



*Personal Investing*

PRODUCED by  
INVESTMENT MANAGEMENT  
ASSOCIATION OF SINGAPORE

# INTRODUCTION TO PERSONAL INVESTING



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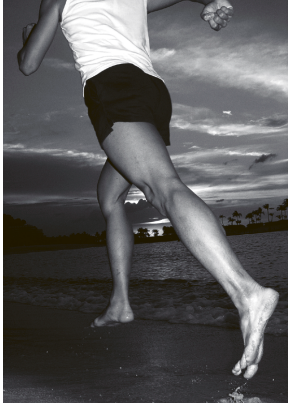
Ten Important Points to Remember

PRODUCED *by*

THE INVESTMENT MANAGEMENT ASSOCIATION OF SINGAPORE (IMAS)

THIS BOOKLET IS PART OF THE ASSOCIATION'S INVESTOR EDUCATION PROGRAMME.

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## **INTRODUCTION**

Many Singaporeans realise the importance of saving but have reservations about investing. Investing is often regarded as: “gambling”; “too risky”; “only for the rich”; “only for those about to retire”; “too complicated”; “not necessary”. While misleading, such reservations also deter us from investing. We then forgo the opportunity of growing our savings.

This booklet seeks to address some of the concerns and questions you may have about investing. Intended as an introduction to the subject, it will explain important investment concepts (chapters 1-3); discuss the investment characteristics of cash, shares, bonds and unit trusts (chapters 4-7); and describe an investment strategy called asset allocation.

# UNDERSTANDING RETURN AND RISK

Return and risk are primary considerations in investing. They are likely to form the basis for almost all your investment decisions. It is important, therefore, for you to understand what return and risk are, how they originate and how they are related.

## RETURN

You invest to get a return. The return is simply what you have gained (positive return) or lost (negative return) on your investment after you've sold it. Even if you decide not to sell, you can still calculate your return by comparing the investment's market value against your purchase value.

It is important to distinguish between expected return and actual return. When you invest, you expect a particular level of return. However, the actual return may differ from the expected return.

### EXAMPLE

You invest in 1000 shares of ABC at \$1 a share. You expect the shares to rise to \$ 1.25 by year-end. Your expected return is 25%. If however, the shares had risen to \$1.10 when you sold them, your actual return would be 10%.

Investing is based on expected return. It is therefore important that you do not have unrealistic expectations. Be aware of how you arrived at your expected return on an investment: was it, for example, the result of informed analysis; a "tip" from a friend; a "hunch"?

The return from an investment usually consists of two components:

- (i) An interest or dividend payment in cash. This component is called the income, and when expressed as a percentage of the purchase price, is known as the yield.



*taking that first step in  
personal investing*

- (ii) The appreciation (or depreciation) of the investment's price.  
This is called capital gain (or capital loss).

The total return of an investment is the two components added, that is:

Total Return = income + capital gain (or loss).

**EXAMPLE**

You bought 1000 shares of ABC at \$2.00 a share, for a total cost of \$2,000. During the year you received a dividend of 10 cents a share, or total income of \$100. You then sold your 1000 shares at \$2.20, for total sale proceeds of \$2,200.

Your total return is:

$$\frac{\$100 \text{ (income)} + \$200 \text{ (capital appreciation)}}{\$2,000} = 15\%$$



For some assets like bank deposits and bonds, the main component of total return will be the income. For others like shares, it will be capital appreciation.

You can use annualised returns to compare returns between investments held over different holding periods. An annualised return computes the rate of return over a full year for an investment held for more than one year. For example, if you had an investment that gave a return of 30% over 3 years, your annualised return would be 9.1%.

You should also account for transactions costs and charges when computing returns. These eat into your returns. You incur brokerage charges when you buy or sell shares. You will also have to bear management fees and other expenses when investing in unit trusts.

## **RISK**

Most investors think of investment risk as the possibility of losing money. This is certainly a basic and valid concern. However, investment professionals have a broader definition of risk. They define risk as the uncertainty of receiving the expected return. This in turn is gauged by the volatility of historical returns i.e. the variability of returns around its average historical return. Volatility can be measured and quantified by a statistic known as **standard deviation**. The larger the standard deviation, the greater the tendency for returns to fluctuate, hence the greater the risk. Different investment instruments have different degrees of risk or volatility.

### **EXAMPLE**

The Singapore Government issues 2 year Treasury Notes that pay a fixed interest or coupon rate. There is virtually no risk that the government will not pay the coupon or redeem these notes when they mature. Such an investment would therefore be regarded as a low risk instrument.

By contrast, shares are highly volatile investments as their prices can fluctuate a great deal. In 1999, for example, the Singapore Straits Times Index, a widely used barometer of the share market gave a return of 78.0%. In 2000 however, the STI fell 22.3%.

The following table shows the annualised returns and risk of US shares, bonds and cash between 1980 and May 2003.

### Risk & Return Through the Years (1980-2003)

	1980-1989		1990-1999		2000-May 2003	
	RETURNS	RISK	RETURNS	RISK	RETURNS	RISK
<b>Shares</b>	17.4%	16.4%	18.1%	13.4%	-10.3%	18.7%
<b>Bonds</b>	12.8%	13.4%	9.2%	7.2%	13.6%	7.1%
<b>Cash</b>	9.2%	0.8%	5.0%	0.4%	3.4%	0.6%

Source: Ned Davis Research

Looking at the average annual rate of return as well as the risk between 1980 and 1999 one can see that shares have had the highest risk but generally have also produced the highest rates of return. Bonds have had considerably lower risk but have also produced lower rates of return.

The table below shows the annualised returns and risk of S\$ cash, Singapore shares and world equities (MSCI World) between 1980 and May 2003.

### Risk & Return Through the Years (1980-2003)

	1980-1989		1990-1999		2000-April 2003	
	RETURNS	RISK	RETURNS	RISK	RETURNS	RISK
<b>MSCI S'pore</b>	11.5%	27.0%	8.3%	24.7%	-19.1%	25.0%
<b>MSCI World</b>	18.4%	14.0%	10.5%	13.2%	-12.3%	17.4%
<b>S'pore Cash</b>	5.7%	0.6%	2.6%	0.2%	1.0%	0.1%

Note: Returns refer to the annualised average rate of return. Risk refers to the standard deviation of returns. Source: MAS and MSCI.

Clearly, global stockmarkets have outperformed Singapore stocks and at a considerably lower level of risk.



## SOURCES OF RISK

Risks can be classified into two broad categories: systematic risk and non-systematic risk. You should understand what they mean as they have important implications for how you can manage risk.

Systematic risk factors are those that affect the market in general and include things like general economic conditions, changes in interest rates or a sudden adverse change in market sentiment. As an investor, you cannot avoid systematic risk; it is inherent in investing. Non-systematic risk (otherwise known as specific risk) factors are those that are applicable only to the investment itself but not to others. Examples might include the quality of a company's management and the sustainability of its product development strategy. Unlike systematic risk, non-systematic risk can be reduced by spreading your investments over a number of holdings.

### EXAMPLE

What are the systematic and non-systematic risks for an airline share like Singapore Airlines (SIA)? Systematic factors would include weak global stock markets. The general market downturn will adversely affect SIA shares even if SIA is doing well. A specific risk would be the loss of lucrative flight routes. The share may then be negatively affected even though the stock market in general is rising.

## THE RISK-RETURN TRADE-OFF

The risk-return trade-off refers to an important investment principle: investments that offer higher expected returns also have higher risks. The saying that "there's no free lunch" also applies to investing. Simply put, investors who are not willing to take risks have to contend with low returns. In order to achieve higher returns they must be prepared to bear more risks.

We can rank investment instruments by their risk-return profile, starting with instruments that have both low expected return and low risk, and moving through to those with higher expected return but, correspondingly, higher risk.

Singapore Government Treasury Bills are at one end of the risk-return spectrum. Their expected return is relatively low, but the risk that investors won't achieve that return is very low. As can be seen in the table above, when you invest in other types of assets, like bonds and shares, you have the potential for higher returns but also take on more risks.

### **APPLYING THE RISK-RETURN TRADE-OFF**

The risk-return trade-off is not just a piece of theory that is nice to know. It has practical implications for investing.

The typical investor, when considering an investment, usually focuses on expected return. You should by now realise that this is too simplistic an approach. Remember that the "price" or the trade-off for higher potential return is higher risk. The question, to ask yourself before committing to an investment is "can I accept the risk entailed?"

Conversely, if your concern is risk, you may feel that a product that is capital guaranteed might be appropriate for you. Again, be aware of the trade-off. In this case, the "price" of the guarantee is likely to be returns over an investment cycle that are lower versus comparable alternative products that do not contain a guarantee. This time, the question is "should I take more risk with my investments?"

When deciding on the appropriate level of risk, you should consider two issues. First, what is your tolerance for risk? This is subjective. Your best friend may be able to have a good night's sleep, even when his investments are down. You may not be able to. Know what your comfort level with risk is. That will be associated with a whole host of factors such as your cash flow, financial position, future commitments and number of dependents.

Second, consider the length of time you are investing for. The longer your investment horizon, the more risk you can accept. Conversely, you should only invest in low risk assets if you have a short investment horizon. This concept is explained further in Chapter 3.



## **CONCLUSION**

You invest to earn a return on your money. Return can comprise a mixture of income and capital appreciation. There is no such thing as a “free lunch”. The higher the return you aim to achieve, the more risk you must assume. Risk originates from a variety of sources. The investment decision boils down to considering the risk-return trade-off of the investment.



# DIVERSIFICATION

The basic idea behind diversification is: “don’t put all your eggs in one basket”. Diversification is a powerful tool in managing risk. This chapter will explain what diversification in investing means, how to achieve diversification and what its benefits are.

## WHAT IS DIVERSIFICATION?

Put simply, diversification involves spreading your investments over a variety of assets and securities to avoid excessive exposure to any single source of risk.

If you invest all your money in a single security, you may lose all of it if the issuer goes bankrupt. Spread your money equally among ten securities and one-tenth of your capital is at stake with each issuer. Then, you are not as exposed to the specific risk of any one issuer.

## HOW TO DIVERSIFY: USING THE CONCEPT OF CORRELATION

To diversify effectively, you must apply the idea of correlation. Correlation is a measure of the tendency of the return of a security or investment class to follow that of another. Assets with returns that move in the same direction are positively correlated; if their returns move in opposite directions, they are negatively correlated

What this means to you as an investor is this: when you are investing in assets with high positive correlation you are figuratively “putting all your eggs in one basket”. All your assets are exposed to the same risks. You should hence spread your investments across assets with low to negative correlations. This will lower the risk of your portfolio.

There are two ways to diversify your investments. First, you can invest in different asset classes like cash, bonds and shares. This is known as asset allocation. It is an important investment strategy and will be discussed further in chapter 8.



#### EXAMPLE

Shares and bonds sometimes react differently to the same set of economic conditions. For example, government bonds tend to do well in a recession while stocks often suffer. A portfolio having both shares and bonds will then weather a recession better than an all-share portfolio.

Second, you can diversify by investing in different securities in an asset class. For example, a diversified share portfolio will consist of shares in different industries and of local and international companies.

#### EXAMPLE

Shares of oil companies might be negatively correlated to airline shares as a fall in oil prices will lower the profits of oil companies but will raise the profits of airline companies. A portfolio which holds both oil shares and airline shares will be less exposed to movements in the oil price than a portfolio which holds just one or the other.

### BENEFITS OF DIVERSIFICATION

By diversifying, you will have an investment portfolio that can weather the ups and downs of economic cycles and market volatility.

#### EXAMPLE

If you invest all your money in shares, your capital drops by 20 % if the stock market falls by 20 %. What if you had split your investments equally into shares and bonds? As they are sometimes negatively correlated, a fall in shares may tend to be associated with a rise in bond prices. Assume that in this case bond prices rise by 5 %. Your share-bond portfolio will then fall by just 7.5 %, the average of the return for shares and bonds.



## **HOW TO DIVERSIFY IN PRACTICE**

To diversify effectively, you need to invest in a variety of securities and asset classes. You will probably have difficulty doing it on your own. For example, you will have to invest in many shares and bonds spread across sectors. You may also want to invest internationally. Not many investors have the resources and time to do all these.

Unit trusts and other types of pooled funds such as Exchange Traded Funds offer you a practical route to diversifying. With an investment of as little as \$1,000 you can invest in a well-diversified basket of securities. Unit trust investing will be discussed in chapter 7.

## **CONCLUSION**

Not putting all your eggs in one basket is a sensible rule for investors. You diversify by spreading your investments over different securities in various asset classes. Unit trust investing is a practical way to diversify.



# TIME IN INVESTING

How often have you heard the saying that “time is money”? Do you realise that this saying also applies to investing? Time is of special significance to investors because it has a critical impact on return and risk. This chapter will explain why.

## INVESTMENT TIME HORIZON

When you invest, you operate with a time horizon in mind. Your time horizon is the number of years you have available to invest to achieve your financial goals. If you are 35 years old and investing for retirement at age 60, then your time horizon is 25 years. Your time horizon is important in influencing what assets you invest in, how much your savings can grow and how much risk you can take.

## TIME AND RETURN

You can think of time as a friend who can help you grow your savings. It does so through the power of compounding. Compounding works like this: say, you invest \$10,000 and get a 5% return a year while you are invested. You reinvest the annual return alongside your original principal. After the first year, your investment is worth \$10,500, after the second it is \$11,025 ( $1.05 \times \$10,500$ ), after the third it is \$11,576 ( $1.05 \times \$11,025$ ) and so on. The return on returns is helping your money grow faster.

The longer your time horizon the more compounding works in your favour. The impact can be an eye-opener: a \$10,000 investment giving a return of 5% per year compounded after 10 years becomes about \$16,300, after 20 years about \$26,500, after 30 years about \$43,200 and after 40 years about \$70,400.



### "RULE OF 72"

Divide 72 by the rate of return and the answer is the approximate number of years it will take to double your money. Thus, at 6% annual returns your money doubles in about 12 years; at 8% it will double in about 9 years.

The lesson from compounding is this: start early when investing and you increase your chances of meeting your financial goals.

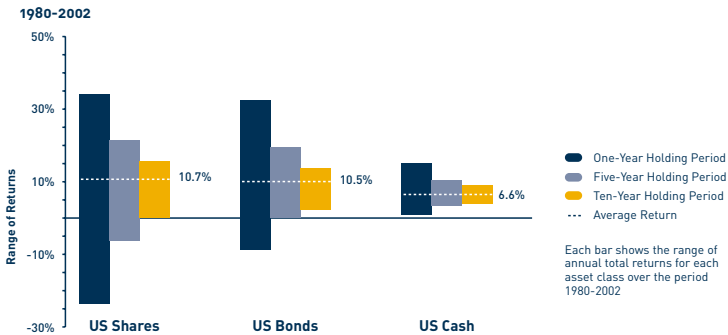
### TIME AND RISK

To understand the relationship between time and risk, simply think of this popular piece of advice: do not take risk if you do not have the time to recover from your losses. It sums up how your time horizon affects how much risk you can assume and what assets you should invest in.

If you need your money in a short time, you cannot take chances with your capital. You should invest in assets that do not put your capital at risk during the period.

If your time horizon is, however, longer, then you can invest in riskier assets that offer potentially higher returns, like shares. This is because you have time to recover from the periodic losses sustained by investing in the stock market and to benefit from its long-term upward trend.

### Reduction of Risk Over Time



Source: Federal Reserve Database in St Louis



The above chart compares the range of annualised returns from one, five and ten year holding periods between 1980 and 2002 for US shares, bonds and cash. What is clearly shown is that the range of annualised returns narrow as the holding period lengthens. Therefore, the lesson is invest with a longer time horizon.

### **DOLLAR COST AVERAGING**

Dollar cost averaging can reinforce the risk reduction benefits of a long investment horizon. The idea is to invest a fixed sum of money at a regular interval, regardless of whether the market is rising or falling. This is similar to the idea of not putting all your eggs in one basket - if you concentrate your investing only at certain times, you may be unlucky and buy when prices are at or near the peak. A regular savings programme is an excellent way of taking advantage of a dollar cost averaging scheme.

### **CONCLUSION**

Time is a lever that increases your ability to grow your savings. The earlier you start investing to meet your financial goals, the more you can exploit the power of compounding. Time is also one of the most important factors in determining how much risk you should take. This is another reason to begin investing early.



# CASH

Everyone is familiar with cash and cash-equivalents like fixed deposits. There is virtually no risk with cash but it offers low returns.

## MAIN CASH EQUIVALENTS

Cash is a safe and liquid asset. However, you do not earn a return if it sits in a box under your bed.

There are instruments that are almost as liquid and safe as cash which also provide some return. These instruments are known as cash equivalents.

Cash equivalents include:

- \* Savings and interest-bearing checking accounts;
- \* Fixed deposit accounts;
- \* Certificates of deposit.

Most Singaporeans are familiar with the first two. For example, many of us have at least one bank savings account. We would normally use a savings account to have our salaries credited into and from which to make payments. Certificates of deposit are not as widely held. They are like fixed deposits but there are important differences. For example, the minimum amount for a certificate-of-deposit can be as large as \$250,000.

## CHARACTERISTICS OF CASH EQUIVALENTS

Cash equivalents are almost like cash in the following ways:

- **Safety:** the principal invested in them does not fluctuate in value. However, there is the risk that the financial institution holding your deposit fails. As there is no deposit insurance in



Singapore, you may then lose your money. This risk however should be put in perspective, as the financial system in Singapore has, historically, proven to be extremely sound.

- **Liquidity:** they can be quickly converted into cash with little or no loss of principal.
- **Convenience:** withdrawal is easy. For example, savings accounts held with many banks can be accessed through ATMs.

Cash equivalents provide a return in the form of interest. These interest rates vary depending on the institution and the term to maturity. Savings and interest-bearing checking accounts pay relatively low interest because they are liquid. Fixed deposits pay higher interest, as you have to maintain your deposit for a specified term. Generally, the less liquid the account or the longer its term, the higher the interest paid on the account.

#### EXAMPLE

In 2002, the interest rate on savings accounts averaged about 0.5%, on a six month fixed deposit about 1% and on a twelve month fixed deposit about 1.2%.

When you hold cash equivalents, you must be prepared to receive modest returns. However, as cash equivalents are generally short term and interest rates are reset at maturity, their yields can be adjusted upwards as inflation rises. Hence, they are a better hedge against inflation than fixed interest rate assets like bonds. However, the returns from cash equivalents usually at best merely keep up with inflation.

#### EXAMPLE

Between 1990-2002, the interest on savings accounts with Singapore banks averaged 2.08% while the consumer price index averaged 1.42%. So, the real return on money kept in savings accounts, after adjusting for inflation, was less than 1%.

## **WHY INVEST IN CASH EQUIVALENTS?**

There are several reasons for investing in cash equivalents. First, they provide safety of principal and liquidity. Therefore, they are suitable for a planned expense due shortly, such as buying a car, as emergency funds for a rainy day or as a place to “park” funds temporarily for future investing. Cash equivalents can help your portfolio weather times of market uncertainty.

Second, cash equivalents are a better hedge against inflation than bonds. They can therefore be useful in inflationary periods when interest rates tend to be rising.

The drawback of cash equivalents is their modest returns. They often do no more than keep up with inflation and therefore will not allow your savings to grow in real terms.



# BONDS

Many individual investors are unfamiliar with bonds and do not invest in them. Bonds, however, are an important asset class which should not be ignored. This chapter will explain what bonds are and why you should consider investing in them.

## WHAT ARE BONDS?

Think of bonds as long term IOUs issued by governments and companies, which can be bought and sold by investors. When you purchase a bond, you are effectively lending money at a fixed interest rate to the issuer for a stated period. Hence, bonds are also referred to as fixed-income securities. Because bonds have a longer maturity period than cash, the “rate of interest” for bonds (usually referred to as the bond yield) will tend to be higher than for cash.

### HOW TO CALCULATE BOND YIELD

Bond yield calculations can get quite complex and technical depending on the market and conventions used. Here we show a simplified method of calculating a bond yield that does not require complex mathematical calculations.

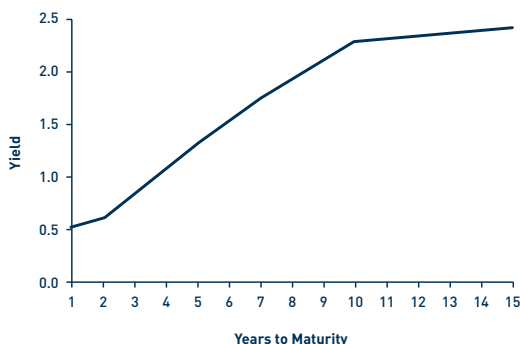
Take the case of the Singapore Government Bond maturing March 2007 and offering a coupon of 4%. Today's date is 11 June 2003. Current price of the bond is 110.5%. Redemption value at maturity is 100%. Remaining life of bond is 3.72 years.

Annual Coupon	4.0%
Capital loss per year	2.82% $(10.5\% \div 3.72 \text{ years})$
Net return per year	1.18% $(4.0 - 2.82)$
Average value of Investment	105.25% $(110.5 + 100 \div 2)$
Bond yield to maturity	1.12% $(1.18\% \div 105.25)$

The following chart shows the bond yields for various maturities of Singapore Government Bonds in June 2003. This is also known as the yield curve and is usually a normal upward sloping curve with longer maturity bonds offering higher yields than shorter ones.



## Yield Curve for Singapore Government Bonds



### CHARACTERISTICS OF BONDS

The bondholder is a creditor. If the issuer goes bankrupt, creditors are repaid first, before shareholders. Bonds are therefore regarded as less risky than shares.

When you hold a bond, you receive interest, or coupon payments. The coupon rate is expressed as a percentage of the principal, otherwise known as the “face” value of the bond. The face value of most bonds is \$1,000.

Bond prices are usually expressed as a % of face value. This is because upon maturity, bonds are redeemed at face value and bondholders get paid 100% of face value. For this reason also, bond prices tend to be more stable than equities as there is a fairly high level of certainty of what the value will be at maturity.

#### EXAMPLE

In 2000, the Land Transport Authority (LTA) issued a 15 year bond with a coupon rate of 4.81%. This bond will pay you interest of \$48.10 a year ( $.0481 \times \$1,000$ ) for every \$1,000 face value held. Interest is paid twice a year, so you will receive \$24.05 every six months for 15 years. The principal of \$1,000 will then be returned to you at maturity.

Bonds can be classified by type of issuer. The issuer is important for the bond's credit rating and perceived risk of default. The main categories of bonds are:

- **Government bonds:** bonds issued by governments of the developed economies are regarded as the most credit-worthy as there is little risk of default. Singapore Government Bonds are included in this category. The interest rates on such bonds are lower than other bonds of the same maturity.
- **Government Agency bonds:** these pay slightly higher rates than government bonds. This is because governments do not guarantee such bonds. In Singapore, the equivalent would be bonds issued by statutory boards.
- **Corporate bonds:** these bonds carry higher interest rates than government bonds because of their higher perceived risk. There are credit rating agencies that grade corporate bonds according to their credit-worthiness.

## DEFAULT RISK

Since a bond is no more than an IOU there is a risk that the issuer may default at some point before maturity. A default occurs when the bond issuer fails to pay interest on a due date or fails to pay bond holders the face value on maturity.

A bond issue with little or no default risk will trade at relatively low yields whereas one with higher default risk has to offer a higher yield to compensate investors for the risk. This again, is consistent with the risk-return relationship we explained earlier.

### EXAMPLE

SIA issued a 10-year bond in 2001 and the bonds are currently priced at 109.63% for a yield to maturity of 2.87%. This yield is 1.03% above the Singapore Government Bond yield curve and represents the default risk premium of SIA relative to the Singapore Government.

It should be noted, however, that bond defaults are rare occurrences in Singapore with the vast majority of bonds having been repaid on maturity.

In the large capital markets like the US and Europe most bonds are rated by credit rating agencies such as Standard & Poors and Moody's after detailed analysis and assessment of their default risks.

"Investment grade" bonds are those rated from 'BBB' to 'AAA', which is the highest rating. Bonds with rating of 'BB' and below are regarded as non-investment grade (sometimes referred to as junk bonds).

Not surprisingly the highly rated bonds offer relatively low yields to maturity whereas low rated bonds need to offer higher yields to compensate investors for the higher risk of default.

## **INTEREST RATE RISK**

Apart from default risk, the other main risk faced by bond holders is interest rate risk. To understand interest rate risk, you must realise that bond prices move in opposite direction to interest rates. This means that as interest rates rise, bond prices decline; as interest rates fall, bond prices increase. To understand why this is, consider the following example:

### **EXAMPLE**

You have a 10 -year government bond with a coupon of 5%. Suppose that interest rates fall and a new 10 -year government bond now offers a coupon of 4%. Investors buying \$1000 face value of this newly issued bond will get annual interest of \$40. They will be willing to pay more for your bond as it pays annual interest of \$50. In this case the price of your bond will rise to about \$1,070. This is the price which will bring the yield on your bond to about 4%. Conversely, if interest rates increase, the price of the bond will decrease.

The longer the life of the bond the more sensitive will its price be to changes in interest rates.



If you hold a bond till it matures, you may not be so concerned about fluctuations in its price expecting that at maturity, you will be repaid your principal. If its price has risen in the meantime you can sell it at a profit. On the other hand, the price may drop due to a sharp rise in interest rates.

The interest rate effect means that bonds do not do well in inflationary periods. This is because higher inflation leads to rising interest rates. For example, the Singapore Government 10 year bond is trading at 113% of face value for a yield to maturity of 1.90%. Should interest rates rise to 3% over 1 year, its price would fall to less than 104% of face value. Taking into account the coupons received during this period, this represent a total net loss of 5.4%.

Conversely, bonds often do well in recessions or slow growth environments when interest rates are falling or remain fairly stable.

### **WHY INVEST IN BONDS?**

Investing in bonds can meet a number of investment objectives. First, you can invest your long-term savings in bonds to earn higher yields than are available on cash equivalents. Second, bonds are suitable for people, like retirees, who want a regular stream of income. Remember, however, that if you want higher yields you will have to invest in bonds with higher risk. Third, bonds can sometimes hedge against deflation and periods of sluggish economic activity. They may help your portfolio weather times when stocks are not doing well.

### **HOW TO INVEST IN BONDS**

Unfortunately, individual investors usually find it difficult to buy bonds directly. This is because most bonds require a minimum investment of \$100,000. There have been some bonds issued by statutory boards allowing minimum investments of \$1,000. You would also have been able to apply for them through ATMs and retail bank branches. However, the amount of such bonds available to the public is small. For most investors, the only practical way to invest in local and international bonds is through bond unit trusts.



## **CONCLUSION**

You should not neglect investing in bonds. They offer higher yields than cash equivalents, and provide a regular stream of income. Bonds are also generally less risky than shares. However, if bond yields are low you need to consider the risk of bond prices falling should interest rates turn upwards.



# SHARES

This chapter explains why shares (also commonly referred to as “stocks” and “equities”) offer higher potential return than cash and bonds, why they are considered risky and how they can help you meet your investment objectives.

## **WHAT ARE SHARES?**

There are two types of shares - common shares and preferred shares. Of the two, common shares are what investors primarily invest in. Unless otherwise stated, the term “shares” in this chapter will refer to common shares.

Shares are securities issued by companies to raise capital from investors. In turn, the investors get a share, or equity stake, in the business. When you buy shares, you become a part owner of the company. Your stake in the company depends on the number of shares you own as a percentage of the total shares issued by the company.

## **CHARACTERISTICS OF SHARES**

As a shareholder, you can attend the company’s annual general meetings and vote on matters like election of the directors of the corporation. The number of shares you own will determine how many votes you have.

Shareholders, as owners, bear more risk than bond holders and other creditors if the company fails. They will only be entitled to income and assets remaining after payments to creditors, including bond holders. However, shareholders have limited liability in that they cannot lose more than their investment in the company. Creditors can only lay claim on assets of the company and not of shareholders.

In return for accepting higher risks, shareholders get to share in the company’s growth and profits. Thus, unlike bonds, shares offer greater upside potential.

Shareholders derive returns from the growth of the company in two ways. First, they may receive dividends. Dividends are paid out of the annual and retained profits of the company. The company usually does not distribute all its profits as dividends but will retain a percentage to be reinvested in the business. The reinvestment of earnings can foster growth of the company, benefiting shareholders through a rise in the share price as discussed below.

Second, shareholders have the opportunity to benefit from capital appreciation of the shares. This occurs when the company grows and its earnings increase. The company becomes more attractive to other investors, which causes its share price to rise.

As you are probably aware, however, share prices do not just move up but can also fall. Indeed, shareholders must be prepared for share prices to be volatile.

There are numerous factors that can affect a share price. To reiterate what we said in an earlier chapter, systematic risk factors are those that affect the market and include things like general economic conditions, changes in interest rates or a sudden adverse change in market sentiment. Non-systematic risk factors are however specific to the investment. Unlike systematic risk, non-systematic risk can be reduced by spreading your investments over a number of different shares.

Share prices react quickly to changes in any of these factors. Not only that, they also move in expectation of how developments will unfold. These expectations contribute to the volatility of shares.

Compared to bonds, shares show a wider range of returns. Of course, a lot depends on whether you have selected the right shares to invest in. You will need to invest time and energy to do your research before selecting which shares to buy. When you invest in shares you must be prepared to stand the emotional and financial stress during periods when your shares are performing poorly.

## **WHY INVEST IN SHARES?**

Historically, shares have been among the best hedges against inflation, protecting and enhancing the real value of savings.



### EXAMPLE

US financial markets have been among the most intensively analysed. The following show the average annual returns from different investments and inflation in the US between 1960-2001.

Cash Equivalents	5.9%
Government Bonds	7.2%
Shares	10.7%
US Inflation	4.4%

Source: Global Investment Return Yearbook: Dimson, Marsh, Staunton. Feb 2002.

Shares can also help you achieve a variety of investment objectives. Shares that pay high dividends can be a source of income. If you wish steady long-term capital appreciation, you can invest in large well-established companies that have good potential for earnings growth. Young companies or those in emerging economies may offer higher potential for price appreciation but may also be riskier in terms of their earnings volatility and corporate failures.

## COMMON WAYS OF VALUING SHARES

Professional investors use a variety of ways to judge the value of a share. We will briefly explain 3 commonly accepted methods that you might consider.

### Price-Earnings Ratio (P/E Ratio)

A company's earnings per share (EPS) can be easily determined by dividing its net profits by the number of common shares outstanding. By simply dividing the share price by the EPS, we have computed its price-earning ratio. For example, F&N reported net profit of \$0.86 per share in the financial year ended September 2002 and its share price was \$8.75 on 28 May 2003. The P/E ratio for F&N is therefore 10.2x. All other things being equal, investors prefer buying lower P/E ratio shares than high P/E ratio shares. A share's P/E ratio is influenced by many factors. Of these, probably the most important is investors' perception of earnings growth potential. High growth shares tend to

trade at higher multiples. Conversely, shares in mature low growth industries tend to trade at low multiples.

P/E ratios would also be influenced by the general level of interest rates in the country. When rates are high, P/E ratios tend to be low. Conversely when interest rates are low, the ratios tend to be higher. The riskiness of a company's earnings would also influence its P/E ratio. Obviously, the higher the perceived risks, the lower the P/E ratio and vice versa. In using P/E ratio, investors should be careful to rely on "normal" earnings or earnings which are largely recurrent and not boosted (or deflated) by some unusual occurrences. For example, SIA's earnings in the financial year ending March 2004 may be reduced by the SARS situation. On the other hand, Capital Land's earnings in 2002 were boosted by the sale of 3 shopping malls.

### **Price to Book (P/B)**

"Book" refers to the company's "book value" or its net asset value per share. A company's net asset value is the value of all assets minus all liabilities on its books. As at 31 March 2003, SIA had net asset value on its book of \$10.7bn. Divide this by the number of shares (1218 million) and we derive a book NAV of \$8.79 per share. Hence at a price of \$9.40, the P/B ratio is 1.07. Most shares trade at a reasonable premium to book value. The average P/B ratio for the 45 Straits Times Index component stocks (as at 30 May 2003) is about 1.2. High growth companies and highly profitable companies tend to trade at higher P/B ratios. The share of an electronic manufacturing company trades at 3.1 times book. This, however, may be justified as its earnings per share has been growing at over 20% per year and the company has been achieving a return of more than 20% on its book value in the last 5 years. On the other hand, the shares of a department store operator trade only on 1.3x book as its earnings growth rate over the last 5 years has been about 3% per year and its return on book value is only about 8%.

### **Dividend Yield**

A share's dividend yield is simply its yearly dividend per share expressed as a percentage of its current share price. An example of a high



dividend yield share is Robinson. In FY2002, the company distributed dividends of \$0.30 per share to shareholders. At a price of \$5.60 the share offers a yield of 5.4%. Dividend yield by itself however is not a sufficient indicator of a stock's attractiveness. Many high growth companies in fact do not pay dividends, preferring to reinvest their earnings in the business. A good example is the US software giant, Microsoft which has only started paying dividends in February 2003. Slower growth companies have less use for their earnings and distribute more of its earnings to shareholders.

When buying shares on the basis of dividends, it is important to assess the ability of the company to continue paying dividends in future. This would depend on the future profitability of the company as well as the dividend cover i.e. the ratio of the earnings to dividend per share.

### **Summary of Share Valuation Methods**

While these are commonly used methods to evaluate the attractiveness of a share it is important to look at all aspects and not rely on any one single measure of value. Besides looking at such basic valuation measures one also needs to assess various other factors such as the quality of management, its competitive strengths and weaknesses and the financial health of the company.

Many investors are attracted to shares because of the high potential returns available. Such returns can be achieved in a number of ways - dividend yield, earnings growth and P/E ratio expansion. As share prices are volatile and dividends generally more stable, dividend yields can over time contribute a significant portion of the total return from share investing. The risk for share investors is that earnings growth may fall short of expectations, P/E ratio can also contract and dividends cut. In Singapore, the average market P/E ratio for the Straits Times Index over the past ten years has ranged between 11 and 36 times.

To reduce risks, investors can choose to invest in a diversified portfolio of shares in different industries and spread their investments over time to avoid buying at extreme highs.



## **HOW TO INVEST IN SHARES**

You can invest in shares yourself through an account with a brokerage firm. Nowadays, you can also trade shares on-line. In Singapore, share investors must have an account with the Central Depository. It acts as a registrar and custodian of your shares.

If you choose to do it yourself it is advisable that you do some basic research based on information available such as the company annual reports, broker research and publications. The other way to invest in shares is through unit trusts. The next chapter will discuss unit trust investing.

## **CONCLUSION**

Investing in shares allow you to participate in the growth of companies. If the company does well, its shareholders enjoy dividends and capital appreciation of the stock. Share prices, however, are volatile because they are influenced by numerous factors. But, over the long term a carefully selected portfolio of shares can help you achieve significantly higher rates of return than bank deposits or bonds.



# UNIT TRUSTS

You may have already invested in unit trusts with your CPF or cash savings. For the average Singaporean, unit trusts are a practical alternative form of investment. You should therefore know what unit trusts are, what benefits they provide and how you can invest in them.

## **WHAT ARE UNIT TRUSTS?**

A unit trust pools money from many investors, which is then invested in a variety of assets in order to meet specified investment objectives. The pool is managed by a team of full time professionals and a trustee is appointed to protect the interests of unit holders.

You invest in a unit trust by buying units in the trust. The price of each unit is determined in relation to the trust's net asset value (NAV). This is the market value of the trust's net assets (investments, cash and other assets minus expenses, payables and other liabilities), divided by the number of units outstanding. The NAV is usually computed daily to reflect changes in the prices of the investments held by the fund.

## **TYPES OF UNIT TRUSTS**

Unit trusts can be divided into several categories depending on their investment objectives and focus. In general, they are divided into three main categories: shares, bonds, and balanced funds that combine shares and bonds. Some funds are invested in a single country, some in specific regions (e.g. Asia, Europe) and some even globally. There are funds that focus on specific sectors or industries such as technology and healthcare. In recent years, capital guaranteed or capital protected funds have become very popular. It is also possible nowadays to invest in funds that invest "passively". Such funds invest in the component stocks of a market index and thus require no skill or judgement on stock selection. Given the large number of possible choices, it is important that you select those that meet your investment objectives and risk tolerance.



If you invest in unit trusts, you have to pay various fees. There are fees that are one-off and mainly paid to the distributors of the fund. These are paid when units are purchased (“front-end” fees) and, sometimes, when units are sold (redemption fees). These fees are also called “loads” and can be as high as 5% of your initial investment in a unit trust. A 5% load means that for every \$10,000 you invest in a unit trust, \$500 will be deducted as fees. Only the remaining \$9,500 or 95% of your investment is invested in the fund.

In addition there are those fees that are recurrent in nature. The biggest of these would be the management fee paid to the investment manager for managing the fund. This is usually around 1% of NAV. Other fees include the trustee fee, registry fees, valuation fees and audit fees. Together these fees make up what is called the total expense ratio (TER).

The TER is usually between 1 to 2.5% of NAV. For your unit trust to grow in value it must first generate sufficient income or capital growth to cover the TER. Investors should find out a fund’s TER before deciding to invest in it.

## **EVALUATING UNIT TRUSTS PERFORMANCE**

There are three main ways of evaluating the performance of your unit trust. One is by looking at absolute returns, taking into account both the income received and price change. You can obtain information on total returns from the manager of the fund or from the IMAS/LIA Fund website. Normally, these returns are annualised so that you can examine performance over a number of years and also to enable you to compare performance of one fund relative to another. However, absolute return is not a sufficient measure of a fund’s performance.

The second way is to judge a unit trust’s relative performance by comparing it against its benchmark index. The difference, called excess return, is calculated by subtracting the benchmark return from the unit trust return. Most unit trusts have a stated benchmark against which its performance is measured. For example, the typical benchmark for unit trusts investing in Singapore stocks is the Straits Times Index. If the excess return is positive, the unit trust is said to have outperformed its benchmark. If it is negative, the unit trust has underperformed.



The benchmark index represents how the entire market performed on average. Comparing a unit trust's performance against its benchmark is a more useful measure of the skill of the fund manager. Other than passive or index funds which replicate the entire benchmark index, a fund should be expected, over a reasonable time horizon to outperform its benchmark.

Two unit trusts can have the same excess return over the same time horizon, yet performance may not be equal, as risk has not been taken into account. The third method therefore is to measure the performance of the unit trust relative to the risk taken. One widely used statistic is the **information ratio** which measures the excess return per unit of risk taken, with the latter measured by the volatility of the excess returns. If the information ratio is positive, it indicates the presence of some skill in the fund manager. A negative information ratio indicates that the fund manager has underperformed the benchmark return.

### **WHY INVEST IN UNIT TRUSTS?**

Unit trusts offer several advantages. First, you can select a fund or a combination of funds to cater to your specific investment goals and tolerance for risk. If, for example, you are nearing retirement and have low tolerance for risk, you can invest in unit trusts like bond funds or balanced funds. On the other hand, there are unit trusts that are suitable for investors looking for higher potential return and willing to accept higher risks.

Second, unit trusts allow you to invest in a diversified portfolio with a minimum investment of as little as \$1,000. For example, a unit trust with \$50 million in assets can hold hundreds of different shares. Unit trusts can also negotiate lower transactions costs such as brokerage charges.

Third, through unit trusts you can invest in securities that you may be unable to access as an individual investor. These securities include bonds that usually require a minimum investment of \$100,000. It may also be difficult for you to invest directly in overseas stocks whereas you can conveniently invest in a unit trust investing in international stock markets.



Fourth, funds invested in unit trusts are managed by professional fund managers and analysts. You can therefore benefit from their expertise and full time attention to investing the funds.

Fifth, buying and redeeming unit trusts is simple and convenient. You can get updated values of the price of your unit trust from the daily newspaper. Most unit trusts in Singapore allow daily buying and selling of units.

### **AREAS OF CONSIDERATION IN INVESTING IN UNIT TRUSTS**

Unit trusts offer significant benefits, but you should also be aware of the following points.

The variety of unit trusts available can be overwhelming. If you invest indiscriminately, you could end up with an assortment of unit trusts that do not match your needs. You must be clear about your investment objectives and then decide on the suitable unit trusts.

The fees you pay for investing in unit trusts can eat significantly into your returns. These fees may also include high transactions costs so investors should avoid trading frequently. You should inquire about the type and amount of fees applicable to a particular unit trust. If you do not need the services of a financial adviser, it is now possible to invest in a number of unit trusts online and pay lower front-end fees.

The selection of the manager is another important consideration. You will need to assess whether the fund manager has the resources, experience and skills to do a good job of managing the fund. Once the investment is made you still need to monitor the performance to see if it is meeting your expectations.

Good recent performance of a unit trust may attract you to invest in it. This may not be advisable however since it is difficult to judge consistency over a short period. Consistent good performance over a longer period is a better guide to the quality of the fund manager, but even then it must be noted that past performance is not necessarily a good indicator of future performance



## **CONCLUSION**

There are strong reasons why you should consider investing in unit trusts. Unit trusts provide diversification, enlarge your investment opportunities and allow you to tap the skills of professional fund managers. But, as with all investments, you should also make sure you are comfortable with all aspects of the product.



# ASSET ALLOCATION

Despite what many people think, one of the most important investment decisions you can make is not what particular stocks or securities you buy but how you allocate your investable funds to the various asset classes.

This chapter will explain what asset allocation is, the principles it is based on and how you can use it as an investment strategy. As you will see, asset allocation uses many of the ideas outlined earlier - for example risk and return, diversification and time (chapters 1-3) and our knowledge about the various asset classes (chapters 4-7).

## **WHAT IS ASSET ALLOCATION?**

Asset allocation is the process of deciding what percentage of your investable funds should be invested in cash, bonds, and shares. People often stick to the asset they are most familiar with and ignore the others i.e. they do not diversify their financial assets sufficiently. Studies have shown that what really makes a difference to a portfolio's returns and risks is not which shares or bonds were chosen but how much was invested in shares and how much in bonds. That is to say, the asset allocation decision is the main deciding factor determining a portfolio's returns and risks and can be much more important than the selection of individual securities.

## **MAKING ASSET ALLOCATION CHOICES**

The asset allocation decision is very important, but it can also be fairly complex. You may want to use the services of a professional Independent Financial Advisor, to help you with it. However, it is important to appreciate how you can arrive at an appropriate allocation. In this section, we examine some factors to consider when making this decision.



First, you will have to fix your broad investment goals. Common ones are capital preservation, capital growth, income or liquidity. Which is your over-riding goal? This will set the theme of your asset allocation strategy. For example, if capital preservation is your key aim, you can't afford to take too many chances. Investing the bulk of your savings in shares will not be suitable for you.

Second, you have to define your investment time horizon. That comes straight from your goals. Your broad goals can be related to specific ones like an education abroad for your children or saving for retirement. Each will have a definite time horizon. Your age is certainly an important factor. If you are in your thirties and plan to retire when you reach 60 your time horizon is roughly 30 years and an appropriate allocation in this instance may be 70% in shares and 30% in bonds. As explained in chapter 3, the more time you have, the more you can invest in higher risk assets like shares.

Third, know how high your risk tolerance is. Basically, this is the extent to which you are willing to see the value of your investments fluctuate and are even prepared for the possibility of losses. Risk tolerance is subjective and varies from one individual to another. If your tolerance is low, your portfolio would be dominated by bonds and cash instead of shares. You must then accept the lower expected returns such an allocation will deliver.

Fourth, to decide on a suitable asset mix, you need to know what risks and what returns to expect from the different assets and how they are correlated. Bear in mind that even investment professionals have difficulty forecasting returns and risks. It is therefore prudent to use realistic, rather than optimistic, expectations about returns and risks.

Fifth, remember that currencies fluctuate. Singapore is a very small economy and this limits the range of assets available for investment. To optimize the expected risk and return of your portfolio often means investing in assets abroad. However this creates an additional risk - that adverse movements in exchange rates can wipe out all your gains. A professional fund manager would lessen this exposure by hedging but this may not be easy for the personal investor to accomplish.

Finally, you combine all these factors to arrive at an asset allocation that addresses your investment objectives and risk tolerance. Different



investors will have different objectives and risk profiles. Therefore, an asset allocation suitable for one investor may not be suitable for you.

#### **EXAMPLE**

An investor's age is often the natural starting point in developing asset allocation guidelines. Investors in their twenties can afford more risk. They can hold a high percentage of stocks and smaller percentages of bonds and cash. Individuals in their fifties tend to be more risk averse as they are usually approaching retirement. They will now hold a higher percentage of bonds and cash than stocks.

The asset allocation you finally decide upon is your investment plan. Like all plans, your asset allocation has to be periodically reviewed as circumstances change. For example, you might switch careers or decide that you need more liquidity. Even if your personal position doesn't change, the markets are likely to. A prolonged weakness in the stockmarkets may result in an unintended redistribution of your holdings and you find yourself with less in shares than you wanted. You must then decide whether to keep to your existing allocations or rebalance them to their original levels.

#### **CONCLUSION**

The asset allocation decision is one of your most important investment decisions. To do that skilfully you will have to define your investment goals, time horizon and risk tolerance. The asset mix you choose will also depend on your expectations about the performance of the various assets and possible moves in the currency exchange rate. When you invest according to your asset allocation strategy, you will have a diversified portfolio that addresses your investment goals and which can weather different market conditions.



# CONCLUSIONS: TEN IMPORTANT POINTS TO REMEMBER

**1** Investing is important to all of us who have to plan for the future, have financial goals and desire financial security. You, therefore, have to give it the time and attention needed. It is your personal responsibility.

**2** When you invest, you expect a particular level of return. The actual return from the investment, however, may be more or it may be less than your expected return - this is the risk inherent in investing. You should also distinguish between gross returns and net returns after transactions costs and fees. Transactions costs eat into your returns, so avoid frequent trading.

**3** When considering an investment opportunity, balance the expected return with the risk you have to assume. There is no "free lunch" in investing. Investments offering higher potential return also entail higher risk. Likewise, a capital guaranteed fund is unlikely to also provide high returns. Therefore, do not be attracted to an investment just because it promises a particular level of return. Can you also bear the risk accompanying that investment?

**4** Diversification is an important investment strategy you can use to manage risk in investing. You can diversify by investing in different assets and in different securities. You should also consider investing in international, as well as local markets in order to take advantage of the broader set of investment opportunities available.



**5** Start investing early to meet your financial goals. The longer the time you have, the more you can use the power of compounded returns to grow your savings. It also allows you to invest in assets like shares, which are riskier in the short term but could give higher returns over time.

**6** Cash investments are liquid and offer safety of principal. They are useful as emergency funds. They also help insulate your portfolio in times of market uncertainty. However, cash gives only modest real returns. Leaving too much of your funds in cash will inhibit the real growth of your savings.

**7** Do not overlook bonds as an investment option. Bonds can provide a regular stream of income. Bonds however are a poor hedge against inflation.

**8** Historically, shares have provided among the best real returns of all investments but are also among the most volatile in the short term. When you invest in shares you must have a long enough time horizon and the risk tolerance to withstand the periodic fluctuations in the stock markets. The evidence, though, is that over time, investors holding shares are rewarded through capital growth. However, you do need to invest time and effort in doing thorough research in selecting and monitoring the shares to invest in.



**9** Unit trusts can offer many benefits to investors. The most important one is you gain access to professional management. With as little as \$1,000, investors can invest in a diversified portfolio of local or international securities managed by full time professionals enabling you to invest in securities that you might not otherwise have access to as an individual investor. However, you have to pay various fees to invest in unit trusts. You need to do some basic research in order to select the right unit trusts as well as the right fund manager.

**10** Deciding on asset allocation is more important than deciding what shares or bonds to buy. Asset allocation stresses diversification through investing in various asset classes. To decide on the asset allocation suitable for you, you need to consider your investment goals, your time horizon, your risk tolerance and the expected returns and risks of different assets. If necessary seek professional advice to decide on an appropriate asset allocation.




## **The Investment Management Association of Singapore**

The Investment Management Association of Singapore (IMAS) was established on 22nd September 1997. IMAS currently has over 100 members. Its membership roll includes all of the major investment management firms in Singapore.

IMAS's objective is to contribute towards the development and growth of the investment management industry in Singapore. It aims to do this by fostering high standards of professionalism and promoting exemplary practice among its members, providing a forum for its members to discuss industry related issues, serving as a collective voice where representation is needed on behalf of the industry, facilitating training for its members, and contributing towards investor education.

For more information about the Investment Management Association of Singapore, please visit our website at <http://www.imas.org.sg>



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