FINANCE

A Conceptual Approach

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To Carmela, Ronit, Asaf, and Ayelet

Preface

This book is based on lecture notes prepared for students in the M.B.A. program at York University and at the University of Toronto. The notes were originally intended to serve as a supplement to textbooks and journal articles read by the students in the introductory finance course. They were circulated in class so that students could actively participate in class discussions instead of taking notes. The notes were received with great enthusiasm. Moreover, students offered favourable and constructive criticisms which were instrumental in subsequent revisions. Gradually, then, these notes became the primary learning tool used by the students in the introductory finance course, and with this development it was decided to bring the notes into a book format.

The book emphasizes the conceptual background of finance in order to provide students with a solid understanding of the major issues which are related to financial decision making. This focus on concepts rather than on detailed discussions of techniques and normative prescription-type models is consistent with the structure and the clientele of most business school programs: many students who attend the program intend to major in finance and plan career paths leading to treasury positions or to positions in the investment field. These students will naturally take additional finance courses such as financial management, investments, capital markets and international finance. They therefore require solid conceptual preparation in the introductory finance course in order to grasp more advanced concepts and handle cases, problems and decisional situations both in these advanced courses and later on in their business careers. On the other hand, the nonfinancial majors study finance as part of the core program because future business decisions they will be involved with will inevitably have financial implications. Therefore, while they need a solid conceptual grasp of the field of finance, they do not require detailed exposure to such topics as financial forecasting or the valuation of convertible debentures, which instructors sometimes include in the introductory finance course.

This text caters to both groups of students. Drawing on the material it covers, students should be able to analyse cases and real-world situations with a solid conceptual understanding of the financial environment of business decisions.

The book is very concise and pithy. It was purposely written this way because extended experience gained from the use of the notes by my students has demonstrated that this shorter format enabled them to focus attention and time on the concepts. This increases the value of the book as a teaching tool because the scarce time at the disposal of students is not spent on extraneous issues that can be shortened through in-class discussions.

The approach taken in preparing this text was to provide the reader with a fairly comprehensive picture of the world of finance. The discussion describes the field in terms of three concentric circles. Following the introductory chapter which defines the objectives of financial management and emphasizes the importance of interaction between internal decisions and market reactions in determining the value of the firm, the central circle comprises the bare elements of a partial equilibrium model of the financial environment. Investors and corporations are treated without regard to the other sectors of the economy and the discussion of the central circle reviews the implications of the interrelationships between investors and corporations within the limited framework of the capital market. Chapter 2 tackles the capital budgeting problem as an example of the development of a criterion for a decisional situation. The next two chapters, which emphasize the need to understand the capital markets in order to assess market reactions to financial decisions, take the reader on a voyage into this market by reviewing several financial instruments which are traded there. Chapter 5 introduces the concept of risk as an important dimension of business decisions and develops the portfolio concept. Chapter 6 takes this concept of portfolio selection and uses it to develop the capital asset pricing model as an equilibrium model for the capital market. This discussion completes the first circle, and in the next three chapters the student is presented with the capital structure decision and the capital budgeting decision in the context of an integrated capital market.

The second circle opens up the financial system and superimposes the flow of investable funds from the surplus sectors of the economy to the deficit sectors. Chapter 10 reviews the supply–demand interactions and their reflections in market interest rates and yields. It also emphasizes the role of financial intermediaries in the financial system. The discussion within the confines of the second circle provides a more complete conceptual framework for the evaluation of financial decisions.

Part of the discussion of the second circle is devoted to the presence of inflation and its effects on capital markets and financial decisions. Chapter 11 discusses and elaborates on the effects of changes in inflation expectations on interest rates, yields and prices of financial instruments. The implications of future expected inflation on the financing decision, capital structure, the cost of capital and capital budgeting are also addressed at length.

The third circle takes an even more comprehensive view of financial markets by opening up the system to the international flow of funds. Foreign trade and international flows not only impact upon the local capital market but also provide many interesting investment and financing opportunities to the business firm. Therefore, the last chapter of the book provides a discussion of some aspects of finance in the international setting.

Students who successfully complete the introductory finance course covered by this text will be well prepared to undertake challenging advanced courses in their business programs. Those majoring in finance will be able to proceed with ease to higher levels in finance courses. Others will find they are well prepared to tackle more general courses in business policy where the financial implications of business decisions are of crucial importance. It is my hope that both groups will find this book enlightening and even enjoyable (!) reading.

I would like to take this opportunity to thank the people who helped me in writing this book. Professor Jerry Baesel, who motivated me to write the first set of notes, was also the first to point out that the notes might be of textual value to the students, and I wish to thank him for his encouragement. Professors Dawson Brewer, Arie Melnik and Yossi (Joe) Yagil deserve special thanks for their support. All my students in the introductory finance course in the past five years were very helpful, and their encouraging remarks were a great source of support. In particular, I wish to thank Dave Farnell, Erez Weinreich and Gary Jacobson for their very helpful comments and suggestions. Andrea Rosen was of particular assistance throughout my labouring over the manuscript and her editorial aid was invaluable. I wish to thank Mary-Lynn Roblin, Dorothy Rochefort, Carol Turner and Maureen McCann for their patience in typing and retyping the manuscript. Anne Butler, Kathleen Forster, David Hogg, Paula Pike, Bruce Reeve and Steve Soloman at Butterworths (Canada) have been most helpful in producing this book.

Nahum Biger
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PART I

Introduction

CHAPTER 1

The Objectives of Financial Management and the Nature of Financial Decision Making

Business financial management involves the initiation, monitoring and control of flows of funds. The financial management function can be described as two-way intermediation between the capital market and the business firm. There are five main flows which must be handled by the financial manager:

(1) Flow of funds from the capital market to the financial department (treasury)
(2) Flow of funds from the financial department to the operations of the firm for the purchase of assets
(3) Flow of funds from operations to the treasury
(4) Flow of funds from the treasury to the capital market
(5) Flow of funds from operations back to the firm for the acquisition of assets.

Each of these flows can take several forms. Funds from the capital market can be obtained by the firm through the issue of various financial instruments. These can be common stocks, in which case the firm obtains *external equity funds*, preferred shares (another form of external equity funds), long-term and medium-term bonds of various types, which represent long- and medium-term debt, commercial paper, bank loans and accounts payable, which are short-term debt and so on. It is clear that because of the multitude of forms of financing, financial policy and management involves a selection of the "best" single alternative or the "best" composition of *alternatives* among all possible methods of financing.

Funds from the financial department flow to the firm's operations in order to enable the acquisition of services and of assets. The funds may simply be kept in the form of cash, because the firm decides to maintain a certain liquidity position. They may be directed to the acquisition of financial instruments, most notably accounts receivable, because the firm wishes to extend credit to its customers in order to maintain and increase sales. Funds can flow towards the purchase of inventory, which is needed for smooth production or sales. Funds also flow towards the purchase of fixed assets such as machinery, equipment, structures, production lines, etc. Finally, the firm may need funds in order to acquire other businesses. The financial management function is to evaluate these many uses and to choose a particular composition of assets (or uses) that will absorb the funds. This, again, is a choice between alternatives.

Funds from operations represent the total net revenues of the firm. These flow on a continual basis and add to the financial resources of the firm. The use of these additional resources can take the form of plowing-back; that is, the funds can be directed toward the purchase of other assets, or they can be directed back to the capital market.

Funds flow from the firm to the capital market in several forms. They may be used to redeem the firm from previous financial obligations, such as payments of accounts payable of various sorts or payments of bank and other loans. These funds are also directed towards payment of interest for the use of funds lent to the firm by the capital market, and to the redemption of the firm's bonds, either upon maturity or before maturity.

Flows of funds from the finance department to the capital market also take the form of dividend payments to the holders of the firm's preferred shares and to the owners of the firm, namely, the holders of its common shares. In addition, the firm may redeem its preferred or its common shares by purchase of these shares.

The firm does not have complete discretion with regard to the allocation of its funds. Some funds which flow from the finance department to the capital market are predetermined when the firm borrows. Borrowing dictates future payments of interest on the firm's debt, which can only be removed by an early redemption of the firm's outstanding bonds. The firm does have considerable discretion in connection with decisions about payments of dividends to the holders of its shares.

Figure 1.1 summarizes the various flows and the role of the financial department of the business firm.

Two major observations about the role of financial policy and management can be offered:

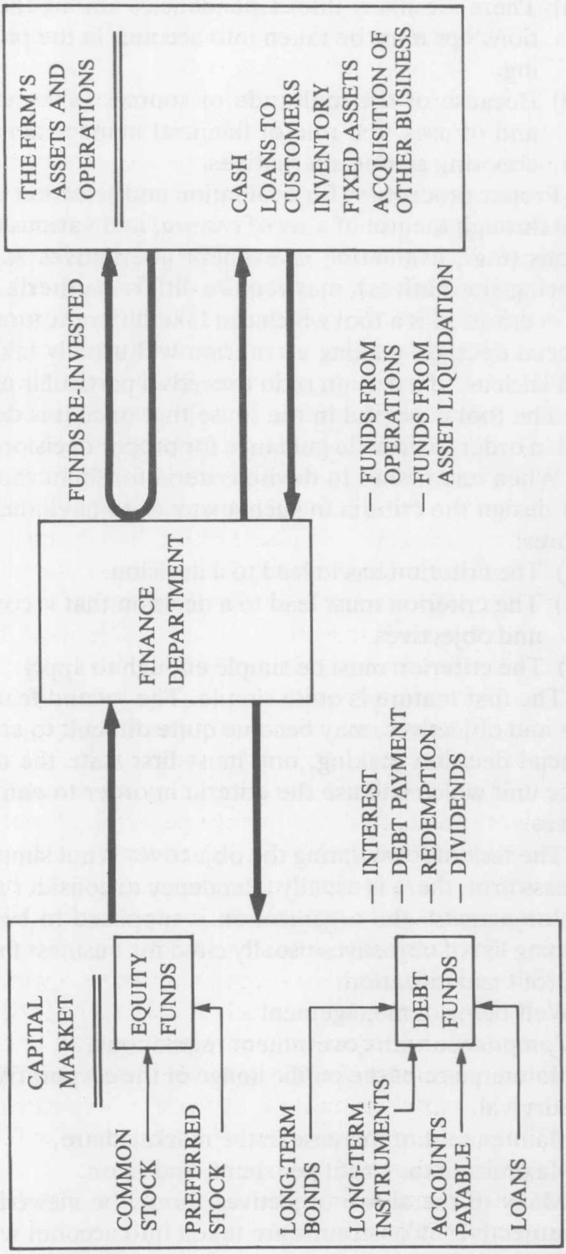

Figure 1.1 Financial Management — The Flow of Funds

(a) There are many interdependencies among the flows and these relationships must be taken into account in the process of decision making.
(b) Because of the multitude of sources (external and internal funds) and of uses, the role of financial management and policy is that of choosing among alternatives.

Proper procedures for evaluation and selection of alternatives is facilitated through the use of a *set of criteria*, and various types of decisional situations (e.g., evaluating investment alternatives as opposed to choosing financing alternatives), may require different criteria.

A criterion is a tool which can take different formats. In the context of financial decision making a criterion will usually take the form of a statement such as "if a certain ratio exceeds a particular number then do so and so." The tool is helpful in the sense that once it is developed it can be applied in order to provide guidance for proper decisions.

When one wishes to devise criteria for financial decision making, one must design the criteria in such a way as to have them possess three main features:
(a) The criterion has to lead to a decision.
(b) The criterion must lead to a decision that is consistent with the goals and objectives.
(c) The criterion must be simple enough to apply.

The first feature is quite simple. The second feature, consistency with goals and objectives, may become quite difficult to attain. In the context of financial decision making, one must first state the objectives of the economic unit which will use the criteria in order to enhance its goals and objectives.

The task of formulating the objectives is not simple. In the context of a business firm, there is usually a tendency to consider a whole list of "goals" and "objectives" the organization is supposed to be trying to attain. The shopping list of objectives usually cited for business firms includes:

- Profit maximization,
- Well-being of management,
- Compliance with government regulations,
- Maintenance of the public image of the corporation,
- Survival,
- Maintenance or increase in the market share,
- Maximizing the profit per share, and so on.

Many of the above objectives should be viewed as *constraints* rather than objectives. Constraints are taken into account when we seek to attain the objectives, but they are not by themselves objectives. Those that do qualify as objectives are hard to formulate in an operational manner. For