The business world experiences many events in the space of a year. However, sometimes major events that shake the confidence of corporate managers, regulators and investors come along to change the business environment permanently. Arguably, 2007 and 2008 experienced one of these events with the global credit crisis that has affected banks, corporations and consumers alike.

For many years, low inflation and buoyant economies led to a supply of very cheap money in the world’s financial markets. China and India’s economic growth, excessive consumption by individuals in the US and Europe, escalating property prices, and highly competitive economic conditions contributed to a fairly unique business environment. However, in the summer of 2007, the world was stunned when news reports announced major defaults in high-risk or subprime mortgages in the United States.

While the problem was confined largely to the US, the fallout from the mortgage defaults rippled through all developed economies. US banks, worried about further losses in the subprime mortgage market, reduced their credit facilities and lending to other banks. This led to a worldwide liquidity crunch, and in the following months, bank after bank announced massive losses resulting from worsening economic conditions.

The bad news was not just confined to the banking sector. In 2008, crude oil prices passed $100 a barrel and gold moved towards $1,000 an ounce, when just three years before they were valued at $49 and $430 respectively. As inflationary pressures grew, raw material costs increased and corporate profit margins eroded. To maintain their level of funding, many companies went to the Middle East and Asia to raise more capital, and more frequently, investors from this region have become the main investors.

Now, more than ever, corporate managers need to understand how to value investments accurately, choose the best funding mix for their operations, manage the risk of their short- and long-term capital, and satisfy the expectations of their investors. Understanding all of these issues and integrating them into a cohesive picture is the goal of this text. Understanding corporate decision-making first requires an understanding of what is meant by corporate finance and what a corporate entity looks like, all of which we discuss in this chapter.

1.1 What Is Corporate Finance?

Suppose you decide to start a firm to make tennis balls. To do this, you hire managers to buy raw materials, and you assemble a workforce that will produce and sell finished tennis balls. In the language of finance, you make an investment in assets such as inventory, machinery, land and labour. The amount of cash you invest in assets must be matched by an equal amount of cash raised by financing. When you begin to sell tennis balls, your firm will generate cash. This is the basis of value creation. The purpose of the firm is to create value for you, the owner. The value is reflected in the framework of the simple balance sheet model of the firm.
The Balance Sheet Model of the Firm

Suppose we take a financial snapshot of the firm and its activities at a single point in time. Figure 1.1 shows a graphic conceptualization of the balance sheet, and it will help introduce you to corporate finance.

The assets of the firm are on the left side of the balance sheet. These assets can be thought of as short-term (current) and long-term (non-current). Non-current assets are those that will last a long time, such as buildings. Some non-current assets are tangible, such as machinery and equipment. Other non-current assets are intangible, such as patents and trademarks. The other category of assets, current assets, comprises those that have short lives, such as inventory. The tennis balls that your firm has made, but has not yet sold, are part of its inventory. Unless you have overproduced, they will leave the firm shortly.

Before a company can invest in an asset, it must obtain financing, which means that it must raise the money to pay for the investment. The forms of financing are represented on the right side of the balance sheet. A firm will issue (sell) pieces of paper called debt (loan agreements) or equity shares (share certificates). Just as assets are classified as long-lived or short-lived, so too are liabilities. A short-term debt is called a current liability. Short-term debt represents loans and other obligations that must be repaid within one year. Non-current liabilities include debt that does not have to be repaid within one year. Shareholders’ equity represents the difference between the value of the assets and the liabilities of the firm. In this sense, it is a residual claim on the firm’s assets.

From the balance sheet model of the firm, it is easy to see why finance can be thought of as the study of the following three questions:

1. In what long-lived assets should the firm invest? This question concerns the left side of the balance sheet. Of course the types and proportions of assets the firm needs tend to be set by the nature of the business. We use the term capital budgeting to describe the process of making and managing expenditures on long-lived assets.

2. How can the firm raise cash for required capital expenditures? This question concerns the right side of the balance sheet. The answer to this question involves the firm’s capital structure, which represents the proportions of the firm’s financing from current and long-term debt and equity.
How should short-term operating cash flows be managed? This question concerns the upper portion of the balance sheet. There is often a mismatch between the timing of cash inflows and cash outflows during operating activities. Furthermore, the amount and timing of operating cash flows are not known with certainty. Financial managers must attempt to manage the gaps in cash flow. From a balance sheet perspective, short-term management of cash flow is associated with a firm’s net working capital. Net working capital is defined as current assets minus current liabilities. From a financial perspective, short-term cash flow problems come from the mismatching of cash inflows and outflows. This is the subject of short-term finance.

**EXAMPLE 1.1**

On 4 March 2008, Admiral Group plc, a British motor insurer, announced its financial results for the year 2007. Insurance companies earn income from receiving insurance premiums and investing this money in the financial markets. They pay out on insurance claims that they receive throughout the year. The assets of an insurance company are generally financial securities that they can sell at any time, and the liabilities are generally insurance claims that will be paid out within a year. The figures, which come from the firm’s financial accounts, are simplified to make the example more accessible.

At the end of 2007, the company had £7.7 million in tangible non-current assets and £69.0 million in intangible non-current assets. Current assets amounted to £793.6 million and current liabilities (liabilities due within one year) were £632.7 million. Admiral Group had no non-current liabilities. A balance sheet model for Admiral Group plc is presented below.

Capital Structure

Financing arrangements determine how the value of the firm is sliced up. The people or institutions that buy debt from (i.e. lend money to) the firm are called creditors, bondholders or debtholders. The holders of equity shares are called shareholders.

Sometimes it is useful to think of the firm as a pie. Initially the size of the pie will depend on how well the firm has made its investment decisions. After a firm has made its investment decisions, it determines the value of its assets (e.g. its buildings, land, and inventories).

The firm can then determine its capital structure. The firm might initially have raised the cash to invest in its assets by issuing more debt than equity; now it can consider changing that mix by issuing more equity and using the proceeds to buy back (pay off) some of its debt. Financing decisions like this can be made independently of the original investment decisions. The decisions to issue debt and equity affect how the pie is sliced.
Chapter 1 Introduction to Corporate Finance

The pie we are thinking of is depicted in Fig. 1.2. The size of the pie is the value of the firm in the financial markets. We can write the value of the firm, \( V \), as

\[ V = B + S \]

where \( B \) is the market value of the debt and \( S \) is the market value of the equity. The pie diagrams consider two ways of slicing the pie: 50 per cent debt and 50 per cent equity, and 25 per cent debt and 75 per cent equity. The way the pie is sliced could affect its value. If so, the goal of the financial manager will be to choose the ratio of debt to equity that makes the value of the pie – that is, the value of the firm, \( V \) – as large as it can be.

**Example 1.2**

In response to the €4.9 billion loss made from trading in the financial markets at the beginning of 2008, the French bank Société Générale announced that it would issue €5.5 billion of new shares to recover its funding levels. Société Générale could also have issued new debt securities for the same amount of money. If the funding ratio of debt to equity does not affect the value of the firm, the managers of Société Générale would have been indifferent between the two funding options, since the money raised would have been the same.

The Financial Manager

In large firms, the finance activity is usually associated with a top officer of the firm, such as the vice-president or chief financial officer, and some lesser officers. Reporting to the chief financial officer are the treasurer and the controller. The treasurer is responsible for handling cash flows, managing capital expenditure decisions, and making financial plans. The controller handles the accounting function, which includes taxes, financial and management accounting, and information systems.

In smaller firms, many of the roles within an organization are combined into one job. Although each firm will be different, there will always be someone who is responsible for the duties of a financial manager. The most important job of a financial manager is to create value from the firm's capital budgeting, financing, and net working capital activities. How do financial managers create value? The answer is that the firm should:

(a) try to buy assets that generate more cash than they cost;
(b) sell bonds, shares, and other financial instruments that raise more cash than they cost.

Thus the firm must create more cash flow than it uses. The cash flows paid to bondholders and shareholders of the firm should be greater than the cash flows put into the firm by the bondholders and shareholders. To see how this is done, we can trace the cash flows from the firm to the financial markets and back again.
In Their Own Words

Skills Needed for a Chief Financial Officer

One needs only to read the employment opportunities section in the financial press to appreciate the skills that are required for someone to be a successful chief financial officer. Below is presented an advert that appeared in 2008 for a chief financial officer position based in Europe. The company is large and, as a result, the successful candidate would have needed extensive experience in the role. As a budding financial manager yourself, it is useful to keep in mind the CV you must build to become an appropriate candidate for this type of job. It seems an awful lot at the moment, but experience and study will bring you to your required level if you keep focused on your target. The name of the company has been changed to FM GmbH to ensure anonymity.

Company: FM GmbH
Location: Frankfurt, Germany

The Chief Financial Officer will be responsible for the internal and external financial and accounting reporting requirements of the company. This position requires an individual whose business acumen, financial aptitude and professional initiative enable them to improve the organization’s performance and enhance the effectiveness of the individuals within. The CFO will need to be committed to results and have a strong sense of personal responsibility for how the company performs. Financial aptitude and analytical skills need to translate into insightful corrective actions and proactive business improvement. FM is of a size where the CFO will need to blend both strategic and tactical skills. The candidate will need to maintain a ‘big picture’ perspective but also have a strong attention to detail.

Primary responsibilities:

- Oversee financial management of corporate operations, to include developing financial and budget policies and procedures.
- Responsible for cash management, banking relationships and debt management, as well as heavy involvement in any merger and acquisition activities.
- Create, co-ordinate, and evaluate the financial programmes and supporting information systems of the company to include budgeting, tax planning, property, and conservation of assets.
- Ensure compliance with local and international budgetary reporting requirements.
- Oversee the approval and processing of revenue, expenditure, and position control documents, department budgets, mass salary updates, ledger, and account maintenance.
- Co-ordinate the preparation of financial statements, financial reports, special analyses and information reports.
- Manage an accounting department including a controller and accounting staff.
- Implement finance, accounting, billing and auditing procedures.
- Establish and maintain appropriate internal control safeguards.
- Interact with other managers to provide consultative support to planning initiatives through financial and management information analyses, reports and recommendations.
- Ensure records systems are maintained in accordance with internationally accepted auditing standards.
- Strategic thinker who has the ability to manage with an operational perspective.
- Approve and co-ordinate changes and improvements in automated financial and management information systems for the company.
- Analyse cash flow, cost controls and expenses to guide business leaders. Analyse financial statements to pinpoint potential weak areas.
- Establish and implement short- and long-range departmental goals, objectives, policies and operating procedures.
- Serve on planning and policy-making committees.
Chapter 1 Introduction to Corporate Finance

The interplay of the firm’s activities with the financial markets is illustrated in Fig. 1.3. The arrows in Fig. 1.3 trace cash flow from the firm to the financial markets and back again. Suppose we begin with the firm’s financing activities. To raise money, the firm sells debt (bonds) and equity (shares) to investors in the financial markets. This results in cash flows from the financial markets to the firm (A). This cash is invested in the investment activities (assets) of the firm (B) by the firm’s management. The cash generated by the firm (C) is paid to shareholders and bondholders (F). The shareholders receive cash in the form of dividends; the bondholders who lent funds to the firm receive interest and, when the initial loan is repaid, principal. Not all of the firm’s cash is paid out. Some is retained (E), and some is paid to the government as taxes (D).

Over time, if the cash paid to shareholders and bondholders (F) is greater than the cash raised in the financial markets (A), value will be created.

**Figure 1.3** Cash flows between the firm and the financial markets

**Identification of cash flows** Unfortunately, it is not easy to observe cash flows directly. Much of the information we obtain is in the form of accounting statements, and much of the work of financial analysis is to extract cash flow information from accounting statements. The following example illustrates how this is done.

**Example 1.3 Accounting Profit versus Cash Flows**

Midland plc is an Irish firm that refines and trades gold. At the end of the year, it sold 2,500 ounces of gold for $1.67 million. The company had acquired the gold for $1 million at the beginning of the year. The company paid cash for the gold when it was purchased. Unfortunately it has yet to collect from the customer to whom the gold was sold. The following is a standard accounting of Midland’s financial circumstances at year-end:
What Is Corporate Finance?

Under International Financial Reporting Standards (IFRS), the sale is recorded even though the customer has yet to pay. It is assumed that the customer will pay soon. From the accounting perspective, Midland seems to be profitable. However, the perspective of corporate finance is different. It focuses on cash flows:

The Midland plc Accounting view Income statement Year ended 31 December

<table>
<thead>
<tr>
<th>Sales</th>
<th>€1,670,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>−Costs</td>
<td>−€1,000,000</td>
</tr>
<tr>
<td>Profit</td>
<td>€ 670,000</td>
</tr>
</tbody>
</table>

The perspective of corporate finance is interested in whether cash flows are being created by the gold trading operations of Midland. Value creation depends on cash flows. For Midland, value creation depends on whether and when it actually receives €1.67 million.

Timing of Cash Flows  The value of an investment made by a firm depends on the timing of cash flows. One of the most important principles of finance is that individuals prefer to receive cash flows earlier rather than later. One euro received today is worth more than one euro received next year.

Cash Flow Timing

The Italian firm Montana SpA is attempting to choose between two proposals for new products. Both proposals will provide additional cash flows over a four-year period and will initially cost €10,000. The cash flows from the proposals are as follows:

<table>
<thead>
<tr>
<th>Year</th>
<th>New product A (€)</th>
<th>New product B (€)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>4,000</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
<td>4,000</td>
</tr>
<tr>
<td>3</td>
<td>0</td>
<td>4,000</td>
</tr>
<tr>
<td>4</td>
<td>20,000</td>
<td>4,000</td>
</tr>
<tr>
<td>Total</td>
<td>20,000</td>
<td>16,000</td>
</tr>
</tbody>
</table>

At first it appears that new product A would be best. However, the cash flows from proposal B come earlier than those of A. Without more information, we cannot decide which set of cash flows would create the most value for the bondholders and shareholders. It depends on whether the value of getting cash from B up front outweighs the extra total cash from A. Bond and share prices reflect this preference for earlier cash, and we shall see how to use them to decide between A and B.

Risk of Cash Flows  The firm must consider risk. The amount and timing of cash flows are not usually known with certainty. Most investors have an aversion to risk.
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**Example 1.5**

The Norwegian firm Fjell ASA is considering expanding operations overseas, and it is evaluating the Netherlands and South Africa as possible sites. The Netherlands is considered to be relatively safe, whereas operating in South Africa is seen as considerably more risky. In both cases the company would close down operations after one year.

After undertaking a complete financial analysis, Fjell has come up with the following cash flows of the alternative plans for expansion under three scenarios – pessimistic, most likely, and optimistic:

<table>
<thead>
<tr>
<th></th>
<th>Pessimistic (NKr)</th>
<th>Most likely (NKr)</th>
<th>Optimistic (NKr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Netherlands</td>
<td>750,000</td>
<td>1,000,000</td>
<td>1,250,000</td>
</tr>
<tr>
<td>South Africa</td>
<td>0</td>
<td>1,500,000</td>
<td>2,000,000</td>
</tr>
</tbody>
</table>

If we ignore the pessimistic scenario, perhaps South Africa is the better alternative. When we take the pessimistic scenario into account, the choice is unclear. South Africa appears to be riskier, but it also offers a higher expected level of cash flow. What is risk, and how can it be defined? We must try to answer this important question. Corporate finance cannot avoid coping with risky alternatives, and much of our book is devoted to developing methods for evaluating risky opportunities.

1.2 The Goal of Financial Management

Assuming that we restrict our discussion to for-profit businesses, the goal of financial management is to make money or add value for the owners. This goal is a little vague, of course, so we examine some different ways of formulating it to come up with a more precise definition. Such a definition is important, because it leads to an objective basis for making and evaluating financial decisions.

**Possible Goals**

If we were to consider possible financial goals, we might come up with some ideas like the following:

- **Survive.**
- **Avoid financial distress and bankruptcy.**
- **Beat the competition.**
- **Maximize sales or market share.**
- **Minimize costs.**
- **Maximize profits.**
- **Maintain steady earnings growth.**

These are only a few of the goals we could list. Furthermore, each of these possibilities, as a goal for the financial manager, presents problems.

For example, it’s easy to increase market share or unit sales: all we have to do is lower our prices or relax our credit terms. Similarly, we can always cut costs, simply by doing away with things such as research and development. We can avoid bankruptcy by never borrowing any money or never taking any risks, and so on. It’s not clear that any of these actions are in the shareholders’ best interests.

Profit maximization would probably be the most commonly cited goal, but even this is not a precise objective. Do we mean profits this year? If so, then we should note that actions such as deferring maintenance, letting inventories run down, and taking other short-run cost-cutting measures will tend to increase profits now, but these activities aren’t necessarily desirable.

The goal of maximizing profits may refer to some sort of ‘long-run’ or ‘average’ profits, but it’s still unclear exactly what this means. First, do we mean something like accounting net income or earnings per share? As we shall see in more detail in Chapter 4, these accounting numbers may have little to do with what is good or bad for the firm. Second, what do we mean by the long run? As a famous economist once remarked, in the long run we’re all dead!
More to the point, this goal doesn’t tell us what the appropriate trade-off is between current and future profits.

The goals we’ve listed here are all different, but they tend to fall into two classes. The first of these relates to profitability. The goals involving sales, market share and cost control all relate, at least potentially, to different ways of earning or increasing profits. The goals in the second group, involving bankruptcy avoidance, stability and safety, relate in some way to controlling risk. Unfortunately, these two types of goal are somewhat contradictory. The pursuit of profit normally involves some element of risk, so it isn’t really possible to maximize both safety and profit. What we need, therefore, is a goal that encompasses both factors.

The Goal of Financial Management

The financial manager in a corporation makes decisions for the shareholders of the firm. So, instead of listing possible goals for the financial manager, we really need to answer a more fundamental question: from the shareholders’ point of view, what is a good financial management decision?

If we assume that shareholders buy shares because they seek to gain financially, then the answer is obvious: good decisions increase the value of the company’s shares, and poor decisions decrease the value of the shares.

From our observations, it follows that the financial manager acts in the shareholders’ best interests by making decisions that increase the value of the company’s shares. The appropriate goal for the financial manager can thus be stated quite easily:

The goal of financial management is to maximize the share price of the company.

The goal of maximizing the share price avoids the problems associated with the different goals we listed earlier. There is no ambiguity in the criterion, and there is no short-run versus long-run issue. We explicitly mean that our goal is to maximize the current share value.

If this goal seems a little strong or one-dimensional to you, keep in mind that the shareholders in a firm are residual owners. By this we mean that they are entitled only to what is left after employees, suppliers and creditors (and everyone else with legitimate claims) are paid their due. If any of these groups go unpaid, the shareholders get nothing. So if the shareholders are winning in the sense that the leftover, residual portion is growing, it must be true that everyone else is winning also.

Because the goal of financial management is to maximize the value of the equity, we need to learn how to identify investments and financing arrangements that favourably impact on the value of the shares. This is precisely what we shall be studying. In fact, we could have defined corporate finance as the study of the relationship between business decisions and the value of the shares in the business.

A More General Goal

If our goal is as stated in the preceding section (to maximize the company’s share price), an obvious question comes up: what is the appropriate goal when the firm has no traded shares? Corporations are certainly not the only type of business, and the shares in many corporations rarely change hands, so it’s difficult to say what the value per share is at any particular time.

As long as we are considering for-profit businesses, only a slight modification is needed. The total value of the shares in a corporation is simply equal to the value of the owners’ equity. Therefore, a more general way of stating our goal is as follows: maximize the market value of the existing owners’ equity.

With this in mind, we don’t care what the organizational form is, since good financial decisions increase the market value of the owners’ equity, and poor financial decisions decrease it. In fact, although we choose to focus on corporations in the chapters ahead, the principles we develop apply to all forms of business. Many of them apply even to the not-for-profit sector.

Finally, our goal does not imply that the financial manager should take illegal or unethical actions in the hope of increasing the value of the equity in the firm. What we mean is that the financial manager best serves the owners of the business by identifying goods and services that add value to the firm because they are desired and valued in the free marketplace.
1.3 Financial Markets

When firms require cash to invest in new projects, they have to choose the most efficient and cost-effective financing option from a range of appropriate alternatives. First, they must choose whether to borrow money or give up a fraction of ownership of their firm. When borrowing, the company takes out a loan and agrees to later pay back the borrowed amount (principal), plus interest, to compensate the lender for giving the money to the borrower. If the firm decides to give up ownership, it sells a part of its company for a set cash amount. Irrespective, the firm will end up with the cash that it needs.

If a firm borrows funds, it can go to a bank for a loan, or it can issue debt securities in the financial markets. Debt securities are contractual obligations to repay corporate borrowing. If a firm gives up ownership, it can do this through private negotiation or a public sale. The public sale of ownership is undertaken through the marketing and sale of equity securities. Equity securities are shares (known as ordinary shares or common stock) that represent non-contractual claims on the residual cash flow of the firm. Issues of debt and equity that are publicly sold by the firm are then traded in the financial markets.

In many countries the financial markets are not nearly as well developed as in Europe. For example, in Africa, many stock exchanges are very small and only a handful of companies have equity or debt securities. For these firms, it is cheaper to get funding from banks and strategic investors.

The financial markets are composed of the money markets and the capital markets. Money markets are the markets for debt securities that will pay off in the short term (usually less than one year). Capital markets are the markets for long-term debt (with a maturity of over one year) and for equity shares.

The term money market applies to a group of loosely connected markets. They are dealer markets. Dealers are firms that make continuous quotations of prices for which they stand ready to buy and sell money market instruments for their own inventory and at their own risk. Thus the dealer is a principal in most transactions. This is different from a stockbroker acting as an agent for a customer in buying or selling shares on most stock exchanges; an agent does not actually acquire the securities.

**Figure 1.4** Comparison of dealer and agency markets
Figure 1.4 illustrates the major difference between dealer and agency markets. In both cases, Trader A wishes to sell to Trader B. Moreover, in each scenario, Trader A sells shares for £100 and Trader B buys shares for £110. So what is the difference between the market types? In the dealer market, the dealer bears the risk of holding the shares before he can find a counterparty to buy them. In Fig. 1.4, the dealer finds someone to buy the shares at £110. However, if they are unable to locate a counterparty, they may end up with shares that are less than the value at which they were purchased (£100). This is known as inventory risk, and constitutes a cost to the dealer. The difference between the dealer's buying and selling price is known as the *bid-ask spread*, which in this case is £10.

In an agency market, Trader A hires an agent or broker to find a counterparty. The broker will hopefully find someone and then take a commission on the sale price, which in this case is £10. At no time does the broker own the shares that she is trying to sell and, as a result, does not bear inventory risk.

At the core of the money markets are the money market banks (these tend to be large banks located in Frankfurt, London and New York), government securities dealers (some of which are the large banks), and many money brokers. Money brokers specialize in finding short-term money for borrowers and placing money for lenders. The financial markets can be classified further as the *primary market* and the *secondary markets*.

**The Primary Market: New Issues**

The primary market is used when governments and public corporations initially sell securities. Corporations engage in two types of primary market sales of debt and equity: public offerings and private placements.

Most publicly offered corporate debt and equity come to the market underwritten by a syndicate of investment banking firms. The *underwriting* syndicate buys the new securities from the firm for the syndicate’s own account and resells them at a higher price. Publicly issued debt and equity must be registered with the local regulatory authority. *Registration* requires the corporation to disclose any and all material information in a registration statement. The legal, accounting and other costs of preparing the registration statement are not negligible. In part to avoid these costs, privately placed debt and equity are sold on the basis of private negotiations to large financial institutions, such as insurance companies and mutual funds, and other investors. Private placements tend not to be registered with regulatory authorities in the same way as public issues.

Every country has its own regulatory authority that deals with the registration of publicly traded securities. Corporations that wish to have traded securities in a country’s securities exchange must register with the competent authority. Table 1.1 presents the names of regulators for a sample of countries.

**Secondary Markets**

A secondary market transaction involves one owner or creditor selling to another. Therefore the secondary markets provide the means for transferring ownership of corporate securities. Although a corporation is directly involved only in a primary market transaction (when it sells securities to raise cash), the secondary markets are still critical to large corporations. The reason for this is that investors are much more willing to purchase securities in a primary market transaction when they know that those securities can later be resold if desired.

**Dealer versus Auction Markets** There are two kinds of secondary markets: *dealer* markets and *auction* markets. Generally speaking, dealers buy and sell for themselves, at their own risk. A car dealer, for example, buys and sells automobiles. In contrast, brokers and agents match buyers and sellers, but they do not actually own the commodity that is bought or sold. An estate agent, for example, does not normally buy and sell houses.

Dealers markets in equities and long-term debt are called *over-the-counter* (OTC) markets. Most trading in debt securities takes place over the counter. The expression *over the counter* refers to days of old, when securities were literally bought and sold at counters in offices.
Auction markets differ from dealer markets in two ways. First, an auction market or exchange has a physical location (such as Wall Street in New York). Second, in a dealer market, most of the buying and selling is done by the dealer. The primary purpose of an auction market, on the other hand, is to match those who wish to sell with those who wish to buy. Dealers play a limited role.

Trading in Corporate Securities  The equity shares of most large firms trade in organized auction markets. The largest such market is the New York Stock Exchange (NYSE). Other auction exchanges include Euronext (Amsterdam, Brussels, Paris, and Lisbon Stock Exchanges) and London Stock Exchange (largest securities only).

In addition to the stock exchanges, there is a large OTC market for equities. The National Association of Securities Dealers Automated Quotation System (NASDAQ) in the US and most equity securities traded on the London Stock Exchange are both examples of OTC markets. The fact that OTC markets have no physical location means that national borders do not present a great barrier, and there is now a huge international OTC debt market. Because of globalization, financial markets have reached the point where trading in many investments never stops; it just travels around the world.

<table>
<thead>
<tr>
<th>Country</th>
<th>Regulator</th>
<th>Country</th>
<th>Regulator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Securities and Investment Commission</td>
<td>Italy</td>
<td>Commission Nazionale per le Società e la Borsa</td>
</tr>
<tr>
<td>Austria</td>
<td>Financial Market Authority</td>
<td>The Netherlands</td>
<td>The Netherlands Authority for the Financial Markets</td>
</tr>
<tr>
<td>Bahrain</td>
<td>Central Bank of Bahrain</td>
<td>Norway</td>
<td>Kreditinsynet</td>
</tr>
<tr>
<td>Belgium</td>
<td>Banking, Finance and Insurance Commission</td>
<td>Poland</td>
<td>Financial Supervision Authority</td>
</tr>
<tr>
<td>China</td>
<td>China Securities Regulatory Commission</td>
<td>Portugal</td>
<td>Comissão do Mercado de Valores Mobiliários</td>
</tr>
<tr>
<td>Denmark</td>
<td>Finanstilsynet</td>
<td>South Africa</td>
<td>Financial Services Board</td>
</tr>
<tr>
<td>Egypt</td>
<td>Capital Market Authority</td>
<td>Spain</td>
<td>Comisión Nacional del Mercado de Valores</td>
</tr>
<tr>
<td>Finland</td>
<td>Financial Supervision Authority</td>
<td>Sweden</td>
<td>Finansinspektionen</td>
</tr>
<tr>
<td>France</td>
<td>Autorité des Marchés Financiers</td>
<td>Switzerland</td>
<td>Commission fédérale des banques</td>
</tr>
<tr>
<td>Germany</td>
<td>Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin)</td>
<td>Tanzania</td>
<td>Capital Markets and Securities Authority</td>
</tr>
<tr>
<td>Greece</td>
<td>Hellenic Republic Capital Market Commission</td>
<td>Thailand</td>
<td>Securities and Exchange Commission</td>
</tr>
<tr>
<td>India</td>
<td>Securities and Exchange Board of India</td>
<td>Turkey</td>
<td>Capital Markets Board</td>
</tr>
<tr>
<td>Ireland</td>
<td>Central Bank and Financial Services Authority</td>
<td>United Kingdom</td>
<td>Financial Services Authority</td>
</tr>
<tr>
<td>Israel</td>
<td>Israel Securities Authority</td>
<td>United States</td>
<td>Securities and Exchange Commission</td>
</tr>
</tbody>
</table>

Table 1.1 Corporate and financial regulators
Exchange Trading of Listed Companies

Auction markets are different from dealer markets in two ways. First, trading in a given auction exchange takes place at a single site on the floor of the exchange. Second, transaction prices of shares traded on auction exchanges are communicated almost immediately to the public by computer and other devices.

The London Stock Exchange is ideal for describing how shares are traded, since the dealer and auction systems operate simultaneously. As of the beginning of 2009 there were more than 2,700 equities traded on the London Stock Exchange. Out of this number, approximately 900 of the largest equities were traded on the exchange's auction system, SETS (Stock Exchange Trading System), and the rest were traded through dealers.

On SETS, traders are allowed to submit orders to buy or sell at a stated price within a reasonable time (limit order), or to buy or sell a stated number of shares immediately at the best price (market order). If a limit order cannot execute immediately (i.e. there are not enough shares at the stated price to fulfil the order), it will stay in the limit order book, which lists all outstanding limit orders.

Smaller companies are traded through a dealer system, called SEAQ (Stock Exchange Automated Quotation System). Dealers compete with each other by posting buy and sell quotes for a maximum number of shares through an electronic system that lists every dealer's quotes. The dealer that quotes the highest buy price and the lowest sell price is most likely to trade.

Listing

Shares that trade on an organized exchange are said to be listed on that exchange. To be listed, firms must meet certain minimum criteria concerning, for example, asset size and number of shareholders. These criteria differ from one exchange to another. For example, Euronext has three main requirements for listing. First, a company must have at least 25 per cent of its shares listed on the exchange, and the value of these shares must be at least €5 million. Unlike other exchanges, Euronext does not have a minimum threshold for asset size. The second requirement is that the listing firm have at least three years of financial accounts filed with the regulator. Finally, all of the company's financial statements must follow recognized international financial reporting standards, also known as IFRS.

Table 1.2 gives the market value of stock exchanges around the world as at the beginning of 2008.

1.4 Corporate Finance in Action: The Case of Google

The verb ‘to google’ is defined in the Concise Oxford English Dictionary as ‘to search for information on the Internet’. This integration into everyday language is just one signal of the exceptional success of the Internet search engine that was started in 1996 by two Stanford PhD students, Sergey Brin and Larry Page. Google is now worth in excess of $130 billion. During Google's massive growth, its management had to consider and deal with many issues, all of which are covered in this textbook over the next 30 chapters.

Early Days

The foundation of any new business is the product or service idea. Through their research, Brin and Page believed they had a more efficient model of searching through Internet pages than the search engines that existed in 1996. Armed only with this idea and a few working algorithms, they approached several potential investors, and successfully attracted $100,000 from one of the founders of Sun Microsystems to develop their business concept. Within a year they had received a further $25 million from venture capitalists. To receive this financing, Brin and Page would have had to create a business plan and cash flow forecast that estimated their future costs and revenues. From business plans and cash flows, investors are able to arrive at a valuation of the future company. Valuation of companies and projects is covered in Part Two of this text.
Chapter 1 Introduction to Corporate Finance

By 2004 Google had been so successful with its business model and grown so much that it needed significant injections of cash to capture the emerging business opportunities that were becoming available. To the two founders, Brin and Page, it was paramount that they retain control of the company, but they also knew that they would have to issue many shares to investors so as to receive adequate funding. As a solution, Google restructured its ownership to have two types of equity shares, A and B class. B class shares, which were predominantly owned by Brin and Page, awarded 10 votes at company meetings for every share certificate, whereas A class shares received one vote for every share certificate. This meant that even though the number of shares held by outside investors was much higher than those of the two founders put together, the number of votes of outsiders was lower. Issues relating to ownership structure and corporate governance in general are covered in the next chapter.

When Google was thinking of raising capital, it had two choices. It could borrow the money (through a bank loan or public debt markets) or issue equity (through the equity markets). In the end, it chose to raise all the money in the form of equity financing. Google actually has no long-term debt. There are a number of reasons for this, and there are many factors to take into consideration when a firm chooses its own debt-to-equity mix, which is

<table>
<thead>
<tr>
<th>Exchange</th>
<th>Market value (£m)</th>
<th>Exchange</th>
<th>Market value (£m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NYSE Group</td>
<td>7,825,416</td>
<td>Athens Exchange</td>
<td>132,480</td>
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<td>Tokyo SE Group</td>
<td>2,165,461</td>
<td>American SE</td>
<td>128,899</td>
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<td>Euronext</td>
<td>2,111,340</td>
<td>Wiener Börse</td>
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<td>Nasdaq</td>
<td>2,006,825</td>
<td>Tel Aviv SE</td>
<td>117,528</td>
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<tr>
<td>London SE</td>
<td>1,925,853</td>
<td>Santiago SE</td>
<td>106,455</td>
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<tr>
<td>Shanghai SE</td>
<td>1,847,174</td>
<td>Osaka SE</td>
<td>106,089</td>
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<td>Hong Kong</td>
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<tr>
<td>TSX Group</td>
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<td>Deutsche Börse</td>
<td>1,052,599</td>
<td>Thailand SE</td>
<td>98,565</td>
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<td>Bombay SE</td>
<td>909,550</td>
<td>Luxembourg SE</td>
<td>83,047</td>
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<tr>
<td>BME Spanish Exch.</td>
<td>890,566</td>
<td>Irish SE</td>
<td>71,953</td>
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<tr>
<td>NSE India</td>
<td>830,048</td>
<td>Cairo &amp; Alexandria SE</td>
<td>69,637</td>
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<tr>
<td>Sao Paulo SE</td>
<td>684,856</td>
<td>Philippine SE</td>
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<td>Australian SE</td>
<td>649,158</td>
<td>Colombia SE</td>
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<td>Swiss Exchange</td>
<td>635,524</td>
<td>Lima SE</td>
<td>34,693</td>
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<tr>
<td>OMX Nordic SE</td>
<td>621,289</td>
<td>Buenos Aires SE</td>
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<td>Korea Exchange</td>
<td>561,303</td>
<td>New Zealand SE</td>
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<td>Borsa Italiana</td>
<td>536,267</td>
<td>Budapest SE</td>
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<tr>
<td>JSE</td>
<td>414,093</td>
<td>Tehran SE</td>
<td>21,943</td>
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<tr>
<td>Shenzhen SE</td>
<td>392,259</td>
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<td>Taiwan SE Corp.</td>
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<td>Singapore SE</td>
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<td>Mexican Exchange</td>
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<td>Oslo Børs</td>
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<td>Bursa Malaysia</td>
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<tr>
<td>Istanbul SE</td>
<td>143,286</td>
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</tr>
</tbody>
</table>

Table 1.2 Stock exchanges around the world

The Google Share Issue

By 2004 Google had been so successful with its business model and grown so much that it needed significant injections of cash to capture the emerging business opportunities that were becoming available. To the two founders, Brin and Page, it was paramount that they retain control of the company, but they also knew that they would have to issue many shares to investors so as to receive adequate funding. As a solution, Google restructured its ownership to have two types of equity shares, A and B class. B class shares, which were predominantly owned by Brin and Page, awarded 10 votes at company meetings for every share certificate, whereas A class shares received one vote for every share certificate. This meant that even though the number of shares held by outside investors was much higher than those of the two founders put together, the number of votes of outsiders was lower. Issues relating to ownership structure and corporate governance in general are covered in the next chapter.

When Google was thinking of raising capital, it had two choices. It could borrow the money (through a bank loan or public debt markets) or issue equity (through the equity markets). In the end, it chose to raise all the money in the form of equity financing. Google actually has no long-term debt. There are a number of reasons for this, and there are many factors to take into consideration when a firm chooses its own debt-to-equity mix, which is
also known as its capital structure. It may even choose to use more complex instruments such as options or warrants. Capital structure is covered in Part Four of this textbook, and complex funding securities are discussed in detail in Part Six.

The Google share issue was highly unusual in that it was organized wholly over the Internet. However, several fundamental issues had to be decided upon. First, what should the value of the new shares be? Should A class shares have a different value from B class shares? How risky were the shares? These questions are of huge importance to investors who are planning to invest their cash in any new investment. Assessing the risk of investments is covered in Part Three, and the process of issuing new securities is reviewed in Part Five.

Google as a Business

Although Google is known as an Internet firm, its success and size make it quite similar to other large firms in more capital-intensive industries. As at the end of 2007 Google had over $4 billion invested in property, and nearly 17,000 employees. In fact, the Google management were so concerned that the firm was losing a lot of its early values and culture that they appointed a chief cultural officer, whose remit was to develop and maintain the early Google working environment. Like all other firms, Google needs to ensure that it has enough liquidity and cash available to pay off its creditors. Short-term financial planning is therefore crucial to its continued existence. This is covered in Part Seven of the text.

Finally, Google has undertaken over 30 acquisitions since 2001. Most notably, it bought YouTube ($1.65 billion) in 2006 and DoubleClick ($3.1 billion) in 2007. Its operations span many countries, making its global reach enormous. It is one of the biggest companies in the world, and will continue to evolve and develop in the future. The final part of this textbook deals with issues such as corporate restructuring, financial distress, and international finance. These are extremely important to all companies, and not just Google.

So what Is Corporate Finance?

Many people who think of corporate finance tend to consider valuation as being most important. Others think of risk assessment and risk management, while many believe that capital structure should be emphasized. Hopefully, this section shows that for a business to be truly successful, the management of the firm and its shareholders must have a solid understanding of all corporate finance areas, and not just one or two topics. Google was a success, not just because it had a fantastic business idea, but also because it understands the fundamental basis of good business and corporate finance.

Summary and Conclusions

This chapter introduced you to some of the basic ideas in corporate finance:

1. Corporate finance has three main areas of concern:
   (a) Capital budgeting: What long-term investments should the firm take?
   (b) Capital structure: Where will the firm get the long-term financing to pay for its investments? Also, what mixture of debt and equity should it use to fund operations?
   (c) Working capital management: How should the firm manage its everyday financial activities?

2. The goal of financial management in a for-profit business is to make decisions that increase the value of the shares or, more generally, increase the market value of the equity.

Of the topics we’ve discussed thus far, the most important is the goal of financial management: maximizing share value. Throughout the text we shall be analysing many different financial decisions, but we shall always ask the same question: How does the decision under consideration affect the value of the equity?
1 Corporate Finance  Your grandmother sees you reading a fantastic book called *Corporate Finance*. She asks you, ‘What does corporate finance mean?’ Explain to her in a way that doesn’t put her to sleep.

2 Corporate Finance Decisions  What are the three main types of decision a financial manager can make? For each decision, give a relevant example.

3 Goal of the Firm  Evaluate the following statement: ‘Managers should not focus on the current share price, because doing so will lead to an overemphasis on short-term profits at the expense of long-term profits.’

4 Goal of Financial Management  Why is the goal of financial management to maximize the current share price? In other words, why isn’t the goal to maximize the future share price?

5 Financial Markets  ‘The advantages of the corporate form are enhanced by the existence of financial markets. Financial markets function as both primary and secondary markets for corporate securities and can be organized as either dealer or auction markets.’ Explain this statement.

6 The Corporate Life Cycle  Many companies view a stock market listing as an important objective. Why do you think this is the case? Why do you think Google listed on a stock exchange?

7 Balance Sheet Equation  The 2007 annual report for Anglo American plc, the world’s leading global mining company, shows that the firm had $34.042 billion in non-current assets and $9.962 billion in current assets. It reported $11.480 billion in current liabilities and $8.665 billion in non-current liabilities. How much was the equity of Anglo American plc worth?

8 Capital Structure  Anglo American plc announces that it plans to increase its non-current assets by $10 billion. If the company wishes to maintain its ratio of total liabilities to equity, how much long-term debt should it issue?

9 Accounting and Cash Flows  You work for a private airport that has just purchased a new radar system from the UK for £3.5 billion. You have paid £100 million up front, with the rest to be paid in three months. Explain how these figures would appear on an accounting statement and cash flow statement.

10 Timing of Cash Flows  Your company has just purchased a forklift truck, and has two payment options. The first option is to pay 100,000 Swedish kroner every month for 12 months. The second option is to pay 1,200,000 Swedish kroner at the end of the year. Which option should you choose? Why?

11 Risk of Cash Flows  You are assessing the viability of two projects. Project A has a 25 per cent chance of losing €1,000,000, a 50 per cent chance of breaking even, and a 25 per cent chance of making €1,000,000 profit. Project B has a 25 per cent chance of losing €2,000,000, a 50 per cent chance of breaking even, and a 25 per cent chance of making €2,000,000 profit. Which project should you choose? Why?

12 Corporate Goals  The global conglomerate, A.P. Moller-Maersk, states on its website that, ‘At A.P. Moller-Maersk, our vision is to be a world-class group, known and highly respected. An attractive business partner and employer, and a good corporate citizen.’ Is this consistent with the goals of financial management? Explain.

13 Financing Goals  Small firms tend to raise funds from private investors and venture capitalists. As these firms grow larger, they focus more on raising capital from the organized capital markets. Explain why this occurs.

14 Financial Management Goals  You have read the first chapter of this textbook and have taken over a company that you now discover is losing £100,000 a week. At the rate things are going, the company won’t have any cash left in six months to pay its creditors. What are your goals as a financial manager? Is this consistent with what you have read in this chapter? Explain.

15 Financial Management Goals  If you are in charge of a private firm and it doesn’t have a share price, what should be your goal as a financial manager? Explain.
16 **Financial Management Goals**  You have been manager of a small company for 20 years and have become great friends with your employees. In the last month, new Norwegian owners have bought out the company's founding owner and have told you that they need to cut costs in order to maximize the value of the company. One of the things they suggest is to lay off 40 per cent of the workforce. However, you believe that the workforce is the company’s greatest asset. On what basis do you argue against the new owners’ opinions?

17 **Goals of the Firm**  Your company’s new owners suggest the following changes to maximize the value of the firm. Write a brief report responding to each point in turn:

(a) Add a cost of living adjustment to the pensions of your retired employees.

(b) It is expected that high oil prices will increase your revenues by 25 per cent. The company wishes to increase its exploration costs by 15 per cent and pay the rest of the profit out to shareholders (i.e. themselves) in the form of increased cash dividends.

(c) Begin new research and development into more advanced but untried exploration techniques.

(d) Lay off 15 per cent of the workforce to keep costs down.

18 **Dealer versus Agency Markets**  Explain the difference between dealer and agency markets. Why do you think both types of market exist? Is there one type of market that is the best? Explain.

19 **Balance Sheet**  If a firm is to cut costs as a result of falling revenues, how would this appear in the balance sheet? Explain.

20 **Dual Class Shares**  Your grandmother asks you why Google has two classes of shares. Explain to her, in a way she would understand and not put her to sleep, why Google structured its share issue in such a way.

21 **Balance Sheet Equation**  You have the following information for the British mining firm Antofagasta plc. All figures are in $ millions.

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<tbody>
<tr>
<td>Total current assets</td>
<td>2,911</td>
<td>2,451</td>
<td>1,849</td>
<td>1,302</td>
<td>452</td>
</tr>
<tr>
<td>Total non-current assets</td>
<td>2,945</td>
<td>2,634</td>
<td>1,931</td>
<td>1,897</td>
<td>1,954</td>
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<tr>
<td><strong>Total assets</strong></td>
<td>5,856</td>
<td>5,085</td>
<td>3,780</td>
<td>3,199</td>
<td>2,406</td>
</tr>
<tr>
<td>Total current liabilities</td>
<td>367</td>
<td>514</td>
<td>389</td>
<td>405</td>
<td>309</td>
</tr>
<tr>
<td>Total non-current liabilities</td>
<td>1,424</td>
<td>1,416</td>
<td>1,349</td>
<td>1,328</td>
<td>1,191</td>
</tr>
<tr>
<td>Total liabilities</td>
<td>1,791</td>
<td>1,930</td>
<td>1,738</td>
<td>1,733</td>
<td>1,500</td>
</tr>
<tr>
<td>Total equity</td>
<td>4,065</td>
<td>3,155</td>
<td>2,042</td>
<td>1,466</td>
<td>906</td>
</tr>
<tr>
<td><strong>Total liabilities and shareholders’ equity</strong></td>
<td><strong>5,856</strong></td>
<td><strong>5,085</strong></td>
<td><strong>3,780</strong></td>
<td><strong>3,199</strong></td>
<td><strong>2,406</strong></td>
</tr>
</tbody>
</table>

Give a brief interpretation of what you think Antofagasta plc did over the period 2003–2007. Do you think it is in a better position now than in 2003?

22 **Balance Sheet**  Assume that Antofagasta plc increased its non-current assets by $1,000 million in 2008 and at the same time reduced its current assets by $500 million. Review the ways in which Antofagasta would be able to finance this expansion.

23 **Balance Sheet**  Assume that, in 2009, Antofagasta purchased a new mine for $500 million. It paid this on credit, and won’t be due to actually pay for the mine until 2011. The managers of Antofagasta state that, in the future, any increase in assets will be wholly funded by debt. What would the balance sheet look like at the end of 2009? At the end of 2011?

24 **Balance Sheet**  Assume that instead of financing the expansion fully with debt, the managers of Antofagasta say they wish to maintain the ratio of non-current liabilities to equity after the expansion. What would Antofagasta’s balance sheet look like at the end of 2011?
Financial Market Regulators  The UK’s Financial Services Authority states that its objectives are to promote efficient, orderly, and fair markets, help retail consumers achieve a fair deal, and improve the country’s business capacity and effectiveness. The German financial markets regulator, BaFin, states that ‘The objective of securities supervision is to ensure the transparency and integrity of the financial market and the protection of investors.’ Are the British and German objectives consistent with each other? Explain.

Practical Case Study

A skill any financial manager must have is to be able to find and understand financial information. Visit the websites of Volkswagen AG, Daimler AG and Renault SA. Download their financial accounts for the most recent year. At first you may find it difficult to find these, but persevere, because the information is there.

1 For each firm, look at its statement of financial position and record the following:
   (a) Non-current assets
   (b) Current assets
   (c) Current liabilities
   (d) Non-current liabilities

   Construct the balance sheet for each firm and calculate the value of shareholders’ equity. What do the figures say about each company?

2 Visit the Yahoo! Finance website and find the share price of each firm. What does the share price history tell you about each company?

3 On Yahoo! Finance read the news for each company. What does the news tell you about the fortunes of each company?

4 Combining all the information, which company do you think is the best investment? Explain.

Additional Reading

The field of corporate finance is enormous, and evolves in conjunction with events in the global business environment. An interesting paper for readers who wish to delve further is given below. Admittedly, the paper was written in 2000, but the discussion is still highly relevant today. Furthermore, as you will discover in later chapters, corporate finance research has progressed a lot in the 10 years since the paper was published.


To help you grasp the key concepts of this chapter check out the extra resources posted on the Online Learning Centre at www.mcgraw-hill.co.uk/textbooks/hillier

Among other helpful resources there are PowerPoint presentations, chapter outlines and mini-cases.