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Module 1:
Industry Overview



Module 2:
Ethics and Regulation



Module 3:
Inputs and Tools



Module 4:
Investment Instruments



Module 5:
Industry Structure



Module 6:
Serving Client Needs



Module 7:
Industry Controls

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Clarity

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CHAPTER 17

INVESTMENT MANAGEMENT

by Alistair Byrne, PhD, CFA



LEARNING OUTCOMES

After completing this chapter, you should be able to do the following:

- a** Describe systematic risk and specific risk;
- b** Describe how diversification affects the risk of a portfolio;
- c** Describe how portfolios are constructed to address client investment objectives and constraints;
- d** Describe strategic and tactical asset allocation;
- e** Compare passive and active investment management;
- f** Explain factors necessary for successful active management;
- g** Describe how active managers attempt to identify and capture market inefficiencies.

INTRODUCTION

1

Investors expect the industry participants that serve them to act ethically, to comply with regulation, and to be well organized. Just as importantly, they expect a return on the money they invest. Competent investment management is critical to achieving returns and helping investors meet their financial goals.

As discussed in the Investors and Their Needs chapter, an investment policy statement (IPS) captures information about a client and the client's needs. The IPS serves as a guide to what is required of and what is acceptable in the investment portfolio. The IPS helps guide asset allocation—that is, which asset classes and how much of each asset class should be included in the investor's portfolio.

The results of academic studies have indicated that asset allocation is the most important determinant of portfolio return. Most investors—both individual and institutional—hold a diversified portfolio of investments rather than a portfolio concentrated in just a few investments. A key reason for this diversification is the desire to manage risk, which is consistent with the saying, “Don't put all your eggs in one basket.”



SYSTEMATIC RISK, SPECIFIC RISK, AND DIVERSIFICATION

2

How well investment risk is managed is a key determinant of the success of investment management. Risk occurs when there is uncertainty—meaning that a variety of outcomes are possible from a particular situation or action. In investment terms, risk is the possibility that the actual realized return on an investment will be something other than the return originally expected on the investment. There will be times when the return fails to meet an investor's expectations and times when the return exceeds expectations. Fluctuations in the prices and values of investments (capital gains and losses) reflect the risk of investing. Income (e.g., dividends and interest) may also differ from what was expected.

Most investors prefer higher returns and lower risks. That is, they prefer better outcomes and more certainty, all other things being equal. The trade-off between risk and return is a fundamental issue in investment management. Typically, the higher the risk of an investment, the higher the expected return; the lower the risk, the lower the expected return.

2.1 Systematic and Specific Risk

The returns on investments, such as shares, bonds, and real estate, will be affected by general economic conditions. Returns will also be affected by issues that are specific to the particular investment. These two types of risk are called systematic risk and specific risk, respectively.

- **Systematic risk:** The risk created by general economic conditions is known as systematic or market risk because the risk stems from the wider economic system. For example, if the economy enters a recession, many companies will see a downturn in their revenues and profits.
- **Specific risk:** Risk that is specific to a certain company or security is variously known as specific, idiosyncratic, non-systematic, or unsystematic risk. Examples include the share price response when a company launches a successful new product (e.g., the Apple iPad) or the response to the negative news that a promising new drug has failed in trials.

The distinction between systematic and specific risk is important because the two types of risk have different implications for investors. Investors can reduce specific risk by holding a number of different securities in their portfolios. Holding a number of different securities that are not correlated diversifies away specific risk. The extent to which two asset classes (or securities) move together is captured by the statistical measure of correlation, which is presented in the Quantitative Concepts chapter. The greater the correlation between asset classes (or securities), the more similar their price movements will be.

Investors cannot diversify away systematic risk. They can do little to avoid systematic risk because all investments will be affected to some extent by systematic risk—for instance, a recession. Diversifying an equity portfolio by adding different types of investments, such as real estate, will not eliminate systematic risk because rents and real estate values are affected by the same broad economic conditions as the stock market. Because systematic risk cannot be avoided or diversified away and because risk is undesirable, investors have to be compensated for taking on systematic risk. More exposure to systematic risk tends to be associated with higher expected returns over the long term.

Portfolio theory suggests that taking on more specific risk does not necessarily lead to higher returns on average because specific risk can be diversified away. But some investors may try to identify shares that they expect to outperform (to earn higher returns than expected based on their risk) and invest in them rather than diversifying. In the process, investors take on specific risk; if they turn out to be correct, they may earn a higher return as a result of taking on more risk.

2.2 Diversification

Diversification is one of the most important principles of investing. When assets and/or asset classes with different characteristics are combined in a portfolio, the overall level of risk is typically reduced.

Mathematically, a portfolio that combines two assets has an expected return that is the weighted average of the returns on the individual assets.¹ Provided that the two assets are less than perfectly correlated, the risk of the portfolio (measured by the standard deviation of returns) will be less than the weighted average of the risk of the two assets individually.² Overall, this means the risk–return trade-off, which is a key concern for investors, is better for a portfolio of assets than for individual assets.

Most investors hold more than two securities in their portfolios. Adding more securities to a portfolio will reduce risk through diversification, although eventually the additional benefits begin to lessen. Exhibit 1 shows the levels of risk—total, specific, and systematic—for portfolios of shares chosen at random from all of the shares in the US market. Specific risk is reduced by combining additional shares, but as the portfolio moves beyond 30 shares, the incremental risk reduction becomes small and the associated trading costs may outweigh any incremental benefit of risk reduction. Exhibit 1 illustrates the concepts of specific risk and diversification. Specific risk is highest at the left side of the exhibit (one share) and lowest at the right side of the exhibit because much of the specific risk is diversified away.

Exhibit 1 Portfolio Risk

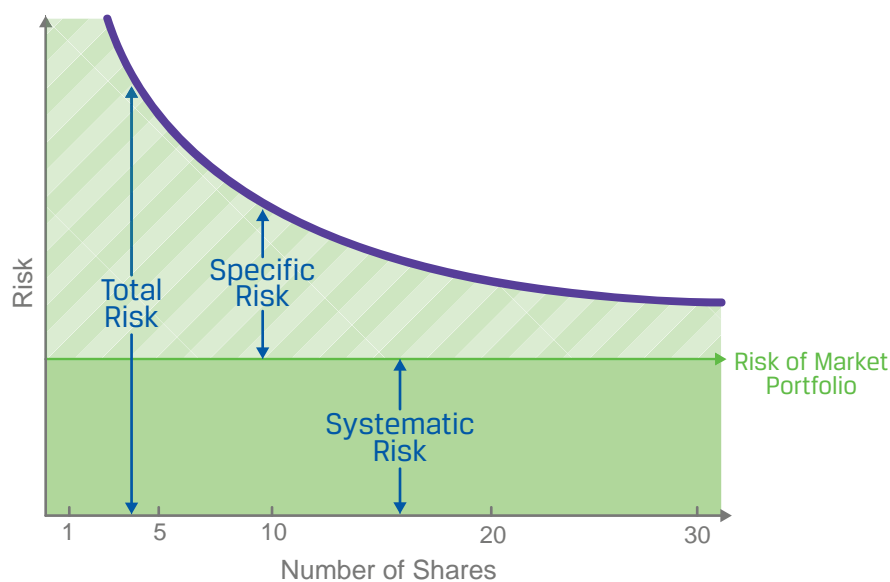


Exhibit 1 assumes randomly chosen shares. There is the potential for greater risk reduction when shares with low correlation to each other are chosen.

Combining different asset classes can also improve diversification and reduce a portfolio's risk by reducing specific risk. For example, an investor might combine investments in various stock and bond markets with investments in real estate and commodities to reduce the overall risk of a portfolio.

¹ The expected return on a portfolio of x assets is the weighted average of the returns on the individual assets.

² The systematic risk (measured by beta) of a portfolio is the weighted average of the systematic risks of the individual assets. Systematic risk cannot be diversified away.

3

ASSET ALLOCATION AND PORTFOLIO CONSTRUCTION

After developing the investment policy statement (IPS), which includes—among other information—an investor’s willingness and ability to take risk, the asset allocation of the portfolio is determined. This determination involves decisions regarding which asset classes are suitable (e.g., global equities, domestic government bonds, commodities, or domestic real estate investment trusts) and the proportion of the portfolio to invest in each asset class. In some cases, the asset allocation decision is documented as part of the IPS; in other cases, asset allocation is regarded as part of the subsequent implementation of the IPS.

3.1 Strategic Asset Allocation

Strategic asset allocation is the *long-term mix of assets* that is expected to meet the investor’s objectives. The desired overall risk and return profile of the portfolio is a factor in determining the strategic asset allocation. A portfolio with a strategic asset allocation dominated by equities would be expected to have a higher return and be more volatile than a portfolio dominated by, say, bonds because bonds generally have lower risk than equities and thus produce lower returns. The strategic asset allocation that is suitable for one investor may not be suitable for another.

Academic studies have demonstrated that strategic asset allocation significantly affects the average return on a portfolio. Thus, asset allocation warrants considerable attention from investors, investment managers, and investment advisers.

Consider the following example of strategic asset allocation.

EXAMPLE 1 STRATEGIC ASSET ALLOCATION

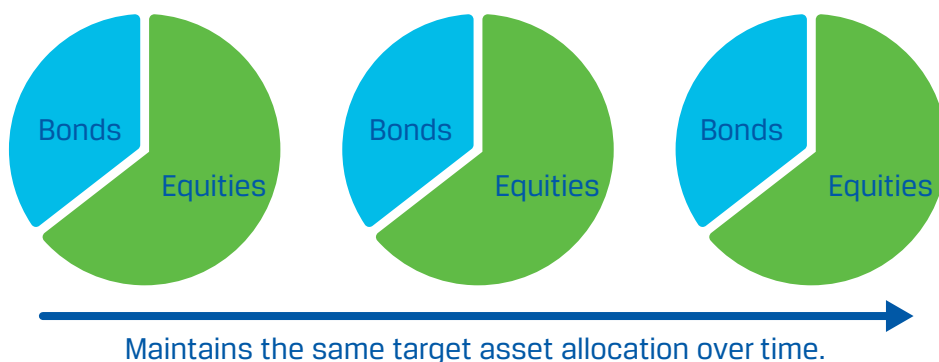
An institutional investor requires a 7% return on its portfolio. The investment committee decides to invest in global equities and in European government bonds. At the time the investment is made, European government bonds are yielding 4%, and the committee’s expectation for the long-term return on the global equity market is 9%.

A portfolio allocation of 40% bonds and 60% equity gives an expected return of 7%:

$$(0.40 \times 0.04) + (0.60 \times 0.09) = 0.07 \text{ or } 7\%$$

The committee has to consider the level of risk implied by this asset allocation. If the committee is not comfortable with the risk, the return requirement may need to be reduced. The portfolio mix can be adjusted as bond yields change and the committee revises its expectations for the return on the global equity market.

Strategic asset allocation typically requires investment managers to estimate the expected risk and return of each asset class. Historical returns can be used as a guide, but estimates need to be forward-looking. Managers also need to determine the correlation of returns between the asset classes so they can calculate the diversification benefits that may be achieved by combining the various assets in a portfolio.

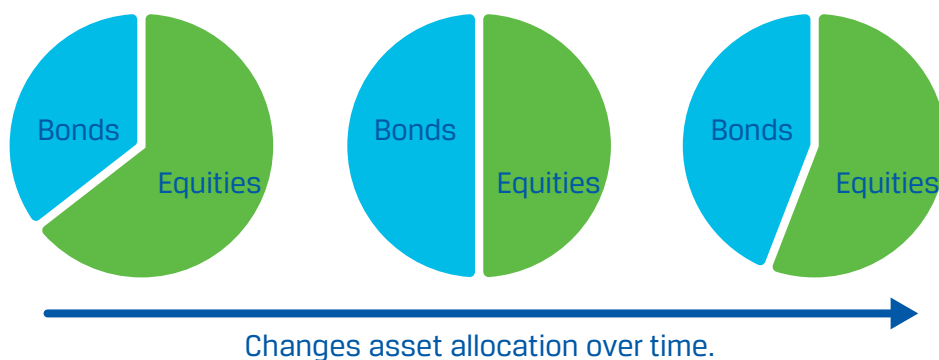


The chosen strategic asset allocation is expected to meet the investor's long-term risk and return objectives. An investor may set the strategic asset allocation and simply hold a portfolio for the life of the investment. If the investor does so, the proportions of the portfolio will likely depart from the original weights chosen as the different asset classes provide different rates of return over time and their values thus increase or decrease by different amounts. As a result, the portfolio has to be adjusted through a process called rebalancing.

Rebalancing involves selling some of the holdings that have increased as a proportion of the portfolio and investing the proceeds into the holdings that have decreased as a proportion of the portfolio. Because there are trading costs associated with rebalancing, most investors will not rebalance on a continual basis but will instead rebalance at specified intervals or weightings.

3.2 Tactical Asset Allocation

Although the chosen strategic asset allocation is expected to meet the investor's objectives over the long term, there are times when shorter-term fluctuations in asset class returns can be exploited to potentially increase portfolio returns. A *short-term adjustment among asset classes* is known as **tactical asset allocation**.



To illustrate, we will extend the earlier example in which an investor has a strategic asset allocation of 60% global equities and 40% European government bonds. The investment manager may think the global equity market is overvalued and likely to produce poor returns in the short term. In response, the manager could adjust the asset allocation to 50% equities and 50% bonds. If the manager's expectation is correct, this 50/50 tactical allocation will perform better in the short term than the strategic asset allocation of 60/40. The manager will have added return for the investor compared with maintaining the strategic weights on a static basis. But forecasting markets is difficult, and tactical allocation does not always benefit the investor. The difficulty of financial forecasting means investors may choose to maintain their strategic asset allocation within predetermined ranges. For example, an acceptable strategic asset allocation may be determined to be 56%–64% global equities and 36%–44% European government bonds, rather than 60% global equities and 40% European government bonds. Such ranges allow for some tactical asset allocation and reduce the need for and expense of frequent portfolio rebalancing.

An investor or manager typically uses a variety of tools and inputs to make tactical allocation decisions. The decisions may be based on

- fundamental analyses of economic and political conditions and their likely effects on market returns,
- market valuation measures relative to past data, or
- trends and momentum in markets.

When considering tactically altering a portfolio's asset allocation, a manager may look at the strength of the economy and likely future trends to gain a perspective on how the central bank might change interest rates and on what might happen to corporate profits. The manager may then look at the level of the price-to-earnings ratio of the stock market and how it compares with recent decades as a measure of valuation or with the level of bond yields relative to historical ranges. The manager could also look at stock and bond market trends as a way of gauging investor sentiment.

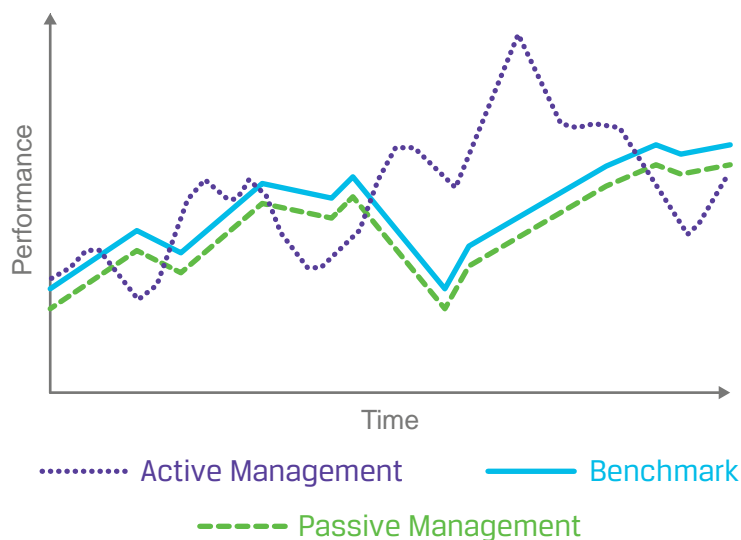
Tactical asset allocation represents an attempt to add value to a portfolio by deviating from the strategic asset allocation. Tactical asset allocation is a form of active portfolio management, which we will discuss in the next section.

4

PASSIVE AND ACTIVE MANAGEMENT

Beyond deciding on asset allocation, an investor must decide whether to use a passive or active management approach to asset selection.

- Passive managers manage a portfolio designed to *match* the performance of a specified benchmark.
- Active managers attempt to add value to a portfolio by selecting investments that are expected, on the basis of analysis, to *outperform* a specified benchmark.



The choice between the two approaches typically hinges on the relative costs of active management compared with passive management and on the investor's expectation of the success of active management. The expectation is related to the investor's beliefs about the efficiency of the markets being invested in. An investor may decide to use a passive approach in some markets and an active approach in other markets based on an assessment of the efficiency of each market.

As discussed in The Functioning of Financial Markets chapter, an informationally efficient market is one in which the prices of investments reflect available information about the fundamental values and return prospects of the assets they represent. For example, in a stock market context, a company with good prospects should have a high stock valuation, which reflects the future profits that will likely accrue to the shareholders. A company with poor prospects will have a low valuation to reflect the anticipated low future profitability of the company. If stock markets are believed to be informationally efficient, the investor will believe there is little point to actively managing stock market investments because share prices already reflect the potential of the underlying companies. In other words, there is little to uncover via further research. In contrast, in an inefficient market some shares may be over- or undervalued relative to the company's prospects, and an investor may be rewarded with excess returns by successfully identifying such shares.

Sometimes, whole markets—rather than just individual shares—can be inefficiently priced. Some investors argue that stock markets in developed economies are relatively efficient but that markets in emerging economies are less so. They argue that public information flows may not be as extensive or reliable in emerging economies and that it is possible for some investors to access and use information that is not available to others. This situation may exist because there may be less market regulation in emerging economies than in more developed economies or because there may be an absence of skilled analysts investigating markets in emerging economies. Similarly, some investors argue that shares of smaller companies are less efficiently priced than shares of larger companies because fewer investors and analysts take the time to research smaller companies in detail and information is less available. The most efficient markets tend to be those with a large number of active, informed participants.

The markets for such investments as real estate or private equity may not be efficient for a number of reasons. For instance, information on these investments may not be publicly available and trading is less active and done privately rather than in a public market in which prices and volumes can be observed. As a result, some investors may have access to information and deals that are not available to other investors. In cases where inefficiency is believed to exist, it is reasonable to believe that active management may be a successful approach.

4.1 Passive Management

Passive investment managers seek to match the return and risk of a benchmark. Benchmarks include broad market indices, indices for a specific market segment, and specifically constructed benchmarks. Passive investment managers attempt to minimise tracking error. Recall from the Performance Evaluation chapter that the tracking error is the deviation of the return on the portfolio from the return on the benchmark being tracked. Passive managers may try to fully replicate the benchmark by holding all the securities in the benchmark in proportions equivalent to their weighting in the benchmark.

But many benchmarks are difficult and costly to fully replicate, sometimes because of the number of securities or because of liquidity and availability issues. So, instead of full replication, passive managers may use a tracking approach and hold a subset of the market that is expected to closely track the benchmark's returns and risk. For example, a passive manager in the UK equity market has the choice of replicating the FTSE 100 market index directly or attempting to track the index by selecting a subset of shares to represent each industrial sector of the market. Bond index funds are typically restricted to the tracking approach because it is almost impossible to own every bond issue in an index.

Whatever passive investment approach is used, a passive investor must be willing to accept the risk of the underlying market.

4.2 Active Management

Active investment managers use a variety of approaches. They may attempt to select assets that will outperform the benchmark. These active managers focus on selecting individual securities or assets in an asset class or classes. Active managers may also try to time a market (buying when they believe the market is undervalued and selling when they believe the market is overvalued). Tactical asset allocation is an example of trying to time markets. How active managers identify assets or asset classes to buy and sell and to identify market timing opportunities is discussed in Section 5.

4.3 Factors Needed for Active Management to Be Successful

Active management is a challenging task, but there are managers who have impressive long-term records of success. For active managers to be consistently successful, they have to be better than other investors at assessing the potential of investments. When active managers buy a security or investment because their analysis suggests it has good return potential, they may be buying it from another active manager who believes the prospects for the security are poor.

For active managers to identify outperforming securities on a consistent basis, they must either have access to better information than other investors or be able to respond and use the same information faster or with better models to process the information. The ability to do this is difficult because so many other investors have access to the same information and resources.

In many markets, corporate disclosure regulations mean that information on company fundamentals must be made available to all investors at the same time. In fact, laws typically prohibit selective disclosure of material information on company prospects or performance. With many profit-motivated investors digesting corporate information, it is a challenge to interpret the information faster and better than the aggregate market view.

Also, for active management to be successful, any mispricing of investments has to be substantial enough to cover the costs of exploiting this mispricing. Investing in an undervalued security is only worthwhile if the excess return covers the cost of the research required to identify the undervaluation and the trading costs involved in investing in the security.

Accurately predicting mispricing is difficult because prices generally should already reflect most publicly available information about fundamental values. It is interesting to note that prices would not necessarily reflect most publicly available information if active managers (investors) did not gather and analyse the information and act on it. Much academic and practitioner research has shown that most active managers do not consistently outperform the market over long time periods, after accounting for fees and expenses. Unfortunately, identifying active managers who will outperform the market in the future is generally as difficult as identifying individual assets that will outperform the market.

4.4 Choosing between Passive and Active Management

Is investing passively in an index, such as the Hang Seng Index, the S&P 500 Index, or the FTSE 100 Index, the best way to increase your wealth? Or is hiring an active investment manager with a record of past success a better option? Unfortunately, it is never possible to know for sure. But the choice between passive and active management is a key issue for investors and the decision must be weighed carefully.

Passive management is typically cheaper to implement than active management because successfully replicating or tracking a benchmark requires fewer analytical resources than researching and identifying investments with superior return potential. The passive approach requires some skill, such as knowing which investments to include in the benchmark and their respective values and weights in the benchmark. Although the costs of passive management are lower than the costs of active management, the return earned by the passive investor will typically be less than the index return because of costs.

Passive management of equity portfolios is a well-established discipline and replicating an equity market index is quite straightforward. But for some markets, such as real estate, in which all properties are unique and trading is done in private transactions rather than on a public stock exchange, it is less clear how a passive approach can be used. There may not be a suitable index for passive managers to track. In addition, real estate assets themselves have to be managed (maintained, rented, refurbished,

and so on) in a way that equity investments do not. So, most investments in real estate are actively managed to some extent. A similar argument applies to private equity and venture capital.

Active approaches require a more detailed analysis of each relevant investment or asset class, which is costly because investment firms need skilled employees and/or expensive technology. Active management typically also has higher transaction costs because of more frequent trading in the portfolio. If active management does achieve returns that are higher than the benchmark, the excess return may compensate for the higher employee, technology, and transaction costs and the net returns to the investor may be higher.

Proponents of active management argue that good active managers can more than cover their costs and thus deliver net benefit to investors. Conversely, proponents of passive management argue that the difficulty of identifying superior investments means it is not worth paying higher costs for that effort and that passive management will deliver higher net-of-costs returns over the longer term. Concerns about the costs, the average or below-average performance of most active managers, and the difficulties of identifying active investment managers who will outperform in the future have made passive investment strategies increasingly popular over time. Despite these concerns, active management still remains popular.

As noted earlier, an investor may decide to use a passive approach in some markets and an active approach in other markets based on an assessment of the efficiency of each market.

5

IDENTIFYING AND CAPTURING MARKET INEFFICIENCIES

Active investment managers use various methods to try to identify future performance. Managers using fundamental analysis focus on macroeconomic, industry-specific, and company-specific factors that make securities and assets valuable. Other managers use technical and behavioural models to identify trends and momentum in the market and to predict how trading by other market participants may change future market prices. Some active managers build statistical or quantitative models to try to identify shares that are likely to outperform or underperform. In practice, many managers use a blend of the techniques discussed in the following sections. Based on their analysis, active managers purchase assets that are expected to have superior returns and sell assets that are expected to underperform.

5.1 Fundamental Analysis

Active managers often try to identify and capture market inefficiencies through fundamental analysis. For equity investors, this process means conducting a thorough analysis of a company's business model, its prospects, and its financial situation. This analysis may involve meeting company management and interviewing them about their strategy and the prospects of the company. Analysts must take care not to violate laws and regulations when gathering information. Their goal is to identify companies

that have better prospects than the stock market price reflects. Typically, an analyst or investment manager performs some form of fundamental analysis to arrive at an estimated value for a company's shares. If the share price is significantly below the estimated value, the manager will increase the weighting of the shares in the portfolio or add the shares to the portfolio.

As explained in the Equity Securities and Debt Securities chapters, the value of a security can be viewed as the present value of all the cash flows the security will generate in the future. For example, recall that investors can estimate the value of a stock by discounting all the dividends they expect to receive while they hold the stock and adding the proceeds from selling the stock. Value that is estimated this way is called the stock's fundamental value or intrinsic value. Although fundamental values are not observable, many active investment managers work hard to accurately estimate them. Managers using fundamental analysis operate on the premise that security market prices tend to move toward their estimates of fundamental values. They can produce exceptional returns when they accurately estimate values and make the appropriate investments before other market participants.

To estimate fundamental values, they must forecast future cash flows and estimate the rates at which these cash flows are discounted. Managers using fundamental analysis take into account many issues when forming investment opinions. The issues most important to their opinions vary according to the type of asset they are analysing.

For example, when analysing fixed-income securities (such as bonds, notes, and bills), managers consider borrowers' ability and willingness to pay their debts—that is, borrowers' creditworthiness and trustworthiness. Lenders consider borrowers to be creditworthy if they expect that the borrowers will be able to pay interest, principal, and preferred dividends when due. They consider borrowers to be trustworthy if they expect that borrowers will arrange their affairs to ensure that they can and will make these payments. Managers consider financial data and past borrowing histories to determine whether borrowers are creditworthy and trustworthy.

When analysing equities, they pay close attention to an issuer's future prospects for earning money and producing valuable assets. Among many other issues, they consider the following:

- Demand for the company's products
- Cost of producing those products
- Profit margins of the company and whether the margins are sustainable
- Competitiveness of the company and whether it can remain competitive
- Quality, stability, and security of the company's management, workforce, and physical and intellectual assets
- Productivity of its research and development efforts
- Amount of debt the company uses to fund its operations and investments
- Value of options to suspend or expand operations or to engage in new initiatives

- Prospects for disruptive technological innovations, the imposition or removal of significant regulatory constraints, and legal or extra-legal expropriations that may affect the company's viability
- Macroeconomic issues, such as prospects for inflation, national economic growth, and unemployment
- Legal and regulatory environment the company operates within and whether any major changes are planned
- Corporate governance problems that may allow corporate managers to waste or misuse corporate earnings that otherwise could be distributed to shareholders or be retained to pay off debt holders

When analysing alternative investments, the issues considered will also differ. For example, when analysing real estate investments, managers consider how the value of the property compares with similar properties in the area, how its rental prospects might develop in the future, and whether there is scope to add value to the property through redevelopment. Managers using fundamental analysis consider the specific factors that are expected to affect the value of the type of asset being analysed.

5.2 Technical and Behavioural Analysis

Managers using technical analysis study market information, including price patterns and trading volumes, whereas managers using behavioural analysis focus on indicators of market sentiment, such as manufacturers' new orders or indices of consumer expectations.

Some investment managers use a technical approach, seeking to assess price and trading volume trends in the stock market to identify shares that may outperform or underperform. For example, an active manager who believes in momentum will try to invest in shares that have recently been rising in the market, which is based on the notion that a rising share will continue to rise. Other managers might look for signs of imbalance between the potential buyers and sellers of a share to try to predict which direction the share is likely to move.

Recall from the discussion about supply and demand in the Microeconomics chapter that an increase in demand or a decrease in supply will typically cause prices to increase. Similarly, a decrease in demand or an increase in supply will typically cause prices to decrease. Investment managers who use technical and behavioural approaches try to buy a particular security or asset before an increase in buyer interest or a decrease in seller interest causes the price of the security to rise, and they try to sell before an increase in seller interest or a decrease in buyer interest causes the price of the security to fall.

5.3 Quantitative Analysis

Some managers build statistical models to try to identify shares that are likely to outperform. By analysing data, they identify characteristics that have typically been associated with share price outperformance. For example, the analysis might suggest that companies with below-market average valuation levels (for example, the ratio

of the share price to earnings per share, known as P/E) and above-average expected earnings growth tend to outperform. This insight can then be used to search for shares that show those characteristics. Managers using this approach are often called “quants”, because of the quantitative models they use.

As noted earlier, managers may use a combination of the types of analysis. Also, depending on the asset, asset class, or market being analysed, the approach(es) used and the precise variables of interest will differ.

SUMMARY

In your workplace, you may not be directly involved in investment management, but knowing how assets are selected and how portfolios are constructed for investors is important to better understand the investment industry.

Some important points to remember about investment management include the following:

- Asset allocation is the largest contributor to portfolio return. An investor, sometimes in conjunction with an investment manager, must decide on the asset allocation in an investment portfolio.
- The trade-off between risk and return is a fundamental issue in investment management. Typically, the higher the risk of an investment, the higher the expected return; the lower the risk, the lower the expected return.
- Returns on investments, such as shares, bonds, and real estate, are likely to be affected by general economic conditions. Risk created by general economic conditions is known as systematic risk. Risk specific to a certain security or company is variously known as specific, idiosyncratic, non-systematic, or unsystematic risk.
- Portfolio theory maintains that systematic risk cannot be avoided, but that specific risk can be diversified away. Investors should be compensated for systematic risk but not necessarily for specific risk. Thus, taking on more specific risk does not necessarily lead to higher returns.
- Diversification is an important concept in investment theory. When shares or other investments with different characteristics are combined in a portfolio, the overall level of risk is typically reduced. The combination of two or more assets in a portfolio results in an expected return on the portfolio that is the weighted average of the returns on the individual assets. Provided the assets are less than perfectly correlated, however, the risk of the portfolio will be less than the weighted average of the risk of the assets.
- Strategic asset allocation is the long-term mix of assets that is expected to meet an investor’s objectives. Strategic asset allocation is a decision that has a great impact on the long-term returns on a portfolio.

- Although the strategic asset allocation should meet the investor's objectives over the longer term, the manager or investor can potentially increase returns by exploiting short-term fluctuations in asset class returns. The process of exploiting these short-term fluctuations by adjusting the asset class mix in the portfolio is known as tactical asset allocation.
- An informationally efficient market is one in which prices reflect the fundamental values and prospects of the assets they represent.
- Passive management is managing a portfolio designed to track the performance of a benchmark.
- Active management attempts to add value to the portfolio through the selection of investments that are expected to outperform the benchmark and/or through tactical asset allocations.
- Passive management is typically cheaper to implement than active management because fewer analytical resources are required to successfully track a market index than to research and identify investments expected to have superior returns. If active management does achieve a return that is higher than the benchmark, the excess return may compensate for the higher costs. But it is not certain that the active manager can consistently identify superior investments; consistently successful active management is challenging to achieve.
- The choice between the active and passive approaches typically hinges on the costs of active management and on investors' expectations of the chances of success using active management. The expectation of success is related to the investor's beliefs about the efficiency of the markets being invested in.
- The successful active manager needs access to better information or the ability to process information faster and/or better than other investors. These requirements are demanding. Any mispricing of investments has to be substantial enough to cover the costs of exploiting it.
- Active managers often attempt to identify and capture market inefficiencies by using fundamental analysis to identify mispriced securities. Some managers use technical and behavioural analysis to assess price and volume trends to identify securities that will outperform. Other managers (quants) attempt to build statistical models to identify shares that are likely to outperform. In practice, many managers use a blend of these techniques.