INVESTMENTS

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INVESTMENTS

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PREFACE

This textbook is the end product of a remarkable academic cooperation between two faculty members, belonging to two different generations, who devoted immense amount of time and effort to culminate this book. It should be added that such cooperation up to now has also produced fourteen articles three of which were published in international indexed journals, a handbook of statistics and furthermore a novel and a poetry book.

This textbook, which is primarily designed for undergraduate students, does not aim to be more than an introductory guide. On the other hand, students pursuing their master's degrees may particularly find the chapters on the valuation of securities and the modern portfolio theory quite helpful.

This book, however, aims to present the most essential principles of investments which serve as the foundation blocks lying beneath *the investment process*. No securities market participant can be called as a rational investor unless he/she does have a deep knowledge of these principles and skills to apply them. In other words, individuals ignorant of these basics act on the basis of gossips/tips and zealously trade securities in the market. Such a market, in which these ignorant individuals buy and sell securities, can appropriately be referred to as "the crazy market." None of the conventional principles suggested in this book or in any other textbook on investments can explain the workings of this market and the behavior of its participants.

On the other hand, the rationality, on the part of an individual investor, is earned by devoting incessant efforts to grasp the true meaning of the basic investment principles and to use them in the investment process. Furthermore, the rationality is the indispensable or the most vital element in creating an efficient securities market. Only the existence of an efficient securities market enables a national economy to harvest the benefits of trading securities. The securities market without the merit of rationality stands out as an establishment having so many common characteristics with a "casino".

As far as the structural division of this textbook is concerned, the following should explicitly be stated: For the sake of introducing subjects in a conventional way, the book is formally divided into eight parts.

Part I: Investment Fundamentals which includes Chapters 1 through 5.

Part II: Basics of Valuation of Securities and Financial Statement Analysis. This part consists of Chapters 6 and 7.

Part III: Investment in Primary Securities. It includes Chapters 8, 9 and 10.

Part IV: Investment in Alternative Securities. Chapters 11, 12 and 13 are included in this part.

Part V: Common Stock Valuation Approaches I - : Fundamental Analysis which is made up of Chapters 14, 15 and 16.

Part VI: Common Stock Valuation Approaches II - : Technical Analysis and Efficient Market Hypothesis. This part includes Chapters 17 and 18.

Part VII: Modern Portfolio Theory. It consists of Chapters 19 and 20.

Part VIII: Portfolio Management. This part is made up of Chapter 21.

Alternatively, the textbook is implicitly structured to reflect the well-known steps of the investment process. That is:

Identification Step. Chapter 1: An Overview, Chapter 2: Securities Market, Chapter 3: Sources of Investment Information, Chapter 8: Common Stock, Chapter 9: Preferred Stock, Chapter 10: Bond, Chapter 11: Forwards and Futures, Chapter 12: Options, Chapter 13: Convertible Securities and Warrants.

Valuation Step. Chapter 4: Measures of Return on Investment, Chapter 5: Measurement of Risk, Chapter 6: Valuation of Basic Securities, Chapter 7: Financial Statement Analysis, Chapter 14: Analysis of the Economy, Chapter 15: Industry Analysis, Chapter 16: Company Analysis, Chapter 17: Technical Analysis, Chapter 18: Efficient Market Hypothesis.

Selection of Assets and Forming the Portfolio Step. The fundamental knowledge in this step is provided by Chapter 19: Portfolio Theory and Chapter 20: Capital Market Theory.

Monitoring and Modifying Step. Chapter 21: Portfolio Management.

It should be noted that each chapter at its beginning contains an introduction revealing its content. On the other hand, a concluding remark section is included in some chapters. Boxes are inserted into chapters to attract the attention upon some important issues. When found appropriate, solved problems, self-study problems and questions are provided to lead the reader to the core of the issue under review. At the end of each chapter, key terms, questions and problems section is added for further mastering on the topics discussed. To aid the students to have a feeling of the real world application of the topics, a section titled as the Reality Check is added. Moreover, a list of suggested readings, a glossary and an index are appended to the end of the textbook to maximize the benefits from it.

This textbook from its inception to its completion is deeply indebted to the literature which has provided the required guidance and help. The book unfortunately does not offer any teaching aids, which are the standard features of the contemporary textbooks due to the lack of encouragement and support on these matters. However, it should be noted that this is not the most unfortunate matter, which this textbook lacks. It would have been a matter of great pride had this book presented a list of contributors who critically reviewed and made invaluable comments and suggestions in bringing this edition to completion. Regrettably, no single name was available to provide such professional work. This fact is simply stated without making any further comments.

The authors sincerely thank to Fethiye Çolak and the syndics of Efil Yayınevi who contributed in their own ways to the completion of this book.

Finally we would like to end the Preface with a dedication lined in a free-verse form, to the 'unknown' lover of knowledge.

To the Lover of Knowledge

In solemn silence, your lips sing
The glorious song of brave warriors
"I will have my wings, I will fly!"
And the earth trembles.
You will have your wings to ascend
To the land of noble courageous eagles
Then you will look downward
In free spirit, in supreme supremacy.
You will see small creatures
Crawling in wretched contentment
Toward their hiding places
Smile only for a while.
And turn your face toward
The highest, coldest mountains - to climb
The unexplored deepest seas - to sail
The vast unbounded burning deserts -to roar
And feel always fearlessly
The eternal joy of being free.

M.A.C. & M.B.D.

INVESTMENT FUNDAMENTALS

CHAPTER 1 An Overview

CHAPTER 2 Securities Markets

CHAPTER 3 Investment Information

CHAPTER 4 Measures of Return on Investment

CHAPTER 5 Measurement of Risk

CHAPTER 1

AN OVERVIEW

A DIALOG

* L denotes the currency unit used in the text.

Key points in the above dialog are as follows:

1. Investing is a highly complex process and it requires that all investors are "rational."
2. Investment textbooks do not contain magical formulas that will produce instant superior financial results for anyone with meager financial resources.
3. By studying investment textbooks, an individual can enhance his/her understanding of the fundamentals of "rational" investing and consequently increases his/her chance of achieving a reasonable degree of financial success.
4. Achieving a reasonable degree of financial success in investing does not happen by sheer luck nor does it come instantaneously. An individual, who rushes to commit his/her funds into some investment tools without an understanding of the essentials of investments, certainly fails. This means that he/she will be penalized for his/her lack of knowledge needed to establish and fulfill his/her financial goals by creating a portfolio which reflects the vital trade-off between expected return and risk.

Today's investment environment is highly complex and volatile. In such an environment, investors cannot succeed by luck, even though it is possible that it may place some investors in the right strategic position that may produce inconsistent or temporary substantial rewards from investing. On the other hand, the rational (knowledgeable) investors have better chance of being consistently rewarded in such an environment.

THE INVESTMENT PROCESS

Prospective investors, those with some external or internal funds, eagerly seek answers to this question: "***What should I do with my money?***" Instantaneously, two short but proper answers can be provided: **Invest** and **keep it idle** - but temporarily.

The term "invest" is simply an order for the prospective investor to enter into the ***investment process,*** which consists of several interrelated steps. An investor, in this process, will perform the following tasks:

1. Identify investment tools (alternatives) available in the financial markets.
2. Evaluate the risk/return characteristics of each of the identified investment tools.
3. Select investment tools and form a portfolio which reflects his/her risk/return preference.
4. Monitor and modify his/her portfolio constantly.

These tasks undertaken by a prospective investor are time consuming and difficult. They require an in-depth knowledge on the basics of investment and the structure of the investment process. Such knowledge is the basic ingredient of **rationality**, and it provides the investor with a sound ground for seeking profitable investing opportunities intelligently.

BOX 1.1: A NOTE ON INSTITUTIONAL INVESTORS

All the tasks cited above are from the viewpoint of an individual investor, which is the primary concern of this text. It should be noted that institutional investors, such as banks, insurance companies, social security agencies, mutual funds, investment companies, will perform these very same tasks, by employing highly skilled professionals using sophisticated tools and techniques in committing huge sums of funds into the investment process.

An individual, by entering this process, simply aims to set his/her money to earn more money. In more specific terms, an individual, through this process, commits his/her funds and expects to achieve additional income and / or growth in the value of his/her holdings. It should be underlined that the word "expect" refers not to "certainty" but to "uncertainty," that is risk regarding outcomes of investing (committing) funds.

The investment process must therefore be viewed in terms of both risk and expected return. More specifically, the investment process involves the trade-off between risk and expected return reflecting the investor's preferences.

Before entering into the investment process an individual should ask him/herself: "***How much money do I want to make, how fast, with how much risk?***" or simply "***Who am I - as an investor?***" To answer these interrelated questions, it is therefore strongly advised that an individual, before actually entering into this process, should study his/her investment personality. The investor can recourse to the professional help of investment advisors, if he/she is unable to make such assessments by him/herself.

The role of external factors, such as uncertain expected events in the future, changes in the investment environment should be recognized in the investment process. The investors' objectives, preferences will certainly be affected by the external factors.

On the other hand, **keeping funds idle** involves an opportunity cost that is giving up the chance to earn a return. Keeping the funds idle is "usually" not advisable since their value (or their purchasing power) rapidly diminishes in an inflationary environment. However, in case of keeping funds temporarily idle for a short-time period in order to seek profitable investment opportunities can provide substantial monetary rewards (returns) to the individual.

THE CONCEPT OF INVESTMENT

In this section, several definitions of the term of investments are provided as depicted by Diagram 1.1, as follows:

a. It refers to the study of the investment process.
b. It can mean the commitment of funds to financial assets and / or real assets with the expectation of obtaining pecuniary return (reward).
c. It can be defined as the sacrifice of the funds that are available for the present consumption in order to enhance the funds to be used for future consumption.
d. It can be thought as managing and increasing one's monetary wealth through the investment process. "Wealth" in this definition can be defined as the holdings of various tangible and intangible assets.

It, in the broadest sense, refers to the mechanism needed for the development and growth of the national economy.

investment: commitment of funds that are available for the present consumption to assets with the expectation of higher level of funds for future consumption.

THE STRUCTURE OF THE INVESTMENT PROCESS

Diagram 1.2 depicts the structure of the overall investment process. As it will be noticed, the essential groups are a) suppliers of funds (SOF) and b) demanders of funds (DOF). Both groups consist of economic units- individuals, business firms and government. Schematic exposition of SOF and DOF is provided in Diagram 1.3. Each economic unit may act as a supplier and/or demander of funds.

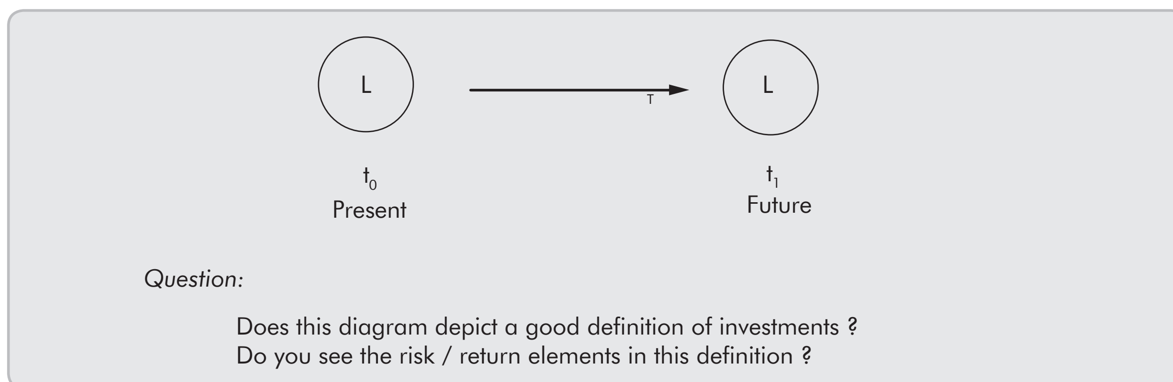


Diagram 1.1: A Definition of Investments

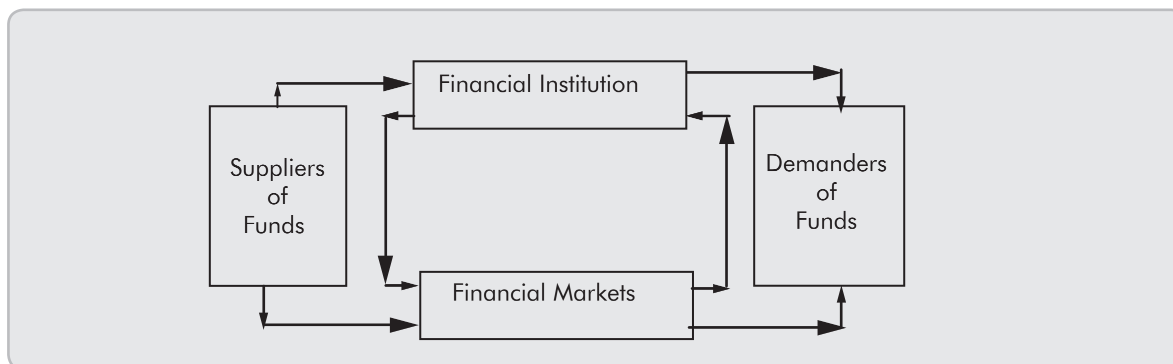


Diagram 1.2: The Structure of the Investment Process

Suppliers of Funds: For an economic unit to be included into suppliers of funds group, the unit has to have a surplus of funds- positive difference between an economic unit's current income and current expenditure.

Demanders of Funds: Demanders of funds, on the other hand, has the need for funds to finance their deficit - negative difference between the economic unit's current income and current expenditure. It should be added that some economic units appear to be net demanders of funds (they demand more funds than they supply) or net suppliers of funds (they supply more than they demand).

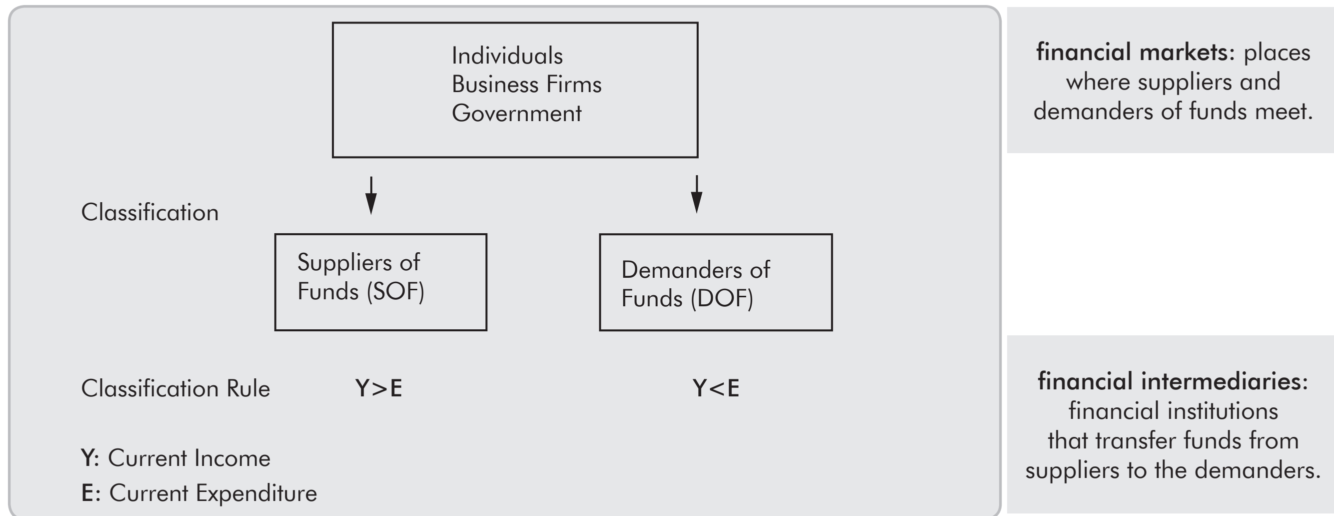
suppliers of funds: economic units whose current income is greater than their current expenditure.

demanders of funds: economic units whose current income is less than their current expenditure.

The other vital elements of the investment process structure are financial institutions and financial markets. **Financial institutions** are financial intermediaries, such as banks, insurance companies, pension funds. They transfer funds from suppliers of funds to the demanders of funds. The essence of financial intermediation is easily seen by examining Diagram 1.4.

Financial Markets are the places where the suppliers and demanders of funds are brought together to carry out financial transactions. They can, also, be defined as the places where the funds are transferred by the use of securities. Such transfers

occur on short-term or long-term basis. Accordingly, the financial markets can be classified as the money market and the capital market.



financial markets: places where suppliers and demanders of funds meet.

financial intermediaries: financial institutions that transfer funds from suppliers to the demanders.

Diagram 1.3: Economic Units: A Classification

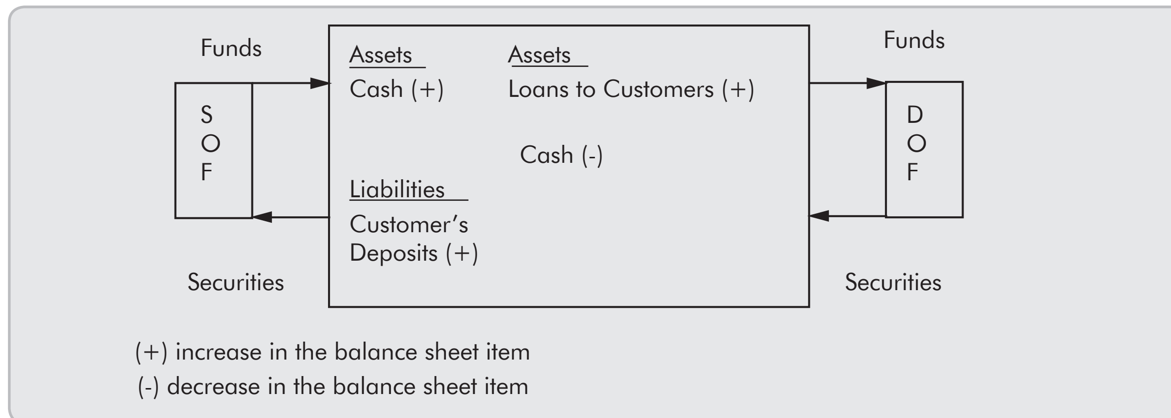


Diagram 1.4: Financial Intermediation

THE REWARDS FROM INVESTING

The rewards (or return) from placing funds in the investment process may occur in two basic forms: 1) Periodic (current) income expected to be received on a regular basis, and 2) Appreciation in the value of the investment over time. A diagrammatic exposition of the components of the rewards from investing is presented in Table 1.1. It should be noted that the magnitude of rewards is determined by the risk/return characteristic of each investment tool.

return: the rewards received form the investment process in the form of periodic income and change in the value of the investment.

Periodic Income		**Appreciation in Value**
Types	***Source***	***Notations***
Interest Dividends Rent	Debt Securities Equity Securities Real Estate	P_1 = Price at time (1) (Sale Price) P_0 = Price at time (0) (Purchase Price)
		$P_1 > P_0$ Price appreciation (Capital Gain) $P_1 < P_0$ Price depreciation (Capital Loss) $P_1 = P_0$ Breakeven

Table 1.1: Rewards (Return) from Investing

RISK DEFINITIONS

Simple definitions of risk are given below:

1. Risk is the chance of occurring of an undesirable event. From the view point of an investor, an undesirable event is the loss of the returns/rewards expected from an investment. In other words, risk can be defined as the probability of "Loss".
2. Risk is uncertainty regarding the expected return from an investment.
3. Risk is the chance that the value of return of an investment asset will differ from its expected value. It is noted that the risk, in this respect, can be derived by determining the range of possible outcomes and probability of each one's occurring in order to achieve a measure of the dispersion of returns of an investment tool.

risk: the probability that the actual return will differ from the expected return.

The Relationship between Risk and Return

In investment activities, risk and return go together. Large (small) potential risk companies provide large (small) returns. No rational investor is willing to assume risk, large or small, for its own sake. Risk will be assumed if there is an expectation of adequate compensation.

By entering into the investment process, the investor is trading a known amount of funds for some amount of funds to be received in the future. In such trading the investor must be compensated adequately to place his/her funds into investment tools for a) the length of time during which the funds are committed, b) the expected changes in prices during the stated time period and c) the uncertainty involved in the future cash inflows.

INVESTOR ATTITUDES TOWARDS RISK

What an individual should do before entering into the investment process is to know his/her investment personality. That is, every investor should know his/her attitude toward risk by asking "**Do I like (dislike) risk?**" He / she must place his/herself in one of the following categories: