

## **Chapter 1: Understanding Investments**

### **CHAPTER OVERVIEW**

Chapter 1 is designed to be a standard introductory chapter. As such, its purpose is to introduce students to the subject of Investments, explain what Investments is concerned with from a summary viewpoint, and outline what the remainder of the text will cover. It defines important terms such as **investments, security analysis, portfolio management, expected and realized rate of return, risk-free rate of return, risk, and risk tolerance.**

IT IS IMPORTANT TO NOTE that Chapter 1 discusses some important issues, such as the expected return--risk tradeoff that governs the investment process, the uncertainty that dominates investment decisions, the globalization of investments, and the impact of institutional investors. As such, the chapter sets the tone for the entire text and explains to the reader what Investments is all about. It establishes a basic framework for the course without going into too much detail at the outset.

Chapter 1 also contains some material that will be of direct interest to students, including the importance of studying investments (using illustrations of the wealth that can be accumulated by compounding over long periods of time) and investments as a profession. The CFA designation is discussed, and the Appendix for Chapter 1 contains a more detailed description of the CFA program.

Equally important, Chapter 1 does *not* cover calculations and statistical concepts, data on asset returns, and so forth, either in the chapter or an appendix. The author feels strongly that Chapter 1 is not the place to do this when most students have little knowledge of what the subject is all about. They are not ready for this type of important material, and since it will not be used immediately they will lose sight of why it was introduced. The author believes that it is much more effective to introduce the students *thoroughly* to what the subject involves.

It is highly desirable for instructors to add their own viewpoints at the outset of the course, perhaps using recent stories from the popular press to emphasize what investments is concerned with, why students should be interested in the subject, and so forth. One interesting and important topic that can be discussed in class is investment fraud. Scams continue day after day, and many people lose their life savings. Most people will have at least heard of the alleged Ponzi scheme revealed in late 2008 involving Bernie Madoff. By learning a few basic investing principles, students will be able to avoid these “scams,” thereby possibly saving themselves or their family and friends from misfortune.

Chapter 1 also discusses ethics in investing, setting the stage for examples of ethical issues in other chapters.

## CHAPTER OBJECTIVES

To introduce students to the subject matter of Investments from an overall viewpoint, including terminology.

To explain the basic nature of the investing decision as a tradeoff between expected **return** and **risk**.

To explain that the decision process consists of **security analysis** and **portfolio management** and that external factors affect this decision process. These factors include *uncertainty*, the necessity to think of investments in a *global context*, the environment involving *institutional investors*, and the impact of the internet on investing.

To organize the remainder of the text.

## **MAJOR CHAPTER HEADINGS [Contents]**

### **An Overall Perspective On Investing**

Just Say NO!

### **Establishing A Framework For Investing**

Some Definitions

[investment; investments; financial and real assets;  
marketable securities; portfolio]

### **A Perspective on Investing**

[investing is only one part of overall financial decisions; take a portfolio perspective]

Why Do We Invest?

[to increase monetary wealth]

Take a Portfolio Perspective

### **The Importance of Studying Investments**

The Personal Aspects

[most people make some type of investment decisions; examples of wealth accumulation as a result of compounding; people will be largely responsible for making investing decisions affecting their retirement; how an understanding of the subject will help students when reading the popular press]

Investments as a Profession

[various jobs such as security analysts, portfolio managers, stockbrokers, and financial advisors; financial planners; CFA designation]

### **Understanding the Investment Decision Process**

The Basis of Investment Decisions—Return and Risk

[expected return; realized return; risk; risk-averse investor; risk tolerance; the Expected-Return--Risk Tradeoff; diagram of tradeoff; ex post vs. ex ante; risk-free rate of return, RF]

### **Structuring the Decision Process**

[a two-step process: security analysis and portfolio management]

### **Important Considerations in the Investment Decision Process for Today's Investors**

The Great Unknown

[uncertainty dominates decisions--the future is unknown!]

#### A Global Perspective

[the importance of foreign markets; the Euro; emerging markets]

#### The Importance of the Internet

[using the internet to invest]

#### Individual Investors vs. Institutional Investors

[individual investors compete with institutional investors, but individuals are the beneficiaries of institutional investor activity; Regulation FD; spin-offs]

#### Ethics in Investing

### **Organizing the Text**

[Background; Realized and Expected Returns and Risk; Bonds; Stocks; Security Analysis, including both fundamental and technical analysis; Derivative Securities; Portfolio Theory and Capital Market Theory; the Portfolio Management Process and Measuring Portfolio Performance]

## **POINTS TO NOTE ABOUT CHAPTER 1**

### **Exhibits, Figures and Tables**

Exhibit 1-1 discusses some professional designations used by people in the money management business. It offers a good opportunity to discuss with students the opportunities in the field, such as financial planner.

Figure 1-1 is an important figure because it is the basis of investing decisions--indeed, it is the basis of all finance decisions. It shows the expected return--risk tradeoff available to investors. This diagram should be emphasized because it can be used to generate much useful discussion, including:

- The upward-sloping tradeoff that dominates Investments.
- The role of RF, the risk-free rate of return.
- The importance of risk in all discussions of investing.
- The different types of financial assets available.
- The distinction between realized and expected return.

NOTE: This diagram is relevant on the first day of class, and the last. It is a good way to start the course, and to end it.

NOTE: Example 1-1 shows wealth accumulations possible from an IRA-type investment. It typically generates considerable student interest to see the ending wealth that can be produced by compounding over time. This type of example can be related to 401 (k) plans, which are quickly becoming of primary importance to many people.

## SOME RECOMMENDATIONS WHEN DISCUSSING CHAPTER 1:

1. The expected return-risk tradeoff is fundamental to any understanding of Investments. While it seems to be a straightforward concept, I find that students have problems with it. These problems revolve around understanding the realized tradeoff (what did happen) vs. the anticipated tradeoff (what is expected to happen). I discuss the following relationships to show the various tradeoffs.
  - (a) The **expected tradeoff** (illustrated in the text) which is always upward sloping because rational investors must expect to receive a larger return if they are to assume more risk. This is the basis of decision-making when investing.
  - (b) The **long-term (for example, 50 or more years) realized tradeoff**, as illustrated by the Ibbotson data and the returns data used in Chapter 6. This tradeoff must slope upward if what is taught in Investments is to make sense; that is, we have a real problem if over long periods of time risky assets do not return more than safe assets.. And, of course, they have done so in the past. Stocks have returned more than bonds, which have returned more than T-bills, over very long periods of time.
  - (c) The **shorter-term realized tradeoff**, where safe assets outperform risky assets. 2000-2002 and 2008 offer the perfect examples. The market declined sharply in each case, and therefore T-bills returned more than stocks. On a *realized* basis, investors were penalized for assuming risk. Obviously, they did not expect this to occur.

Thus, diagrams for (a) and (b) look similar. The difference is the label on the vertical axis: expected return for (a), and realized return for (b).
2. The decline in the economy and in the stock market in 2000-2002 is a good illustration of risk, and of using the recent past to predict the future. During the late 1990s and into part of 2000, we heard a lot about day traders, and how we were now in a new environment where the old standards of valuation such as profitability were much less important. Of course, many of the high-flyers crashed and/or went out of business. Today there is a renewed appreciation for the traditional methods of stock valuation.

The stock market decline of 2008 is a dramatic example of the risk that can impact investors. The decline was dramatic, and most investors who held stocks lost money. Many well known investors and professionally managed funds failed to anticipate this market decline or the extent and severity of it. Many investors found their retirement accounts significantly diminished.
3. It may be good practice to start talking about the dollar, and the Euro, at the beginning of the course. Movements in the dollar are a popular topic, and an important one.

## ANSWERS TO END-OF-CHAPTER QUESTIONS

- 1-1.** The term **Investments** can be thought of as representing the study of the investment process. An **investment** is defined as the commitment of funds to one or more assets to be held over some future time period.
- 1-2.** Traditionally, the investment decision process has been divided into security analysis and portfolio management.
- **Security analysis** involves the analysis and valuation of individual securities; that is, estimating value, a difficult job at best.
  - **Portfolio management** utilizes the results of security analysis to construct portfolios. As explained in Part II, this is important because a portfolio taken as a whole is not equal to the sum of its parts.
- 1-3.** The study of investments is important to many individuals because almost everyone has wealth of some kind and will be faced with investment decisions sometime in their lives. One important area where many individuals can make important investing decisions is that of retirement plans, particularly 401 (k) plans. In addition, individuals often have some say in their retirement programs, such as allocation decisions to cash equivalents, bonds, and stocks.

The dramatic stock market gains of 1995-1999 and the sharp losses in 2000-2002 and 2008 illustrate well the importance of studying investments. Investors who were persuaded in the past to go heavily, or all, in stocks reaped tremendous gains in their retirement assets as well as in their taxable accounts in 1995-1999 and then often suffered sharp losses in 2000-2002 and 2008.

- 1-4.** A **financial asset** is a piece of paper evidencing some type of financial claim on an issuer, whether private (corporations) or public (governments).

A **real asset**, on the other hand, is a tangible asset such as gold coins, diamonds, or land.

- 1-5.** Investments, in the final analysis, is simply a risk-return tradeoff. In order to have a chance to earn a return above that of a risk-free asset, investors must take risk. The larger the return expected, the greater the risk that must be taken.

The risk-return tradeoff faced by investors making investment decisions has the following characteristics:

- ☞ The risk-return tradeoff is upward sloping because investment decisions involve expected returns (vertical axis) versus risk (horizontal axis).
- ☞ The *vertical intercept* is  $R_F$ , the risk-free rate of return available to all investors.

- 1-6. An investor would expect to earn the risk-free rate of return (RF) when he or she invests in a risk-free asset. This is the zero risk point on the horizontal axis in Figure 1-1.
- 1-7. **Disagree.** Risk-averse investors will assume risk if they expect to be adequately compensated for it.
- 1-8. The *basic nature of the investment decision* for all investors is the upward-sloping tradeoff between expected return and risk that must be dealt with each time an investment decision is made.
- 1-9. **Expected return** is the anticipated return for some future time period, whereas **realized return** is the actual return that occurred over some past period.
- 1-10. In general, the term **risk** as used in investments refers to adverse circumstances affecting the investor's position. Risk can be defined in several different ways. **Risk** is defined here as the chance that the actual return on an investment will differ from its expected return.

Beginning students will probably think of default risk and purchasing power risk very quickly. Some may be aware of *interest rate risk* and *market risk* without fully understanding these concepts (which are explained in later chapters). Other risks include *political risk* and *liquidity risk*. Students may also remember *financial risk* and business risk from their managerial finance course.

- 1-11. As explained in Chapter 21, return and risk form the basis for investors establishing their objectives. Some investors think of risk as a constraint on their activities. If so, risk is the most important constraint. Investors face other constraints, including:

- ☞ time
- ☞ taxes
- ☞ transaction costs
- ☞ income requirements
- ☞ legal and regulatory constraints
- ☞ diversification requirements

- 1-12. All *rational* investors are risk averse because it is not rational when investing to assume risk unless one expects to be compensated for doing so.

All investors do not have the same degree of risk aversion. They are risk averse to varying degrees, requiring different risk premiums in order to invest.

- 1-13. Investors should determine how much risk they are willing to take before investing—this is their **risk tolerance**. Based on their risk tolerance, investors can then decide how to invest. Investors may seek to maximize their expected return consistent with the amount of risk they are willing to take.



**1-14.** The external factors affecting the decision process are:

- (1) uncertainty—the great unknown
- (2) the global investments arena
- (3) the importance of the internet
- (4) individual investors vs. institutional investors

**The most important factor is uncertainty**, the ever-present issue with which all investors must deal. Uncertainty dominates investments, and always will.

**1-15. Institutional investors** include bank trust departments, pension funds, mutual funds (investment companies), insurance companies, and so forth. Basically, these financial institutions own and manage portfolios of securities on behalf of various clienteles.

They affect the investing environment (and therefore individual investors) through their actions in the marketplace, buying and selling securities in large dollar amounts. However, although they appear to have several advantages over individuals (research departments, expertise, etc.); reasonably informed individuals should be able to perform as well as institutions, on average, over time. This relates to the issue of market efficiency.

**1-16.** Required rates of return differ as the risk of an investment varies. Treasury bonds, generally accepted as being free from default risk, are less risky than corporates, and therefore have a lower required rate of return.

**1-17.** Investors should be concerned with international investing for several important reasons. First, international investing offers diversification opportunities, and diversification is extremely important to all investors as it provides risk reduction. Second, the returns may be better in foreign markets than in the U. S. markets. Third, many U. S. companies are increasingly affected by conditions abroad—for example, Coca Cola derives most of its revenue and profits from foreign operations. U. S. companies clearly are significantly affected by foreign competitors.

The exchange rate (currency risk) is an important part of all decisions to invest internationally. As discussed in Chapter 6 and other chapters, currency risk affects investment returns, both positively and negatively.

**1-18.** The long run ex ante tradeoff between expected return and risk should be an upward sloping line indicating that the greater the risk taken, the greater the expected return.

The long run ex post tradeoff between return and risk should also be upward sloping if investing is to make sense. Over long periods riskier assets should return more than less risky assets.

**1-19.** Disagree. If investors always attempted to minimize their risk, they would only invest in Treasury bills. Instead, investors must seek a balance between expected return and risk.

- 1-20.** Disagree. If investors sought only to maximize their returns, they would purchase the riskiest assets, ignoring the risk they would be taking. Once again, investors must seek a balance between expected return and risk.

## **Chapter 2: Investment Alternatives**