

Equities: types and features

1. Introduction

1.1. Chapter overview

There are various classes of assets that can be used for investment purposes. This chapter introduces you to the first of many that you will cover: **shares**.

The chapter starts by introducing investors who buy shares in companies, known as ordinary **shareholders**. Ordinary shareholders have an **ownership** stake in a company, giving them the right to a variable share in the profits of the company, known as a **dividend**, and the right to **vote** on decisions about the company made at company meetings. Ordinary shareholders may be involved in the day-to-day **management** of a company, but normally this responsibility is delegated to the company **directors**.

You will learn about a second class of shares; **preference** shares. Preference shares do not attract voting rights, but, to compensate for this, they pay a fixed rate dividend.

Next, you will be introduced to **American depositary receipts (ADRs)**. US investors do not like buying shares in a non-US company as it means they have different tax rules to follow and have to pay for the shares and receive dividends in foreign currencies. ADRs are a way of overcoming these problems. They are documents held in the US representing shares in overseas companies.

Finally, you will investigate a technique for estimating the value of a share based on dividend payout: Gordon's growth model.

1.2. Learning outcomes

On completion of this chapter you will:

Ordinary and preference shares

- 10.1.2 Explain the concept of a company being a separate legal entity
- 11.1.1 Identify the characteristics, and the risks to the investor, of the various classes of equity capital
- 11.1.2 Identify the reasons for issuance of preference shares and the implications to the investor

American and global depositary receipts

- 11.1.3 Identify the characteristics of Global and American Depositary Receipts

Dividends

- 11.3.1 Identify the reasons for a company's chosen dividend policy
- 11.3.2 Explain the practical constraints on companies paying dividends
- 11.3.5 Calculate an estimated growth rate for dividends using historic data, or using return on equity, and a retained earnings ratio

Absolute valuation models

- 11.3.6 Distinguish between and evaluate the merits of relative valuation models and absolute valuation models and between historic and prospective measures of value

- 11.3.7 Define holding period returns
- 11.3.8 Calculate a holding period return for an ordinary share, comprising capital gain and dividend income
- 11.3.9 Explain the components, assumptions and limitations of the dividend discount model (Gordon's growth model)
- 11.3.10 Calculate the present value of a share using the dividend discount model

Warrants

- 13.3.4 Define a warrant
- 13.3.5 Distinguish between a warrant and a call option
- 13.3.6 Explain the key features of covered warrants

2. Ordinary and preference shares

2.1. Incorporation

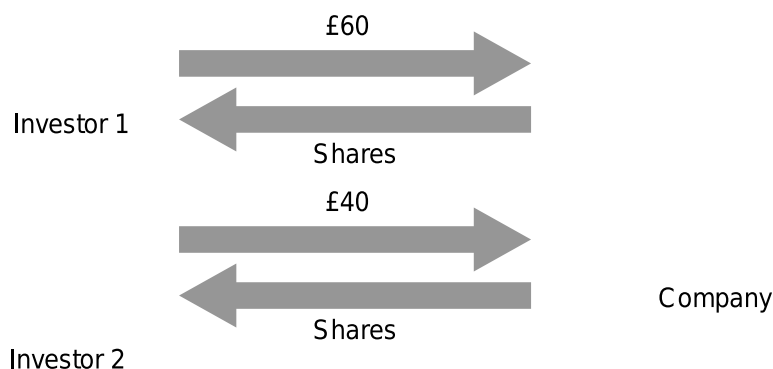
Incorporation is the process whereby a company comes into existence as a separate legal entity.

UK companies may be **private** or **public** companies. The key distinctions are as follows:

- Name: the name of a public company must include 'public limited company' or '**plc**'. A private limited company's name must only include 'limited' or '**Ltd**'
- Share capital: the minimum allotted share capital for a public company is £50,000. There is no minimum capital requirement for a private company
- Transferability of shares: Public companies are permitted to freely trade their shares in the secondary markets to the general public. Private companies may not

Note: a close company is one that is under the control of five or fewer persons or is under control of the directors alone.

2.2. Shareholders



Shareholders - also called **equity holders** or **members** - are the owners of the company. They invest capital into a business and receive shares in return. The more shares an investor holds, the greater proportion of the company he or she owns. For instance, if the company has issued 100 shares and an investor holds 60, then the investor owns 60% of the company.

Ownership vs. management

Shareholders are the owners of the company. It is, however, directors that manage the day-to-day affairs of the company on the shareholders' behalf. Executive directors are appointed, and may also be removed, by the shareholders of the company.

Authorised share capital

Authorised share capital is the **maximum** number of shares a company is permitted to issue, based on the shares nominal value. For example, if the authorised share capital is £1,000,000, the company could issue 2,000,000 50p nominal value shares.

The nominal value of a share is the fixed legal value; it is not the market price. For example, the nominal value of Tesco shares is 5p. This is well below the market price.

Authorised share capital can only be changed on approval by the shareholders in a general meeting.

Issued share capital

Issued share capital is the number of shares the company has allotted to shareholders, based on nominal value. For instance, in our example the company has authorised 2,000,000 shares, but only 500,000 may have actually been issued. Therefore, should the company require additional capital, it can issue up to another 1,500,000 shares.

The issued share capital is never allowed to exceed the authorised share capital.

2.3. Ordinary shares

Basic characteristics

Ordinary shares are the most common form of equity and are sometimes called **common shares** (especially in the United States).

Ordinary share capital is usually referred to as **equity capital** because the return derived from ordinary shares varies with performance (an 'equity' return).

Ordinary shares give shareholders the following basic rights:

Right to vote

Ordinary shares usually grant the right to **vote** in general meetings (although non-voting ordinary shares do exist).

Right to a dividend

A dividend is a share in the profits of the underlying company.

Dividends payable to ordinary shareholders can only be paid **after** all interest and preference dividends have been satisfied. Therefore, if a company is unprofitable, the ordinary shareholders who are most likely to lose out.

However, should the company generate profits, ordinary shareholders may receive a good return in order to compensate for this risk, although payment is at the discretion of the directors.

Right to a surplus on winding up

In the event of the winding up of a company, ordinary shareholders are entitled to a share of the remaining (i.e. surplus) assets of the company on a pro rata basis, but only after **all** other liabilities have been paid. This may result in ordinary shareholders receiving more than their nominal, or face, value.

Special types of ordinary shares

Deferred shares

Deferred shares typically have one or all rights deferred. During the deferral period these shares are often worthless.

The shares are often issued to founders, new board members and employees as incentives. The incentive is that given a specific event, such as profits hitting certain targets or company flotation, the deferred shares will be converted into standard ordinary shares in the company.

2.4. Preference shares

Background

Preference shares do not normally carry the right to vote in general meetings. This means decision making remains within the company and is not given to shareholders.

However, unlike ordinary shares, preference shares carry an expectation of a **fixed rate** dividend. This dividend is payable **after** interest but **before** ordinary dividends. Like all dividends, this dividend is payable at the discretion of the directors.

A preference share is referred to as a preference share because a company cannot pay ordinary dividends without paying off any preference dividends due first. i.e. the preference share takes preference over ordinary shares.

There are four basic types of preference share:

Cumulative preference shares

A cumulative dividend means that, should the company not pay a dividend (because, for example, of a lack of profitability), the right to receive that dividend is **rolled over** into the next period.

This is in contrast to ordinary shareholders who will lose the right to receive an annual dividend if the directors do not declare one.

Other shareholders cannot be paid until all **arrears** of cumulative preference dividends have been satisfied.

Participating preference shares

Most preference shares are only entitled to a fixed rate dividend. This fixed rate is a percentage of the nominal value of the share. For example, a 5% £1nv preference share will entitle the shareholder to 5p dividend each year for every share held.

However, the constitutional documents of the company may confer **participating rights**. This means that additional dividends may be paid, over and above the fixed rate, should the company be particularly profitable.

Participating preference dividends will often be calculated according to a profit related formula.

Convertible preference shares

A preference share with conversion rights allows the preference share to be converted into ordinary shares within a certain time period.

Redeemable preference shares

The shares can be repurchased by the company on a specific date or within specific periods. The redemption is normally at nominal value.

3. American and global depositary receipts

3.1. Introduction

The problem non-US companies face is that US investors like to buy dollar denominated shares and to receive dollar dividends. Therefore, unless a non-US company issues dollar denominated shares, it may lose out on the potential US investor base.

An American depositary receipt (ADR) is a way around this problem.

ADRs are used by non-US companies in order to encourage US investors to buy an equity stake. They are created and issued by a US bank on behalf of the non-US company. The ADR is an investment that represents the shares in the non-US company and **denominated in US dollars**.

Global depositary receipts (GDRs) are similar investments. The key differences are:

- Created and issued by non-American banks
- May be denominated in a currency other than US Dollars
- Marketed primarily to non-US investors
- Traded on non-US exchanges

3.2. Features

The following description explains how a fictional UK company, Brit plc, issues ADRs on the back of sterling denominated shares:

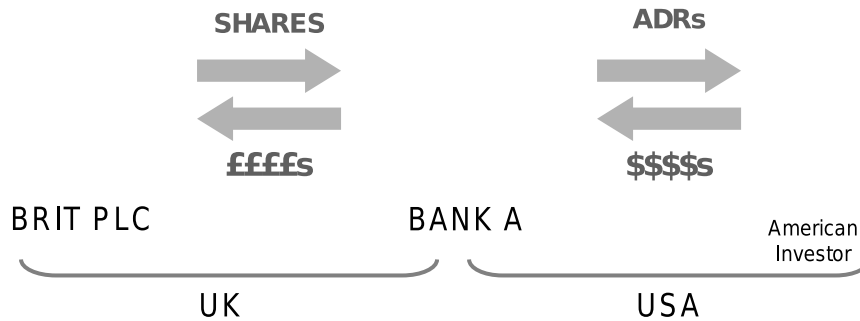
- Usually, one ADR represents several underlying securities. For example, one ADR may represent 100 shares in Brit plc
- ADR holders receive most privileges of the underlying shares, including voting rights and dividends. Dividends will, however, be paid in dollars

Global depositary receipts (GDRs) work in the same way and are likely to be created for distribution across several countries.

3.3. Summary

Ordinary and preference shares

Ordinary shares



Brit plc will pay dividends in sterling to Bank A. Bank A will convert them into US dollars and pass them on to the ADR holder.

4. Quotation of share prices and dividends

4.1. Share prices

Nominal value

Shares are described with a **nominal** (or **face** or **par**) value. For example, a 50p ordinary share, or a £1 ordinary share, or a 25p preference share.

The nominal value is shown on the face of the share certificate (where these still exist). The nominal value does **not** represent the market value of the share.

Market price

The market value is the **price** of the share (i.e. its worth). Should a company issue shares at a value above nominal, the excess is called the **share premium**.

The total **market capitalisation** of a company is calculated by multiplying the number of shares in issue by the market value/price of each share. Within this figure is the **free float** market capitalisation; this is the market capitalisation of a company based solely on the percentage of shares freely available for trading on the open market. A company could reduce its free float without, of course, affecting its overall market capitalisation.

4.2. Dividends

Tax credit

Dividends, both ordinary and preference, are quoted (and paid) **net** of a 10% tax credit.

Consequently, when a shareholder receives a dividend they are deemed to have already paid 10% income tax at source.

This tax credit is taken into account when an individual's income tax bill is calculated for the year.

Example:

An investor receives a dividend of 10p:

Gross dividend = $10 \times 100 / 90 = 11.1\text{p}$

Tax credit = 1.1p

4.3. Dividend policy

Introduction

Shares pay out dividends to shareholders as a distribution of profits. Directors will look at the performance of their company and decide what dividend to pay out. Many companies have a dividend policy in place to suggest how the directors will consider the dividend to be paid. After all, the more a company pays out in dividends, the less it has to reinvest in the business of the company. Therefore, the payment of dividends today could reduce the potential for future dividends.

Dividend signalling theory

A change in a firm's dividend policy can have an effect on its share price.

A rise in dividend payment is viewed as a positive signal, conveying positive information about a firm's future earning prospects, resulting in an increase in share price. Conversely a reduction in dividend payments is viewed as a negative signal about future earnings prospects, resulting in a decrease in share price.

It is this theory that could lead a company to pay out an uncovered dividend. This is where a company distributes a dividend greater than the current earnings per share in order to signal to the shareholders that, although times are tight at the moment, profits are expected to improve in the future.

Stable dividend policy

Some companies like to attract income seeking investors, such as pension funds, by offering a constant level of dividend. This stable dividend policy can lead to a steady growth in the company share price, as surplus profits are reinvested into the company.

Investors can use the dividend cover ratio to identify whether the level of dividend paid is sustainable.

Dividend cover

$$\frac{\text{Earnings per share}}{\text{Dividend per share}}$$

A dividend cover above one is sustainable, and above two is more than comfortable.

Uncovered dividend

An uncovered dividend is where a company distributes a dividend greater than the current earnings per share. To do this the company must use previous year's earnings. This is clearly not sustainable and is used to maintain an expected level of dividend to shareholder or signal that, although times are tight at the moment, profits are expected to improve in the future.

5. Absolute valuation models

5.1. Absolute vs. relative valuation techniques

Equity valuation is not an exact science, so there are many different valuation techniques used by analysts to obtain an appropriate valuation. Despite the variety of techniques used, they fall into one of two main categories:

- Absolute valuation techniques: based on absolute returns and discounting techniques. These are used to estimate an intrinsic value of equity as the present value of future returns
- Relative valuation techniques: estimate the value of equity as some measure of earnings power (e.g. profit) times an appropriate multiple. Other examples of earnings power might include sales, net assets ('book value') or cash flows

The narrative below explores absolute valuation techniques in a little more detail. Relative valuations will be picked up on the ratio analysis chapter.

5.2. Holding period return

The holding period return from a share over a given period is calculated as the capital gain plus income received, all divided by the original amount invested:

$$\text{Total return} = \frac{(\text{End Val} - \text{Start val}) + \text{Dividends received}}{\text{Start val}}$$

For example, an investor buys a share for £3.90 and sells it after 18 months for £4.50. If she receives dividends over the period of 5p, 8p, and 12p, her total return for the period is:

$$\begin{aligned} \text{Total return} &= \frac{(\text{£}4.50 - \text{£}3.90) + 5\text{p} + 8\text{p} + 12\text{p}}{\text{£}3.90} \\ &= \frac{85\text{p}}{\text{£}3.90} \\ &= 21.79\% \end{aligned}$$

5.3. Dividend valuation models

Preference share valuation

The principle of discounted cash flows may be applied to the valuation of equities. The relevant cash flows are the future dividend receipts. We saw in the financial maths chapter that where these dividend streams are constant, as in a preference share, the perpetuity formula can be used.

Example

EMCA plc has recently issued preference shares which will pay an annual dividend of 25p per share. If investors are expecting a return of 7% pa from such an investment, what must be the fair value of each share?

PV = price

$r = 7\%$

Dividend = 25

$$Price = \frac{Div}{r} = \frac{£0.25}{0.07} = £3.57$$

Gordon's growth model

However, the predictability of a future dividend stream with ordinary shares is uncertain, as the level of dividends depends on corporate performance.

Gordon's Growth Model factors in to the calculation a change in the dividend. However, it assumes that the level of dividends paid over time by a company increases at a **constant rate** (g).

Formula

Gordon's Growth Model calculates the ex-dividend price of a share, assuming constant dividend growth and dividend payments made at the end of each period in perpetuity. The formula used in deriving the ex-dividend price is shown below:

$$\text{Ex - div share price} = \frac{D_0(1+g)}{(r-g)}$$

Where:

- D_0 is the most recent dividend
- g is the growth rate of the dividend

- r is the investor's required rate of return

Alternatively, the formula may be expressed as:

$$\text{Ex - div share price} = \frac{D_1}{(r - g)}$$

Where:

- D_1 is the next dividend

Example

Suntrac plc has just paid a dividend of 6p. The expected growth rate of its dividends is anticipated to be 7%. Shareholders in Suntrac expect a return of 15%.

The current market price of Suntrac's shares is 75p. The value according to Gordon's Growth Model is calculated as:

$$\begin{aligned} \text{Ex - div share price} &= \frac{D_0(1 + g)}{(r - g)} \\ &= \frac{6p(1 + 0.07)}{(0.15 - 0.07)} \\ &= \frac{6.42}{0.08} = 80.25p \end{aligned}$$

According to the model, the company's shares are cheap at their current price of 75p. Consequently, investors would be advised to increase their holding in Suntrac plc.

Limitations to Gordon's Growth Model

This is simple model and so limitations are expected. It is a purely quantitative model and does not take into consideration aspects such as company or industry trends. Part of this is the assumption of a constant dividend growth, which ignores, for example, the possibility of high initial growth that levels off as the company matures.

6. Warrants

6.1. Definition of a warrant

Warrants are securities issued by a company.

They give their owner the right to subscribe for **new** shares in the company at a fixed price (the **exercise** price) on a future date (the **expiry** date).

Warrants are typically issued as a 'sweetener' with other investments, for example to make a corporate bond look more attractive to investors. Some of these warrants are non-detachable and are permanently fixed to the bond. Others are **detachable** and become separate tradable instruments in their own right.

Warrants are some of the riskiest investments available on the London Stock Exchange.

6.2. Warrant value

Introduction

The value of a warrant has two components: **formula value** and **premium value**.

Formula value

Formula value is the profit 'built-in' to a warrant (if any). It is sometimes called intrinsic value.

For example, if a warrant has an exercise price of £2 and the current share price is £2.50, the formula value will be 50p.

This equates to the amount saved by exercising the warrant relative to buying the share in the open market.

Formula value can only be positive (if a warrant is 'in-the-money') or nil. It can **never** be negative, as a warrant is a **right** to buy at a set price, not an obligation. That is, if you were not going to make money on the exercise of your right, you would not exercise it.

Premium value

Premium value is the remainder of the warrant value (i.e. warrant value less formula value). It is sometimes called **time value**.

The example below illustrates the calculation of formula and premium value:

- Warrant price = 700p
- Warrant exercise price = £2.00 per share
- Current share price = £2.50
- No. of new shares issued on exercise of warrant = 10
- **Formula value** = Current share price - Exercise price = £2.50 - £2.00 = 50p per share or 500p in total
- **Premium value** = Warrant price - formula value = 700p - 500p = 200p or 20p per share

The warrant's price of 700p is therefore made up of 500p formula value and 200p premium value.

Percent premium

Often the premium value is expressed as a percentage of the current share price. The **percent premium** may be calculated as follows:

$$\begin{aligned}
 \text{Percent premium} &= \frac{\text{Warrant price} - \text{Formula value}}{\text{No. of shares created} \times \text{Current share price}} \\
 &= \frac{700\text{p} - 500\text{p}}{10 \times 250\text{p}} \\
 &= \frac{200\text{p}}{2500\text{p}} \\
 &= 0.08 \text{ or } 8\%
 \end{aligned}$$

6.3. Differences between call options and warrants

Warrants are very similar to call options, both in terms of the amount of risk to which an investor may be exposed and in the way they work. The key differences are listed below:

- A warrant is a security giving the holder the right to buy **new** shares in a company; whereas an option is the right to buy shares in the secondary market. When warrants are exercised, the company's share capital increases, and the company delivers the shares to the investor
- A warrant's life tends to be a number of years whilst an option's will be a matter of months
- The seller of an option is always responsible for delivering the shares if it is exercised. The seller of a warrant, however, sells a right to buy shares from the company, and is not responsible for delivering the shares
- Equity warrants are traded on stock exchanges whilst equity options are traded on derivatives markets

6.4. Covered warrants

Covered warrants are warrants in a company's shares issued by an organisation other than the company itself, such as investment banks. Historically, covered warrants were marketed by investment banks to institutional clients.

The covered warrants are usually issued in a different denomination or a different currency from the underlying shares.

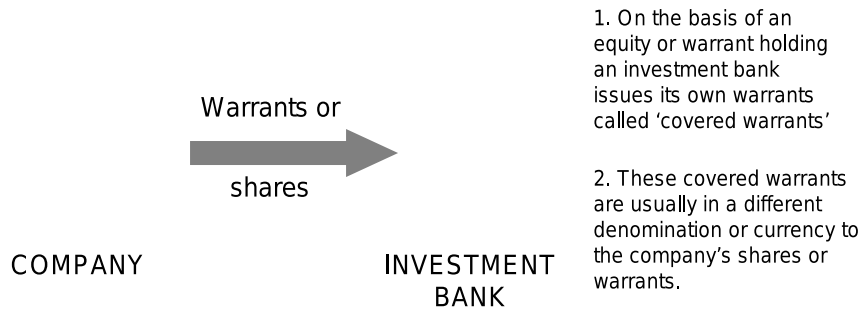
When the holder of a covered warrant exercises their right to buy the shares, they are exercising it against the issuer of the covered warrant rather than the company itself.

The LSE offers an order driven trading service for covered warrants with European and US underlying shares, aimed at institutional and private clients. These covered warrants can be:

- Calls (right to buy) or puts (right to sell)
- Cash or physically settled

- European style (exercised on expiry only) and American style (exercised on any day up to and including expiry)

Summary



7. Equities types and features: summary

7.1. Key concepts

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Now you have finished this chapter you should attempt the chapter questions.