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# **UNDERSTANDING INVESTMENTS: Theories and Strategies**

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# Chapter 2 The Investment Decision Process and Investment Strategies

## Chapter Objectives

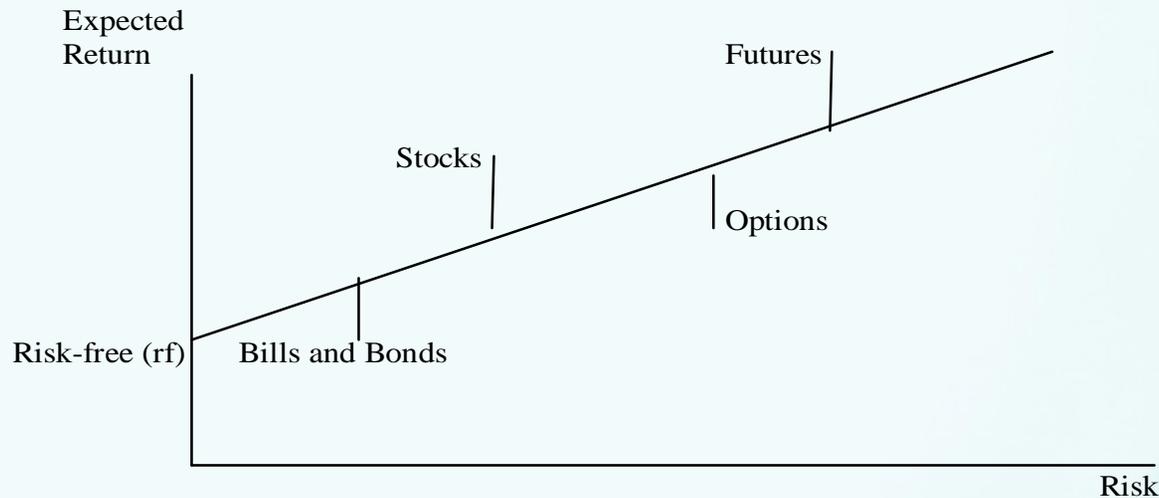
- understand the two steps in the investment process
- grasp the risk-return trade-off all investors face
- see how investors apply the investment process
- see what the differences are between a passive and an active approach to investing
- learn some other investment strategies, including the popular dollar-cost averaging technique
- know how to engage in margin purchases and short sales as well as their pros and cons
- learn the various types or orders for securities purchases or sales

# 1. The Investment Process

## The Risk-Expected Return Trade-Off

*investment process* broadly describes how investors choose among the various securities, how much money to allocate to each security, and when to make the investment  
*higher expected return comes with higher risk*

### The Risk-Expected Return Tradeoff



## The Asset Allocation Step in the Investment Process

*asset allocation* refers to the allocation (or the fraction) of your investment budget among the various available asset classes (like equities, debt, derivatives, and/or other assets)

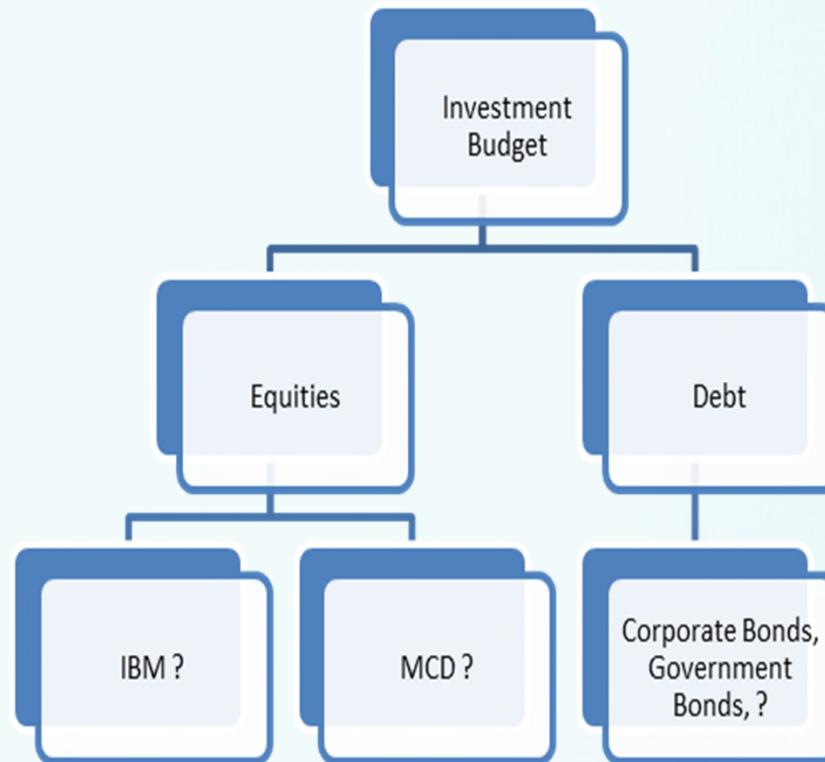
asset allocation is considered by many professional managers as the most important step in the investment process

## The Security Selection Step in the Investment Process

*security selection* refers to the analysis of individual securities (or portfolios of securities) considered for inclusion in the investor's portfolio

*security analysis* involves the estimation of the values of securities for inclusion in or exclusion from the portfolio

## Asset Allocation and Security Selection



Two general approaches to security analysis:

*technical analysis*: refers to the identification of recurring patterns in the prices of individual stocks

*fundamental analysis*: deals with the economics of the firm in the sense that the company's financial health or weakness is examined (via financial statements) to determine its fair stock price

## 2. General Investment Philosophies and Strategies

### Some Prominent Investment Philosophies

Markowitz: father of modern portfolio theory; don't put all your eggs in one basket

Samuelson: risk is not completely eliminated in the long run; investing should not excite you

Bogle: invest in index funds; apply passive investment strategies

Buffett: invest in firms that you understand and that have value

### What Is Your Investment Philosophy?

assess your risk tolerance (or degree of risk aversion)

are you a defensive or aggressive investor?

do you invest for the short run or the long run?

are you rational in your investment choices or do you suffer from behavioral biases?

## Some Investment Strategies

top-down and bottom-up approaches to investing

*top-down*: asset allocation then security selection

*bottom-up*: security selection then asset allocation

active and passive investment strategies

*active strategy* involves analyzing assets in an effort to achieve better than average returns when compared to some benchmark such as the market

*sector rotation* involves changing the weights of a particular sector's assets so as to profitably exploit the sector's relatively better performance

*market timing* involves positioning the portfolio to take advantage of the relative over-performance of risky assets relative to safer or risk-free assets

*passive* strategy is based on the notion that securities are correctly (or fairly) priced and that there are no security bargains  
the *buy-and-hold* strategy simply means that the investor buys assets and holds them until he meets his investment horizon

the *indexing* strategy involves the attempt to mirror the performance of a market index such as the S&P 500 index

Other investment strategies (some technical indicators):

*advance/decline ratio*: advancing to declining stocks

*relative strength index*: compares a particular stock's current performance to its past performance

*traders' index*: indicator of the market's trading momentum

## *Dollar-Cost Averaging Technique*

example: invest \$100 each week; initial share price is \$10; weekly change in share price: \$1.00

### **Number of Shares Purchased**

Week	Rising Market	Falling Market
1	10.00	7.69
2	9.09	8.33
3	8.33	9.09
4	7.69	10.00
<b>Total Shares</b>	35.11	35.11
<b>Total Value</b>	\$456.43	\$351.10

dollar-cost averaging is suitable for defensive investors who not only have a fixed amount to invest but also be disciplined when they wish to enter the market on a consistent basis

## Margin Purchases

*margin* is defined as the amount of equity the investor has in his account

*initial margin* is equity in account/value of the stock

*maintenance margin*: min equity amount to be kept in the margin account

example: per share price is \$100, buys 100 shares, has \$7,000 of own money, borrows \$3,000 from broker, broker has a 30% maintenance margin; what stock price would trigger a margin call?

$$\begin{aligned} \text{\%margin} &= \frac{\text{equity in account}}{\text{value of the stock}} & 0.30 &= \frac{100P - 3,000}{100P} \end{aligned}$$

$$P = \$42.85$$

*rate of return for the investor:* assume now that the investor has \$10,000 of his own money and borrows another \$10,000 from broker; the investor expects a 30% stock price appreciation, his broker charges an interest rate (the call rate) of 5%; what is the investor's rate of return?

new total dollar value of stock: \$26,000 ( $=\$20,000 \times 1.30$ )  
*minus* total dollar amount of loan: \$10,500 ( $=\$10,000 \times 1.05$ )  
*equals* net dollar proceeds from transaction: \$15,500

$$\text{ror} = \frac{15,500 - 10,000}{10,000} = 55\%$$

thus, he turned a 30% rise in stock into a 55% increase in his rate of return because he was correct in his expectations!

what if he is wrong in his expectations and the stock price actually falls by 30%, what would be his rate of return?

new total dollar value of stock: \$14,000 ( $=\$20,000 \times 0.70$ )

*minus* total dollar amount of loan: \$10,500 ( $=\$10,000 \times 1.05$ )

*equals* net dollar proceeds from transaction: \$3,500

$$3,500 - 10,000$$

$$\text{ror} = \frac{\quad}{10,000} = -65\%$$

$$10,000$$

thus, you see that his loss is much higher than he would suffer had he not borrowed (leveraged) money!

that's why leverage is a "double-edged sword": in good times it magnifies returns but in bad times it also magnifies losses!

## Short Sales

a *short sale* is defined as the sale of stock not owned in order to profit from an expected decline in the stock's price

example: you borrowed 100 shares of stock X and sold them immediately at the market price, say, \$100 per share; credit to your account is \$10,000; put up 50% collateral or \$5,000 (T-bills are typical); so, your assets (equity) is \$15,000; broker has a 30% maintenance margin; what is the minimum price increase that would trigger a margin call?

$$0.30 = (15,000 - 100P)/100P \Rightarrow P = \$115.38$$

thus, if (theoretically) the stock's price falls slightly below \$115.38, you will get a margin call to increase the amount of equity in your account (that is, to put up more collateral)

## 3. Types of Markets and Orders

### Types of Trading Markets

- direct market
- brokered market
- dealer market
- auction market

### Types of Trading Orders

- market order* (instructs the broker to immediately buy/sell a security at current market prices)
- limit order* (instructs the broker to buy/sell a security by specifying the price to buy/sell that security)
  - limit-buy
  - limit-sell
  - stop-sell, buy, loss

## Finding the Equilibrium Price of a Share

*equilibrium price* of a share depends on demand and supply conditions

thus, at the point where the demand (D) for shares intersects the supply (S) of shares, point A, the equilibrium price of a share is found

