

# 1

## *An Overview of Finance*

### CHAPTER OBJECTIVES

Having studied this chapter the student will be able to:

1. appreciate the objectives of financial management
2. understand the role of the financial manager
3. distinguish between the different forms of business organisations
4. understand the concept of shareholder value
5. recognise that ethical business behaviour will have long-term profitability gains
6. appreciate the importance of interest rates
7. understand the factors that affect the level of interest rates
8. explain the yield curve.

### INTRODUCTION

Reading the quality newspapers on a day-to-day basis one notices a staggering amount of information on finance. We see news reports about companies taking over other companies, companies issuing their end-of-year financial reports, football clubs negotiating contracts with players, governments selling off utilities and supporting their currencies, and many more. All of these business stories involve finance and the amount of money involved is quite staggering. People involved in organisations must understand the basic principles of financial management.

This chapter introduces the fundamental principles of finance – recognising that finance also involves the study of investment markets. For example, if one works in the money and capital markets dealing with stocks, bonds, mutual funds, pension funds, etc., a sound understanding of financial management is necessary because investments of this nature will require an understanding of the financial performance of the firm. In addition, investment advice from stockbrokers to their clients presupposes an understanding of financial management. Furthermore, financial managers will require an understanding of how markets view companies and how security prices are set.

The basic theme running throughout this text is value creation. The emphasis is clearly on valuation and its companion, net present value. Net present value (NPV) represents the excess of market value over cost and is what creates wealth and value. If the market value of an investment is greater than its cost then value is created. Consequently, NPV is treated as the most fundamental principle in finance.

### 1.1 What is finance?

Finance is about managing money. You can readily appreciate this if you think of the basic issues to be considered in setting up a business. Your first consideration (after you have put your business plan together) will be to determine how much cash you will need to finance the business. This is the budgeting process, which involves assessing the firm's long-term investment projects. It is at this stage that we begin the discussion on the most fundamental principle in finance – net present value (NPV). Investment projects are undertaken when their market value is greater than their cost. This will involve an assessment of the future timing and risk of future cash flow generated by these investments. We develop these themes in detail throughout this book.

You will then need to consider where this cash will come from, i.e. will you have sufficient savings of your own to fund the operation or will you need to bring in outside investment in the form of a partnership or loans from financial institutions? This is the **capital structure decision**, which is crucial for the financial manager to get right if he/she is to maximise the return on investment to the owners.

Managing the day-to-day working capital (stock, cash, debtors and creditors) will absorb considerable time, but decisions made here will have a huge bearing on the company's profitability and liquidity. These issues are discussed in the chapters on **working capital**.

There is however one overriding consideration included in all of these decisions (budgeting, capital structure and working capital), and that is that these investments must be managed in a way that maximises the owner's wealth. We discuss this briefly next.

### 1.2 The role of the financial manager

While the role of the financial accountant in firms is to provide a profit and loss account (an account of the profits or losses over the recent past) and a snapshot of the fiscal position of the firm's assets and liabilities recorded in the company's balance sheet, the role of the financial manager is quite different.

Although the function of the financial accountant is an important one, the information provided is historical. However, since the value of all assets is the extent to which these assets can generate cash flows both now and in the future – companies only succeed by looking to the future. This is the role of the financial manager and it involves making decisions that affect the future of the firm. This involves assessing long-term investment projects, how these projects are funded and an assessment of the day-to-day working capital requirements. The primary role of the financial manager is to make these investments while adding value (wealth) to shareholders.

### 1.3 Maximising shareholder value

Emanating from the US in the 1990s and increasingly taking a foothold in Europe is the concept of value creation. Shareholders are the owners of corporations. They elect directors who in turn appoint managers to run the company. It seems reasonable that shareholders will want managers to manage the company in such a way as to maximise

shareholders' wealth. The wealth of shareholders is the number of shares they hold multiplied by the market price of the share. Therefore shareholder value maximisation means maximising the price of the company's shares. It is not surprising therefore that a system of compensation packages which remunerate managers and employees based on value creation has developed. We will return to this concept and look at how we can best calculate value added in later chapters.

Nevertheless, the idea that maximising shareholder value should be the sole consideration in business seems insidious. Surely there are other and perhaps more important goals of business, such as the maximisation of employee welfare, and the reduction of pollution. Proponents of value creation will insist that maximising share price benefits everybody in society and society itself.<sup>1</sup>

Share ownership is increasing because of the proliferation of growth in pension funds, life insurance companies and unit-linked funds. This is why, particularly in the US, pension funds and mutual fund managers are seeking out companies that are adopting shareholder value added financial systems. With the advent of the internet and e-commerce more and more individuals are trading in stocks and shares online, sometimes for very short periods such as a day (day trading). Around the world share ownership is increasing because of government commitment to the privatisation of public utilities. Therefore, because more and more people are now becoming shareholders, maximising share price can increase the wealth of many more people.

#### 1.4 What maximises share price?

The value of a share, indeed the value of any financial asset, depends on the ability of a company to generate cash flows both now and in the future. In finance, 'cash is king'. Cash is what is used by companies to invest in value-creating projects and to pay dividends.

**Shareholder value is maximised by generating cash flow and not necessarily by maximising profits.** The remuneration package of company executives will depend on how successful they are at maximising shareholder value. **Profit maximisation should not necessarily be a goal of financial management.** For example, developing a new product may involve a lot of time, money, risk and effort. It will reduce short-term profitability. However, if the future cash flows of the project are more than enough to offset the initial capital outlay, then shareholder wealth will increase. Concentrating on short-term profitability may destroy shareholder value.

The **timing** of cash flows is also important in enhancing shareholder value. Cash received sooner is more valuable because it can be reinvested in the company to generate more cash or paid to shareholders as dividends.<sup>2</sup> Finally, investors will pay more for shares that are less risky. Therefore reducing the **riskiness of the expected cash flows** can enhance share price (shareholder wealth).

To summarise, maximising shareholder wealth means maximising share price. The price (or value) of a share depends on:

1. the ability of the company (i.e. share) to generate cash flow
2. the timing of these cash flows
3. the riskiness of these cash flows.

Therefore to maximise share price (i.e. to maximise shareholder value) requires:

1. generating as much cash flow as possible
2. getting these cash flows into the company as quickly as possible and
3. doing all this while minimising risk.

### 1.5 What doesn't maximise share price?

Shareholders appoint directors who in turn appoint managers. Managers act as agents for owners. Managers are assumed to make decisions that enhance shareholder value. Sometimes, however, managers make decisions that suit themselves at the expense of shareholders. Agency theory deals with the conflict of interest between managers and their shareholders, and between shareholders and creditors. Agents work on behalf of others. The people agents represent are called principals. For example senior management and the board of directors of the Smurfit Group act as agents for their shareholders or principals. The directors and management have a legal and ethical responsibility to enhance their shareholders' interests, i.e. shareholder value. An agency cost is any benefit a manager receives from a company that is not part of the manager's remuneration package and which does not enhance shareholder value. For example agency costs may include golf in the afternoon, fancy offices and the use of luxurious company cars where smaller, less expensive ones would do, the use of company helicopters and perhaps jets (see Box 1.1).

Another example of an agency cost is managers deciding not to embark on projects that are risky, even though such projects may be potentially lucrative if they pay off. Managers will have a lot more to lose (they may lose their jobs) than individual shareholders who may have only a small proportion of their capital tied up in the company. Agency costs also include the expenditure incurred by shareholders designed to investigate and control managerial actions, such as audit costs on internal control. In addition, agency costs involve the appointment of outside specialists to the board of directors in order to limit and control the actions of managers. Controlling agency costs is difficult, particularly for large companies where individual shareholders will not have the power to control managers who are not acting in the best interests of their shareholders. There are a number of ways that agency costs can be reduced:

1. One way to reduce agency costs is the threat of takeovers. A **takeover** is likely to replace inefficient and wasteful managers. If managers are only interested in **lining their own pockets** at the expense of shareholders, the threat of a takeover is likely to ensure that such managers will be replaced after the takeover.
2. **Stock options** may be a means of synchronising the interests of managers with those of shareholders. Stock options are increasingly becoming a part of employee and management remuneration packages. Managers are more likely to act in the interest of shareholder wealth maximisation if they are themselves significant shareholders.
3. Finally, **pension fund managers** who control large blocks of shares in companies can take action to deal with the agency problem:

- (a) Action against managers of companies (in the form of advice, or the imposition of outside directors on the board of management) if their actions are in conflict with shareholders' interests. This is the best course of action for fund managers to take.
- (b) They could exit the market by selling their shares in the company. However, because they hold such large portfolios of shares, selling those shares would depress the market price.

### Box 1.1 Top Irish executives take home world-class salaries

Ireland's publicly quoted companies might be small by international standards but their top executives take home salaries and bonuses on a par with their global peers, according to a survey just published.

A new report from Hewitt Associates shows that the directors of Ireland's quoted companies achieved an average 12 per cent rise in their basic pay last year, and a 'staggering' 30 per cent increase when bonuses and other benefits are included.

By comparison, the average rate of increase on fixed salaries for executives in the US was about 4 per cent, while the European figures ranged from 3.5 per cent to 7.5 per cent depending on the country.

The figures were compiled up to May 2008 and are sure to stir debate from shareholder groups and pension funds about the level of pay increases awarded to directors here.

The average remuneration for the highest paid director – usually the chief executive – was €1.3 million, according to Hewitt's analysis.

Hewitt avoided listing out the individual payments made to all directors of Irish plcs but it said the average total remuneration paid to directors ranged from €496,000 for the lower quartile of the 69 companies surveyed to €2 million for the upper quartile.

This reflects the different size of the companies, according to Hewitt.

Hewitt director Rachael Ingle said the pay increases were high by international standards but added that they were likely to moderate significantly this year given the economic downturn.

'Our expectation would be that it will come down again to 5 or 6 per cent for fixed pay this year,' she said. 'There's going to be significant pressure in the current economic climate.'

Hewitt found that about 40 per cent of a director's pay is now made up of bonuses and performance-related payments.

This percentage is about 50 per cent for the larger cap companies and about 15 per cent for the market tiddlers.

Hewitt's research shows that more and more Irish public companies are now opting for long-term incentive plans for their executives instead of share option schemes.

About 35 per cent of the companies now use LTIPs to reward directors compared with 20 per cent in 2006.

The LTIPs generally involve the issuing of free shares if certain targets are met, while share options involves granting stock at an attractive price which vests at a date in the future.



The decline of stock market valuations over the past couple of years has resulted in many stock options now being under water, and therefore less attractive as a motivational tool for executives.

A change in accounting standards in recent years also forced companies to calculate the cost of the share options and list that figure in their accounts.

'Hewitt believes LTIPs are a better mechanism for reward,' Ingle said.

'Not only are they more cost effective but they also offer more value to shareholders concerned about dilution of shares.

'They more accurately reflect business performance outside market trends, offering more positive returns for the employee. We expect to see a greater shift towards LTIPs over the next few years.'

Aer Lingus chief executive Dermot Mannion has benefited from an LTIP scheme and executives at IAWS have been offered a 10-year scheme following its merger with Swiss food group Hiestand.

While CEOs and other executive directors achieved double-digit increases in their salaries, Hewitt's study found that non-executive directors got an average rise of 6 per cent while executive chairman were given an average 5 per cent boost in fees.

More than 25 per cent of Dublin listed companies granted share options to non-executive directors, a practice that is frowned upon in the UK as being against corporate governance best practice.

Ingle said this probably reflected a US influence at some of the companies listed here, given that the practice is more common across the Atlantic.

'In the US it's standard practice so maybe some of the Irish companies are taking their influence from there and some are taking it from the UK, where it's not seen as good practice,' she said. 'It's a mix of influences at play.'

Hewitt's survey illustrates the pecking order among executive directors. Finance directors (FD) generally get about two-thirds of the pay awarded to the CEO with the next layer of director getting about 60 per cent.

'The chief operating officer seems to be coming more to the fore than in the past and a lot of companies seem to be equalising their [COOS] pay with the FD, who traditionally would have been considered the number two,' she said.

'In the US, the culture is very different. The CEO is the emperor and the difference could be three to five times that of the next best paid director.'

According to Ingle, Irish directors are paid more than their equivalents in the UK, when the relative size of the company is taken into account.

'They're bigger fish in a smaller pond here,' Mr Ingle said. 'It's a smaller market with a smaller pool of people so Irish companies have to pay more to get the right people.'

Called the *Report on Irish Directors' Remuneration 2008*, the study looked at the pay of directors at all 69 Irish listed companies, including those on the IEX junior market.

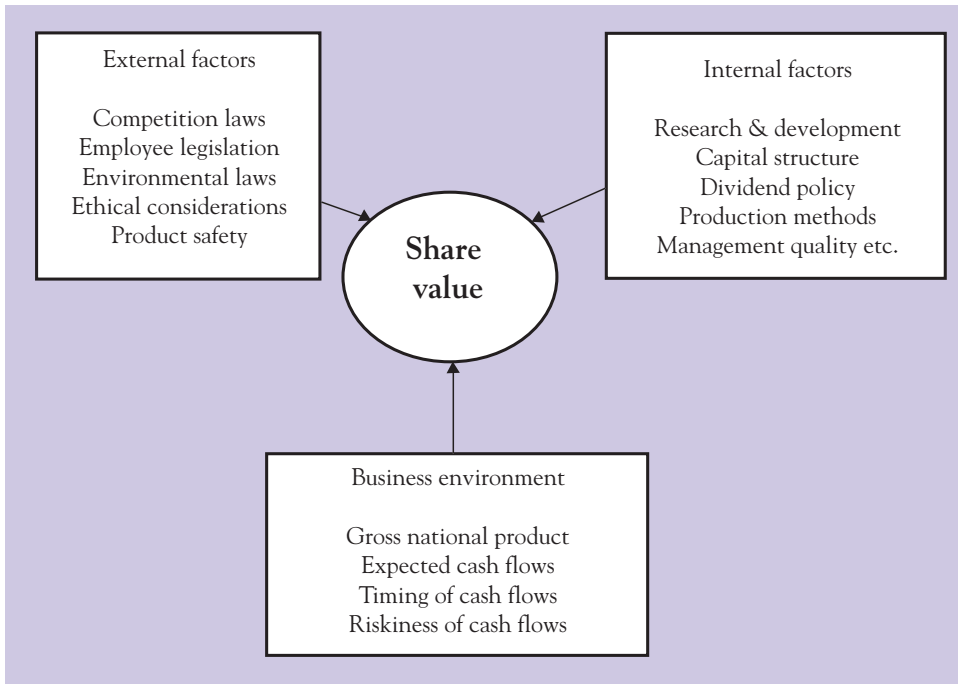
The report found that earnings per share is no longer the only means used to measure performance.

Return on capital employed and other measures are now being used by public companies here.

*The Irish Times*, 22 August 2008

Figure 1.1 illustrates the major factors affecting share prices. These are broadly divided into **internal** and **external** factors, and the impact of the business/economic environment.

**Figure 1.1 Major factors affecting share value**



## 1.6 Summary of key paradigms

### 1.6.1. Risk *v* return

We live in a risky world. By crossing the road we run the risk of being knocked down by a car, a bus or a cyclist. If we want to avoid any chance of being run over by traffic we could stay indoors all our lives. Doing this increases the risk of dying younger because of a lack of exercise. Risk is the chance that some unfavourable event will occur. The old saying 'A bird in the hand is worth two in the bush' goes to the heart of understanding human nature. We all prefer to have things now rather than later. To sacrifice consumption today we will require a greater amount of consumption in the future. You will need more in the future if you are to delay current consumption. The extra consumption demanded is the real rate of interest. This real rate of interest excludes the effects of inflation. Risk-averse investors tend to avoid additional risk unless they are compensated for taking on the additional risk. This is the risk–return relationship. To get a return greater than the real rate of return, an investor will incur more risk. No investor would buy a risky security if they were not compensated for the risk. This is why asset returns must fluctuate with risk. Because many securities have more than the risk-free amount of risk, the only way that these securities can be sold is to offer a higher amount of interest.

### 1.6.2 *The time value of money*

Money received today is worth more than money received in the future. Which would you prefer: €100 today or €100 in twelve months' time? Not a difficult decision to make. The value of an asset is the present value of the cash flows that asset generates both now and in the future. An investment is worthwhile if the present value of these cash flows is greater than the initial cost of the investment.

### 1.6.3 *Asymmetric information*

In business, if everybody knows the same thing then both investors and managers have the same information. This is called **symmetric information**. It assumes that investors and insiders have the same information. However, this may not be the case. Insiders (managers) will often have better information than that which outsiders (investors) have. This is called **asymmetric information**. An insurance agent, for example, who sells car insurance may not know the extent to which the car owner will take the necessary steps to protect his car against theft. It is also reasonable to assume that the insiders (managers) of an organisation will have different information about the future of the firm than outsiders. This will have important implications for the capital structure of the firm – the proportion of debt and equity in the capital structure. To illustrate the point, consider two firms. Firm A has a new investment opportunity that will increase the value of the firm. Firm A managers believe that this new investment opportunity will generate cash flows, the present value of which will be greater than the cost. Hence a positive NPV project. To fund this new investment opportunity Firm A will need to raise new capital. How should it raise this capital? Suppose it funds the new investment by selling shares. When the profits from this investment materialise the new investors will share in the wealth creation. If the firm had not issued new stock the original shareholders and managers would get to keep all of the profits created themselves. Therefore, asymmetric information explains why firms with positive future prospects should avoid selling shares and instead fund investments with debt capital or internal sources of funds. So, a company that has financing options and decides to issue debt to fund an investment sends a signal to the market that its prospects are good and its stock price will rise.

### 1.7 *Ethics in business*

Ethical issues challenge the function of business and financial management. These include the civil rights of employees and consumers, environmental pollution concerns, workplace health and safety issues, ethical responsibilities of management towards shareholders, fair employment opportunities, product safety, ethical advertising standards, bribery and corruption and insider dealing.

There is a fundamental shift throughout the world to have big business incorporate ethical issues in their investment policies. A move in Britain to have pension fund trustees look beyond a simple narrow financial focus will have repercussions in Ireland (see Box 1.2).



### Box 1.2 Ethics takes centre stage in pension market

The business and financial world has recently become the target for campaigners, sometimes violent, who do not like what it does with its power and money.

Last year witnessed increased opposition to big business at a number of points throughout the world, including the well-organised demonstrations at the World Trade Organisation in Seattle as well as more violent bomb threats against investors in certain companies.

While these activists hit the headlines, a much more fundamental and peaceful shift is underway behind the scenes particularly in Britain. We in Ireland would do well to take notice of emerging developments.

From 3 July this year British pension fund trustees will have to move beyond their traditional, narrow financial focus and inform their members about the ethics that lie behind their investment policies.

The significance of this development should not be underestimated. Already the largest fund management groups are organising to monitor companies they invest in on issues ranging from energy use to labour conditions in their factories. It has been predicted that stg £100 billion of pension fund money will soon be invested according to some kind of ethical criteria.

Most major consulting actuary firms have already set up teams to look at socially responsible investment (SRI).

Also, all the major institutions are now trying to decide how to provide these services to their customers.

The impetus for this dramatic development came originally from local authorities and others concerned about where their members' savings were going. For years, such pension trustees were reading about whether they were legally allowed to discriminate between the company investments on anything other than financial grounds. The traditional view was that trustees' fiduciary duties prevented them from worrying about what the companies were doing, or how they were doing it.

The only issue to guide investment decisions was supposedly the duty to maximise financial returns for members.

During the 1990s this dictum was diluted. While trustees still had to look after members' money as best they could, as long as financial returns were not threatened they could discriminate on social and environmental grounds.

This approach mirrored the traditional ethical investment stance avoiding activities such as arms, tobacco and alcohol manufacturing, and gambling.

But the new pensions regulation moves the argument on well beyond that exclusionary approach to what has become known as 'engagement'.

Following an amendment to the 1995 British Pensions Act, trustees must declare, in their annual statement of investment principles: 'The extent (if at all) to which social, environmental or ethical considerations are taken into account in the selection, the extent and realisation of investments; and their policy (if any) directing the exercise of rights (including voting rights) attaching to investments.'

Ministers have made it clear that this is not intended to drive investments away from unpopular sectors. Instead it is based on two notions: the right of pension scheme



members to know where their money is being invested; and the view that responsible businesses will be more profitable in the long term. This latter view is reflected in the ethical statement which has been drawn up by Hermes, the investment manager in charge of BT's stg £29 billion fund which is the largest in Britain and the first leading company to respond to the new regulation.

BT's fund managers will be required to consider that 'the company run in the long-term interests of its shareholders will need to manage effectively relationships with employees, suppliers and customers, to behave ethically and to have regard for the environment and society as a whole'.

This injunction is similar to the approach to be taken by the third largest British fund, the University Superannuation Scheme.

The US finally caved in last December after a long campaign by its lecturer members, and agreed to 'engage' companies about their non-financial policies and performance.

Other funds would follow suit over the next few months, but it will be some time after 3 July this year before the full impact on the business world is felt.

It is expected that trustees are taking the view that they need to respond positively to this development. They will need to because they will be targeted by dissatisfied members if they stick to the position that ethics have no place in fund management. And in the nervous world of pensions, there is also likely to be concern in some trustees' minds about their legal liability if members can be shown in a few years' time that funds which do take ethics seriously have performed better.

As a result, chief executives and finance directors are going to find themselves facing questions about their carbon dioxide emissions and human rights policies – not from campaigners whose job it is to go on about these things, but from pension fund managers.

For years companies have complained that market pressure for short-term results prevented them from taking environmental and social issues more seriously. Chief executives have frequently promised that they would be able to improve their green performance if only analysts and fund managers understood the issues and the importance of addressing subjects such as global warming or Third World labour conditions.

This argument will no longer apply. There might be some concerns regarding costs in that adding new dimensions to investment managers' research responsibilities will clearly add to costs at a time when the industry is seeking to pare expenses in pursuit of better returns for funds.

However it is possible to track indices which take account of ethical issues. And since the end of last year, investors have been able to follow the Dow Jones Sustainability Index, comprising international companies leading the field in pursuit of sustainable development. Also, while remembering that the new regulation is supposed to be about engagement, fund managers should continue to raise social and environmental issues in routine company meetings along with more mainstream issues such as investment, cost-cutting and dividend policy.

The new pensions regulation in Britain will make trustees take social and environmental issues seriously. This is clearly a welcome development in a world that is becoming increasingly conscious of the environment.



While there are a number of smaller-scale funds operating within Ireland that could be described as socially and environmentally responsible, the fact is we have not yet become alive to the demands and the opportunities such a departure will present. A new challenge has now been posed to fund managers and indeed government in Ireland to keep abreast of these exciting initiatives.

Roger Acton (head of ACCA Ireland), *Sunday Business Post*, 7 May 2000

There have been many examples of unethical business behaviour. Many of these have involved the collusion of the world of politics and business. In the late 1990s the Irish Government set up several inquiries to investigate unethical practices. These included how some of Ireland's financial institutions were involved in successful attempts to allow some investors to avoid paying deposit interest retention tax (the so called DIRT Inquiry presided over by the Dáil's Public Accounts Committee). (See Box 1.3.)

### Box 1.3 Learning to recognise the law and ethics divide

Always tell the truth. That way you don't have to remember anything, declared Mark Twain.

The often contradictory memories of events recounted to the different tribunals and inquiries in Ireland suggest some witnesses have failed to take Mark Twain's advice.

An interesting example is the inquiry by the Dáil Committee of Public Accounts into DIRT. Did or did not AIB Bank have a tacit agreement with the Revenue to ignore a tax liability of up to €127.1 million? As the cat and mouse game between politicians, bankers, Revenue and barristers is played out, it is obvious the issue is being treated primarily as one of legal compliance, rather than of value systems and integrity.

Even if AIB had an amnesty from the Revenue, does that excuse its behaviour and attitude? The crux is that AIB, indeed all the banks with bogus foreign accounts, aided and abetted tax evaders. With or without Revenue agreement, their behaviour could be deemed unethical. This is the core issue, even if there is room for argument about personal responsibility of those involved.

The explanations – indeed justifications – of the behaviour of the banks and their bogus account holders typify the rationalisations often heard when unethical choices have been made: for example, 'everybody else does it' or 'if we don't do it, someone else will'. Defence of unethical behaviour on the basis of its frequent occurrence or that you will lose out to a competitor is not acceptable ethical reasoning.

'It doesn't really hurt anyone' is another justification. Tax evasion, social welfare fraud and false compensation claims fall into this category. This is because the victims of these transgressions are usually faceless, for example Dublin Corporation or insurance companies.

'The system is unfair' – tax evasion in the 1980s has been justified by way of the 'crucifying' tax rates prevailing at the time. Moreover, those who facilitated bogus foreign accounts to evade taxes have actually defended this practice on the basis that there would have been a flight of capital out of the State had they not acted as they did.



‘We’ll wait until the lawyers tell us it’s wrong’ – the philosophy of those appearing before the different inquiries with their teams of legal advisers. This attempts to equate law with ethics, not always a perfect match. There are many situations where behaviour is perfectly legal but totally unethical, for example, when banks forgive large debts or influential debtors under political pressure but relentlessly pursue smaller less powerful debtors, the moral reasoning used is at a low level.

In fact, an element considered to influence ethical judgment and action is the maturity in moral reasoning attained by the individual. Lawrence Kohlberg, an American psychologist, has devised a theoretical framework that describes development in moral reasoning.

Kohlberg’s theory consists of six stages of moral reasoning. The stages are sequential and invariable in their order.

At the first two stages, the person accepts good/bad or right/wrong as being externally imposed by some authority figure. In childhood, it is the parents, in adulthood, it may be the boss. At the first stage, the person ‘has a punishment and obedience orientation’ and does what is expected by the authority figure to avoid punishment. In business life, this childish orientation is paralleled by the mentality that nothing is wrong if you can get away with it and avoid punishment.

At the second stage, ‘instrumental purpose and exchange’, the individual has stepped outside him/herself to an awareness that others too have needs. In fact, the person realises that s/he can trade in the satisfaction of these needs. For instance, an employee can be encouraged to sell high margin but unsuitable products to a vulnerable class of customers. The seller might make a high rate of commission. At this development stage, the incentive of the remuneration is the main consideration of employee and employer.

At the third and fourth stages, the individual takes up group expectations as standards of moral behaviour. Conformity to the norms of one’s family, or social, professional or ethnic/national groups is given as the reason for choosing one behaviour over another.

At stage three, ‘good’ behaviour is used to gain approval from those to whom one has an emotional or social dependency relationship. This involves the mutual maintenance of trust, loyalty, respect and gratitude to consolidate such relationships. At stage three reasoning, an employee may mis-sell products under the direction of a manager in order to retain good working relationships with the superior, and with peers engaged in the same practice for the same reasons. Of course, these practices might be disapproved of by those outside the workplace, creating a conflict of moral judgment.

In stage four, the basis of approved behaviour moves to obligations to society and the common good. The rationale for moral behaviour is to keep the institution going, to avoid a break-down in the system ‘if everyone did it’. Those who have reached this stage might refuse to mis-sell products because it could harm consumers and thereby, society.

The fifth and sixth stages involve ‘principled thinking’, when people see beyond law for the sake of law and order, or social norms. Instead, principles guide moral behaviour. At stage five, the emphasis is still on rules and laws, but these should protect people’s rights. So, an employee refusing to mis-sell products at this point would justify the refusal on the grounds that it violates the rights of customers to know the full truth.



Stage six thinking appeals to universal ethical principles. These tend to be abstract, dealing with justice, equality of human rights, respect for the dignity of human beings and the concept that human beings are ends in themselves, not instruments. At this stage, the person will have the insight to grasp complexity, the existence of conflicting principles, and the difficulty of resolving them.

For example companies setting up in countries where child labour and corruption are rampant have a conflict between providing indirect support for regimes which violate human rights and freedoms, and providing a livelihood, food and shelter for the citizens of those regimes.

According to Kohlberg's research, fewer than 20% of the population achieved principled thinking; most stop at stage five.

Kohlberg considers the higher stages morally preferable to lower ones. Of course, a high moral reasoning level does not guarantee moral conduct, since other factors, such as personality and organisational culture, influence behaviour. But research studies have found a moderate relationship between lower moral reasoning stages and behaviour, ranging from delinquency and fraud, to cheating at exams.

Moral reasoning stages are measurable through psychometric tests, although they are rarely used as an assessment instrument in Ireland. Had they been used, who knows? The Irish taxpayer might have been deprived of the hours of riveting entertainment showing at all the tribunals and inquiries.

Dr Eleanor O'Higgins (UCD), *The Irish Times*, 1 November 1999

At the time of writing, there is an ongoing tribunal of inquiry into payments made to politicians in the planning process. Elected county councillors have the power to zone designated lands for commercial and residential development.

While these have all been high-profile cases, companies and management must be made to understand that **ethical business behaviour can have long-term profitability gains**. It will avoid the possibility of hefty legal expenses, gain more business from customers who support ethical business policies, and it will attract high-calibre employees.

## 1.8 Forms of business organisation

There are three main legal forms of business organisation: sole proprietorship, partnerships and limited liability companies.

### 1.8.1 Sole trader

Sole proprietorship is the most prevalent form of business organisation in Ireland and around the world. This is a business formed and owned by one individual. The general features of sole proprietorship are:

- It is independent, easily and inexpensively formed.
- It avoids corporation tax and profits are taxed at the rate of personal income tax.
- There are no requirements under the Companies Act for disclosure to the public of its accounts.

- It has the limitations that it doesn't have access to large sums of capital and has unlimited liability.
- The life of a sole proprietorship is legally limited to the life of the founder.

### 1.8.2 Partnership

A partnership exists whenever two to twenty persons carry on a business with the view of making a profit. It has the following characteristics:

- Partnerships can be formal when formed under a written deed of partnership, or informal oral agreements.
- It can easily be formed and is relatively inexpensive.
- The liability of the partners is unlimited.
- It can be in two forms: (a) **general partnership** where each partner contributes an agreed amount, and (b) **limited partnership** where some of the partners are liable for all the debts of the firm and other partner(s) are liable only for their financial contribution to the firm.
- General partnerships can be dissolved after a fixed term or after the completion of a specific venture for which the partnership was set up in the first place, the bankruptcy or death of a partner, legally on the grounds of insanity, misconduct of a partner, or viability of the business. Limited partnerships cannot be dissolved on the death, bankruptcy or lunacy of a limited partner.
- Profits are taxed at the appropriate income tax rate.

### 1.8.3 Limited liability company or the corporation

A limited liability company is a legal entity separate from its owners. The formation of a limited liability company takes the following form:

- The articles of association: The rules governing the organisation are set out by the owners in a contract known as the articles of association. These govern the internal workings of the company. They set out the relative rights and duties of the management of the company and its shareholders. The main elements of the articles of association include:
  - (a) the authorised share capital of the company and its division into shares
  - (b) the voting rights of these shares
  - (c) powers of directors
  - (d) meeting of the shareholders and procedures at such meetings.
- Memorandum of association: The document governing the relationship between the company and others is set out in the memorandum of association. The main contents of the memorandum are:
  - (a) the name of the company. If the company is a public company, the words **public limited company (plc)** should be included in the name. If it is a private company the word **Limited** or **Ltd** should be included.
  - (b) the main areas of activity in which the group intends to operate

- (c) the authorised or nominal share of capital
- (d) a statement that the liability of the members is limited.

These documents, together with a list of the directors, are sent to the registrar of companies, and if everything is in order, he/she will issue a certificate of incorporation.

The fact that the corporation is a separate legal entity (from its owners) means that it can have unlimited life and will continue after the life of its owners. Transferability of ownership is easier than in a partnership or a sole proprietorship because the ownership of a limited liability company can be divided into a number of shares which are more easily transferred. Easier transferability of shares improves liquidity, which means that it is easier to convert shares (assets) into cash. The liability of a limited liability company is, as the name suggests, limited. The risk borne by the investors of a corporation is limited, which means that investors cannot lose more than the amount they invested when buying the shares. The ability of a corporation to attract capital is greater than that of a partnership or a sole trader. Consequently, growth opportunities for corporations are better.

## 1.9 Financial markets

A principal role of the financial manager is to raise funds to finance the firm's investments. While much of these funds can be sourced internally from retained profits, most companies will find it necessary to seek external capital. Knowledge of financial markets is therefore necessary.

The financial system consists of markets and institutions that match buyers of funds (investors) and sellers of funds (savers). For the economy as a whole, savings and investments are key to long-term economic prosperity. An economy that saves a large slice of its GDP has more funds available for investment and this raises the country's capital and productivity.

Financial markets are the institutions where those who have surplus funds (savings) can supply these funds to others who have a deficit (borrowers). There are two types of financial market – capital markets and money markets.

### 1.9.1 Capital markets

When companies and governments need to raise money for long periods of time (greater than a year) they do so in the capital markets.

The two capital markets that are most relevant are the bond market and the stock market.

#### The Bond Market

A company can fund its investments with two types of capital – **debt capital** and **equity capital**. When it wants to raise debt capital it borrows money from the public by issuing bonds. A bond is an IOU or a certificate of indebtedness. This certificate (also known as a **security**) will specify the terms and conditions of the loan and all obligations of the borrower. These include the time in which the loan will be repaid (date of maturity), the



periodic rate of interest to be paid and the subsequent repayment of the principal or the amount borrowed. This bond can be held by the buyer until the maturity date or sold on the bond market at some time before the date of maturity – this is the liquidity function of the financial system. These bonds or securities have value because the owner or bearer has the right to be paid the amount that is specified on the certificate. Therefore a bearer has the right to sell the security to another party for cash. The new owner could also trade or sell the security to someone else.

There are thousands of different types of bond traded in the market. When corporations, governments and local authorities need money for investment (e.g. to build factories, roads, schools, hospitals, etc.) they will usually sell bonds.

Characteristics of bonds:

1. The maturity date of the bond (when the principal has to be paid) can be short, a few months, or as long as 30 years. The interest rate on a bond depends on the date to maturity. Long-term bonds are riskier because the holders have to wait longer for payment. To compensate for this higher risk, long-term bonds usually pay higher interest rates.
2. There is the possibility that bond holders may fail to pay the interest (and/or principal) on the debt. This is the bond's credit risk. If the probability of default is high, those who buy bonds will seek higher interest payments to compensate for this higher risk. It's usually agreed that governments don't 'go broke', therefore they don't default and therefore have low credit risk with commensurate interest. However, this is not always the case and governments can go broke as was the case with Russia in 1999 (see Box 1.4). Note that the interest rate paid on corporate bonds will vary with the risk attached to that bond. Rating agencies assess the creditworthiness of bonds and apply a rating. For bonds that have very high credit ratings and little chance of default a rating of AAA is assigned. Other bonds may be rated AA, A or BBB. Bonds that are rated below BBB are referred to as **junk bonds** because they are not investment grade and are too risky. Features that investors like about bonds will tend to lower the interest rate and features that investors don't like will tend to raise interest rates.

#### Box 1.4 Open your eyes to the risks

Novice investors have been left penniless by the spectacular collapse of the International Securities Trading Corporation (ISTC) a high-flying finance company that fell to earth in the global credit crunch.

They all invested at least €50,000 each in two ISTC bonds managed by Friends First, believing their capital was guaranteed.

Two sisters – one 55, the other 70 – put their life savings of €300,000 into the ISTC creative Step UP bond last week, including a substantial lump sum that the older woman took from her pension fund when she retired.

The bonds are now worthless, however, making ISTC the biggest disaster in Irish investment history. ISTC raised €165m from investors in the largest share placement ever by a private Irish company. ISTC attracted money from wealthy businessmen as well as from 125 individuals who invested €43m through the Friends First bonds.





ISTC used the cash to raise debt finance to lend to banks and other financial institutions that needed to borrow money – the same market that sparked the crisis at Northern Rock last September.

As the crisis spread throughout the global financial system, however, the value of ISTC's investments plummeted, forcing a fire sale of the company. Under the deal, investors in Friends First bonds will get nothing.

In the wake of the ISTC disaster many investors have concerns about how secure their assets are.

Aren't bonds a safe bet?

Bonds are often seen as a safe bet between low-yielding deposits and risky equities. They pay fixed returns – useful for those seeking a steady income – and their values do not fluctuate as much as stocks and shares.

Investors, though, take too much for granted. Bonds issued by companies – or banks in the case of ISTC – are the riskiest. Those issued by governments are safer, but not entirely risk-free.

Governments have been known to default on their debts as happened in Russia in 1998. Bonds can also lose their value when interest rates are rising. Investors should examine the credit rating of the bonds they are buying, ensuring they are of investment grade. People can lose money on bonds. They are traded in the same way as equities, so their values can go up and down. There's also the risk of default.

[www.timesonline.ie/money](http://www.timesonline.ie/money), *The Sunday Times*, 9 March 2008, extract by Niall Brady

## The Stock Market

Another way for companies to raise money for their investments is through the stock market or **equity finance**. A company's stock represents ownership of the company and is therefore a claim on the cash flows generated by the company. While the owner of the stock is a part owner, the holder of a bond is a creditor. As part owner the stock holder participates in the success of the company, whereas the bond holder is just paid the interest on their loan. If the company gets into trouble the interest on debt is fixed and must be paid before shareholders get anything. Because stocks are higher risk the return on stocks must be higher than interest paid on bonds.

When corporations raise new equity they do so by selling stock on the **primary market**. The corporation receives the funds from the sale. **Secondary markets** are markets where existing securities are traded among investors. An investor who decides to sell 1,000 shares in Intel, for example, will do so on the secondary market.

Security exchanges are organisations that facilitate the trade of stocks and bonds among investors. Companies may wish to list their shares or bonds on an organised exchange such as the Dublin Stock Exchange, the London Stock Exchange or the New York Stock Exchange so that they can be traded. In contrast to the organised exchanges that have physical locations, the over-the-counter (**OTC**) market has no physical location and trading in securities is conducted electronically. The OTC is a network of dealers worldwide that hold an inventory of securities for sale. If you wanted to buy a security you would shop around with dealers who hold the security. The biggest and most significant OTC market is the NASDAQ.

It's important here to distinguish between financial markets and financial institutions. **Financial markets** are organisations that facilitate the trade of securities. **Financial institutions** are organisations that channel funds from savers to borrowers.

### 1.9.2 Money markets

Cash flows in companies, governments and other organisations seldom occur at the same time. Cash flowing in seldom occurs at the same time as cash flowing out. Companies' cash inflows may be greater than their cash outflows, in which case they will have surplus cash. At other times cash outflows may be greater than cash inflows and cash deficits occur. Similarly, government tax revenues typically occur near the end of the fiscal year, while government expenditure occurs all year round. In this case governments will need to raise cash in the short term and repay it when tax receipts are collected. To solve these problems of cash flows occurring at different times, money markets have developed. Raising money for short-term purposes (maturities of one year or less) is conducted in the money markets. Remember, holding excess cash has an opportunity cost in terms of lost interest income. Those who will need to buy money market securities include governments, companies and financial institutions. Most transactions conducted in the money markets are by telephone and computers.

The term **money market** is a misnomer because money is not traded. Money market securities are very liquid and can be sold for cash quickly. Hence the term money markets. Buyers of securities in money markets will only buy from well-established, large and reputable issuers. If a company had excess cash and wanted to sell that excess cash to another company for a few days, it simply would not have time to check out the reputation and credit risk of the issuer. Because it is only the large and reputable issuers in the market, the risk involved in money market transactions is low.

Examples of some money market instruments follow:

**Commercial Paper:** Commercial paper is a short-term IOU. It is only issued by large corporations with strong credit ratings and issued to other large firms, pension funds, and to banks. Most commercial paper matures within 40 days and usually doesn't pay interest – they are issued at a discount and the return comes in the way of an increase in price.

**Treasury Bills:** to refinance previously issued government securities that come due each week, governments issue treasury bills or **T-bills**. This is the most liquid debt security issued by governments. T-bills will have maturity dates of 12 months or less. The risk of default is zero because governments can simply print more if they run out of cash. In addition, because of the short-term nature of T-bills inflation risk is low. For these reasons, T-bills are close to being risk free and consequently the yield from T-bills is low. T-bills are sold at a discount which means that they do not pay interest. They are sold for less than they are worth at maturity.

**Inter-bank lending:** By law, commercial banks are required to keep a proportion of their assets in cash form. The reason for this is to maintain confidence in the banking system. Banks with excess cash over their required level can lend this excess cash to other banks

whose cash is below the required level, usually for a period of 1 day. Banks could borrow from the central banks but they may not want to alert the central banks to any liquidity problems. The interest rate in this market is closely watched because it will influence the central banks' money supply. This is done indirectly by the central banks buying or selling government securities.

**Repurchase Agreements:** Repurchase agreements (**repos**) operate when a firm sells securities with an agreement to buy that same security back at some specified future date. Repos are short term, with maturities between 3 and 15 days. Long-term repos are available with maturities up to six months. Holders of government securities usually participate in this market. This essentially makes the repo a collateralised loan and therefore low risk. Any coupons paid on repos during the period of time the repo buyer owns the security are paid to the seller.

Repurchase agreements are sometimes used by central banks to release money into the banking system.

**Bankers' Acceptances:** This is an order to the bank by the drawer to pay a specified person (the bearer) a specified amount at a given date. In this sense it is like a post-dated cheque. For example, suppose a company wanted to buy some machinery from Hong Kong. The Hong Kong firm might not want to ship the machinery without being paid because it might not know enough about the UK firm. For the same reasons the UK firm is reluctant to send money to Hong Kong in advance of receiving the machinery. By issuing a bankers' acceptance this stand-off can be resolved because the bankers' acceptance is a promise to pay the shipper if any problems occur.

This characteristic makes bankers' acceptances a money market instrument. Bank acceptances sell at a discount to their face value. Bankers' acceptance rates are the rates in which they trade.

### *1.9.3 Financial asset markets and real asset markets.*

So far we have looked at the principle financial markets – capital markets and money markets. Real asset markets or physical (tangible) asset markets deal with real assets such as automobiles and real estate. Financial assets are pieces of paper that allow the owners of these financial assets to a contractual claim on the underlying real assets. For example, if you own a Smurfit corporate bond (or share) this gives you a claim on the cash flows generated by Smurfit's real assets. Mortgage markets deal with loans that are secured on real estate. Mortgages are a financial asset like bonds and shares.

As a general point, financial markets need to be efficient. An efficient transfer system from those who are net savers to those who need to access money is essential for any market economy. If construction companies and governments did not have access to money there would be no houses built. If transportation companies did not have access to financial markets there would be no public transport. In short, efficient economies need efficient financial markets.

## 1.10 Interest rates

When buyers and sellers of money come together in the money markets the price of money is determined. This is the interest rate or the rental price of money.

The interest rate or the price of money is determined by many factors that determine the supply of money and the demand for money. If the supply of money is restricted, the price of money rises, other things being equal. However, what this analysis does not tell us is why individual firms will pay different interest rates on their borrowed funds. What are the specific factors that determine the interest rate paid by particular firms?

The interest rate prevailing at any particular time is the **nominal interest rate**. This nominal rate is comprised of several components. These are:

### 1.10.1 The Real Rate of Interest

By lending money the lender postpones opportunities to spend that money during the period it is loaned. Investment opportunities for the lenders during this loan period are lost. The compensation paid by the borrower to the lender for this lost opportunity is the real rate of interest or the basic rate of return required to satisfy the lender for this lost opportunity.

Additions to this real rate of interest are called **premiums**. Some of the major premiums are:

1. **A premium for inflation.** The effect of rising prices is that it reduces the purchasing power of the money in your pocket. For this reason money received in the future is less valuable than money in your hand. Because of inflation the money that lenders receive when their loan is repaid will not purchase as much as when the loan was made. If lenders anticipate inflation they will demand additional returns (interest) to compensate for this additional risk. Note that the inflation premium will be the average *expected* rate of inflation during the life of the security.

The real rate of interest plus the inflation risk premium is the nominal risk-free rate.

$$\text{real interest rate} + \text{inflation risk premium} = \text{nominal risk-free rate}$$

### Example

An investor buys a €1,000 short-term government bond with a maturity of one year and is paid 6 per cent interest. The investor will receive €1,060 at the end of the year. However, let's suppose inflation is 10 per cent during the year. If the price of a cappuccino at the beginning of the year is €1, it will cost €1.10 at the end of the year. At the beginning of the year €1,000 would have bought 1,000 cups of cappuccino. At the end of the year, €1,060 would have bought 963 cappuccinos. So in real terms the investor is worse off.

2. **The default risk premium.** A default on a loan happens when the borrower fails to pay the interest and the principal when it is due. If a borrower has a suspect history or has had financial difficulties in the past, the lender faces the risk that the borrower will

default. Corporations that issue bonds will receive a credit rating. The lower the credit rating the higher the default risk premium and therefore the higher the interest rate.

3. **Liquidity risk premium.** Liquid assets are assets that can be converted into cash quickly without loss in value. Lenders can sell loans to others. The easier it is to sell loans the more liquid the loan is. Liquidity is something that is desirable by investors. Illiquid loans will pay a higher interest to compensate lenders for the hassle of having to hold the loan until maturity. The liquidity risk premium is the interest that lenders need to compensate for illiquidity.
4. **The maturity risk premium.** If interest rates go up, the price of long-term bonds will go down. Lenders that have made loans at the original rate will be trapped in receiving the original (lower) rate of interest. New loans that are made will receive the new and higher interest rate. This interest rate risk is more pronounced the longer the date to maturity. If lenders perceive that interest rates will rise in the future, they will increase the interest charged on the loan to compensate for this interest rate risk. Of course, interest rates can be expected to go up or down and consequently the interest rate risk can go up or down. This doubt as to the direction of interest rates will make lenders adjust the current interest rate in order to compensate themselves for this risk.

However, while short-term bonds do not have exposure to interest rate risk (because of the short maturity), they are exposed to reinvestment rate risk. When short-term bonds mature and are reinvested in other short-term bonds when interest rates are lower, then the interest income will decline. For example, if short-term rates were 10% an investor would receive an interest income of €100,000 on a €1m investment. If after reinvesting, interest rates had fallen to 5%, interest income would have been €50,000. If the money had been reinvested in long-term debt, then the income would have been preserved. Of course, the trade-off is that while interest income would have been preserved, the principal is still exposed to maturity risk (unlike short-term bonds).

### 1.10.2 Nominal interest rates

The quoted prevailing rate of interest is the nominal interest rate. The nominal interest rate is the real interest rate plus all of the premiums discussed above. The following equation shows the relationships of various components:

$$N = k + \text{INFL} + \text{LP} + \text{DRP} + \text{MRP} \quad (1.1)$$

Where

N	=	the nominal rate of interest (the rate quoted)
k	=	real rate of interest
INFL	=	inflation risk premium
LP	=	liquidity risk premium
DRP	=	default risk premium
MRP	=	market risk premium

Note that nominal interest rates will vary over time because the real rate of interest and the premiums will vary causing market rates to fluctuate. In addition, if the European

Central Bank intervenes in the markets to change the money supply this will also lead to fluctuations in the rate of interest.

### 1.11 The term structure of interest rates – the yield curve

Interest rates on long-term bonds will be higher than interest rates on short-term bonds. The reason, as discussed above, is that long-term investments have greater risks than short-term investments. Consequently the price of long-term bonds will be affected more by changes in interest rates than will the price of short-term bonds. If market interest rates go up – the price of bonds will fall. If market interest rates fall – the price of bonds will rise. Bond prices will change more depending on the length of the term to maturity.

#### *Example*

Suppose an investor buys a bond for €100 with a yield of 10%, and say that after a few years €100 bonds are being issued that yield 12%. The consequence is that no investor will pay €100 for the old bond that pays 10%. The price of the old bond must fall to a price that yields 12%.

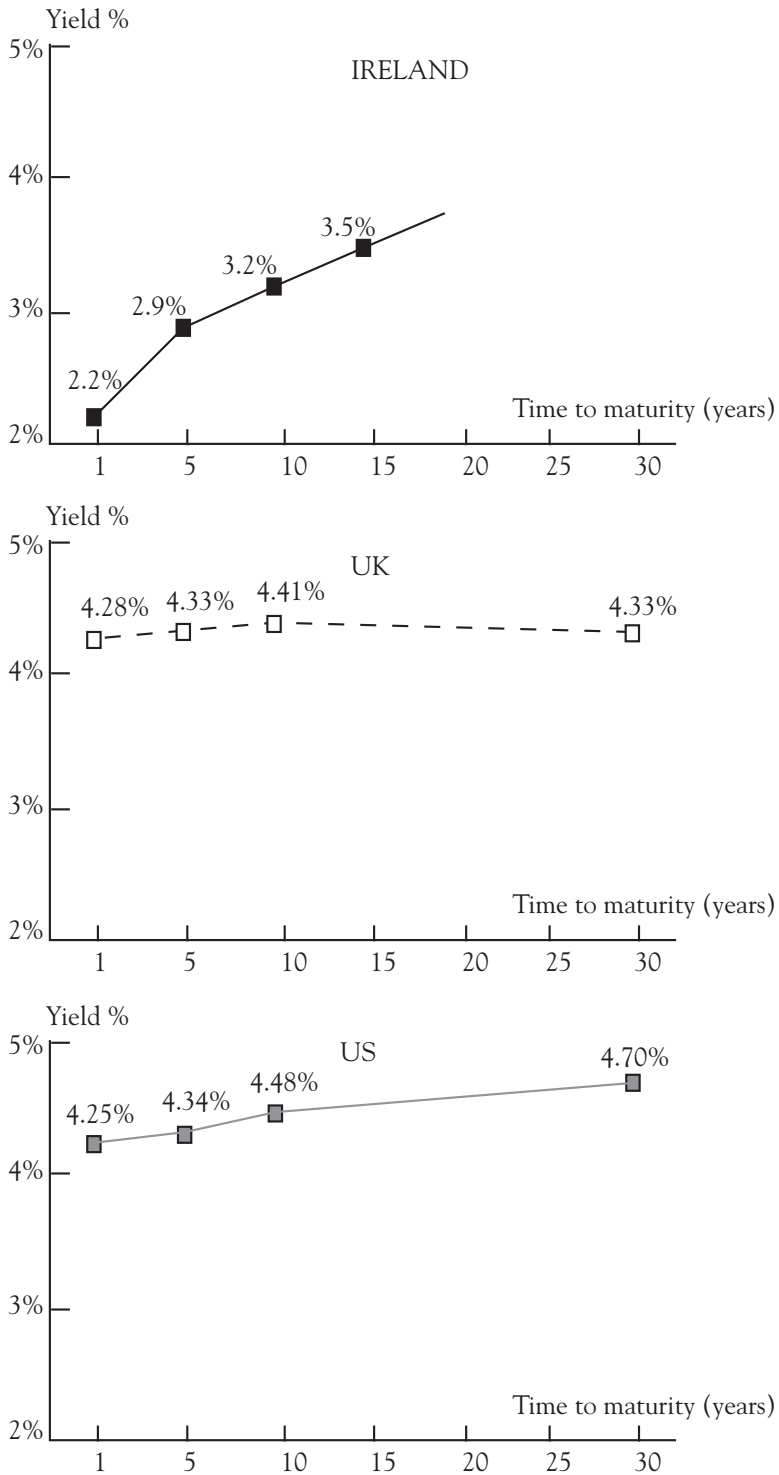
The relationship between the yield (return) and maturity is referred to as the **term structure of interest rates**. This relationship between short-term and long-term bonds (the term structure of interest rates) is important both to borrowers who need to decide whether to issue long or short securities and for investors who will have to decide whether to buy short- or long-term securities.

A yield curve depicts graphically the interest rates for securities in the time remaining to maturity. The interest rates on a particular security are plotted with various maturity dates.

Historically, long-term rates have been above short-term rates in most years. Consequently, the shape of the yield curve will be upward sloping or normal. It's described as **normal** because interest rate risk is lower for short-term securities, i.e. lower market risk premiums. If short-term rates are high and investors expect them to decline then the yield curve will be abnormal or downward sloping. This was the case in the 1980s when short-term rates were very high (principally because of very high rates of inflation) but most investors took the view that monetary authorities would implement appropriate macroeconomic policies that would eradicate the cause of high inflation and that the long-term prognosis for interest rates would be below short-term rates.

An example of Irish, UK and US yield curves is depicted in Figure 1.2<sup>3</sup>. Flat yield curves (i.e. when short-term rates are not much below long-term rates) may indicate that the economy is going to slow down. The European Central Bank may have pushed up short-term rates to curb inflation which in turn slows economic activity. Long-term inflationary expectations are reduced and long-term rates fall.

Figure 1.2.



### 1.12 Theories that determine the shape of the yield curve

**The Pure Expectations Theory:** According to this theory the yield curve only depends on expectations about the future direction of interest rates. Long-term rates are simply a weighted average of the interested rates expected during the life span of the maturity. For example, if interest rates for next year are expected to be 8% and 10% for the subsequent year, then the two-year rate will be 9%  $(8\% + 10\%) / 2 = 9\%$ .

Similarly, the rate on a four-year loan will be the geometric average of the four one-year rates that are expected over the next four years.

#### Example

If you borrow money from the bank for a period of four years, the bank may expect inflation to increase for each of the four years. Consequently, the lending institution may predict the annual rates of interest and the estimated long-term rates as follows:

**Table 1.1 Pure expectations theory and estimated long-term rates**

Year	Expected Annual Rate	Expected Average Interest Rate
2007	5%	5%
2008	6%	5.5%
2009	7%	6%
2010	8%	6.5%

This theory therefore assumes that bond prices are determined solely by expectations on future interest rates. This would imply that investors do not perceive long-term bonds as being riskier than short-term bonds. In other words, the pure expectations theory implies that the maturity risk premium is zero. However, most evidence points to the view that long-term bonds are riskier than short-term bonds and that a positive maturity risk premium does exist. The required rate of return for longer term bonds is greater than that for short-term bonds to compensate for the higher maturity risk. This theory is known as the Liquidity Preference Theory.

**The Liquidity Preference Theory:** The theory that long-term bonds will yield more than short-term bonds holds that lenders will prefer to make short-term loans and borrowers will prefer to take out long-term loans. Therefore to encourage lenders to make long-term loans, borrowers must pay an interest premium. The intuition behind this is risk aversion by borrowers. Borrowers prefer to borrow long term because of risk aversion. By borrowing long term at a fixed rate, investors may miss out on the opportunity of gaining from a reduction in short-term rates but this is better than the risk of interest rates rising to the point where the investor cannot afford the cost of these rising interest rates.



So for this reason borrowers prefer to borrow long term with fixed interest loans. Lenders, on the other hand, prefer to make short-term loans. In other words, the liquidity preference theory holds that lenders prefer to lend short-term because these securities can be converted into cash (are more liquid) without the possibility of loss in value. This reduces risk and therefore lenders will accept lower yields on short-term securities. Borrowers prefer to hold long-term debt because short-term debt exposes them to the possibility of having to repay the debt if short-term rates rise. Therefore borrowers, all else being equal, will pay a premium for long-term funds. Thus a maturity risk premium exists and this maturity risk increases with time to maturity. So, an upward sloping yield curve exists.

Another reason why lenders prefer to make short-term loans is that it is more difficult to forecast what the financial position of the borrower will be in 10 or 15 years time. Therefore short-term loans will allow lenders to reconsider the terms of the loans if general market business conditions or the financial health of the borrower has deteriorated.

In summary, expectations about future interest rates are the most important factor determining the shape of the yield curve. However, the slope of the yield curve will change because of investors' expectations about future interest rates **and** because of the existence of a maturity risk premium.

**Market Segmentation Theory:** Some financial analysts subscribe to another theory called the market segmentation theory. This theory holds that there is clear market segmentation for funds between those who trade in short-term bonds and those who trade in long-term bonds. The supply and demand for short-term bonds will determine the price (interest rate) for short-term bonds and the supply and demand for long-term bonds will determine the price (interest rate) for long-term bonds. In this sense there is no connection between the yield on short-term and long-term bonds, and it doesn't explain the shape of the yield curve because it doesn't provide any particular reason why long-term rates will be above short-term rates.

### 1.12.1 Review of the theories

- **The pure expectations theory:** Long-term rates are an average of expected short-term rates from now to maturity. These short-term rates are influenced by expected inflation rates.
- **The liquidity preference theory:** Lenders prefer to hold securities that are short-term because they are more liquid and borrowers (who are assumed to be risk averse) prefer to borrow long term because of the risk of having to pay back short term if short-term rates rise.
- **Interest rate risk:** If interest rates change the value of bonds will fluctuate. This interest rate risk increases with time to maturity and so a premium is paid by borrowers on long-term loans to compensate for the increased risk.
- **Market segmentation theory:** The market for short-term and long-term bonds are segmented and the supply and demand for each types of security determines their price.

## SUMMARY

- Finance is about managing money. The most fundamental principle in finance is net present value – is the market value of an investment greater than its cost?
- Finance also involves the study of the investment market.
- Shareholders will want management to manage the company so that shareholder wealth is maximised.
- Cash is king – the value of any financial asset depends on the ability of the asset to generate cash flows both now and in the future.
- Profit maximisation should not necessarily be a goal of financial management.
- Cash received sooner is more valuable.
- Reducing the riskiness of cash flows increases share value.
- Agency theory deals with the conflict of interest between managers and shareholders.
- Ethical issues challenge the function of business and financial management.
- There are three legal forms of business organisation: partnership, limited liability companies and sole proprietorship.
- Financial markets are numerous, with the two main markets being capital markets and money markets.
- Capital markets are for long-term debt and company shares.
- The nominal or the quoted interest rate is the real risk-free rate plus premiums that reflect inflation, default risk, maturity risk and liquidity risk.
- The relationship between the interest rate paid on securities and their maturity dates is referred to as the **term structure** of interest rates.
- The shape of the yield curve depends on expectations about the future direction of interest rates and the risk associated with different maturity dates.
- If the inflation rate is expected to increase the yield curve will be upward sloping or normal. The yield curve will be downward sloping or inverted if inflation is expected to decline.

## WEB LINKS

[www.financewise.com](http://www.financewise.com)

Comprehensive data on financial matters from around the world.

[www.thecorporatelibrary.com](http://www.thecorporatelibrary.com)

Information on compensation, board ratings and comparative data, corporate governance.

[www.forbes.com](http://www.forbes.com)

Intelligent investing.

## QUESTIONS

1. What is finance?
2. Explain the link between the study of finance and the study of investment markets.
3. What do you understand by the term 'shareholder value'?
4. Should profit maximisation be an objective of financial management? Explain your answer.
5. In finance, 'Cash is king.' Discuss.
6. Illustrate and outline the factors influencing share value.
7. Define agency theory. What is an 'agent' and what are 'agency costs'? How can agency costs impinge on the primary goal of 'wealth maximisation'?
8. Define (a) sole trader, (b) partnership and (c) corporation.
9. Describe the legal and ethical challenges that face the financial manager.
10. For class discussion: Should managers be interested only in the maximisation of shareholder wealth or should they also be interested in the welfare of society at large?
11. Why are financial markets so important? What services do they provide? If there is a lack of confidence in the financial system what impact would this have on the wellbeing of the economy?
12. Under what circumstances would an investor use a money market fund?
13. ♦ Why do long-term interest rates differ from short-term rates?
14. ♦ If the risk-free rate of interest is 4% and the expected rate of inflation is 3% in the current year and 5% during the next two years, what is the yield on a three-year treasury security? Assume no maturity risk premium.
15. A one-year treasury bond yields 6%. If the market anticipates that in one year from now one-year treasury bonds will yield 7%, what is the yield today on two-year treasury securities?
16. What is the default risk premium if the real rate of interest is 5% and the expected rate of inflation is 3%, the liquidity risk premium is 1%, the maturity risk premium is 5% and the nominal rate is 17%?
17. ♦ How would the yield curve for a private corporation differ from the yield curve of the government?
18. Explain the pure expectations theory and the liquidity preference theory in describing the yield curve.
19. Evaluate the consequences if long-term rates were not an average of expected short-term rates.

## NOTES

1. See 'The Goals of the Corporation', in *Financial Management: Theory and Practice*, 9th edn, Brigham, Gapenski and Ehrhardt, Chapter 1.
2. See 'Theory of the Firm, Managerial Behaviour, Agency Costs and Ownership Structure', M.C. Jensen and W.J. Meckling in the *Journal of Financial Economics*, October 1976.
3. Yield curves taken with kind permission from: *Fundamentals of Investment: An Irish Perspective* by Brian O'Loughlin and Frank O'Brien, Gill & Macmillan 2006.