



FINANCIAL



MARKET



ANALYSIS

David Blake

Financial Market Analysis

David Blake

Lecturer in Financial Economics
Department of Economics
Birkbeck College
University of London

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'To a little tiger.'

Preface

This book deals with the following issues:

- the composition of financial markets with special reference to the UK;
- the analysis and valuation of securities traded in financial markets;
- the use of securities in constructing portfolios, in managing portfolios and in contributing to portfolio performance;
- the causes of failure in financial markets.

The aim of the book is to provide readers with a good understanding of the practice of analysing financial markets from within the framework of modern finance theory. Modern finance theory offers certain predictions about how an efficiently organized financial system operates, and we will examine the practice of financial market analysis in the light of these predictions. For example, we will examine how securities such as bonds and shares ought to be analysed and evaluated in the light of modern finance theory. Similarly, we will examine how securities ought to be structured in portfolios and how these portfolios ought to be managed in the light of modern finance theory. We can then compare the theory with the practice of security analysis and evaluation, and the theory with the practice of portfolio structuring and management, in order to determine how well practice corresponds with the theory, or, equivalently, how difficult the theory is to implement in practice.

This book was originally written for a third-year undergraduate course in financial market analysis at City University Business School.

I felt that what was badly needed was a text that provided a comprehensive and up-to-date treatment of the analysis of financial markets, using numerous practical illustrations from the UK financial markets. The text should be sufficiently rigorous and should pay due attention to modern finance theory and its implications, without being a text on the principles of finance, of which there are many good examples. It should also provide sufficient illustrations of the various financial instruments and how they are used, but without being merely an operational book for professionals.

The nearest existing texts did not in my view meet these objectives. In particular, they paid inadequate attention (or worse, no attention at all) to the following issues:

- new types of investment product (e.g. synthetic securities, swaps);
- different portfolio management strategies (e.g. passive/active management, bond *v.* equity *v.* treasury portfolio management);
- speculation and arbitrage strategies;
- hedging strategies;
- financial market failure.

This text has chapters on all these topics.

While initially conceived as a text suitable for third-year undergraduates in UK universities or polytechnics, the resulting book is relevant to a much wider constituency. In particular, it is of relevance to postgraduates (both MSc and MBA), and it provides a useful source of reference to professionals in the financial markets. The text has subsequently been taught as an option on the M.Sc (Economics) course at Birkbeck College and as part of the graduate induction programme of

a major European investment bank. In addition, given the generality of approach, the book will be useful to both student and professionals worldwide.

The text does not require a strong quantitative background, although readers with no such background may find some sections hard going. Three useful books covering this area are J. Curwin and R. Slater's *Quantitative Methods for Business Decisions* (Van Nostrand Reinhold, London, 1988), S. Glaister's *Mathematical Methods for Economists* (Blackwell, Oxford, 1984) and G. Bancroft and G. O'Sullivan's *Maths and Statistics for Accounting and Business Studies* (McGraw-Hill, London, 1988).

At the end of each chapter there is a set of exercises, most of which can be addressed using the material from the preceding chapter. Solutions to the exercises involving calculations are available to bona fide instructors free of charge from the publishers.

D.B.

Abbreviations

ACT	advance corporation tax
ADR	American depository receipt
AFBD	Association of Futures Brokers and Dealers
AIBD	Association of International Bond Dealers
APR	annual percentage rate
ARBM	arbitrage pricing model
BBS	Board of Banking Supervision
BECS	bearer eurodollar collateralized security
BFI	bank financial intermediary
B of E	Bank of England
BZW	Barclays de Zoete Wedd
CAPM	capital asset pricing model
CBOT	Chicago Board of Trade
CD	certificate of deposit
CFX	Credit for Export PLC
CGO	Central Gilts Office
CGT	capital gains tax
CML	capital market line
CMO	collateralized mortgage obligation
CP	commercial paper
CTD	cheapest to deliver
DHR	duration hedge ratio
DIE	designated investment exchange
DM	discounted margin (or Deutschmark)
DOT	Designated Order Turnaround
EC	European Community
ECP	eurocommercial paper
ECU	European Currency Unit
EDSP	exchange delivery settlement price
EFTPOS	electronic funds transfer at the point of sale
EMCF	European Monetary Co-operation Fund
EMH	efficient markets hypothesis
EMS	European Monetary System
EMU	economic and monetary union (of the EC)
EPS	earnings per share
ERA	exchange rate agreement
ERB	excess return to beta
ERM	exchange rate mechanism (of the EMS)
ESCB	European System of Central Banks
ESCP	eurosterling commercial paper
FIFO	first in, first out
FIMBRA	Financial Intermediaries Managers and Brokers Regulatory Association

FOTRA	free of tax to residents abroad
FRA	forward rate agreement
FRN	floating-rate note
FSA	Financial Services Act 1986
FTSE	Financial Times Stock Exchange
GDP	gross domestic product
GEMM	gilt-edged market-maker
GNMA	Government National Mortgage Association
ICCH	International Commodities Clearing House
IDB	inter-dealer broker
IMRO	Investment Managers Regulatory Organization
IRG	interest rate guarantee
ISDA	International Swap Dealers Association
ISE	International Stock Exchange
LAUTRO	Life Assurance and Unit Trust Regulatory Organization
LBO	leveraged buy-out
LDFRA	long-dated FRA
LIBID	London interbank bid rate
LIBOR	London interbank offered rate
LIFFE	London International Financial Futures Exchange
LIFO	last in, first out
LIMID	London interbank mid rate
LOCH	London Options Clearing House
LSM	Listed Securities Market
LTOM	London Traded Options Market
MBB	mortgage-backed bond
MBO	management buy-out
MCF	multiple component facility
MCT	mainstream corporation tax
MECS	marketable eurodollar collateralized security
MMD	money market deposit
MRS	marginal rate of substitution
MRT	marginal rate of transformation
NBFI	non-bank financial intermediary
NERB	net excess return to beta
NIF	note issuance facility
NYSE	New York Stock Exchange
OTC	over-the-counter
PE	price-earnings ratio
PINC	property income certificate
P/L	profit and loss
PLC	public limited company
POTAM	Panel on Takeovers & Mergers
PPP	purchasing power parity
PSBR	public sector borrowing requirement
PSDR	public sector debt repayment
QM	quoted margin
RIE	recognized investment exchange
RPB	recognized professional body

RPI	retail price index
RUF	revolving underwriting facility
SAR	Substantial Acquisitions Rule
SAEF	SEAQ Automated Execution Facility
SAPCO	Single Asset Property Company
SCP	sterling commercial paper
SEAQ	Stock Exchange's Automated Quotations
SEMB	stock exchange money broker
SIB	Securities and Investments Board
SLOB	secured lease bond
SML	security market line
SPOT	Single Property Ownership Trust
SPUT	Single Property Unit Trust
SRO	self-regulatory organization
STAGS	sterling transferable accruing government security
SUPSI	specific unpublished price-sensitive information
TALISMAN	Transfer Accounting Lodgement for Investor Stock Management for Principals
TAURUS	Transfer and Automated Registration of Uncertified Stock
TB	Treasury bill
TOPIC	Teletext Output Price Information by Computer
TRUF	transferable revolving underwriting facility
TSA	The Securities Association
UCITS	undertakings for collective investments in transferable securities
USM	Unlisted Securities Market
WDA	writing-down allowance
WDV	written-down value
YTM	yield to maturity
ZEBRAS	zero-coupon eurosterling bearer or registered accruing security

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I INTRODUCTION TO FINANCIAL MARKETS

The first part of the book is designed to introduce readers to the financial system of an advanced market economy. We shall consider the composition of the financial system with special reference to the UK. In particular, we shall examine the participants, securities, markets, trading arrangements and regulations that constitute a modern financial system. We shall also examine how financial markets determine the discount rates that are used to value the securities that are traded in them, and shall review the financial arithmetic used to determine security values.

1 The financial system

Every advanced financial system is composed of *participants, securities, markets, trading arrangements* and *regulations*. In this chapter, we examine each of these components in turn, concentrating in particular on the financial system in the UK (sometimes known as the ‘City’). We conclude by placing the current UK financial system in a temporal context.

1.1 Participants

There are three main classes of participants in an advanced financial system: *end-users, financial intermediaries* (general and specialist), and *market-makers*.

1.1.1 End-users of the financial system

The following identity holds at all times:

$$\begin{aligned}\text{Saving} - \text{Investment} &= \text{Increase in financial assets} \\ &\quad - \text{Increase in financial liabilities} \\ &= \text{Net acquisition of financial assets} \\ &= \text{Net financial surplus/deficit}.\end{aligned}$$

For the economy as a whole this identity is zero, but for sectors in financial surplus the identity is positive, while for sectors in financial deficit it is negative. Typically in the UK (although not always), the household and overseas sectors will be in financial surplus and will therefore be net primary lenders to the financial markets, and the industrial, commercial and government sectors will be in financial deficit and will therefore be net borrowers from the financial markets. So there are two types of end-user of the financial system: *primary lenders* and *ultimate borrowers*.

The ultimate objective of an individual in the household sector, say, is to maximize the expected welfare or utility of his lifetime consumption stream. If the individual is currently not spending all his income on consumption, he will want to find a temporary repository for his current savings until they are required to finance future expenditure. This will involve the purchase of financial assets.

For a given ultimate objective, the individual’s proximate objective is to allocate his surplus funds across different assets in such a way as to maximize the expected utility of the characteristics of the portfolio of assets that he holds, taking into account any *aversion to risk, preference for liquidity*, etc. Given the unpredictability of the future consumption profile, the uncertainty of the returns from the asset holding (especially in real terms, taking into account the effects of inflation) and the cost of liquidating assets in terms of both transaction costs and capital value uncertainty (especially before assets have matured), all these factors tend to combine to induce the individual to select the maturity profile of the portfolio to match as closely as possible the maturity profile of planned consumption.

This means that the optimal portfolio of an individual in the household sector is likely to be one that is held short, i.e. that is easily liquidated at low cost. The more uncertain the future consumption plan, the more uncertain portfolio returns, the greater the costs of liquidating assets