

Class: MSc

Subject : Actuarial Practice 1

Chapter: Unit 2 Chapter 6

Chapter Name: Equity and Property

Today's Agenda

1. Characteristics of Ordinary shares
2. Equity categorization
3. Property investment – Prime property
 1. Characteristics of Direct property investment
 2. Freehold & leasehold property investment
 3. Indirect property investment

1 Characteristics of Ordinary Shares

1. Introduction

- Ordinary shares are securities held by the owners of an organization. In a small company all the equity shares may be held by a few individuals or institutions, whereas in a large organization there may be thousands of shareholders. They represent the fraction of ownership in the corporation that issues it
- As an owner the shareholder has the right to vote in the company's major decisions and a share in the company's profits after debt holders and preference shareholders are paid their interests.

2. Cashflows

- Company's profits are distributed amongst the shareholders in the form of dividends. Dividend payments happen at the discretion of the board of directors and may not be paid regularly. As the dividends are dependent on the profits made by the company, they are not known in advance and are variable.
- Shareholders expect company profits to grow with time and so should their dividends. In order to establish equity cashflows, we first need to project the growth of future dividends, thus making the cashflow schedule uncertain as they are estimates rather than quantities.
- Not all the profits left after paying debt holders and preference shareholders are distributed as dividends amongst ordinary shareholders. Some profits are held back to use as funds for taking up new projects or for expansion. Companies may also hold back profits in the good years, to compensate for dividends in years with worse profits.

1 Characteristics of Ordinary Shares

The payout ratio determines the proportion of profits that are to be distributed as dividends

$$\text{Payout ratio} = \frac{\text{dividends per share}}{\text{earnings per share}}$$

- Profits to shareholders can also be distributed in the form of buyback shares instead of dividends.
- Equities do not have a fixed redemption date and can be held indefinitely unless an investor sells them or the company buys them back and carry the risk of the company going bankrupt. In this case dividend payments may cease, and the only assets available to the shareholders are any left after the creditors have been paid their due diligence. This may at times lead to them having their future positive cashflows being less than their initial negative cashflow at the time of purchasing the shares.

1 Characteristics of Ordinary Shares



Suggest reasons why a company would want to buy back some of their shares.

3. Investment and Risk Characteristics

We use the **SYSTEM T** approach to set out the investment and risk characteristics.

➤ **Security**

Distribution of dividend income depends on the directors, the profits earned by the company and the ratio of earnings to dividends. In case of the company being wound up, the shareholders are the last stakeholders at the receiving end of the companies assets if any are left after payments to all the creditors have been met.

➤ **Yield**

- Real vs Nominal

Equities usually provide a real yield. This happens as profits and hence dividends rise with the level of inflation and economic growth. It can however not promise complete inflation protection like index-linked securities.

- Expected return relative to other assets

As we know greater the risk factor of an investment product, greater are the returns needed to compensate for the level of risk. Since equities have a higher risk factor than bonds, their returns are also greater. The extent of yield margin, however depends on the company issuing it

1 Characteristics of Ordinary Shares

➤ **Spread – volatility of capital values**

Like bonds, equity prices are also based on the concept of demand and supply, and can be volatile. Investors may at times buy or sell on the basis of short term speculation, but the most prudent basis of determining the price of shares is using by using the present value of future dividend.

➤ **Term**

Equities have an indefinite timeline unless the investor decides to sell them or the company buys them back.

➤ **Expenses**

- Expenses associated with equity are lower than those associated with bonds. Equity expenses largely depend on its marketability. The most prominent expense for equity is the spread between its bid and ask price

- Exchange rate – currency risk

Many countries have their own stock exchanges. An investor who has his liabilities and equities in two different currencies, is exposed to currency risk

➤ **Tax**

Dividend income and any capital gains from the sale of equity are taxed differently and depend on the tax regime in the country, with both being taxed at different rates in some.

1 Characteristics of Ordinary Shares

➤ **Marketability**

- Marketability for equities varies between companies. Usually marketability depends on the size of the company. However this relation may not always hold true. For instance if a large company has only a few shareholders who own large proportions of the company's shares, then the equity has poor marketability.
- For shares that are not listed on any recognized stock exchange, the investor uses a matched bargain approach, where he needs to find another investor willing to buy his shares

4. Quoted Shares

- Most equity investment by financial institutions and individuals is in shares that are listed on a stock exchange. In order to obtain a listing, companies need to comply with the stock exchange's regulations, as protective measure for investors.
- Regulations may be in the form of disclosure of information such as companies financial statements etc.
- Unquoted equity need not comply with stock market regulations, which makes them less secure than quoted shares
- Listed shares also benefit from greater marketability and are hence easier to price as a meaningful market value can be ascertained. They also have a flexible divisibility

2 Equity Categorization

Shares can be classified on the basis of :

- Size of company
- Expected profit growth
- Industrial sector

1. **Categorization by industry**

Equity analysts often specialize in a particular industry and confine their research and advice to the relative merits of companies within that industrial group for two main reasons

- Practicality
- Correlation of investment performance

2 Equity Categorization

1. Practicality

Investment analysts specialize within particular investment sectors because:

- Factors affecting one company in a particular industry are likely to be relevant to other companies in the same industry
- Information about companies in the same industry usually come from a common source and are presented in the same manner
- A single analyst cannot be assumed to have his forte in several areas of research, it is thus better to specialize
- Grouping of equities according to a common factor gives a structured decision making process, thus assisting in portfolio management and classification

2 Equity Categorization



- An investment analyst is interested in assessing the future growth prospects of a well known cosmetics brand. Their aim would be project future profit and dividend prospects based on the current share price of the company, their dividend payout ratio etc.
- To establish the profitability for the shareholders, they would try to accumulate all the available information about the company and factors that have an impact on the future trading. For instance they would consider:
 - Trends in consumer expenditure whether people would consider spending on cosmetics essential or futile
 - Trends in consumer preferences such as consumers moving towards products that are against animal testing
 - Population projections as it helps determine the market size
 - Extent of competition in the cosmetics industry as it affects the profit margin
- After collecting all the information and carrying out the analysis, it now feels practical to analyze other companies in the same sector rather than venturing out in a new sector as much of the data collected is relevant to every other company in the same industry.

2 Equity Categorization

2. Correlation of Investment Performance

After adjusting for overall market movements, the share price movements of companies within the same industry, tend to correlate more closely with each other than with companies in other industries. The share price movements reflect the changes that have occurred in the operating environment, thus affecting companies in individual industries in similar ways. For this reason, listings of share prices are often subdivided by business sector, and major markets have separate indices for different sectors.

For example the Nifty in India is subdivided into the following industry groups:

- Automobiles
- Banking
- Financial services
- FMCG
- Healthcare
- IT

2 Equity Categorization

Factors that are relevant to companies in the same sector are:

- Resources – companies in the same sector will use similar resources such as labour, land raw materials and thus have similar input costs. Eg consider companies in the construction sector where they will all use cement, steel rods, similar equipments, etc.
- Markets – companies in the same sector supply to the same market and will therefore be similarly affected by changes in demand. Consider companies part of the canned food industry, which will all see a sudden fall in demand for their products if consumers start preferring fresh and organic foods over them
- Structure – companies in the same sector often have similar financial structures and will therefore be affected by changes in interest rates. For example companies in the financial sector tend to have a large debt to equity ratio.

As companies belonging to the same industry get affected by the similar factors, there exists a correlation between changes in their profitability and share price as well

2 Equity Categorization

Problems with Industry Grouping

In practice some issues arise with the grouping of industries even when companies are grouped efficiently. Issues may arise in the case of:

1. Conglomerate Companies – a conglomerate company is a type of multi-industry company, that consists of several different and unrelated business entities operating under one corporate group. Here issues arises with grouping as it is difficult to group a conglomerate company in a particular industry as it operates in several sectors
2. The heterogeneity of companies within particular sectors – even companies operating within the same sector have several differences such as size of company, its marketability, its consumer base, product quality etc. as a result of which there may be hardly any correlation in their profitability and share price

3 Property Investment – Prime Property

Prime property – Property that is the most attractive to investors is called prime. Prime property would score highly on all of the following factors:

- Location
- Age and condition
- Quality of tenant
- The number of comparable properties available to determine the rent at rent review and for valuation purposes
- Lease structure
- Size

For example a prime location for a residential building would be an area which has a park in its vicinity, schools, supermarkets, shopping malls etc

For commercial spaces, prime location would be in a metropolitan city with major development and a developed public transport system etc.

3.1 Characteristics of Direct Property Investment

1. Nature of Return

- Property being a real investment is expected to provide a hedge against inflation, as it moves broadly in line with the inflation rate. Rental income from properties also increases in line with inflation assuming there are no other external factors.
- However practically demand-supply factors have a great effect on rental income as well as the capital value of the property, as a result of which they may increase only broadly in line with inflation

2. Cashflow Pattern

- Leases are for fixed terms with rent reviews being a rarity and if any, they may be on the upward side. The income stream may therefore increase in steps every few years. However, for a property that fetches rent at a level above the current market rents, the income stream may be fixed for many years.
- Lease terms can be anywhere between five to hundred years, with the lease agreement stating a rental review after every fixed interval of time eg. 10 years. Thus income from property increases in a stepped manner.

3.1 Characteristics of Direct Property Investment

- An upward only rent review is when rental income can only rise from its current value and cannot be decreased at any review. In case of any reduction in the market or rack rates before the review, the rent will remain fixed at its current value but will not reduce with market rates.



Rack rent – It is the full rent of a property if it were subject to an immediate open market review and may be different from the rent actually being received

- The rental yield from a property depends on the type of building.
- Running yield from property is the return achieved through income generated from the property as opposed through capital growth.

$$\text{running yield} = \frac{\text{rental income (net of all management expenses)}}{\text{cost of purchase (gross of all purchase cost)}}$$

- Risk associated with the property and the running yield from it are directly proportional to each other

3.1 Characteristics of Direct Property Investment

3. Marketability

Property is highly unmarketable as it takes a long time to buy or sell and dealing costs are very high. Poor marketability can be credited to :

- Unit size – the unit size of most investment property is large and is indivisible in most cases. As opposed to other investment choices such as shares or debentures which can be bought even in small quantities, the indivisibility of a property demotivates people from purchasing them or they may invest in them indirectly by purchasing shares of property company, as the availability of huge funds to directly invest in them is not always possible
- Uniqueness – each property is unique, which is why a particular yardstick cannot be used to value it and also lowers the marketability. Uniqueness may be in the form of size, location, their layout etc
- Valuation – property valuation is a matter of professional judgement and there is no central market with quoted property prices. There may be significant variations in valuations carried out by different valuers or by the same valuer on different basis. As sales take place infrequently, the property market is characterised by a lack of information

Placing a certain value on a property is a guess game because valuation is subjective and expensive. The actual value of a property may only be known at the time of its sale. Most of the property dealings that happen are confidential and their frequency is also low. This again demotivates investors from directly investing in them.

3.1 Characteristics of Direct Property Investment

4. Security

The security of income earned from the property largely depends on the quality of the tenant. Rent payable by a company is a prior charge on its profits, but costs of recovery from tenants in arrears can be high and there is risk of voids – periods when the property is not let.

When the property is not rented out, it is no longer a source of income during periods of voids. Periods of void are taken into account when establishing the expected return from a particular property.

When property is leased to a profitable tenant, for whom the rent is a an insignificant proportion of his total cost, one can assume complete security of the rental income.

Obsolescence and government intervention are other prime reasons that compromise property security.

Obsolescence - land is virtually indestructible, and buildings normally have a long life if maintained in a satisfactory condition. Buildings can, however be exposed to obsolescence. This results in a slowdown in the relative rate of growth in value between old and new buildings. In time expenditure on modernization becomes necessary.

Buildings wear and tear over time and their refurbishment involves high costs that is not always in line with the financial securities.

3.1 Characteristics of Direct Property Investment

Obsolescence may be reason for property values falling in real terms even when the average property values may rise in line with inflation.

Government intervention makes property susceptible to rent and planning controls. For instance the government may introduce a maximum limit on the rent earned on property for social concern, even if the property is capable of earning a higher rent.

5. Yield

Property being less marketable and less secure in comparison with index-linked government bonds, makes investors want a higher expected return from it.



Suggest other factors that would influence the size of yield margin between property and index-linked government bond returns

3.1 Characteristics of Direct Property Investment

6. Spread

Capital values of buildings can be volatile over the longer term, although infrequent and stable valuation methods may reduce short-term volatility. Land being indestructible will always have some value. Property values tend to move in line with the general economic cycle, but practically lags behind, because any changes in the economic cycle cannot be implemented on the property values in real time as supply of property is slow to respond. For investors looking for stability in their assets, investing in property solves their purpose.

Site value is that part of property value which it derives from the site on which the property stands. When site value forms a substantial part of the property's capital value, the property value tends to be more secure. This happens because even though property may be subject to depreciation, good land will always retain its value

3.1 Characteristics of Direct Property Investment

7. Expenses

Investing in property comes along with high expenses with respect to its buying, selling and maintenance. As a result for some investing in property is a matter of long-time commitment.

Maintenance and insurance costs if often borne by the tenant.

Investment characteristics can be changed by the owner

It is possible for the investment characteristics of individual property assets to be substantially changed by the owner. Examples of this would be redevelopment of an existing property or renegotiation of a lease with a sitting tenant.

3.2 Freehold and Leasehold Property Investment

Freehold Property Investment

- Freehold ownership is in perpetuity. A freeholder has the right to occupy the building or to let it out and subject to planning restrictions, to refurbish the property or develop it. However the land on which the property stands is subject to certain restrictions. These include covenants, easements such as rights of way, planning and building regulations and statutory requirements not to cause nuisance to others.
- For example the land can only be used for residential purposes, it may prohibit trades or business operating on land, restrict the number or type of buildings that can be erected or restrict the height of new buildings.



Covenants are agreements between multiple parties that create a legally binding agreement on how each party is to perform.

Easement is an agreement where someone other than the owner of the property acquires certain rights of using it.

- A freeholder is the sole and ultimate owner of his property and all his rights are reverted to him at the end of the lease agreement. There can be a number of leases, but ownership can be single

3.2 Freehold and Leasehold Property Investment

➤ Freehold ownership may be:

Unencumbered – the property has not been leased, and the owner has the liberty to refurbish or redevelop it or set it up for lease and receive rent on it

Leased – the property is already occupied by tenants who pay rent to the owner and the property gains the unencumbered status once the lease expires.

Leasehold Property Investment

➤ Where possession has been given to a third party under a long lease, the building reverts to the freeholder upon the expiry of the lease. The leaseholder pays the owner an annual ground rent. Compared to freehold investment, a leasehold investment is for a fixed period, provides a higher initial rental yield and a capital loss if the lease is held till the termination of the contract. Leases of 99 or 999 years can be treated as close to freehold interest except for the need to pay ground rent to the freeholder.

3.2 Freehold and Leasehold Property Investment

The leaseholder is the owner of the property and not of the ground on which it stands. Once the contract terminates, both the ground and property come under the ownership of the freeholder. Hence it is optimal for the leaseholder to sell the property before the lease terminates, or else he may suffer a capital loss equivalent to the cost of the building



There exists a third type of ownership in Scotland, known as commonhold ownership. Under the Scottish law, long leases were converted to full ownership. This means that homeowners own the freehold of a flat in a building without a time limit, and will pay a service charge – called the factor to maintain the common parts which are jointly owned and managed by all the flat owners

3.3 Indirect Property Investment

Direct investment in property has several disadvantages such as:

- Size – at times properties available may be too big for an investor to afford
- Diversification – when investing, the investor might wish to diversify his funds so as to reduce his risk exposure. Diversifying in property may require to own several types of property. This may not be possible for small investors with limited funds.
- Lack of marketability – the time duration and costs associated with the purchase and sale of property makes it less marketable.
- Valuation – the true value of a property can only be known once it is sold.
- Expertise needed – profits from the purchase and sale of properties are generated if their timing is accurate. Knowing the optimal time of dealing in properties, requires expertise and local knowledge, which not all investors have.

The issues of direct property investment can be resolved through indirect means of investing in them. These include pooled property funds or property company shares.

3.3 Indirect Property Investment

1. Pooled Property Funds

Various vehicles exist for pooled property investments such as open-ended unitized funds and close-ended investment trusts.

These vehicles normally have constitutions that specify the types of property that they can invest in, limits on liquidity, management charges that can be deducted from the funds etc.

2. Property Company Shares

Exposure to real property can also be gained by investing in shares of a property company such as property developers or property investors.

Large companies can invest in properties beyond the scope of most pooled funds. However, a property company has no restriction in the investments it can make or the management expenses it can incur. The larger property companies can also invest in property developments, which carry a greater risk than investing in an existing building with existing tenants

3.3 Indirect Property Investment

Property company shares are priced on the basis of their discounted net asset value.

Net asset value is the net value of the company's assets less liabilities, divided by the number of shares. It excludes any intangible assets such as goodwill, as upon winding up, goodwill is an insignificant asset with no value.

- Discounting the net asset value reflects:
 - Any difference in the valuation of the property and the valuation of shares
 - The risk of property being sold at a cheaper price, than otherwise the higher price it would have garnered had the sale not been a forced one
- Lower the discounting rate, higher is the price. NAV may be discounted at a smaller rate or may have a premium attached to it if:
 - Valuations basis of the NAV are extremely prudent
 - The market is optimistic of the developments and of a significant capital gain
 - The property company has an optimal management record