

PRENTICE HALL
essence of management
SERIES

工商管理精要系列·影印版

国际货币

(第二版)

INTERNATIONAL
MONEY

SECOND EDITION

艾德里安·巴克利 著

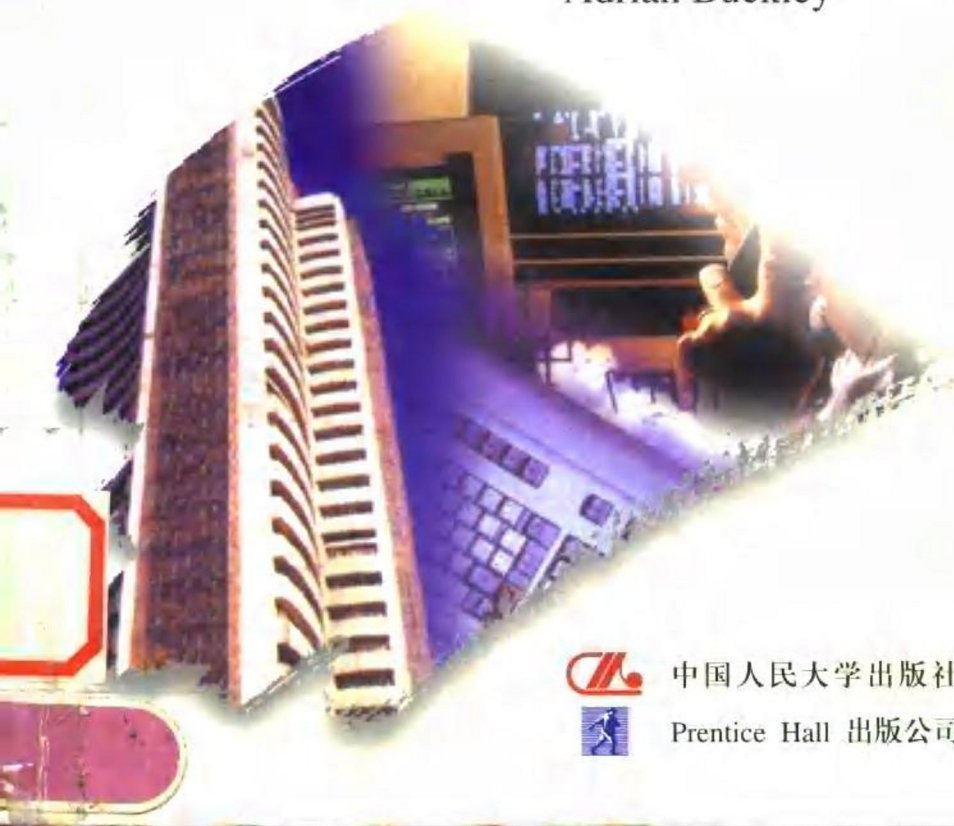
Adrian Buckley



中国人民大学出版社



Prentice Hall 出版公司



工商管理精要系列·影印版

国际货币

(第二版)

International Money

SECOND EDITION

艾德里安·巴克利 著

Adrian Buckley

Cranfield School of Management



中国人民大学出版社



Prentice Hall 出版公司

图书在版编目 (CIP) 数据

国际货币: 第二版: 英文/巴克利著·影印版

北京: 中国人民大学出版社, 1997.8

(工商管理精要系列·影印版)

书名原文: The Essence of International Money

ISBN 7-300-02472-6/F·757

I. 国…

II. 巴…

III. 货币-世界-英文-影印版

IV. F821

中国版本图书馆 CIP 数据核字 (97) 第 17278 号

Adrian Buckly: The Essence of International Money

Copyright © Adrian Buckly, 1996

All rights reserved. For sale in P.R.China only

本书英文影印版由中国人民大学出版社和 Prentice Hall 出版公司合作出版, 未经出版者书面许可, 不得以任何方式复制或抄袭本书的任何部分。

本书封面贴有 Prentice Hall 防伪标签, 无标签者不得销售。

版权所有, 翻印必究。


工商管理精要系列·影印版

国际货币

第二版

艾德里安·巴克利 著

出版:  中国人民大学出版社

 (北京海淀路 175 号 邮码 100872)

Prentice Hall 出版公司

发行: 中国人民大学出版社

经销: 新华书店

印刷: 北京市丰台区印刷厂

开本: 787×1092 毫米 16 开 印张: 12.25 插页 1

1997 年 8 月第 1 版 1997 年 8 月第 1 次印刷

印数: 1-5 000 册

定价: 22.00 元

(图书出现印装问题, 本社负责调换)

《工商管理精要系列·影印版》

出版说明

《工商管理精要系列·影印版》是中国人民大学出版社和西蒙与舒斯特国际出版公司继《工商管理经典译丛》之后，共同合作出版的一套大型工商管理精品影印丛书。

本丛书由欧洲著名管理学院和管理咨询公司的教授和专家撰写，它将 90 年代以来国际上工商管理各专业的最新研究成果，分门别类加以精练浓缩，由享誉世界的最大教育图书出版商 Prentice Hall 出版公司出版。每一本书都给出了该专业学生应掌握的理论框架和知识信息，并对该专业的核心问题和关键理论作了全面而精当的阐述。本丛书虽然篇幅不长，但内容充实，信息量大，语言精练，易于操作且系统性强。因此，自 90 年代初陆续出版以来，受到欧洲、北美及世界各地管理教育界和工商企业界读者的普遍欢迎，累计发行量已达数百万册，是当今国际工商管理方面最优秀的精品图书之一。

这套影印版的出版发行，旨在推动我国工商管理教育和 MBA 事业的发展，为广大师生和工商企业界读者，提供一套原汁原味反映国外管理科学研究成果的浓缩精品图书。有助于读者尽快提高专业外语水平，扩大知识面，掌握工商管理各专业的核心理论和管理技巧。

本丛书可作为管理院校的专业外语教材和各类企业的培训教材，对于那些接受短期培训的企业管理者、MBA 学生，以及想迅

II

速了解工商管理各专业核心领域的师生来说，本丛书更是极具价值的藏书和参考资料。

为了能及时反映国际上工商管理的研究成果，中国人民大学出版社今后将与 Prentice Hall 出版公司同步出版本丛书的其他最新内容并更新版本，使中国读者能借助本丛书，跟踪了解国际管理科学发展的最新动态。

1997 年 8 月

Preface

The growth of international business and deregulation of financial markets has changed the face of financial management in the last couple of decades. Twenty-five years ago managers could be relatively complacent about foreign exchange risk; after all we were operating in a world of fixed exchange rates with widespread exchange controls – at least in most of Europe. The move towards floating exchange rates and the dismantling of exchange controls in Britain and many other countries put an end to this complacency. Understanding what impelled international financial markets became imperative, although it is doubtful whether, even now, British managers know as much as they should about foreign exchange markets and their implications. To some extent – but by no means in total – Britain's loss of market share in world trade might be attributed to such ignorance.

Despite the growth in international business over the recent past, good basic texts on international money are conspicuous by their absence from managers' bookshelves. True, there is a pile of high-priced, complex texts in the subject area, but the basic book that provides a foundation for non-financial managers and for students of international business is not around. It is this gap in the market that is addressed by this modestly priced text. If the author succeeds, the reader will obtain a foundation in the understanding of foreign exchange markets, their workings, their value, uses and their implications. And if this objective is met then readers may wish to move on to more advanced texts in the subject area.

My intent, then, is truly practical. It is that this text should improve performance and awareness by introducing readers with no prior knowledge of international financial management (but with a basic understanding of domestic finance) to the essence of international money.

I am most grateful to Liz Tribe who cheerfully typed the manuscript and generally acted as manager in putting the book into a format fit for publication. Having said this, responsibility for errors remains my own.

Adrian Buckley

Introduction

Twenty years ago the majority of company executives did not have to understand what impelled exchange rates to move or how to avoid foreign exchange risk. Decisions to move away from the fixed exchange rate system and to disband exchange controls were important factors in changing all that. Managers had to start to learn new tricks in the 1970s and 1980s. Those who were slow to learn made mistakes. They failed to cover Deutsche Mark payables as sterling declined precipitously; they borrowed in Swiss francs because the interest cost was low; they failed to realize the opportunities created by the demise of exchange controls; they were unaware of the benefits to accrue from currency options, and so on. Unfortunately, even now there is too much ignorance about international financial management. This text aims to combat perceived gaps in managers' knowledge in a readable, comprehensible and logical way. In so doing, the intent is to avoid mathematics but a small amount inevitably has to occur. But not too much, I trust.

Financial management is concerned with the costs of financing sources and the payoffs from investment. In the domestic arena, movements in exchange rates are substantially ignored; but when we move outside of the purely domestic field, there is no way that we can analyse international financing and investment opportunities without an understanding of the impact of foreign exchange rates upon the basic model of financial management. We are still concerned with raising funds at minimum cost, but there are clearly complications if a British-based or a French company is raising funds by way of a Swiss franc borrowing. We are still concerned with investment opportunities chosen to create maximum shareholder value, but what if the income and cash flow of our British-based or French company's investments arise from Switzerland in Swiss francs? Or from

Mexico in pesos? And what if exchange controls place barriers on remittances of some proportion of profit?

Obviously international financial management possesses a dimension that makes it far more complicated than its domestic counterpart. Indeed we make no bones about it: multinational finance is a complex area of study. It has been sired by the internationalization of business. If money is the language of business, foreign exchange is the language of international business.

We are therefore concerned in the early chapters of this book with foreign exchange markets throughout the world and with the pressures that impel exchange rates to move upwards and downwards. In later chapters, we look at topics like foreign currency exposure and how to avoid it, international investment appraisal, multinational financing and so on.

The objective of this text is to provide a general, basic book which meets the needs of managers and students coming to the foreign exchange market for the first time. There is a bibliography at the end of the book which has been prepared to guide the reader's next steps in multinational finance should he or she wish to move onwards. But this book is unashamedly a general text – which is what the Essence series is all about.

Contents

1. What is international money all about?	1
The foreign exchange markets	1
Eurocurrency markets	3
2. The essence of currency calculations	6
Foreign exchange markets	6
Inflation, interest and exchange rates	8
Practicalities	14
An overview	14
Appendix: A deductive proof of the four-way equivalence model	15
3. How are foreign exchange rates quoted?	23
The players	23
Methods of quotation	24
Forward contracts and quotations	26
An overview	29
4. What makes exchange rates move?	30
The balance of payments approach	30
The monetary approach	32
Chartism	33
The efficient markets hypothesis	36
An overview	38

5. What is foreign exchange risk?	40
Transaction exposure	41
Translation exposure	41
Economic exposure	46
An overview	49
6. Why worry about foreign exchange risk?	50
Transaction exposure	50
Economic exposure	53
Translation exposure	54
An overview	56
7. Internal techniques of managing foreign exchange exposure	58
Netting	58
Matching	59
Leading and lagging	60
Price variation	62
Invoicing in foreign currency	62
Asset and liability management	66
An overview	67
8. External techniques of managing foreign exchange exposure	68
Forward markets	68
Trading purpose of the forward market	69
Short-term borrowing	75
Discounting foreign currency denominated bills receivable	77
Factoring foreign currency denominated receivables	77
Currency overdrafts	78
Government exchange risk guarantees	79
An overview	79
9. What are currency swaps?	81
Swaps	81
An overview	84
10. What are financial futures on foreign exchange?	88
Financial futures in general	88
Currency contracts	91
An overview	94

11. How do currency options work?	95
How currency option markets work	96
Currency option strategies	100
Option pricing models	103
Corporate use of currency options	105
An overview	107
12. Interest rate risk	108
The term structure of interest rates	108
Forward rate agreements	112
Interest rate futures	114
Interest rate swaps	114
Interest rate options	115
An overview	116
13. The value of growth options	117
An example using decision trees	118
Flexibility and value creation	120
The Black and Scholes model	121
Another example with decision trees	122
An overview	125
14. Is the international investment decision different?	126
The international complications	126
An overview	132
15. Is the international financing decision different?	133
The Eurobond market	133
Borrowing internationally	135
The risks of borrowing internationally	137
An overview	138
16. The European Monetary System	139
Principal features of the EMS	139
The Exchange Rate Mechanism	140
European Monetary Union	141
German reunification	142
Black Wednesday	144
The wake of Black Wednesday	145
An overview	147

17. Why hedge anyway?	149
The capital asset pricing model	149
What does exposure management aim to achieve?	156
The arguments against corporate hedging	156
Employees and managers	158
And shareholders too	158
The value of the firm	159
Financial distress	159
An overview	162
18. Economic exposure revisited	163
Macroeconomic exposure	163
The analysis	164
Hedging	165
Interest rates invariably key	166
Experiments with macroeconomic exposure	167
An overview	167
Questions and answers	168
Numerical questions	168
Bramit Investment Trust plc	170
Answers to numerical questions	172
Suggested answers to the Bramit Investment Trust questions	175
<i>Further reading</i>	180
<i>Index</i>	181

1

What is international money all about?

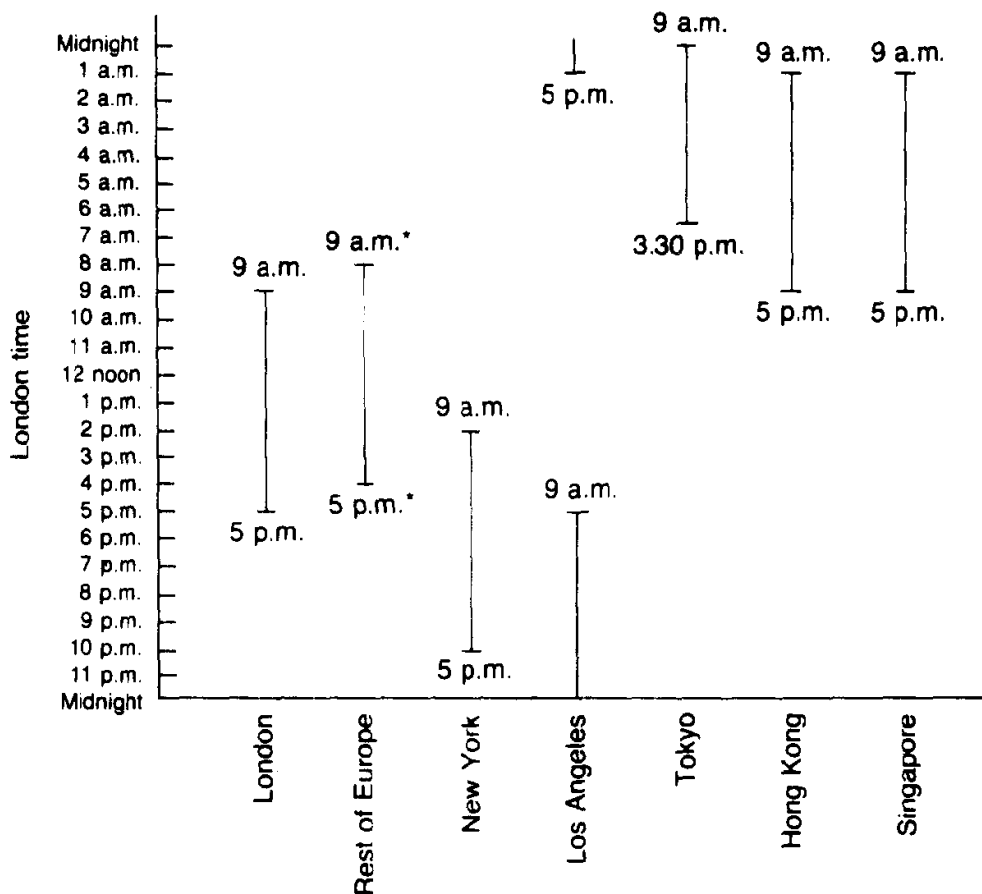
With any topic, there are certain factors which set the scene and are essential to an understanding of the subject. This is as true of international money as it is of beekeeping. In this first chapter we present some of these key factors about foreign exchange markets and the Eurocurrency markets – the pillars of international money. The reality of foreign exchange is, however, that it is such a dynamic subject that data on market sizes presented here will, no doubt, be overtaken by events before this book is published.

The foreign exchange markets

For the majority of foreign exchange markets, there are no individual, physical marketplaces. The market is made up of banks and dealers carrying out transactions via telephone, computer, telex and other similar devices.

The total world foreign exchange market is the largest of all markets in the world. It has been estimated that foreign exchange deals, worldwide, averaged \$1300 billion per day in 1995 – a doubling of the figure three years earlier. This market size is two hundred times that of the New York Stock Exchange. The market is a twenty-four-hour market which moves from one centre to another – from Tokyo to Hong Kong to Singapore to Kuwait to London to New York to San Francisco to Sydney and then back to Tokyo – as the sun appears to move round the world. Figure 1.1 summarizes the overlap.

About 95 per cent of all foreign exchange transactions involve banks on both sides of the deal. This high percentage is reflected by banks taking and unravelling positions in currencies in order to trade for profit and to



*Times quoted are local time.

Figure 1.1 Time overlap of world foreign exchange markets.

offset imbalances created by their purchases and sales with customers. Some 95 per cent of all trades involve the US dollar. If a French importer wishes to pay a British exporter, the bank will quote a sterling/franc rate based upon the franc/dollar rate and the dollar/sterling rate.

Nowadays, trade accounts for only a small proportion of all foreign exchange deals, maybe only 1 to 2 per cent of total transactions. The lion's share is made up of capital movements from one centre to another and the taking of positions by bankers in different currencies.

There is a spot market in which deals are arranged for immediate delivery (technically, a spot deal has delivery two working days after the spot transaction) and there is a forward market in which purchase or sale is arranged today at an agreed rate but with delivery some time in the future. Forward markets do not exist for all currencies, for example there is no forward market for the Argentine peso. But, for the currencies of major western economies, forward markets can go out to ten years; for others it is only in existence for up to six months or a year. The term deep market is used to refer to those currencies which are widely dealt, for

example dollars, sterling, Deutsche Marks, etc. At the opposite end of the spectrum, the terms shallow or thin market are applied synonymously to currencies which are traded only occasionally.

London is the largest foreign exchange centre, followed by New York and then Tokyo. London's average daily turnover is around \$464bn; the next two centres' averages amount to \$244bn and \$161bn, respectively. Half of London's turnover is accounted for by spot transactions and almost 40 per cent involves forward deals maturing within one month. •

The foreign exchange market is the cheapest market in the world in which to deal. If one were to start with US\$1m and switch this into Deutsche Marks and then immediately reverse the transaction so that one returned to US dollars, the proceeds would be less than US\$1m by approximately twice the bid/offer spread (the rate for selling and the rate for buying) for Deutsche Marks against US dollars (after all, two deals have been done). But assuming exchange rates had not moved, the total amount by which one would be out of pocket would be only \$300 or so. For major currencies, the large banks act as market makers. This means that they hold stocks of foreign currencies and are prepared to deal in large amounts at stated prices. In other currencies, banks may operate as brokers thereby avoiding the risk of price movements.

Foreign exchange dealers can make or lose a lot of money for the banks that employ them. They can make a million dollars a day for the bank, but they can also lose that sum. Their salaries and bonuses are high: some make \$500,000 per annum. But their business life is strenuous. Watching currency movements for ten hours a day in the bank (and taking a Reuters foreign exchange rate screen home) and dealing on the finest margins all take their toll. Dealers on banks' foreign exchange desks seem to be aged between twenty and just over thirty. Perhaps beyond thirty, reflexes are slower. Perhaps the adrenalin flows more slowly. Or maybe dealers have made so much money already that motivation is not quite what it used to be and dealers move onto a less frenetic life style.

Eurocurrency markets

With a few minor exceptions, the definition of a Eurodollar is a dollar deposited in a bank outside of the USA. A Eurodeutsche Mark is a Deutsche Mark deposited in a bank outside Germany. A Eurosterling deposit is created by depositing British pounds in a bank account outside of the UK. The term Eurocurrency is used to embrace all forms of Euro-deposits. But beware. When people talk about the Eurodollar market a certain amount of caution is called for. This is because the term Eurodollars is sometimes used as a generic term for all Eurocurrency deposits.

Eurocurrency markets exist outside of the borders of the country of the underlying currency concerned. As such, they escape controls which may be imposed on domestic currency markets. Indeed, they escape controls altogether. Markets for lending and borrowing in Eurocurrencies operate in the world of classical economies – a world without a regulating authority, a world without controls. In this respect, a contrast must be drawn with domestic currency and domestic money markets.

The domestic central bank is usually the institution through which the home government intervenes in domestic interest rate markets and currency markets. In Eurocurrency and Euro-interest rate markets there is no intervention by a central bank for Euromarkets because there is no central bank for Euromarkets.

In domestic interest rate markets governments have, at various points in the past, fixed maximum interest rates payable by commercial banks to depositors. In domestic banking markets, governments frequently specify that banks must deposit some proportion of their own lendings to clients or deposits received from customers with the local central bank at rates substantially below market rates – so-called reserve asset requirements.

The effect of the former control was that it forced depositors to seek market rates by placing their monies in non-regulated markets, such as Euromarkets. Via this kind of mechanism, investors have been able to access higher deposits in Euromarkets than they have in domestic markets.

The impact of the latter control, exercised through reserve asset requirements, has a similar distorting effect. With reserve requirements, a commercial bank aiming for a return of, say, 15 per cent per annum on its total loan portfolio would have to charge borrowers above this rate in order to compensate for the placing of monies with the central bank at a submarket rate. By contrast, in the Euromarkets the commercial bank would lend at 15 per cent per annum to earn an overall return of 15 per cent since no requirements for below market rate depositing exist. All other things being equal, borrowers are able to access Euromarkets more cheaply than their domestic counterpart.

It is interesting to note that the effect of the domestic regulations referred to in the foregoing paragraph means that both lenders and borrowers may get a better deal in the Euromarkets than in the domestic markets. Hardly surprising, then, that Euromarkets offer a vast reservoir of lending and borrowing potential for companies, governments, quasi-government organizations, high net worth individuals and so on. It is also worth noting that, in the absence of exchange controls, Euromarkets and domestic markets should not get much out of line since it is always possible for an operator (whether an individual, or a company or a bank) to borrow in the Euromarket and invest in the domestic market. The possibility of arbitrage of this kind should keep rates fairly close.