

https://dspace.org/

The history of Eurocurrency system: future prospects and implications for the south african foreign exchange market

Bell, Graham Douglas

2015-01-07
http://hdl.handle.net/10539/16208

Downloaded from a DSpace repository. https://dspace.org/

THE HISTORY OF THE EUROCURRENCY SYSTEM: FUTURE PROSPECTS AND IMPLICATIONS FOR THE SOUTH AFRICAN FOREIGN EXCHANGE MARKET

Graham Douglas Bell

A Dissertation Submitted to the Faculty of Commerce, University of the Witwatersrand, Johannesburg for the Degree of Master of Commerce

Johannesburg 1985

ABSTRACT

BELL, Graham Douglas, M.Com. University of the Witwatersrand, 1985.

This dissertation studies the development and operation, advantages and problems associated with the Eurocurrency market. It also considers the parallel emergence of the United States dollar as the primary international vehicle currency. A well-developed international money market with easy access to a widely accepted international numeraire is deemed desirable because it reduces the costs of international financial transactions and facilitates international capital mobility. Two major criticisms are that the Eurocurrency market contributes to international inflation and that Eurobanks have been imprudent in lending to developing countries. The thesis concludes that the conventional credit multiplier model is not appropriate in studying the market but that there is, however, some inflationary potential. As for imprudent Eurobank lending, some blame adheres to the bankers but extensive international controls are ruled out. Finally, the advent of floating exchange rates in the 1970s and uncertainty surrounding United States economic policy has led to considerable uncertainty in international financial markets. This has been aggravated by volatile short-term international capital flows fuelled by the efficient Eurocurrency market. In such an environment South Africa has experienced considerable oscillations in the price of gold, its major export, and has embarked on a programme to establish a flexible foreign exchange market. Much progress has been made but important changes, particularly in the forward market, are vital.

DECLARATION

I declare that this disseration is my own, unaided work. It is being submitted for the degree of Master of Commerce in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in any other University.

G.D. Bell.

GRAHAM DOUGLAS BELL

30th day of September, 1985.

To my loving wife
BRENDA

PREFACE

The Eurocurrency market has been a source of fascination to economists ever since its inception in the 1950s. Its fortunes have been inextricably linked with those of the US dollar - the dominant currency in international trade and finance. This dissertation follows the parallel course of the Eurocurrency system and the US dollar through the period from the mid-1950s to the current day. It is a course fraught with problems : the collapse of the Bretton Woods agreement, the oil crisis, the adoption of floating exchange rates, accelerating inflation in the 1970s, the international debt crisis. Despite these problems both the dollar and the market have survived. Indeed, they still flourish.

Although peripheral to most of these events South Africa has been affected by them. In particular the substantial movements in the gold price and in the major exchange rates have influenced the adoption of more market-related financial policies in South Africa.

The seed for this dissertation was originally sown by Prof. D.J.J. Botha, Head of the Department of Economics at the University of the Witwatersrand, in 1978. Much of the initial reading was done under the auspices of the Office of the Economic Adviser to the Prime Minister in 1978 and 1979. The author is grateful to Dr. Simon Brand for the facilities provided by this institution. During this time Prof. J.C. Van Zyl, then of the Department of Economics at the University of Pretoria, provided much helpful guidance.

In September 1980 an article was published by the author in the South African Journal of Economics entitled : Eurodollars and the Dollar Standard : Implications for the Rand Exchange Rate. The author is grateful to the editors for assistance at that time which, hopefully, has been incorporated in this dissertation.

The thesis was taken up again in 1983 under the supervision of Prof. R.M. Gidlow of the Department of Business Economics at the University of

the Witwatersrand. His continual assistance has been gratefully appreciated throughout.

Much has changed in the period since 1978 but the basic tenet of the thesis still holds: a dominant international vehicle currency supported by a viable international money market contributes considerably to reducing the cost of international financial transactions.

Controls are usually unsuccessful in financial markets. This point has also been accepted in South Africa where an important revolution in financial policy is taking place.

The author is grateful to numerous other professional economists who have seen earlier drafts of parts of this dissertation. These include Mr. Rudolf Gouws, Mr. Aubrey Dickman, Mr. Jim Buys and Mr. Gabriel De Kock. Further, the author was assisted in discussions with a number of foreign exchange dealers in Johannesburg, notably Mr. Stuart Hain and Mr. Trevor Walker.

CONTENTS

	Page
Abstract	i
Declaration	ii
Dedication	iii
Preface	iv
Table of Contents	vi
List of Tables	ix
List of Figures	xi
CHAPTER	
1. INTRODUCTION	1
2. THE USE OF MONEY	8
2.1 Introduction	8
2.2 The Use of Money	8
2.3 Money in an International Setting	12
2.4 Intertemporal Decision-Making	14
2.5 Social versus Private Returns to Capital	17
2.6 The Heckscher-Ohlin Theorem	18
2.7 International Vehicle Currency	21

CONTENTS (continued)

		Page
3.	ORIGIN, SIZE, LOCATION AND OPERATION OF THE EUROCURRENCY MARKETS	25
3.1	Introduction	25
3.2	Origin	25
3.3	Early Growth Phase - the Effect of US Controls ...	28
3.4	US Current Account Deficits	32
3.5	Size	34
3.6	Location	41
3.7	Sources	47
3.8	Users	49
3.9	Operation	51
3.10	Eurocurrency Interest Rates	58
4.	THE ROLE OF THE DOLLAR IN THE INTERNATIONAL MONETARY SYSTEM	64
4.1	Introduction	64
4.2	Dollar Overhang	64
4.3	The End of Bretton Woods	67
4.4	The First Oil Crisis	69
4.5	Dollar Diversification	72
4.6	Monetarist Practice	74
4.7	Conclusion	81
5.	INFLATION AND CONTROLS	84
5.1	Introduction	84
5.2	The Eurocurrency Markets and Inflation	84
5.3	Central Bank Redepositing	87
5.4	Shift of Ownership	88
5.5	Savings-and-Loan Associations	89
5.6	Supply and Demand Approach	90
5.7	Credit is Expanded	93
5.8	Liquidity Transformation	95
5.9	Inflationary Potential in Perspective	99
5.10	Controls	101

CONTENTS (continued)

		Page
6.	BANK LENDING TO LESS DEVELOPED COUNTRIES	105
6.1	Introduction	105
6.2	Origins of the LDC Debt Problems	107
6.3	Quantifying the Debt Crisis	112
6.4	Current Measures of the Debt Crisis	115
6.5	Early Warning System	119
6.6	Involvement of Banks	120
6.7	Eurobank Mistakes	123
6.8	LDC Mistakes	125
6.9	Controls	127
6.10	Conclusion	134
7.	GOLD, THE EUROCURRENCY MARKET AND THE DEBT CRISIS	137
7.1	Introduction	137
7.2	End of the Gold-Dollar System	138
7.3	Gold Price Unleashed	144
7.4	The Gold Price and the International Debt Crisis ...	153
7.5	Gold and the South African Balance of Payments ...	156
7.6	Conclusion	159
8.	THE EVOLUTION OF THE SOUTH AFRICAN FOREIGN EXCHANGE MARKET	163
8.1	Introduction	163
8.2	The South African Rand : 1971 - 1979	164
8.3	De Kock Commission Report	170
8.4	Steps towards a Managed Float	173
8.5	Developments in the Forward Exchange Markets	177
8.6	A Eurorand Market	181
8.7	Recent Developments	186
8.8	Conclusion	190
	SELECT BIBLIOGRAPHY	194

LIST OF TABLES

		Page
2.1	Growth in the Volume of World Trade	20
3.1	US : Official Reserves Transactions Balance	27
3.2	US : External Liabilities	33
3.3	Net, Net Size of the Eurocurrency Market	39
3.4	Ratio : Net, Net Size to US Money Stock	40
3.5	Eurodollar as a Percentage of Gross Liabilities in All Currencies	46
3.6	Currency Breakdown	47
3.7	Publicised Eurocurrency Bank Credits	55
4.1	US Reserves : Liability Ratio	65
4.2	US Economic Variables 1974 - 1980	73
4.3	3-Month Eurodollar Rate	75
4.4	Share of the US Dollar in Official Foreign Exchange Holdings	78
4.5	Real 3-Month Eurodollar Interest Rate	80
4.6	Growth in Non-Bank Eurocurrency Deposits	81
5.1	Eurocurrency Market : Change in the Net Claims on Non-Banks	100
6.1	Total External Debt of 21 Major LDCs	106
6.2	Import and Export Growth in LDCs and Changes in IMF Commodities Price Index	109
6.3	Non-Oil Developing Countries Trade Deficit	110
6.4	Foreign Trade of Non-Oil Developing Countries	111
6.5	Changes in Commodity Prices, LDC Terms of Trade and LDC Trade Deficit	112
6.6	21 Major Borrowers - Debt-Export Ratio	116
6.7	21 Major Borrowers - Debt Service Ratio	118
6.8	Growth of Total External Debt of Latin American Borrowers	119
6.9	21 Major LDC Borrowers - External Debt Owed to Banks	121
6.10	US Banks : Reserves as a per cent of Total Loans	125

LIST OF TABLES (continued)

		Page
6.11	GDP and Current Accoun Balances in Latin America	127
7.1	Ratio of the Value of Wo ld Gold Reserves to the Value of Foreign Exchange Reserves	141
7.2	US Trade Balance and Inflation 1960 - 1971	143
7.3	Fabrication Demand for Gold	150
7.4	South African Gold Mine Production and Gold Export Value	157
7.5	South African Exports and Imports - Ratio to GDP	158
8.1	Total Merchandise Trade 1981	182
8.2	South Africa : Current Account and Imports	184

LIST OF GRAPHS

		Page
2.1	Marginal Rate of Transformation	15
3.1	Three-Month Interest Rates : Eurodollars and US NCDs	59
4.1	US Foreign Liability Ratio 1960 - 1971	68
4.2	US Foreign Liability Ratio 1971 - 1983	79
5.1	Discontinuous Yield Curve	90
5.2	Continuous Yield Curve	91
5.3	Eurobank Supply and Demand Curves	95
5.4	Mis-Match Curve	97
7.1	World Trade and Reserves	139
7.2	Gold Price versus *US Inflation*	145
7.3	Gold Price versus US Dollar	148
7.4	Gold Price versus Metals Prices	151
7.5	Gold Price *versus US* Real After-Tax Interest Rate	152
7.6	Gold Price - 1982/3	153
7.7	Gold Exports - South Africa	159
8.1	*$/Rand versus PPP* Line	175
8.2	Monetary Banking Sector - Net Short-Term Foreign Assets	187

CHAPTER 1

INTRODUCTION

Two themes are pursued throughout this thesis. The *first is that the use* of a single currency for the denomination of international transactions *is desirable because* it reduces the costs involved in such transactions. Since World War II the US dollar has become the most widely accepted international currency despite periods when it has suffered from a decline in confidence.

The second theme is that the development of an *efficient international* money and capital market enhances world economic welfare because it *enables the proper allocation* of capital from capital-rich to capital-hungry economic entities. Despite criticisms, the Eurocurrency (popularly known as the Eurodollar) market has flourished over the past 30 years in response to a world-wide need.

The two themes are, in fact, complementary. The widespread use of a single world currency is possible only when transactors have easy and *rapid access* to it for a full range of financial services. The Eurodollar market has emerged as a natural consequence of the need for a widely acceptable international numeraire. Modern technology has made transactions in dollars virtually instantaneous while competition in international banking has ensured access from all corners of the globe.

Chapter 2 of this thesis focuses on the use of money in an exchange economy. The *introduction of money* to an economy allows the exchange process greater fluidity because it enables transactors to express mutual agreement (or disagreement) in terms of a unit which has equal validity in their eyes.[1] In a world lacking in perfect foresight money performs both the function of a medium of exchange and a store of value.

In the international context a single world currency reduces the cost of transacting because knowledge concerning it is widely shared by transactors. Thus in its medium of exchange function a single currency becomes more efficient. As for the store of value function, a well-developed international banking system enables transactors to choose

the most appropriate combination of liquidity and rate of return to suit their various needs.

Chapter 2 also discusses the role of sophisticated financial markets and a dominant world currency in improving the allocation of resources between present and future consumption; the parallel growth of international capital mobility and world trade; and concludes with a brief resumé of the emerging dominance of the US dollar after World War II.

Chapter 3 concentrates on the origin, size, location and operation of the Eurodollar market. The role of the US balance of payments deficits and US domestic financial controls in the emergence of the market is highlighted. Then follows a detailed analysis of the different measures of its size. The chapter continues with a discussion of the different financial centres making up the market and the currencies used; the sources of Eurodollar deposits and the users of Eurodollar loans. Finally, there is an overview of the operation of the market and the mode of determination of Eurocurrency interest rates.

Chapter 4 again takes up the complementary development of the dollar as international vehicle currency and the Eurodollar market. In the 1960s a dilemma emerged concerning the dollar. The rapid growth in world trade necessitated a corresponding increase in international liquidity. The US was reluctant to allow an increase in the dollar price of gold leaving the brunt of the demand for increased liquidity to fall on the dollar. As US inflation accelerated and its balance of payments deteriorated during the 1960s confidence in the dollar declined. The US imposed various controls to limit capital outflows which encouraged the development of the evolving Eurodollar market. Ultimately the lack of confidence in the dollar outweighed the international need for dollar liquidity and the Bretton Woods system collapsed.

During the 1970s the Eurodollar market continued to flourish particularly after the first oil crisis when it played a major role in recycling the OPEC current account surplus. The role of the dollar in international finance declined somewhat owing to a further acceleration of US inflation. However, from 1979 the US monetary authorities adopted a

determined anti-inflationary course which restored confidence in the currency considerably.

Arguments concerning the need for controls in the Eurodollar market generally focus on two major problem areas - the inflationary potential of the market and the lending of Eurobanks to less developed countries (LDCs). The first of these is considered in Chapter 5. Early analysis tended to focus on the fractional reserve multiplier model used to examine a domestic banking system. Many economists noted the very low ratio of reserves to deposits held by Eurobanks. This led them to postulate that the market operated on very high credit multipliers, created almost unlimited amounts of liquidity and possessed considerable inflationary potential.

As the Eurodollar market was subjected to more intense academic scrutiny it became increasingly apparent that the credit multiplier model was not an appropriate tool of analysis. One of the most important reasons for this was that there are no cheque facilities in the market. It became apparent that Eurobanks were more akin to non-bank financial intermediaries such as savings-and-loan associations.

Other theorists perceived that it was precisely because of their negligible reserve ratios that Eurobanks did not create credit in the conventional way. Without the fulcrum of a required reserve ratio Eurodollar deposits and loans were much more sensitive to interest rate movements. For example, an exogenous rise in deposits need not necessarily result in increased lending by Eurobanks. It could equally lead to a fall in deposit rates and a corresponding withdrawal of deposits by investors seeking better returns in other markets.

Another issue was the extent to which the market could enhance the liquidity of the non-bank sector. Empirical analysis shows that Eurobanks do tend to transform short-term deposits into long-term loans.

Overall it is concluded that the Eurodollar market does have some inflationary potential particularly through its ability to increase the velocity of the given stock of money in a domestic economy. However, because the market is an extension of domestic money markets it is within

the scope of domestic monetary authorities to control its inflationary potential. Controls, in some international form, are therefore rejected.

Chapter 6 is concerned with international bank lending to LDCs. The origins of the so-called 'debt crisis' in 1982 are discussed, particularly with respect to the growing role of Eurobanks in financing LDC development. This is followed by a review of the various measures adopted by banks to quantify the creditworthiness of debtor countries. It is apparent that the commonly used debt ratios were either inadequate or not fully adhered to during the latter half of the 1970s. Data on these ratios are included along with numbers on bank lending to various major debtors.

The view is held that neither the Eurobanks nor the LDCs can shoulder all the blame for the debt crisis. However, numerous misconceptions were apparent on the part of the banks. These concerned issues such as the potential for a country to go bankrupt and the belief that world central banks would automatically support stricken Eurobanks. The issue of controls is also covered and this section includes a brief list of various organisations of international bank supervisory bodies. It is concluded that there should be neither a cessation of private bank lending to LDCs nor an overly austere programme of restraint in LDC economies. Rather a careful balance between adjustment and financing should be adopted over the remainder of the decade with close co-operation between private banks, official lending agencies and the LDCs.

Chapter 7 returns to the parallel themes of the dollar and the Eurodollar market. The chapter commences with a more detailed discussion of the failure of the US to revalue the gold price in the 1960s. Apart from the dollar only gold was capable of meeting the need for international liquidity. US economic policy did not inspire confidence in the dollar and the Bretton Woods system ultimately broke down in 1971. Thereafter followed a dramatic surge in the gold price. Fuelled by the efficient Eurodollar market liquid funds were rapidly channelled from one investment outlet to another in various geographical locations. Floating exchange rates became the rule for the major currencies.

The movement in the gold price had important consequences for South Africa and an analysis of the gold price vis-à-vis four economic variables is undertaken. These are: the US inflation rate; the trade-weighted US dollar exchange rate; the US business cycle; and the real, after-tax US interest rate. The role of the debt crisis in determining the movement in the gold price is also covered. The chapter concludes with a brief analysis of the importance of gold for the South African balance of payments.

The final chapter, Chapter 8, focuses on developments in the South African foreign exchange markets in the light of the gyrations in the international monetary system after 1971. Firstly, there is an historical overview of South African exchange rate policy between 1971 and 1979. The authorities experimented with various measures according to the state of the domestic balance of payments and external currency adjustments.

From 1979 the proposals of the interim report of the De Kock Commission of Inquiry concerning exchange rate policy were progressively implemented.[2] The Commission recognised that in a world of floating exchange rates and volatile capital flows, a more flexible exchange rate regime needed to be implemented.

By 1983 a managed float of the spot rand exchange rate was in place. Unfortunately this did not prevent a dramatic decline in the rate during 1984. This was because the authorities were not able to follow a sufficiently disciplined combination of monetary and fiscal policy. This, sadly, went against the proposals of the Commission.

Progress in the forward exchange market was much slower. The Commission also recognised that a proper forward market was an essential adjunct to a managed spot rate. Not the least of its worries was the substantial losses incurred by the South African Reserve Bank on forward exchange transactions. By the time of writing the proposals concerning the forward market had not been put in place. Particularly necessary is the need for domestic banks to be able to make much greater use of the Eurodollar market for hedging forward commitments to clients.

The chapter also includes a discussion of the potential for a Eurorand market to develop. Despite South Africa's relative importance as a trading nation it is concluded that an offshore rand market is unlikely to be significant. More appropriate would be a further easing of exchange controls to allow foreigners to hold a wider range of rand-denominated financial instruments in South Africa.

CHAPTER 1

REFERENCES

1. Goodhart, C.A.E. Money, Information and Uncertainty, MacMillan Press, London, 1975, p.9.

2. Exchange Rates in South Africa. Interim Report of the Commission of Inquiry into the Monetary System and Monetary Policy in South Africa, Government Printer, Pretoria, November 1978.

CHAPTER 2

THE USE OF MONEY

2.1 Introduction

In this chapter the use of money in an exchange economy is discussed. It is argued that technological developments have reduced the cost of holding money in an uncertain world and have increased the efficiency of a commonly-accepted medium of exchange. In the international sphere it has also been practical to develop a single, acceptable currency unit because it reduces the cost of transacting. The US dollar adopted this mantle after World War II in response to the growing need for international liquidity. The status of the dollar as world numeraire was enhanced by the emergence and rapid expansion of the Eurocurrency market which has devised a sophisticated range of monetary instruments to satisfy the medium of exchange (liquidity) and store of value (minimum cost) needs of transactors in a widely accepted international currency.

Because it is efficient the Eurocurrency market has also increased international welfare by enabling unfettered transfer of financial resources from capital-rich to capital-poor nations i.e. from countries where the decision to consume is delayed to countries where it is not. In addition, it is argued that, far from free trade in commodities being a complete substitute for international capital mobility as posited in the Heckscher-Ohlin theorem, the combination of the US dollar and the Eurocurrency market enabled spectacular growth in world trade after World War II.

2.2 The Use of Money

The modern economic system with its sophisticated monetary mechanism has come a long way from the barter process of early economies. The use of a commonly accepted medium of exchange by societies has permitted the communal organisation of production and trade to develop far beyond the primitive exchange process which was based on the double coincidence of wants.

Barter trading is complex, costly, inefficient and slow because it restricts the exchange process to those transactors able to match divergent needs simultaneously. This hampers division of labour and the growth of productivity.

The use of money as a medium of exchange separates the decision to sell from the decision to buy and the divisibility of money enables precise satisfaction of different utility needs. Money oils the transactions process and facilitates rapid exchange.

The function of money as a medium of exchange relates to the specific point of time at which a transaction is made. Until such time as the transaction is undertaken the money used for the transaction must perform some other function. If it were absolutely certain as to the exact moment at which each transaction was to take place, there would be no necessity to hold the money required. It could be used to purchase some other asset which would yield a return to the transactor and would mature at the precise time that the transaction was due to take place.

As Hicks has pointed out, however, absolute certainty about future transactions is an unattainable goal.[1] Owing to men's ignorance of future events (and still more owing to their ignorance of the consequences of changes, whether future, present, or even past) perfect equilibrium can never be attained. The absence of perfect equilibrium or perfect *foresight concerning* the timing of transactions naturally implies that future prices on which economic actions are based are also uncertain.

The absence of perfect foresight is well illustrated by the discrepancy between disbursements and receipts in the modern economy. Individuals make purchase decisions continually throughout the period between salary or wage payments; *firms sell goods* continually throughout the period between salary or wage payments. *Inevitably* the use of money for exchange purposes is sporadic and variable. Money is not always spent as soon as it is received and this gives rise to its store of value function. 'Because a period of

time will usually elapse between an economic unit receiving its income and making its expenditure, a medium of exchange will also act as a store of value ...'.[2]

In the absence of a perfect world the decision as to how much money to hold depends, to start with, on the degree of uncertainty as to the time and price of future transactions, i.e. on the expectations of the transactor. Secondly, it depends on the alternative cost of holding money, i.e. the rate of interest and degree of risk inherent in non-monetary assets (or less liquid monetary assets).

Expectations both as to the timing and the price of transactions tend to be guided by past influences. There is usually a lack of information available to transactors about the availability of goods in alternative markets. The real supply-demand situation may not be reflected in price adjustments until quite some time after the transactions have been concluded due to variable rates of information-gathering and processing in different markets.

With respect to the alternative cost of holding money Tobin has developed useful theoretical insights.[3] Tobin's analysis of money demand combined both the means of payment and the store value functions of money. Tobin explained that economic units held both transactions balances and investment balances. Transactions balances were held because an economic unit did not enjoy 'perfect synchronisation between the seasonal patterns of its flow of receipts and its flow of expenditures'.[4] While the major proportion of these balances were held in cash, a smaller proportion could be held in interest-earning assets. What proportion would depend on the interest rates on alternative assets, the size of the transactions balances, etc. Therefore, this proportion of transactions balances would be performing a temporary store of value function.

Tobin distinguished investment balances from transactions balances as those balances which 'survive all the expected seasonal excesses of cumulative expenditures over cumulative receipts ...'.[5] Because the economic unit is risk averse owing to uncertainties regarding interest rate movements, at least a portion of investment balances

would be held in cash. This would depend on the rate of interest and the degree of risk of alternative financial assets.

Expectations about future price movements, including interest rates, clearly are important determinants which affect decisions about the optimum holding of cash in a financial portfolio.

Hicks has more recently asserted that one way of looking at monetary evolution is to regard it as the development of ever more sophisticated ways of reducing transactions cost.[6] The trend has been for the distinction between money and near-money to diminish. There are a wide variety of instruments which are virtually as liquid as cash and which can instantly be called upon for payments purposes at negligible cost. In sophisticated money markets interest-bearing assets such as negotiable certificates of deposit and treasury bills can easily be liquidated. The growing variety and exchangeability of near-money assets improves the ability of economic units to minimise the cost and uncertainty of disparities between receipts and disbursements.

Variety and exchangeability also enable holders of near-money assets to reduce the risk of capital gain or loss which they face when monetising them. Thus, while assets such as short-term bills and bonds do not have a certain nominal capital value and are subject to price changes as the supply or the demand for them change, they are still sufficiently 'money-like' to perform the medium of exchange function of money when needed. Although the store of value function of money still entails a cost measured by the yield on alternative financial assets, this cost has been reduced by the growing variety of near-money assets which carry an interest return.

In short, technological advances in money markets have improved the efficiency of money because they have reduced the cost to transactors of holding money simultaneously as a medium of exchange and as a store of value. It is also likely that the lower the risk and the higher the return attainable on a particular unit of exchange, the more widely it is likely to be used by the economic community.

2.3 Money in an International Setting

The growth of the international money markets has provided new avenues for the use of money *both as a medium of exchange* and as a store of value. According to Brunner and Meltzer, the Eurodollar market suggests the way in which a unit of account begins to acquire *the properties of a medium of exchange* and other attributes of money through the efforts of private traders.[7] Their analysis incorporates a succinct statement of the role of money in *an uncertain world*. They state: 'For individuals, money is a substitute for investment and information and labour allocated to research. By using money, individuals reduce *the amount of* information they must acquire, process and store and they reduce the number of transactions in which they engage to exchange their initial endowments for optimal baskets *of goods*. *The use of* money increases the welfare of each money user by reducing uncertainty, the length of transactions chains, and the variance of price ratios and by increasing the expected *wealth and time available* for leisure'.[8]

The rise of the dollar to the role of the world's major currency is practical *evidence of* this theory. The dollar has become internationally acceptable for the denomination of world trade in goods, services and financial assets. The Eurodollar market has *expanded to facilitate* the rapid transfer of dollars amongst users; the precision of specialised broking techniques has made dollar transactions across national borders a highly efficient process.

A strong case can be made out for a single international currency. Vaubel asserts that individual information cost (*depreciation of* memory) is smaller the longer a money has been used as a standard of value, and the larger the average number of accounts have been denominated in it per period of *time* (learning by doing). *Social* and spatial economies arise in contracts and payments between economic agents. They concern short-term exchange rate risk (or the cost of hedging *against it*), *convertibility risk*, and the transactions cost of exchanging moneys or of managing a multi-currency portfolio.[9] Vaubel continues: 'To some extent the choice between currencies is comparable *to the choice* between languages or telephone networks or

industrial locations: the more economic agents choose the product or location x, the more attractive it becomes for others so that success *breeds success* in a gradual and cumulative agglomeration process'.[10]

The use of the dollar has had a spill-over effect as the benefits are passed on from user to user. Market information becomes easier to attain; traders and brokers create linkages which facilitate the development of economies of scale. Working balances can be pooled and minimised while cash inflows can be more rapidly invested.

The Eurodollar market offers the investor a wide range of maturities in which to invest, from overnight to more than a year. This allows the transactor to choose deposit maturities to coincide with future transactions while unforeseen needs are accommodated by flexible, negotiable monetary instruments. Eurodollar deposit facilities enable dollars to perform the medium of exchange and store of value functions simultaneously because they offer a high degree of liquidity and a well-developed and flexible interest rate structure. This reduces the cost of holding money or near-money to a minimum. It allows the transactor to come closer to an optimal portfolio spread.

The expansion of the market has enhanced the process of information-gathering. Opportunities for division of labour have multiplied. Professional middlemen and specialised traders exploit the partial and incomplete distribution of information about particular currencies. Information costs about market conditions are lowered as these specialised services expand. Most banks in the Eurocurrency market prefer to make use of foreign exchange brokers who tend to specialise in particular Eurocurrencies or maturities. Some Eurobanks specialise in a specific Eurocurrency. Furthermore, rapid technological innovations have made the transfer of information a very speedy business. The telephone, and more recently, computer screens have made monetary transactions virtually instantaneous.

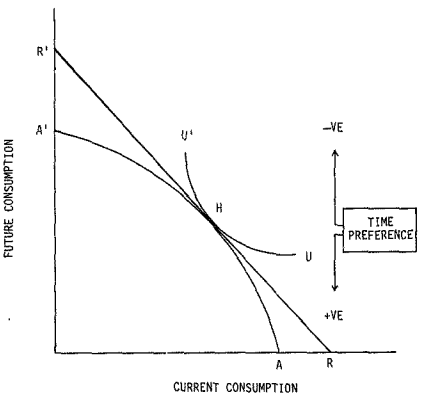
To conclude, the use of the dollar as international numeraire and the subsequent development of the Eurodollar market is a process which continually reinforces itself. Both the transactions and the precautionary demand for money are satisfied in a world where uncertainty about the timing of payments and the alternative cost of money exists.

2.4 Intertemporal Decision-Making

One major role of financial markets is to allow the producer to separate production and consumption decisions.[11] This applies as much to external as to domestic financial markets. Traditionally the theory of international capital flows starts with an analysis of production possibilities in a closed economy where producers have perfect foresight. Producers face a trade-off between production for current consumption and for future consumption. The marginal rate of transformation between present and future consumption is described by the intertemporal opportunity locus AA' in Graph 2.1.[12] The locus is concave to the origin indicating diminishing returns to scale.

By devoting some resources to future consumption total output over time can be increased. The slope of the tangent RR' in Graph 2.1 at any point along the locus determines the rate of return in terms of future output against present output given up. Resources will continue to be devoted to future consumption up of the point where this rate of return equals the market rate of interest.

GRAPH 2.1



The market rate of interest is determined by the time preference of the consumer. If consumers have a positive time preference, they prefer current consumption to future consumption and if they have a negative time preference, they prefer future consumption to current consumption. The market rate of interest is the slope of the line where the consumer indifference curve (UU' in Graph 2.1) is tangent to the production possibility locus. This is at point H.

This unique point signifies the equilibrium in domestic supply and demand given perfect foresight. As different economies are likely at any point to have different time preferences there are advantages in developing international trade and capital flows. A country with a positive time preference will have a relatively higher market rate of interest than one with a negative time preference. The positive time preference country therefore attracts capital from the negative time

preference country, selling claims on its future production in the process and enabling it to purchase more goods for current consumption. The negative time preference country lends to the positive time preference country and purchases claims on its future production in the process.

With the introduction of uncertainty the single market rate of interest (rate of return) is no longer realistic. Both borrowing and lending countries require a broader range of financial instruments to cater for varying perceptions of risk and return in a world with an uncertain future. Also, instead of there being just a small number of countries participating in world trade, there are, in reality, an almost infinite number of production and consumption units in the international economy with widely diverging needs and expectations.

In a certain world, free international trade in goods and financial assets would produce a constant rate of transformation and, hence, market rate of interest. When uncertainty is introduced the existence of risk leads to the creation of diversified financial assets so that each participant in international markets may choose an optimal combination of risk and return.

The use of money also facilitates the intertemporal allocation of resources. Deferred payments, borrowing, credit, and the payments system expand when a standardised asset with well-known properties becomes available. The reason is that transactors become more willing to enter into contracts calling for deferred payment.[13] The Eurocurrency system has developed a wide range of financial instruments to meet this need. Apart from the extensive deposit and loan facilities the market is broad and deep and participants also have the benefit of sophisticated forward cover mechanisms. With one currency dominant and acceptable in the market, participants are able to minimise currency transactions and information costs. This leads to greater efficiency in the allocation of international savings and thereby to improved investment and growth.

2.5 Social versus Private Returns to Capital

In the previous section it was argued that international capital movements separated the decision whether to consume or invest. This led to greater world economic welfare because participants could arrive at an optimal trade-off between present and future consumption.

For this to be true it is also necessary that the social returns to capital, i.e. the returns to society as a whole, coincide with the private returns, i.e. returns to specific groups. Factors such as divergent tax systems, inflation rates and direct controls over capital flows tend to drive a wedge between the social and private returns to capital. Modigliani has argued that until fiscal and capital market structures from country to country have been made reasonably uniform, there is no sound basis for arguing that freedom of capital to move in response to differences in private yields contributes to an improved allocation of world resources.[14]

There appears, however, to be considerable support for a classical stand as regards capital movements, i.e. that they should be left free. It is generally agreed that the principal benefit of international financial market integration is increased efficiency in the allocation of scarce capital resources throughout the world.[15] Lending by capital-rich countries generates higher returns in capital-poor countries than to domestic borrowers while capital-poor countries can invest more without having to sacrifice present consumption. The crucial precondition is that such capital movements are efficient.[16] It does not seem unreasonable to maintain that the Eurocurrency market has satisfied this precondition.

The argument is more elegantly stated by Kindleberger: 'The main justification for international capital movement is that it shifts savings from locations where they are abundant and cheap relative to investment opportunities to places where they are scarce and expensive. Where capital is more productive in one country than another, it should be moved from the country where it is less to a country where it is more productive. Total output is increased by

such movement. Where savers in one country have lesser preference for current consumption than those in another, total welfare is increased by shifting the consumption of one into the future and the other into the present'.[17]

Because the Eurocurrency market has developed free from restrictions on capital flows it has facilitated the efficient allocation of financial resources internationally. In addition, the market has promoted the US dollar's role as the world's major currency which has reduced the costs of international financial transfers. According to Einzig and Quinn[18] the market has provided an inducement as well as the means for greater co-ordination in international economic policies. Furthermore, the recovery of the major industrialised countries since World War II and the subsequent rapid growth in the developing countries specifically and as a group derived in large measure from the growing efficiency in the distribution of liquid resources on an international basis. The role of the US dollar in particular should not be understated. The increasingly wide use of the dollar as an international working and reserve currency has made the dollar money markets the closest approximation to a single world money market.

2.6 The Heckscher-Ohlin Theorem

Two Swedish economists, Eli Heckscher and Bertil Ohlin, writing in the early part of the 20th century, developed a theory for international trade which concluded that free trade in commodities could completely substitute for international mobility of capital and labour in the sense of driving wages and rents to equality for participating countries. If the theory is valid then there would be no need for capital to seek the best return, internationally, because the free flow of goods across borders would optimise the application of capital within domestic economies.

There appears to be a preference for free trade rather than free capital movements amongst official economic policy-makers. While there is no co-ordinated, official international agreement for capital movements, a structure for international agreements related

to trade does exist in the form of the General Agreements on Tariffs & Trade (GATT).

However, neither the Heckschler-Ohlin theorem nor the institutional approach have diminished the need for mobile international capital and rapid growth of an international structure to facilitate it. Indeed, it is argued that the rapid expansion of the Eurocurrency markets has been a response to and support for the sharp and sustained rise in world trade since World War II.

During the 1950s it was common cause that there was an international liquidity-shortage owing mainly to the non-convertibility of European currencies and the 'dollar shortage'. The emergence of the Eurodollar market was a natural consequence of the dollar's rise to the status of world currency. The market increased the availability and velocity of circulation of liquid resources necessary to finance the trade boom. From Table 2.1 it can be seen that world trade volume grew at an average rate of over 7 per cent during the period 1954 to 1970; in other words from just prior to the advent of the system until the end of the first full decade of its existence. The development of Eurocurrency operations, along with the rapid expansion of international trade and investment, has indeed changed the basic structure of the world economy. International capital flows have transcended political and ideological barriers along with international trade as witnessed by the expansion of business conducted between the West and Comecon countries.

TABLE 2.1

GROWTH IN THE VOLUME OF WORLD TRADE

Year	Imports (%)	Exports
1954	5,5	5,0
1955	10,9	8,4
1956	7,6	8,9
1957	6,5	4,8
1958	0,1	-2,1
1959	9,2	7,0
1960	10,9	10,6
1961	5,5	4,2
1962	7,0	5,1
1963	7,6	8,1
1964	9,8	9,8
1965	7,2	6,8
1966	8,6	7,5
1967	5,2	4,8
1968	12,4	12,4
1969	11,2	11,0
1970	9,8	9,8
Average	7,9	7,2

Source: International Financial Statistics, Supplement on Trade Statistics, 1982.

The Heckscher-Ohlin theorem still probably shows how differences between countries in the endowment of broad classes of productive factors such as capital and labour will be reflected in differing patterns of production and trade.[19] However, it is also true to say that the Eurodollar was born 'in an era of rampant internationalism' and the extent of this could not perhaps have been imagined by the two Swedish economists.[20]

2.7 International Vehicle Currency

The United States emerged from World War II relatively unscathed. By the end of the war over half of the world's manufacturing and one-third of the total production of all goods was estimated to be taking place in the US. The US was the dominant economy in terms of national wealth and productive capacity, and it also possessed considerable reserves of gold.

In the immediate post-war period the US was the only manufacturing nation capable of exporting in large volume. However, *US imports did* not match exports and a scarcity of dollars arose in international markets. Until 1951 the US authorities *applied a number of policy* measures aimed at reducing this dollar shortage so that the war-torn West European economies could *afford the purchase of US exports* vital to their recovery. These measures included stabilisation loans as well as a flow of dollars under *the European* Recovery Programme.

The *European economies recovered* during the early 1950s and the dollar shortage diminished as the US continually ran deficits on an *official reserve* transactions basis. This allowed the reconstructed nations of Western Europe to rebuild their depleted international *reserves*. Furthermore, their dollar assets were held with some confidence as the US Treasury was prepared to exchange them for gold on an official basis.

The dollar therefore assumed the status of a key international currency in that an adequate supply of dollars was available for reserves and transactions purposes, and the currency's official convertibility was assured by a seemingly endless supply of gold.

There were numerous reasons for the US balance of payments deficit. The most notable were growing overseas military expenditure by the US; increasing grant and aid programmes; overseas investment by US multinational companies and, ultimately, the deterioration of the US trade balance.

The demand for dollars did not only come from official agencies such as central banks and national treasuries to build up their foreign exchange reserves. There was also a substantial private demand for the dollar related to its growing usefulness as a vehicle currency for the denomination of trade and for the international settlement of trade debts. The ability of the US to export a large volume of long-term investment capital enhanced the role of the US capital market as a focal point of international investment transactions. Indeed, the large scale and efficiency of US money and capital markets compensated for the shortcomings of financial markets in the European economies and boosted the dollar considerably.

In summary, the sheer size and power of the US economy after World War II made the dollar the only candidate for replacing sterling as the world's vehicle currency. The dollar adopted this role in all respects: as a medium of exchange for transactions purposes, as the leading currency for denomination of international capital transactions, and as chief reserve medium. The use of the dollar for international financial transactions was promoted with the emergence of the Eurocurrency markets in which the Eurodollar was predominant. The market enabled the world's numeraire to be traded rapidly and efficiently. The Eurocurrency system developed in response to a need in the international economy for an international money market that was broad and deep and which offered a single currency that was acceptable for a wide range of financial transactions.

CHAPTER 2

REFERENCES

1. Hicks, J.R. Recollections and Documents. Economica, February 1973, p. 5.

2. McKenzie, G.W. The Economics of the Euro-Currency System, MacMillan Press, London, 1976, p. 41.

3. Tobin, J. Liquidity Preference as Behaviour Towards Risk. Review of Economic Studies, Vol. 25, No. 2, 1958, pp. 65 - 86.

4. Tobin, J. ibid., p. 65.

5. Tobin, J. ibid., p. 66.

6. Hicks, J.R. Critical Essays in Monetary Theory, Clarendon Press, Oxford, 1967, p. 7, quoted in Trut, M.L. Money and Near-Money: An Old Refrain. South African Journal of Economics, September 1978, p. 247.

7. Brunner, K. and Meltzer, A.H. The Uses of Money: Money in the Theory of an Exchange Economy. American Economic Review, December 1971, p. 787 (Footnote).

8. Brunner, K. and Meltzer, A.H. ibid., p. 799.

9. Vaubel, R. Free Currency Competition. Weltwirtschaftliches Archiv, No. 3, 1977, p. 457.

10. Vaubel, R. ibid., p. 457.

11. Agmon, T., Lessard, D. and Paddock, J.L. Financial Markets and the Adjustment to Higher Oil Prices. M.I.T. World Oil Project, Working Paper No. MIT-EL-77-039WP, September 1977, p. 18.

12. McKenzie, G.W. op.cit., pp. 31-38.

13. Brunner, K. and Meltzer, A.H. op.cit., p. 800.

14. Modigliani, F. International Capital Movements, Fixed Parities, and Monetary and Fiscal Policies, in Bhagwati, J. and Eckhaus, R., eds., Development and Planning, Allen and Unwin, London, 1972, p. 241, quoted in Boll, F. Capital Movements, Capital Controls, and the Exchange-Rate Game. Tijdschrift Voor Economie en Management, Vol. 23, No. 1, 1978, p.47.

15. Logue, D.E., Salant, M.A. and Sweeney, R.J. International Integration of Financial Markets: Survey, Synthesis, and Results, quoted in Stem, C.H., Makin, J.H., and Logue, D.E., eds., Eurocurrencies and the International Monetary System, American Enterprise Institute for Public Policy Research, Washington, 1976, p. 91.

16. Boil, F. Capital Movements, Capital Controls, and the Exchange-Rate Game. Tijdschrift Voor Economie en Management, Vol. 23, No. 1, 1978, p. 33.

17. Kindleberger, C.P. The Pros and Cons of an International Capital Market. Zeitschrift für die Gesamter Staatswissenschaft, October 1967, pp. 600-617, quoted in Dufey, G. and Giddy, I.H. The International Money Market, Prentice-Hall, Englewood Cliffs, 1978, p. 193.

18. Einzig, P. and Quinn B.S. The Euro-Dollar System: Practice and Theory of International Interest Rates, 6th Ed., MacMillan Press, London, 1979, p. 115.

19. Caves, R.E. and Jones, R.W. World Trade and Payments: An Introduction, 2nd Ed., Little, Brown and Co., Boston, 1977, p. 126.

20. Little, Jane S. Eurodollars: The Money Market Gypsies, Harper and Row, New York, 1975, p. 82.

CHAPTER 3

ORIGIN, SIZE, LOCATION AND OPERATION OF THE EUROCURRENCY MARKETS

3.1 Introduction

The Eurocurrency market first came into being in the late 1950s following the liberalisation of exchange and capital controls in Europe. The market was given a further boost by US attempts to prevent the export of capital in the 1960s. These developments coincided with rapid growth in world economic activity and trade which created a need for international liquidity. As the predominant medium of exchange for international transactions, only the US dollar would satisfy this need. The effect of US capital controls was to shift business normally conducted domestically by US banks to Eurocurrency centres such as London where a growing number of US and other banks established branches.

This chapter examines the origins of the Eurocurrency market and its early growth and includes a discussion of the initial role played by US balance of payments deficits. Then follows a detailed breakdown of the size of the market, its variety of locations, the source of Eurocurrency deposits and the different categories of users. Finally attention is given to the operation of the market and the determination of the various Eurocurrency interest rates.

3.2 Origin

The Eurocurrency market was originally started by commercial banks in Europe which accepted interest-bearing deposits in currencies other than their national currencies and re-lent them either in the same currency, their national currency or in a third currency. The market is no longer specifically 'Euro' in that external or offshore banking centres have been established in many areas including the Caribbean and the Middle and Far East. More generally a Eurocurrency deposit may be defined as any short-term bank liability (whether to a resident or non-resident) denominated in a currency other than the currency of the country in which the bank is located. The US dollar

is the dominant currency in the market, contributing 80 per cent of gross Eurocurrency liabilities at the end of 1983.[1] For this reason the words 'Eurocurrency' and 'Eurodollar' are often used interchangeably by observers of the market, and by the author.

Some precedent exists for the trading of foreign currency deposits. At medieval fairs bills drawn in terms of foreign currencies were often paid out of or into foreign currency deposits.[2] Transactions in sterling deposits in foreign countries have been a feature since the last century. However, the Eurocurrency system is unprecedented to the extent that it is a broad international money market that attracts foreign currency deposits from a wide variety of sources and puts these deposits to an equally wide variety of uses, be it for trade, deficit financing, arbitrage or speculation. The emergence of a structure of international interest rates that are distinct from national interest rates is something entirely new. It is without parallel in modern economic history.[3]

Numerous factors led to the creation of the market in the late 1950s. For one thing, after World War II, the USSR sought dollar claims that were not subject to US control and Communist-controlled banks like the Moscow Narodny Bank in London and the Banque Commerciale de L'Europe du Nord in Paris redeposited their dollar holdings with banks in London and Paris. Reasons cited for this include the desire to avoid the risk of seizure of their dollar assets by the US authorities, and the build-up of goodwill with Eurobanks who could later become a source of loans.

Secondly, an important boost to the market came in 1957 when a sterling crisis caused the Bank of England to raise the Bank rate to seven per cent and to ban sterling-financed trade for non-sterling countries. After World War II the use of the dollar as vehicle currency for international payments had become increasingly widespread and, to compensate for the restrictions on sterling credit, the Bank encouraged London-based banks to make greater use of dollars.

Thirdly, a major factor behind the original expansion of the market related to the deficits on the US balance of payments. The table shows the US official reserve transactions balance between 1950 and 1970. This measure is similar to changes in net gold and foreign exchange reserves recorded in the South African Reserve Bank Quarterly Bulletin.

TABLE 3.1

UNITED STATES: OFFICIAL RESERVE TRANSACTIONS BALANCE

YEAR	($ Billion)
1950	
1951	
1953	
1954	Average -1,2
1955	
1956	
1957	1,1
1958	-2,7
1959	-2,7
1960	-3,4
1961	-1,4
1962	-2,7
1963	-1,9
1964	-1,5
1965	-1,3
1966	0,2
1967	-3,4
1968	1,6
1969	2,7
1970	-9,8

Source: Yeager, L.B. International Monetary Relations : Theory, History & Policy, Harper & Row, New York, 1976, pp. 570-1.

Friedman pointed out that US balance of payments deficits could not be held responsible for the massive growth in the market. US deficits amounted to less than $9 billion (on a liquidity basis) for the five years up to 1968 whereas Eurodollar deposits had totalled $30 billion.[4] However, it is noted that during the 1950s the US ran deficits to finance the reconstruction of Europe. The deficits were created not on the US balance of trade which consistently showed a surplus until 1971 but on capital account owing to long-term and

short-term capital outflows. The dollar became widely used in trade and international financial transactions. In 1958, other European currencies became freely convertible into dollars when the function of the European Payments Union lapsed. Convertibility meant that private foreigners could freely place their dollar balances where they wished. Dollar-holders started to place their assets outside the US money market where interest rates on time deposits were subject to ceilings. Eurobanks accepting these deposits offered more attractive and unrestricted interest rates. Thus the US dollar deficits provided the initial supply of dollars which found their way into the Eurocurrency system.

London was the first major centre for Eurocurrency activities. The technical expertise and banking specialisation developed since before the Gold Standard era equipped the City to take on the rapid expansion of the international money markets. Today, London is still conducting a third of total Eurocurrency business, despite the flourishing offshore banking activities in other centres.

During its early phase the system received ample support from official and financial institutions. Central banks, treasuries and international bodies deposited substantial sums in the market in the formative years to take advantage of the more attractive yields offered. For example, during 1960 and 1961 interest paid on 3-month bank deposits in the US was 2,5 per cent against 3,5 per cent or more for Eurodollar deposits.

The re-depositing of funds in the Eurocurrency market by official institutions was later to become a central element in the controversy concerning the inflationary potential of the market. This is covered in *Chapter 5*.

3.3 Early Growth Phase - the Effect of US Controls

The early development of the Eurocurrency market was treated with some suspicion. In the early 1960s Americans regarded Eurodollars as 'funny money' and interest outside Europe was only stimulated from 1966 when US banks became significantly involved. Given the

phenomenal growth of the market over the past two decades, it is hard to imagine that the system had small beginnings. Oscar Altman of the IMF, one of the early analysts of the Eurodollar market, estimated that total Eurodollar deposits amounted to $5 000m by the end of 1962 - whereas 20 years later at the end of 1982 total deposits were about $1 650 000m.

Dufey & Giddy list three minimum prerequisites for the development of an external dollar money market.[5] Firstly, non-resident depositors in the US should be free to transfer their deposits out of the US. This had been permitted since at least World War II. Secondly, banks situated outside the US should be able to offer external deposits and loans at competitive rates in a convenient location. As has already been noted, this condition was satisfied by the support given by the Bank of England to Eurobanks based in London from 1957. Thirdly, there should be demand for external deposits and loans.

While the original emergence of the Eurocurrency market can be attributed to the liberalisation of exchange and capital controls in Europe in the late 1950s, the US attempt to stop the export of capital in the 1960s gave the market a further boost because, in effect, it led to the export to Europe of a portion of the US money market instead. These restrictions satisfied the third condition for the expansion of the market.

Eurobanks already had a competitive advantage as a result of their relative freedom from the costs and impediments of the regulatory arrangements covering domestic banking in the US. For instance, they were not subject to reserve requirements or the pricing agreements prevalent in the US banking system. An important regulation that stimulated the development of the Eurodollar market was Regulation Q, under which the Federal Reserve fixed maximum interest rates that member banks could pay on time deposits. The existence of Regulation Q meant that Eurobanks could attract dollar deposits by offering more attractive rates. This was to have chaotic consequences in the latter half of the 1960s.

The US capital controls programme during the 1960s provided further 'infant industry' protection for Eurobanks. The Interest Equalisation Tax (IET) enacted in 1964 had the effect of restraining outflows of long-term capital from the US. The IET was augmented in 1965 by the Voluntary Foreign Credit Restraint Programme (VFCR), under which US banks were obliged to lend abroad only with funds borrowed abroad. These measures failed to halt the deteriorating dollar situation and in 1968 the Federal Reserve was given the authority to make the VFCR mandatory.

These attempts by the US to control capital outflows had the effect of putting severe pressure on financial markets throughout the world. By the 1960s the US dollar had risen to prominence as the world's main vehicle currency for trade both in commercial goods and financial assets. As international financial intermediary, the US provided capital not only in the form of goods and services, but also in the form of liquidity to a European market which required dollars to finance capital formation and growth.

Arguing that Europe needed dollars because European capital markets were 'narrower and less competitive than that of the US', Despres and others maintained that if access to dollars were cut it would have a dampening effect on European growth and a subsequent negative effect on US exports, causing the US trade balance to deteriorate.[6]

Despite this argument there was increasing nervousness surrounding the large dollar balances building up outside the US relative to the US stock of international reserves. US monetary authorities attempted to minimise the dollar 'overhang' by implementing controls on dollar outflows. However, because there was still a need for dollars internationally this merely led to further stimulation of the unrestricted market for dollars - the Eurodollar market.

The effect of these controls was a shift of business normally conducted by banks within the US to offshore Eurobanks and many US banks established branches in Eurobanking centres.

The Eurodollar market grew considerably faster from 1965 onwards. Regulation Q made it unattractive for non-residents to hold US dollars in the US when they could get higher rates in the Eurodollar market. Furthermore, the restrictions on dollar outflows forced non-residents to turn to Eurodollars for dollar funds.

US banks established branches in London, which was the centre of Eurodollar activity, at a rapid rate. At the beginning of 1960 only eight US banks had foreign branches. At the end of 1963 three groups of banks together accounted for two-thirds of the currency business undertaken in London: these were American (making up around 25 per cent of the total), British overseas and Commonwealth banks and merchant banks.[7] By the end of the 1969 the relative share of US branches had risen to 54 per cent, and by 1973 125 US banks had foreign branches.[8] It is clear that foreign branches of US banks played a major role in the development of the Eurocurrency market. Roughly speaking, US foreign branch banks appear to have accounted for perhaps as much as one-half of the overall growth of Eurocurrency activity.[9]

The ability of commercial banks to circumvent exchange controls was an important feature in the expansion of the market and led to many innovations and techniques. It should also be mentioned that foreign-currency banking can be very lucrative for Eurobanks. As long as the innovating bank can add more to income than to expenses by attracting this additional business, it is adding to its TOTAL profits - even if its profit margin is reduced.[10] (However, there is a point at which capital ratios can restrict Eurocurrency business). There have been times when the world's largest banks relied to a major extent on international earnings to maintain profits - in 1977, 82 per cent of Citicorp's after-tax earnings arose outside the US.[11]

Perhaps it should be said here that, while the activities of the Eurobanks appeared to be at odds with the goals of the international monetary authorities, particularly in the US, the Eurobanks were helping to facilitate the workings of a rapidly developing system of international trade. This system had been fostered in the first

place by the formulators of the Bretton Woods system. Internationalisation and liberalisation of world economic systems were fundamentally desirable. A necessary adjunct was an efficient international money market.

One specific period during the 1960s serves as an illustration of the conflicting interests of public and private sector motivations during the transitionary period leading up to the final demise of Bretton Woods in 1971.

During the period 1968 and 1969 market interest rates in the US rose above the ceiling rates on time deposits (ceilings which were set by Regulation Q). As domestic NCDs became due onshore banks struggled to replace them and turned to the Eurodollar market for funds. In particular, they borrowed from their own offshore branches. These Eurobanks, in turn, obtained funds largely from short-term investors, who in the absence of Regulation Q, might have placed their funds directly with the head office banks in the US. This is a good example of what is meant by the 'export of the US banking system to Europe'. The loans by US branch banks to their head offices caused interest rates on Eurodollars to be bid up, thereby attracting dollar deposits from the US. This 'round-tripping' of dollars effectively thwarted attempts to control US domestic banking activities.

This example illustrated the fact that the implementation of controls to prohibit the growth of the external financial markets and thereby to preserve this outdated system was self-defeating because it ignored the fact that the external markets were necessary to the increasingly integrated world economic network.

3.4 US Current Account Deficits

On the basis of the US current account alone there was little sign of a net flow of dollars to non-US holders. The US current account averaged a deficit of only $2,8 billion annually between 1960 and 1967. There were considerable deficits between 1968 and 1972 but by then the Eurodollar market was well-established. However, there were deficits on the overall balance of payments (the official reserves

transactions balance) between 1950 and 1970 (see Table 3.1). Net short- and long-term capital outflows were sufficiently large to produce an annual average deficit of $1,3 billion between 1950 and 1959 and $1,9 billion between 1960 and 1970. Hence, the rest of the world built up claims on the US over the period when the Eurodollar market was taking shape. By 1959, these claims amounted to just under $18 billion and rose steadily for the next 11 years to reach $45,6 billion in 1970 (see Table 3.2).

TABLE 3.2

UNITED STATES : EXTERNAL LIABILITIES ($b)

YEAR	TO CENTRAL BANKS & GOVERNMENTS	TO OTHER BANKS & OTHER FOREIGNERS	TOTAL
1959	10,1	7,6	17,7
1960	11,1	7,6	18,7
1961	11,8	8,4	20,2
1962	12,9	8,4	21,3
1963	14,4	9,2	23,6
1964	15,8	11,1	26,9
1965	15,8	11,5	27,3
1966	14,9	14,2	29,1
1967	18,2	15,8	34,0
1968	17,3	19,4	36,7
1969	16,0	28,2	44,2
1970	23,8	21,8	45,6

Source: International Financial Statistics, Yearbook, 1982, p. 465.

The question is whether US deficits as recorded on an official reserve transactions basis were necessary to underpin the continuing growth of the market. Certainly, the deficits were a prerequisite for the initial development of the market. The dollars had to come from the US in the first place and once dollar balances had built up

in Europe, European currencies became convertible which meant that European residents could hold dollars rather than be forced to convert their holdings immediately into local currency. However, dollar claims by non-residents did not have to be held as Eurodollars. In particular, assets issued in the US itself could be purchased.

However, it was not necessary for US balance of payments deficits to continue for the Eurodollar market to grow. The Euromarkets were free of controls such as liquidity and reserve requirements, ceilings on deposit rates etc. Once exchange and capital controls in Europe had been reduced (relative to pre-1958 conditions of non-convertibility for European currencies), the resulting international competition for more efficient and cheaper banking operations caused the Euromarkets to thrive.

Banks were attracted into the external markets because the absence of controls meant that they could operate on narrower borrowing and lending margins. Depositors were attracted to Eurobanks because they could receive higher yields on their dollar assets than they could in the US and could borrow dollars more cheaply. The markets expanded as more and more potential participants became aware of the benefits.

It is possible that the sharp increase in the number of US banks that established offshore branches during the 1960s may have occurred even without the US capital controls programme. The proximity of the Euromarkets to the large and growing European economies and the attraction of additional profits may on their own have been a sufficient spur. However, the capital controls programme certainly added to the incentive.

3.5 Size

Although the Eurocurrency market is very large it is by no means the only component of total bank lending in international markets. Excluded from the Eurocurrency markets are loans by Eurobanks to non-residents in the domestic currency of the banks' location. This type of lending contributed 32 per cent of gross international bank

lending in 1982 according to Bank for International Settlements (BIS) estimates.

However, we are concerned with foreign currency lending for which there are traditionally two types of estimates of the size - the gross size and the net size. The basic difference between the two is that, broadly speaking, interbank Eurocurrency deposits are included in the estimates of gross size and excluded in the estimates of net size.

Before discussing the estimates of the size of the market it should also be noted that there can be a considerable discrepancy between the total assets and the total liabilities of the Eurocurrency markets. For example, in 1982 the BIS estimates of gross Eurocurrency assets were $1 150 billion and gross liabilities, $1 249 billion, a difference of nearly $100 billion or 9 per cent of assets. This net debtor position of Eurobanks built up particularly after 1978 and was related to the banks' role in financing European reporting countries' oil-induced balance of payments deficits.[12] Conversely over the same period domestic US banks' external claims considerably exceeded their external liabilities reflecting the worldwide net demand for US dollar financing.

3.5.1 Estimates of Size

Two sources have traditionally been used for estimating the size of the Eurocurrency markets - the Bank for International Settlements and the Morgan Guaranty Trust Company of New York.

3.5.2 BIS Estimates

(a) Gross Size

BIS estimates of the gross size are taken from the reported external positions of banks in the Group of Ten countries excluding the US (Belgium, Luxemborg, Canada, France, Germany, Italy, Japan, Netherlands, Sweden, and the UK) plus Switzerland plus the branches of US banks in five

offshore centres: the Bahamas, the Cayman Islands, Panama, Hong Kong, and Singapore. In addition it makes an estimate for non-reporting banks in offshore centres.

(b) Net Size

The estimate of the net size excludes interbank positions between reporting banks in the so-called 'inside area', i.e. positions between banks within the reporting area.

Positions vis-a-vis banks in the 'outside area', i.e. outside the reporting area, are included in the estimate of net size. The rationale for including positions vis-a-vis the outside area is as follows: 'Business of the reporting banks with outside area banks and non-banks can be amalgamated since the local banks are generally just acting as a channel between the reporting area banks and the local economies. On the other hand business among inside area banks will be inflated by transactions among banks as they intermediate between the original supplier and the final user. The BIS therefore makes an estimate of the net size ..., in which transactions among banks in the main financial and offshore centres are netted out ...'[13]

Double-counting (inside area bank redepositing) is netted out because the net size is an attempt to identify the non-bank sources and uses of Eurocurrency funds. Redepositing within the Eurobanking system is merely a process of intermediation which enables the banks to allocate original deposits more efficiently and to increase the market's flexibility. In fact, more transactions occur between banks within the market than between banks and banks or non-banks outside the market.

However, apart from including positions to outside area banks, the BIS net size also includes other interbank deposits. Firstly, Eurobanks' foreign currency loans to inside area banks are included if they are switched into

domestic currency or are used for direct foreign currency loans to domestic customers. Secondly, foreign currency loans to banks in the country of the currency loaned are also included. However, working balances for Eurocurrency operations are excluded.

These exceptions to the rule of netting out interbank redepositing occur because it is assumed that the borrowing banks 'obtain the funds mainly for domestic purposes and not for re-lending to other banks in the reporting area'.[14]

3.5.3 Morgan Guaranty Trust Company Estimates[15]

When the BIS first started publishing estimates of the size of the Eurocurrency market it omitted all non-European Eurocurrency business. This led the Morgan Guaranty Trust Company (MGT), a New York bank, to publish its own, broader estimates. Although the BIS estimates have been extended considerably the MGT estimates are still more broadly based than, if not as detailed as, the BIS estimates. However, both sets of estimates follow the same principle in separating the gross from the net size of the market.

(a) Gross Size

The MGT gross size consists of the total foreign currency liabilities of banks in the 'major market centres'. In addition to the Group of Ten countries and Switzerland, MGT includes three other European countries not included in the BIS figures - Austria, Denmark, and Ireland. As for offshore centres, it includes the five used in the BIS estimates and also Bahrain. Furthermore, apart from the Bahamas and the Cayman Islands data for non-US branches in offshore centres are included.

(b) Net Size

The MGT estimates of net size are derived by netting out interbank redepositing within the entire market area. Since the market area in the MGT estimates is greater than the inside area in the BIS estimates the absolute value of deposits netted out is greater than for the BIS figure for double-counting. However, basically the same exceptions that apply to netting out interbank redepositing in the BIS estimates apply in the MGT estimates. As with the BIS, MGT attempts to distinguish the banks' roles as original suppliers or end users of Eurocurrency funds from their role as intermediaries.

3.5.4 Comparisons with National Money Supplies

The MGT estimate of the net size of the market is not directly comparable with national money supply statistics because even the net estimate includes a substantial element of bank redepositing. National money supply figures normally exclude all interbank deposits. MGT notes that a large proportion of the net liabilities size of the market has a counterpart already counted in domestic monetary totals. This counterpart includes domestic currency funds that banks within the market area either switch into foreign currencies or place directly in the Eurocurrency market; also it includes funds supplied by banks outside the market area, such as dollars which are placed in the Euromarket by banks located in the US. Even some of the funds deposited by central banks have a domestic liability counterpart which is included in a national money supply aggregate. Once this overlap of liabilities is eliminated only what MGT calls the 'net, net' size of the market remains. The net, net size of the market consisting of liabilities to non-banks (defined by MGT as corporations, individuals, and non-bank financial institutions) is shown in Table 3.3.

TABLE 3.3

NET, NET SIZE OF THE EUROCURRENCY MARKET

YEAR	$ BILLION	GROWTH (%)
1970	30	-
1971	30	0
1972	35	17
1973	55	57
1974	80	60
1975	90	13
1976	115	28
1977	135	17
1978	174	29
1979	245	41
1980	327	33
1981	428	31
1982	474	11
1983	527	11

Source: World Financial Markets, Morgan Guaranty Trust Co., New York, various issues.

At the end of 1983 the net, net size of the Eurocurrency market was $527 billion, compared to only $30 billion at the end of 1970. This represents an average annual compound growth rate of 25 per cent.

As the dollar makes up the largest proportion of gross Eurocurrency liabilities (80 per cent in 1983) it is useful to compare the net, net size of the market with US money supply statistics. There have been a number of changes in the US monetary authorities' definition of the domestic money stock in recent years but a reasonably consistent series can be derived. As demand deposits are not offered in the Eurocurrency markets M1 has been excluded from all the US money stock statistics used in the comparison. Up until 1977 US M5 (minus M1) is taken to be the relevant money stock statistic

and thereafter M3 (minus M1) is used. This is because the new M3 series after 1977 bears a strong resemblance to the old M5 which was discontinued.

While it is clear from Table 3.4 that the Eurocurrency market net, net size is still substantially smaller than the comparable US money stock, the ratio indicates that it has grown substantially faster than this measure of the US money supply during the past decade. It shows that the relative competitiveness of Eurocurrency instruments has drawn an ever-increasing share of international non-bank deposits.

TABLE 3.4

RATIO: NET, NET SIZE TO US MONEY STOCK

	U.S. MONEY STOCK (unadjusted)($b)				Eurocurrency Market Net,	
	M5	M3	M1	Difference	Net Size	Ratio %
1972	892	-	263	629	35	6
1973	986	-	279	707	55	8
1974	1074	-	292	782	80	10
1975	1178	-	304	874	90	10
1976	1321	-	323	998	115	12
1977	1453	-	348	1105	135	12
1978	-	1638	373	1265	174	14
1979	-	1766	399	1367	245	18
1980	-	1996	425	1571	327	21
1981	-	2243	452	1791	428	24
1982	-	2467	492	1975	474	24
1983	-	2714	538	2176	527	25

Sources: 1) US money stock measures - various issues of Federal Reserve Bulletin, Board of Governors of the Federal Reserve System, Washington, D.C.

2) Eurocurrency measure - various issues of World Financial Markets, Morgan Guaranty Trust Co., New York.

It should be noted that a measure of the US money stock alone is an insufficient comparison and that similar money stock measures in other countries whose currencies are traded in the market should be added. This would reduce considerably the ratio of Eurocurrencies to comparable domestic money supplies but would not conceal the fact that Eurodeposits have grown very rapidly.

In conclusion it can be stated that the net, net Eurocurrency market is still substantially smaller than the comparable US, and especially a broader international, money stock. Nevertheless, it has grown at a markedly more rapid rate than either since the early 1970s.

3.6 Location

London is the most important centre of Eurocurrency business. Figures for September 1982 show that London's share of gross Eurocurrency lending was 35 per cent, slightly higher than the 32 per cent in September 1980 and the 33 per cent in September 1981.[16] Unfortunately the table from which these figures are derived does not in all cases separate out from Eurocurrency business the item 'domestic currency lending to non-residents' which is by definition excluded from the market. However, it is apparent that no other single centre has obtained more than 10 per cent of the market with Japan, France and the Bahamas sharing the next three places after London.

These market share statistics appear to be broadly confirmed by earlier numbers produced by MGT on gross Eurocurrency liabilities as at June 1978.[17] London's share was put at 34 per cent, France's at 8 per cent, Japan's at 6 per cent, and the Bahamas and the Cayman Islands combined at 12 per cent. In other words no single centre had significantly more than 10 per cent apart from London.

Yet earlier figures from the Banker magazine showed that at the end of 1976, London had a 36 per cent share of the gross external foreign

currency assets of all banks in the European reporting area plus US bank branches in the Caribbean and Far East.[18] Offshore centres in the Caribbean and Far East had a 20 per cent share, Belgium-Luxembourg 13 per cent, and France 12 per cent.

It is clear that London still is the pre-eminent Eurocurrency centre. In 1982 there were 379 foreign banks directly represented (ie through a representative office, branch, or subsidiary) and 70 indirectly represented (ie through a stake in a joint venture or consortium bank) in London.[19] This was nearly double the representation only 10 years before. The longest-standing and largest South African bank represented in London is Nedbank which started operations in 1906.

London's emergence as the major centre of the market was partly traditional. In the days when sterling was the world's key currency, many foreign banks established branches in the city for trade financing and other foreign exchange purposes. Out of the long-standing experience of London-based bankers has developed a remarkable communications and brokerage network. A level of expertise and technical efficiency has been attained which continues to attract a clientèle seeking the benefits of rapid, cheap and efficient services.

The combination of capital and banking controls in the US and a stance of 'benevolent neutrality' by the Bank of England contributed much to London's popularity with Euromarketeers. Although it has restricted sterling activity at times the bank plays no active part in the market for foreign currency deposits and has left it to the initiative of private individuals to regulate and adapt the system.

The development of offshore banking centres outside Europe has been marked during the 1970s. There are two types of offshore centre. Firstly, a 'satellite', such as Singapore, which is regarded as being the birthplace of the 'Asiadollar market'. This provides a service to its geographical area. Satellite centres employ highly-trained staff, operate an interbank market, and offer reduced transactions costs to customers because of their familiarity with the peculiar

requirements of the region. Secondly, 'shells' have flourished in places like the Caymans and the Bahamas as tax havens for international banks. A shell is likely to consist of no more than a brass plate and a single office, a telephone and a skeleton staff.

The emergence of Nassau, in the Bahamas, in the early 1960s as an international investment centre resulted initially from attempts to restrict foreign lending by US banks. Attracted by the favourable tax structure, excellent communications, political stability and lower operating costs, many of these banks opened Bahamian branches to facilitate their Eurocurrency activities. The trend accelerated in 1969 when the Federal Reserve Board began approving shell branches abroad as a way of giving smaller US banks access to the Eurocurrency market.

3.6.1 International Banking Facilities

Recently a major development has taken place in the US financial markets with the establishment of International Banking Facilities (IBFs) in New York and seventeen other states. By September 1982 - less than a year after the system came into being - nearly 400 banking institutions, including US banks and US branches of foreign banks, had established IBFs with three-quarters of the assets concentrated in New York.[20]

The idea behind the IBF was the desire on the part of the US banking system to increase its international competitiveness after more than two decades of losing ground to Eurocurrency banking centres. An IBF is no more than a set of asset and liability accounts segregated on the books of a (parent) banking organization.[21] The Federal Reserve Board has created a regulatory environment such that IBFs are not subject to reserve requirements, interest rate ceilings, or the insurance coverage and assessments imposed by the US Federal Deposit Insurance Corporation (FDIC). In addition a number of states have granted favourable tax treatment for IBF operations.

IBFs are able to carry on deposit and loan business with foreign residents and the Board imposed a number of limitations on IBF activities to prevent them conducting business with US residents.

The question arises whether IBF centres are to be included when calculating the size of the Eurocurrency markets. The first point about IBFs is that they do not comply with the strict definition of a Eurocurrency market for the reason that dollars comprise 97 to 98 per cent of IBF business. However, IBF business is distinct from domestic US banking activity and figures show that a considerable amount of the business originally booked by US banks through their 'shells' operating in the Bahamas and the Cayman Islands has been shifted to IBFs. Thus although the IBF system is situated 'onshore' the regulatory environment is similar to that in the Eurocurrency centres.

IBFs may not lend to domestic US residents as may bank branches in other Eurocurrency centres and IBFs may not issue negotiable instruments which constitute a major source of funds in some offshore centres, particularly London. While the maturity structure of IBF deposits is similar to that in the Eurocurrency markets (ie typical maturities are between one and three months) the bulk of liabilities consist of interbank and intrabank transactions and the non-bank customer base is quite small. The interest rates payable on IBF deposits have fitted 'almost exactly into the general worldwide pattern of Euromarket activity'.[22]

It appears that a strong case can be made out for including IBF business in the gross estimates of the size of the Eurocurrency market. As of September 1982 total IBF liabilities amounted to $136 billion or 7 per cent of the MGT gross size estimate. There is, moreover, potential for growth in IBF activity. New York plays a pivotal role in US finance and banking, and the dollar is the dominant currency in the Eurocurrency markets. Much of the international lending to non-banks is done by US

banks because of their sheer size and the huge funding base available to them. While the IBFs have not to date attracted much new business (most IBF business has been shifted from established centres) it is true to say that 'in the long-term, IBFs have the potential to become a significant centre in Euromarket activity'.[23]

3.6.2 Currencies

From the start the Eurodollar has been the dominant Eurocurrency. There was a period during the late 1970s (see Table 3.5) when it was thought that the dollar's dominance would decline relative to other 'stronger' currencies such as the Deutschmark but this has appeared to be unfounded, especially since the surge in the value of the dollar which followed from tight US monetary policy under Federal Reserve Board Chairman, Paul Volcker. Altman's analysis of the market in the early 1960s showed that in London and Canada the market for foreign currency deposits was almost exclusively made and denominated in dollars. As for the foreign currency markets in Paris, Germany and Italy, the dollar component was around two-thirds or more.[24]

TABLE 3.5

EURODOLLARS AS A PERCENTAGE OF GROSS LIABILITIES IN ALL EUROCURRENCIES

	%
1973	74
1974	76
1975	78
1976	80
1977	76
1978	74
1979	72
1980	75
1981	78
1982	79
1983	80

Source: World Financial Markets, Morgan Guaranty Trust Co., New York, various issues.

Table 3.6 shows the recent estimates of the currency breakdown of the market by the BIS. The BIS figures are for total foreign currency positions of banks in the 12 reporting European countries while the MOT figure gives the US dollar component in the gross size of the market.

TABLE 3.6

CURRENCY BREAKDOWN

	BIS (%) --- total liabilities ---					MOT (%)
	$	Dm	Sf	£	Y	$
1977	70	17	6	2	1	76
1978	68	18	5	2	1	74
1979	66	19	6	2	2	72
1980	69	16	7	3	1	75
1981	71	13	8	2	2	78
1982	Comparable table not available.					

Source: Bank for International Settlements, Annual Report, various issues.

3.7 Sources

Funds placed in the Eurocurrency markets have originated from various sources, the four most important of which are central banks, commercial banks, non-banks and international agencies.

3.7.1 Central Banks

During the market's early phase central banks were the most important source of funds. It was estimated that two-thirds of all the foreign currency funds in Eurocurrency centres in 1962 were owned by central banks and monetary authorities.[25] The proportion of central banks' holdings declined during the 1960s but the absolute amount continued to grow. These depositors were encouraged by the higher yields and liquidity offered for short-term money by the market.

In 1971 the Group of Ten agreed not to increase the volume of funds they invested in the market. However, official deposits continued especially when the huge surpluses which accumulated

in the OPEC countries induced the latter to make large-scale new official placements after 1973. Likewise, after the second oil crisis OPEC countries made significant deposits in the market. For example, in 1980 the most important expansionary factor in the international banking sector were identified new deposits of OPEC countries amounting to $42 billion.[26] Another important source of deposits after the first oil crisis were the non-oil developing countries. For example, foreign currency deposits of Latin American countries with reporting European banks amounted to only $4,8 billion in 1971. By 1982 deposits by Latin American countries had risen to $37 billion.[27]

3.7.2 Commercial Banks

The contribution of commercial banks as 'original source' (ie excluding double-counting) suppliers of Eurocurrency funds has remained a significant proportion of the total since the early stages of the market. Over the full period of development, this has probably been the most important source. Redepositing of Eurodeposits between Eurobanks should be excluded from estimates, the source being identified as the placement in the Eurocurrency market of funds received in domestic markets. The geographical sources of commercial flows to the market can vary dramatically. For example, in 1983 US banks switched from being major net suppliers to being large net takers of new funds.[28]

3.7.3 Non-banks

Insurance companies, mutual fund operations, multi-national companies and individuals have been important contributors of funds. Indeed, corporations vied with central banks as the predominant source of funds during the 1960s. These groups are particularly influenced by interest rate incentives. In the past, non-bank sources within the European reporting area have been particularly important generators of funds. However, in 1981 there was a sharp acceleration from $10 to $31 billion in

new international bank deposits by US non-banks. This reflected the growing role of US mutual funds as Eurocurrency depositors.[29]

3.7.4 International Agencies

The BIS and the World Bank as well as other international agencies have contributed to Eurodollar sources. Deposits by the trustees of Swiss trustee accounts also make up a noticeable percentage of total Eurocurrency deposits.

3.8 Users

There are numerous borrowers in the Eurocurrency market and they are discussed here under three headings: public sector borrowers, private sector (financial) and private sector (non-bank) borrowers.

3.8.1 Public Sector

Included in this category are loans to governments, corporations receiving government backing, municipalities, local authorities and nationalised industries. Official borrowers have taken over 70 per cent of Eurocurrency credits in recent years and a good indication of this tendency can be gained from scanning the publicised Eurocurrency credit lists published in various sources such as Euromoney and MGT's World Financial Markets.

Raising loans from foreign sources is an alternative to taxation and reduces competition with the private sector in the domestic capital market. Government-backed borrowers have traditionally been in a more favoured risk category than private sector borrowers in the Eurocredit market, although their status has suffered in recent years owing to the escalation of developing country debt problems.

Public sector borrowing may be for project finance, to increase foreign currency reserves, to finance balance of payments

deficits, or for bridging and liquidity finance. Government-backed loans to corporations are a major element in project financing and many types of loan have been developed in this field.

Certain factors have stimulated demand from developing countries. The relative stagnation in the flow of official development assistance in the 1970s has resulted in an increased demand for other means of financing.[30] In recent years, moreover, there has been recourse by less developed countries to the markets to finance oil-induced current account deficits.

3.8.2 Private Sector (Financial)

Financial institutions such as insurance companies and special credit institutions created to channel finance for economic development are users of Eurodollars. However, the most important private sector demand for funds comes from commercial banks.

Banks borrow Eurodollars for various reasons. Firstly, they can make a quick turn by undoing the transaction again at the earliest opportunity at a more favourable rate (the profit margin is often 1/4 per cent or less). Secondly, they may borrow for reasons of prestige - to retain prominence in competitive conditions. Thirdly, they may engage in interest arbitrage. Fourthly, they finance foreign trade with the aid of Eurocurrency credits. Fifthly, they may swap Eurocurrency loans into domestic currency. Sixthly, they may use Eurocurrency funds to finance domestic business cycle upswings.[31]

It should be noted here that activities such as foreign exchange transactions are not strictly Eurocurrency transactions. They are frequently conducted between banks which are not Eurobanks. Also, Eurobank transactions in the interbank market, while crucial for the efficient operation of

the market, are counted differently from transactions where Eurocurrencies are switched into domestic currencies for on-lending.

3.8.3 Private Sector (Non-banks)

Initially Eurodollars were extensively used for trade finance. After controls on capital exports from the US were imposed from 1965, US multi-national corporations in particular were able to maintain their rapid development without aggravating US balance of payments problems by borrowing in the Euromarkets. Cost has been an important factor for corporations as well as the range of borrowing instruments and availability of currencies.

Corporations have not always been free to borrow in the market. One prime example of restrictions placed by the authorities on borrowing was the German 'bardepôt' of 1971-72 where domestic borrowers were forced to place 40 per cent of Eurocurrency loans into an interest-free account with the Bundesbank.

3.9 Operation

As the market has expanded more and better quality information has become available, and a considerable division of labour has taken place. The market has attracted professional transactors such as brokers and specialists in various market segments. The large and varied number of participants has increased the complexity involved in matching borrower and lender, and the banks have developed a highly sophisticated communications network to speed up the exchange process. Transactions are for large amounts and are unencumbered by the restrictions and provisons which accompany transactions in domestic markets. For example, Euroloan agreements are characterised by a striking absence of restrictive covenants, such as ratio limits, dividend restrictions, interest coverages and net worth provisions because of the more competitive conditions in the market.[32]

The Eurocurrency market also differs from domestic credit markets in that it offers a broader range of facilities. The international money market is simultaneously an interbank market, a market where governments raise funds and a lending and deposit market for corporations.[33] Usually in domestic markets these various borrowing and lending functions are more compartmentalised.

3.9.1 The Interbank Market

The difference between the gross and net size of the market indicates that many of the transactions take place between Eurobanks. A large proportion of the balance sheet of a typical Eurobank consists of liabilities to and claims on other Eurobanks. The core of this interbank market consists of a group of large, well-known and respected international banking corporations with interbank transactions taking place on a 'name' basis through the medium of unsecured credits. This procedure greatly enhances the flexibility with which Eurobanks manage their assets and liabilities. Under normal conditions the breadth and depth of the interbank market enable the banks to extend credit for the maturities and in the currencies that are best suited to their overall portfolios.

This market is, in essence, a money market for short-term deposits among banks in which most of the transactions are in US dollars. If a bank does not have an immediate demand from an end-user for dollars deposited with it, it will seek to lend the deposit to a bank which does have a loan opportunity. In practice a relatively small proportion of Eurobanks attracts the bulk of original Eurodeposits and the balance draws on the interbank market to fund loans.

Apart from serving as a source and outlet for funds the market also performs a vital information-transmitting role. A substantial proportion of interbank trading occurs because it gives participating banks a feel for the market trends relating to exchange rate and interest rate movements, liquidity flows etc. Interbank margins are very narrow (say 1/32 of one per

cent) and so interbank trading provides a relatively cheap and rapid way of picking up information about supply and demand. Interbank trading also satisfies the need of participants to appear active in the market. It is easier for a recognised name to raise funds at short notice or be invited to participate in a syndicated credit.[34]

3.9.2 Loans

'The most typical form of Euro-lending is the revolving credit at a floating interest rate'.[35] Floating rate loans are for a commitment period of up to 12 years with a renewal period of six months on average. By negotiating the interest rate on the loan regularly the bank can, to a certain extent, protect itself from interest rate fluctuations.

Credits of $500m and more are not uncommon, and are seldom less than $10m. The average size of a loan is around $100m.[36] The advantage to the borrower of a revolving credit is the option to use the loan as a line of credit, ie he may delay the draw down of the loan and may also delay rollovers and renewals. This stand-by facility is offered against payment of a commitment commission (up to 1/2 of one per cent) on the unused portion of the loan. The draw down period is usually limited to 18 months.

Interest rate spreads are based on the London Interbank Offered Rate (LIBOR) for the currency involved and range from a premium of 1/2 to as much as three per cent for both corporate and public borrowers, with the median being somewhere between one and two per cent. LIBOR is the rate at which a group of London Eurobanks offer funds for deposit in the interbank market.

A further facility which benefits the borrower is the multicurrency option which gives the borrower the choice of drawing funds denominated in one or more stipulated currencies. On interest renewal dates the borrower may request a change in the currency of denomination of the loan. If the

facility was originally expressed in dollars and the borrower switches to another currency he is required to pay the dollar equivalent in the alternative currency on maturity of the loan.

Repayment of loans is either in lump-sum (balloon repayments) or may, in the case of longer term credits, be by way of amortisation schedules. Early repayment can be subject to a penalty.

Borrowers are usually responsible for additional costs such as legal fees, or the imposition of reserve requirements and withholding taxes both in the present and in the future. In general, Eurocredits are issued without collateral and promissory notes of a maturity coinciding with the renewal period are usually sufficient.

In the event of a rollover being impossible owing to particular currencies being unavailable, the loan becomes due immediately. This also applies when the interest rate becomes unacceptable to the borrower. In this case, once the loan has been redeemed, the facility can still be held available to the borrower against a commitment fee.

Many Eurocredits are publicised by means of 'tombstones' indicating the banks involved. However, publicised credits certainly understate the total. In particular, the consensus appears to be the publicised Eurocredits understate by 50 per cent or more the actual volume of credit extended by Eurobanks to the developing countries.[37] With developing countries taking up an average of 43 per cent of publicised Eurocurrency credit between 1980 and 1983 (see Table 3.7) it is possible that the total new publicised credits understate the actual total by as much as 25 per cent.

TABLE 3.7

PUBLICISED EUROCURRENCY BANK CREDITS ($ MILLION)

	1980	1981	1982	1983
Industrial countries	39 100	86 022	42 571	38 742
Developing countries	35 054	45 264	41 519	32 937
Centrally planned countries	2 809	1 791	765	1 212
Other	429	302	160	1 321
TOTAL	77 392	133 379	85 015	74 212

Source: World Financial Markets, Morgan Guaranty Trust Co., New York, various issues.

The emergence of the Euromarkets stimulated large-scale participation by US banks in the external currency business especially from London based. Today, US banks lead the field as lead managers for Eurocredit syndication which is now the most favoured technique for making loans. A syndicate is a highly structured group of financial institutions, formed by a manager or a group of co-managers that lends funds on common conditions to a borrower.[38]

An extension of the syndication concept has been the formation of the multi-national consortium bank, neatly described as 'a cross between a behemoth and a centipede footloose in many countries'.[39] These consortia, the first of which - Midland and International Banks Limited - was set up in 1964, also participate in loan syndications not as the individual banks constituting the consortia, but as a single banking conglomerate.

Syndication emerged in response to the need of banks to diversify owing to the large sums, and hence risks, involved in international lending, and the increasing exposure to specific borrowers. By lending in syndicates, individual banks can limit their loan exposure to particular clients to manageable proportions. This joint lending system is based on the relationship between the lead manager bank which solicits the underwriting support of participating banks. The

lead bank is generally in a position by virtue of its experience and knowledge of the borrower's requirements to conclude rapid negotiations for the setting up and distribution of the loan. The borrower obtains a commitment, against a fee, that the syndicate manager will place the paper at the best conditions obtainable or increase its share accordingly. The 'front-end' syndication fees range from 1/2 to three per cent. Of these fees, certain percentages are 'given-up' to participant banks which commit funds.

The lead bank is responsible for correctly processing the mechanics of the loan. Syndication may be initiated on a 'broadcast' or 'straight' basis. The broadcast method involves telexing prospective participants with an invitation to join in and is the method usually adopted for straight-forward syndications. The straight basis is a more discreet method whereby the loan is made from the outset by a group of banks selected by the managing bank. Finally, the agent bank which may or may not be the lead bank, is responsible for administering interest payments, amortisation, legal matters, default and so forth.

Apart from risk-spreading, the syndication offers a blend of technical facilities which enhance the information transmitting process. Syndication has developed in such a way that the foreign desks of commercial banks have taken on the role usually reserved for investment banks in a domestic setting. An investment bank is 'an institution that specialises in buying and selling of large blocks of securities (as new issues) and in raising funds for capital expansion'.[40] Since the commercial banks are the ultimate source of the bulk of funds, the merging of investment and commercial skills is a development which is characteristic of the market.

3.9.3 Deposits

The Eurodollar market [illegible] natural deposit base. It has no stable level of de[illegible] as is guaranteed to banks in a domestic money ma[illegible] mark of good liability management of a Eurobank is the [illegible]y to attract and retain funds at as low a cost as possible, and to earn as high as possible a

return on assets, including reserve balances. This must be done by maintaining interbank lines and facilities and by offering deposit liabilities that have a sufficiently attractive combination of yield, liquidity, and safety to draw funds from competing financial institutions and markets.[41]

The majority of deposits are time deposits and the maturity ranges between seven days and six months. Most deposits have a maturity of between one and three months. Cheques are not used in the system.

The first Eurodollar Certificates of Deposit were introduced in June 1966 by the First National City Bank of New York. These deposits are saleable before maturity and a successful secondary market has developed, especially in London. The additional liquidity of these deposits enables banks to offer interest rates slightly below (about 1,8 per cent) those offered on regular time deposits.[42] They are issued in 'tap' form or in 'tranche' form. Tap CDs are the most common and are issued in single amounts (say, $1 million) whenever a bank requires a particular quantity of funds for a particular maturity. Tranche CDs, unlike tap CDs are managed issues, offered for sale to the public in a fashion analogous to a securities issue. They are usually for larger amounts than tap CDs but are denominated in smaller 'tranches' or slices (say $10 000). Tranche CDs are more marketable than tap CDs, because they are taken up on behalf of a variety of fiduciary clients in small amounts.

A further development has been the floating rate CD (FRCD) which developed as a combination of the Eurodollar CD and the floating rate note (FRN) which was conceived in 1970. The FRN was a 'grey market' instrument enabling corporate borrowers to tap non-bank investment sources at times of high interest rates, giving the borrower the opportunity to avoid a fixed rate. Since 1975 major banks have also tapped the FRN market especially for large issues. The advantage is a guaranteed interest spread above LIBOR at a fixed maturity usually at more favourable rates than on an equivalent fixed rate deposit.

The development of CDs in other Eurocurrencies has not been achieved and until recently has not been encouraged by monetary authorities.

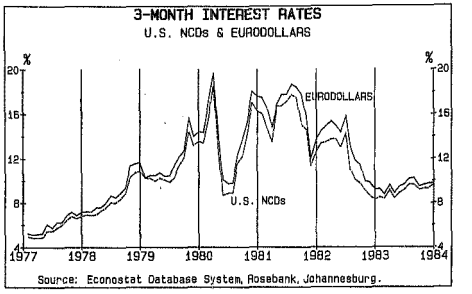
3.10 Eurocurrency Interest Rates

Eurobanks are not obliged to hold minimum contingency balances, minimum liquid assets or cash reserves, nor are they bound to interest rate or credit ceilings. The absence of these controls enables the banks to offer more competitive yields on both deposits and loans than their domestic counterparts.

Although Eurobanks offer a wide variety of facilities, the most important single element behind their sustained growth has been this yield differential. Depositors of Eurocurrencies have required a yield premium to compensate them for the greater risk which they 'regard as attaching to deposits in institutions with which they are as yet relatively unfamiliar'.[43] Although familiarity with the Euromarkets has grown rapidly since their inception there is still a natural reluctance to place funds with offshore centres rather than domestic banks without the incentive of a small premium.

Graph 3.1 shows that between 1977 and 1983, 3-month Eurodollar deposit rates consistently exceeded the rates on 3-month NCDs in the US. The maximum premium during this period was 206 basis points and the minimum, 6.

GRAPH 3.1



Source: Econostat Database System, Rosebank, Johannesburg.

Determining the differential between Eurocurrency rates and domestic rates on loans is not as simple as for deposit rates. 'As regards loan rates charged to the end-users for Eurodollar loans, we must suppose that in order for the borrower to run to the Eurobank there must be an advantage in the form of a lower interest rate than he would have to pay to an American bank'.[44] However, US domestic lending rates have first to be adjusted to make comparisons with Eurodollar lending rates. Dufey and Giddy show that for the comparison to be made the US prime rate, for example, should be adjusted for the cost to the borrower of maintaining interest-free compensating balances.[45] However, once the adjustment is made the expected differential emerges. In other words, Eurodollar lending rates are a shade below the comparable US domestic lending rates.

It is because Eurobanks are able to operate on narrower margins than domestic commercial banks that domestic interest rates, with few exceptions, set the upper and lower bounds for Eurocurrency rates.

As Eurodollars make up by far the largest component of total Eurocurrency business, non-dollar Eurocurrency interest rates tend to adjust to Eurodollar rates after accounting for forward exchange exchange premiums or discounts. A study by Marston[46] shows that

each non-dollar Eurocurrency rate is linked to the Eurodollar rate through arbitrage operation undertaken by Eurobanks. The results of the study provide overwhelming evidence that non-dollar Eurocurrency rates are determined almost entirely by interest arbitrage operations between the dollar and non-dollar markets. If a discrepancy emerges, the depth and breadth of the interbank market ensures that arbitrage will rapidly bring the rates back into line. Further support for the interest parity between Eurocurrencies is provided by a survey of empirical studies in Dufey and Giddy.[47]

However, empirical studies have also shown that movements in Eurodollar interest rates are determined largely independently of the forward exchange market and interest rates on other currencies. A study by Johnson shows, rather, that there is a very close relationship between the effective cost of loanable funds to banks in the Eurodollar and domestic US markets.[48]

Kreicher shows that between 1970 and 1982 arbitrage operations maintained a close link between Eurodollar and domestic US deposit rates. The study found a high degree of integration between the two markets despite occasional deviations.[49]

These studies suggest that the large volume of short-term capital flows which pass through the Eurocurrency market are not a result of covered arbitrage flows between Eurocurrencies within the market (because very small flows would bring the market into equilibrium). Rather they are a consequence of flows between domestic markets and the Eurocurrency markets (in particular, the US market and the Eurodollar market). These flows are generated by distortions which arise within the domestic money markets themselves. Such distortions can arise from factors such as the misalignment of domestic interest rates, reserve requirements, domestic capital controls and exchange rate expectations.[50] The implication is that the Eurocurrency market is not independent of domestic monetary policies - changes in domestic interest rates and reserve requirements will directly influence the level of Eurocurrency interest rates and hence the amount of credit extended by the Eurocurrency and domestic banking systems combined. Because of the dominance of the Eurodollar it follows that US monetary policy plays a crucial role in the performance of the Eurocurrency market.

CHAPTER 3

REFERENCES

1. World Financial Markets, Morgan Guaranty Trust Co., New York, July 1984, p. 15.

2. Einzig, P. & Quinn, B.S. The Eurodollar System : Practice and Theory of International Interest Rates, 6th Ed., MacMillan, London, 1979, p. 2.

3. Einzig, P. & Quinn, B.S. ibid., p. 3.

4. Friedman, M. The Eurodollar Market: Some First Principles. Morgan Guaranty Survey, Morgan Guaranty Trust Co., New York, October 1969, p. 4.

5. Dufey, G. & Giddy, I.H. The International Money Market, Prentice Hall, Englewood Cliffs, 1978, p. 111.

6. Despres, E., Kindleberger, C.P. and Salant, W.S. The Dollar and World Liquidity. The Economist, 5 February, 1966, p. 527.

7. Bell, G. The Eurodollar Market and the International Financial System, Halstead Press, New York, 1974, p. 29.

8. Little, J.S. Eurodollars : The Money Market Gypsies, Harper and Row, New York, 1975, p. 83.

9. McClam, W.D. Credit Substitution and the Eurocurrency Market. Banca Nazionale del Lavoro Quarterly Review, December 1972, p. 350.

10. Little, J.S., op.cit., p.49.

11. International Banking-Annual Review. The Banker, August 1978, p.77.

12. Bank for International Settlements, Annual Report 1980-1981, Basle, 1981, p.116.

13. The International Banking Markets in 1982. Bank of England Quarterly Bulletin, March 1983, p. 52.

14. Bank for International Settlements, Annual Report 1981-1982, Basle, 1982, footnote to table, p.116.

15. World Financial Markets, Morgan Guaranty Trust Co., New York, January 1979, pp.9-15.

16. The International Banking Markets in 1982. op.cit., p.56.

17. World Financial Markets, January 1979, op.cit., p.10.

18. Foreign Banks in London. The Banker, November 1977, p.83.

19. Blanden, M. New Names Drawn to the City. The Banker, November 1982, p.79.

20. Key, S.J. International Banking Facilities. Federal Reserve Bulletin, Board of Governors of the Federal Reserve System, Washington, D.C., October 1982, p.563.

21. Walmsley, J. A Tough Year for US Bankers. The Banker, February 1983, p. 85.

22. Walmsley, J. ibid., p.85.

23. Key, S.J. op.cit., p.576.

24. Altman, O.L. Recent Developments in Foreign Markets for Dollars and Other Currencies. IMF Staff Papers, March 1963, p.51.

25. Altman, O.L. ibid., p.57.

26. Bank for International Settlements, ual Report 1980-1981, op.cit., p.101.

27. See Bank for International Settlements, Annual Report 1972-1973, Basle, 1973, p.165 and Bank for International Settlements, Annual Report 1982-1983, op.cit., p. 116. Note, however, that the number of reporting banks expanded considerably over the decade and also that the figures for 1982 do not separate out domestic currency deposits.

28. Bank for International Settlements, Annual Report 1983-1984, Basle, 1984, p.105.

29. Bank for International Settlements, Annual Report 1981-1982, op.cit., p. 127.

30. Mohammed, A.F. & Saccomanni, F. Short-Term Banking and Eurocurrency Credits to Developing Countries. IMF Staff Papers, November, 1973, p.617.

31. Einzig, P. & Quinn, B.S. op.cit., p.38.

32. Dufey, G. & Giddy, I.H. op.cit., p.232.

33. Dufey, G. & Giddy, I.H. ibid., p.213.

34. Dufey, G. & Giddy, I.H. ibid., p.226.

35. Mohammed, A.F. & Saccomanni, F. op.cit., p.618.

36. Market Commentary. Euromoney, March 1983, pp.159-172.

37. Mohammed, A.F. & Saccomanni, F. op.cit., p.625.

38. Dufey, G. & Giddy, I.H. op.cit., p.245.

39. Little, J.S., op.cit., p.88.

40. Webster's Third New International Dictionary, Encyclopaedia Brittanica Inc., Chicago, 1976.

41. Dufey, G. & Giddy, I.H. op.cit., p.218.

42. Dufey, G. & Giddy, I.H. ibid., p.229.

43. Lutz, F.A. The Eurocurrency System. Banca Nazional del Lavoro Quarterly Review, September 1974, p.195.

44. Lutz, F.A. ibid., p.195.

45. Dufey, G. & Giddy, I.H. op.cit., p.49.

46. Marston, R.C. Interest Arbitrage in the Eurocurrency Markets. European Economic Review, January 1976, pp. 1-13.

47. Dufey, G. & Giddy, I.H. op.cit., p.86-97.

48. Johnston, R.B. Some Aspects of the Determination of Eurocurrency Interest Rates. Bank of England Quarterly Bulletin, March 1979, pp. 35-46.

49. Kreicher, L.L. Eurodollar Arbitrage. Federal Reserve Bank of New York Quarterly Review, Summer 1982, pp.10-22.

50. Johnston, R.B. ibid., p.43.

CHAPTER 4

THE ROLE OF THE DOLLAR IN THE INTERNATIONAL MONETARY SYSTEM

4.1 Introduction

By the late 1960s it was clear that the destinies of the Eurodollar market and the US dollar were closely interlinked. The rapid growth in world trade necessitated a corresponding increase in international liquidity. The US had been reluctant to allow an increase in the dollar price of gold during the 1960s. This meant that the brunt of the demand for increased world liquidity fell upon the dollar. In theory, this was desirable, for the dollar was aptly suited to the role of world vehicle currency because of the strength of the U.S. economy. Furthermore, the expansion of the Eurocurrency market, in which the dollar was the dominant currency, provided the perfect medium for users in all parts of the globe. However, in practice, it was required that econo- policy backing the dollar be sound. During the 1960s accel- -ing US inflation and growing balance of payments deficits caused -ing lack of confidence in the dollar despite the need for dollar liquidity. This culminated in the demise of the Bretton Woods system of fixed exchange rates. During the 1970s the Eurodollar market continued to grow and entered a new era with the onset of the first oil crisis in 1973. However, for most of the 1970s concern about the dollar continued and its role in international reserves and transactions declined. This was only reversed after 1979 when the US monetary authorities set about reducing inflation with very tight monetary policies. This has had an electrifying effect on the dollar. It has regained the status of the world's most important currency while the Eurodollar market, despite some setbacks, is larger than ever.

4.2 Dollar Overhang

As the 1950s drew to a close exchange controls in Europe were scaled down and non-resident convertibility for most European currencies was restored. Most of the increase in central bank holdings of foreign currencies was in dollars and the dollar shortage had ceased to be a problem. Indeed, by 1960 the dollar shortage had become a dollar

'overhang', i.e. the ratio of US external liquid liabilities to US holdings of international reserves fell below 1 after declining steadily throughout the 1950s (see Table 4.1).[1]

TABLE 4.1

US RESERVES : LIABILITY RATIO

END OF YEAR	RATIO
1950	2,73
1951	2,73
1952	2,38
1953	2,06
1954	1,84
1955	1,69
1956	1,59
1957	1,57
1958	1,34
1959	1,11
1960	0,92
1961	0,82
1962	0,71
1963	0,64
1964	0,58
1965	0,53
1966	0,50
1967	0,45

Source: Grubel, H.G., The International Monetary System, Penguin, 1972, p.138

The decline was to continue throughout the 1960s giving rise to fears of a gold shortage should foreign holders of US short-term liabilities attempt to convert dollars for gold.

The rapid flow of funds across international borders that led up to, and ultimately brought about, the end of the Bretton Woods system, had its roots in this imbalance between the US balance of payments deficits and the US dollar price of gold. The rapid growth of world trade in the post-war period required a similar growth in the means of external payments. The relatively modest inflow of monetary gold to world reserves was inadequate and was supplemented by the build up of foreign held dollars created by US balance of payments deficits.

Initially, after World War II, the huge gold reserves of the US were more than adequate backing for the rise in foreign dollar holdings. However, in the 1960s the US was increasingly faced with a dilemma between the continuous rise of its foreign-held dollar liabilities and the shortage of new gold available for reserves. At the time gold was still valued at $35 per ounce, unchanged since the 1930s. At that price the US stood to lose its entire gold stock. Yet the US authorities shied away from the devaluation of the dollar vis-à-vis gold.[2] This is discussed in more detail in Chapter 7.

The uncertainty that this policy generated resulted in frequent bursts of destabilising international capital flows and, ultimately, the end of the Bretton Woods system.

Thus, in spite of its role as the world's most important currency unit, confidence in the dollar became more and more suspect during the 1960s as US inflation and balance of payments deficits steadily grew more serious. The inflexible international exchange rate system and the imposition of capital controls in the US merely magnified the impending crisis. The official reserves transactions balance of the US balance of payments (which is the net value of trade, transfers and capital flows between the US and private non-residents during a year) was consistently in deficit during the 1960s with three exceptions. The exceptions occurred in 1966 and 1968/9 - during periods of tight monetary policy in the US when head offices of US banks borrowed in the Eurodollar market to compensate for funds lost owing to interest rate ceilings on domestic deposits. A massive flowback of these funds occurred in 1970-71 as expectations of recession in the US coincided with rising inflation and interest rates in Europe.

In Chapter 3 the role of the US balance of payments deficits in creating Eurodollars is discussed in more detail. The point here is that the increasing volume of foreign-held dollars was to a certain extent involuntary and, hence, entailed a declining measure of confidence and acceptability in the dollar as the world's numeraire.

4.3 The End of Bretton Woods

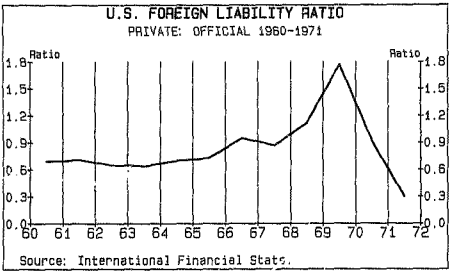
Owing to exceptionally tight domestic credit conditions between the end of 1968 and mid-1970, outstanding borrowings of US banks through their foreign branches rose from under $7 billion to a peak of just under $18 billion in August 1970. Interest rates rose by as much as 5 per cent in 1969 and differentials between US domestic and Eurodollar rates rose to as much as 3 per cent and more. The severe pressures on the liquidity positions of US banks induced by the Federal Reserve had forced them to turn to the Eurodollar market for additional funds. US monetary policy had a powerful effect on all European money markets via the Eurocurrency system. In response to monetary outflows from domestic markets, European monetary authorities raised discount rates and market interest rates rose accordingly.

The Federal Reserve responded to the Eurodollar demand by imposing a 10 per cent reserve requirement on borrowings in the market by US banks over and above a certain base. This had some effect in reducing additional borrowing but it was only when monetary conditions eased that US banks actually began to repay their debts.

A reversal of US monetary policy released massive sums into the international system. The repayment of Eurodollars coincided with the first US merchandise trade deficit since 1935 - the culmination of years of dollar overvaluation - and precipitated a run on the dollar. The resulting disruption to the international system compounded earlier problems. Not only did the return flow play havoc with foreign exchange rates but the abrupt change in interest rates left national authorities hard-pressed to protect their money markets from being swamped with funds. The result was a major international

crisis. The extent of the change in market sentiment is illustrated in Graph 4.1 which shows the ratio of external dollar holdings in private hands to holdings of public institutions. From a peak of 1,77 in 1969 this ratio had fallen to only 0,30 by 1971 indicating both the sale of dollars by private holders and central bank purchases which were necessary to protect fixed exchange rate parities.

GRAPH 4.1



Central banks found it impossible to neutralise the dollar inflow. Some even placed dollars in the Eurodollar market which depressed Eurodollar interest rates making it cheap for speculators to borrow Eurodollars and buy European domestic currency. However, the speculative element was not to blame. It was the sharp acceleration in credit expansion in the US itself that led to the movement out of dollars. Total net credit growth soared by 55 per cent in 1971.[3] The Federal Reserve also raised the Regulation Q ceilings in 1970 making it easier for banks to attract domestic deposits in the US, giving added incentive for the repayment of Eurodollar loans.

$10 billion in Eurodollars was repayed over 1970-71. The Federal Reserve attempted to reduce this rate of repayment by increasing the required reserves on US banks' Eurodollar borrowings to 20 per cent as against borrowings in excess of the reserve-free base of 1969.

The idea was that US banks would reduce repayments because, should they wish to return to the market for future loans, these loans would be more expensive. However, falling US domestic interest rates made the retention of Eurodollar borrowings too expensive and this policy was unsuccessful.

The response of the Group of 10 countries as recipients of this dollar inflow was to seek conversion of dollars into gold. The US authorities were faced with the choice either of ending convertibility of the US dollar into gold or of allowing an increase in the dollar price of gold.

In short, a massive financial shock to the Bretton Woods system, implicit in poorly co-ordinated monetary policies and rapid intermediation through the Eurocurrency markets, and US efforts to obtain some ability to adjust the dollar exchange rate combined to produce a breakdown of the system in 1971.[4]

The Euromarket, far from being the culprit, was merely the catalyst in a changing world. The real culprit was disharmony in national monetary policies. Such disharmony was untenable in a fixed exchange rate system for it merely offered a 'one-way option' on exchange rates to currency speculators.

4.4 The First Oil Crisis

Recurring currency crises over the period 1971-73 culminated in generalised floating for the world's major currencies from early 1973. Attempts to peg currencies within margins over this time encouraged speculative activity which put severe pressures on parities. The Euromarkets grew rapidly and in late 1973 the massive oil price hike by the OPEC cartel gave the Euromarket a boost which caused it to develop in a new direction.

'The period since (the oil crisis) has demonstrated in a particularly dramatic way the manner in which private capital markets have been able to deal with the situation with which the international agencies and central banks are still unable to deal appropriately'.[5]

The petrodollar problem caused the market to adopt the role of international financial shock-absorber. The process of recycling petrodollars was based on the issue of financial claims by oil-importing countries to OPEC to pay for oil. A secondary, multilateral exchange of financial claims between oil importers also occurred, resulting in a net transfer of such claims to OPEC. This secondary mechanism enabled those importers whose financial assets were not attractive to OPEC to receive assistance from other importers whose assets were purchased by OPEC.

The OPEC surplus in 1974 amounted to around $55 billion of which $23 billion was put into the Eurodollar market.[6] By the end of 1977 approximately $112 billion of reserves were held in the market by official institutions and OPEC placements are estimated to account for over two-thirds of the increase from 1973 to 1977.[7]

For OPEC itself the market offered something of a hedge against the declining value of the dollar because it provided it with the means to achieve an optimum investment portfolio. To a certain extent, however, the OPEC funds were locked into Eurodollars because mass withdrawals would have depressed their value to much. This allayed the reservations of many economists concerning the mismatching of maturities in the balance sheets of Eurobanks.

The industrialised countries made substantial use of Eurocurrency credit. The market offered an immediate palliative to the quadrupling of the oil price. The low absorptive capacity of OPEC restricted the volume of exports to OPEC to pay for oil. 'Neither France, nor the UK, or previously Italy, could have imported capital in the amounts they did without the existence of the Eurocurrency market'.[8]

The intermediary role of the Euromarkets was especially helpful in providing a bridge between risk-averse lenders and pressurised borrowers - especially less developed countries. OPEC tended only to accept low-risk financial claims and a substantial proportion of oil-importing LDC debt tended to be insufficiently secure. The Eurobanks bought the high-risk LDC debt and financed it by selling

low-risk debt to OPEC. By 1977 the external debt of non-OPEC LDCs had risen to $180 billion of which nearly half had come from commercial banks. This function has become an increasing feature of the market and has made a considerable contribution to replacing diminished grants of official foreign aid to LDCs. However, the problem of LDC debt default has risen to alarming proportions in recent years and will be discussed in Chapter 6. It may seem surprising that the Eurocurrency market was so prominent in the petrodollar recycling process. As the bulk of the international oil trade is denominated in dollars it would have been reasonable to expect the US domestic financial markets to have been more favoured by OPEC depositors. However, it appears that political considerations, particularly fears of blocking or confiscation, deterred OPEC depositors from making greater use of the US markets.[9] Similarly, LDC borrowers have found it easier to borrow in the Euromarkets than in national capital markets. Although the Eurocurrency markets are not free of such risks (as was shown when the Federal Reserve Board ordered the freezing of Iranian deposits with US bank branches in London during the US hostage crisis in 1980) they are able to offer more attractive interest rates to depositors because they are not subjected to cash reserve requirements.[10]

Several economists predicted that the growth of the market would taper off after 1973. It was thought that the termination of controls over capital flows from the US at the beginning of 1974 would reduce the demand for offshore dollars. Also, the failure of the Herstatt Bank in 1974 due to foreign exchange dealing mismanagement led some to believe that the number of participants in the interbank market would decline owing to greater caution by the larger Eurobanks.

Although there was a decline in the gross size of the market during the third quarter of 1974, it followed a massive increase in activity in the first two quarters. Interbank activity did, in fact, decline briefly owing to nervousness following the Herstatt affair but this was merely a hiccup as banks sought to restructure their loan activity and internal control mechanisms. Interbank business revived strongly in 1975 and lending to LDCs increased substantially. As it

turned out, the need for recycling predominated and served to underline the fact that the Eurodollar market was inextricably linked with the future of the world economy.

In fact, the US move to drop capital controls in 1974 opened up new scope for arbitrage between the US and Eurodollar deposit and loan markets for banks located in the US, while the Herstatt affair merely served as a cautionary warning to Eurobanks to increase their market efficiency.

Other moves supported the perpetuation of the market. At a meeting in Basle in September 1974 it was agreed that the central banks of the countries comprising the Group of Ten were able and willing to act as lenders of last resort should banks operating in the Eurocurrency system experience liquidity problems.[11] Furthermore, the extensive redepositing of funds in the market by OPEC monetary authorities gave a considerable boost to the growth of Eurodollar deposits.

In any event, predictions of a contraction in the growth of the market were unfounded. The oil crisis elevated the system to the status of a household word. The market displayed an ability to accommodate a wide variety of needs in a flexible and competitive fashion throughout a succession of chaotic disturbances.

As was the case during the Gold Standard era, when the resilience and adaptibility of monetary banking institutions made possible the development of national credit money and smoothed out fluctuations due to gold rushes, the Eurobanking system performed remarkably well during the convulutions resulting from the unwinding of the Bretton Woods agreement of which the first oil crisis was the primary example.

4.5 Dollar Diversification

The period immediately after the oil crisis until the end of 1979 was a testing time for the US dollar. After peaking in 1974 US inflation measured by the consumer price index declined in 1975 and 1976.

However, from 1977 both money supply growth and inflation began to accelerate. Further pressure was put on the dollar by the very large trade deficits which occurred in the second half of the 1970s as shown in Table 4.2.

TABLE 4.2

YEAR	US MONETARY GROWTH %	US TRADE BALANCE ($b)	US CPI INFLATION %	INDEX OF EFFECTIVE US $
1974	9,1	-5,3	10,9	101,1
1975	6,6	9,1	9,2	100,0
1976	6,5	-9,3	5,8	105,2
1977	9,0	-30,9	6,5	104,7
1978	9,6	-33,8	7,5	95,7
1979	9,5	-27,4	11,3	93,7
1980	9,2	-25,3	13,5	93,9

Source: International Financial Statistics, Yearbook, 1983.

The result was that the effective exchange rate of the dollar declined by 11 per cent between 1976 and 1979 giving rise to widespread speculation that the dollar 'may be in a long-term decline, as distinct from the sort of decline that one might expect to accompany a sharp rise in US inflation and a widening US trade gap'.[12]

It was anticipated that central banks of many countries would diversify future accumulations of foreign exchange in order to scale down the dollar component. There was a danger that such official diversification could become a distinct long-term trend which would have ripple effects on the entire international monetary system.

Attention was focused on other international currency units - notably the Deutschmark. It was reported that the Bundesbank had adopted a more accommodating stance to the increasing reserve currency role of

the Deutschmark.[13] There was also a softening of attitude on the part of Japan and Switzerland with respect to their national currencies. At a meeting of the Interim Committee of the IMF in Hamburg in April 1980 an arrangement was sanctioned under which the dollar, while remaining the pre-eminent reserve asset, would share its international role more widely with other currencies, especially the Deutschmark, the Swiss franc, and the yen. Subsequently the Swiss and Japanese authorities eased up on exchange controls giving both foreign central banks and private investors greater access to their domestic markets.

The role of the dollar in the Eurocurrency markets was also affected by the problems besetting the US economy. The proportion of Eurodollars to total Eurocurrency liabilities declined from 80 to 72 per cent between 1976 and 1979.[14]

In their analysis of the use of money Brunner & Meltzer have explained the motivation behind currency diversification. 'Transactors concentrate their search on those transactions chains that offer at least the same expected gain in wealth as existing mediums of exchange. The assets that replace existing money may have higher marginal costs of acquiring information and transacting. If so, they must have lower marginal holding costs than the existing money'.[15] During this period of international currency diversification the value of the dollar as a means to reducing the costs inherent in the exchange process was being eroded by its increased holding cost owing to inflation and oversupply.

4.6 Monetarist Practice

Towards the end of 1979 an important shift occurred in US monetary policy. On 6 October, under the chairmanship of Paul Volcker the Federal Reserve Board abandoned the traditional policy of stabilising interest rates in favour of a policy of stabilising money supply growth rates. At that time US interest rates had already been rising for some two-and-a half years, the prime overdraft rate having reached a record level of 13,5 per cent. Inflation had also been rising since the end of 1976 and had reached record levels.

The decision to abandon the interest rate target led to a further dramatic surge in interest rates. For example, between the end of September 1979 and the end of March 1980 the 3-month Eurodollar deposit rate rose from 12,75 to 19,69 per cent (see Table 4.3).

TABLE 4.3

3-MONTH EURODOLLAR RATE (%)

1979	January	10,31	1980	January	14,37
	February	10,50		February	16,94
	March	10,50		March	19,69
	April	10,75		April	14,37
	May	10,44		May	10,12
	June	10,50		June	9,75
	July	11,31		July	9,81
	August	12,12		August	12,25
	September	12,75		September	13,81
	October	15,69		October	15,37
	November	14,00		November	18,06
	December	14,44		December	17,62

Source: World Financial Markets, Morgan Guaranty Trust Co., New York, various issues.

For the 12 months from November 1979 to October 1980 the Federal Reserve set a target range for narrowly-defined money supply (M1A) growth of 3,5 to 6 per cent (which constituted a severe contraction in real terms with inflation well above 10 per cent during that time). Although there was considerable volatility - including a sharp fall in money supply during the second quarter of 1980 - the target was met.

The target range for the next 12 months was reduced to 3 to 5,5 per cent. This was subsequently adjusted to minus 2 to minus 4,5 per cent to account for the shift to Negotiable Order of Withdrawal accounts and the focus shifted to M1B where the target range had been

set for 6 to 8,5 per cent. By the end of October 1981 [illegible] growth in M1B was only around 3,5 per cent, well below the lower limit of the range.

The Fed then set a target of only 2,5 to 5,5 per cent for the next 12 months for M1, having scrapped the M1A-M1B definitions. Although there was some overshooting (the growth rate to October 1982 was 7,3 per cent) this nevertheless meant that for the 3 years from the start of the new monetary growth targeting policy the Federal Reserve had succeeded in limiting M1 growth to about 6 per cent annual compound growth. Over the same period the annual compound growth rate in US inflation was over 9 per cent meaning a considerable contraction in real monetary growth over the 36 months. The real monetary contraction was more severe in the earlier stages of the Fed policy. The consumer price inflation rate peaked at 14,5 per cent in the second quarter of 1980 whereas it had declined sharply to only 5 per cent by October 1982.

The result of this tight monetary stance was exceptionally high interest rates in the US throughout the period. Nominal interest rates followed a roller-coaster pattern with the prime overdraft rate rising to and falling from the 20 per cent level twice in 1980 and 1981 and declining to a low of only 10,5 per cent by mid-1983. More importantly, real US interest rates reached their highest levels in 50 years.

The combination of tight money and high US interest rates produced a considerable contraction in US economic activity over the period. Industrial production dropped by 9,1 per cent between the end of 1979 and the end of 1982.

More interesting is that from the end of 1982 the US economy commenced a period of exceptionally strong growth despite a continuation of this tight monetary stance. US real GNP growth was 3,7 per cent in 1983 and around 7 per cent in 1984. In 1983 real M1 growth accelerated to 5,6 per cent but was cut back to below 4 per cent in 1984. By late 1984 M1 growth was at the lower end of the target range set by the Federal Reserve Board.

The Fed's policy has had a remarkable effect on the US dollar. At the time the Fed implemented its policy - November 1979 - the dollar's effective exchange rate was 92,7 (index 1980 - 82 = 100). Initially, there was little change in the rate and it had actually declined to 88,7 by September 1980. However, it recovered strongly over the next two years - rising by 26 per cent to 115,0 by November 1982.[16] At this level the dollar was actually higher than the level it recorded in the early 1970s before the era of floating exchange rates commenced. Since the recovery in US economic activity in late 1982 the dollar has continued to strengthen with the effective exchange rate index reaching 124 by mid-1984.

The tight US monetary policy had the effect of reversing the tendency towards diversificaton away from the dollar discussed in the previous section. After reaching a low point of 72 per cent in 1979, the proportion of Eurodollars to total Eurocurrency liabilities recovered strongly to reach 79 per cent by 1982 which was only a shade below the highest level reached (80 per cent in 1976) since the onset of floating exchange rates. Since then it has stayed around the 78 - 80 per cent level.[17]

Another measure of the diversification away from the dollar is the share of US dollars in the SDR value of foreign exchange reserves held by central banks. Table 4.4 shows the decline in the dollar component of international foreign exchange holdings from 79 per cent in 1975 to 56 per cent in 1980. This tendency appears to have been reversed in 1981 when public concern over stability came to be more evenly spread among major currencies and interest rate developments favoured holdings of assets denominated in US dollars.[18]

TABLE 4.4

SHARE OF THE US DOLLAR IN SDR VALUE OF TOTAL IDENTIFIED OFFICIAL HOLDINGS OF FOREIGN EXCHANGE

YEAR	(%)
1975	75
1976	80
1977	79
1978	77
1979	62
1980	56
1981	58
1982	60

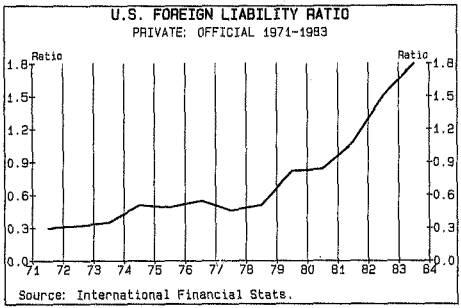
Source: International Monetary Fund, Annual Report, 1982, p.65. 1982 Figure: IMF, Annual Report, 1983, p.72.

There is still considerable debate as to the success of the policy of the Federal Reserve. Measured in terms of a strong dollar and the reversal in the secular rising trend of US inflation, the policy has indeed been successful. Measured in terms of declining levels of output and rising unemployment the policy was not without substantial costs.

Furthermore, the subsequent recovery in economic activity and job creation has been to a considerable extent a result of record US Federal budget deficits. This appears to be an intractable, structural problem which is, in itself, potentially destabilising for the dollar. For example, there is still the chance that such deficit spending could be financed with more accommodative monetary policy. Alternatively, rapid US growth has resulted in a mounting US trade deficit (around $120 billion) in 1984 which could, ultimately, lead to the perception that there is an excess supply of dollars in the hands of holders outside the US. In this context it is interesting to note that in 1983 the ratio of private to official holdings of dollars outside the US had risen back to the peak last achieved in 1969 - just prior to the flight from dollars which occurred in 1970

and 1971 (see Graph 4.2). So far in 1984 this ratio has continued to rise. Clearly, any large-scale loss of confidence by private transactors in dollars could mean a significant decline in the value of the currency.

GRAPH 4.2



As far as the Eurocurrency market is concerned, the strong dollar and lower inflation have brought considerable problems. In particular, the rising level of debt in less developed countries over the 1970s was financed cheaply because of the erosion of the dollar's value internationally. The new monetary policy changed that. The dollar has become expensive for debtors, especially when it is borne in mind that the low level of international economic activity between 1980 and 1982 devastated their export volumes and prices. Perhaps the best measure of the cost of borrowing has been the historically high real Eurodollar interest rates (see Table 4.5). Even in early 1983 after three years of low economic growth, inventory decumulation and sharp cutbacks on capital spending internationally, real Eurodollar rates remained stubbornly high, preventing a decline in the effective value of the dollar, and prolonging the dire financial situation of the LDC debtor countries.

TABLE 4.5

REAL 3-MONTH EURODOLLAR INTEREST RATE (%)*

Month	1977	1978	1979	1980	1981	1982
Jan	0,5	0,5	1,0	0,5	3,8	6,1
Feb	-0,7	0,8	0,6	2,8	5,3	7,2
Mar	-1,1	1,0	0,3	5,0	4,0	8,6
Apr	-1,6	1,0	0,4	-0,3	6,9	8,3
May	-0,9	1,0	-0,4	-4,3	8,0	7,7
Jun	-1,4	1,3	-0,4	-4,5	8,2	8,7
Jul	-0,7	0,8	0,0	-3,4	8,0	6,6
Aug	0,5	1,0	0,3	-0,5	7,5	6,0
Sep	0,2	1,1	0,7	1,1	6,8	6,4
Oct	0,8	2,5	3,5	2,8	5,5	4,9
Nov	0,4	2,6	1,4	5,5	2,4	5,3
Dec	0,9	2,7	1,1	5,2	4,9	5,3

* 3-month Eurodollar interest rate minus US year-on-year CPI inflation rate.

Sources: 1) Eurodollar interest rate: World Financial Markets, Morgan Guaranty Trust Co., New York, various issues.
2) US Consumer Price Index: Econostat Consumer Database System, Rosebank, Johannesburg.

Despite the strong dollar and high real Eurodollar interest rates the Eurocurrency market has continued to expand in recent years, although at a slower rate. Table 4.6 below shows that growth in non-bank Eurocurrency deposits declined to 11 per cent in 1982 and 1983. Indications are that there was a further deceleration in 1984.

TABLE 4.6

GROWTH IN NON-BANK EUROCURRENCY DEPOSITS

YEAR	%
1978	29
1979	41
1980	33
1981	31
1982	11
1983	11

Source: World Financial Markets, Morgan Guaranty Trust Co., New York, July 1984, p.15.

4.7 Conclusion

It seems for the time being that the process of a long-term move away from the dollar as key currency has been halted. While the continued dominance of the dollar in international finance has entailed costs for many because of the uncertainty regarding its future value, it is a cost that transactors appear ready to pay: 'The high costs that individuals are willing to pay before beginning to search for new or supplementary arrangements suggests the size of the benefits received from a dominant medium of exchange'.[19]

CHAPTER 4

REFERENCES

1. Grubel, H.G. The International Monetary System, Revised Ed., Penguin Books, Manchester, 1972, p. 138.

2. Gilbert, M. Quest for World Monetary Order - The Gold-Dollar System and its Aftermath, John Wiley and Sons, New York, 1980, p.217.

3. McClam, W.D. Credit Substitution and the Euro-Currency Market. Banca Nazionale del Lavoro Quarterly Review, December 1972, p.351.

4. Stem, C.H., Makin, J.H. and Logue, D.E. Eurocurrencies and the International Monetary System, American Enterprise Institute for Public Policy Research, Washington, 1976, p.25.

5. Einzig, P. and Quinn, B.S. The Eurodollar System : Practice and Theory of International Interest Rates, Sixth Ed., MacMillan Press, London, 1977, p.102.

6. Einzig, P. and Quinn, B.S. ibid., p.103.

7. Young, J.H. The Eurocurrency Market and World Economic Stability. Departmental Memoranda Series, International Monetary Fund, 21 June, 1978, pp. 14 and 32.

8. Lamfalussy, A. Beyond Bretton Woods : Floating Exchange Rates and Capital Movements, in Thirlwall, A.P. Keynes and International Monetary Relations, MacMillan Press, London, 1976, p.117.

9. Stem, C.H., Makin, J.H. and Logue, D.E. op.cit., p.368.

10. Aliber, R.Z. Exchange Risk, Political Risk, and Investor Demand for External Currency Deposits. Journal of Money, Credit, and Banking, May 1975, pp. 161 - 179.

11. McKenzie, G.W. The Economics of the Euro-Currency System, MacMillan Press, London, 1976, p.126.

12. How Central Banks are Ditching the Dollar. Euromoney, October 1978, p.31.

13. Marsh, D. Towards a New Balance in World Reserve Currencies. Financial Times, London, 15 May 1980, p.24. See also The Deutsche Mark as an International Investment Currency. Monthly Report of the Deutsche Bundesbank, November 1979, pp. 26 - 34.

14. World Financial Markets, Morgan Guaranty Trust Co., New York, various issues, 1976 - 1980.

15. Brunner, K. & Meltzer, A.H. The Uses of Money : Money in the Theory of an Exchange Economy. American Economic Review, December, 1971, p. 801.

16. World Financial Markets, Morgan Guaranty Trust Co., New York, January 1984, pp.12-13.

17. World Financial Markets, ibid., various issues.

18. International Monetary Fund, Annual Report, 1981, p.64.

19. Brunner, K., & Meltzer, A.H., op.cit., p.801.

CHAPTER 5

INFLATION AND CONTROLS

5.1 Introduction

A number of criticisms have been levelled at the Eurocurrency markets as they have grown in size. Most important among these have been that the markets contribute significantly to excess monetary growth and thereby to inflation; and also that Eurobanks have acted imprudently in making loans on a very large scale to less developed countries (LDCs) for balance of payments financing purposes. For these two broad reasons critics of the markets have suggested that they be subjected to varying degrees of direct or indirect control.

This chapter will focus primarily on the question of the inflationary potential of the markets and the feasibility of controls. The following chapter will be concerned with the question of involvement of the Eurocurrency markets in the so-called 'international debt crisis'.

5.2 The Eurocurrency Markets and Inflation

The acceleration of international inflation during the late 1960s and the 1970s occurred simultaneously with rapid growth in the Eurocurrency markets. It appeared to many economists that owing to their unregulated nature, the Eurocurrency markets were capable of creating additional credit on the basis of the fixed coefficient money multiplier model along the same lines as within a domestic banking system. In fact it was thought by some that the Eurocurrency system could create almost unlimited amounts of liquidity in this fashion because of the very small ratio of reserves that Eurobanks (voluntarily) held against deposits. From this it was concluded that the markets were an important cause of world inflation and that they should be subjected to control.

Proponents of the fractional reserve process in the Eurocurrency markets included Friedman[1], Fratianni and Savonna[2], Carli[3] and

Ossola[4]. Friedman stated the proposition boldly: 'The correct answer for both Eurodollars and liabilities of US banks is that their major source is a bookkeeper's pen'.[5] He stated that the ultimate increase in the amount of Eurodollars from an initial transfer of deposits from other banks to Eurodollar banks depended on the amount of dollars Eurobanks chose to hold as precautionary cash reserves in the US and the 'leakages' from the system, i.e. the extent to which Eurodollar loans were not redeposited in the Eurocurrency market. Friedman's view was that the Eurodollar market raised the world's nominal money supply and thus made the world price level higher than it would otherwise have been.

Carli outlined carefully the process of credit creation and control in a domestic economy whereby the volume of credit that ultimately is created is a multiple of the monetary base. The monetary base in turn is determined by the monetary authorities, the banks and the public. The authorities lay down the proportion of cash reserves to deposits which the banks must hold, the banks decide on the amount of excess reserves they wish to hold and the public decides on how much of the monetary base it needs to keep on hand as means of payment. That part of the monetary base not in the hands of the public or held as compulsory reserves may be lent out as credit. The stream of credit lent out flowed back, either wholly or in part, to one or more banks in the system.

Carli's view was that the same process of credit creation operated in the Eurocurrency markets. However, a domestic banking system was subject to the restraint of compulsory reserves and to control exercised by the authorities over the volume of monetary base instruments. The Eurocurrency markets were not subjected to such restraints or controls except the voluntary cash reserves which Eurobanks felt it necessary to hold. Carli feared that the amount of credit that could be created on this base could reach inflationary dimensions and advocated various controls to inhibit it.

For Ossola, the Eurocurrency market was a system where a market mechanism could legally create unlimited monetary means. The Eurobanking system's potential for expansion was greater than that of

domestic systems because its liquid reserves were proportionately lower and its monetary base not controlled by any monetary authority. He also advocated a series of controls for regulating the markets.

Fratianni and Savonna followed the same line of reasoning concerning the 'multiplicative power' of the Eurobanking system and claimed to have empirically identified a Eurodollar multiplier equal to between 3 and 7.

In a survey of empirical estimates of the Eurodollar multiplier, Dufey and Giddy discovered a range of 0,4 to 18,45 depending on which data was used to approximate the Eurodollar monetary base and over which time period the study was carried out.[6]

Virtually all the theoretical work which attempted to identify the fixed coefficient money multiplier took care to explain that 'leakages' from the system reduced the size of the multiplier. Ossola called leakages the 'loss coefficient', the size of which depended on the extent to which a beneficiary of a Eurocurrency loan redeposited the funds in the Eurocurrency market.

The traditional analysis of the money multiplier can be simply stated in the formula:

$$k = \frac{1}{1 - (1-r)(1-e)}$$

where e refers to the holdings of economic transactors in the form of notes or cash, and r to the reserve requirement rate.[7] Applying the formula to the Eurocurrency system would assume that Eurobanks held a determinable proportion of deposits to reserves (i.e. deposits with head office banks) and that there was a determinable redeposit rate by beneficiaries of Eurocurrency loans. The proponents of the fixed coefficient money multiplier model conceded the existence of leakages, particularly by loan recipients who frequently deposited the funds borrowed in the markets with banks located in the country of origin of the currency concerned. However, because the reserve

ratio was known to be small and the redeposit ratio significant, most studies found a multiplier of at least more than unity.

5.3 Central Bank Redepositing

After the upheaval in the international monetary system in 1970 and 1971 the phenomenon of depositing by central banks in the Eurocurrency market attracted considerable attention. Tight monetary policy in the US during 1969 encouraged US banks to borrow extensively in the Eurocurrency market at relatively low rates of interest. A recession in the US and recovery in Europe in 1970 reversed the tight credit conditions in the US and US interest rates declined. In contrast, Japan and most Western European economies persisted with anti-inflationary policies. This caused a considerable return flow of dollars from the US to the Eurocurrency market in search of higher interest rates.

The subsequent run on the dollar forced European central banks to purchase dollars in order to maintain exchange rate parity under the existing system of fixed exchange rates. On one particularly hectic day, 5 May 1971, the German authorities acquired $1 billion in 40 minutes of trading to maintain their exchange rate.[8]

A substantial portion of the dollars so acquired found their way into the Eurodollar market. Such redepositing was thought to substantially reduce the loss coefficient in the market and increase its credit creating potential. The problem of central bank redepositing was temporarily alleviated in June 1971 when the central banks belonging to the Group of Ten agreed among themselves not to increase their official reserve holdings in the Eurocurrency markets. However, the problem re-emerged in the mid-1970s after the quadrupling of the oil price which generated large foreign exchange reserves for OPEC economies, a significant proportion of which was placed by OPEC monetary authorities in the market.

5.4 Shift of Ownership

Even with the problem of central bank depositing it became increasingly clear that the fixed coefficient money multiplier model was not an adequate theoretical tool for studying the effect of the Eurocurrency markets on world money supply growth and inflation. One simple difference between the Eurocurrency markets and domestic credit markets is that the deposit liabilities of domestic banks are used as a means of payment (ie cheques) whereas Eurobank deposit liabilities are not. With a few minor exceptions no cheques can be drawn on Eurodollar deposits. Before such deposits can be used for payments purposes they first have to be converted into a demand deposit with a bank located in the US. Eurobanks are more similar to 'savings banks' than 'commercial banks' in that their liabilities answer an investment need and not a payments need.[9] Loans to customers of Eurodollar banks are generally made in the form of actual US dollars rather than by the creation of a Eurodollar deposit against which a customer draws, as is the case with a loan by a domestic US bank.[10] In much the same way that a demand deposit with a domestic bank is withdrawn and placed with a savings-and-loan association, which constitutes a transfer of ownership of the demand deposit to the latter, a shift of a demand deposit from a local US bank to a Eurobank transfers ownership of the demand deposit to the latter. The Eurobank receiving the deposit can subsequently extend dollar loans based on the demand deposit it holds at a US bank (maintaining some small portion of the deposit with the US bank as a 'precautionary reserve').[11] The beneficiary of the loan, in turn, has ownership of the original demand deposit transferred to it. The total level of demand deposit liabilities held by the US banking system is not changed.

There is nothing in the payments mechanism which obliges the supplier of goods to the borrower of a Eurocurrency loan to pay the cheque drawn on the US demand deposit into any Eurobank. This decision will rest purely on the supplier's preference. Thus there is no causally connected succession of deposits in the Eurobanking system comparable to the chain found at the level of a national banking system.[12]

5.5 Savings-and-Loan Associations

An example of the analogy with a savings-and-loan association would work as follows: the owner of a commercial bank demand deposit transfers it to a savings bank. The latter draws on the demand deposit to make a loan to a home construction company. The company, out of net income from its business, saves a certain amount which it deposits with the savings association. The latter makes another loan with this deposit and so on. Thus multiple loans can be made against the original and unchanged demand deposit with the commercial bank. The savings association is acting less as a creator of credit than as an intermediator of existing deposits. In this analysis it is clear that the intermediary role played by the savings-and-loan association increases the velocity of circulation of the original deposit.

Crockett has pointed out that commercial banks are not unique in their ability to create credit. When attention is shifted to the balance sheets of financial institutions and their customers, it can be seen that the circumstances of banks and other financial intermediaries are quite comparable.[13] While savings banks' liabilities are not regarded as means of exchange they are still able to extend credit up to a point where the marginal return on lending is equal to the marginal cost of attracting deposits. Similarly, commercial banks are constrained in their lending activities by the relative attractiveness of their liabilities ie they compete with other financial intermediaries for deposits. Eurobanks have developed a range of liabilities that satisfy a wide spectrum of liquidity needs. While their liabilities are not actually used as a means of payment they are nonetheless close substitutes for money.

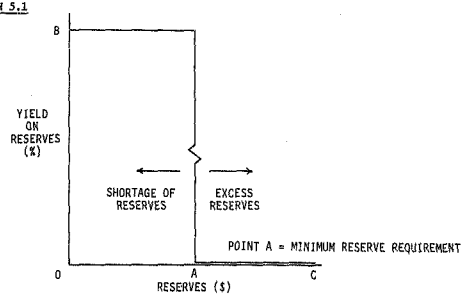
The second interim report of the De Kock Commission of Inquiry into the monetary system and monetary policy in South Africa has recently explicitly recognised the credit creating potential of building societies, non-bank financial intermediaries similar to US savings-and-loan associations and, for that matter, Eurobanks. In recent years the liabilities of these institutions have increasingly taken on the character of money or close money substitutes and they are capable to some extent of creating their own liabilities.[14]

All that is necessary is that the building societies quote competitive interest rates for funds and that investors find their liabilities attractive to hold as money or money substitutes.

5.6 Supply and Demand Approach

In addition to showing that other financial intermediaries are also capable of expanding their balance sheets, Crockett asserts that there is little use for the money multiplier model in studying Eurobank extension of credit. Because domestic commercial banks are constrained by cash reserve requirements they face a 'discontinuity in the implicit yield on reserves'.[15] Below the required minimum, i.e. between points O and A in Graph 5.1, the implicit marginal yield on reserves is extremely high; above the prescribed minimum, i.e. between points A and C, it is zero.

GRAPH 5.1

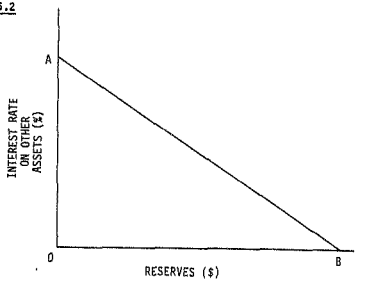


In other words, the penalty for failing to meet the reserve requirements is prohibitive whereas the return on excess cash reserves is negligible (except for a very small margin over the minimum). Thus, movements in the yield on alternative assets will have no influence on the ratio of reserves that an individual bank will wish to hold. Banks will always respond to a release of

reserves by the central bank by expanding loans. An increase in the volume of reserves provided by the central bank causes a discrepancy between the return on marginal loans and the return on reserves (which, being in excess of requirements, will fall to the zero-yielding portion of the discontinuous yield curve).[16] Banks will lower their loan rates, increase loans and run down excess reserves, until reserves reach the required minimum again. The minimum reserve requirement acts as a fulcrum upon which national monetary authorities' open-market operations are applied to affect commercial bank credit creation.

However, Eurobanks do not face a discontinuous yield curve for their reserves. Because they are not subjected to legal minimum reserve requirements the utility derived from holding reserves is a continuous function, i.e. line AB in Graph 5.2, of both the interest rate on other assets and the amount of reserves held.

GRAPH 5.2



Eurobanks hold a very small proportion of total assets as reserves and rely on the well-developed interbank market to meet unforeseen withdrawals. The expansion of the market depends on the demand for Eurocurrency deposits and Eurocurrency loans. Since its inception and for various reasons mentioned in Chapter 3 the relative

attractiveness of Eurocurrency instruments has generated a continuous flow of new funds into the system enabling its balance sheet to expand. Crockett concludes that it is not the mechanical nature of credit creation by banks that makes reserve requirements essential, but rather the existence of reserve requirements that makes credit creation conform to a multiplier framework. In the Eurocurrency market the simple mechanism of supply and demand equated by price can explain the expansion of the market perfectly well.[17]

Dufey and Giddy also find the supply and demand approach appropriate for analysing the growth of the Eurocurrency market.[18] The demand for Eurocurrency deposits by Eurobanks is a function of the demand for Eurocurrency loans by borrowers. The lower the Eurocurrency loan rate the greater the demand. For example, as the Eurodollar rate rises loan demand declines and becomes zero at the point at which the Eurodollar loan rate equals the equivalent domestic US loan rate.

Similarly, depositors in the Eurocurrency market increase their deposits in response to the rising Eurodeposit rate and reduce their deposits as it falls. In the Eurodollar market, the supply of Eurodollar deposits becomes perfectly elastic when the Eurodollar deposit rate is equal to the equivalent domestic US deposit rate.

On the basis of this analysis an exogenous rise in Eurocurrency deposits would not produce the same effect as an exogenous rise in deposits in a domestic banking system. According to the multiplier analysis the domestic bank retains the required reserve against the deposit and loans out the balance at a lower interest rate. The loans create new deposits in the banking system and, in turn, new reserves and loans. The process continues until all of the original inflow has been taken up by reserves or has leaked out of the system. To calculate the multiplier all that is required is the loss coefficient.

In the Eurocurrency market Eurobanks aim merely to equate deposits and loans at the most profitable interest rate. An exogenous increase in deposits could result in an increased extension of credit

but it could also produce lower deposit rates such that part of the original inflow is counterbalanced by an outflow of deposits. Depending on the interest rate elasticity of the supply and demand curves for Eurobank facilities some combination of both is likely to occur.

Two factors are responsible for the continued growth of the markets. Firstly, the rate of credit expansion in national markets and secondly, the increasing awareness of the attractiveness of the markets amongst borrowers, banks and depositors. On its own, the extent of credit creation over time in domestic markets determines the potential flow of deposits to Eurobanks. This potential has been steadily enhanced over the past two decades as greater awareness of the market has spread internationally, and the learning curves of participants in the markets have flattened out.

The supply and demand approach to the growth of the Eurocurrency markets gives a different perspective to the problem of central banking redepositing which, under the multiplier approach, was held responsible for a great deal of the inflationary impact of the market.

For example, the shift of funds by a central bank out of a domestic US deposit to a Eurodollar deposit would have the effect of depressing rates in the offshore market or raising rates in the domestic market or some combination of both. At the margin some depositors would shift deposits from the offshore back to the domestic market. Whether or not the initial shift is wholly offset by the reflow depends on the interest elasticities of the two markets. Because of the high degree of integration between the Eurodollar market and the domestic US money market, these elasticities are assumed to be very high.[19]

5.7 Credit is Expanded

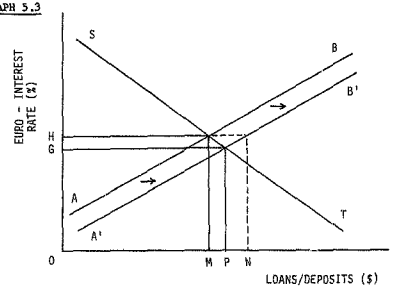
Although the supply and demand approach to the flow of funds through the Eurobanking system appears more realistic than the conventional multiplier analysis it is difficult to escape the conclusion that a transfer of deposits to the Eurocurrency system is likely to produce

an extension of credit upon an unchanged base of domestic deposit liabilities. Thus while the domestic stock of money remains unchanged an expansion of lending and spending has occurred - in other words an increase in the velocity of the given money stock has taken place. The simplified balance sheet analysis below shows how this occurs.

US BANK			EUROBANK			
ABC	100		ABC	100	US BANK	100
-ABC	100				-US BANK	98
E/BANK	100				XYZ	98
-E/BANK	100					
XYZ	98					

Initially a shift of a time deposit of $100 occurs from a US bank to an offshore bank. The depositor, ABC, now owns a Eurodeposit and the Eurobank owns a US deposit upon which it can extend credit of $98 to XYZ (keeping a small reserve against the original deposit). XYZ then acquires ownership of a $98 deposit with the US bank. At this stage there is an unchanged deposit liability for the US bank and an expanded balance sheet for the Eurobank. However, in a dynamic system this is unlikely to be the end of the process. ABC's original shift is likely to produce at the margin a small decline in the Eurodeposit rate, inducing other depositors to withdraw their Eurobank deposits. This would create a contraction in the Eurobank's balance sheet. However, as Graph 5.3 shows, even with very flat (interest-elastic) Eurobank supply and demand curves some expansion of the balance sheet on the basis of an original deposit must occur. An autonomous shift in the Eurodeposit curve AB to A'B' such that deposits rose from OM to ON would have the effect of reducing the Eurodeposit interest rate from OH to OG where a new equilibrium level of deposits would be established at OP (less than ON but greater than OM). Only if AB was perfectly horizontal would there be no increase in the equilibrium level of Eurodeposits. This is unlikely in such efficient markets.

GRAPH 5.3



It appears, therefore, that using the money multiplier approach (deemed inappropriate by the author), the conclusion is reached that the Eurocurrency markets create credit and money, while using the supply and demand approach the markets augment the velocity of money. Under neither analysis is it possible to quantify accurately the extent to which these effects occur.

5.8 Liquidity Transformation

Another approach to the inflationary potential of the Eurocurrency market is to establish the extent to which it enhances the liquidity of the non-bank sector. In particular, net liquidity creation is positive if a financial intermediary borrows short and lends long. The nature of commercial bank activities is certainly to borrow short and lend long. However, many non-bank financial intermediaries also perform this function. Evidence that Eurobanks maintained a fairly close maturity balance would indicate that the system functions primarily as a distribution mechanism for existing liquidity rather than as one that creates new liquidity.[20]

The only detailed data available for analysis of the maturity structure of Eurobanks are compiled and published by the Bank of England in its Quarterly Bulletin. They are restricted to UK-based

Eurobanks which do, however, make up a relatively large proportion of total Eurobank activity (see Chapter 3) and are therefore taken to be fairly representative of the market as a whole.

Hewson has constructed 'mismatch curves' to analyse the degree of maturity transformation performed by Eurobanks. The mismatch curve involves expressing the percentages of assets and liabilities in each maturity class as a percentage of aggregate assets and liabilities respectively, cumulating these percentages for both assets and liabilities and then plotting these cumulative percentages.[21] The larger the area between the mismatch curve and the diagonal, the further from equal is the distribution of claims relative to the distribution of liabilities.

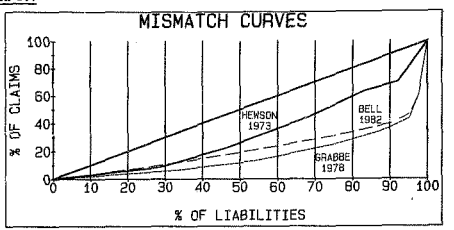
Using data for September 1973 Hewson found that the degree of maturity transformation in the UK-based Eurobanking system was noticeably less than in the domestic American banking system and not significantly differently from that in the domestic Japanese and German banking systems.

Unfortunately Hewson's analysis was not consistent with his initial statement that 'the economic significance of the Eurobanking system should not be determined by whether it creates money per se, but whether liquidity transformation represents a significant aspect of its operations vis-a-vis the non-Eurobank sector.'[22] That is, it depends on whether, in dealing with the non-bank sector, Eurobanks (on average) tend to match the liquidity of their deposits from this sector to the liquidity of their claims on this sector.

In compiling mismatch curves Hewson ignored the specific breakdown of Eurobank assets and liabilities with respect to the non-bank sector preferring to concentrate on overall assets and liabilities. The resultant mismatch curves show quite a small area between the curves and the diagonal allowing the conclusion that maturity transformation is not significant.

However, using Hewson's same data (in which the figures for assets and liabilities in respect of non-banks are presented but not used for compiling the curves) a much greater area is found between the curve and the diagonal (see Graph 5.4).

GRAPH 5.4



In a later study by Grabbe[23] it can be seen (Graph 5.4) that by 1978 there had been a considerable increase in maturity transformation vis-à-vis non-banks compared with 1973. Grabbe points out that the question of the impact of maturity transformation on the inflationary process has particular relevance to Eurobank lending to LDCs (which will be covered in more detail in Chapter 6). Grabbe shows that there was a one-time maturity adjustment during the year 1974, following the October 1973 oil-price rise, accounted for by the sharp rise in short-term deposits by OPEC countries and an equivalent rise in long-term borrowing by oil-importing countries. Thereafter, the structure of bank liabilities did not change over the period March 1974 to November 1978.

Data for November 1982 shows that since November 1978 there has actually been a small contraction in the area under the mismatch curve, although the area is still significantly larger than in 1973.[24] Thus there is still considerable maturity transformation occurring within the Eurobanking system. Grabbe seems to imply that as long as the degree of maturity transformation is not increasing, it does not aggravate the inflation process. However, it seems more logical to say that at a constant rate of maturity transformation what is more important is the rate at which funds are transferred from domestic to Eurobank deposits by non-banks. If the rate of transferal is large then maturity transformation must have a significant effect on the net liquidity of non-banks and hence some inflationary potential.

This last point is supported by a recent paper by Folkerts-Landau.[25] He finds that the magnitude of the flow of domestic deposits to external locations is the most important factor for determining the money and credit creating potential of the external financial markets. Innovations in the technology of external financial transactions have contributed to a reduction in transaction costs, while extended lender-of-last-resort facilities and a better definition of the legal responsibilities of domestic banks toward their external subsidiaries have reduced the risk of externally issued deposit liabilities. These developments have resulted in a sustained secular growth of external financial markets. It is impossible to determine the outer limit of the rate at which deposits move toward external intermediaries because it depends on factors such as the rate of technological innovation in financial transactions, and the reduction in the perceived risk of external liabilities which by their nature are difficult to quantify.

Another way of putting this is to revert to Machlup's concept of a 'primary' deposit which is one that 'increases at the same time the total deposit liabilities and the total cash reserves of the group of banks under question'.[26] For example, if the holder of a time deposit with a domestic US bank withdraws it and deposits it with a Eurobank both the dollar deposit liabilities and the dollar cash reserves at the Eurobank are increased. Thus, as was shown above, an increased extension of credit is made possible without changing total domestic dollar liabilities. The velocity of the original time deposit has been increased thereby increasing inflationary pressure. Even with some compensatory adjustment in domestic US and Eurodollar interest rates there is likely to be some rise in total dollar credit.

In conclusion, it seems clear that the Eurocurrency system, because of its efficiency and growing popularity, does have inflationary potential because it enhances the velocity of a given domestic money stock. This is unlikely to be due to a money multiplier effect, which appears to be an inappropriate method of examining the phenomenon. Instead it arises out of shifts of deposits from domestic to external banks which enable increased credit extension on

an unchanged money stock. There is also a considerable degree of maturity transformation for non-banks by Eurobanks. This adds to the market's inflationary potential.

If the issue of the inflationary potential of the Eurodollar markets were to be left at this point there would appear to be good grounds for concluding that the system has had a detrimental impact on the international economy. There are, however, other considerations.

5.9 Inflationary Potential in Perspective

A number of points need to be made to put the potentially harmful impact of the market in perspective. Firstly, as pointed out in Chapter 3, the size of the Eurocurrency market, despite its phenomenal growth, is still quite small relative to comparable national monetary aggregates. Its inflationary impact, therefore, must be considerably smaller than that of such aggregates. Folkerts-Landau shows that the potential direct contribution by the external financial markets to the US rate of inflation was between 0,06 and 0,4 percentage points per annum during the period 1975 to 1980.[27] The average annual consumer price inflation rate for the US over the period was 9 per cent.

Secondly, a number of writers have pointed out that it is false to say that if the Euromarkets did not exist the international flow of credit channelled through them would not occur at all. International credit did not originate with the Euromarkets, nor is it monopolised by them. The Euromarkets are more correctly an alternative channel for credit flows that would occur in some form or another in any event. McClam has shown that in times of a reduction in commercial bank lending in the US disintermediation has not been concentrated solely in the Eurocurrency markets.[28] Because domestic financial markets in the US are highly developed the impact of monetary restraint can be significantly reduced by disintermediation through domestic US non-bank financial intermediation.

As far as destabilising short-term 'hot-money' capital flows are concerned it is clear that they occurred long before the advent of

the Euromarkets, such as during the spate of competitive devaluations in the 1930s.[29]

Thirdly, it is likely that the blame for excessive credit creation rests not on the Eurocurrency markets but on domestic monetary authorities who have exercised inadequate control over their own money supplies. The recent performance of inflation in industrial countries in response to more disciplined monetary policies is evidence that inflation can be controlled despite the existence of the Euromarkets. Indeed, monetary policy can and does affect the extension of credit by Eurobanks in the same way as it affects the extension of credit by other domestic non-bank financial intermediaries. For one thing, because of the close linkages between domestic and Eurocurrency interest rates, the authorities can directly affect the cost of Eurocurrency credit by exerting pressure on domestic money supplies.

TABLE 5.1

EUROCURRENCY MARKET:
CHANGE IN NET CLAIMS ON NON-BANKS

Year	$
1974	50
1975	24
1976	27
1977	27
1978	26
1979	25
1980	29
1981	25
1982	12

Source: World Financial Markets, Morgan Guaranty Trust Co., New York, various issues.

Table 5.1 shows the sharp contraction in the growth of net credit extension to non-banks by Eurobanks in 1982. While some of this contraction was due to a deliberate policy of more selective lending by Eurobanks rather than a slowdown in credit demand it is clear that the ultimate reason is the concerted policy of monetary constraint followed by the US and other industrialised countries since 1980. This has produced a severe economic recession, high interest rates, a strong dollar and falling commodity prices all of which have contributed to more cautious lending policies by Eurobanks. In short, the Eurocurrency system is not the main generator of excessive credit creation nor is it beyond the scope of domestic monetary policy to control.

5.10 Controls

Much has been written on the desirability and practicability of controls over Eurobanks. The most common direct controls suggested are twofold. One approach would incorporate compulsory reserve requirements against foreign currency deposits. Monetary authorities could require Eurobanks coming under their respective jurisdictions to maintain reserves against their foreign currency deposits. For example, the Eurodollar system would then be subjected to the same contractive and expansive influences emanating from changes in the US monetary base such as would be caused by US open-market operations. An important prerequisite for the success of such measures would be comprehensive international agreement, otherwise Eurobank business would merely shift to other centres. It is unlikely that all nations and government entities throughout the world would agree to impose uniform legal reserve requirements in such a way as not to cause foreign currency business to move to the most advantageous locations.

Another approach would emphasize open-market operations. Central banks could agree to increase or decrease availability of Eurodollars by borrowing or redepositing funds directly or via the Bank for International Settlements. They could even create some sort of special security to do so. A sale of such a security to Eurobanks would have the effect of driving up Eurocurrency interest rates relative to domestic interest rates. However, this would have

the impact of attracting domestic deposits offshore, tantamount 'to bailing out a boat with a hole in its bottom'. Apart from the problems of identifying the base toward which such open-market operations should be directed, and the lack of an identifiable multiplier, there would also be the problems of which type of security to use and of how such operations should be co-ordinated.

Other controls have been suggested, such as credit ceilings and controls over the US balance of payments. One form of control, the German 'Bardepôt', was tried extensively in the early 1970s. This was a cash deposit requirement on all loans and other credits from non-residents to German non-banks. The bardepôt was initially set at 40 per cent and later raised to 100 per cent and was instrumental in reducing non-bank inflows of short-term capital. However, most of these suggestions appear to ignore the fact that the Eurocurrency markets to a certain extent emerged as more efficient alternatives to heavily controlled domestic financial markets, particularly in the US. It might even be suggested that instead of imposing controls over the Eurocurrency markets and thereby compounding the agony of controls already imposed in domestic markets, that regulation over domestic banking activity should be scaled down. This would increase the relative competitiveness of domestic banks and reduce the incentive to utilise offshore banking facilities.

Recent events in the international economy, in particular the accelerating problem of the debt and liquidity problems of Third World countries, have resulted in calls for more specific controls over Eurobank credit extension. In this respect, the argument for controls focuses specifically on the question of the adequacy of bank earnings and capital vis-à-vis their outstanding loans to these countries. The question of insufficient attention to country risk appraisal has arisen and the problem has reached such serious proportions that some economists and analysts have been led to fear for the whole fabric of international banking. This problem will be discussed in Chapter 6.

CHAPTER 5

REFERENCES

1. Friedman, M. The Eurodollar Market : Some First Priciples. Morgan Guaranty Survey, Morgan Guaranty Trust Co., New York, October 1969, pp.4 - 14.

2. Fratianni, M. and Savona, P. Eurodollar Creation : Comments on Professor Machlup's Propostion and Developments. Banca Nazionale del Lavoro quarterly Review, June 1971, pp. 110 - 128.

3. Carli, G. Eurodollars : A Paper Pyramid? Banca Nazionale del Lavoro Quarterly Review, June 1971, pp. 95 - 109.

4. Ossola, R. Central Bank Interventions and Eurocurrency Markets. Banca Nazionale del Lavoro Quarterly Review, March 1973, pp. 29 - 45.

5. Friedman, M. op.cit., p.4.

6. Dufey, G. and Giddy, I.H. The International Money Market, Prentice-Hall, Englewood Cliffs, 1978, p.147.

7. Delamaran, G. Should the Eurocurrency Be Controlled? Cercle Universitaire Europeenne de Recherches Financieres Seri 13A, 1980, p.3.

8. Yeager, L.B. International Monetary Relations : Theory, History and Policy, 2nd Ed., Harper and Row, New York, 1976, p.512.

9. Mayer, H.W. Multiplier Effects and Credit Creation in the Eurodollar Market. Banca Nazionale del Lavoro Quarterly Review, September 1971, p.242.

10. Mikesell, R.F. The Eurodollar Market and the Foreign Demand for Liquid Dollar Assets. Journal of Money, Credit, and Banking, August 1972, p. 644.

11. Wood, G.E. and Mudd, D.R. Do Foreigners Control the U.S. Money Supply? Federal Reserve Bank of St. Louis Review, December 1977, p.8.

12. Lutz, F.A. The Euro-Currency System. Banca Nazionale del Lavoro Quarterly Review, September 1974, p.189.

13. Crockett, A.D. The Eurocurrency Market : An Attempt to Clarify Some Basic Issues. International Monetary Fund Staff Papers, July 1976, p. 377.

14. The Building Societies, the Financial Markets and Monetary Policy. Second Interim Report of the Commission of Inquiry into the Monetary System and Monetary Policy in South Africa, Government Printer, Pretoria, 1982, p.8.

15. Crockett, A.D. op.cit., p.379.

16. Crockett, A.D. ibid., p.382.

17. Crockett, A.D. ibid., p.383.

18. Dufey, G. and Giddy, I.H. op.cit., p.130.

19. Dufey, G. and Giddy, I.H. ibid., p.176.

20. Hewson, J. Liquidity Creation and Distribution in the Eurocurrency Markets, Lexington Books, Massachusetts, 1975, p.33.

21. Hewson, J. ibid., p.52.

22. Hewson, J. ibid., p.33.

23. Grabbe, J.O. Liquidity Creation and Maturity Transformation in the Eurodollar Market. Journal of Monetary Economics, July 1982, pp.39-72.

24. Bank of England, Quarterly Bulletin, March 1983, Table 14.2.

25. Folkerts-Landau, D.F.I. Potential of External Financial Markets to Create Money, Credit and Inflation. International Monetary Fund Staff Papers, March 1982, pp.77 - 107.

26. Machlup, F. Eurodollar Creation : A Mystery Story. Banca Nazionale del Lavoro Quarterly Review, September 1970, p.237.

27. Folkerts-Landau, D.F.I. op.cit., p.91.

28. McClam, W.D. Credit Substitution and the Eurocurrency Market. Banca Nazionale del Lavoro Quarterly Review, December 1972, p.328.

29. Yeager, L.B. op.cit., p.374.

CHAPTER 6

BANK LENDING TO LESS DEVELOPED COUNTRIES

6.1 Introduction

Recent developments concerning the debt of Less Developed Countries (LDCs) have, for the second time since the oil crisis in 1974, brought the stability of the international banking system into question. Since Friday, 13th August, 1982, when Mexico shut its foreign exchange markets because it could not afford repayments on its huge foreign debt commitments, the international money market has undergone severe gyrations. In the year that followed Mexico's fateful move some 25 LDCs attempted to renegotiate the terms of about $100 billion of external debt owed to the international banking system - about 20 times the amount of cross-border debt to the markets renegotiated in any previous year.[1]

Table 6.1 below shows the breakdown of the external debt owed by the 21 major LDCs as classified by the Morgan Guaranty Trust Company (MGT). Of the total external debt of these countries - some $517 billion at the end of 1982 - about 60 per cent, more than $300 billion, was owed to banks.[2] The total external debt of all LDCs was somewhat larger, being equal to around $655 billion at the end of 1982.

TABLE 6.1

TOTAL EXTERNAL DEBT OF 21 MAJOR LDCs

	$ Billions - 1982
Brazil	86,3
Mexico	84,6
Korea	37,2
Argentina	36,5
Venezuela	32,6
Israel	28,0
Indonesia	25,5
Turkey	22,6
Egypt	22,2
Philippines	20,8
Chile	17,2
Algeria	14,9
Thailand	11,7
Peru	11,6
Nigeria	11,5
Morocco	10,8
Colombia	10,5
Malaysia	9,5
Taiwan	8,2
Ivory Coast	8,0
Ecuador	6,7

Source: De Vries, R. Morgan International Tables & Charts, Morgan Guaranty Trust Co., New York, November, 1983, p.4.

The table shows an amorphous group, representing four continents, and includes manufactured goods exporters such as Korea and Taiwan; oil-exporting countries such as Mexico and Indonesia; and countries richly endowed in other raw materials such as Brazil and Argentina.

Because this outstanding foreign debt has assumed such large proportions accusations of irresponsibility in their lending practices have been levelled at Eurobanks and renewed calls for control over international bank lending have been widely heard.

It should be noted that not all of the lending to LDCs is in Eurocurrencies. Eurocurrency lending is defined as lending in a currency foreign to the territory in which the bank office through which the loan is booked is situated. In recent years the most rapidly expanding sector of the international money market has been lending in domestic currency to foreign borrowers - for example, the International Banking Facilities (IBFs) in the US. In 1982, over 26 per cent of the identifiable total external credit extended by banks was in domestic currency.[3] However, it is clear that Eurobank lending, as defined, has played the major role in international bank credit to LDCs.

Of total external LDC debt at the end of 1982 amounting to $655 billion, $367 billion was owed to banks. Of this amount of $367 billion, 36 per cent or $133 billion, was owed to US banks (including offshore branches of US banks).[4] Clearly, US banks are heavily involved in lending to LDCs but they are by no means alone in their exposure to these countries.

6.2 Origins of the LDC Debt Problems

The substantial growth in the foreign debt of the LDCs has only occurred over the past decade. In particular, the lending of commercial banks to LDCs during the 1960s was not common, being restricted mainly to short-term trade finance, project finance, and term loans in conjunction with IMF stabilisation programmes. As of 1971, two-thirds of the LDCs' external debt was owed to official sources and the remaining third to suppliers and banks.[5]

One of the major initial reasons behind the flow of bank credit to LDCs was the increasing attention given to some of the higher-income LDCs by multi-national companies - particularly from the end of the 1960s. A number of newly-industrialised countries (NICs) such as Korea, Taiwan and Singapore implemented forward-looking development programmes which concentrated on developing manufactured goods exports industries with the aid of multi-nationals. Similarly, countries in the Western hemisphere well-endowed with natural

resources such as Brazil and Mexico embarked on expansion programmes which attracted multi-national participation. It was natural for the multi-nationals to turn to international banks to raise finance for their operations in LDCs. Eurobanks could provide US dollar loans - the dominant currency for world trade - which were not available in the US credit market because of US capital controls.

By the late 1960s and early 1970s the Eurocurrency system had experienced rapid growth and was well placed to participate in the expansion of the LDC economies. Economic growth for the non-OPEC LDC group, defined as 'non-oil' LDCs to distinguish them from OPEC countries, averaged 5,6 per cent per annum between 1961 and 1970, and 5,5 per cent per annum during the following decade - considerably higher than growth in OECD economies - and they offered excellent investment opportunities. At about this time industrial countries and official agencies were making changes in their official aid programmes. For example, the US tended to concentrate aid more on lower-income economies while the World Bank adjusted its interest rates to market-related levels. Furthermore, lending by the IMF was always accompanied by conditions concerning economic performance which most higher-income LDCs preferred to avoid. Under these conditions the capital-hungry LDCs turned to the Eurobanks where they found credit relatively easy to obtain, cheap and condition-free.

Commercial bank lending to LDCs was also boosted by the expansion of world trade. Table 6.2 shows the rapid acceleration of non-oil developing countries' exports and imports from the late 1960s and early 1970s. Many of this group of countries are primary goods rather than manufactured goods exporters and their exports benefitted considerably from the commodity price boom between 1972 and 1974 and again from 1976 to 1980. Between 1968 and 1974 non-oil developing countries' exports rose more than 3 times. Over the same period the IMF commodities prices index more than doubled. Thus not all the rise in exports was due to inflation - world trade was booming and there was strong demand for commodities from the reconstructed economies of Europe and Japan.

TABLE 6.2

ANNUAL % GROWTH

	NON-OIL DEVELOPING COUNTRIES		IMF COMMODITIES
	IMPORTS	EXPORTS	PRICE INDEX
1965	5,9	6,8	-2,1
1966	9,6	8,1	3,4
1967	2,4	0,3	-6,0
1968	6,7	6,4	-1,0
1969	9,3	11,6	7,7
1970	15,1	9,3	3,3
1971	13,0	5,8	-4,9
1972	8,8	20,3	13,3
1973	38,4	45,9	53,5
1974	57,5	41,0	27,9

Sources: International Financial Statistics, Yearbook, 1983.
International Financial Statistics, Supplement on Trade Statistics, 1981.

In the aftermath of the commodities price boom of the early 1970s the international economy entered a severe recession. This was induced mainly by the effect on the industrialised economies of the quadrupling of oil prices by OPEC. The combined effect of the recession and high oil prices was a drastic deterioration of the trade balances of the non-oil developing country group. This led to another surge in bank lending to LDCs, this time for balance of payments purposes. Table 6.3 shows that from 1973 to 1975 the combined trade deficit of the non-oil developing countries deteriorated from $17 to $54 billion per annum. At the time governments in the industrialised countries encouraged such bank lending because of fears that the trade surpluses of the OPEC countries would remain high indefinitely. It was thought that the richest OPEC economies had low 'absorptive capacity' i.e. limited ability to suck in imports because of their relatively small populations. The banks were encouraged to 'recycle' the excess

dollars to the LDCs to dampen the impact on them of the high oil price. For US banks such lending was facilitated by the removal of controls on capital outflows in 1974.

TABLE 6.3

NON-OIL DEVELOPING COUNTRIES
TRADE DEFICIT

	$ BILLIONS
1965	7,4
1966	8,5
1967	9,4
1968	10,2
1969	10,3
1970	14,0
1971	19,4
1972	16,3
1973	17,3
1974	40,1
1975	54,1

Source: International Financial Statistics, Yearbook, 1983.

IMF resources were boosted in 1974 and 1975 through the first and second oil facilities which totalled $9 billion and later through the Supplementary Financing Facility which added another $10 billion.

Many LDCs were tardy in implementing policies of economic adjustment following the oil crisis. A number had embarked on ambitious development programmes in the early 1970s and preferred, often for political reasons, to attempt to ride out the recession and borrow in the Eurocurrency markets.

It is estimated that in the three years following the first oil crisis non-oil LDCs obtained $60 billion in commercial bank credits. Of this total nearly $30 billion was publicly announced borrowing from the Eurocurrency markets.[6] The rapid growth in lending to the LDCs was highly successful in moderating the effect of higher oil prices on international economic growth. After a slight dip in 1975

non-oil LDC exports recovered sharply as demand picked up in the OECD economies and their combined trade deficit also improved substantially. This permitted a resumption of strong import growth from 1977 further aiding the recovery of the industrial countries (see Table 6.4).

TABLE 6.4

FOREIGN TRADE OF NON-OIL DEVELOPING COUNTRIES

	ANNUAL % CHANGE IN		TRADE DEFICIT
	IMPORTS	EXPORTS	($ Billions)
1975	6,8	-1,3	54,1
1976	1,8	15,7	38,1
1977	14,6	17,6	38,2
1978	18,5	13,7	52,7

Source: International Financial Statistics, Yearbook, 1983.

The second oil price shock in 1979, and the events which followed, severely aggravated the external debt position of the LDCs. Whereas the industrial economies had followed relatively lax monetary policies following the first oil crisis, anti-inflationary policies were stringently implemented from 1979, particularly in the UK and the US. Inflation declined sharply in most OECD economies and interest rates rose to record levels in real and nominal terms. There followed a recession of similar intensity and longer duration than in late 1974 and early 1975. For example, from its peak in January 1980 US industrial production had declined by 8 per cent only six months later. Then followed a sharp recovery - 9,7 per cent - only to be followed by a further 12,3 per cent fall between July 1981 and November 1982.

The non-oil LDCs were faced with a desperate situation - a sharp rise in interest rates, much higher oil prices, a strong rise in the US dollar in which 70 per cent of their foreign debt was denominated, falling demand in their major export markets and, after 1980,

declining commodity prices. Table 6.5 shows the decline in the IMF commodity price index over this period and the simultaneous deterioration in the non-oil LDCs' terms of trade. It also shows the sharp rise in this group's combined trade deficit.

TABLE 6.5

ANNUAL % CHANGE

	IMF COMMODITY PRICE INDEX	NON-OIL LDC TERMS OF TRADE	NON-OIL LDC TRADE DEFICIT
1978	4,1	-5,2	40,4
1979	16,3	-1,9	9,3
1980	8,0	-5,3	47,2
1981	-14,6	-8,4	20,1
1982	-12,1	-1,7	-28,9
1983	6,7	n.a.	-36,2

Source: International Financial Statistics, Yearbook, 1984.

However, from 1982 the non-oil LDCs were able to effect a drastic decline in their trade deficit owing to an 11,5 per cent cutback in imports - the only time that imports have declined in any year since 1960. Nevertheless, as shown in Table 6.1, LDC debt had assumed alarming proportions by the end of 1982. Furthermore, it was not only the non-oil developing countries that were affected. A number of OPEC countries, notably Venezuela, as well as non-OPEC oil producing nations, notably Mexico, featured prominently among the 21 most indebted LDCs. These countries had been among the most creditworthy during the sharp run-up in the oil price in 1979 and 1980. However, the subsequent decline in oil prices and the cutback in world oil demand during the recession placed a question mark over the ability of these countries to service their foreign debt.

6.3 Quantifying the Debt Crisis

It has been pointed out that the accumulation of a large quantity of external debt and the running of sizeable current account deficits need not, in itself, be undesirable.[7] It is natural for a country

in its development phase to be a net borrower because internally-generated savings are unlikely to be sufficient to provide the funds needed for extensive development projects. For example, for many years between 1870 and 1890, the US ran large current account deficits and accumulated a large external debt averaging over 300 per cent of exports during the last five years of this period. Interest payments on these debts amounted to between 10 and 15 per cent of exports. Such ratios were well above those recorded by most LDCs during the past two decades.

There is no simple answer to the question : how much should a country borrow and how much should banks lend to a particular country? However, it is crucial for the lender to know whether the borrowing country will be able to repay the debt, or will be able to refinance it on terms agreeable to both lender and borrower. More specifically, some standardised means should be available to the lender to gauge whether the borrowing country is a high risk. 'Country risk' may be defined as the possibility that sovereign borrowers of a particular country may be unable or unwilling to fulfill their foreign obligations for reasons beyond the usual risks which arise in relation to all lending.[8] The idea behind this definition is that there may be no legal redress against a foreign borrower that chooses to renege on its external obligations and that, whereas private sector borrowers are subject to legal process, they may be prevented from obtaining the necessary foreign exchange to service their foreign debt.

Various measures of country risk have been compiled and have received particular attention since the spate of LDC debt rescheduling recently. For example, the Swiss Bank Corporation's (SBC) approach to country risk assessment is based on both qualitative and quantitative characteristics.[9] The qualitative assessment consists of a standard form which examines political, economic, external debt and trade statistics in report form. The quantitative assessment considers a variety of indicators - 20 in all of which eight are ratios - each observed for a period of five years. Forecasts are also made. Each of the eight ratios - such as debt-to-exports and international reserves-to-imports - is accompanied by a 'critical level' which, if exceeded, indicates that a potentially serious debt problem may be building up.

Nowzad believes that economic considerations applicable to foreign debt should be divided into three categories:

1. Factors that are fairly well known or can be predicted with some accuracy.

2. Factors that are more difficult to project accurately but on which acceptable assumptions may be possible.

3. Factors that are most resistant to accurate measurement and projection.[10]

The first group would include amortisation and interest payments on outstanding debt. The second would include factors such as the 'compressibility' of imports i.e. the ability to reduce imports in response to a foreign exchange crisis. The third group would include sudden fluctuations in export receipts owing to, say, a world recession of unexpected intensity.

Such distinctions are useful because they identify the inherent inability to pin down exactly the point at which a 'debt crisis' should be triggered. The markets frequently respond in a way that cannot be anticipated by any specific set of variables, either qualitative or quantitative.

Roberts distinguishes between the 'economic' aspects of the LDC debt burden and the 'financial' aspects.[11] The economic burden results from reduction of goods available for domestic use when interest and amortisation payments are made. So long as borrowers receive more in new loans than they pay out for debt servicing, the economic burden should not present problems. Ideally, the loan should be directed into productive sources so as to generate sufficient proceeds to service it. Thus one important measure of the state of the economic burden for a country is the ratio of external debt to GDP.

The financial burden refers to the need to acquire and maintain sufficient foreign exchange to make the debt service payments. If foreign exchange earnings and reserves are inadequate, a liquidity

crisis can develop, forcing sharp reductions of imports, output, and consumption even though the longer run economic burden may be low. The most commonly used indicator of longer-run financial vulnerability is the debt-service ratio i.e. the ratio of the country's debt service to exports.

6.4 Current Measures of the Debt Crisis

Recent work published by Morgan Guaranty Trust Co. (MGT) makes use of a number of variables for quantifying the magnitude of debt crisis. The most important of these are:

(i) the ratio of external debt to exports;

(ii) the ratio of debt service to exports.[12]

As can be seen in the case of each ratio MGT uses exports as the denominator. While some analysts assert that external debt should be measured relative to GNP, MGT contends that exports should be used on the grounds that external debt must be serviced in foreign exchange, rather than local currency. Hence, exports are more relevant for measuring debt servicing capacity and vulnerability to liquidity problems, especially in LDCs prone to inappropriate exchange rate policies and restrictions on trade and capital flows.[13]

For each of these ratios MGT has compiled a threshold level based on historical precedent as a guide to the potential for the LDC, to which the ratio is applied, to reschedule foreign debt. For example, in the case of the ratio of external debt to exports, known as the debt-export ratio, virtually every country whose ratio climbed above 200 per cent at one time or another has been forced to reschedule portions of its debt. As a means to receiving an early warning for potential rescheduling MGT sets the threshold level for the debt export ratio at 160 per cent.[14]

It appears that the debt-export ratio can be substituted for the debt-GNP ratio used by Roberts as an indicator of the economic burden of LDC debt. For the 21 major LDC borrowers as a group, the ratio of debt to exports rose from 125 per cent in 1980 to nearly 180 per cent in 1982 - well above the threshold level (see Table 6.6).

TABLE 6.6

21 MAJOR BORROWERS - DEBT-EXPORT RATIO - 1982

	%
Latin America	270
Argentina	375
Brazil	345
Chile	295
Colombia	188
Ecuador	232
Mexico	268
Peru	258
Venezuela	157
Asia	99
Indonesia	114
Korea	121
Malaysia	61
Philippines	233
Taiwan	33
Thailand	119
Middle East & Africa	172
Algeria	106
Egypt	241
Israel	235
Ivory Coast	252
Morocco	264
Nigeria	65
Turkey	238

Source: De Vries, R. Morgan International Tables & Charts, Morgan Guaranty Trust Co. ... York, November, 1983, p.6.

For Latin American coun... e even higher - to 270 per cent - and in the specific cases ...ntina and Brazil - to 375 and 345 per cent respectively. Over the same period there was a sharp

reversal of the economic fortunes of Latin American economies. In the case of Argentina real GDP growth contracted from an annual average of 4,3 per cent in 1979/80 to minus 6 per cent 1981/2. For Brazil the comparable GDP growth figures were 7,3 and minus 1,7 per cent. Clearly the economic burden of external debt became too great for these countries once the debt-export ratio rose significantly above the threshold level, and severe economic contraction was the result.

In terms of measuring the financial burden of debt MGT have set the threshold level for the debt service-export ratio at 65 per cent. (Debt service in this case is defined as the interest on gross debt plus all maturing debt including amortisation of medium- and long-term debt and all short-term debt). For the 21 major LDC borrowers this ratio also rose above its threshold level over the period 1980 to 1984 (see Table 6.7) In the case of the Latin American group it had reached 138 per cent by 1982 - more than double the threshold level. Once again, the countries with the highest debt service ratios were Argentina (203 per cent) and Brazil (155 per cent) at the end of 1982. The lukewarm response of international banks to requests from these countries for more foreign credit signifies that the financial burden of their external debt became too severe.

TABLE 6.7

21 MAJOR BORROWERS - DEBT SERVICE RATIO - 1982

	%
Latin America	138
Argentina	203
Brazil	155
Chile	120
Colombia	91
Ecuador	131
Mexico	142
Peru	108
Venezuela	108
Asia	43
Indonesia	26
Korea	61
Malaysia	16
Philippines	109
Taiwan	22
Thailand	63
Middle East & Africa	63
Algeria	35
Egypt	62
Israel	133
Ivory Coast	81
Morocco	56
Nigeria	25
Turkey	77

Source: De Vries, R. Morgan International Tables & Charts, Morgan Guaranty Trust Co., New York, November, 1983, p.6.

6.5 Early Warning System

For all their usefulness in examining the extent of the debt crisis the ratios, threshold levels, vulnerability indicators etc. developed by banks and economists have failed in recent years to generate adequate alarm among both borrowers and lenders as to the serviceability of LDC debt.

Data from Morgan Guaranty Trust Co. indicate that the debt-export and debt service ratios began to exceed their threshold levels in 1975 and that, despite a slight correction between 1978 and 1980, have remained above these levels ever since.[15] Indeed, from 1976 the external debt of the major Latin American borrowers continued to rise at a very rapid rate and only started to decelerate from 1981 (see Table 6.8).

TABLE 6.8

GROWTH OF TOTAL EXTERNAL DEBT OF MAJOR LATIN AMERICAN BORROWERS (per cent per annum)

	1976 - 80	1981 - 82
Argentina	28,1	19,4
Brazil	24,4	14,3
Chile	16,2	24,0
Colombia	15,1	12,1
Ecuador	45,2	18,4
Mexico	21,9	26,9
Peru	8,0	9,0
Venezuela	40,9	12,9

Source: World Financial Markets, June 1983, p.3.

In effect, while hindsight and experience bring to the surface the factors which should be taken into account in making loans to LDCs, there has been no universally observed principle for assessing debt situations. It appears futile to search for a magic early warning

signal - some point beyond which no further credit will be extended. This could even have adverse effects because it would trigger off a chain of loan retractions leading to a full-scale debt crisis.

Nevertheless, few observers feel that the Eurobanks have conducted themselves in a prudent fashion in respect of LDC lending in recent years. While some defences are available to the banks (specifically, the unexpected severity of the recession and the exceptionally tight monetary policy in some of the major economies), there seems little doubt that Eurobanks should have exercised more caution. This is particularly true in the case of the bigger, more established Eurobanks. It should be added that some of the major LDC borrowers could also have been less prodigal.

6.6 Involvement of Banks

The exposure of international banks to LDCs is considerable although only slightly over half (56 per cent) of the foreign debt of LDCs is owed to banks. Furthermore, bank lending to LDCs does not emanate exclusively from Eurocurrency banks although the most widely publicised category of bank lending to LDCs is in the form of publicly announced Eurocurrency bank credits. Table 6.9 shows the amount of foreign debt owed to banks by the 21 major LDC borrowers at the end of 1982. Of the $319 billion owed to banks, 37 per cent was owed to US banks and the balance to non-US banks.

TABLE 6.9

21 MAJOR LDC BORROWERS
EXTERNAL DEBT OWED TO BANKS - 1982

	$ Billions
Brazil	69,7
Mexico	62,9
Venezuela	27,5
Argentina	25,7
Korea	23,2
Philippines	12,6
Chile	11,6
Indonesia	9,9
Algeria	8,5
Nigeria	8,5
Colombia	7,1
Israel	6,7
Malaysia	6,6
Taiwan	6,6
Peru	5,4
Thailand	4,9
Egypt	4,9
Turkey	4,7
Ecuador	4,5
Morocco	3,9
Ivory Coast	3,4

Source: De Vries, R. Morgan International Tables & Charts, Morgan Guaranty Trust Co., New York, November, 1983, p.4.

Since 1975 the growth of bank lending to all LDCs has averaged slightly over 20 per cent per annum; for the major LDC borrowers the average has been even higher - 25 per cent per annum.[16] This growth has been far in excess of the growth in the banks' shareholders equity. For example, it is claimed by the American Banker that the 10 largest banking holding companies in the US had investments amounting to 169 per cent of equity in 'problem plagued'

countries.[17] A broader measure estimated the equity capital of the world's top 100 banks at $160 billion while outstanding bank debts of Latin American countries alone exceeded $200 billion.[18]

There is a widely used indicator that banks can apply to their own lending activities as a measure of the extent of the build-up of LDC external debt, rather than to rely on general indicators concerning the countries themselves. This indicator is known as the capital ratio - the ratio of capital to assets. The primary function of bank capital is to act as a risk cushion against unforseen and unexpected losses.[19] Banks amass capital through retained earnings out of profits and the generation of capital enables the extension of new credit to a multiple of the capital accumulated.

A study by Davis showed that the leverage of the 40 Eurobanks investigated ranged widely - from 3:1 to 22:1. Leverage was defined as total deposits divided by total capital funds, including subordinated debt and non-specific reserves. However, the chief executives of the banks concerned felt that a ratio of 15:1 was the most appropriate.[20] In the case of US banks (data on bank capital for other countries are not comparable to those for US banks) the growth in lending to LDCs has far outstripped the growth of their capital. Since the mid-1970s the major US banks have accumulated capital at only around 9 to 10 per cent per annum.[21] Federal Reserve Board data showed that by mid-1982 credits to the three larger Latin American borrowers, Brazil, Mexico and Argentina, constituted about 113 per cent of the total capital of the nine largest US banks.[22] Clearly these banks and their stockholders, if not the entire international monetary system, are overly dependent on the continued health and prosperity of only a few countries.

6.7 Eurobank Mistakes

Although at least part of the deterioration of the LDC debt ratios can be accredited to unforseen economic developments such as the severe international economic recession and high real interest rates, it still appears that the Eurobanks have been guilty of excessive risk-taking. There have been a number of reasons for the complacent attitude of the Eurobanks.

Firstly, it has been a widely-held view that the banks and their depositors could rely on the prospect of central bank lender-of-last-resort facilities in the event of a major run on Eurobanks following an LDC debt default. Although the world's major central banks agreed in Basle in 1975 to go to the aid of banks within their area of jurisdiction which might find themselves in difficulty, the collapse of Banco Ambrosiano in 1982 exposed weaknesses in the agreement. The Bank of Italy declined to take responsibility for Banco Ambrosiano's foreign interests which were grouped in a Luxembourg holding company. The Luxembourg Banking Commissioner also rejected responsibility on the grounds that Banco Ambrosiano Holding was a holding company and not a bank. These examples show that it is by no means certain that offshore banks can rely on central bank support.

Secondly, the competitive nature of the Eurocurrency market has caused an erosion of discipline in international lending. While the cost of funds to the banks has been broadly equalised, lending has been based on differing perceptions of risk and the more cautious banks have come under increasing pressure to match competitive lending rates in order to retain market share. Furthermore, loans extended to LDCs before their credit standing deteriorated have become more and more risky as a result of aggressive lending by more recent participants in the offshore banking system.

Thirdly, there have been a number of misconceptions concerning bank lending to LDCs. One argument is that countries cannot go bankrupt. Although this is technically true, the corollary is also true: that countries are less likely to exercise prudential self-restraint in their borrowing activities. Another misconception is the belief that

by syndicating bank lending, banks reduce their individual exposure to default risk to a minimum. However, as there is no secondary market for LDC debt the banks have been effectively forced to participate in further loans to LDC borrowers which have become overborrowed. The banks have also argued that by spreading their lending among a wide range of LDC borrowers they have diversified the risk of an LDC default - the assumption being that the economic performance of LDCs is sufficiently uncorrelated for such risk-spreading to be effective. However, recent developments have shown a relatively high degree of systematic risk in LDC lending: for example, the bulk of LDC bank loans have been in the form of floating rate dollar debt and thus dependent on the performance of the US dollar and US interest rates.

Eurobanks have also erred in the assumption that short-term lending provides protection against country risk. After 1979 there was a significant rise in the ratio of LDC short-term debt to exports. MGT estimates the threshold level of this ratio to be 30 per cent and yet by 1982 the ratio for [illegible] LDCs was more than 60 per cent and for Latin American countr[illegible] over 100 per cent.[23] Far from being able to withdraw sh[illegible] credit facilities on maturity, the Eurobanks have been forced to extend an even greater volume of short-term credit to LDCs with mounting debt-service difficulties.

These misconceptions have led Eurobanks to grant extensive credit to LDCs without subjecting them to the same degree of prudential security that they apply to corporate borrowers. Until the Polish debt crisis, loans to sovereign borrowers rarely attracted specific or even general bad debt provisions except where countries had actually repudiated debt or 'reached the point where they were so fundamentally overborrowed as to make ultimate repayment questionable.'[24] It has become increasingly questionable whether bank credit to LDC borrowers in severe difficulty should be counted as assets at all. Banks have been lending troubled debtor nations enough for them to make interest payments which then flow right back into the banks' income statements. The risk for the banks is that these loans may never be collectible and may merely swell the LDC

debt burden. Only very recently have the results of the major US banking groups incorporated a significant increase in their loss reserves.[25] Table 6.10 shows the loss reserve ratios for seven large US banks over the past two years.

TABLE 6.10

US BANKS : RESERVES AS A PER CENT OF TOTAL LOANS

	30/9/82	30/9/83
Bank of America	0,87	1,21
Bankers Trust	1,10	1,14
Chase Manhattan	1,01	1,02
Chemical	0,96	1,07
Citicorp	0,76	0,82
Manufacturers Hanover	0,82	0,83
J.P. Morgan	1,02	1,39

Source: Business Week, 7 November, 1983, p.21

Despite this attempt at setting aside more realistic provisions it is clear that they would be completely inadequate in the event of any major repudiation of LDC debt.

6.8 LDC Mistakes

The LDCs must also shoulder some of the blame for the debt crisis. In particular the exchange rate policies of Latin American countries have caused long-term structural distortions which severely eroded their international competitiveness. In contrast to the industrialised economies which have experimented with exchange rate regimes since the early 1970s, Latin American economies have persisted with the crawling peg regime popular in the 1960s. Their currencies have remained pegged to the US dollar and adjustments have been made only periodically by government fiat.[26] The forces of supply and demand for foreign exchange have been permitted to exert little direct influence on the exchange rate.

the strength of the dollar since 1980 has led to periods of considerable overvaluation for Latin American currencies. Even in those economies where devaluations occur they are generally made with reference to a programme of demand-management or an incomes policy. These programmes have frequently not met their targets causing a deterioration of the balance of payments and, ultimately, a sizeable further devaluation. In several Latin American countries this has led to a cycle of overvaluation-undervaluation lasting for three to six years.[27]

Among other damaging effects, these exchange rate policies have stimulated destabilising speculative capital flows. It has been estimated that between 1975 and 1983 'thousands of individuals, small businesses and multinational companies have shipped more than $120 billion out of the developing countries'.[28] Between 1980 and 1982 capital flight amounting to an estimated $71 billion was measured for seven major debtors (Mexico, Argentina, Venezuela, Indonesia, Egypt, Philippines and Nigeria) while their foreign debt rose by $102 billion.[29] Currency overvaluation has contributed significantly to this problem.

In the eyes of official agencies, LDC debtors have, in general, not used their borrowed funds unproductively over the past decade. On the contrary, the record shows that most of them used external capital for productive investment, which sustained their growth and helped them increase their capacity to earn foreign exchange.[30] Cited as an example of this is the fact that gross domestic investment amongst the middle-income countries, which include the larger borrowers from private markets among the LDCs, rose by an annual average of 7,8 per cent in 1970s. For the mature industrial countries the rate was only 1,6 per cent. GDP growth in the developing countries averaged 5,6 per cent per annum in the 1970s against 3,2 per cent for the industrial economies.[31]

It is difficult to determine exactly at which point foreign debt for the purpose of financing growth is transformed into foreign debt which finances consumption. However, as shown in Table 6.11, GDP growth in some Latin American countries slowed dramatically in 1981/2

while their current account balances (as a percentage of exports) remained large.

TABLE 6.11

GDP AND CURRENT ACCOUNT BALANCES IN LATIN AMERICA

	REAL GDP GROWTH (annual average - %)		CURRENT ACCOUNT BALANCE (% of exports, annual average)	
	1979/80	1981/2	1979/80	1981/2
Argentina	4,3	-6,0	-25	-30
Brazil	7,3	-1,7	-57	-49
Chile	7,9	-2,6	-28	-63
Colombia	4,5	3,0	-1	-46
Ecuador	4,9	2,9	-23	-42
Mexico	8,7	4,5	-28	-28
Peru	3,5	2,3	-9	-33
Venezuela	-0,2	0,0	13	4

Source: World Financial Markets, October 1982, pp.3-4.

It is probably reasonable to argue that much of the sharp deterioration in these numbers was a consequence of the severe recession in the industrial economies. However, it is known that in 1982 banks of some highly indebted LDCs raised increasing amounts of very short-term money through their foreign branches, using this money for the funding of longer-term loans to debtors at home; bank-to-bank deposits were therefore used to finance balance of payments deficits at that time.[32]

6.9 Controls

Calls for greater control over international bank lending have been more vociferous since the external debt position of Mexico reached a head in August 1982. One large US bank - Citibank - has come in for special criticism for its practice of 'regulatory arbitrage'.[33] This is the practice of taking advantage of wide regulatory

disparities between different offshore jurisdictions. For example, the Swiss and French authorities imposed local reporting requirements for foreign banks on different dates thereby opening the way for 'window-dressing' operations designed to improve Eurobank's reported liquidity on the relevant closing dates. In addition, time zone differences have enabled Citibank and other Eurobanks to pass positions from one centre to another overnight. 'In the extreme, deals could be kept off the closing books of any centre by passing them through successive time zones.'[34]

There are a number of organisations in existence designed to develop better co-operation between the world's bank supervisors. It is difficult to say precisely how effective these organisations are in supervising international banking activities. Because they lack regulatory powers it appears that they have been ineffective in coping with serious crises. The organisations are:

Groupe de Contact

This is an informal club of EEC banking supervisors, formed in 1972 to achieve closer understanding and practical co-operation between the banking supervisory authorities of the member states.

EEC Banking Advisory Group

This is a high-level policy-making committee, established in 1979, which usually meets in Brussels to advise the European Commission on how to harmonise the regulatory framework of the EEC Banking Systems.

Offshore Group of Banking Supervisors

This group represents a 'dozen or so' offshore centres and first met in October 1980. It has agreed to establish formal arrangements for keeping members up to date on practical matters such as licences granted and withdrawn, regulatory changes and alterations in supervisory arrangements.

Commission of Latin American and Carribean Banking Supervisors

This group, representing 21 countries, first met in Mexico City in 1981. Meetings are irregular and aim at exchanging information and discussing banking supervision techniques, mechanisms to protect bank deposits and inspection procedures.

The Basle Committee

This is a standing committee officially entitled the 'Committee on Banking Regulations and Supervisory Practices'. It was set up by the central bank governors of the Group of Ten Countries and Switzerland in 1974 to improve the co-ordination of national surveillance of the international banking system.

In July 1983 the Basle Committee published a revised version of the 1975 Concordat setting out the principles governing the division of supervisory responsibilities between parent and host authorities with regard to foreign establishments of banks.[35] The report examines ways in which supervisory gaps can be prevented, including gaps that arise from the existence of holding companies and non-banking companies within banking groups. For example, the new guidelines recommended that where holding companies are at the head of groups that include separately incorporated banks operating in different countries, the authorities responsible for supervising those banks should endeavour to co-ordinate their supervision.[36] The report addresses in detail the problem of which supervisory authorities are responsible for foreign bank branches and foreign bank subsidiaries as well as consortium banks.

A far more radical set of proposals for international bank supervision was drawn up as part of the legislation to authorise the US Congress to contribute an additional $8,4 billion to the International Monetary Fund which was passed in November 1983. Earlier in the year US bank regulatory authorities had put forward a package of measures which included tougher monitoring of country risk and increased disclosure. However, the House of Representatives insisted on even tougher measures, particularly in

the area of special loss provisions. The legislation requires that special uniform reserves be set up 'where there is a substantial likelihood that such debt cannot reasonably be expected to be repaid in accordance with its original terms and conditions without additional borrowing or restructuring.' (Section 404 of the International Recovery and Financial Stability Act).

Despite these attempts to exert greater control over international bank lending almost all the proposals put forward as solutions to the international debt crisis warn against a sharp curtailment of commercial bank lending to LDCs. There are good reasons for this: already since the Mexican rescheduling in 1982 there have been signs of a contraction in the Eurocurrency interbank market and of a withdrawal of small banks from medium-term credit syndications. These developments have made each major rescheduling operation a nerve-wracking affair.

The maintenance of interbank lines has been crucial in several of the rescheduling packages. These lines provide essential liquidity to the LDCs for financing their external trade. Withdrawal of such short-term credit would make it impossible for LDCs to expand their export markets and would also prevent the import of essential capital goods.

Retaining the participation of the smaller Eurobanks in medium-term credits to LDCs is also essential. It is estimated that some 830 banks participated in the $6,5 billion rescue package for Brazil towards the end of 1983.[37] The bulk of these were small banks, some with assets of less than $5 billion. Many of these banks have relatively low exposure to LDC borrowers and are reluctant to increase it. Nevertheless, without their participation the Eurobanking system would be very hard-pressed to raise the necessary funds to keep the more heavily indebted LDCs afloat.

These two issues - the contraction of the interbank market and the withdrawal of small Eurobanks - illustrate clearly the dilemma facing international banking regulators. While there is a justifiable feeling of disapproval at the extent to which the debt

crisis has become so severe, there is also recognition that any significant clamp-down on bank lending would only aggravate it. The interbank and small bank issues show also that the market, at least to some extent, contains within itself the mechanism to punish imprudent banking practice. Because of the distinct possibility of major LDC loan defaults Eurobanks have had to increase bad debt provisions, re-examine their country risk exposure estimates and, worst of all, to make further large new credit lines available to their worst customers.

Of the various proponents for solutions to the debt crisis probably the most widely known is Rimmer de Vries of the Morgan Guaranty Trust Company. De Vries identifies three board approaches.[38] One approach emphasises the short-term, liquidity aspect and stresses the need for deflationary policies by LDCs. Proponents of this argument point out that a country's external payments position can improve significantly within a relatively short period following the adoption of appropriate adjustment policies.

A second approach regards the LDC debt crisis as essentially a longer-term, solvency problem. The proponents of this view believe that LDC austerity programmes will generate too much socio-political strain. They favour a programme of economic expansion amongst developed countries along with a writing off and/or transfer of LDC debt to new institutions.

De Vries finds that both of these approaches are too risky. The first proposal, entailing LDC deflationary policies, can be successful for a single country but the current crisis has involved significant numbers of important participants in world trade. The LDCs constitute a sizeable market for developed country products, accounting for nearly 40 per cent of US exports and 28 per cent of OECD exports.[39] Prolonged and generalised contraction in LDC growth would have severe ripple effects for the expansion of world trade. There can also be political constraints on a country's ability to implement adjustment programmes. In particular it remains to be seen whether political stability in Argentina and

Brazil can be maintained under the austerity programmes they have agreed to with the IMF.

The second proposal, involving expansionary developed country policies and the writing off of LDC debt, would also not be satisfactory. It contains the danger of a resurgence of international inflation, reduced at great cost so far in the 1980s and would also severely affect the profits of Eurobanks and hence their willingness to lend to LDCs.

De Vries advocates a third approach which 'takes positive elements from the two former approaches and strives for a more careful balance between adjustment and financing.'[40] This approach recognises five essential elements. Firstly, there needs to be a moderate recovery in OECD economies. Secondly, considerable time is requir d for some LDC debtors to reduce their debt ratios to more acceptable levels. Thirdly, LDCs need to pursue restrictive demand management policies according to IMF guidelines in order to guarantee participation of Eurobanks. Fourthly, an environment should be created in which Eurobanks are encouraged to provide additional finance to LDCs. Fifthly, Eurobank lending should be increasingly supplemented by credit from official agencies.

On the basis of these requirements, De Vries has formulated a base-case scenario for dealing with the international debt problem. The base-case assumptions are:

1. Real OECD GNP growth averaging 3,5 per cent in 1984/5 and 3 per cent between 1985 and 1990.

2. OECD inflation not exceeding 6 per cent between 1984 and 1990.

3. A moderate decline in the effective exchange rate of the US dollar in 1984 and 1985.

4. A 6-month Eurodollar interest rate averaging not more than 3 per cent in real terms up to 1990.

5. An oil price not exceeding $32 per barrel by 1985 and a zero real increase thereafter.

6. A recovery in non-oil commodity prices such that they regain about two-thirds of their decline between 1980 and 1982 by the end of the decade.

Under these assumptions there is relatively slow progress towards better LDC debt ratios during the first couple of years. For example, the LDC debt-export ratio only declines from 196 per cent in 1983 to 166 per cent in 1985 - still above the 'threshold level' of 160 per cent exceeded for the first time in 1982. However, by 1990 this ratio declines to 123 per cent - well below the threshold level and equivalent to the level prevailing immediately after the first oil crisis. Even by 1990, however, three borrowers still have debt-export ratios well above the threshold levels. They are Argentina, Brazil and Venezuela.

The De Vries base case can be criticised on many grounds : for example, the simulations show that it is very sensitive to OECD GNP growth which is required to achieve a 3 per cent average rate between 1986 and 1990 during which time there will almost certainly be a downswing in the international business cycle. However, the exercise is extremely useful in illustrating the ponderous nature of the debt problem. Even with the relatively optimistic assumptions of the base case, LDCs as a group will be required to make negative net financial transfers (i.e. suffer a contraction in net capital inflows) for the remainder of the decade and beyond. Furthermore, the base-case scenario only works if there is considerable co-ordination between Eurobanks and official lending agencies and a very disciplined approach to economic policy by the major LDC debtors. These requirements will surely test the structure of the international monetary system as well as the socio- political fabric of some of the major LDC debtors.

In aiming for a finely-tuned balance between continued financing for LDCs and long-term LDC adjustment policies the base-case strategy highlights the long-term nature of the LDC debt problem (which, in

reality, commenced in the early 1970s and was not properly attended to until 1982) as well as the global co-operation required to prevent international financial chaos. If the problem is seen in this broader context it is clear that moves to control international bank lending must be conducted with caution.

6.10 Conclusion

Although at least part of the responsibility resides with the LDCs themselves, it cannot be denied that Eurobanks were irresponsible in their lending activities to LDCs during the latter part of the 1970s and the early 1980s. Even the shift to excessively tight monetary policies in the industrialised countries and the severe recession, high interest rates and overvalued US dollar which followed cannot fully exonerate the Eurobanks for blame for the so-called international debt crisis. However, calls for controls over international bank lending which ignore the need for long-term co-operation between banks, official agencies and the debtor countries will only cause a further deterioration in the international monetary system.

CHAPTER 6

REFERENCES

1. Mendelsohn, M.S. International Debt Crisis: the Practical Lessons of Restructuring. The Banker, July 1983, p.33.

2. De Vries, R. Morgan International Tables and Charts, Morgan Guaranty Trust Company, New York, November 1983, p.4.

3. Johnson, C. What are the Prospects for Growth in the International Credit Markets? The Banker, January 1983, p.26.

4. De Vries, R., op.cit., p.4.

5. Global Debt : Assessment and Prescriptions. World Financial Markets, Morgan Guaranty Trust Co., New York, February 1983, p.1.

6. Beek, D.C. Commercial Bank Lending to the Developing Countries. Federal Reserve Bank of New York Quarterly Review, Summer 1977, p.4.

7. Global Debt: Assessment and Prescriptions. op.cit., p.2.

8. Dale, R.S. Country Risk and Bank Regulation. The Banker, March 1983, p.41.

9. Philipp, B.C. Swiss Bank Corporation's Approach to Country Risk Assessment. Economic and Financial Prospects, Swiss Bank Corporation, Basle, April/May, 1983, pp.4-6.

10. Nowzad, B. Lending and Borrowing Limits: The Futile Search for a Formula. The Banker, February 1983, p.26.

11. Roberts, D. The LDC Debt Burden. Federal Reserve Bank of New York Quarterly Review, Spring 1981, pp. 33-41.

12. Global Debt: Assessment and Prescriptions. op.cit., p.5.

13. Global Debt: Assessment and Long-Term Strategy. World Financial Markets, Morgan Guaranty Trust Co., New York, June 1983, footnote p.3.

14. Global Debt: Assessment and Long-Term Strategy. ibid., p.4.

15. De Vries, R. op.cit., pp.1-11.

16. Global Debt: Assessment and Long-Term Strategy. op.cit., p.6.

17. Friedman, A. Problem Foreign Loans Focus Scrutiny on Bank Profits. Financial Times, London, 23 March 1983, p.33.

18. Plender, J. International Bank Debt: Of Profits and Imprudence. Financial Times, London, 18 February 1983, p.18.

19. Gardener, E.P.M. How Much Capital is Adequate? The Banker, November 1982, p.42.

20. Dufey, G. and Giddy, I.H. The International Money Market, Englewood Cliffs, Prentice-Hall, 1978, p.221.

21. Global Debt: Assessment and Long-Term Strategy. op.cit., p.6.

22. Congress is Ready to Beat up the Banks. Business Week, New York, 14 March 1983, p.90.

23. De Vries, R. op.cit., pp.1-11.

24. Plender, J. op.cit., p.18.

25. How Key Banks are Adding to Their Loss Reserves. Business Week, New York, 7 November 1983, p.21.

26. Exchange-Rate Policy in Latin America. World Financial Markets, Morgan Guaranty Trust Co., New York, February 1982, p.4.

27. Exchange-Rate Policy in Latin America. ibid., p.5.

28. An Exodus of Capital is Sapping the LDC Economies. Business Week, New York, 3 October 1983, p.65.

29. An Exodus of Capital is Sapping the LDC Economies. ibid., p.65.

30. Developments in External Borrowing. World Debt Tables, International Monetary Fund, 1983, p.vii.

31. Developments in External Borrowing. ibid., p.ix. See also Roberts, D. op.cit., p.39.

32. Guth, W. International Debt Crisis: The Next Phase. The Banker, July 1983, p.26.

33. Dale, R. The Geobanking Gravy Train. International Currency Review, Vol. 14. No. 5, 1982, p.6.

34. Dale, R. ibid., p.7.

35. Revised Basle Concordat on Bank Oversight Clarifies the Division of Supervisory Roles. International Monetary Fund Survey, 11 July 1983, pp.201-204.

36. ibid., p.203.

37. Montagnon, P. Brazil Battles for the Smaller Banks. Financial Times, London, 24 October, 1983, p.20.

38. Global Debt: Assessment and Long-term Strategy. op.cit., pp.1-15.

39. Global Debt: Assessment and Long-term Strategy. ibid., p.7.

40. Global Debt: Assessment and Long-term Strategy. ibid., p.12.

CHAPTER 7

GOLD, THE EUROCURRENCY MARKET AND THE DEBT CRISIS

7.1 Introduction

The idea has been formulated in previous chapters that the development of the US dollar since World War II as the major currency for international transactions has been desirable because a single world currency can reduce the uncertainty and improve the efficiency of international financial transfers. The rapid expansion of economic activity over the past 35 years created the need for extensive international money markets - a need which was satisfied by the emergence and growth of the Eurocurrency market which played a major part in promoting the role of the dollar in international finance.

However, until 1979 the US authorities were unable or unwilling to follow the combination of monetary and fiscal discipline necessary to sustain the confidence of the international community in the US dollar. Ever since 1979 when a policy of strict monetary policy was initiated and, for the most part, adhered to, there have still been doubts concerning the future role of the dollar in the international monetary system.

These doubts stem partly from continuing fears concerning US domestic economic policies and partly from anxiety concerning the stability of the Eurocurrency market. Currently, fears concerning US domestic economic policy are centred on the inability of the authorities to cope with the dilemma of large Federal budget deficits and growing trade and current account deficits.

As for the Eurocurrency market, it has for more than a decade been so large that it has acted as the predominant medium for destabilising international short-term capital flows in response to exchange rate uncertainties. Here the market's role has been passive in the sense that it has provided the means but has not been the underlying cause for speculation in foreign exchange markets. However, the

Eurocurrency market has also played a more active role in that its own internal mechanism has contributed to instability in the international financial system. It has achieved this through the process of increasing the international velocity of money (discussed in Chapter 5) and providing the facility for excessive bank credit to LDCs (discussed in Chapter 6). Again it was argued in Chapter 4 that the Eurocurrency market could even have been prevented from carrying out this more active destabilising role if the US monetary authorities had practised more responsible monetary policies.

There is no doubt that the US dollar is still vulnerable to a substantial loss of confidence which could cause international investors, traders and central banks to ditch the currency for other avenues of investment. Despite the fact that gold bullion is no longer officially the centrepiece of the international monetary system it is still regarded as an important store of value and at least part of any funds seeking alternatives to the US dollar will probably find their way into the gold markets.

This chapter discusses the recent history of the role of gold in the international monetary system, and considers the factors influencing the very sharp rise in the gold price during the 1970s. Movements in the gold price have frequently been very volatile, reflecting the uncertainty and changing expectations of participants in the financial markets. The economic policy of the US provided the motivation and the Eurocurrency market the means for this volatility.

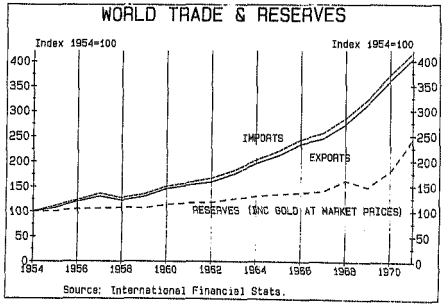
7.2 End of the Gold-Dollar System

During the 1960s the international monetary system came under increasing pressure because the growth in the value of world reserves was inadequate to meet the need for international liquidity. Graph 7.1 illustrates the extent to which the nominal growth in international trade (exports and imports) outstripped the growth in international liquidity between 1954 and 1970. Throughout this period, what growth did occur in international reserves was accounted for mainly by US dollars - the dominant reserve currency - for the official price of gold was held at $35 per ounce until 1971.

This does not mean the gold was not an important component of international reserves. On the contrary, throughout the period until 1970, the value of gold reserves exceeded the value of foreign currency reserves, although the ratio declined sharply between 1954 and 1970. The international monetary system was based on a de facto gold-dollar standard.

Unfortunately, two factors prevented gold from playing its proper role under such a gold-dollar standard. Firstly, the amount of newly mined gold available each year was not sufficient (once fabrication and private investment demand were satisfied) in combination with the growth in the US dollar component of world reserves to match the need for international liquidity. Although the physical stock of gold in international reserves did rise (from 992 million ounces in 1954 to a peak of 1 194 million ounces in 1965 - or some 20 per cent) it has been shown (in Graph 7.1) that international reserves were still inadequate.

GRAPH 7.1



Secondly, despite the obvious need for a rise in the dollar price of gold, the US authorities successfully prevented this solution from being implemented. There were numerous reasons for this. One was that President J.F. Kennedy during his election campaign in 1960 pledged that he would not raise the price if elected following a surge in the market price of gold during the campaign. Owing to a narrow victory the Kennedy Administration was reluctant to embark on any monetary experiments.[1]

Another argument was that the main gold producers were South Africa and USSR. Owing to their political status the US was reluctant for them to benefit from a rise in the price.[2] Other arguments were that it was wrong for gold speculators to benefit from a rise in the gold price and that only the richer countries holding gold reserves would benefit so that the US would be breaking faith with countries holding dollar reserves.[3]

The rigidity of the stance of the US is clearly summed up in Table 7.1 which shows the physical volume and value (in SDRs) of world gold reserves and the ratio of the value of gold reserves to the value of foreign exchange reserves held internationally.

TABLE 7.1

RATIO OF THE VALUE OF WORLD GOLD RESERVES
TO THE VALUE OF FOREIGN EXCHANGE RESERVES

	World Gold Reserves (m Oz)	Value (SDR Billions) End of Period	Ratio of Value of Gold Reserves to Value of Foreign Exchange Reserves
1954	992	34,8	2,1
1955	1 005	35,1	2,1
1956	1 024	35,8	2,0
1957	1 059	37,1	2,2
1958	1 080	37,9	2,2
1959	1 079	37,8	2,4
1960	1 083	38,6	2,1
1961	1 072	38,9	2,0
1962	1 119	39,2	2,0
1963	1 149	40,3	1,8
1964	1 163	40,9	1,7
1965	1 194	41,9	1,8
1966	1 166	41,0	1,6
1967	1 126	39,6	1,4
1968	1 107	46,4	1,4
1969	1 113	39,2	1,2
1970	1 058	39,5	0,9

Source: International Financial Statistics, Yearbook, 1983.

The attitude of the US created a major obstacle for the effective operation of the gold-dollar standard. As shown in Chapter 4 by 1960 the dollar shortage of the 1950s had become a dollar 'overhang', i.e. the ratio of US external liquid liabilities to US holdings of international reserves fell below unity after declining steadily throughout the 1950s (see Table 4.1). The need for US dollars to provide liquidity for the rapid increase in international economic

activity was not in question. The problem was that fears started growing that the US would ultimately be unable to guarantee the conversion of foreign-held dollars for gold. These fears gathered strength during the second half of the 1960s as the US inflation rate rose and the US balance of payments came under increasing pressure.

The international monetary system was confronted with a major dilemma. It needed international reserves to grow more rapidly but it could not sustain a rapid accumulation of US dollars alone because of mounting uncertainty concerning that currency's stability.

Adequate harmony between the two components of the gold-dollar system was lacking. In the eyes of some analysts the only solution to the weakness of the system was a rise in the price of gold. It was the value of the growth in gold reserves that had to be kept in harmony with the growth in the value of dollar reserves.[4]

Matters came to a head towards the end of the 1960s. At the start of the decade (in November 1961) the central banks of the United Kingdom and six continental countries joined the US in supplying the gold needed to keep the market price of gold near to $35 per ounce. The US' share in this 'Gold Pool' was 50 per cent. Although in its early phase the Gold Pool was able to operate as a net buyer of gold (owing partly to Russian sales) by the mid-1960s the price of gold was again being held down by official sales. Following the sterling devaluation in late 1967 demand for gold rose strongly and by March 1968 the Gold Pool participants were forced to suspend the sale of gold to the markets. The Gold Pool came to an end and a two-tier market was established: the $35 per ounce price was effective for official transactions but the open market price was left to supply and demand.

The gold price made little headway during the three years following the breakdown of the Gold Pool - averaging $41,09 in 1969, $35,94 in 1970 and $40,80 in 1971. Part of the reason for this was steady selling of gold by South Africa because of balance of payments difficulties. Other reasons included the activation of the scheme to issue Special Drawing Rights (SDRs) as an alternative source of

international reserves and the agreement at the end of 1969 between the IMF and South Africa to put a floor of $34,9 per ounce on the price of South African sales.[5]

The inevitable consequence of the refusal by the US to revalue gold eventually occurred during the third quarter of 1971. On 15 August, President Nixon formally suspended the convertibility of the dollar into gold and the foreign exchange markets closed for a week. The announcement had been preceded by periods of furious selling of the dollar and massive flows of short-term foreign capital into the Deutschmark. There were two sound economic reasons behind the run on the dollar. The first was the deterioration in the US trade balance from 1965. Table 7.2 shows the trade balance as a percentage of gross national product between 1960 and 1971 when it moved into deficit for the first time in the post-war period. The second was the acceleration in US inflation after 1965. The annual inflation rate between 1960 and 1971 measured by the consumer price index is also shown in Table 7.2.

TABLE 7.2

UNITED STATES TRADE BALANCE AND INFLATION : 1960 - 1971

	Trade Balance % of GNP	Annual Inflation Rate (CPI) - %
1960	0,1	1,5
1961	1,1	1,1
1962	0,8	1,1
1963	0,9	1,2
1964	1,1	1,3
1965	0,7	1,6
1966	0,5	3,1
1967	0,5	2,8
1968	0,1	4,2
1969	0,1	5,4
1970	0,2	5,9
1971	-0,3	4,3

Source: International Financial Statistics, Yearbook, 1983.

These two economic fundamentals finally undermined confidence in the US dollar so that despite its pivotal role in international monetary transactions, international asset holders were forced to seek alternative havens. In the decade which followed the official demise of the gold-dollar system, the gold price rose to a peak (in 1980) that was about twenty times higher than the official price in 1971. (It should be noted that the official price of gold was set at $38 per ounce at the Smithsonian Agreement of December 1971). The following section of this chapter attempts to identify the various factors that have influenced the market price of gold since 1972.

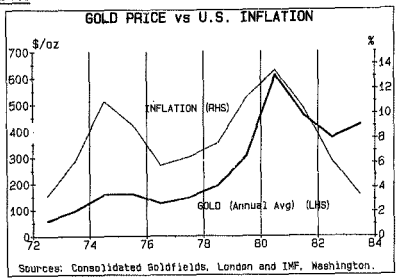
7.3 Gold Price Unleashed

From 1972 the market price of gold rose sharply reaching an average of $64,9 during the fourth quarter compared with $43,6 a year before - a rise of 49 per cent.[6] The price continued to rise in 1973 and 1974 eventually reaching a peak of $183,9 in December 1974 (monthly average). Thereafter the price subsided radically to only $109,9 in August 1976. Then followed another spectacular bull market with the price rising to over $600 in January 1980. The price then collapsed to a level of $315,9 in June 1982. The movement in the gold price between 1972 and 1982 can be correlated quite closely with four economic variables: the US inflation rate, the trade weighted US dollar exchange rate, the US business cycle and real, after-tax US interest rates. The next four sub-sections expand on these four influences on the gold price. The following section considers the behaviour of the gold price after mid-1982.

7.3.1 United States Inflation

Graph 7.2 shows the close relationship between the direction of movement as well as peaks and troughs between US inflation and the dollar price of gold. A peak in US inflation occurred in December 1974 (12,3 percent) simultaneous to the peak in the gold price. Inflation then declined, reaching a trough (4,7 percent) two years later in December 1976 - only a *few* months after the trough in the gold price. The next peak in United States inflation occurred in March 1980 (14,8 percent) only two months after the peak in the gold price.

GRAPH 7.2



It was only during the second half of 1982 that this relationship appeared to break down - despite a further decline in US inflation to a trough of 2,4 percent in July 1983, the gold price ran initially to a peak of $491,1 in February 1983 before declining to below $400 again by the end of 1983. It is maintained that despite this apparent severing of the link between the gold price and US inflation over this brief period the relationship between the two still holds. This period is discussed in more detail in Section 7.4.

Although a mere visual correlation between gold and US inflation is simplistic there can be little doubt that holders of wealth will seek out those assets which retain their value in an inflationary environment. Although gold bullion bears no interest, indeed physical gold incurs a storage cost, it is still regarded as an important investment alternative in an environment in which national currencies are debased by persistent price increases. For one thing, gold is not the liability of any issuer as are monetary assets and therefore offers the holder an independent store of wealth.

This relationship between the gold price and US inflation is widely recognised by investment analysts and receives prominent attention in numerous newsletters and analysts' reports which recommend gold and other precious metals to clients. For example, in a recent article Gorrie stated that after 1968 when the US dollar was increasingly depreciated through excess monetary growth, the price of gold denominated in US dollars came to stand as a proxy for the world's reserve currency and the final arbitor of the real value of goods in an inflationary world. 'In turn, the rise and fall of US inflation has also come to be seen as a proxy for the ghastly after-effects of bouts of US credit creation and thus, depreciation of the real value of the US dollar. In that environment, since 1968 the price of gold has tracked and usually lead movements in US inflation with a great degree of accuracy'.[7]

The concept of gold as the 'final arbitor of the real value of goods in an inflationary world' dates back to the era of the gold standard. The mechanism of the gold standard can be analysed using the instruments of the quantity theory of money. The basic identity MV=PQ showed how an increase in the money supply, M, owing to an inflow of gold would raise the price level, P, (given velocity, V) and the level of output, Q, resulting in a deficit on the balance of trade. This necessitated an outflow of physical gold in settlement which reversed the initial inflow. Under such a system there was a tendency towards stable prices in the long run and hence, long run protection for the national currency.

Although there is considerable doubt as to whether the gold standard which was in operation during the latter part of the 19th century and the early part of this century really operated in this way at all, the system has still had its adherents in recent years.[8] Rees-Mogg maintains that a government which goes on gold makes a statement to its people that in future the nation will have to earn its money, that government and individuals will have to pay their way in the world in the hardest of hard currencies, and that the money supply will be limited.[9]

Although the gold standard era is long past with little prospect of being resurrected, gold is clearly still the currency of final resort which acts as the watchdog against monetary mismanagement in international finance. This is particularly true in relation to the dollar which, as the world's numeraire needs the most careful management of all. In the era since the demise of the Bretton Woods system the Eurocurrency market came to maturity enabling international asset-holders rapid access to alternative investment instruments. At such a level of sophistication it is little wonder that movements in the gold price have quickly reflected inflationary trends in the US.

7.3.2 The United States Dollar Trade Weighted Exchange Rate

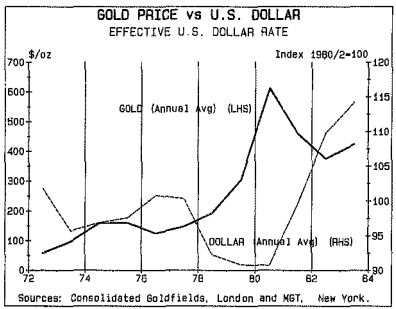
A further factor which could explain the rise in the gold price since 1972 is the performance of the US dollar against other investment media. Underlying this assertion is the fact that there are a limited number of alternative investment vehicles available to international investors. These include a few national currencies such as the Deutschmark or the Japanese yen, precious and other metals such as gold and a variety of other assets such as valuable carpets, stamps, etc.

At times when the fundamental value of the dollar is threatened by accelerating inflation or a deteriorating trade balance, international investors tend to shift a portion of their dollar holdings into these alternatives. This causes the relative value of the dollar to decline.

A decline in the dollar is reflected in its value measured against a basket of currencies. The nominal effective exchange rate of the dollar constructed by Morgan Guaranty Trust Company is an index of the dollar's value measured against the trade-weighted values of 15 other major currencies. Graph 7.3 shows the relationship between the

inverse of this index and the gold price over the period 1972 to 1982. During periods when the nominal effective value of the dollar has risen (a decline on Graph 7.3) the gold price has declined and vice-versa.

GRAPH 7.3



Clearly when international investors diversify away from the dollar they do not invest solely in other currencies. At least a portion of the funds shifted into other investment avenues has ended up in gold bullion.

In fact, the available investment outlets in other major currencies are quite limited. For example, the Deutschmark liabilities of Eurocurrency banks in the BIS reporting area to non-banks in mid-1982 amounted to only DM 27,8 billion (or $10,9 billion) out of total Eurocurrency liabilities to non-banks in 1982 of over $500 billion.[10] In addition, estimates by the Deutsche Bundesbank show the Deutschmark assets held in Germany by foreign entities by mid-1983 amounted to DM 306 billion (or $117 billion).[11] However, more than 60 per cent of these investments had a maturity of

more than one year which indicates the limited ability of the domestic German financial markets to accommodate short-term foreign capital inflows. As it can be said that the Deutschmark is the second most important international investment currency after the dollar, albeit a very long way behind the latter, it is clear from these statistics that non-dollar international currency markets are quite thin.[12]

The Japanese yen plays an even smaller role in international finance than the Deutschmark. For example, while the Deutschmark accounts for 11,6 percent of international foreign currency reserves, the yen accounts for only 3,9 per cent.[13] Until very recently the Japanese monetary authorities have avoided liberalising the Japanese financial markets, preferring to control interest rates and to channel scarce capital to designated growth industries. Although this started to change from 1980 when formal foreign exchange controls were abolished and also, more recently, with measures such as the revision of regulations concerning foreign investments in Japanese stocks, the Japanese yen has still continued to offer a relatively minor investment alternative to the dollar.

The gold market itself is also quite thin. Table 7.3 below shows the percentage of gold bullion supply over the period 1972 to 1982 absorbed in fabrication demand. (Fabrication demand is defined as gold used in jewellery, electronics, dentistry and industrial/ decorative applications as well as in medals, medallions and coins).[14]

TABLE 7.3

FABRICATION DEMAND FOR GOLD

	Fabrication Demand as % of Total Supply to the Non-Communist Private Sector
1972	109
1973	62
1974	60
1975	89
1976	97
1977	87
1978	92
1979	78
1980	68
1981	106
1982	95
Average	86

Source: Gold 1983, Consolidated Goldfields PLC, London, 1983, p.24.

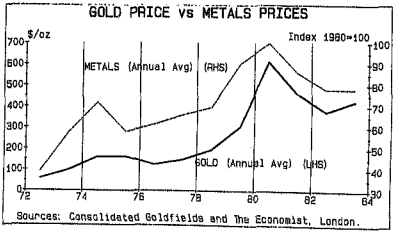
In two of the years shown above, 1972 and 1981, fabrication demand actually exceeded gold bullion supply indicating dishoarding (i.e. the sale of gold from existing stocks). In 1982, the market value of total gold bullion supply (1 122 metric tons) was $13,5 billion of which 95 percent or $12,9 billion was used for fabrication.[15] Clearly a relatively small shift in sentiment away from the US dollar in favour of gold would exert significant pressure on the gold price. Therefore, it is not surprising that the movements in the trade-weighted value of the dollar and the gold price resemble each other quite closely.

7.3.3 The International Business Cycle

Although there are considerable variations, a significant proportion of total gold supplied to the non-communist world each year is used for fabrication purposes, as is shown in Table 7.3 above. In 1982, even excluding the manufacturing of medals and coins, fabrication demand for gold accounted for 82 percent of total gold supply in that year.[16] Because of this high proportion of gold used for manufacturing purposes it does not seem unreasonable to expect the price of gold to follow a similar trend to that of other commodities, especially other metals.

The prices of metals tend to follow a cyclical pattern determined to a great extent by the business cycle of OECD countries. As aggregate demand in the major industrial countries gains momentum it follows that the demand for commodities should rise, leading to an appreciation in their prices. Graph 7.4 shows this to have been the case between 1972 and 1982. During periods of economic downswing in 1974/75 and 1980/82 metals prices including the gold price declined while during upswing phases they rose.

GRAPH 7.4

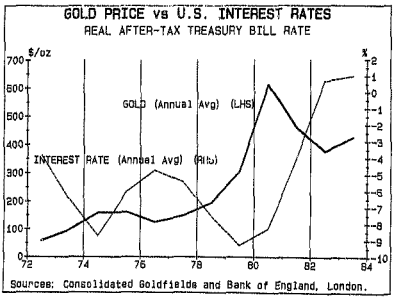


Sources: Consolidated Goldfields and The Economist, London.

7.3.4 United States Real Post-Tax Interest Rates

The fourth variable which had a close correlation with the gold price over the period 1972 to 1982 is the real post-tax rate of interest in the US. Graph 7.5 shows the relationship between the gold price and the real after-tax interest rate in the US over the period. This variable is derived by first subtracting from the US Treasury bill rate the top rate of income tax and then subtracting the expected rate of consumer price inflation.[17] Real rates are important because they are thought to be particularly relevant to saving and investment decisions. In addition, the real rate appropriate to private saving and investment decisions is one which takes account of the tax treatment of interest. In principle, the pre-tax real rate is relevant only to borrowers whose interest payments cannot be offset against tax, and to lenders whose interest income is not taxable.[18]

GRAPH 7.5



Sources: Consolidated Goldfields and Bank of England, London.

As Graph 7.5 shows, throughout the period from 1972 to 1981, real post-tax interest rates in the US were significantly negative. This meant that the tax-paying investor holding US dollar assets was not preserving the value of his asset,

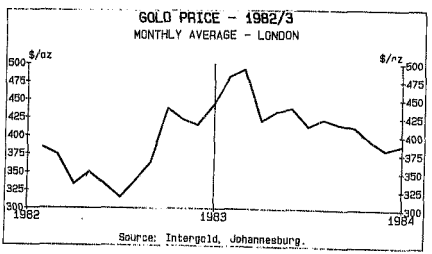
whereas if he had switched into hard assets such as gold the value of his asset would have more than held its own despite the fact that there is no yield on an investment in gold bullion. Conversely, the return to positive real post-tax interest rates in 1982 rendered gold unattractive relative to dollar assets.

When attention is focussed on the real return offered on a particular asset such as the US dollar it is not surprising to find that a close correlation exists between it and the price of gold bullion. When the dollar has offered good value the price of gold has weakened and vice-versa.

7.4 The Gold Price and the International Debt Crisis

Graph 7.6 shows the performance of the gold price during the second half of 1982 and the early part of 1983. During this period the price rose from a monthly average of $316 per ounce in June 1982 to $491 per ounce in February 1983. Thereafter, the price declined to below $400 per ounce in early 1984. The sharp rise in the gold price during this brief period appears to have been in conflict with the performance of at least three of the four variables considered above.

GRAPH 7.6



Source: Intergold, Johannesburg.

During the period June 1982 to February 1983 the US inflation rate measured by the consumer price index (year-on-year basis) fell from 7,1 to 3,5 per cent and, in fact, continued to decline until the third quarter of 1983.[19] At the same time the trade-weighted dollar index was static : it was 111,1 in June 1982 and 111,0 in February 1983, although it rose as high as 115,0 in November 1982.[20] The international business cycle was still in a downswing phase : for example, the index of US industrial production declined from 94,4 to 94,0 over the period although it actually fell to a low point of 91,8 in November 1982.[21]

However, the fourth variable, the post-tax real US interest rate actually moved sharply in a favourable direction for gold over the period. From a level of plus 1,53 per cent in June 1982, this variable declined to minus 0,6 per cent in February 1983.[22] This is not surprising as the US Treasury bill rate declined from 12,75 per cent in June 1982 to a low point of 7,88 per cent in February 1983.[23]

Despite the slightly more favourable performance of the post-tax US interest rate over this time the sharp rise in the gold price does appear to have been excessive. The performance of the gold price in the year following its rise to the $500 per ounce level in February 1983 appears to confirm this: at one point in early 1984 the price fell below the $370 per ounce level. This latter performance was more in line with the four variables under consideration: US inflation only started to rise slowly towards the end of 1983; the US dollar was exceptionally strong throughout 1983; other metal prices were virtually unchanged at the end of 1983 from the levels recorded in the second quarter of 1982.[24] Post-tax real US interest rates probably rose again after February 1983 because there was little expectation of a resurgence of US inflation, while the Treasury bill rate reached 9 per cent at the end of the 1983 from under 8 per cent in February 1983.

Another development, then, is necessary to explain this uncharacteristic surge in the gold price. It is generally accepted that fears related to the international debt crisis, triggered off

by Mexico during the third quarter of 1982, were responsible.[25] Although Eurobanks had been lending large sums to LDCs for a number of years, the closing by Mexico of its foreign exchange markets in August 1982 sparked off a chain of uncertainty and loss of confidence in the international financial system. There were fears of a breakdown in the interbank mechanism of the Eurocurrency market which could have led to a widespread withdrawal of deposits. Furthermore, there were fears of a repudiation of foreign debt by some of the larger debtor countries which could have led to a dramatic squeeze on the largest lenders in the Eurocurrency market. It was felt that the world's major central banks would prevent a full-scale collapse of the international banking network by pumping cash into the system. Such a move would have increased international liquidity, produced a decline in interest rates and ultimately an acceleration in international inflation, all of which would have stimulated the speculative demand for gold.

In the event, despite some acceleration in money supply growth in the US and a corresponding fall in US interest rates, the collapse of the Eurobanking system was averted without a rekindling of US and world inflation. Once the markets perceived that responsible action was being taken, the fears which led to the sharp anticipatory buying of gold abated, and with them the price of gold. For the time being at least, despite the problems still confronting LDC debtors and their creditors (discussed in Chapter 6), the international debt crisis has receded as an important determinant of the price of gold.

As to the future prospects for the gold price much will depend on the willingness of the US monetary authorities to maintain a realistic rate of return on dollar assets. This will entail pursuing a monetary policy that is consistent with relatively low inflation and sustained economic growth and a fiscal policy that does not generate excessive competition between the private and public sectors for financial resources. Currently, monetary policy appears sound but there is too large a gap between Federal spending and revenue. Should the authorities successfully reduce Federal

budget deficits there is every prospect that international investor confidence in the US dollar will be consolidated. Naturally the phenomenon of the business cycle will at times cause investor preferences to shift away from the US dollar at the margin, for example, during a period of acceleration in US inflation. However, if the US authorities are sufficiently adept at harnessing money supply growth so as to maintain a real rate of return on dollar assets such shifts are unlikely to produce severe exchange rate instability.[26] Under such circumstances investor demand for gold will be restrained and the gold price is unlikely to rise substantially faster than the real rate of growth in the world economy.

The final section of this chapter is concerned with a brief analysis of the role of gold in South Africa's external accounts. The massive rise in the gold price since 1972 was a considerable bonanza for the South African economy but it has also reflected the instability of the international monetary system. This, in turn, has had important implications for South African exchange rate policy, a question which will be taken up in Chapter 8.

7.5 Gold and the South African Balance of Payments

Although South Africa's gold output has declined steadily since the early 1970s the value of that output has played a growing importance in the country's balance of payments. Table 7.4 shows South African gold mine production between 1972 and 1983 and the rand value of gold exports over the same period.

TABLE 7.4

	South African Gold Mine Production (Metric Tons)	Value of South African Gold Exports (Rm)
1972	910	1 161
1973	855	1 770
1974	759	2 565
1975	713	2 540
1976	713	2 346
1977	700	2 795
1978	707	3 864
1979	705	6 003
1980	675	10 141
1981	658	8 340
1982	664	8 627
1983	680	9 929

Sources: Gold Production: Gold 1984, Consolidated Gold Fields PLC, London, 1983, p.14.

Gold Exports : South African Reserve Bank, Quarterly Bulletin, various issues.

During this same period the dollar price of gold rose from an average of $58/oz to $424/oz. Furthermore, the rand-dollar exchange rate fell from an average of $1,29 in 1972 to only $0,90 in 1983.[27] Thus the average rand price of gold moved from R45,1 in 1972 to R471,1 in 1983, a rise of 945 per cent.

This rapid rise in the rand gold price has, of course, encouraged the mines to mine lower grades of gold-bearing ore so that not all of the decline in South African gold output can be explained by depletion of reserves.

The South African economy can be classified as an 'open' economy. Over the period 1972 to 1983 total exports of goods and services constituted an average of 30 percent of GDP (see Table 7.5). Over the same period the ratio of total imports of goods and services was 31 percent on average.

TABLE 7.5

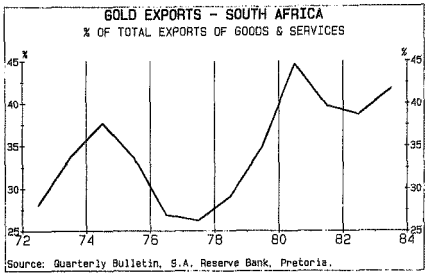
SOUTH AFRICAN TRADE
GOODS AND SERVICES: % OF GDP

	Exports	Imports
1972	26	27
1973	26	27
1974	28	32
1975	28	35
1976	28	34
1977	31	30
1978	33	30
1979	36	30
1980	37	33
1981	30	36
1982	28	33
1983	27	27

Source: South African Reserve Bank, Quarterly Bulletin, various issues.

The bulk of South African gold production is exported and gold exports play a crucial role in generating the foreign exchange necessary to import the capital goods vital for the continued expansion of the country's industrial base. In fact, the reliance on gold exports has expanded since 1972 as can clearly be seen from Graph 7.7. In recent years the contribution of gold to total exports of goods and services has been between 39 and 45 per cent compared to a level of between 27 and 37 percent earlier. Before 1972, for example, in the period 1963 to 1971 the average ratio of gold exports to total exports was 32 percent. Thus it is true to say of recent times that South Africa has become more heavily dependent on gold than at any other time in the past 20 years.

GRAPH 7.7



Source: Quarterly Bulletin, S.A. Reserve Bank, Pretoria.

7.6 Conclusion

During the 1960s considerable pressures built up in the international monetary system owing to rising US inflation and the deterioration in the US trade balance. This created uncertainty concerning the status of the US dollar as the world's numeraire. During this period world trade expanded rapidly and there was a growing need for international liquidity which could not adequately be met by an increase in dollars alone. One solution which suggested itself was an increase in the price of gold which constituted a major portion of international reserves but was not being produced in sufficient quantity. Unfortunately this option was rejected. This left the international monetary system with a dilemma: it was becoming increasingly reliant on the major international reserve asset - the dollar - while economic fundamentals were rendering the status of the dollar increasingly suspect.

This dilemma was resolved in the early 1970s with the breakdown of the gold-dollar standard and the fixed exchange rate system and thereafter followed a decade of exceptional volatility including a

spectacular rise in the gold price. The Eurocurrency system played an important role during this period by providing the means for rapid, large-scale financial transfers.

By the early 1980s gold had assumed an even more important role in the South African balance of payments than in the 1960s, constituting around 40 percent of total exports of goods and services. Thus the South African economy was directly affected by events in the international monetary system during the 1970s and early 1980s. In Chapter 8 the impact of these events on the South African exchange rate policy will be analysed.

CHAPTER 7

REFERENCES

1. Gilbert, M. Quest for World Monetary Order, A Twentieth Century Fund Study, John Wiley and Sons, 1980, p.217.

2. Gilbert, M. ibid., p.143.

3. Gilbert, M. ibid., p.218.

4. Gilbert, M. ibid., p.39.

5. Yeager, L.B. International Monetary Relations : Theory, History and Policy, 2nd Ed., Harper and Row, New York, 1976, p.427.

6. Yeager, L.B., ibid., p.427.

7. Corrie, C. No Super-Tight Gold Prices in this Cycle. Gold Newsletter, March 1 1984, p.1.

8. Triffin, R. The Evolution of the International Monetary System : Historical Appraisal and Future Perspectives. Princeton Essays in International Finance, no. 12, 1964, p.7.

9. Rees-Mogg, W. The Reigning Error : the Crisis of World Inflation, Hamish Hamilton, 1974, p.73.

10. The Deutschmark component is taken from : The Euro-DM market. Monthly Report of the Deutsche Bundesbank, January 1983, p.28. The figure for the total market comes from : World Financial Markets, Morgan Guaranty Trust Co., New York, October 1983, p.11. Although the latter gives statistics for a broader definition of the market than the BIS reporting area, it is still clear that the Euro-DM is quite small.

11. The Deutschmark as an International Investment Currency. Monthly Report of the Deutsche Bundesbank, January 1984, p.14.

12. The Deutschmark as an International Investment Currency. Monthly Report of the Deutsche Bundesbank, November 1979, p.26.

13. A Wary Japan Starts to Open up its Financial Markets. Business Week, March 5, 1984, p.32.

14. Gold 1984, Consolidated Goldfields PLC., London, 1984, p.27.

15. The average market price of gold in 1982 was $374,92. See Gold 1983, Consolidated Gold Fields PLC., London, 1983.

16. Gold 1983, ibid., p.24.

17. A Note on Real Short-term Interest Rates. Bank of England Quarterly Bulletin, December 1983, p.474. The method for calculating the expected rate of consumer price inflation is explained in footnote (4) on p.473. The values in Graph 7.5 are estimated from Chart 3, Line 7 on p.474. The value for 1983 is calculated using the author's estimates of expected US inflation in 1984.

18. A Note on Real Short-Term Interest Rates, ibid., p.471.

19. Ivor Jones, Roy, Inc., Economic Database System, Diagonal Street, Johannesburg.

20. Various issues of World Financial Markets, Morgan Guaranty Trust Co., New York, 1982 - 83.

21. Ivor Jones, Roy, Inc., loc.cit.

22. This calculation is made using actual rather than expected inflation rates using the formula in the Bank of England article, op.cit., Footnote (4), p.473.

23. Ivor Jones, Roy, Inc., loc.cit.

24. International Monetary Fund, International Financial Statistics, various issues, 1982-84.

25. Gidlow, R.M. Third World Debt : The Danger of Repudiation and its Implications for Gold. Economic Focus, Bank of Lisbon and South Africa, February 1983, p.1.

26. Batten, D.S. and Ott, M. Five Common Myths about Floating Exchange Rates. Federal Reserve Bank of St. Louis Review, November 1983, pp.5-15.

27. South African Reserve Bank, Quarterly Bulletin, various issues, 1982-84.

CHAPTER 8

THE EVOLUTION OF THE SOUTH AFRICAN FOREIGN EXCHANGE MARKET

8.1 Introduction

During the post-war period until December 1971 only a single alteration in the rand-dollar exchange rate occurred - in September 1949. However, after August 1971 when the US suspended the convertibility of the dollar into gold, South Africa was forced to re-examine its exchange rate policy. In the years that followed various strategies were adopted including a managed float and rejection of a sterling peg in favour of the dollar. The period was characterised by the international movement away from fixed exchange rates based on the gold exchange standard to floating exchange rates. World commodity prices such as gold and oil rose dramatically which exerted considerable impact on the South African balance of payments. Simultaneously, the Eurocurrency market reached maturity providing the resources for rapid capital movements in response to changing exchange rate expectations.

Although the South African foreign exchange market was to a large extent insulated from direct Eurocurrency flows, the impact of these flows on the exchange rates of South Africa's major trading partners caused the domestic monetary authorities to continually re-assess their exchange rate policy. Early in 1979 the evolution of South Africa's foreign exchange markets was taken a major step forward by the acceptance by the government of the recommendations of the Interim Report of the Commission of Inquiry into the Monetary System and Monetary Policy in South Africa entitled 'Exchange Rates in South Africa'.[1]

The report recommended, inter alia, as a long-term objective, the introduction of a market-determined flexible exchange rate for an independent rand subject to Reserve Bank management but with only limited exchange control.[2] It also recommended the development of an active and competitive forward exchange market in South Africa.[3]

The first section of this chapter will briefly discuss the history of the rand exchange rate between 1971 and 1979, followed by a review of the basic recommendations of the Commission. The next two sections focus on developments in the spot and forward rand markets in response to these recommendations. This is followed by a discussion of the possible introduction of a Eurorand market and a comment on future developments in the forward exchange market.

8.2 The South African Rand : 1971 - 1979

8.2.1 Pre-1971

During the post-war period until December 1971 only a single alteration in the rand-dollar exchange rate occurred - that in September 1949. Thus the par value of the rand in terms of gold was retained throughout the period 1967 - 71 despite the 14,3 per cent devaluation of sterling in November 1967, and other developments such as the two-tier gold market in 1968 and adjustments in the exchange rates of other major currencies like the Deutschmark and the Swiss and French francs over the 1969-71 period.

South Africa was forced to re-examine its exchange rate policy in August 1971 when the US announced the suspension of dollar-gold convertibility and the exchange rates of the world's major currencies commenced to fluctuate. It was expected that the currencies of South Africa's major trading partners would appreciate against the dollar and this created uncertainty about the balance of payments. The reaction of the authorities was to adopt a temporary link with the dollar.

8.2.2 The Smithsonian Agreement

On 18 December 1971 at the Smithsonian Institute in Washington the Group of Ten agreed on a 7,89 per cent devaluation of the dollar and a revaluation of the other major currencies of varying amounts.[4] The uncertainties concerning the rand had not been alleviated by the temporary dollar link and it

required a 12,28 per cent devaluation of the rand three days after the Smithsonian Agreement to restore the net inflow of capital to the private sector. In addition the link with sterling was restored.

8.2.3 Sterling Floats

Exchange rate speculation was extensive during the first half of 1972 in international money markets as the debate on proposals for international monetary reform continued. The level of uncertainty was accompanied by a rise in the price of gold on the free market to hitherto unprecedented levels in excess of $60 per ounce.

Heavy speculation against sterling forced the UK authorities to allow the pound to float from 30 June 1972. The South African authorities decided to maintain the sterling link because the balance of payments was still under pressure and economic growth was a priority.[5]

The floating of sterling marked a weakening in traditional investment links between South Africa and the UK due to the imposition at the time of the investment dollar premium on South African portfolio investments by UK residents.

8.2.4 Effective Rand Revaluation

From 25 October 1972 the rand-dollar link was re-established. This amounted to a 4,2 per cent devaluation in terms of gold. Thereafter the trade-weighted exchange rate appreciated until early 1974 after showing a steady depreciation from mid-1971.[6]

It appears that the authorities were confident that the balance of payments had been restored to a sufficiently strong position as there was a surplus on current account as well as a sustained inflow of long-term capital.

8.2.5 Another Revaluation

In early 1973, the US dollar came under pressure. During the first few days of February foreign exchange activity in international markets was enormous, highlighted by rampant speculation against the dollar.

The South African authorities decided to maintain the par value of the rand which amounted to a noticeable revaluation in the trade-weighted index. Reasons given were that the gold and foreign exchange reserves were sound, that the economic climate was favourable for an acceleration in growth and that a further depreciation was undesirable given the rate of inflation.[7]

Simultaneously, the gold price continued to move to record levels. The dollar devaluation failed to stop foreign exchange speculation and in March 1973 some of the EEC currencies commenced to float jointly against the dollar while other major currencies including sterling, yen and the Canadian dollar embarked on a policy of generalised floating. Since that time, the regime of floating exchange rates has been firmly entrenched.

8.2.6 Revaluation Again

After a period of steadiness the dollar continued to depreciate in May 1973 while South Africa's gross gold and foreign exchanges reserves rose to record heights due to a particularly strong current account surplus.[8] The gold price also reached a peak on the free market at this time. The rand was revalued effectively by around five per cent on 5 June 1973.

8.2.7 The Oil Crisis

The current account moved back into deficit in the last quarter of 1973 due mainly to the effect of the economic

upswing on imports. The drastic increases in the oil price and the parallel appreciation of the dollar in international markets also contributed to what was to be a sharp decline in gold and foreign exchange reserves during 1973/74. Furthermore, the capital account of the balance of payments registered a reversal into deficit after the large surplus of the previous few years.

With inflation running at double figures by the end of 1973 devaluation would have been very unwelcome. The monetary authorities set out to remove devaluation fears and hence adverse speculation against the rand by following a tighter monetary policy.

8.2.8 The Managed Float

On 21 June 1974 the authorities announced that the rand would be subjected to a managed float whereby small but frequent adjustments against the dollar would be made according to the balance of payments position and domestic economic conditions. One of the factors leading to this policy was the hope that frequent adjustments of the exchange rate in either direction would discourage traders from taking a view on the exchange rate and would hence reduce leads and lags.

Between June 21 1974 and April 4 1975, the rate was adjusted upwards seven times and downwards four times. The net result was a trade-weighted depreciation of some seven per cent.[9] The Reserve Bank maintained that the policy 'worked reasonably well up to March 1975'[10] but Gidlow asserts that it was unsuccessful because the business community was soon able to predict exchange rate adjustments so that the policy effectively encouraged leads and lags.[11]

It is clear that leads and lags led to the final abandoning of the managed float : 'On 27 June 1975 the authorities changed their policy of independent managed floating because the

strengthening of the dollar and the weakening of sterling encouraged unfavourable leads and lags in foreign payments and receipts'.[12]

8.2.9 Rand-Dollar Devaluation

At the same time that the managed float was terminated the rand was devalued by 4,76 per cent against the dollar. Speculation continued at this time as the dollar appreciated markedly and in August exchange controls were eased to encourage capital inflows. Monetary policy was also tightened.

During this time the cyclical economic downswing failed to produce a significant improvement in the gold and foreign exchange reserves. The gold price was falling rapidly - a decline that was to continue until the third quarter of 1976 - and there were large private sector short-term capital outflows in the second and third quarters. The strain on the reserves led to intensive compensatory financing by the Reserve Bank with the 'liabilities related to reserves' account registering substantial inflows in the same two quarters. The authorities reacted by devaluing the rand sharply by 17,9 per cent on 22 September and they tightened monetary policy still further.

The deficit on current account reached a low point at the close of 1975. However, the leads and lags problem again appeared in December as the trade-weighted value of the rand appreciated. In March, the Minister of Finance announced in the Budget a decrease in the rate of increase in government expenditure and other frugal measures.

The inflow of long-term capital slowed during the first half of 1976 and the current account deficit remained high as government expenditure reacted slowly to the tight budget. Gold and foreign exchange reserves plummeted along with the gold price. Thus further measures to prop up the balance of payments included an increase in the Bank Rate to nine per cent in July and an import deposit scheme in August.

The internal political developments of 1976 contributed to a substantial deterioration on the short-term capital account. Net outflows of short-term capital reached very high levels in the second and third quarters. The authorities were once again borrowers from foreign sources to support the foreign exchange reserves.

During 1976 the restrictive monetary and fiscal policies eventually brought about an improvement in the current account. This recovery was aided by a rise in the gold price in late 1976 and economic recovery in most industrialised countries which boosted exports.

During 1977 the short term capital account recorded substantial outflows which served to concentrate the authorities' attention on balance of payments policy.[13] It is likely that political factors were as important as economic factors as reasons behind the extensive short-term capital outflows from the private sector which reached alarming levels in 1977 and again in 1978. Indeed, a remarkable swing into surplus on current account aided by record gold price levels in 1978, complemented by a rapidly depreciating dollar between September 1977 and October 1978 (which led to a fall in the rand's trade-weighted value of 16 per cent)[14] would, under normal circumstances have led to short-term capital inflows. According to the Reserve Bank, the outflow of short-term capital was related both to a decline in the foreign financing of imports and political uncertainty in Southern Africa.[15] The decline in foreign financing was due increasingly to the narrowing differential between domestic and foreign interest rates which was reduced to zero during the second quarter of 1978 after which the reverse differential (i.e. foreign interest rates exceeded domestic rates) widened rapidly.

Measures were taken to tighten exchange control in March 1977 which affected dividend repatriation by foreign-controlled South African organisations and an import surcharge of 15 percent was imposed.[16] The 1978 budget imposed further restrictions on dividend repatriation and transfer of redemption proceeds of gilts and semi-gilts by non-residents.[17]

Another measure related to the balance of payments was the decision to value South Africa's official gold holdings on a market-related basis from April 1978. This was in line with the new IMF Articles of Agreement which abolished the official price of gold.

Late 1978 marked the publication of the proposals of the De Kock Commission[18] which recommended a more flexible exchange rate regime for the rand. By that time, despite capital outflows, the rand was in a stronger position than at any time during the previous two years owing to a significant improvement in exports helped by a gold price at well over $200 per ounce.

The time was therefore ripe in early 1979 to take a major evolutionary step by severing the link with the dollar which had been in force for 41 months - the longest period of exchange rate fixing since the demise of Bretton Woods. This was done on 27 February 1979 and a new era commenced for the rand.

8.3 De Kock Commission Report

Although South Africa only adopted a flexible exchange rate policy from 1979, the architect of the new policy, Dr. Gerhard De Kock, had shown as early as 1973 that the exchange rate system had undergone a radical change : "'n Moderne Rip van Winkel wat twintig jaar gelede aan die slaap geraak en onlangs eers wakker geword het, sou die huidige wêreld van wisselkoerse nie herken nie ... die meeste vername geldeenhede is tans besig om 'onwettiglik' te sweef".[19]

It is interesting to note that De Kock regarded the adoption of generalised floating in 1973 as 'illegal' in the sense that the IMF still supported a return to the parity system at that time. It was only in 1978 that the third Amendment of the IMF Articles of Agreement came into operation, permitting members a free choice as to the exchange rate regime they wished to adopt. In view of the history of the co-operation between the IMF and South Africa the eventual acceptance of fluctuating exchange rates by the IMF may have contributed to the timing of the Commission's recommendations at the end of 1978.

In the Interim Report De Kock pointed out that under the current international system the rand was, in effect, already floating - with the US dollar in terms of most other currencies - and that floating of one kind or another was, for the time being at least, inevitable for the rand.[20]

Apart from the distinct need to adapt to external developments in the international foreign exchange markets, the Interim Report also identified numerous defects of the fixed exchange rate system for South Africa. One major defect was that changes in the country's balance of payments position tended to be reflected immediately in the level of foreign reserves held by the Reserve Bank, and not in changes in the exchange rate. Under conditions where the reserves were declining this often gave rise to serious speculative capital outflows, including leads and lags in foreign payments and receipts. When the authorities attempted to defend the pegged exchange rate which was clearly overvalued, in the opinion of the market, speculators not only anticipated a devaluation but knew from experience that, when it came, it would be likely to be a fairly large adjustment. With such a one-way risk and such great potential rewards, they had every reason to speculate.[21] It was felt that under a more flexible exchange rate system any speculative pressure would be borne, in part, by the exchange rate rather than the foreign exchange reserves and that after a certain point speculation would cease.[22]

Another important consideration in the report was the desire for more independence for domestic monetary and fiscal policies.[23] Under the system of a fixed rand dollar exchange rate the authorities frequently had to grant a lower priority to the economic objectives of attaining satisfactory economic growth, lowering unemployment, achieving balance of payments equilibrium and controlling inflation in order to defend the fixed exchange rate. The Interim Report took the view that by adopting a flexible exchange rate policy greater attention could be devoted to these other objectives. However, it is also clearly stated that in attending to these other policy objectives sufficient discipline should be exerted such that the rand should become a strong currency.[24] Unfortunately this latter objective has not been attained (see Section 8.4).

A further defect of the exchange rate system in operation in 1978 was that in the event of a depreciation of the rand the Reserve Bank was exposed to large losses in its forward exchange book. For example, during the six years up to March 1978 these losses amounted to R1 046 million.[25] The losses were a consequence of the imbalance between forward sales and forward purchases of foreign exchange by the Reserve Bank. For example, at the end of 1978 Reserve Bank forward sales exceeded forward purchases by R2 500 million.[26] This imbalance resulted, in turn, from the fact that while the cost of forward cover offered by the Reserve Bank was cheap (fixed artificially at 1 per cent for both purchases and sales) a major proportion of South Africa's export revenues flowed directly to the Reserve Bank without being covered forward in the foreign exchange market. Therefore, even when the exchange rate was perceived to be in equilibrium, importers would tend to take out (cheap) forward cover but there would not be fully compensating sales of forward exchange by exporters. Whenever expectations of a devaluation emerged, the imbalance would be aggravated by leads and lags. Those importers still without forward cover would cover while exporters would completely withdraw from the forward exchange market. In addition to proposing a more flexible spot rate so that the certainty of a one-way movement in the exchange rate would be

diminished the Interim Report also recommended the development of a more sophisticated forward exchange market. These recommendations are discussed in Section 8.5.

8.4 Steps Towards a Managed Float

Since the acceptance by the government in early 1979 of the recommendations of the Interim Report significant progress has been made in achieving the goal of a sophisticated foreign exchange market in South Africa. In the spot market an evolutionary process of reform was put into operation immediately and numerous important steps had been taken by early 1981. These included :

1) the withdrawal by the Reserve Bank of fixed buying and selling rates previously prescribed for foreign exchange transactions;

2) the setting of limits by the Bank for the amounts authorised foreign exchange dealers were allowed to hold abroad;

3) the introduction of the Reuters monitor system for rapid dissemination of foreign exchange market information;

4) the gradual introduction of more frequent daily adjustments in spot foreign exchange rates by the Bank;

5) the occasional intervention in the market by the Bank on its own initiative;

6) the channelling of Krugerrand sales proceeds directly through the Chamber of Mines.[27]

The following two years (up to September 1983) saw further major steps towards the development of a (managed) floating spot rand exchange rate. The most important of these included :

1) the restriction by the Bank of its exchange rate quotations for rand/dollar deals to authorised foreign exchange dealers in South Africa alone;

2) an increase in the daily adjustments of rates by the Bank to as much as 30 points per day;

3) the scrapping of foreign exchange controls for non-residents and, therefore, the elimination of the dual exchange rate system which had been in operation from 1961 in one form or another;[28]

4) the channelling of the proceeds of gold bullion sales through the South African mining houses directly into the foreign exchange market. (This measure was partially reversed in early 1985).

With the latter two steps the recommendations of the Commission with respect of the spot market were, for the most part, implemented. The objective had been to introduce a unitary exchange rate system under which an independent and flexible rand finds its own level in well-developed and competitive spot markets in South Africa, subject to Reserve Bank "intervention" or "management" by means of purchases and sales of foreign exchange (mainly US dollars), but with no exchange control over non-residents and only limited control over residents.[29]

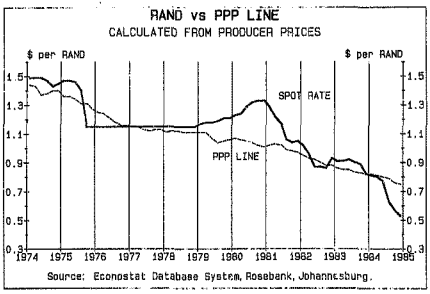
Before proceeding with a review of how far the authorities have progressed in implementing a more fully-developed forward exchange market in South Africa it is of interest to assess the performance of the rand exchange rate since 1979. Such an analysis will be conducted using the theory of purchasing power parity as applied to the rand-dollar exchange rate. Although some of the other major currencies play important roles in South Africa's total foreign exchange transactions, the dollar is, nevertheless, the primary currency for trade.

The basic tenet of the purchasing power parity (PPP) theory is that exchange rate movements fully offset movements in domestic price levels.[30] The PPP analysis is by no means the only method of

examining exchange rate adjustments but there is no doubt that the movement of price levels in different economies affects their exchange rates over time.[31]

The PPP line has been constructed for the period 1974 - 1984 (see Graph 8.1) by creating an index from the quotient of US and South African producer price indices. Because South African inflation has tended to exceed US inflation over the period the PPP line has declined. While there is debate as to which price index to use, the analysis here shows very similar results whether producer price or consumer price indices in the US and South Africa are used.

GRAPH 8.1



A further problem with PPP analysis is to determine a point at which the rand-dollar rate was in equilibrium and, therefore, on its PPP line. The point chosen here was mid-1977 when the current account of the South African balance of payments was moving through a point of balance i.e. from deficit to surplus. The selection of this point appears justified for the following reasons:

Firstly, at other points over the period when the current account was in balance the rand-dollar exchange rate also passed through the

PPP line. For example, in 1981 when the current account moved from a large surplus to a large deficit, the rand fell sharply against the dollar and by 1982 had penetrated the PPP line. With the return to surplus in 1983 the rand rose above the PPP line only to fall again in late 1983 and in 1984 with the swing back into deficit.

Secondly, it shows the rand as undervalued after the devaluation in September 1975. The fact that the rand was undervalued following this step appears to be supported by the Interim Report. For example, *it is stated in the Report : 'It is possible that, if a* less rigid exchange rate system had been in force, the depreciation of the rand would have occurred more gradually over a period of time and would, in total, have been less than the actual extent of the devaluation'.[32]

It is clear from the graph that while for short periods the rand has remained above or below its PPP line it has tended to move in the direction indicated by the line. During periods when a surplus on the current account has been recorded, for example, in 1979/80, the *rand has risen above its PPP line and vice versa for a deficit. It* is interesting that this has been true both during the period of the fixed exchange rate regime and since 1979 when a more flexible approach was adopted.

During 1984 the rand fell to a point considerably below the PPP line so that, on the basis of this analysis alone, the rand was clearly undervalued. While there were important reasons for the rand being undervalued, notably, the exceptional strength of the US dollar in 1984 and the return to a deficit on the current account of the *balance of payments, there are reasons for believing that the rand* will not in the future rise significantly above its PPP line against the dollar, as it did in the period 1973/4 and 1979/80.

These reasons are as follows:

Firstly, [illegible]can current account surpluses are likely to be smaller [illegible]ter duration than during the 1970s owing to the low probe[illegible]f a repetition of the specutacular surges in commodity prices experienced in that decade.

Secondly, it is expected that the new constitutional arrangements in South Africa will lead to a sustained high rate of growth in government spending which will boost imports.

Thirdly, the policy of the authorities to remove foreign exchange control will help to avoid the situation that occurred in 1980 when very large foreign exchange inflows were bottled up within the domestic markets which pushed the exchange rate up very sharply.

In summary, over the period 1974 to 1984 the rand-dollar spot exchange rate fell considerably in line with the higher inflation rates experienced in South Africa vis-à-vis the US. Since 1980 when South Africa embarked on an evolutionary course towards flexible exchange rates, the fall in the rand has been quite spectacular. Part of this has been a consequence of the tight monetary policy followed in the US which has strengthened the dollar. However, the decline in the rand has also stemmed from domestic problems, in particular, the inability to gain control over money supply growth and inflation. To date, therefore, the objective of the Interim Report to make the rand a strong currency has not been successful. The means to achieving this was to adopt a flexible exchange rate policy in order to achieve greater independence for domestic monetary and fiscal policy.[33] Unfortunately, neither monetary nor fiscal policy have been sufficiently disciplined to take advantage of the more flexible exchange rate policy.

8.5 Developments in the Forward Exchange Markets

In the Interim Report it was recognised that a well developed foreign exchange market could not be achieved without measures to create an active and competitive forward exchange market in South Africa. The Report identified numerous deficiencies in the forward market which was administered by the Reserve Bank. These deficiencies included an imbalance between forward cover available to importers (12 months) and exporters (6 months); artificially set forward cover based on the spot rate plus 1 per cent commission

which bore no relation to domestic versus foreign interest rate differentials; and the absence of forward cover facilities for foreign loans taken out by private sector firms.[34]

Most of these deficiencies were attended to within a year or so of the publication of the Interim Report. For example, in February 1979 the Reserve Bank began quoting forward rates which were based on spot rates and took into account the difference between market interest rates in South Africa and comparable rates overseas. Further, early in 1980 cover for 12 months was extended to exporters and banks were given greater freedom in respect of the type of transactions for which forward cover could be provided.[35]

However, these measures were not sufficient to relieve the Bank of its role as the final arbiter of what the 'correct' exchange rate should be.[36] There still existed an artificial separation between the spot and forward markets such that forward market transactions had no effect on the spot exchange rate. This was because authorised foreign exchange dealers could, under the existing arrangements, be covered in full and at any time and without any restriction with the Bank.

Without a fully market-determined spot exchange rate the Bank continued to face the problem of the one-way option. In particular, its forward sales of foreign exchange considerably exceeded its forward purchases. For example, during the first quarter of 1981 new forward contracts for the sale of foreign exchange by the Bank exceeded forward purchases by R2,3 billion (i.e. R3,6 minus R1,3 billion). This made the Bank extremely vulnerable to losses on forward exchange contracts when the rand-dollar exchange rate was under pressure as it was throughout 1981 and during most of 1982. In June 1982, the Bank made an unusual disclosure of the losses made on forward exchange contracts. During the first quarter an amount of R1 317 million appeared in the category 'net other assets and liabilities' of the monetary banking sector.[37] Although a complete breakdown of this increase was not available, a 'major part' of it consisted of exchange losses made by the Bank on forward exchange contracts. These losses are for the account of the central

government and are considered as claims of the monetary banking sector on the government.[38] They also came on top of the losses amounting to R1 046 million during the six years up to March 1978 (mentioned in the Interim Report).

It was felt that in order to establish better balance in the forward market, the spot exchange rate needed to find its own level based primarily on the dictates of supply and demand. The De Kock Commission felt - rightly or wrongly - that should this be the case both importers and exporters would be equally likely to seek forward cover because of uncertainty as to the future movement of the spot rate. It was recognised that better balance and greater depth in the spot market could be created by paying the proceeds of gold bullion sales to the mining houses in dollars and allowing De Beers to siphon its foreign exchange receipts directly into the domestic foreign exchange market. When these measures were implemented in 1983, along with the abolition of exchange controls over non-residents, the Bank made significant progress in reducing its dominant influence over the exchange rate.

However, the next crucial step was to establish the proper linkages between the spot and forward markets. Here the authorities faced a dilemma. It has frequently been the policy of the monetary authorities in South Africa to encourage importers to make the maximum use of foreign rather than domestic credit by offering attractive forward cover terms through the Reserve Bank.[39] While this policy benefitted the net gold and foreign exchange reserves, it has also contributed to the imbalance in the forward exchange market : the Bank has tended to be a net seller of forward dollars. Furthermore, because the Reserve Bank offered direct forward cover facilities, demand for forward cover did not impact on the spot exchange rate in the way that it does in sophisticated forward exchange markets. The Bank feared that should it completely withdraw from the forward market undue pressure on the spot exchange rate could arise because authorised dealers would purchase spot foreign exchange in order to hedge their forward foreign exchange commitments. Any attempt by the Bank to support the spot rate could then result in a large drain on the net gold and foreign exchange reserves.

The Bank favoured a more evolutionary process of withdrawal from the forward exchange market - in line with its evolutionary approach to the establishment of a floating spot rate.

With the introduction of a floating spot rate in September 1983 the Bank announced the introduction of a spot/swap system of forward exchange. Under this system the Bank continued to offer forward cover, but on a swap basis as opposed to the previous method of providing cover outright. Authorised dealers could no longer take out straight forward cover with the Bank on behalf of clients. Instead they covered oversold foward positions by buying in the spot market and effecting swap arrangements either in the market or with the Bank.[40]

Thus, where a dealer found that he could not cover a net forward position in the domestic interbank market, the Reserve Bank offered him a re-purchase arrangement for the amount and maturity of his exposed position. This obviated the need for local dealers to place dollar deposits offshore. This arrangement was due to expire in September 1986 and in the interim period the Bank was progressively to reduce the scale on which it was prepared to offer swaps to the market.

Apart from avoiding a sudden shock to the foreign reserves, phasing in the spot/swap system also had the objectives of gradually fostering a broader and deeper interbank foreign exchange market and of establishing the normal linkages between spot and forward foreign exchange transactions. It was hoped that the interbank market would develop as the Bank withdrew progressively while the spot-forward linkages were created because the dealers hedged exposed forward positions with offsetting spot transactions.

By September 1986 it was the intention that transactions in the forward exchange market would be conducted independently of the Reserve Bank (although the Bank would continue to intervene from time to time). This implied that the current limits on authorised foreign exchange dealers in placing deposits in the Eurocurrency

market would have to be removed or at least significantly reduced. In reality, the Bank's programme of withdrawal has not been a success as will be discussed in Section 8.7. The following section discusses the possible development of the Eurorand market.

8.6 A Eurorand Market

South Africans are not unfamiliar with the Eurodollar market. It has probably been used for financing purposes more than any of the other international markets available to us.[41] Borrowings in this market are not restricted to any type of transactions. It is used for trade finance (mostly up to six months), working capital requirements, and, in times of tight domestic liquidity, by banks to supplement funding requirements. Towards the end of 1983 many corporate borrowers took out extensive Eurodollar loans without covering forward in the belief that the rand-dollar spot rate would strengthen thereby giving them the benefit both of lower Eurodollar interest rates and a capital gain on the currency. This has proved to be an expensive mistake.

The Eurodollar market is also extensively used by long-term borrowers, particularly public corporations such as Escom. These loans are usually handled by an overseas lead manager bank which will sign the agreement with the local borrower and then syndicate the loan with a number of overseas (and, more recently, local) banks on a private placement basis.[42] This type of borrowing is more in the nature of a Eurobond or foreign bond issue.

With the proposed withdrawal of the Reserve Bank from the forward exchange market the question of the development of a Eurorand market has arisen. Such rand deposit facilities could be offered in two forms. Firstly, a more active Eurorand market could develop where interbank rand deposits are held in major financial centres such as London and New York. Secondly, non-residents could be granted permission to make use of onshore rand deposit facilities without restrictions.

At first sight the prospect of a Eurorand market appears exciting. The 1983 Yearbook of International Financial Statistics published by the IMF shows that in 1981 South Africa ranked 18th in terms of total merchandise trade (including gold bullion sales) (see Table 8.1).

TABLE 8.1

TOTAL MERCHANDISE TRADE 1981

	$ Billions
United States	502
West Germany	326
Japan	279
France	212
United Kingdom	199
Italy	161
Saudi Arabia	145
Canada	138
Netherlands	122
Belgium	92
Switzerland	58
Sweden	57
Spain	51
Brazil	45
Korea	45
Australia	45
Mexico	43
South Africa	41

Source: International Financial Statistics, Yearbook, 1983.

Furthermore, it is estimated that at the end of 1983 around 31 per cent (R13,7 billion) of the market capitalisation of mining shares quoted on the Johannesburg Stock Exchange was owned by non-residents.[43] However, these figures belie the true nature of the currency flows through the South African foreign exchange

market. For, on the trade side, the rand is not the predominant currency for the denomination of transactions. In the case of exports it is likely that a negligible proportion of total exports (including gold bullion) is paid for in rands. All the major metals and minerals are priced in dollars and, in a few cases, sterling. To a great, although slightly lesser extent, South African imports are also paid for in foreign currencies.

As for foreign ownership of South African shares, two factors limit the need for trading purposes. Firstly, a large proportion of the trading by foreigners is actually conducted in New York or London between foreign parties which excludes the need for rands. Secondly, scrip available for trading has been declining since 1969 as a growing proportion of South African shares have been taken up by major institutions as a long-term investment.[44] However, it is true that the volume of foreign trade conducted in Johannesburg has picked up considerably since the abolition of exchange controls for non-residents in February 1983.

It appears, therefore, on the basis of the denomination of trade and capital flows that the rand plays a very small role despite the relatively large value of such transactions by international standards. This implies that there is very limited need for offshore rand deposit facilities.

Another factor militating against the establishment of a Eurorand market is the weak currency status of the rand. Apart from the fact that South African inflation appears almost endemically higher than that of its trading partners it is also interesting to note that the economy is by nature a capital-importer and has tended to run current account deficits since the mid-1960s. This fall has been obscured by recent history - between 1977 and 1980 there were considerable surpluses on current account.

TABLE 8.2

SOUTH AFRICA : % OF G D P

Year	Current Account Surplus or Deficit[1]	Imports[2] (Constant Prices)
1964	-0,8	26
1965	-2,8	27
1966	-0,3	23
1967	-2,0	25
1968	0,4	25
1969	-2,4	26
1970	-6,7	29
1971	-7,4	30
1972	-0,6	25
1973	-0,3	27
1974	-4,1	31
1975	-6,7	30
1976	-5,4	26
1977	1,2	22
1978	3,4	22
1979	6,1	21
1980	4,6	23
1981	-5,7	25
1982	-4,1	21
1983	0,3	18

Sources: (1) Econostat Database System, Rosebank, until 1975. Quarterly Bulletin, South African Reserve Bank, 1976 to 1983.

(2) A Statistical Presentation of South Africa's National Accounts for the Period 1946 to 1980, South African Reserve Bank, September 1981 and Quarterly Bulletin, South African Reserve Bank, various issues.

However, as shown in Table 8.2, this has tended to be the exception - caused by the phenomenal rise in the gold price at the time.

As South Africa is likely to continue to rely heavily on capital goods imports for its industrial expansion, it seems likely that current account deficits will persist. This prospect is made even more likely if it is taken into account that the country's programme of import replacement initiated during the 1970s can probably not go much further than the point attained during 1983. By then, imports as a percentage of gross domestic product had declined to only 18 per cent compared with the level of 31 per cent recorded in 1974 (see Table 8.2). If South Africa is to continue to import capital to finance current account deficits, there will be little room for exporting capital to stimulate the growth of an offshore rand deposit market.

In conclusion, although a small Eurorand market is already reported to exist,[45] economic fundamentals make it very unlikely that it will play a major role in South African foreign exchange transactions in the future. This leaves the alternative of establishing domestic rand deposit facilities for foreigners which implies that the authorities will need to make further changes in the exchange control regulations.

The current difficulty with the provision of rand deposit facilities to foreigners in South Africa is the prohibition on non-resident investment in money market instruments which are bearer-owned. Non-residents are restricted to deposits with banks or purchase of government stock. The basis for this restriction is the fear that residents could sell money market paper to non-residents, accepting payment overseas, which would constitute a drain on the net foreign reserves. As there is no register of money market instruments the Reserve Bank would not be able to control capital outflows from this source.

If the onshore rand deposit market is to resemble a Eurocurrency market system and thereby generate reasonably active foreign participation, such restrictions will have to be removed. In addition, other impediments, not imposed in the Eurocurrency markets, such as the 10 per cent withholding tax on interest from foreign deposits and even the liquid asset requirements on bank deposits will have to be reconsidered because they effectively lower the rate of interest available to deposit-holders.

8.7 Recent Developments

A major principle underlying the Interim Report was the assertion that a more flexible spot exchange rate would generate sufficient uncertainty concerning the future direction of movement in the rand as to encourage balance in the forward exchange market.[45] To this end in September 1983 the authorities embarked on the final stage to link the spot and forward markets such that the spot rate achieved the adequate degree of flexibility. As mentioned in Section 8.5, in addition to introducing the spot/swap system of forward exchange, they allowed the proceeds of gold bullion sales to flow directly through the market. Furthermore, they permitted invisible receipts and payments to be covered forward.

It was the intention of the Reserve Bank to withdraw progressively from providing spot/swap facilities to the market. Each September until 1986 the Bank was to reduce in stages the maximum quota of swaps between it and each authorised dealer. The Bank hoped that over this period of phased withdrawal the interbank market would gradually become more sophisticated such that forward sales and purchases of foreign exchange would be matched with diminishing recourse to the bank.

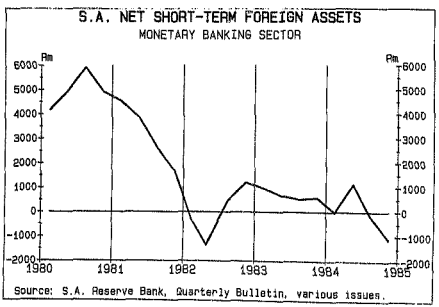
Unfortunately, two factors have severely inhibited the development of such a balanced forward market. The first of these was the unprecedented decline in the spot exchange rate between mid-1984 and early 1985.

During July 1984 the rand came under severe pressure against the US dollar and declined from around $0,76 towards the end of June to just above $0,60 at the end of July, a decline of over 20 per cent in only 5 weeks. In this particular example there had been widespread expectation that the rand was due to rise and many importers had taken uncovered foreign loans. The subsequent decline in the rand led to a large volume of forward covering, and by early 1985 the rate had fallen further to $0,42.

During this startling decline, the rand spot rate did not appear to reach a point where the probability of a further decline was equalled by the probability of a rise. Furthermore, large-scale switching from foreign to domestic credit occurred as importers perceived that the exchange rate risk outweighed the benefit of relatively lower interest rates overseas.

These pressures occurred at a point where the net foreign reserves of the monetary banking sector were already low (see Graph 8.2). The Bank attempted to prop up the rand at times, necessitating considerable foreign borrowing.

GRAPH 8.2



In January 1985, the authorities responded to this disaster by taking two retrospective steps. Firstly, they stopped paying the full proceeds of gold sales in dollars to the mining houses. From the end of January the houses were paid half in dollars, half in rands. Secondly, the bank reintroduced, as an option, the practice of dealing directly in forward exchange with authorised dealers.

The second factor holding back the development of a sophisticated forward market has been the failure on the part of the authorities to allow domestic banks to set up adequate foreign exchange facilities offshore and to allow foreign banks to open up rand deposit facilities locally. It appears that the authorities anticipate that, following their withdrawal from the forward market, the necessary swap facilities will be provided within the domestic interbank market. However, the realities of the domestic forward exchange market render this most unlikely. For one thing the imbalance in the forward market is unlikely to be eliminated rapidly. The bulk of South Africa's mineral exports are sold spot and the proceeds are only to a limited extent sold forward for rands. Many minerals producers believe that, in the long run, the rand and the gold price, for example, will move more or less in the same direction, thereby providing a natural hedge.

Secondly, the very sharp decline in the rand during 1984 caused a number of authorised dealers to reduce the scale of their transactions in the foreign exchange market or to withdraw altogether. This has severely limited the breadth and depth of the interbank market. Furthermore, banks impose limits on their swap, spot and forward transactions with other banks.[47]

Under these circumstances, the Bank is confronted with two choices. It must either continue to provide some minimum level of spot/swap facilities or it must allow the authorised dealers to take advantage of swap facilities in Eurocurrency markets.

The authorities appear firmly opposed to the former choice. The latter choice would entail the easing or lifting of controls on the amounts of foreign currency domestic banks may hold and borrow offshore. Then, in circumstances where the demand for forward foreign exchange exceeds the supply, the banks would enter into swaps by borrowing rands, purchasing foreign exchange and investing the foreign exchange in the Eurocurrency market until the commitments on forward contracts become due. Such transactions could, of course, put downward pressure on the rand exchange rate.

Should it reject one of other (or some combination) of these two choices, the Bank runs the risk of causing a contraction in the forward exchange market. Authorised dealers at times will simply be unable to meet all the demand for forward dollars. Excess demand for forward cover will put undue downward pressure on the forward rand exchange rate, leading to expectations of a decline in the spot rate. Importers will be encouraged to reduce their demand for foreign credit and switch to domestic sources, thereby putting pressure on the foreign exchange reserves and pushing up domestic interest rates.

In September 1984 the Bank did, in fact, reduce the swap quotas it makes available to authorised dealers in line with its phased withdrawal programme. However, it neglected to raise the limits on dealers to hold foreign exchange in offshore deposits. Currently, these limits total R600m which is wholly inadequate. South Africa's total foreign transactions routed through the foreign exchange market, are estimated to total at least $30 billion (equal to around R60 billion at the time of writing).[48] Furthermore, the limits are determined in rands, implying a considerable contraction since mid-1984 owing to the fall in the exchange rate.

In summary, it appears that the economy has not gained from the cautious approach adopted by the authorities. Fundamentally, for the spot and forward markets to operate efficiently they need to be given depth and breadth. Currently there are too many controls which restrain the flows of foreign exchange, leaving the markets thin and brittle. The steps taken in January 1985 leave the South African foreign exchange markets somewhere between control and

laissez-faire with no certainty as to the future direction or the ultimate objective. In order to rectify these uncertainties, the authorities need to reconcile their provision of forward currency facilities with controls over domestic banks' foreign currency exposure.

8.8 Conclusion

T e widespread adoption of floating exchange rates in the 1970s eventually led to recommendations for a similar system for the South African rand. An evolutionary process was set in motion in 1979 for the establishment of competitive spot and forward markets for South Africa. By September 1986 this process was supposed to have been completed. However, early in 1985, several retrogressive steps were taken leaving the forward exchange market in a state of uncertainty. While extensive use is made of the Eurodollar market, the establishment of an active Eurorand market is not thought viable. A significant reduction in exchange controls has already occurred but further steps in this regard both for non-residents and residents are required.

CHAPTER 8

REFERENCES

1. Exchange Rates in South Africa. Interim Report of the Commission of Inquiry into the Monetary System and Monetary Policy in South Africa, Government Printer, Pretoria, November 1978.

2. Exchange Rates in South Africa. ibid., p.43.

3. Exchange Rates in South Africa. ibid., p.45.

4. Yeager, L.B. International Monetary Relations : Theory, History and Policy, 2nd Ed., Harper and Row, New York, 1976, p.580.

5. Annual Report, South African Reserve Bank, Pretoria, 1973, p.20.

6. Trends, Bureau for Economic Research, Stellenbosch, September 1978, p.2.10.

7. Annual Report, South African Reserve Bank, Pretoria, 1973, p.20.

8. Annual Report, ibid., p.20.

9. Trends, Bureau for Economic Research, Stellenbosch, January 1979, p.1.11.

10. Annual Report, South African Reserve Bank, Pretoria, 1975, p.23.

11. Gidlow, R.M., The Lessons and Repercussions of South Africa's Abandonment of Managed Floating of the Rand. South African Banker, February 1976, p.30.

12. Annual Report, South African Reserve Bank, Pretoria, 1976, p.24.

13. Annual Report, South African Reserve Bank, Pretoria, 1977, p.21.

14. Trends, op.cit., January 1979, p.1.11.

15. Annual Report, South African Reserve Bank, Pretoria, 1978, p.21. See also Quarterly Bulletin, South African Reserve Bank, Pretoria, March 1979, p.15.

16. Annual Report, 1977, op.cit., p.17.

17. Annual Report, 1978, op.cit., p.17.

18. Exchange Rates in South Africa. op.cit.

19. De Kock, G. Die Suid Afrikaanse Rand in 'n Wêreld van Veranderende Wisselkoerse. South African Journal of Economics, June 1973, p.87.

20. Exchange Rates in South Africa. op.cit., p.2.

21. Exchange Rates in South Africa. ibid., p.14.

22. Exchange Rates in South Africa. ibid., p.21.

23. Exchange Rates in South Africa. ibid., p.21.

24. Exchange Rates in South Africa. ibid., p.2,21.

25. Exchange Rates in South Africa. ibid., p.16.

26. Exchange Rates in South Africa. ibid., p.33.

27. Stals, C.L. Integration of the Money Market and the Spot and Forward Exchange Markets. The South African Banker, May 1981, p.86.

28. Gidlow, R.M. Implications of a Floating Exchange Rate System for the Rand. Economic Focus, Bank of Lisbon and South Africa, Johannesburg, May 1983, pp 1-2.

29. Exchange Rates in South Africa op.cit., p.43.

30. Ranganathan, V.K. Does Purchasing Power Matter Now? Euromoney, August 1983, p.149.

31. See Yeager, L.B. op.cit., pp.210-221 and Caves R.E. & Jones R.W. World Trade & Payments : An Introduction, Little, Brown & Co., Bo.~on, 1977, p.315.

32. Exchange Rates in South Africa. op.cit., p.15.

33. Exchange Rates in South Africa. ibid., p.15-16.

34. Exchange Rates in South Africa. ibid., p.15-16.

35. Stals, C.L. op.cit., p.87.

36. Stals, C.L. ibid., p.87.

37. Quarterly Bulletin, South African Reserve Bank, Pretoria, June 1982, p.8-34.

38. Quarterly Bulletin, ibid., p.14.

39. Exchange Rates in South Africa. op.cit., p.33.

40. Gidlow, R.M. Forward Exchange Arrangements and Exchange Control Policy in South Africa. South African Journal of Economics, September 1984, p.247.

41. Van Renen, A. Forms of International Finance and International Banking Services Offered by South African Banks, p.10. Paper presented at a Foreign Exchange Market Seminar by Volkskas Merchant Bank Limited, Johannesburg, 8 September 1983.

42. Van Renen, A. ibid., p.10.

43. Cagiati, A. & Brown, M. Foreign Holdings in South African Mining Shares. Mining Research, Davis, Borkum & Hare, Johannesburg, June 1984, p.2.

44. Jasse, R. Measuring the Scrip Shortage. Institutional Cashflows and Investment Patterns, Martin & Co. Inc., Johannesburg, 25 January 1983, Appendix p.1.

45. Gidlow, R.M. Forward Exchange Arrangements and Exchange Control Policy in South Africa. op.cit., p.250.

46. Exchange Rates in South Africa. op.cit., p.21.

47. Gidlow R.M. The Looming Crisis in the Forward Rand-Dollar Market. Economic Focus, Bank of Lisbon and South Africa, Johannesburg, February 1985, p.3.

48. Gidlow, R.M. ibid., p.4.

SELECT BIBLIOGRAPHY

BOOKS

Bell, G. The Eurodollar Market and the International Financial System, Halstead Press, New York, 1974.

Dufey, G. and Giddy, I.H. The International Money Market, Prentice Hall, Englewood Cliffs, 1978.

Einzig, P. and Quinn, B.S. The Eurodollar System : Practice and Theory of International Interest Rates, 6th Ed., MacMillan, London, 1979.

Gilbert, M. Quest for World Monetary Order - The Gold-Dollar System and its Aftermath, John Wiley and Sons, New York, 1980.

Goodhart, C.A.E. Money, Information and Uncertainty, MacMillan, London, 1975.

Grubel, H.G. The International Monetary System, Revised Edition, Penguin, Manchester, 1972.

Hewson, J. Liquidity Creation and Distribution in the Eurocurrency Markets, Lexington Books, Massachusetts, 1975.

Little, J.S. Eurodollars : The Money Market Gypsies, Harper and Row, New York, 1975.

McKenzie, G.W. The Economics of the Euro-Currency System, MacMillan, London, 1976.

Stem, C.H., Makin, J.H. and Logue, D.E. (eds.) Eurocurrencies and the International Monetary System, American Enterprise Institute for Public Policy Research, Washington, 1976.

Yeager, L.B. International Monetary Relations : Theory, History and Policy, 2nd Ed., Harper and Row, New York, 1976.

JOURNAL ARTICLES

Beek, D.C. Commercial Bank Lending to the Developing Countries. Federal Reserve Bank of New York Quarterly Review, Summer 1977, pp. 1 - 8.

Brunner, K. and Meltzer, A.H. The Uses of Money : Money in the Theory of an Exchange Economy. American Economic Review, December, 1971, pp. 784 - 805.

Carli, G. Eurodollars : A Paper Pyramid? Banca Nazionale del Lavoro Quarterly Review, June 1971, pp. 95 - 109.

Crockett, A.D. The Eurocurrency Market : An Attempt to Clarify Some Basic Issues. IMF Staff Papers, July 1976, pp. 375 - 86.

Despres E., Kindleberger, C.P. and Salant, W.S. The Dollar and World Liquidity. The Economist, 5 February 1966, pp. 526 - 9.

Folkerts-Landau, D.F.I. Potential of External Financial Markets to Create Money, Credit and Inflation. IMF Staff Papers, March 1982, pp. 77 - 107.

Fratianni, M. and Savona, P. Eurodollar Creation : Comments on Professor Machlup's Proposition and Developments. Banca Nazionale del Lavoro Quarterly Review, June 1971, pp. 110 - 128.

Friedman, M. The Eurodollar Market : Some First Principles. Morgan Guaranty Survey, October 1969, pp. 4 - 14.

Frydl, E.J. The Debate over Regulating the Eurocurrency Markets. Federal Reserve Bank of New York Quarterly Review, Winter 1979 - 80, pp. 11 - 20.

Gidlow, R.M. The Lessons and Repercussions of South Africa's Abandonment of Managed Floating of the Rand. South African Banker, February 1976, pp. 30 - 42.

Gidlow, R.M. Implications of a Floating Exchange Rate System for the Rand. Economic Focus, Bank of Lisbon and South Africa, Johannesburg, May 1983, pp. 1 - 6.

Gidlow, R.M. Implications of Recent Developments in the Rand - Dollar Market. Economic Focus, Bank of Lisbon and South Africa, Johannesburg, October 1984, pp. 1 - 6.

Grabbe, J.O. Liquidity Creation and Maturity Transformation in the Eurodollar Market. Journal of Monetary Economics, July 1982, pp. 39 - 72.

Hicks, J.R. Recollections and Documents. Economica, February 1973, pp. 2-11.

Johnston, R.B. Some Aspects of the Determination of Eurocurrency Interest Rates. Bank of England Quarterly Bulletin, March 1979, pp. 35 - 46.

Key, S.J. International Banking Facilities, Federal Reserve Bulletin, Board of Governors of the Federal Reserve System, Washington, D.C., October 1982, pp. 565 - 577.

Kreicher, L.L. Eurodollar Arbitage. Federal Reserve Bank of New York Quarterly Review, Summer 1982, pp. 10 - 22.

Machlup, F. Eurodollar Creation : A Mystery Story. Banca Nazionale del Lavoro Quarterly Review, September 1970, pp. 219 - 60.

Marston, R.C. Interest Arbitrage in the Eurocurrency Markets. European Economic Review, January 1976, pp. 1 - 13.

Mayer, H.W. Multiplier Effects and Credit Creation in the Eurodollar Market. Banca Nazionale del Lavoro Quarterly Review, September 1971, pp. 233 - 62.

Mayer, H.W. The BIS Concept of the Eurocurrency Market. Euromoney, May 1976, pp. 60 - 66.

Mohammed, A.F. and Saccomanni, F. Short-Term Banking and Eurocurrency Credits to Developing Countries. IMF Staff Papers, November 1973, pp. 612 - 38.

Ossola, R. Central Bank Interventions and Eurocurrency Markets. Banca Nazionale del Lavoro Quarterly Review, March 1973, pp. 29 - 45.

Philipp, B.C. Swiss Bank Corporation's Approach to Country Risk Assessment. Economic and Financial Prospects, Swiss Bank Corporation, Basle, April/May 1983, pp. 4 - 6.

Roberts, D. The LDC Debt Burden. Federal Reserve Bank of New York Quarterly Review, Spring 1981, pp. 33 - 41.

Vaubel, R. Free Currency Competition. Weltwirtschaftliches Archiv, No. 3, 1977, pp. 436 - 59.

OTHER PUBLICATIONS

Bank for International Settlements, Annual Report, various issues.

Exchange Rates in South Africa. Interim Report of the Commission of Inquiry into the Monetary System and Monetary Policy in South Africa, Government Printer, Pretoria, November 1978.

International Monetary Fund, Annual Report, various issues.

South African Reserve Bank, Annual Report, various issues.

South African Reserve Bank, Quarterly Bulletin, various issues.

World Financial Markets, Morgan Guaranty Trust Co., New York, various issues.



Author Bell Graham Douglas
Name of thesis The history of the Eurocurrency system : future prospects and implications for the South African Foreign Exchange market. 1985

PUBLISHER:
University of the Witwatersrand, Johannesburg
©2013

LEGAL NOTICES:

Copyright Notice: All materials on the University of the Witwatersrand, Johannesburg Library website are protected by South African copyright law and may not be distributed, transmitted, displayed, or otherwise published in any format, without the prior written permission of the copyright owner.

Disclaimer and Terms of Use: Provided that you maintain all copyright and other notices contained therein, you may download material (one machine readable copy and one print copy per page) for your personal and/or educational non-commercial use only.

The University of the Witwatersrand, Johannesburg, is not responsible for any errors or omissions and excludes any and all liability for any errors in or omissions from the information on the Library website.