks a development programme and where government activities for achieving long run development are badly planned, even the state controlled development bank, (E.T.B.A.) has granted loans to large firms with alternative sources of funds and to foreign firms so that many cases of so called direct foreign investment have been largely financed by domestic funds.

Another factor which has to be considered when examining the role of monetary policy and the efficacy of monetary instruments is the degree of foreign economic dependence. A definition of economic dependence has been given by Newlyn and Rowan (28), which is based on the ratio of foreign financed investment to national product. The higher this ratio, the greater the degree of dependence. This is a rather mechanistic definition which gives no indication of the type of foreign investment, whether it is direct or in the form of loan capital, nor of the sectors of the economy which are dominated by foreign capital, although this can be of crucial importance in determining the degree of dependence. In Greece the above ratio has fallen from approximately 9% in 1950 to 3% by 1964, or from 52% of gross fixed capital formation financed from abroad to 14%. This figure is quite high but of greater importance is the fact that this investment

has been concentrated, particularly in recent years, in the sector of primary production which is export orientated and that the terms of many agreements have been grossly disadvantageous for Greece. Thus substitution of imports has not proceeded as rapidly as it might have done and dependence on export earnings from primary products has been perpetuated. This has therefore restricted the ability of the monetary authorities to minimise short term fluctuations in the level of economic activity since its control over the constituents of national income has been limited to the regulation of domestic investment and consumption. In addition their effectiveness in influencing structural changes in the economy have been reduced.

On the other hand, monetary measures may be more effective in regulating domestic consumption and investment than is the case in more advanced countries for two reasons. First the low level of deposits and the low bank multiplier reduces the relative importance of deposit money, while the absence of non-bank financial intermediaries theoretically makes control of credit expansion easier. To the extent, then, that base money is controlled by the central bank, the major part of money supply can be regulated. In Greece the ratio of currency to money supply, defined narrowly as currency plus demand deposits, has been very high, standing at over $\frac{2}{3}$ as opposed to more advanced countries where currency generally accounts for $\frac{1}{5}$ to $\frac{2}{5}$ of money supply. However, because base money has been largely endogenously determined particularly by government deficit financing requirements, the Bank of Greece has had little control over the expansion of the monetary base. Moreover, the attempted control of bank credit has not been a great success as the objective has been qualitative rather than quantitative control.

The second reason why monetary measures might be more effective in a developing economy than in advanced countries is that in the

former, firms tend to rely more on external financing particularly from the banking sector (29). This makes private domestic investment more responsive to changes in the availability of credit than in countries where internal financing accounts for a greater proportion of investment. This factor applies to Greece, but here the main problem has been to stimulate investment in the desired directions and changes in the availability of credit are more effective in reducing the level of investment than in promoting investment activity.

Thus the aim of regulating domestic expenditure so that investment in the desired sectors proceeds at a rapid rate without at the same time increasing expenditure which generates inflationary pressures, has not in practice been easy to maintain. A complicating factor has persistently been government expenditure. The limitations on the capacity of the financial sector to absorb government securities has further resulted in an often heavy resort to the issue of new currency. Deficit financing by this method, it has been argued, has a more inflationary effect than the creation of deposit money by banks since the increase in currency expands the monetary base and increases the liquidity of the economy further (30). This is aggravated by the fact that government investment expenditure is generally of a long term nature which does not satisfy in the short run the increased demand for goods and services it generates. Budget policy in Greece has generally been based on the requirements of government expenditure rather than on Keynesian considerations of aggregate demand and the regulation of this demand has been left primarily to monetary policy. The fact that inadequate long term economic planning has resulted in an inefficient allocation of government expenditure has exacerbated inflationary pressure in the economy and added to the difficulties of development.

The regulatory role of monetary policy and the tools used by the central bank in its efforts to maintain monetary equilibrium are best revealed by a chronological account of the monetary policy pursued over the period under examination. Such an account also illustrates the means employed for promoting the course of economic development. The following section therefore, gives a brief history of the monetary policy followed between the years 1950 and 1970. This twenty year period can be divided into four sub-periods corresponding to changes in policy priorities as economic conditions and policy attitudes vary. Thus in 3.2. (a) the main concern of the monetary authorities is to bring the war time legacy of severe inflation under control. Part (b) deals with the period when, having achieved price stability, the monetary authorities aim at reducing state control and handing over the main responsibility for credit control to the commercial banks, while at the same time monetary restrictions are relaxed. Part (c) covers the two years when, due to a change in government, a significantly different approach to monetary policy prevails from that of the preceding years. Then, part (d) is concerned with the period of military rule which again led to a marked change in priorities with the objective of achieving short-run benefits, even at the cost of adverse long run consequences. The final part (e) takes a brief look at the way in which money supply, in particular, has increased over the whole twenty year period and the resultant change in the liquidity of the economy.

3.2. Monetary Policy 1950-1970.*

(a) Tight Controls 1950-56: Since 1950 the major aim of the monetary authorities as stated in repeated policy declarations, has been the maintenance of reasonable monetary stability and external equilibrium in relation to international developments and hence the creation of conditions conducive to economic growth. In the fifties the main problem facing the monetary authorities was the lack of confidence in the drachma which was the result of wartime hyperinflation followed by severe inflation during the immediate postwar years. Savings were hoarded mainly in the form of gold sovereigns and the level of bank deposits was very low. Less severe inflation persisted throughout the early fifties, the average annual rate of increase in the price index over the period 1950-56 being 8.5%. Government deficit spending was reduced drastically and this in conjunction with a restrictive monetary policy finally led to a gradual restoration of confidence and a slow down in the rate of inflation.** The restrictive monetary policy was not very effective and despite the small volume of government deficit financing, money supply rose at an average annual rate of 25.58% between 1950 and 1954. Nevertheless increased confidence caused the velocity of circulation to fall rapidly and a period of relative monetary stability ensued. The average annual rate of increase in the price index

* The information for this section has been obtained from several sources, as for example, the books by Candilis (31) and Zolotas (32) but mainly from the Bank of Greece Annual Reports and the Surveys of the Economy (I Elliniki Economia), for the various years and the OECD Annual Surveys on Greece.

** In 1953 also the drachma was devalued by 50%. This drastically reduced the balance of payments deficit from 113.3 million dollars in 1952 to 24.8 million dollars in 1953.

between 1956 and 1960 fell to 2.3%, much lower than in many other European countries.

As the public regained confidence in the drachma, the Bank of Greece began a policy of encouraging bank deposits which had been badly depleted. In May 1956 the interest rate on savings and time deposits was raised from 7 to 10 per cent and by the end of the year the volume of savings deposits had more than trebled, although the absolute level was still low. Private savings as a percentage of GNP rose from 2.9% in 1950 to 7.2% in 1956. Policy on the gold sovereign was also changed in the same year in an attempt to discourage hoarding. The Bank of Greece began to buy and sell gold sovereigns at the market price according to the state of demand, thus eliminating the fixed price which the Bank had previously sought to maintain. As demand for gold sovereigns began to drop off a certain proportion of hoarded sovereigns were absorbed by the Bank.

Because of the low level of bank deposits, the Bank of Greece participated directly in the financing of the economy, particularly of the agricultural sector. It further contributed indirectly to the financing of the private sector by advancing funds to the commercial banks. In 1953, 7.3 per cent of private credit was directly financed by the central bank while 23.8 per cent of the private credit extended by the commercial banks was from central bank funds. By 1957 the respective percentages had dropped to 4 and 5.2 per cent. Nevertheless the volume of credit extended was low in absolute terms. A system of preventive credit control was in force whereby all credit extended by banks had to be granted prior approval by the Currency Committee via the Bank Loans Supervisory Service.

Also in May 1956, rediscounting was introduced by the Bank of Greece. The commercial banks were able to rediscount their portfolio

of industrial bills at a penal rate of 11%. In addition overdraft facilities were introduced so that banks would not be faced with a shortage of funds in unusual situations. In the same year provisions were made for the banks to take over the financing of projects which previously had been financed by the central bank. The four largest commercial banks were obliged to set aside 33 per cent of private deposits plus public utility deposits for the financing of long term development projects. To the extent that these funds remained unutilised, they could be invested in government securities or deposited at the central bank at 5 per cent rate of interest. If the funds were insufficient to cover demand for the financing of special projects, then the central bank would advance funds to the commercial banks at 8 per cent interest. At the same time reserve requirements were reduced from 12 per cent of private deposits plus public entity deposits to 8 per cent of private deposits only, and interest on savings deposits was reduced to 9% and the funds of the Postal Savings Bank were deposited with the commercial banks to further increase their liquidity.

(b) Reducing Central Bank Intervention, 1957-63: In 1957 the above measure was changed and all banks were obliged to reserve 30 per cent of monthly increases in deposits and up to 10 per cent of total deposits for the extension of long term loans to industry. In order to protect the banks a central service for the supervision of bank credit was established and collected data on all companies in order to show their financial standing. At the beginning of the year the interest on time deposits was reduced to 8 per cent to decrease commercial bank costs even more. In the same year the gradual relaxing of preventive credit control was carried further and eventually was no longer enforced in all sectors. Full responsibility for the financing of industry was transferred to the commercial banks although credit to the handicrafts

industry was still subject to prior approval by the Handicrafts Credit Committee. A further measure introduced at the end of 1957 was an attempt to regulate short term fluctuations in bank liquidity due to the yearly income cycle of the tobacco industry. Bank advances to this industry were made in the spring and repaid at the end of the year. The Bank of Greece therefore decided that these funds be invested in treasury bills or placed in deposits at the central bank during the months of December, January and February.

The general relaxation of credit controls led to a rapid rise of credit, particularly to industry, which was the sector for which the controls were most lax. Short term loans to industry for working capital rose by 41.0% in 1957 and 43.3% in 1958. During the same years industrial production increased by only 8 and 10% respectively and it was evident that credit leakage on an extensive scale was taking place. The sectors which were short of credit were being financed indirectly, through the industrial sector.

In 1958 in December, the monetary authorities introduced a new set of rules governing the extension of credit to industry. Loans for working capital were to be based on the turnover of firms seeking short term finance. This measure was followed by a decrease in the rate of growth of short term credit although this rate was still higher than the rate of increase of industrial production. In the same year compulsory bank investment in treasury bills at a level of 5 per cent of current and savings deposits was introduced in order to help the financing of government expenditure.

The year 1959 saw a further relaxation of monetary measures. Banks were allowed to advance loans to firms of up to 8% of the firms' annual turnover and the short term obligations of industry were converted to medium term in order to aid the liquidity position of firms

and hence encourage investment. In April of this year the discount rate was reduced to 10% and was further reduced to 9% in October while the limits on the discounting facility were raised. Interest rates on loans were also reduced. Responsibility for the granting of loans to the handicraft sector was completely transferred to the commercial banks as opposed to the previous procedure whereby prior approval from the Handicrafts Credit Committee had to be obtained for every loan to this sector. At the same time compulsory purchases of treasury bills by commercial banks were increased to 10% of current and savings deposits. Ceilings on credit to the export trade were completely removed.

Expansionary measures were continued into 1960. The discount rate was successively reduced to 7% in April and 6% in November. Credit ceilings were raised and repayment periods for loans were further extended. Also in this year a new measure was introduced which obliged to commercial banks to allocate 5% of their deposits for the purchase of shares in new or expanding industries, where these could not be absorbed by the public. Any such funds which remained unutilised were to be deposited with the Bank of Greece. There were no significant changes in the following two years. Compulsory purchases of treasury bills were again increased to 18% of current and savings deposits in 1961. Again this was to help the financing of government expenditure, which had been increasing at a rapid rate, rather than to reduce commercial bank liquidity. A further reduction of interest rates on bank loans was introduced in 1962. Specifically, interest rates to industry and handicrafts were reduced for firms which exported some part of their output.

(c) Change in Emphasis, 1964-66: Towards the end of 1963 there was a significant change in monetary policy as a result of the change in

government. The relatively cautious expansionary measures previously employed were replaced by much more decisive monetary measures for stimulating economic activity in conjunction with increased government expenditure. Simplified credit regulations were introduced and commercial banks were instructed to grant loans primarily to projects which directly contributed to the aim of economic development while at the same time the banks were to encourage self-financing of investment wherever possible. An overall liquidity ratio for the commercial banks was introduced for the first time and banks had to adjust their loans and other assets accordingly. Compulsory treasury bill holdings were raised to 20% of current and savings deposits and the compulsory reserve deposit ratio was reduced from 12 to 8% of all the current and savings deposits and applied to all the banks. Banks also had to reserve 55% of total deposits for specific categories of loans and other assets. The largest banks were further required to allot 15% of private deposits plus public enterprise deposits to medium and long term loans for fixed capital investment in industry. In addition banks were to be allowed to freely invest in the new issues of industrial securities and to grant long term loans to individuals who wished to invest in such securities, provided they themselves supplied half of the necessary funds. The discount rate was reduced to 5.5% in that year and the interest rate on loans to industry, export and import trade were also fixed at a lower level.

Restrictions, both quantitative and qualitative, on credit extension were eased considerably at the same time. All restrictions on short term loans to industry and the handicrafts sector for working capital were completely lifted. Controls on long term loans to the handicrafts sector were also abolished as were the controls on import financing. Further, a list of commodity imports for which financing

could reach to 100% of their value was issued by the Ministry of Commerce and the repayment period for this type of credit was extended. The financing of domestic trade was also liberalised by raising credit ceilings by one third while the maturity and discount period for certain categories of commercial paper were extended.

As a result of the rapid rise in bank credit in 1963 and a reduction in the rate of growth of deposits during 1964 (due mainly to political developments), the commercial banks experienced a shortage of funds. The central bank tried to offset this by further raising the limits on rediscounting and approximately 900 m. drachmas were lent to the commercial banks over the period July-September. In order to ensure that the priority sectors would not suffer a shortage of credit, restrictions were reimposed on loans to certain sectors. Specifically, the limits on the financing of domestic trade were reduced and the minimum down payment for installment purchases of durable goods were raised by 5%. Further the discount period for paper of the handicrafts sector, trade and industry were reduced. Also the commercial banks were instructed to accord priority to the credit requirements of the handicrafts sector and to be more conservative with respect to loans not directly connected with industrial production and investment.

A new crisis of demand for gold sovereigns was triggered off as a result of rumours concerning the stability of the drachma which were initiated for political purposes and had no economic justification. The Bank of Greece attempted to reverse the demand for gold by intervening in the market to maintain a steady price throughout the year and so reduce the speculation which was aggravating the situation. Also in this year the Greek Industrial Development Bank (ETBA) was instituted by the amalgamation of three existing state credit institutions (see 2.4.).

Demand for gold continued to be high in 1965 and the previous years' policy of maintaining a steady price was still in force but proved to be ineffective. Eventually in December of this year the Bank of Greece ordered that gold transactions could take place through licensed brokers and subsequent to certain formalities. (See 2.5). This measure finally reversed the trend and gold began to return to the central bank. Meanwhile the contribution of the Bank of Greece to the funds of the commercial banks remained higher than normal for the reasons outlined above. In this year also the Bank of Greece put forward a set of recommendations to the Currency Committee, for the promotion of the capital market. Most of these recommendations were finally implemented two years later.

In 1966 a new measure designed to encourage the financing of the priority sectors of the economy was a change in the regulations governing reserve requirements. Instead of compulsory deposits being calculated as a percentage of the commercial bank deposits, they would now be based on the credit extended by the banks, with a variable percentage according to the category of loan. For example banks had to deposit with the central bank an amount corresponding in value to 10% of loans to industry, 25% of loans to domestic and import trade etc. Other measures taken in the same year included the complete abolition of limits on short term credit to industry and handicrafts and the extension of limits on long term loans, following an improvement in the liquidity position of the banking system. In addition the regulations concerning the asset structure of the banks were abolished.

(d) Short run expediency prevails, 1967-70: 1967 was a year of low economic activity as a result of the military takeover in April. In an attempt to stimulate the economy, credit controls were slackened

further and the rules governing bank credit were altered to allow the granting of loans to those sectors which had previously received little or no credit, e.g. shipping industry and construction. The banks' medium term investment loans were taken up by the Bank of Greece to offset in the level of deposits with the commercial banks immediately after the coup, and the discount rate was reduced to 4.5%. In the same year the repeated recommendation of the central bank for measures to encourage the growth of the capital market were implemented. A Capital Market Committee was instituted with responsibility for the control and development of the capital market and a set of rules were formulated with the aim of improving the organisation of the stock market. New types of securities such as secured bonds were introduced and tax incentives given to issuers and buyers.

The previous year's credit policy was continued in 1968 and the short term debts of the agricultural sector to the Agricultural Bank of Greece (A.T.E) were cancelled. The contribution of Bank of Greece funds was higher than in the previous year while the credit regulations for the industrial, export, tobacco and trading sectors were abolished and banks were free to extend credit as they deemed fit. At the same time the complex structure of interest rates was reduced to six different rates according to the broad category of the loan and there was a 1% reduction on rates for short term credit to industry and domestic and import trade. As might have been expected, credit for construction rose rapidly and in 1968 amounted to 61.7 billion drachmas as opposed to credit for manufacturing and mining which amounted to 16.7 billion drachmas for short and medium term loans and 14.8 billion drachmas for long term loans. Speculative activity in equities increased sharply during the year and share prices rose to unprecedented high levels. (See 2.4). Unrestricted credit also caused an increase in consumption expenditure while imports in the second half of the year rose rapidly and the

balance of payments deficit widened.

A more restrictive policy was followed in 1969. The minimum reserve requirement for commercial banks was raised, particularly against the credit extended to domestic and import trade, while discounting by the Bank of Greece of bills financing residential construction was halted. The ceiling for building credit was reduced as was the ceiling on short term credit to trade. The discount rate was raised by three successive stages to 6.5% and the banks' compulsory purchases of treasury bills was raised in two stages to $29\frac{1}{2}\%$ of current and savings deposits, although the latter seems to have been introduced mainly to cover government expenditure rather than to reduce bank liquidity. In order to reduce speculation in equities, ceilings on loans against equity collateral were reduced considerably. Foreign travel allowances were reduced and greater incentives were offered to Greeks working abroad to deposit savings in Greek banks in an attempt to reduce the balance of payments deficits. Foreign exchange reserves were seriously reduced and there were fears that the drachma would be devalued. Between July and August of this year the buying value of the drachma on the Zurich stock exchange fell by 9.6% while the selling value fell by 7.8%. This was finally stopped by Bank of Greece intervention on the market. Meanwhile borrowing on the capital market was sharply reduced as a result of the withdrawal of public enterprises from the market, to which they had contributed between 40 and 50% of total new issues. Despite the more restrictive nature of the policy implemented in 1969 bank credit expanded even more rapidly than in the previous year and credit to residential building, tourism and service trades grew much more rapidly than long term credit to industry. These trends continued in 1970.

A similar policy was implemented in 1970. Compulsory treasury

bill purchases by the banks were raised further in two steps to 34½% of current and savings deposits. Interest rates on advances to domestic and import trade, shipping and construction were raised by 1%. The restrictions on foreign travel allowances were tightened still further. The financing of the current account deficit in 1969 and 1970 was mainly from private capital inflows but both private and official inflows were on commercial terms with short repayment periods and high interest rates and hence servicing of the debt entailed a heavy burden. The servicing of public foreign debt had risen from 41 m. dollars in 1966 to 62 m. dollars in 1968 and was higher still in 1970. In 1970 the deficit stood at 411.3 million dollars. Government expenditure was particularly high in this year following the upward trend in recent years. For the first time, authority was given for mutual funds and unit trusts to operate in Greece in order to promote capital market activity which had been reduced by the previous year's withdrawal of public enterprises. The issue of new securities was raised to the level existing prior to the withdrawal by new issues of government and bank securities but there was no significant change in the issue of private securities.

(e) The Supply of Money: The supply of money, which is defined by the Bank of Greece as currency plus current deposits, has increased at a rapid rate throughout the twenty year period. The average annual rate of increase between 1954 and 1963 was + 18.1% and between 1964 and 1970 it was at the lower level of 13.1%. Nevertheless this is still much higher than in many other countries. If savings deposits are included in the money supply then the increase is even more rapid. Broad money supply as a proportion of GNP has risen from 27.50% in 1963 to 36.51% in 1968 and 39.0% in 1970. Despite this, the price level has remained surprisingly stable with increases generally being much lower than in

most European countries (see ch. I). The average annual increase in prices between 1960 and 1965 was + 1.6% and between 1966 and 1971 it was + 2.7%. The increase in demand over this period has been met largely by ever increasing imports and the deficit has been steadily growing. Certain writers e.g. (33), have attributed the low rate of increase in prices to the fact that inflationary pressures in the economy have been "neutralised" via increased imports and have not therefore led to significant price rises.

From the account of the Greek economy given in the first chapter it appears that the performance of the Greek economy has remained far below its potential.* The outline of the monetary policy implemented during the twenty year period already gives some indications of the shortcomings of this policy and its degree of responsibility for the inadequate achievements of the economy. However a rigorous evaluation of the monetary policy pursued, requires an understanding of the various relationships operating in the monetary sector. This will indicate whether the most appropriate monetary tools have been employed and their likely degree of effectiveness. Consequently in the following chapter, the money supply and its major constituents will be examined in order to gain an insight into the relationships operating in the monetary sector.

* This is asserted in the sense that the rising level of national income realised over the period could perhaps have been higher if feasible structural changes had occurred. Further, such structural changes would have provided a stronger basis for further growth and would have achieved a more equitable regional distribution of income.

CHAPTER 4

The Supply of Money

4.1. The components of money supply.

This chapter examines the constituents of the money supply in Greece. Cagan, Friedman and others have explained the composition of the supply of money in terms of three basic components: base money, the commercial banks' reserve/deposit ratio and the public's currency/deposit ratio (34,35). This is derived from two identities concerning the stock of money. Firstly, the definition of money supply as currency (C) plus bank deposits (D):

$$M = C + D \quad (i)$$

Secondly the definition of base money or high powered money (B) as the sum of currency held by the public (C) and the commercial banks' cash reserves (R):

$$B = C + R \quad (ii)$$

From these two definitions it is possible to obtain by algebraic manipulation the following relationship which is also an identity:

$$M = B \frac{(1 + C/D)}{(C/D + R/D)} \quad (iii)$$

This however does not constitute an explanation of how the supply of money is determined since base money, the cash/deposit ratio and the reserve/deposit ratio are in their turn determined by other economic and monetary variables (36). Even when an attempt is made to account for the factors which cause variations in the two ratios, the level of base money is often taken as being exogenously determined (e.g. 37).

Base money constitutes a large proportion of total money supply in Greece, since the bank multiplier is low, much lower than in most advanced countries. Hence we find that changes in base money account for a large percentage of any change in the money supply. It is important therefore to determine the variables which in their turn affect the level of base money. Similarly, changes in the banks' desired reserve/deposit ratio reflect changes in commercial bank behaviour in response to economic and monetary conditions. The same applies for the desired currency ratio of the public. We will now consider each of these variables in turn.

4.2. Base money.

Base money is defined as the sum of currency in the hands of the public plus the reserves of the commercial banks. The quantity of base money is determined endogenously and cannot be considered as a variable which is fixed exogenously by the monetary authorities as is assumed by Friedman for example, in the case of the United States (38). In Greece the level of base money depends to a large extent on government deficit financing requirements (see diagram 4.1). The major part of the government deficit is financed domestically by the sale of treasury bills, government bonds and by direct loans and advances from the Bank of Greece. The amount of bonds held by the central bank is relatively small and government borrowing is mainly in the form of treasury bills and direct loans and advances. This latter form of financing has a direct effect on the quantity of base money since the liabilities of the Bank of Greece in the form of deposits of the commercial banks and currency in circulation are increased. Of course if government deposits with the central bank also increase then the rise in the base money is lessened by this amount. In practice the

net result of government borrowing has been positive in all years but two; 1955 and 1956 when great efforts were being made by the government to reduce the rate of inflation. To the extent that part of the deficit is financed by transfers from abroad and foreign loans, the need for domestic borrowing is correspondingly reduced. However, positive foreign indebtedness on the part of the government also results in an increase in base money, since the increase in the gold and foreign exchange reserves of the Bank of Greece is followed by an equal increase in domestic currency if the loan or aid is converted into drachmas. Again, any increase in the size of government deposits at the central bank reduces the rise in the level of base money by a corresponding amount.

Another important factor contributing to changes in base money is central bank financing of the private sector (see "Other Loans and Advances" in Table 4.1. which consist mostly of loans and advances to the private sector.). In the earlier part of the period under examination direct financing in the form of loans and advances to most sectors of the economy was extensive. However as conditions in the money market improved, particularly after 1957, there occurred a gradual reduction of direct financing and this form of financing is now restricted almost exclusively to the agricultural sector. The Agricultural Bank of Greece which has not succeeded in attracting sufficient funds to perform its role adequately, receives direct assistance from the central bank.

Loans and advances to the commercial banking system are also included under this heading. The money market in Greece is dominated by the commercial banks themselves. Therefore when they are short of funds they can meet the situation only by either liquidating assets or by using the discounting facility. Borrowing ceilings for each indivi-

dual bank are set by the monetary authorities. Despite this, the authorities usually comply with commercial bank requests to raise this ceiling if the need arises. Commercial banks then have a reasonable freedom of choice between borrowing from the Bank of Greece and liquidating assets. One would expect that they decide on their course of action on the basis of cost criteria constrained to some extent by the height of the discount ceilings and the attitude cultivated by the Bank of Greece of not resorting to the discount facility too often. The short term assets held by the commercial banks are mainly treasury bills and short term loans. Almost the entire issue of short term government paper is covered by the compulsory purchases of the commercial banks consequently the banks cannot liquidate these when short of funds. Even if more than the legal minimum of treasury bills are held, the banks might well have difficulties in unloading these because of the small size of the money market. Restriction of short term loans is therefore the only likely alternative to borrowing from the central bank. The decision of the banks as to how they will meet any shortage of funds is therefore probably based on a comparison of the cost of central bank borrowing and restricting or calling in short term loans.

A further factor contributing to the quantity of base money is the reallocation of the excess funds of public entities which are compulsory deposited with the central bank. These deposits are then allocated by the Bank of Greece to the commercial banks for the exclusive use of financing long term investment in the priority sectors of the economy. This has an expansionary effect on base money, although to the extent to which public entity deposits rise, then the effect of these advances on base money, is reduced by a corresponding amount.

The fourth major factor influencing the quantity of base money is the balance of payments, since changes in this affect the level of

gold and foreign exchange reserves of the Bank of Greece, which in turn affect base money.

TABLE 4.1.

The Constituents of Base Money.*

(b. drachmas)

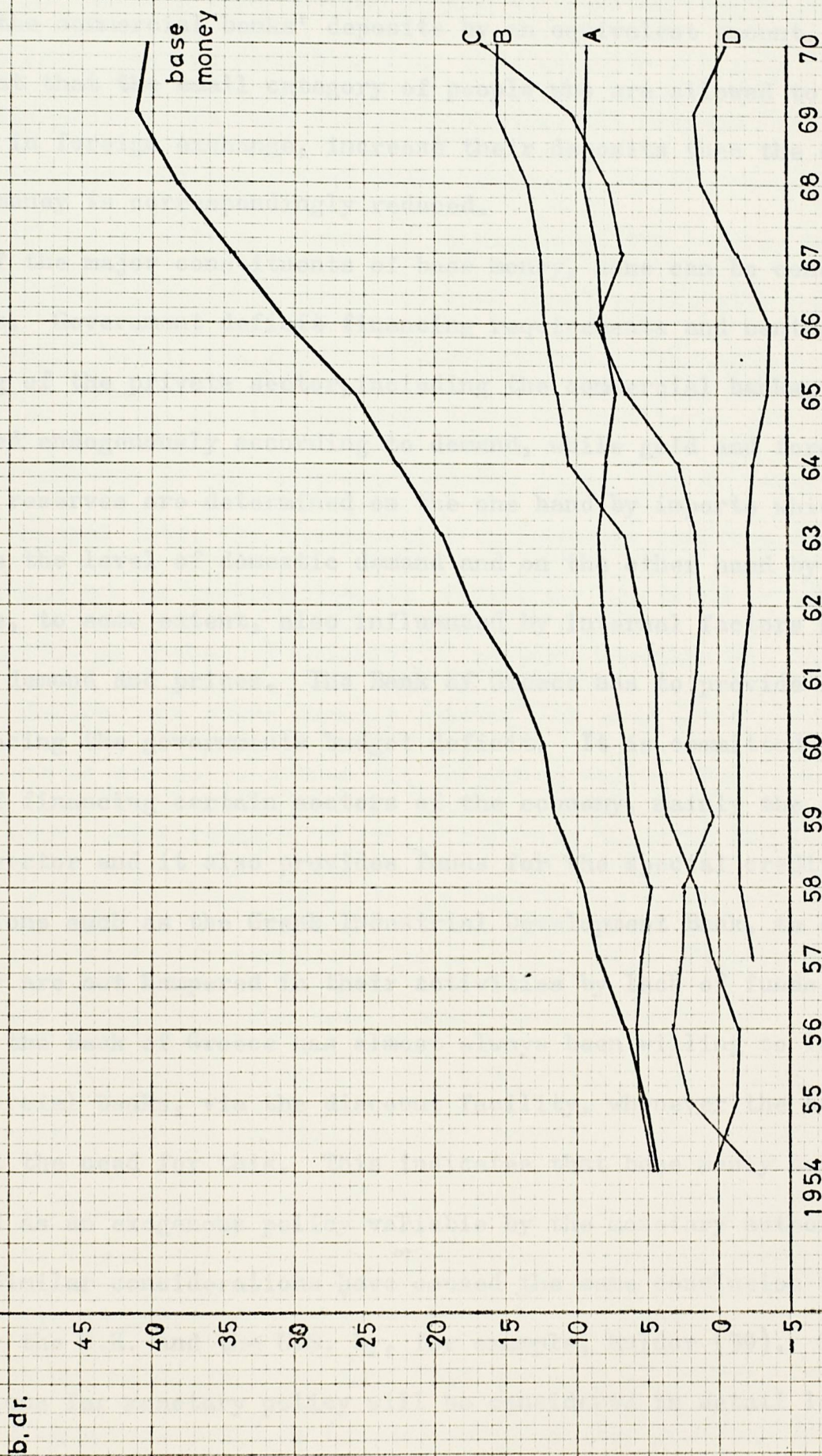
	A	B	C	D	E
	Gold & For. Exchange.	Net Govt. Borrowing	Other Loans & Advances.	Public Entity Funds.	Base Money.
1954	4.954	0.339	-2.499	-	4.34
1955	5.609	-1.146	2.020	-	5.60
1956	5.880	-1.130	3.217	-	6.55
1957	5.647	0.395	2.700	-2.228	8.53
1958	4.995	1.896	2.681	-1.671	9.66
1959	6.154	3.814	0.072	-1.667	11.63
1960	6.533	4.474	2.144	-1.561	12.35
1961	7.498	4.543	1.677	-1.775	14.55
1962	8.084	5.858	1.203	-2.105	17.39
1963	8.218	6.825	1.621	-2.059	19.35
1964	7.983	10.066	2.773	-2.583	22.96
1965	7.058	11.213	6.559	-3.605	25.97
1966	8.179	12.070	8.204	-3.888	30.91
1967	8.583	12.623	6.700	-1.519	34.85
1968	9.658	13.138	7.760	+1.071	38.21
1969	9.510	15.582	10.088	+1.393	41.14
1970	9.300	15.504	16.723	-0.394	40.48

Source: Bank of Greece Statistical Bulletin.

* The rows A to D do not add up to the figures in the final column E since only the major constituents of base money are shown.

Diagram 4.1.

The Constituents of Base Money.



An increase in the level of the reserves means that base money rises by an equal amount as the central bank issues domestic currency or credits the commercial banks' deposits by an equivalent amount. To the extent that the small category of people who are allowed to maintain deposits in foreign exchange, increase their deposits then the effect on base money is correspondingly reduced.

Of the major constituents of base money, none can be considered exogenous. Government deficit financing requirements and central bank financing of the private sector, including the commercial banks, are determined endogenously according to demand, while gold and foreign exchange reserves are determined on the one hand by imports which depend on the level of domestic demand and on the other hand by exports which are, to some extent, also influenced by internal factors such as domestic demand and prices. The Bank of Greece has to provide funds for financing the governments budget deficit. It is committed to a policy of financing certain sectors of the economy, mainly the agricultural sector and it also provides funds for the special credit institutions such as the Greek Industrial Development Bank, to ensure that they are not hampered in their activities by lack of funds. Further, the Bank of Greece has almost always been willing to lend to the commercial banks, via the discount facility, whenever the banks have felt the need for this. This indicates that base money has not been used as an exogenous policy variable by the monetary authorities. Similar considerations have caused the same conclusion to be drawn for the U.K. and the U.S. by, for example, Kaldor (39). The implications for monetary policy will be considered in detail later on. (Ch.6).

4.3. The Commercial Banks' Reserve/Deposit Ratio.

It has already been mentioned that the Bank multiplier in Greece is lower than in countries like the U.K. with a highly developed monetary sector. We must therefore examine the reasons for this and determine how the commercial banks decide on the distribution of their portfolio of assets. Reserves in excess of the legally required minimum (including seasonal reserves) have been consistently held by the commercial banks, the amount of these reserves fluctuating widely from year to year as can be seen from Table 4.2. A large part of these fluctuations is due to changes in the legal reserve requirements, the main changes being the introduction of seasonal reserves in 1957, the reduction of the reserve/deposit ratio from 12% to 8% in 1963 and the change in the method of calculating reserve requirements introduced in 1966. However the above changes account for only a part of the fluctuations as can be seen from the following table. Some writers have explained the existence of excess reserves as being due largely to a lack of demand for bank loans, in particular the demand for medium and long term loans for investment in industry (40). Those categories of loans for which there has been a consistently high level of demand, such as the internal and import trade, construction etc., have been constrained by credit ceilings and can therefore be considered as exogenously determined. Hence it is argued, excess reserves can be explained in terms of the factors determining demand for loans in those sectors where exogenous supply constraints do not apply.

However, although it is true that the rate of increase of medium and long term loans to the industrial sector has been low, it is debateable whether this has been mainly due to a low level of demand and a number of other writers e.g. Loukopoulos (41) have questioned

this conclusion.

TABLE 4.2.

The Reserve Position of the Commercial Banks.

(b. drachmas)

	Reserve/ Deposit Ratio % (a)	Total Reserves (b)	Reserve Require- ments (c)	Excess Reserves (b)-(c)
1954	26.7	0.47	0.215	0.255
1955	36.8	0.68	0.295	0.385
1956	16.1	0.47	0.382	0.188
1957	29.9	1.47	0.642	0.828
1958	26.2	1.98	1.542	0.438
1959	28.9	2.75	1.880	0.870
1960	21.3	2.77	1.098	1.672
1961	15.8	2.37	1.616	0.754
1962	16.8	3.03	1.422	1.608
1963	11.1	2.55	1.589	0.961
1964	10.7	2.80	1.487	1.313
1965	9.1	2.69	1.016	1.674
1966	13.9	4.81	1.307	3.503
1967	3.7	1.40		
1968	10.3	5.12		
1969	9.5	5.70		
1970	7.1	5.33		

Source: (a) Bank of Greece Statistical Bulletin. (b) IMF Financial Statistics, (c) Calculated approximately by taking the relevant % of total commercial bank deposits each year.

Certainly the political and economic instability which has been characteristic of much of the period under consideration, has influenced investment decisions. The risk attached by businessmen to long term investment projects with long gestation periods may have been high but the parallel rapid rise in aggregate demand has offered the promise of high returns on investment even by small and medium sized firms in those areas not dominated by cheaper imports or monopolies. Although an analysis of the extent to which competition from imported goods (especially in connection with the associate member status of Greece in the E.E.C.) has hindered industrial investment, is beyond the scope of this study, it is perhaps, reasonable to question whether the low demand for loans in the major or only reason for the often substantial volume of excess reserves. Discussions I have had with bankers have shown that the banks themselves have been persistently reluctant to lend on a medium and long term basis*, particularly to the small and medium sized firms which are in most need of such loans since their capacity for self financing is low. Requests for loans from such firms have often been refused, not only because such financing is considered to be beyond the scope of normal banking business but because the risk element involved has been considered by banks to be much higher than that involved in financing large, established companies. The returns on such loans are not considered high enough to compensate for this risk. Since interest rates are administered by the monetary authorities and are kept as low as possible to encourage investment, the banks adjust their supply of loans to the level which

* Discussions held in the summer of 1973 in Greece with the heads of the department of credit extension of three different banks.

they are prepared to provide at the given exogenously determined rate of interest. This, therefore means that excess demand for loans could well exist at the given rate of interest, even though the demand for loans in absolute terms is low.

This reflects the difficulties involved in basing a development programme on finance from an oligopolistic banking system where profitability rather than development needs is the criterion employed. The special credit institutions have not yet been capable of performing their role of financing the development process to any adequate extent. This however covers only part of the problem. To the extent that low demand for long term loans exists, then the problem is not solved by the existence of adequate finance institutions, since the problem is structural and not institutional.

Studies of bank behaviour in the U.S. have shown that an inverse relationship exists between excess reserves and interest rates on loans and securities (42,43). Teigen also bases his analysis of money supply on the assumption that the ratio of required to excess reserves is positively related to the profitability of lending (44) i.e. the volume of excess reserves depends on the opportunity cost of holding these reserves which earn a zero return. An analogous relationship between profitability and reserves could apply to the case of the banking mechanism in Greece. The opportunity cost of holding excess reserves can be considered to be the return on the most liquid earning asset available, for example treasury bills and other short term government bonds. However, in the case of Greece the limited size of the market has resulted in the commercial banks being able to hold little more than the compulsory minimum of government paper. Therefore the treasury bill rate is unlikely to be an accurate reflection of the cost of holding excess reserves. Only about 6% of bank assets are

held in the form of government securities and little more than the legal minimum of treasury bills. Perhaps a more suitable measure of the cost of holding excess reserves is the interest rate on short term loans, particularly to industry for working capital. Since 1957, the sole responsibility for the control of short term loans to industry has been vested with the commercial banks. This differs from the case of loans to the handicrafts sector and to domestic and import trade which have been constrained by credit ceilings in most years. Given the interest rate set by the monetary authorities on loans for working capital, one would expect that the commercial banks decide on the supply of such loans mainly on considerations of profitability.

Another interest rate variable which might be expected to influence the level of reserves is the interest rate paid by the commercial banks on deposits. The higher the deposit rate of interest, the greater the need to offset this cost by holding earning assets and hence the greater the incentive to reduce excess reserve holdings. Savings deposits are the largest category of deposits and so one would expect that the reserve/deposit ratio is inversely related to the rate on savings deposits with the commercial banks.

The relative volume of the different categories of deposits may also be a significant factor affecting the volume of excess reserves which are maintained by the banks. As discussed earlier, although savings deposits have a low rate of turnover, their characteristic of being withdrawable on demand may mean that the commercial banks hold higher reserves against these as opposed to time and restricted deposits. This can be linked to the fact that political developments may have caused the banks to hold more reserves throughout much of this period than would otherwise be the case, because of fear of large withdrawals. The public's reaction to most political abnormalities has

been of this nature. This lack of confidence was in fact the main reason behind the monetary authorities' decision to make savings deposits instantly withdrawable, since this induced people to overcome their fear of losing their money. Consequently, liquidity is of considerable importance for the banks in deciding the structure of their assets. The relatively simple asset structure of the commercial banks which reflects the limited choice of assets available to them, means that the portfolio behaviour of the banks can be treated in simple terms, (c.f. Parkin, Gray and Barret (45) and others) with the distribution between earning and non earning assets being of particular importance.

Bearing in mind the particular characteristics of the Greek monetary sector, the relationship between the above variables and the reserve/deposit ratio were tested statistically. The reserve/deposit ratio (R) was regressed on the following independent variables:

1. The ratio of savings deposits to time + restricted deposits (S).
2. The rate of interest on savings deposits with the commercial banks (r_s).
3. The short term lending rate to industry (r_L).

The excess reserves ratio was not used as the dependant variable because accurate figures for reserve requirements were not available and even approximate figures could not be worked out on available data after 1966 when the basis for calculating reserve requirements was changed. Consequently, a dummy variable (D_1) was included in the above regression to account for changes in minimum reserves. This variable had a value of 0 in 1956, +1 in the years 1957-62 when the seasonal reserves were introduced, -1 in the years 1963-66 when the reserve requirements were reduced from 12 to 8% and +1 in the remaining years when reserve requirements increased again. We would therefore expect a positive relationship between R and D_1 .

A further dummy variable (D_2) was tried to test the effect of changes in credit controls on bank reserves. The argument for including this variable is that if credit controls on short term credit are tightened, then since the commercial banks prefer this type of credit extension and are generally averse to giving long term loans, the excess reserves of the banks would be expected to rise. This variable had the value 0 in those years when credit controls were relatively lenient (1956, '58, '60, 1963-68) and +1 in all other years when credit controls were tight. The relationship between this variable and R should be negative.

In order to determine the form of the function both linear and log linear relationships were tried. On all counts the linear form performed better than the log linear form. Both the value of the multiple correlation coefficient and the level of significance was higher. Only the results of the linear form regressions are given in Table 4.3.

As can be seen from the first regression the coefficient of S is highly significant at 1% significance level, having a high value for the t -statistic and a high value for the partial coefficient is positive as expected, indicating that the reserve/deposit ratio rises as S rises. The interest rate variables, however, turn out to be insignificant and of the wrong sign. The inclusion of the two dummy variables in regression 2 raises the explanatory power of the regression from 0.972 to 0.984, but only D_1 is significant at the 5% confidence level.

Because of the likelihood that the coefficients of the two interest rates are distorted by multicollinearity caused by including two related interest rates, the regression was re-run using the average value of the two rates, (regression three). The regression

coefficient of the single interest rate variable (r_{av}) becomes highly significant but still has a positive sign indicating that the higher the cost of holding excess reserves the greater the reserve/deposit ratio. A result which is contrary to most assumptions about commercial bank behaviour. The regression was run once more using an estimate of the real value of the average interest rate (obtained by subtracting the percentage increase in the price level from the nominal interest rate). Once again, however, the sign of the interest variable although significant, was of the wrong sign. (This result is not shown in Tables 5.3.).

The interest rates used in the above regressions are closely correlated with the discount rate. One would expect on a priori grounds that the reserve/deposit ratio is positively related to the discount rate. i.e. the higher the cost of borrowing from the central bank, the more likely are the commercial banks to avoid having to resort to the discount facility, by maintaining adequate reserves. The regression was therefore run yet again using the discount rate as the independent interest rate variable. (regression 5.) This time as expected, the reserve/deposit ratio is positively related to the discount rate. The standard error of the interest rate variable is considerably reduced and the value of the t-statistic is correspondingly higher than for the average interest rate variable. The explanatory power of the equation is raised from .972 to .978 and the residual error reduced from .031 to .028. The Durbin-Watson statistic has a value indicating the absence of positive correlation, by the test for negative autocorrelation is inconclusive.

The dummy variables included to account for changes in the height of credit ceilings, although of the correct sign, proved to be statistically insignificant. This result may in fact be distorted because of multicollinearity between the discount rate and the two policy variables.

TABLE 4.3. Regression Coefficients for the Reserve/Deposit Ratio.

<u>Dep. var.</u>	<u>Indep. var.</u>									
	const.	S	r_s	r_L	r_{av}	r_D	D_1	D_2	R^2	D-W
R	-0.237	0.053	0.028	0.003					.972	2.26
reg.1	(1.08)	(5.23)	(1.63)	(0.08)						
R	-0.254	0.032	0.012	0.025			0.02	-0.02	.984	2.74
reg.2	(1.15)	(2.40)	(0.74)	(0.73)			(1.85)	(1.18)		
R	-0.329	0.054		0.038					.972	2.31
reg.3	(5.68)	(5.73)		(5.30)						
R	-0.292	0.051		0.035			0.01	-0.02	.984	2.87
reg.4	(5.07)	(4.72)		(5.60)			(1.11)	(1.93)		
R	-0.186	0.051				0.020			.978	2.82
reg.5	(5.26)	(6.04)				(6.27)				
R	-0.163	0.049				0.019	0.009	-0.012	.982	2.96

Figures in brackets refer to the t-statistic.

Generally, changes in the discount rate and in the height of credit ceilings have been related and similarly for changes in reserve requirements.

The results of the regressions, as far as the relationship between R and S is concerned, is as expected. The higher the ratio savings deposits to time plus restricted deposits, the greater the reserve/deposit ratio. This indicates that the commercial banks hold higher reserves against savings deposits than against their other categories of deposits since savings deposits can be withdrawn on demand. The dummy variables on the other hand although of the expected sign were insignificant. This seems to indicate that the credit restrictions imposed by the Bank of Greece did not really prevent the commercial banks from extending as much short term credit as they wished. This may possibly be due to credit leakage via the uncontrolled loans to industry for working capital. Similarly changes in reserve requirements do not appear to have significantly affected the reserve ratio which almost always has been well above the legal minimum. However one cannot be too positive in interpreting these results because of the likelihood of multicollinearity and negative autocorrelation distorting the values of the coefficients.

The surprising result is the sign of the interest rate variable which on a priori grounds might be expected to be the most appropriate explanatory variable. The positive relationship obtained when the average interest rate, representing the opportunity cost of holding excess reserves, is used as the regressor, indicates that the cost of holding reserves is not important in determining the volume of excess reserves. In fact the value of the interest rate has not changed very much since 1960, it has ranged from 6.41% to 6.88%. The explanation of the positive sign of the coefficient appears to lie in the

fact that the average interest rate and the discount rate generally move in the same direction, so the average rate acts as a proxy for the discount rate thus giving a positive relationship. This is supported by the fact that the relationship between the reserve ratio and the discount rate is stronger than that between the reserve ratio and the average rate. The commercial banks therefore, hold more reserves when the discount rate is high, since the cost of borrowing to meet unforeseen contingencies is higher in relation to the cost of maintaining excess reserves.

Therefore it seems that the risk element of being unable to meet withdrawals is given more importance than the cost of holding excess reserves. Hence also the significance of the relative size of savings deposits which the banks consider to be most subject to large scale withdrawals in the event of political or economic anomalies. This estimation of how the public reacts to abnormal circumstances is to some extent justified since the level of savings deposits has in practice been influenced by such factors. For example, in the years 1965 and 1967 the level of savings deposits was considerably affected by political developments.

4.4. The Public's Currency/Deposit Ratio.

During most of the period under examination, the demand for currency has been rising at a faster rate than the demand for current deposits. As can be seen from Table 4.4., the ratio of currency to demand deposits has been rising over the period. This can have important repercussions for monetary policy. Other things being equal, an increase in the demand for currency resulting in a reduction of deposits through withdrawals, reduces the credit base of the commercial banks and curtails their credit creating ability. Therefore changes in

the desired ratio of currency to deposits can lead to a change in the money supply unless the monetary authorities take compensating action. It is important therefore to know the factors determining the currency ratio so that action can be taken when they change.

In his study of the supply of money, Cagan gives a number of factors which influence the size of the desired currency ratio (46, 47): the cost of holding currency, expected real income, the volume of retail trade, the volume of travel, the degree of urbanisation and the rate of direct taxation. This study relates to the U.S. economy, but other work such as that of Perlman (48), has found broadly similar factors to be relevant, using international cross section data, for countries of widely differing social and economic background.

The opportunity cost of holding currency as far as the Greek monetary sector is concerned, is unlikely to be the interest rate on demand deposits. This is due to the peculiar characteristics of the Greek system. Demand deposits are held mainly by the business sector and cheque payments are confined therefore, chiefly to business transactions. For the public at large, the usual means of payment is currency. Over sixty per cent of demand deposits are held by business men in order to facilitate their business payments. For the general public then the interest rate on demand deposits does not represent an accurate measure of the opportunity cost of holding cash. Nevertheless, since business transactions, for which cheques are used, form a significant part of total transactions, this interest rate variable was used in the estimate of the currency ratio equation.

The C/D+S ratio as one might expect, has been falling rapidly. Savings deposits unlike demand deposits, are to a large extent made up of the small deposits of a large number of individuals of non-business sector, and are viewed as an alternative form of holding wealth, to currency.

TABLE 4.4.

The Currency/Deposit Ratio.

	Currency/ Demand Dep.	Currency/Demand + Savings Dep.
1953	2.88	2.58
1954	2.40	2.03
1955	2.36	1.88
1956	3.20	1.66
1957	3.08	1.11
1958	3.12	0.93
1959	3.03	0.77
1960	3.31	0.74
1961	3.54	0.73
1962	3.56	0.73
1963	3.79	0.69
1964	3.95	0.72
1965	4.06	0.75
1966	4.36	0.69
1967	5.58	0.81
1968	4.56	0.61
1969	4.33	0.55
1970	3.65	0.48

Source: Bank of Greece Statistical Bulletin.

The small range of alternative financial assets means that savings deposits and currency are the two major forms of holding wealth. The interest rate on savings deposits might be expected therefore to reflect the opportunity cost of holding currency as opposed to savings deposits. This variable therefore was used in the estimate of the ratio of currency to demand plus savings deposits. Also the rate of change of prices was used as an alternative cost variable since deposit interest rate earnings compensate for price rises unlike currency holdings which are a non earning asset.

The level of national income in real and nominal terms was also included in the regression equation, an income variable being expected to influence the size of the currency ratio. Studies for most advanced countries have shown that currency is an inferior good (49,50). The risk and bother involved in holding large quantities of currency means that the relative size of currency holdings compared to deposit money holdings, decrease as income rises. However, in Greece as can be seen from Table 4.4., the ratio of currency to demand deposits has been generally rising over the period in question while income has also been rising. This can again be explained by the fact that demand deposits serve as a means of payment mainly for the business sector, while for the non business sector, currency is the normal means of payment. Since the volume of monetary transactions has been increasing rapidly over this period due to increased monetarization and higher incomes, the demand for currency has risen proportionately more than demand for demand deposits. Also, since currency serves as a fairly important store of value, then again this has the effect of increasing the desired currency/deposit ratio. From the same table, we can see that the ratio of currency to demand plus savings deposits, has on the other hand been falling rapidly. This reflects the role of savings

deposits as an important form of holding wealth.

The volume of retail trade, the volume of travel and the degree of urbanisation are all factors which are expected to have a positive effect on the size of the currency ratio, since they increase the need for currency holdings. The degree of urbanisation can also have the opposite effect if it results in greater familiarity with the banking system. However, for the reason explained above this possibility does not arise in the case of Greece. These variables could not be included in our estimates of the currency ratio function since data for them is not available. An attempt was made to include the effect of the degree of urbanisation by using the ratio of agricultural product to gross national product as a proxy variable (see for example Perlman (51).) The effect of the above variables can however be considered as being included in the regression coefficient of the income variable because of the close correlation between them.

The rate of direct taxation is unlikely to be a significant factor affecting the currency ratio, unlike the case of the U.S. in Cagan's study (52). Tax evasion occurs on a wide scale in Greece and is facilitated by the nature of the tax collection system. In addition the rate of tax has not changed often during this period. For these reasons, the rate of tax variable was not included in our estimate. A dummy variable representing political crises was also included because of the effect of such events on the level of deposits. During all such anomalous periods there has always been a significant drop in deposits, particularly savings deposits, as the demand for currency rises as people seek to purchase alternative, safer forms of holding wealth. When gold sovereigns were freely available the public converted their liquid assets to this form. Now, the demand for consumer durables and property as well as foreign currency present the alternatives,

although there are strict controls on the latter. The dummy variable was given the value of one in 1964, 1965 and 1967, and the value of zero in all other years.

The relationship between the currency/deposit ratio and the above variables was tested statistically, the ratio of currency (C) to demand deposits (D) and to demand plus savings deposits (S) was regressed on the following independent variables:

1. The level of real income (Y_r).
2. The level of nominal income (Y_n).
3. The interest rate on demand deposits (r_d).
4. The interest rate on savings deposits (r_s).
5. The rate of change of the price level (P).
6. The ratio of agricultural product to G.N.P. (A).
7. The dummy variable (D).

Both linear and long linear forms were tried. The use of the log linear specification gave coefficients for the various explanatory variables which either had much higher standard errors or were insignificant. The results of the linear version are given in Table 4.5.

Regressions including the agricultural product ratio give values for the coefficient of this variable and of the income variable which are not statistically significant. Multicollinearity between the two terms probably explains this since they are highly correlated. This variable was consequently dropped. As can be seen from regression 1 and 2, the use of the rate of interest on demand deposits as the variable representing the opportunity cost of holding currency gives very poor results since its coefficient is not significantly different from zero. The dummy variable coefficient, although it has the correct sign, has a high standard error and is not significant, (the equations including this variable are not shown).

This is again probably due to the fact that demand deposits and currency are affected equally by instability as they are both held as a means of payment. Savings deposits on the other hand are affected more by the stability factor as people withdraw their deposits in order to convert them into less risky assets, thus they cause a temporary rise in the demand for currency relative to savings deposits. The correlation coefficient of both equations is very high having a value of .988, but the Durbin-Watson test for autocorrelation is indeterminate so the results can only be interpreted with a limited degree of confidence.

Regressions 5 and 6 have the ratio of currency to demand plus savings deposits as the dependent variable. In all the regressions this currency ratio is negatively related to the income variable indicating that as income rises the demand for savings deposits rises at a faster rate than the demand for currency. This reflects the role of savings deposits as form of holding wealth. The coefficient of the interest rate variable is however insignificant and of the wrong sign, being positive. This is not surprising in view of the fact that savings deposits have been rising at a fast rate over this period while the interest rate has been falling. It would seem, therefore, that cost considerations are not relevant in determining the relative holdings of currency and deposits and that the major determinant is income because of the wealth effect. The price variable also does not reflect the opportunity cost of holding money since although it is significant, its coefficient is positive. This indicates that the higher the rate of change of prices the greater the transactions demand for currency.

The dummy variable is also significant in the case of this currency ratio, as expected, and has the correct sign. This indicates that in periods of instability there is a significant positive effect on the demand for currency relative to the demand for savings deposits.

TABLE 4.5. Regression Coefficients for the Currency/Deposit Ratio.

Dep. var.	Indep. var.									
	const.	Y_r	Y_n	r_d	r_s	P	A	D	R^2	D-W
C/D	1.868	0.009		-0.189			0.046		.986	1.301
reg.1	(0.41)	(0.81)		(1.86)			(0.35)			
C/D	1.274		0.005	-0.200			0.046		.912	1.099
reg.2	(0.52)		(0.77)	(1.94)			(0.34)			
C/D+S	0.781	-0.006			0.093	0.088		0.381	.962	2.217
reg.3	(1.57)	(2.90)			(1.86)	(3.14)		(2.31)		
C/D+S	0.541	-0.004			0.092	0.095		0.378	.962	2.219
reg.4	(1.26)	(2.87)			(1.97)	(3.21)		(2.28)		

Figures in brackets refer to the t-statistic

The correlation coefficient is very high in both regressions, having a value of .962. The value of the Durbin-Watson statistic indicates the absence of both positive and negative autocorrelation, in contrast to the equations using the other currency/deposit ratio for which the test was indeterminate. There does not appear to be any important difference as far as the performance of the regression is concerned, when the real, as opposed to the nominal, level of income is used. As with the previous equations, using both the income variable and the agricultural product ratio caused the coefficients of both to be insignificant and the results are not included in the table.

To summarise then, the level of real money income and the rate of change of the price level appear to be the most important factors influencing the size of the currency ratio. When only demand deposits are included in the currency ratio, the level of income has a positive influence on this ratio reflecting a particular characteristic of the Greek economy. The remaining results are however in accordance with a priori expectations and results from studies for more advanced countries.

4.5. Summary.

The three basic components of the money supply namely, base money, the banks' reserve/deposit ratio and the public's currency/deposit ratio are all determined enogenously. Although control of base money on the part of the monetary authorities could result in a tight control of the money supply because of the low bank multiplier, we find in practice that this has not in fact been achieved. The need to cover government financing requirements by increasing the supply of money in the absence of alternative sources of finance, means that a major constituent of base money is beyond the control of the monetary authorities. As far as loans and advances to the private sector are concerned, the central

bank has the ability to control these and so control an ever increasing component of base money, although care should be taken not to reduce loans to priority sectors. However a stricter control over loans to the commercial banks would probably help to reduce the financing of non productive sectors by the banks, while credit to the productive sectors could be given directly by the central bank and other state financial institutions. To a large extent changes in the supply of money can have important repercussions for economic activity due to the particular characteristics of the economy. This will be dealt with in more detail in the following chapter which attempts to trace the relationships between monetary variables and the real sector.

CHAPTER 5

The Real and Monetary Sectors.

5.1. The Demand for Money: Before considering the impact of monetary changes on the real sector it is important to consider whether or not there is a stable demand for money function in the Greek case. As already seen in section 4.4. of the previous chapter, there is evidence that there is a stable currency to deposit ratio which means that the public adjusts its holdings of currency and deposits according to changes in certain economic variables such as income. It is further necessary to examine the evidence for a similar adjustment between money generally and other assets. Both monetarists and Keynesians trace the effects of changes in money supply through the balancing adjustments between money and other assets made by the public and financial institutions when money supply is greater or less than the desired level. Empirical studies for many countries have provided evidence in support of a reasonably stable relationship between money demanded and some measure of income or wealth and an interest rate variable (53). Before considering the evidence available for Greece, it might be appropriate to analyse the problems connected with the estimation of the demand function, in order to ensure that they do not invalidate the results which have been obtained for the Greek economy.

The first of these estimation problems is that the level of desired money holdings is not an observable magnitude. It is customary therefore to assume that equilibrium is always achieved so that the observed money stock can be used as data for desired money holdings. However this raises the identification problem of distinguishing between the demand and supply functions when using observable data for

estimation. This difficulty is overcome if the two functions are independent so that the explanatory variables which enter the two functions are different. It is usually assumed that there are significant variables entering the supply function which are not included in the demand function. These are for example, technical factors affecting currency supply and political and psychological factors influencing the overall money supply (54). Another assumption made by Fand for overcoming the identification problem is that the appropriate dependent variable in the supply function is the level of nominal money balances while the demand for money is demand for real balances (55). In Greece it appears that the supply of money is largely demand determined (See ch.4). If this is true than the assumption that the observed magnitude of money stock is equal to desired money balances is appropriate.

The definition of money also raises some difficulties. The narrow definition of money supply as currency plus demand deposits may not be an adequate reflection of the true state of liquidity in an economy or of those assets demanded by individuals as a medium of exchange or temporary abode of purchasing power and as a store of value. Considering money as a medium of exchange, we find that the usual argument for excluding savings deposits from the definition is that they are not usually transferable by cheque and that their use involves loss of interest and delay. This definition places the emphasis on the literal meaning of "means of payment". Newlyn's definition of money as an asset which has a "neutral" effect when used as a means of payment, i.e. whose effect is the same as that of a transfer of currency, may be more relevant since it defines money in terms of its effect on the monetary system and not in terms of its effect on the individual (56). Under this definition then, savings deposits could be included in the

definition of money if banks do not differentiate between demand and savings deposits in determining their liquidity ratio. However it could be argued that changes in the volume of savings deposits will have an effect on the monetary system, even if the above is applicable, via changes in the costs of bank liabilities.

An even broader definition is advocated by some on the basis of the argument that since non-bank financial intermediaries also create credit, their liabilities should be included in the supply of money even though they are not widely acceptable as a means of payment (57). Pesek and Saving on the other hand, consider that since monetary policy works mainly through wealth effects and only demand deposits represent net wealth, then the narrow definition is more appropriate (58).

One method of testing empirically how valid these definitions are, is to examine the extent to which the proposed components of money stock are in practice interchangeable. Two empirical studies for the United States designed to establish the degree of substitutability between demand deposits and time deposits have both obtained values of cross elasticity which indicate that in the U.S. at least, substitutability is low. These results appear to support the adoption of the narrow definition of money (59,60).

In Greece cheques are not as widely used as, for example, in the U.K. or the United States. Payments are normally made in currency. Demand deposits are held mainly by business men and cheques are used almost exclusively for the business transactions of large well known companies (see D.Kalodoukas). Savings deposits on the other hand are held largely by the non business sector and although cheque books are not issued against these deposits they are withdrawable on demand. In terms of Newlyn's neutrality criterion demand and savings deposits are identical since no distinction was made between the two in calculating

the reserve requirements up to 1966. Since that year reserve requirements have been based on the category of credit extended by the banks. Despite this, it is found that as expected on a priori grounds, because of the lack of diversified financial assets, savings deposits are viewed as an asset in which wealth can be invested rather than as a form of holding money. In other words, the growth in savings deposits over the period under consideration may be better explained in terms of a wealth effect rather than as a substitution effect between other financial assets (including currency and demand deposits) and savings deposits. This is supported by the fact that savings deposits have risen at a much faster rate than money supply narrowly defined, as income has risen. It is found that the income elasticity demand for money using the broad definition is significantly higher than the analogous elasticity using the narrow definition of money (61), thus indicating that increased wealth has resulted in a greater preference for savings deposits as against money supply narrowly defined. Further support for this conclusion is provided by the fact that savings deposits have a low rate of turnover and are composed mainly of the deposits of small savers who have very few alternative financial assets to choose from (62,63). It appears therefore that the factors of neutrality or instant withdrawal which can be used as arguments in favour of including savings deposits in the broad concept of money are overridden by the way in which savings deposits are used in practice. The narrow definition of money therefore appears to be the more appropriate concept.

From the studies of money demand in Greece, the results appear comparable to those obtained for more advanced countries. There are a number of works such as that of Avramides (64) which deal with the demand for money within the context of a general econometric model,

as well as several studies dealing specifically with the demand for money function. Thus one study (65) relates money demanded (narrow definition) in real terms, to real income and the expected rate of change of the price index as a measure of the cost of holding money. This is particularly likely to be the appropriate variable in the decade or so following wartime hyperinflation when people were still particularly sensitive to price changes. As Cagan shows in his study of hyperinflation in Greece (66) demand for real balances, using monthly data, was related mainly to the expected rate of change of prices with the effect of other factors being dwarfed by the large fluctuations in the price level. The most recent work is that carried out by Leventakis of the Bank of Greece Research Department (67). This derives a demand for money function which includes an income or wealth variable and the rate of interest on deposits as the main explanatory variables, using absolute values. All the estimates of the demand for money function indicate that there is some consistent relationship determining the holdings of cash balances. Lack of adequate data for the prewar period has prevented any estimates of the stability of this function over long time periods, but in the post war period at least one can accept with a reasonable degree of certainty that demand for money has been relatively stable. Although shifts in the function appear to have occurred first, in the early or middle fifties as people regained confidence in the currency and later in the sixties and onwards as consumption habits changed.

5.2. The Interaction Between Real and Monetary Variables.

Given that a stable demand for money function exists we will now examine the effect of changes in monetary variables on the real sector. The main point of interest is to see in what ways changes in money

supply and interest rates are likely to have an impact on investment expenditure and the magnitude of this impact. It is important to understand the repercussions of changes in monetary variables not only on productive investment but also on those activities such as speculation in property etc., which are likely to divert funds which could potentially be used in other sectors. It has been argued that the constraints on investment in those sectors which have been described as productive are sufficiently strong to prevent large scale investment in these areas and the availability of finance alone is not sufficient to induce private initiative to overcome the obstacles. For this reason the level of investment in these sectors is not expected to be influenced by the monetary variables considered. In fact the statistical evidence shows no significant relationship between investment in manufacturing and monetary variables. As expected however, investment in housing is found to be positively related to liquid assets.

The effect of monetary variables on consumption demand can also be important because this may have the secondary effect of inducing increased investment expenditure. However for the same reason given above, it is not likely that productive investment is affected significantly. Nevertheless, assessing the impact of monetary changes on all categories of investment is important for two reasons. First it is of use in evaluating the effectiveness of monetary measures in regulating aggregate demand. Secondly it indicates the potential contribution which monetary policy can make towards growth if used to supplement a comprehensive government development policy. For this reason an attempt is made to trace the mechanism through which monetary changes could be transmitted to all categories of expenditures before some statistical estimates are made of the realised effects of changes in monetary variables. Variations in monetary variables are likely to

have a more direct effect on the real sector in Greece than in more advanced countries. The absence of a complex financial system to act as a buffer between the monetary and real sector, means that changes in monetary variables are likely to be transmitted relatively rapidly to the real sector without the often long transmission lags experienced in more advanced countries. Limited public participation in the capital market and the lack of alternative short term or long term financial assets, indicates that changes in money supply are liable to have a direct effect on demand for non financial, or real assets. The major part of transactions in securities is carried out by the commercial banks (although public participation since 1968 has increased substantially). For most of the period under consideration then, changes in the market rate of securities has not been of importance in influencing peoples' choice of asset holdings. Thus any changes in income and expenditure which occur as a result of variations in the supply of money can be considered to measure the direct effects of the latter on the real variables through a relatively uncomplicated transmission mechanism. Therefore much of the dispute between the monetarist and Keynesian approach as to the importance of the rate of interest in transmitting monetary changes to the real sector, is not relevant for the Greek monetary sector. Bearing in mind the asset holdings of most of the general public, the bank deposit rates are the major interest rates which might be considered to affect people's expenditure decisions and these rates are administered by the central bank quite independently of money supply and are determined by a different set of considerations from those determining money supply. We can consequently examine the separate effects on income and expenditure flows when changes in either money supply or rates of interest occur.

5.3. Changes in the Supply of Money.

The monetary authorities can in theory change the supply of money in basically two ways. Firstly, by direct action on the level of base money. This can be achieved either by varying the volume of currency in circulation or by altering the compulsory reserve requirements of the commercial banks thus changing the level of their reserves. Secondly, they can indirectly affect the supply of deposit money by tightening or relaxing general credit controls and by changing bank rate or other interest rates. The limited size of the capital market prevents the use of open market operations. We will examine the effect of such changes on consumption and investment expenditure and hence on income and prices taking the case of currency fluctuations first.

Assuming that equilibrium exists to begin with, an increase in the amount of currency in circulation means that the public's holdings of currency are greater than the desired level. An adjustment between the currency holdings and deposits will take place until the desired currency/deposit ratio is achieved. This adjustment process between currency and deposits is a result of the fact that there exists a stable currency ratio as shown in Section 4.4.

The result of this adjustment process however, is an imbalance between liquid assets in the form of currency and deposits, and longer term assets. Because of the narrow range of long term financial assets these longer term assets are likely to be real assets. During the earlier part of the period under examination gold sovereigns were still an important form of storing wealth. However the central bank's policy of reabsorbing gold gradually eliminated this form of wealth holding which appears to have been replaced by bank deposits as evidenced by the rapid rise of the latter. The role of a long term asset appreciating

in value seems to have been played by real assets such as land and property. The fact that the market for real estate is well organised means that it satisfies the necessary conditions of a store of wealth especially ease of convertibility into cash and low transactions costs. To a lesser extent consumer durables may have acted as alternative long term assets although the rise in demand for these might be better explained in terms of shifts in consumption due to changes in behavioural factors, particularly in view of the fact that even durable consumer goods are not readily convertible into cash. Nevertheless, an ever increasing imbalance between liquid assets and long term assets, might in the absence of a range of alternative financial assets result in a greater demand for consumer goods than would otherwise be the case. The substitution between money and real goods cannot be construed as evidence for the monetarists' theoretical concept of money as one form of good which can be substituted for any real good and vice versa. It can be argued that it is the unavailability of alternative financial assets which enforces such a substitution between money and real assets.

Assuming that the above substitution effect between money and real assets takes place, then the original increase in currency will result in a further readjustment between money and all deposits and real assets. Thus there will be a direct effect on expenditure. Demand for goods, particularly consumer durables and property will rise and to the extent that domestic supply cannot meet the demand, then prices will rise as has been the case with property. Alternatively, imports of consumer goods will rise and if import prices are stable then the domestic price level is not greatly affected although this will lead to an adverse effect on the balance of payments if exports or other foreign exchange earning activities do not rise accordingly. The increased pressure of demand has to find an outlet either in the form of higher and/or

higher imports or domestic output.

The higher level of income generated by increased demand and higher prices will, in the absence of other restricting conditions, lead eventually to increased investment and output. However, to the extent that other constraints to investment exist, then the increase in the level of demand will be spent in higher prices and imports. The increased currency holdings of the business sector will also necessitate a readjustment of assets as for the non-business public. Whether or not this will lead to an increase in investment expenditure, as opposed to consumption expenditure, depends on the existence or absence of the same constraints.

The increase in bank deposits generated by the increase in the currency circulation means that the lending ability of the commercial banks is strengthened. The effect of this will depend on a number of factors. For example, the height of the credit ceilings on loans to the various sectors, the willingness of the banks to lend on a long term basis as well as the economy's absorptive capacity for such loans. The banks' preference for short term lending will mean that such loans will rise to the level permitted by the credit restrictions and the volume of all loans generally will be influenced by their desire to hold a level of reserves which they consider adequate.

The adjustment process described above assumes that there is a desired balance between short term and long term assets. The observed fact that liquid assets have been rising proportionately more than income, as illustrated by a steady decline in the income velocity of circulation in all years until 1971, indicates either that behavioural factors have caused the desired relative holdings of currency and deposits to rise and/or that there have been constraints inhibiting the desired adjustment e.g. the lack of long term financial assets.

The monetary authorities can also directly affect the supply of money by altering the commercial banks' reserve requirements. This has the effect of transferring deposits from the Bank of Greece to the commercial banks and vice versa. If the central bank reduces the amount of compulsory reserves, bank reserves are increased. If on the other hand, the level of compulsory reserves is raised then in so far as banks do not hold unwanted reserves in excess of the necessary minimum, their credit creating ability is reduced.

As already discussed in 4.3., the commercial banks have in practice consistently held reserves in excess of the required minimum. If we assume that these excess reserves have been voluntarily held and are not a result enforced by a low absorptive capacity for bank funds, then changes in the reserve requirements are expected to have an effect on commercial bank behaviour. For example, a reduction in reserve requirements enables the banks to expand credit while still permitting them to retain the level of reserves deemed necessary. Similarly an increase in reserve requirements forces the banks to cut back on loans if they wish to preserve the same level of excess reserves. As noted previously (4.3.) there is some evidence for maintaining that at least part of the excess reserves held by the commercial banks is voluntary and therefore are not "excess" as far as the banks themselves are concerned. Any change in reserve requirements larger than the amount of unwanted reserves will have immediate repercussions on the lending ability of the banking system. Whether or not the banks can act on their greater lending ability, in the case of a reduction of reserve requirements, depends on the absorptive capacity for bank loans.

The commercial banks in the period under examination extended loans mainly to the business sector. It was not until 1971 that a personal loan scheme of up to 30,000 drachmas was introduced. Any

variation in the lending ability of the banks would therefore have an effect on the expenditure of the business sector. If as has been suggested, part of the extra reserves held by the banks are enforced by lack of demand for bank funds, this is likely to apply to demand for loans for long term investment projects. On the other hand, it has been seen in practice that demand for loans for building purposes and for working capital (remembering that the commercial banks cannot easily trace the use to which the latter are put) has generally been buoyant. Further, the commercial banks will normally take advantage of any increase in their ability to extend such loans since this is the type of business they most prefer. This means that an increase in the supply of money via reduced reserve requirements can be expected to cause an increase in the expenditure of the business sector. Whether this expenditure will result in increased industrial output, higher output from the building sector, or to a higher level of consumption to the extent that credit leakage occurs, depends again on the incentives and constraints on investment. However income and expenditure can be expected to be directly affected, with repercussions for prices and the balance of payments as discussed above.

The use of credit ceilings and controls prohibiting the extension of credit to certain sectors has a constraining effect on the supply of money since these controls tend to be more severe on the type of financing which combines profitability with low risk and hence is preferred by the commercial banks. Also, because of the profitability of many of these sectors, e.g. building and trade, demand for such loans is high although their direct contribution to development is low. The controls therefore are imposed to prevent a rapid rise in aggregate expenditure which would, in the absence of higher output, lead to inflation and balance of payments difficulties. The easing of these

restraints normally leads to an immediate rise in expenditure. This method has in fact been used to stimulate the economy at times of low economic activity to prevent a rise in unemployment in the short run. For example in 1967, the reduction in investment and economic activity generally as a result of uncertainty induced by the military coup, was soon offset to a large extent by lifting controls on credit to the above sectors. However, the outcome of such short term measures in response to a fall in economic activity, has generally been adverse for the balance of payments and prices as happened after 1967. The effects of lifting such controls can be more serious than an increase in currency, since they directly affect the financing of activities which generate income without raising productive capacity or helping to pay for higher imports. In view of the constraints which make businessmen reluctant to invest it is unlikely that this will have the secondary effect of raising productive investment in response to higher demand.

Money supply can also be influenced by changes in the discount rate. Such changes will have an effect on the willingness of the commercial banks to borrow from the Bank of Greece. As the empirical results in section 4.3. indicate, the discount rate has a significant effect on the reserve/deposit ratio of the commercial banks. Thus the greater the discount rate the greater the reserves held by the banks and hence the smaller their credit extending ability. Again this will affect business rather than household expenditure and the form which the change in business expenditure takes will depend on the evaluation by businessmen of profitability and risk attached to the various categories of investment activity. Changes in the discount rate will not necessarily influence household expenditure since bank deposit rates are not directly linked to the discount rate, although simultaneous changes

in the same direction have often occurred in both. To the extent that the former have a significant influence on consumption, i.e. to the extent that a rise in deposit rates increases people's desire to save and vice versa, then one can expect a change in consumption expenditure as well as in the lending ability of the commercial banks as they gain and lose deposits.

The structure of interest rates in Greece is relatively simple compared with that of, say, the U.K. Changes in interest rates are decided by the monetary authorities and there is no room for the manipulation of government debt in order to alter the structure of interest rates throughout the money market. Variations in the size and structure of government debt occur to satisfy changing government financing requirements. Similarly, control of the money supply to the extent that this is possible has been carried out for its direct effect on economic activity and not as a means of influencing interest rates.

The effect of interest rates on the real sector is generally assumed to operate via three channels: the cost of capital effect, a wealth effect and an availability effect. The cost of capital effect is the well known classical postulate that investment varies inversely with the rate of interest. This might be expected to have a significant effect on investment borrowing decisions. There are many small and medium sized firms in the economy for whom the cost of borrowing may be a significant proportion of the outlay necessary for capital investment, since the latter will be on a fairly small scale. This applies particularly to the handicrafts sector. However, the rates on long and medium term investment loans have been kept relatively low in an attempt to encourage investment and, given other factors which influence investment, the willingness of the banking system to supply such loans may be a more decisive factor than lending rates. For larger firms engaged

in more extensive investment outlays the cost of borrowing is, as in other countries, probably less important than other costs of investment.

A significant part of total investment, investment in building, is expected to be unaffected by variations in official interest rates. The financing of a major part of this category of investment has been carried out outside the banking system. An extensive system of promissory notes and trade credit has enabled investment to be financed with little direct control by the monetary authorities (68,69). Although the ability of suppliers to deliver materials in advance of payment depends on the ease or tightness of monetary policy which affects the restrictions on short term working capital loans. This unofficial credit mechanism has been facilitated by the system of payment for building plots in kind, i.e. the prospective buyer and developer offers the current owner of the site one or more apartments or shops in the finished construction instead of a cash payment. This credit mechanism based on promissory notes, which is also used in the trade sector and others, although in the final analysis is dependent on the general level of liquidity which is affected by monetary measures, reduces the effectiveness of selective controls since the final destination of credit extended by the banks to particular sectors, is beyond the banks' control.

The wealth effect of changes in capital market rates may be expected to have a significant influence on the lending ability of the commercial banks which are the major purchasers of securities. Changes in such interest rates are likely to be the side effect of variations in the supply of private and government securities, the latter of which dominate the securities market, resulting from changing financing requirements, or might be caused by a rise in demand for given supply of securities. As explained above there has been no conscious effort by

the monetary authorities to vary government debt in order to alter capital market rates. An increase in the supply of securities or a fall in demand for a given supply, will cause the rate of interest to rise as the price of securities rises. This will have the effect of reducing the capital value of the banks' assets and hence curtail their lending ability. Conversely, an increase in the price of securities will raise the value of the assets held by the banks and hence increase their lending ability. In fact, if we look at the four year period 1970-1973 which was characterised by an unprecedented demand for securities with an increase in public participation on the stock market, we find that share prices increased by as much as 100% and more in each of these years (see 2.3.). There was however an increase in bank credit extension of approximately 19% on average in each of these years as opposed to an annual average of 16% in the preceding four year period when share prices were constant or falling. The slightly higher rate of increase of bank credit extension can be explained by the general ease of monetary policy in this four year period which enabled banks to make more short term loans to sectors which were previously subject to severe credit restrictions. There is little evidence to suggest that a wealth effect was the cause of the higher rate of growth of bank loans.

On the other hand it is possible to argue that the effect on banks of the reduction in interest rates on shares would be small or even negligible because of the small volume of shares. Government securities comprise the major part of commercial bank assets. No figures for the interest rate on treasury bills and bonds are available but the volume of compulsory purchases of treasury bills was substantially raised in the four year period. This will have offset to a

large extent any increase in the banks' ability to lend, as a result of the higher value of their holdings of shares.

The availability effect is due to the fact that certain interest rates do not respond quickly to changes in the market rate of interest. In the U.K. for example, financial institutions such as the building societies, tend to lose funds when other interest rates rise because there is usually a significant time lag before they also adjust their interest rates upward. In Greece this kind of effect is not likely to have been of significant importance. If stock market rates rise this may cause some depositors to withdraw their funds from the commercial banks (if their rates are not also raised by the monetary authorities) in order to take advantage of the higher market rates. However, if we exclude the last four years of the period under consideration, activity on the stock market has been limited and there has not been any significant reduction of bank lending ability as a result of such an effect. Thus it would seem that the size of the effect of changes in interest rates is likely to be limited.

5.3. Empirical Evidence.

An attempt has been made to find some empirical evidence of the effect of monetary variables on the real sector. Consequently some single equation estimates of the relationship between consumption and investment expenditure and various monetary variables. Obviously the use of single equation estimates is unsatisfactory in view of the fact that many of the variables are interrelated, and only tentative conclusions can be drawn from the estimated equations.

5.3.1. Consumption Expenditure.

In order to try and relate consumption expenditure to the

adjustment process between liquid and real assets described in the preceding section, a series of regressions based on Zellner's work on the consumption function (70) and developed in his further work with Huang and Chow (71) were carried out. In the second work, consumption in one quarter, C_t , is related to expected disposable income in the same quarter, Y_t^e , and to the difference between liquid assets held in the previous quarter, L_{t-1} , and liquid assets desired in the current quarter, L_t^d .

$$C_t = K Y_t^e + a (L_{t-1} - L_t^d)$$

where $L_t^d = \eta Y_t^e$ or $\eta Y_t^e - \delta i_t$, if the interest rate, i_t , is assumed to affect desired holdings of liquid assets. In the estimates attempted here, however, only annual data was available for income, therefore^a slightly different equation was used on the assumption that adjustment between desired and actual holdings of liquid assets occurred within the same year. Thus it was assumed that:

$$C_t = K Y_t^e + a (L_t - L_t^d) + u_t \quad (i)$$

$$\text{where } L_t^d = \eta Y_t^e \quad (ii)$$

$$\therefore C_t = (K - a\eta) Y_t^e + a L_t + u_t \quad (iii)$$

If then it is assumed that expected income is determined by the sum of past levels of income weighted on a geometrically declining basis

$$Y_t^e - Y_{t-1}^e = (I - \lambda) (Y_t - Y_{t-1}^e)$$

$$\therefore Y_t^e = (I - \lambda) (Y_t + \lambda Y_{t-1} + \lambda^2 Y_{t-2} + \dots + \lambda^n Y_{t-n} + \dots) \quad (iv)$$

Hence using a Koyck transformation and combining (iii) and (iv) we get

$$C_t - \lambda C_{t-1} = (K - a\eta) (I - \lambda) Y_t + a L_t - a \lambda L_{t-1} + u_t - \lambda u_{t-1}$$

$$\therefore C_t = \lambda C_{t-1} + (K - a\eta) (I - \lambda) Y_t + a L_t - a \lambda L_{t-1} + u_t - \lambda u_{t-1} \quad (v)$$

Or if the interest rate is included we obtain:

$$C_t = \lambda C_{t-1} + (K - a\eta) (1 - \lambda) Y_t + a L_t - a\lambda L_{t-1} + \delta i_t - \lambda \delta i_{t-1} + u_t - \lambda u_{t-1} \quad (vi)$$

Both equations (v) and (vi) were estimated. Since figures for disposable income were not readily available data for total income was used instead. This is not expected to affect the results significantly since tax rates did not change much during the period considered. Therefore total income probably is a fairly good proxy for disposable income. The rate of interest used was that on savings deposits with the commercial banks, while both currency and the broad definition of money supply, i.e. currency plus demand and savings deposits, were used in turn as the liquid assets variable. The dependent variable was private consumption and all the variables were in nominal terms. The results are set out in Table 5.1., for currency as the liquid asset.

The interest rate variable was dropped since it proved to have insignificant coefficients although they were of the right sign. As the table shows the coefficients of the other explanatory variables were of the expected sign and highly significant with the exception of the lagged dependent variable when absolute values were used (Reg.1). However when the first differences of the variables were used (Reg.2) all variables including lagged consumption were highly significant. Although the multiple correlation coefficient was lower in regression 2 than in regression 1, it still remained very high being .930. The Durbin Watson test showed the absence of positive and negative autocorrelation in the first regression and the absence of positive autocorrelation in the second, while the test for negative autocorrelation showed that the statistic was just within the critical area. Although the inclusion of the lagged dependent variable renders this test inconclusive. Regressions 3 and 4 were carried out without the inclusion

of lagged consumption but there was no marked difference in the results although positive and negative autocorrelation as measured by the Durbin Watson statistic were completely absent. These results appear to support the argument that consumption expenditure is altered in response to changes in currency so as to bring about a balance between liquid and less liquid assets.

The use of currency plus deposits as the liquid assets variable gave very poor results. The coefficients although of the expected sign, proved to be insignificant for the unlagged and lagged liquid assets variable. However, since equation (v) is overidentified, the regressions ideally should be run with restricted estimates. The fact that unrestricted estimates were made may be the cause of insignificance, and reduces the confidence which can be attached to all the regression results. It must also be noted that the results do not prove a particular direction of causation but merely indicate that there exists a relationship between liquid assets and consumption. In all probability this relationship is a two way one.

5.3.2. Investment Expenditure.

An attempt was also made to find some evidence for the influence of monetary variables on the level of investment. Investment appears to depend mainly on previous levels of income. The use of an accelerator type equation linking investment with the change in income produced an insignificant income coefficient. Therefore a number of policy variables including interest rates on long term loans for investment purposes were added to the equation relating investment to the previous year's level of income. The interest rate on loans was found to be completely insignificant for total private investment, investment in manufacturing and housing investment.

TABLE 5.1. Regression Coefficients for the Consumption Function.

<u>Dep. var.</u>	<u>Indep. var.</u>					R^2	D-W
	Const.	Y_t	I_t	I_{t-1}	C_{t-1}		
C_t	8846	0.463	3.844	-3.310	0.155	.997	1.68
reg.1		(4.9)	(6.4)	(4.8)	(1.14)		
ΔC_t	3664						
		(ΔY_t)	(ΔI_t)	(ΔI_{t-1})	(ΔC_{t-1})		
		0.734	5.206	-6.286	0.562	.930	2.47
reg.2		(4.1)	(7.6)	(4.4)	(2.5)		
C_t	11.10	0.523	3.812	-3.016		.997	1.62
reg.3		(6.71)	(5.26)	(4.68)			
ΔC_t	868						
		(ΔY_t)	(ΔI_t)	(ΔI_{t-1})	(ΔC_{t-1})		
		0.540	4.471	3.067		.897	2.230
reg.4.		(2.81)	(6.23)	(4.10)			

Figures in brackets refer to the t-statistic.

A variable representing the flow of loans for long term investment was also found to be insignificant. The only financial variable found to have a significant effect was short term loans to industry for working capital.^(w) Housing investment* (I_H) was found to be positively related to this variable. This result is indicative of credit leakage which has undoubtedly taken place throughout the period.

A similar lack of direct influence of monetary variables on investment has been found in Italy (72), although some security interest rates do appear to have some significant effect even if not of large proportions. This is to be expected in the case of Italy which, as opposed to Greece, has a far more varied and developed financial sector and intercompany holdings of new issues amount to almost half the total. The fact that investment appears to depend almost exclusively on previous levels of economic activity has been noted in the econometric model of the Greek economy carried out at the Centre of Planning and Economic Research (73). The conclusion drawn from the empirical findings are that psychological and other non-economic factors were the dominant factors determining investment decisions. This conclusion appears highly plausible particularly in view of the fact that there are many structural weaknesses in the economy which are likely to have the effect of undermining business confidence and increasing the risk attached to long term projects in particular.

This account of how changes in monetary variables can have an effect on the level of consumption and investment expenditure and hence

$$* \quad (1) \quad I_H = - 5.8 + 0.067 Y_{t-1} + 0.206 i_{t-1} + 0.452 W$$

(11.86)
(0.92)
(2.3)

$$R^2 = .993 \quad D - W = 1.632$$

on income and prices, has been rather mechanistic since it concentrated on a one way direction of causation. Although there is evidence that changes in monetary variables have influenced consumption in particular, there is also evidence that the converse has also occurred. Thus changes in economic activity have a direct effect on the supply of money which is to a large extent demand determined. Ideally then, a fully integrated model of simultaneous equations is needed for a more accurate representation of the relationships in the economy. The single equation estimates presented above should therefore, be used to draw only tentative conclusions in knowledge of their limitations.

CHAPTER 6

Conclusions for Monetary Policy

In this final chapter the monetary policy implemented during the twenty year period since 1950 will be evaluated in the light of the analysis of the previous two chapters. Given the economic and institutional background outlined in chapters 1 and 2 and the interaction between the real and monetary sector, the aims set by the authorities and the means employed for achieving these aims can be critically examined. It is argued that too much has been expected of monetary policy with respect to promoting growth and that the absence of an overall government development policy has even made the short run objectives of stability difficult to achieve by monetary means. Finally, an attempt is made to place monetary policy in correct perspective, as a means of facilitating the financing of investment, within a comprehensive growth policy in which government planning and initiative is of primary importance.

6.1. The Aims of the Monetary Authorities.

The broad policy objectives of the monetary authorities throughout most of the period under review, have been the maintenance of internal and external stability in conjunction with specific measures, designed to promote economic development (74). The theory underlying the actions of the authorities has been that stability is of prime importance for the development process. Internal stability has been defined by the authorities as a rate of increase of prices which will not create an adverse psychological climate and is not greater than that prevailing in the world market. Since Greece has to rely

extensively on imported goods both for consumption and investment purposes, it is to be expected that price developments abroad will be transmitted to Greece also. External stability is defined as a balance of payments position which will not have a detrimental effect on the gold and foreign exchange reserves of the country. In developing countries, it is argued, confidence or psychological factors are of equal importance as real factors. The fact that most developing countries, Greece included, have undergone the experience of severe inflation or hyperinflation means that people are particularly sensitive to price increases and the balance of payments position. Even chance increases in the prices of key commodities are often sufficient to spark off a reaction, endangering internal and external stability. The reaction is liable to be much stronger than would be the case in a more advanced country or a country where previous experience has not destroyed money illusion. Even after a number of years of stability, public confidence in the currency may still remain unduly susceptible to changes in economic and political factors and great care has to be exercised by the monetary authorities in order to avoid any recurrence of developments which might lead to panic action.

Inflation led growth even of the selective type, it has been maintained, is not likely to promote economic growth. The main problem facing an economy like that of Greece is not so much a lack of demand as structural deficiencies coupled with a lack of entrepreneurial and other skills and technical knowledge. These deficiencies are often more important than scarcity of capital funds. Thus the monetary authorities say, a redistribution of income in favour of the entrepreneurial class via inflation will in all probability merely lead to hoarding, conspicuous expenditure and increased investment in those traditional sectors like building which offer

quick gains. Selective inflation in certain priority sectors in order to attract investment to these sectors is also subject to serious dangers. Apart from the difficulties of containing price increases to these sectors alone in view of the limited policy weapons available in a developing economy, the low mobility of factors of production means that price differentials have to be substantial if they are to induce mobility of capital.

The promotion of the priority sectors has been attempted ^{by} specific, mainly monetary, measures intended to encourage investment. The sectors designated as priority sectors have been the various branches of industry particularly export oriented industry, tourism and to a certain extent agriculture (75). Although there have been few explicit policy pronouncements, it would appear from an examination of the various measures described in Chapter 3 that the Greek authorities have based their strategy of growth on the sectoral or unbalanced approach to growth. Hence there has been no overall plan aimed at promoting growth in a wide range of sectors. Instead there have been specific measures aimed at certain sectors with the emphasis on exports. The main factor determining the rate of growth aimed at by the authorities, in general, has been the desire to avoid disturbing monetary stability. In other words the authorities have attempted to strike a medium between stability and growth (76).

At the same time the role of foreign investment was seen as crucial to the development process (77). So important was the role of foreign capital considered, that the Governor of the Bank of Greece in a personal paper suggested the formation of special institutions in underdeveloped countries, with counterparts in developed countries in order to coordinate and direct foreign direct investment in developing countries (78). Recognition of the fact that the severe constraints

to domestic private investment were unlikely to be overcome by domestic businessmen, was the reason for the emphasis on foreign direct investment. The government sector, it was argued, was also subject to the same obstacles as the private sector hence foreign investment was the answer (79). However this reasoning ignores the fact that the major obstacle to an adequate level of private investment is the high risk attached to long term projects, often as a result of government action itself. This risk constraint would not apply to government investment. Other arguments such as for example, a shortage of investment funds are also inapplicable. The evidence for excess reserves and the high level of liquidity in the economy indicated the absence of a serious financial constraint provided that available resources were efficiently mobilised. Thus it can be strongly argued that there was no such pressing need for foreign investment to justify the granting of concessions which (a) made direct foreign investment of doubtful economic benefit for the country and (b) at the same time intensified Greece's economic and political foreign dependence.

The approach to growth outlined above was implemented for most of the period under consideration, specifically from 1950 to the end of 1963. There then followed two periods which must be distinguished. The four year period following the military takeover in 1967 is one of these. The resignation of the leading officials of the central bank as well as the fact that the military occupied most ministerial positions meant that few of the former holders of official posts were involved in economic and monetary policy making. The immediate aim after April 1967 was to stimulate the economy following the drop in economic activity which accompanied the coup. Thus in the two years 1967 and 1968, a policy of monetary ease was pursued. The consequence of this was a substantial widening of the balance of payments deficit

plus disturbing signs concerning future price developments. This caused the monetary authorities to place more emphasis on selective credit controls in the next two years although no effort was made to restrict the rate of increase of money supply. This four year period is characterised by a general absence of any conscious and coherent theory of growth and short term economic and political expediency were the main determinants of the various measures imposed. There are certain features however which are an extension of the approach outlined above. First, monetary policy was considered as the major policy tool as before, and secondly, emphasis on the importance of foreign investment was increased still further (see(80)and(81)).

The period extending from the end of 1963 up to the middle of 1965 also presents features which differ from most of the years under examination. The change in government following elections held in November 1963 was accompanied by an approach to the overall strategy of growth which diverged significantly from that previously in force. Less emphasis was placed on monetary stability and more on the maximum utilisation of available resources. It was believed that far greater monetary expansion could be achieved without this giving rise to undue inflationary pressure because there existed adequate scope for a rapid rise in productivity. Underemployment and unemployment were rife thus there was no shortage of labour. Capital funds and natural resources were also felt to be underutilised. It was argued that there was no real shortage of capital funds but that an adequate mechanism for the mobilisation of savings was lacking. The excess reserves held by the banking system was seen as a symptom of this deficiency*. At the same time a shift in emphasis from the export industry to import substitution

* For a rigorous exposition of this view see Loukopoulos (82).

could be discerned. Priority should be given, it was argued, to those sectors with the highest income elasticity of demand. The problem then was seen as encouraging investment and ensuring that funds were available for the financing of long term projects. Monetary restrictions were accordingly eased substantially with a view to promoting investment, while it was felt that a controlled rate of inflation would provide the necessary impetus to the private sector for sustained growth to occur. At the same time there was a substantial increase in government expenditure. Thus for a short length of time there was a significant departure from the previously prevailing approach to growth. Also during this period a start was made in the field of economic planning and the draft of a comprehensive five year plan for Greece was finally completed in 1965. However, for political reasons this new approach to the problem of growth had little chance to be tried out in practice. The Papandreou government was abruptly cut short in July 1965 and throughout the remaining five years of the period being considered, political developments prevented any serious long term planning for growth.

An appraisal of the monetary policy pursued in Greece requires that the policy be examined under two general headings. First, an examination of the technical feasibility of the policy targets must be made. In other words, given the institutional, behavioural and general economic background and in addition the links between the real and monetary sector, the feasibility of the policy objectives must be assessed. Second, the monetary strategy adopted must be evaluated in terms of the extent of its contribution to the overall target of economic development. The following section deals with these two considerations in turn.

6.2. The Feasibility of the Monetary Policy Targets.

Before beginning a critical appraisal of monetary policy in Greece it is important to note the role played by fiscal policy. Over the period considered, fiscal policy has not been used much as a means of regulating short term economic activity (83). In the earlier part of the period, the main objective of fiscal policy was the achievement of a balanced budget on current account, in order to reduce the inflationary pressures in the economy and contribute towards a return to price stability (84,85). A balanced current budget was eventually achieved in 1957 and the ordinary budget has remained in surplus in most years since then. This was followed by an extension of the government investment programme, primarily involving basic infrastructure investment. Decisions on the level of government expenditure have been influenced mainly by political or development considerations rather than by demand management considerations. Similarly taxation policy has been viewed as a source of revenue rather than as a tool for varying disposable income and hence controlling aggregate demand. Neither government expenditure nor taxation measures have been effectively used to bring about structural changes in the economy. As already pointed out, government expenditure has been mainly confined to infrastructure investment while tax incentives have not been of any importance in determining the volume and composition of investment (86). Similarly there have been no effective tax incentives for the promotion of regional development. Despite central bank statements in favour of a more equal income distribution the inadequately progressive nature of direct taxation and the overreliance on indirect taxation (which accounts for approximately 60% of total taxation revenue) means that the distribution of income is in favour of the higher income groups. There is convincing evidence that these groups indulge in a high level

of expenditure on luxury goods and have a higher marginal propensity to consume and to import than lower income groups (87). Thus it cannot be argued that a redistribution of income in favour of lower income groups would have an adverse effect on savings, rather the opposite effect appears more likely. Taxation has not then contributed adequately to the maintenance of price stability or the improvement of the balance of payments. In addition, the situation has been made even more difficult by the absence of a capital gains tax. This has encouraged speculation in real estate and building (88). Thus fiscal measures have played a relatively minor role in the maintenance of internal and external stability and in the direct promotion of economic growth. Apart from government infrastructure investment, which is a necessary but insufficient condition for economic growth, there has been no systematic long term planning on a regional and national basis, nor have all the available policy instruments been used in a coordinated way for the attainment of specific growth objectives during the twenty year period. Therefore monetary policy has been used as the major method of regulating the economy, often by attempting to offset the undesirable effects of government actions in other fields. In addition, a major role in encouraging growth has also been allotted to monetary action. This has had repercussions for the effectiveness of monetary policy.

The objectives of price stability and balance of payments equilibrium have to be tackled on two levels. In the long run the aim has to be to eliminate or at least minimise the structural deficiencies in the economy and to raise the economy's productive capacity so as to meet ever rising demand stemming from higher income and changing consumption patterns. In the short run, if adverse effects on prices and the balance of payments are to be avoided, consumption demand has to

be curtailed and resources channelled into those sectors which are important for the attainment of the long run objective. In the absence of adequate long term planning and investment, short run measures to restrict demand whenever inflationary pressures are intensified, merely have a retardive effect on growth.

As already stated, the essential control of the supply of money in Greece is in the hands of the government and not the central bank. The fact that the objectives of the former have been determined by a different set of considerations from those influencing Bank of Greece aims, has meant that government and central bank actions have worked in opposite directions. So for example, at times when the pressure of excess demand has been considered excessive, government expenditure has increased and a restrictive monetary policy has been employed to counteract this. In other words, private demand has been restricted after government financing requirements have been met. This occurred in 1965 when for the first time since 1957 the ordinary budget was in deficit although a restrictive monetary policy was in force. Such a policy of restraint on private expenditure while public expenditure is rising is legitimate only if this is an intentional policy of diverting funds to the public sector when it is felt that it will utilise these funds more efficiently than the private sector in projects designed to raise productive capacity. The converse, happened in 1960. This time a policy of relative ease was being followed due to the slackening of the rate of growth of income in the preceding years from 8.2% in 1957 to 1.5% in 1958 and 4% in 1959. At the same time net government expenditure dropped to less than half the level of 1959 and dropped again in 1961. National income in 1960 rose by only 3.1%, even lower than the previous year's rise of 4%, while the rise in national income of 10.9% in 1961 appears to have been largely due to an exceptional harvest.

More often however monetary policy has been used as a means of offsetting high levels of government expenditure.

Even if the supply of money were under the central bank's control, restricting money supply in order to control prices and imports would not appear to be an efficient way of exercising control. If the evidence that money supply has a direct effect on consumption expenditure and certain categories of investment is accepted, then restricting the growth of money supply has the effect of dampening economic activity generally. Such a policy which indiscriminately affects all sectors can only restrain prices and imports at the cost of economic growth. This problem is particularly serious in a developing economy. Any general restrictive measure is likely to affect the priority sectors more than traditional sectors. The obstacles to investment in the priority sectors such as manufacturing are already sufficiently great to discourage activity. Any further uncertainty as a result of a monetary policy which restricts demand merely adds to the problem of overcoming reluctance to invest in these sectors unless there is an adequate, parallel effort by the government to make such sectors more attractive for investors by other measures. The absence of any such measures in Greece has meant that the structural deficiencies in the economy continue to exist and the priority sectors lag behind their potential rate of growth.

Nor on the other hand, is it advisable to use increases in money supply to stimulate demand. This will affect all categories of consumers indiscriminately and will probably lead to consumption expenditure in undesired directions such as imports. Using fiscal measures to raise the income of poorer sections of the population will increase the likelihood that the primary round of increased spending will be mainly directed at domestically productive goods.

The fact that money supply has been determined by factors which are mostly beyond the control of the central bank has resulted in great reliance being placed on direct quantitative and qualitative selective controls on credit (89). These controls however, also tend to suffer from the same disadvantages outlined above, because of the overall government economic policy. Even when strict credit restrictions have been placed only on selected sectors such as building or trade, this has still generally resulted in an overall dampening of economic activity, despite the fact that the object of such controls has been to encourage investment in the priority sectors by ensuring that adequate finance is available. However, selective controls on credit to building, trade etc., restrict the level of activity in sectors which although they may not add to the country's productive capacity, nevertheless generate a higher level of income and demand among a significant proportion of the population. Any fall in demand which strict controls may bring about, has a further adverse effect on the already low level of investment in the priority sectors unless suitable steps are taken to compensate for any reduction in demand by an increase in activity in other areas.

The availability of adequate finance for the priority sectors is not by itself an adequate guarantee that investment in these sectors will increase. Since at least part of the excess reserves of the banking system has been due to a lack of demand for long term investment funds, this is a strong indication that availability of finance has not been the only factor preventing investment in the priority sectors. Consequently restricting speculative activity in the building sector for example cannot be expected to cause a switch from this sector to say, manufacturing. This has been repeatedly illustrated in the case of Greece. If measures designed to overcome the non-financial obstacles to

investment are not implemented in conjunction with selective controls, then the latter merely reduce the overall level of private economic activity. This in turn reduces aggregate demand and intensifies the problems of the priority sectors by making them even more unattractive to potential investors. Thus in this case, the use of selective controls turns out to be a self defeating exercise. Although they are intended to control excess demand hence restraining prices and imports while simultaneously encouraging productive activities, selective controls alone can achieve the first aim only at the expense of the latter.

This has had serious consequences for the rate of development. In view of the fact that there has been no sustained and systematic effort to implement an overall government policy for raising the country's productive capacity the dual role ascribed to selective controls has been of particular significance. Thus they have been considered not only as the main method of regulating liquidity in the short run but also as one of the major tools for effecting structural changes in the economy. However as already indicated there is a serious conflict between these two objectives of selective controls given the conditions prevailing in Greece. An additional complicating factor is the existence of widespread credit leakages. This has generally reduced the effectiveness of selective controls with respect to both objectives.

Reserve requirements and special reserves have been another possible tool of monetary policy. As indicated by the statistical tests in the fourth chapter, the main factors determining the level of reserves held by the commercial banks have been the ratio of savings deposits to other deposits and the discount rate. Both these factors, as already discussed, reflect the dominant position of risk considerations in determining commercial bank behaviour. These results further indicate

that part of the excess reserves of the commercial banking system has been voluntarily held to meet unforeseen contingencies, although there is some evidence that lack of demand for long term loans has also contributed to excess reserves. Both factors have repercussions for the effectiveness of changes in reserve requirements. Any reduction in compulsory reserves is unlikely to have any immediate effect to the extent that excess reserves are due to lack of demand for loans. For the banks there is little difference between having interest free deposits at the Bank of Greece or holding higher, also non-earning, reserves. The fact that part of the excess reserves are not held voluntarily by the banks intensifies the asymmetry exhibited by monetary measures when used as a means of stimulating rather than restricting economic activity. Therefore if it is required to encourage activity the more appropriate monetary weapon to employ appears to be an increase in currency which has a direct impact on demand, rather than reduction in compulsory reserves.

However a decrease in the level of supplementary reserves may be more effective than a decrease in reserve requirements. The former have taken one of two forms in Greece - compulsory purchases of treasury bills or interest bearing deposits with the central bank. In contrast to reserve requirements, both forms of supplementary reserves earn income. A reduction in supplementary reserves adds to the involuntarily held excess reserves of the commercial banks but at the same time the important difference from a decrease in reserve requirements is that the earning assets of the commercial banks are reduced. This may induce the banks to make up the loss of income by extending new loans, even of the type they would have avoided before if severe restrictions prevent them from extending further short term credit. Of course this is only possible if the unwanted reserves are due not only to a general lack of

demand for long term credit but also to an insufficient number of applications for loans judged by the banks to be a safe risk. In view of the very strict criteria employed by the commercial banks this may well be the case, particularly where small firms are concerned.

In the case of a restrictive policy, both ordinary reserve requirements and supplementary reserves are likely to be more effective than when the aim is to stimulate the economy. Any increase in compulsory reserves which is greater than the unwanted reserves will restrict the lending ability of the banks. As in the case of restrictive credit controls the resultant decrease in credit to the private sector, unless matched by increased government expenditure, will reduce economic activity and the rate of growth of income. Of course both tools can be used in this way if a diversion of funds to the public sector leads to direct government investment in the priority sectors which would not have otherwise occurred. Even when there is no need to reduce aggregate demand because of inflationary pressures, these tools can be used as a means of allocating funds more efficiently. In practice it appears that while the infrequent changes in ordinary reserve requirements have been used to regulate bank liquidity, the much more frequent changes in supplementary reserves have been used to cover the rising level of government expenditure (90).

From the preceding discussion the incompatibility of the aims of the monetary authorities as well as the conflict between monetary policy and other government policies can be discerned. The central bank's attempts to restrain prices and imports have been hampered by a number of factors. The rapid rate of growth of aggregate demand has been reinforced by credit leakages, an ineffectual system of taxation, significant income inequalities and behavioural factors. At the same time, output has lagged behind increases in demand due to an inadequate

government policy for increasing the rate of investment and effecting a change in the composition of national product. It has not been possible to suppress the growth of demand within the limits set by the rate of growth of output by the use of monetary measures alone. It is doubtful whether this could have been achieved even by a more concerted government effort since output has grown at a rate considerably below people's expectations and demands. Yet throughout the twenty year period there has been no systematic programme for increasing the rate of investment and output.

So the conflict between the short run objectives of maintaining internal and external stability and the long run growth objective has intensified. Thus in the earlier part of the period considered internal price stability was maintained at the expense of rising imports and a widening balance of payments deficit, as excess demand was met increasingly by import commodities. However even this partial success was achieved at the cost of economic growth since monetary restriction was the rule up to early sixties. Given the inadequate government policy to raise productive capacity a more expansionary monetary policy would probably have led to a far more serious running down of foreign exchange reserves. It is important to note that attainment of some sort of uneasy compromise between price stability and the balance of payments position was greatly facilitated by the rapid rate of emigration. The problem of unemployment caused by the low level of investment has been alleviated via the safety valve of emigration, while emigrants' and workers' remittances from abroad have been an important source of foreign exchange accounting for over $\frac{1}{3}$ of invisible receipts. As the changes in world economic conditions led to rising import prices and as a result of the complete absence of any coherent economic policy after 1967 the contradictions between the aims of monetary policy were

further intensified and the weaknesses of the Greek economy became increasingly evident. Given the fact that at no time was there any systematic government action to overcome the obstacles to growth, the responsibilities ascribed to monetary policy could not be fulfilled. In this sense, it is wrong to describe the inability of monetary policy to bring about structural changes or to maintain stability adequately, as a failure. It is rather an indication that the objectives set have been beyond the scope of monetary policy alone.

Nevertheless there are aspects of the monetary policy employed which indicate that even in matters within the range of monetary measures, the appropriate steps have not been taken. It has been already maintained that in a developing country in particular, the major function of monetary policy is to achieve the most efficient allocation of funds with a view to aiding the process of economic growth. As discussed in Chapter 2, the institutional mechanism is of importance in achieving this, yet there has been little effort to create the necessary institutions. It would appear that this has been mainly the result of the authorities' reliance on private initiative. Thus it has been left to the commercial banks, for example, to fulfill a function to which they are not suited and hence cannot perform adequately. The creation of ETBA the development bank was a step in the right direction but even this has failed to function properly because of inadequate planning to provide guidelines for the efficient allocation of resources, and has not provided funds to small, domestic firms in need of external funds while loans have often been granted to large domestic and even foreign enterprises. Given the structure of the industrial sector which is composed of a limited number of very large firms at one end of the scale and many small concerns at the other, the emphasis on the capital market appears to have been misplaced.

Although such a market can be helpful in securing finance for large firms, it cannot help the many small firms which need to invest in order to raise their productivity. Very few provisions have been made for the latter however, while most measures have concentrated on helping the larger and hence stronger firms. At the same time idle funds have been held by the commercial banks as well as ETRA and the two private development banks.

A more extensive system of state controlled institutions in the monetary sector is required. Such institutions could replace completely the commercial banks' involvement in investment financing and could allocate funds not on profit criteria but according to the requirements of the development process. Funds could be accumulated by the provision of suitable forms of financial assets for the public such as development bonds etc., as well as by increasing the supplementary reserve requirements of the commercial banks thus absorbing their excess reserves. Although, the formation of state development financing institutions operating on more successful criteria than those of ETRA during this period, would help the efficient allocation of funds, only one aspect of the development problem is covered. It must be stressed that ensuring an adequate supply of investment funds does not resolve the problem of non-financial constraints on investment, which requires other positive government action. Even more important in this context is the formulation of an overall government policy for growth which will delineate the areas which should receive priority in the allocation of funds. The efficient allocation of any scarce resource implies a detailed evaluation of costs and benefits and a clear definition of the targets being sought. This cannot be obtained without first working out the strategy of growth to be adopted on an overall basis. The ways in which monetary measures can contribute to the overall effort

by minimising financial bottlenecks and providing an adequate flow of funds to the desired sectors, can then be determined.

To summarise briefly it can be said that the role ascribed to monetary policy during most of the period 1950-1970 has been inappropriate. Instead of recognising that, particularly in a developing country, monetary measures can only complement other government policy, monetary policy has been viewed as the main policy tool. This has not only been the case as far as short term stabilising action is concerned. Disproportionate weight has been given to monetary measures for bringing about long term structural changes. The interrelations between monetary variables and between the real and monetary sector indicate that monetary policy is only able to partially achieve short term stability. There is a conflict between the aims of internal and external equilibrium. In addition there is a further contradiction between these aims and the longer term objective of economic growth. Hence it becomes evident that monetary policy cannot be employed as a substitute for other forms of government action and that there has to be a coordinated comprehensive government policy in order to minimise the inevitable conflict between various objectives. The general conclusion therefore is that undue reliance on monetary policy has inevitably led to the perpetuation of the economy's weaknesses and a lower rate of growth than could have been achieved. Given the conditions prevailing in the Greek economy, monetary policy can only have the aim of acting in an auxiliary capacity by providing the means of accumulating and allocating funds according to the requirements of an overall government policy for development.

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