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PRINCIPLES OF STRATEGY, RISK AND FINANCIAL MANAGEMENT TECHNIQUES MAC2602

LUCIANO SCHOOL OF LAW & SOCIAL SCIENCES [LSLSS]

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Contents

MODULE NOTES

- Entities exist to fulfil a certain purpose or mission. Entities cover a gap in fulfilling the needs of people for a return/ profit.
- When organizations are started, the owners/founders have an idea of how they want the entity to be like in a number of years and that will be the vision of the company.
- The mission of the company will be to fulfil that ideal and the mission is encapsulated in a mission statement.

The mission statement

- The mission statement of the company defines the purpose of the organisation by broadly starting why the company / organisation exists.
- The mission statement of the organisation is formulated by the Top management of the company/organisation (The Board) deems it fit.
- A mission statement should have the following characteristics
- Should inspire change within the organisation although the mission itself does not change.
- Should be long term in nature as it will not change.
- Should be easy to understand and communicate.
- The Benefits of having a well-articulated mission statement includes the following
- Describes what the organisation is about
- It reveals the areas in which the company is operating e.g. technology/ internment.
- Provides a guiding philosophy about the direction the organisation should take.
- It enables communication of a common culture through the whole organisation.

Core Value

- Are the principle that guide an organisation by describing how every employees are expected to behave?

- Core values reflect what the organisation stands for and should be visible in the day to day behaviour of all employees of the organisation, independent of the current environment, they do not change over time but remain the same.
- It is important that leaders of companies are seen to be leaders in uphold the core values of the core values of the company, and constantly communicate them to their span of control.

Vision statement

- It is the blue print of where the company wants to go in future.
- Gives a clear picture of what the organisation wants to ultimately become in future.
- It is made in cognisance with the opportunities and threats faced by the organisation or those that it will face.

Strategy

- It is the way which an organisation goes about to fulfil its vision or goals (objectives).
- Strategy can be devised in the long term or in the short term, sometimes short term strategies are known as tactics.
- Elements of strategy are as follows:
  i. Choice of activities – is important in that it should differentiate the organisation from its competitors and create a competitive advantage for the company.
  ii. Trade - offs – organisations should choose specific actions supposed to other actions. It also necessitates that decisions be made about which decisions not to follow/choose.
  iii. Fit-activities/decisions made should fit one another in order to lead to success
  iv. Change – strategy should change in response to changes in circumstances.
  v. Strategy formulation is both a conceptual and analytical thought process and should display a broad conceptual and analytical thought process and should display a broad conceptual knowledge of the operating environment of the organisation and should take the organisations core values into account.

Competitive strategies

- Is about how an organisation obtains an advantage or an edge over its competition.
- Generally there are three competitive strategies that are available to organisations in order for them to develop an edge over its competitors and are as follows:
    i. **Cost leadership strategy**- this strategy sees the company seeking to minimise its costs of production to supply high volume, no fills products to customers at better prices than competitors. E.g. Shoprite
    ii. **Product differentiation strategy** – this strategy sees an organisation creating products or services that are perceived as uniquely attractive, creative and well designed by the customers or markets served by the company a good example is apple.
    iii. **Niche** – Thus sees an organisation trying to serve only one market to the exclusion of all other markets and is knowledge intensive of the particular market they seek to serve.

Pricing strategy

These are the pricing strategies that are followed by entities as the attempt to fulfil their objective and are as follows:

i. **Price skimming** – in this strategy the entity initially sets high prices for new or unique products, thereby minimising short term profits.
ii. **Price discrimination/ selective pricing** – here entities set different prices for the same product or services in different markets.
iii. **Market pricing** – here the entity sets the selling price on the perceived value of the product or service to the customer.
iv. **Penetration pricing** – here prices will be initially set low in order to gain market share.

Strategic objectives

- These objective clearly formulate measures of progress and targets to be achieved in a specific time frame.

- Strategic objective has the following characteristic:
- It is a precise formulation of the goals to be achieved.
- It contains a measure for progress towards the attainment of the attribute sought.
- It contains a target to be achieved and time frame for it to be achieved.
- Strategic objectives should meet the following criteria (SMART)

S- Specific (in what is to be achieved)
M- Measurable (should quantify what means success)
A Attainable
R- Relevant to the mission
T- Time bound with a completion date.

Stakeholders Management

Stakeholders ate those persons and organisation that are affected by the activities of the organisation and have an interest in the strategy of an organisation.
Stakeholders include staff, shareholders, creditors, suppliers, customers, government, local authorities, professional bodies, pressure groups and the community at large.

Stakeholder Classification

- Stakeholders may be classified as internal or external, connected or non-connected primary or secondary.
- Primary stakeholders comprise of internal stakeholders and connected stakeholders while secondary stakeholders comprise parties external to the entity and those that do not have a contractual connection to the entity.
- Internal stakeholders will have a strong influence on how companies are run as their interest are directly influenced by company action and they in turn affect company action.
- When internal stakeholders interests are not met they may respond by resigning, bring or embarking on industrial action, shirk their responsibility or sub optimising performance.

Connected Stakeholders

- Are stakeholders like shareholders, banks, lenders, suppliers and customers who are either connected to the entity either through a business relationship or a legal relationship.
- Connected stakeholders are indorsed in the objectives of the entity as long as the objectives of the entity affect their own interests.
    i. Shareholders
        - A people who have supplied their money in order for the entity to exist in Lieu of a return in either dividends or increase in their wealth.
        - Shareholders interest will revolve around the risk that they may lose their investment in the entity. In bad times this may spur an entity to undertake cast cutting measures to survive and keep the investment of shareholders alive.
        - In other instances if shareholders expectations like required return are not met, it might result in those shareholders selling their shares in the entity and investing elsewhere.

Bank and Lenders

Are interested in the cash flow generating capacity pf the organisations they have extended loans to. They are also concerned with the security of those loan and compliance of loan covenants they may put in place with the entities they have invested / lent money to.

Supplies

Are interested in the purchase strategy of the organisation and survival of the organisation to establish long standing business relationships suppliers will also be interested in whether the entity will be able to pay them in time as their full due.

Customers

- Are interested in products and product strategy of the company, customers want goods to be supplied by entities as promised (The 7's of marketing), this usually involves the agreed type quantity, quality and time of supply.
- Where customers are not satisfied with the products of a company they start buying elsewhere or sue the entity for substandard goods supplied to them by the entity.

Extend stakeholders

Are parties who do not have a business connection with the entity but may have social and ethical connections with the entity and include parties like the government, local authorities, professional bodies, pressure groups and the community groups.

Government

- Are interested in the number of people employed by the entity, training that is provided to those employee's and the tax it will derive from training the employees and the entity on their earning.
- The government might influence the organisation by increasing taxes, regulating certain aspects of the organisations activities or take legal action organisation that do not comply with their regulations.

Pressure Groups and Interest groups

- Are groups such as workers unions, human rights groups, consumer rights, animal rights groups, environmental groups and the local community.
- These groups usually act when they feel that something they represent is being undermined.

- Pressure groups can create reputational risks for the entity leading to loss of customers, earnings or to the entity being shunned by the local community, they can also affect the talent pool that will be available to the entity.

- Given that all these stakeholders have competing, what that cannot be satisfied simultaneously by the entity, the entity has to manage all these stakeholder interests and interaction with stakeholders to improve the standing of the entity.
- As a result strategy development has to take into cognisance stakeholder influences in the development of its strategy and its business conduct.

Factors affection strategy development

- General strategy is developed by looking a factor that would affect it both internally and externally.
- Internally factors are what the company can affect and change while external are those factors that an entity might only influence but sometimes even that influence is limited.

The SWOT Analysis Model

- It is a model to develop strategy that encourages organisations to look at 4 factors or variable that influences its strategy.
- SWOT is an acronym for strengths, weakness, opportunities and threats diagrammatically represented as follows:

	Internal factor	**External factor**
FAVOURABLE	**Strengths** - e.g. motivational employed strong factors in the company	**Opportunities** - events and condition outside
	Weakness - what we are	**Treats** – events and

	doing wrong compared to the competition	conditions that can threats our existence

Strengths and weakness

- There are internal factors that the organisation is showing on for example highly stalled and motivated staff, efficient production process.
- Strengths are as a result of the company's past practices and have to be maintained going forward, this basically what the company is doing rightly or has got the right.
- Strengths are used to exploit opportunities and avoid threats from the external environment by the company.
- Weakness are basically what the company is being wrong e.g. poorly motivated employees and when coupled with threats might actually lead to the demise of the entity .

Opportunities and Threats

- Opportunities are conditions or events in the external environment that the company might exploit to create value for is stakeholders going forward.
- Opportunities or threats may come as a result of changes in social conditioned and have to deal with accordingly by the company.

PESTEL Model

This is a model that looks at mainly the external factors that influence strategy setting.

It is an acronym meaning:

P - Political factors – organisation needs to look at the political environment as it will influence the division available to it or what it can do. (Bank pay of the financial).

E -Economic factors-The business cycle that the company is in and those that are likely to follow, things like inflation, interest rates etc. as these will have important implication about pricing of products, obtaining of funding etc.

S -Social factors- How the entity interacts with is social environments or the community around it as this may entails its reputation and how well it will be received by the business community.

T - Technology - The company also has to look at technology and that which is going to be likely available and how it will affect the operations of the entity.

E -Environment – This entitles how the organisation will deal with the Physical environment it will influence how it deals with its customers and where it will do so.

L – Legal factors - This entitles the laws and regulations that a company has to comply with and is closely connected to the political environment in that it is strongly influenced by the political environment.

Strategic Planning

- Strategic planning is undertaken by the Top management an entity and is hard to quantity in nature, is usually done for a long time period ranging from 5-20 years, is an continuous process in that strategy is changed as circumstances dictate and also irregular as it cannot always been planned for.
- Strategic planning can be subdivided in to 3 categories, corporate, business unit and operational.
- It is important to note that strategy and tactics are closed related but different in that.
- Porter's five forces model is usually used to planning for competitive positioning by the company and therefore forms part and parcel of the strategic planning process.

Porter Five Forces Model look at these variables

i. **Rivalry** announcing existing firms in the industry.

As this will be important for pricing, marketing and determining what actions to take as it there is intense rivalry among existing firms any action under taken by the organisation will, illicit responses from other industry players.

ii. Threats of New Entrants

These looks at barriers to entry into the industry and exit from that particular industry. If it is easy to enter and exit an industry organisation have to be very conscious about their actions as wrong decisions might encourage competition to enter into the market, i.e. relations made, relationship with customers etc.

iii. Bargaining power of suppliers

Do we have a sole suppliers or multiple suppliers will also influence our sourcing strategies, do we have power in negotiating prices or we can't negotiate them.

iv. Bargaining Power of customers

Are we the sole supplier of the product or not as this will affect the prices we charge to our customers? Where we are the sole supplier we can charge any price we want and we are not we are limited to what can be obtained from the market.

v. Threats of substitute products / services

Can our product be replaced with another or not, if it can this will influence our pricing strategy and what we do as an organisation to retain our customers.

Financial objectives of business

Business exist to achieve various objectives and those objectives of business change overtime with charges in circumstances and are as follows.

(a) **Profit maximising** - here the organisation attempts to maximise reported profits and is much popular than other objectives. It is a much more acceptable financial goal but management is mostly seen with entities trying to maximise their earning per share.

(ii) **Market share** – the company might also decide to increase its market share as this might lead to increases in profitability and lead to better chances of survival.

Survival -When firms are operating in trouble economic conditions survival might become an objective that firms pursue in order to benefit as economic conditions improve.

Growth -This is a financial objective of firms that's is not actively admitted but followed passively to actively by management in order to build an empire or their status and perks they would obtain from the job.

Wealth maximisation

- Is susceptible to creative accounting and earnings smoothing by management e.g. management capitalising research and development costs even through the commercial success of the research project is questionable.
- Profit maximisation does not lead to long term profitability as profits are measured annually and management might engage in actions that improve profit in the short term but harm the prospects of the company in the long term.
- Profit maximisation does not consider have value of money consideration
- Profit is calculated using historical cost information and derived Fair value information which distort the true time value of money due to change in price and different measurement included in the same calculation.
- Profit maximisation also does not look at the risks assumed to generate those particular profits.
- To overcome problems associated with profit ,maximisation various approaches like value based management techniques have been developed and for reporting purposes approaches like the integrated report has also been developed . However like all approaches developed by man sometimes they may be fillable and one always have to look for the signs.

Functions performed by a Financial Manager

Generally in financial management the Practionners will be responsible for primarily 3 decision that have costing implication and are therefore long term and strategic in nature generally.

(i) Financing

- It is the job of the financial manager to source finding to enable the entity to fund its investment in long term assets and its day to day operations.
- The financial manager has to decide or the mix of financing to be used by the entity in order to minimise financing costs by the entity.
- The financial manager also have to decide on the right instruments to an in financing the entity and as such the financial manager has to be well versed in the Financial instruments that are available in the market.

Investing

- It is the job of the Financial manager to decide with the other operational managers of the entity which assets the company should invest in.
- The involving function determines the direction that the organisation will take in the fore sable future.
- Here the financial manager uses techniques like ARR to evaluate invests.
- Dividend decision
- The financial manager also has to make decision on either to pay dividends or not, whether it is relevant to pay out dividends or not.

Forms of Business ownership

- Generally business is classified in terms of its ownership structure as this will have important legal and tax implications which will have an effect on the practice of financial management.

Sole proprietorships

- Are business formed by a single person who will be the owner of that entity.
- In a sole proprietorship there is no legal separation between the business and the individual a s they are treated as one on the same which will also be true for tax purposes.
- Is not heavily regulated as one only reads to get a trading licence and set up shop.
- Will be taxed on the same basis as individuals.
- Will have unlimited liabilities.

- Have limited sources of finding available as most its finding is provided by the owner.

Partnerships

- Is formed by between 2 and 20 individuals.
- Has no legal separation from the partners as partners will be jointly and aurally liable for the debts of the partnership (unlimited liability).
- Has to have a partnership agreement which may be oral or written that specifies how partners will share profits and losses.
- The partnership will not be taxed b SARS for tax purposes, but the individual partners will be taxable in their own hands.

Close Corporations

- Can be formed by 1-10 people called members.
- Is a legal person meaning it will be treated legally in its own right and be taxed on its own right?
- Ownership between members and new members is possible if members permit.
- Has limited liability therefore only members contribution invested in the company will be host should the company lease to exist.
- No longer possible to form new ones.

Company

- Is legal person which is quite distinct from its owners and can be pub will into the following classes

Not for profit companies

- Must have an objective to further some public benefit or relating to one or more cultural activities/ communal or group activities.
- Can income and assets to be used only for the stated objective and not to be paid out to directors, incorporators or officers unless its remunerations for the

- Services.

For profit companies

- Are divided into various kinds as follows
- Private company (Pty) Ltd.
- Public company (Ltd)
- Stable owned company (SOC)
- External companies (foreign companies)
- Personal liability companies
- For a company to be formed a memorandum of incorporation should be prepared and filled.
- Companies are legal persons and are treated as distinct legal creatures as well as for tax purposes.
- Companies have limited liability meaning if the company fails only the amount invested by the investor in the company will be the only loss the investor suffers.
- Various different characteristics separate private company from public company exist and will be covered.

Agency Theory

- As companies grow larger, management of companies is separated from ownership, management of company affairs is placed in the hands of management who are employees (agents) appointed by shareholders.
- However sometimes management will not act in the long term interests of shareholders, shareholder sustainable wealth maximisation when this happens it is termed an agency problem, various ways of leading with this exists like structuring incentives to management that align their interests with those shareholders. Shareholders may also sell their shares (dump them) lowering the share of the price making takeover possible and attractive.

Time vale of money calculations

Cash flows

- Profit, income and expenses are accounting concepts and have no direct relationship with value, value is linked to cash.
- Cash will be received at different times by the entity and in different modes.
- Companies can predict when they would receive cash in future or be regarded to pay out cash influence. To facilitate comparing like cash may have to be discounted or compounded.

Cash generally loose its purchasing power as a result either inflations or a return forgoing consumption.

Cash flows can occur in the following forms,

Single or unregular cashflow – these are cashflows that occur once off and are not likely to recur.

Annuity – these are regular or same amount of money cashflows that occur after a regular period generally subdivided into two.

Ordinary annuity – these are same amounts of cash that are payable or receivable at the end of the period like a month, quarter, bi-annually or annually.

Annuity due – these are same money amounts that are payable at the beginning of the period.

Pertuity - is an annuity that occurs, indefinitely that as for ever.

Simple Interest

It is interest calculated on the principal only, for the duration that the money is outstanding where it has been borrowed.

Interest will only be calculated as a percentage of only the principal

$i = (P \times i)$ or $FV = P(I + ni)$ (may penal)

Compound interest (compounding)

It is where interest is calculated initially on the principal and subsequently on the principal and accrued interest in the periods after the first period.

FV = PV (Hi) for one period

where FV = Future value
PV = Present value
i = interest

FV = PV $(I + i)^n$ for many periods.

If compounding is done intra year (more than once in a year) the following should be done to facilitate calculations

$$FV = PV\left(1 + {}^{i}/_{m}\right)^{nxm}$$

Where FV = Future value
PV = Present value
i = interest rate
N = number of years
M = compounding periods

Examples

Simple interest

A loan is borrowed from a bank and its interest is payable in arrears after two years what will be the money due if no interest is paid?

The money borrowed way R10 000 @ 12% Interest

Answer: FV = PV (I +ni)

Amount due = R10000 X (1 +2X0.12) = R12400 **or**

principal	R10 000
Interest(2yrs) 0.12x10000x2	2400
	R12400

Compound interest

Using the same information as above

Answer: FV = $PV\ (1+i)^n$

Amount due = 10 000 $(1 + 0.12)^x$ = R12 544

Annuities

For ordinary annuities the formular used to calculate the future value or the total amounts that will be received or paid is as follows

$$F\ V annuity = PMT \quad X \quad \left[\frac{(1+i)^n-1}{i}\right]$$

Where PMT = is the annuity amount
i= interest rate
n = number of years / period

Example a person invests R6000 at the end of each year for four years at a compound interest of 15%. What is the money amount he will have after 4 years.

$$600 \text{ x } \left[\frac{(1+0.15)^4-1}{0.15}\right] = \text{R } 29\ 960.25$$

Annuity due

For an annuity due the formular is as follows

$$FV = PMT \quad X \left[\frac{(1+i)^{n+1}}{i} - 1 -\right]$$

Using the above example with the difference that now the money is invested in the beginning of each year the result will be as follows.

$$\text{R}6000\left[\frac{(1+0.15)^5-1}{0.15}\right] = \text{R}34\ 454.29$$

PRESENT VALUE

Is actually the reverse of compounding where amounts that will be received in future are actually brought todays Rand value terms and for an irregular cashflow is obtained by the following formular

$$PV = \frac{FV}{(1+i)^n}$$

Where **PV** = present value
FV = Future value
I = interest rate
n = number of periods

Annuity (Ordinary)

The present value of an ordinary annuity is obtained as follows

PV annuity = PMT X $\left[1 - \frac{1}{\frac{(1+i)^n}{i}}\right]$ or $\left[\frac{1(1+i)^{-n}}{i}\right]$ x PMT

Annuity due

The present value of an annuity due is obtained as follows

PV annuity due = PMT X $\left[1 - \frac{\frac{1}{(1+i)^{n-1}}}{i} + 1\right]$ or $\left[\frac{1-(1+i)^{n-1}}{i} + 1\right]$ x 8

Perpetuity

To find the present value of a perpetuity

PV = $\frac{PMT}{L}$ Where PMT = is the amount received

I = is the interest rate

For only to be truly capable of Time value of money calculation one has to know the difference interests rates that may be applied in calculations.

Nominal Interest rates – this is the actual quoted rate of interest on an investment.

Effective interest rate – this is the interest rate effectively incurred after taking into account the time value of money consideration where interest is paid more than once in a year . For interest that is payable once a year the effective interest rate will be equal to the Normal rate of interest. Generally calculated as follows using the periodic / intra year rate

$\left[\left(1 + \frac{c}{m}\right)^m - 1\right]$ x 100%

Interpolation and Extrapolation

These are methods used to find interest rates, return rates of investments or internal rate of return more precisely of any investment by trial and error using absolute amount of the investment and the formula for interpolation or extrapolation is as follows:

Lower interest rate used + (higher interest rate used – lower interest rate used)

$$\frac{\textbf{\textit{Net present value of lower interest}}}{\textbf{\textit{net present value interest} - \textit{net present of higher interest rate}}}$$

Periodic Payment (PMT)

Can be obtained using the annuity Formulas as a periodic payment is just an annuity in another sense. For example if you want to purchase an Audi Q2 for R500 00 what monthly payments should you make over 5years of the term if no deposit is payable and interest is charged at 12% / annum.

$$\text{PMT} = \frac{\textbf{\textit{PV}}}{\textbf{\textit{Annuity factor of periodic interest over term}}}$$

Period of payment (12 x 5 = 60 months) = months, interest = $\frac{12}{12}$ = 1 % per month

$$= \frac{R500\ 000}{\left[\frac{1-\left(1+\frac{0.12}{12}\right)^{60}}{0.01}\right]} = \frac{500\ 000}{44.9550}$$

= R11 122.23

Memorise all the formulars as you have to be comfortable with them to make life easy going forward.
Use of fin calculator in this module not encouraged as Unisa lectures will encourage intuitive use of financial logic.

Sources of Financing

- Entity need funding to undertake their operations and where that funding is obtained will depend on the size and development of the firm.

- For owner managed firm (Sole proprietorship / partnership) this may come from owners savings, selling of investment, retrenchment packages or their own personal borrowing and some of it through retained profits.
- However for larger organisation that require large sources of funding the external capital markets might provide the answer or some retained profits as w ell.

- Obtaining funds through retaining profits is internal source of funds.

External sources of funding

- Generally funds can be obtained from two financial markets that provide funds to organisations that require it at a cost.
- Financial markets generally provide to forms of financing, debt financial visa – visa equity.

- Financial markets are separated into two and are called the Capital Market and the Money Market.

Financial Markets

- Are intermediaries who bring together participants who need money (entities/borrowers) and parties who have excess funds (Lenders/investors) so that they may deal with each other at a set return through the facilitation of the markets through how they channel funds through demand and supply.
- Financial markets play an important role in allocating scare resources within an economy.
- Financial markets can be divided into two broad classes, the capital market and the money market.

The capital Market

Is the market for long term sources of financing that can be used by an entity? (Generally longer than 3 years).

It is important for cashflow smoothing reasons for entities to match the source of funding to how the assets will generate returns for the company otherwise known as Maturity matching.

Capital markets has two components, the primary market and the secondary market.

The pricing market is used to issue new securities to investors and the secondary market is used to s ell previously issued securities.

The Capital Markets deal primarily with equity (ordinary shares, preference shares, warrants) and debt (preference shares and debentures etc.)

In South Africa on primary and secondary markets are provided for by the JSE (Johannesburg Stock Exchange) through its bourse market that deals with equity and the BESA that facilitates debt trading.

Money Markets

Is not a physically located market like the JSE but a virtual market and compulsory all financial intermediary entities, e.g. Insurance companies, banks, ledger funds etc.

Is used to provide for short – term funding needs of a company, generally less than a year.

It is generally used by entities to fund working capital requirements.

Money markets greatly influence interest rates through mechanism like those envisaged by the loanable funds theory, liquidity preference theory.

Companions of Debt and Equity

Equity	**Debt**
Means part ownership in the entity invested in	Means you have lent an entity money
Entitles the holder to a vote in the company	Does not entitle holder of certificate to a vote on the affairs of a company except protective terms.
Costs more as investors expect to be compensated for high levels of Risk assumed	Lost lower due to lower levels of risks assumed as debt holders are paid first should the company be bankrupt
Entails high levels of risk as return is not guaranteed	Entails how levels of risk as return is stated and almost guaranteed.
Is for the life of the company	Is only a limited period of time e.g. 5 years
Does not need to be repaid hence no cashflow pressure / risk	Has to be repaid hence creates financial cashflow risk for the company

Whenever the Financial Manager is to make a decision on which source of long term financing is to be used , are always has to keep in mind the risk / return trade of that equity and debt present.

Return in that for equity is higher and low for debt.

- Risk in that financial risk increases as more debts is assumed by the company due to the fact that interest payments and capital repayments are mandatory annually and a company can be declared bankrupt if they do not pay them.

TYPES OF EQUITY

Ordinary shares

- There are shares that evidences an interest in an entity.
- Dividends are not mandatory.
- Will be outstanding for the life of the entity.
- It is expensive to issue due to floatation costs and a higher required rate of return.

Normal Preference shares

- Are shares that also form part of the permanent capital of the entity.
- Dividends will be paid on fixed percentages of amounts contributed.
- Dividend payments is not mandatory.
- Does not give control in the entity.

Convertible Preference shares

- Are shares that form part of the permanent capital structure of the entity.

- Are convertible into ordinary shares.
- Does not give control right when still preteens but once converted will give some voting rights to holders, depending on conversion ratio.
- Has a conversion ratio that is given at inception on how many ordinary share the preference shares will be convertible into.

Participating Preference shares

- Form part of the permanent capital of the entity.
- Holders get a fixed dividend are also entitled to participate in the profits or losses of the entity in some specified way / fashion.
- Does not give holders control in the entity.

Debt instruments

- Is another way for companies to raise long term funding for it operations.
- Debt instruments are usually credit rated before they are sold to investors.
- However you are encouraged to be circumspect of the rating to instruments by rating agencies as rating agencies can put profits before a good job as 2008 crisis has shown and the euron saya.

Debentures

- Is a long term contract between the company that issues them (issued) and the investor who purchases them (Holder).
- Will have terms and conditions specifying repayment conditions, security and compound rate (interest rate) and any debt covenants that might attach to the debentures.
- Are usually traded using yield to maturity (priced using this in secondary markets).

Corporate Bonds

- Are not normally secured but are rated depending on their risk profile by the rating agencies
- Are similar to debentures and may also contain debt comments as conditions of issues.
- May also be issued in convertible from specifying the conversion option.

Long term loans

- Entities can also obtain long term loans from financial institutions.
- Are negotiated directly between the entity and the lenders and generally involve one lender unless it is a syndicated loan.
- Can also include Mortgage loans which are loans secured on fixed property of the entity.

Lease

- Company/entities can also use lease as a form of financing, companies obtain the assets they require and pay for them on time.
- Companies in tight sports in terms of liquidity might also use sale and lease back technique to obtain financing for some time and pay back the amount in instalments.

The use of debt has several **advantages** and **disadvantages** associated with it.

Advantages of Debt

- Minimises the cost of capital overall for the entity.
- Enhances return for shareholders in companies having debt through the effect of financial leverage.
- Provides financial for entity's actives that might not have been available from equity.

Disadvantages

- Use of debt increases financial risk for the entity concerned.

Capital structure theory

- The capital structure theory refers to how an entity finances it long term assets (noncurrent assets)
- It refers to the percentages of debt and equity used to finance the purchase of non-current assets.

Generally company use a mix of debt and equity to maximise the cost of financing that will be incurred.

The mix of debt and equity that minimise these costs is called the Optimal Capital structure of the Entity.

The capital mix decision also affect the value of the entity and the risk that is attached to a n entity.

Benefits of Debt Financing

- Financial leverage results from the use of fixed cost financing refers to either the increase or decrease in earnings per share as a result of using debt.
- Debt cost (latest) is tax deductible for tax purposes making it cheaper than equity as a result of the tax shield it provides.
- Leaverage will continue to benefit the entity up until the point the optional capital structure is reached / met.

Leaverage can be seen from the following example

Example: An entity that in all equity financed has assets of R100 million the tax rate is 2%. The firm is able to generate earning before intrust and tax of 25% of its assets at all capital levels under R1 Billion. The firm seeks to raise additional funding of R100 million. What would happen profit (earnings per share) if

(a) The additional funding is raised through equity.

(b) The additional funding is raised through debt at an interest rate of 12%.

Solution

	(a)	(b)
	All equity financed	**Equity and debts financed**
Assets before additional funding	R100 000 000	R100 000 000
Additional funding to Assets	R100 000 000	R100 000 000
Total Assets after funding	R200 000 000	R200 000 000
	R	**R**
Earning before interest and tax	50 000 000	50 000 000
25% x total Assets (200mx25%)	-	(12 000 000)
Interest @ 12%	50 000 000	38 000 000
Earning after interest before tax	(14 000 000)	(10 640 000)
Tax there on @ 2%	36 000 000	27 360 000
Profit for the period		
Return achieved by share holder		
=	R36 000 000X100%	R27 360 000
	R200 000 000	R100 000 000
=	18%	27.36%

Before new financing was obtained return achieved by shareholders was as follows:

	R
Total Assets	100 000 000
Earning interest and tax	25 000 000
Interest	-
Taxes @ 28 %(25 000 000 x 28%)	(7 000 000)
Profit for the period	18 000 000
Return available to shareholders	R18 000 000 x 100%
	R100 000 000
=	**18%**

As can be seen from the proceeding example the use of debt by the company would increase the profits that shareholders made from 18% to 27.36% without putting any additional money into the company.

As can be deducted from the above debt funding can be advantage however caution has to be exercised as increase in debt levels assumed by the company increases financial risks (The risk that the company will not be able to make interest payment or capital repayments when they full due). To compensate for this increase in risk debt provides will generate raise the rate of interest they require before they can provide additional funds to a firm that is already indebted.

It is also important to note that in practice the Target / optimal capital structure is not easily maintained or achieved in practice but companies will always to operate or fund the entity around that capital structure.

General entity and debt can be divided as follow for their decisions.

Equity	**Debit**
Issued s hare capital	Debentures
Distributable resumes including retained income	Bonds
Non distributable reserves	Buy term loans
Preference shares classified as entity	Mortagage bonds
	Lease etc.

Cost of capital

- It is the minimum rate of return that the providers of finance are will to have in future in order to foray are consumption today to invest in an investment.
- It is also defined as the return that is given up to achieve some other return or the opportunity cost, for example giving up interest that could be earned on investing in banks to invest in equities.
- When counted in cashflow terms it is sometimes regarded as the effective cost of financial/ capital.

- Calculated in cash flow term it is sometimes regarded as the effective cost of financial / capital.
- Calculating cost of capital is closely related to valuations and will always be done with reference to the market value of the instrument whose cost's is being considered.

Cost of debts

- Is usually done on an after tax basis but for this module will be done on a before tax basis.
- Debt cost lower than equity generally as a result of its lower risk status.

Debentures / Bonds

The cost of a bond or debenture is usually measured as it yield to maturity on any date or time. However to calculate this one needs to know the Technology used by market participants.

i. **Norminal value/force value / redemption value** - this is the value that is stated on the bond. For example R1000 bond,
   It is also the value on which its interest will be based on.
ii. **Coupon rate / interest rate** - is the stated interest rate that will actually be paid to holders of those debentures or bonds. This interest is referred to as coupon payment.

Now to calculate the yield to maturity one compares the price paid to the interest and fair value that will be received over time taking into consideration the time value of money consideration to arrive at the loss of debentures/ bond which will be the internal rate of to obtain this internal rate of return use any 2 interest rate one high e.g. 5% to obtain two different NPV then interpret / extrapolate the results to obtain the IRR.

To obtain the after tax cost multiply rate with after tax effect =

I x (i - tx) or Interest x (100% - tax rate %)

For cost of capital calculations the market value will always be given. However if it is not given one has to do valuation to obtain it and principles of valuation will be given briefly.

Valuation of fixed income securities

Bonds / debentures are generally most debts is regarded as fixed income securities as the interest they pay is constant based on their tax value.

To value fixed income securities the following is d one

i. Obtain the market interest rate which is the market required rate of return, which is the rate of return on average investor in the market demands.
ii. Discount the interest and face value that will be received in future to today's rand values.
iii. Add all the discounted rand value and one obtains the value of the instrument.

Example

Soros Fidelity fund holds R1 000 000 per value bonds in EPL limited. The interest (coupon) on the bonds is 15% and the debentures are redeemable after 5 years at face value. The current market rate of return for similar debentures with similar life (duration / maturity) of 5 years is 20%. The company tax rate is 28%.

(a) Find the market value of the debentures.
(b) Find the effective after tax cost of debt by interpolating between 10% and 20% and by using a financial calculator.

(a) Solution

Discounting at 20%		**R**
Compon (Annuity for 5 years) = R1 000 000 X 15%	=	R150 000
Discount factor for 5 years $\left[\frac{1-(1+0.2)^{-5}}{0.2}\right]$		X 2.9906
		448 590
Face value in 5 years R1000 000 X $\frac{1}{(1+0.2)^5}$		401 878
=		
Value of Bond		R850 468

(b) IRR

NPV at 10%

Coupon =	150 000 x $\left[\frac{1-(1+0.1)^{-5}}{0.1}\right]$	R568 618
Face value	100 000 x $\frac{1}{(1+0.1)^{-5}}$	R620 921
		1189539
NPV = 1189 539 – 850 468 =		339 071
NPV @ 20% (as calculated above) = (850 468 – 850 468)		-

Irr = 10% + (20% - 10%) x $\left(\frac{339\,071-0}{339\,071-0}\right)$

Ytm = 20%

After tax costs = 20% x (100% - 28%) = **14%**

Cost of entity

The cost of entity cannot be directly be determined and as a result is derived using primarily two models, the Gordon growth model and the capital assets pricing model.

Holders of equity instruments expect to be rewarded for holding shares by receiving a dividend pay-out from time to time and seeing the price of their share increase and from this cost the Gordon growth model.

The Gordon growth model can also be used to value shares and is as follows:

$P_O = \frac{D_1}{K_e}$

Where $\boldsymbol{D_1}$ = the next expected divided also given by $D_1 = D_O$ (1 +q)
$\boldsymbol{D_0}$ = current dividend
K_e = market cost of equity, which is also equivalent to be required rate of return.
Q = expected constantan growth rate also the sustainable growth rate of a company.

Problems with the model

- Can only be used for companies that pay dividends and those that behave a constant pay-out ratio of their earning.
- Does not give a meaningful result where the growth rate exceeds the cost of capital.
- Assume growth in perpetuity which is unrealistic.

Example

Berkshire Hathaway limited just paid a dividend of R13.00 on its ordinary shares. The expected rate of return for shareholders is 15.5% and dividends are expected to grow at a constant rate of 8% in future.

Find the value of Berkshire Hathaway limited shares

Solution $P_0 = \frac{D_i}{k_e}$

$= \frac{13(1+0.08)}{0.155-0.08}$ = **R187 .20**

To use the Model to determine the cost of entity one has to make cost equity subject of Formular and obtain the following:

$K_e \ \frac{D_1}{P_0}$ + q

A share is currently trading at R90.00 and a dividend of R6.00 has just been paid and dividend are expected to grow at a constant rate of 6% in future.

Find the cost of capital for the ordinary share.

$K_e \ \left[\frac{6(1+0.06)}{90} + 0.06\right]$ x 100%

= 13.07%

Capital Asset Pricing Model

This was developed to overcome the limitations of the Gordon growth model.

It does so by linking risk assumed to return that will be expected from the risk assumed.
Risk is the variability in earnings overtime or as a result of changing circumstances.
Risk can be separated into two components systemic risk and unsystemic risks.

Systemic Risk / Market Risk

Is the risk that is in the Market or economy and one cannot move away from it by changing processes. It affects all companies in the industry that the company operates in the same.
It can also be taken on an economy level in that if you invest in a particular country you cannot move away from the risks associated with that country e.g. strikes in S.A. or India.
Investors should not worry about their risks as it is everywhere.

Unsystemic Risks / specific risk
This represents the risk that is peculiar to a certain company and is the risk that investors ought to be worried about this is the risk that they should be seeking to remove from their investments.
However there is no market mechanism for this so it has to be climate by diversification.
The riskiness of a company as compared to the market is measured by the Betu of the company (B).
The model is based on economic theory that says that investors should not make economic profit but should only be compensated for, for the risk they bear.

The Capital Asset pricing Model fomular is as follows:

$ke/_{re}$ = R_f + B (R_m - R_f) where $ke/_{re}$ = Required return or cost of equity

R_f = Risk free rate (similar to return on government securities as governments are assumed to never default on their obligation)
Rm = Return on the Market or Average return achieved in the Market.

CAPM Model (Assumptions)

It is based on the efficient market hypothesis which says that investors can never beat the market and therefore should accept the market return.

The capital Asset pricing model is based on multiple regression analysis and therefore correlations between all assets in the market is taken into account and to reduce risk investors would have to do so by using now correlatal share and negatively correlated shares.

The term (Rm – Rf) is called the market premium which is the market compensation for investing in risk assets.

Weighted Average cost of capital

This is the return that a company should achieve at a minimum in order to satisfy the d emends of the providers of finance to the company.

Usually it is calculated using the target capital structure, which is the optimal capital structure that minimises financing costs.

In most instances the target capital structure would not be known to outsiders, hence the current market weights of Debt and Equity would be used as the proxies for the target capital structure.

The WACC is calculated as follows using a table

Component	Amount	Weight	Cost	Weighted cost
Ordinary shares	xxxx	xx%	xx	xxx%
Reference shares	xxxx	xx%	xx	xxx%
Debt: loans	xxxx	xx%	xx	xxx%
debentures	xxxx	xx%	xx	xxx%

Example

BBC Limited the following component of capital and cost

Debt (long term loans) R200 Million
Equity (ordinary shares) R 500 Million
} market values

The current market related cost are as follows Debt 6% (after tax) and equity 14%.

Component	Amount	Weight	Lost	Weighted cost
Equity	500 000 000	71.4%	14	9.996%
Debt	200 000 000	28.6%	6	1.716
	700 000 000	**100%**		**11.712**

Therefore the weighted Average cost of Capital of BBG will be 11.712%.

Or by the use of the fomular

$$\text{WACC} = \frac{\boldsymbol{Value\ of\ \ equity\ x\ cost\ \ of\ Equity + value\ of\ Debt\ \ x\ cost\ \ of\ Debt}}{\boldsymbol{value\ of\ equity + \ value\ of\ Debt}}$$

$$\frac{14\%\ x\ 500m + 6\%\ x\ 200m}{500m + 200m} = \frac{70 + 12}{700}$$

$$= \frac{82}{700} = \mathbf{11.716\%}$$

Analysis of Financial Information

- In order to invest and manage fund one needs to understand why they are doing something and no other things, the thing that will help to put all this into perspective is financial analysis.
- Financial analysis helps prospective investors and manages to evaluate the prospects of a company going into the future.
- Help uses of financial information like investors, potential investors and management to evaluate the performance of an entity.
- It helps manages to make decisions on the effective and efficient way of employing organisational resources.
- Therefore in summary financial analysis helps management and investors make investment decisions and allocation of resources.

Users of financial informational analysis

Creditors

- Creditors use financial information to use if they will be paid in time so they manage liquidity ratios of the entity.
- The also use information to determine demand trends of their product from the entity.

Management

- Management use financial analysis to measure performance and to identify strengths and weakness of the entity.
- They also use financial analysis to fine tax business operation by adjusting where they are making mistakes.

Other users

- SAR and government generally use financial analysis to judge whether companies are complying with government policies and whether they have paid the correct taxes.
- Employee are interested in the security of their employment and the share of value they get from the company‘s operations.

- Financial information is generally obtained from the financial statements of companies, and financial analysis is usually based on information contained therein.
- In doing financial analysis one also has to take into consideration economic data and trends into consideration and how this is likely giving to change in future.

Limitations of financial Analysis

- Does not capture or disclose qualitative factors like motivation.
- Financial analysis is backward cooking and it is not always that the past will hold going in to the future.
- Inflation generally distort the quality of financial analysis as inflation does not affect all the figures uniformly.

GAAP Noise – GAAP and IFRS aim to ensure fair presentation not accuracy and the information presented in financial statements might not be accurate.

Methods of financial Analysis

Common size financial statement

- This uses a technique where all items are stated in relation to an important number as a percentage in those financial statement for example in profit or loss Revenue is treated as a base of 100% and everything else is treated as a percentage of revenue. In statement of financial position this can be used where total Assets is 100% everything else is treated as percentage of total Assets.
- This allows the entity investors to determine trends in the dynamites of a company or entity.

Indexed financial statements

- Are used to analyse companies of different size to measure relative performance. A base year is established and everything in it is inclined at 100 and from there changes are shown going forward.
- This is a good way of analysis as it always shows relative performance as opposed to absolute figures which may be misled as a basis of performance.

Comparative financial statements

- This gives information of an entity over a member of years enabling trend analysis in absolute terms and also using the techniques listed above.

Ratio Analysis

Growth ratio

This measures the growth in any number shown in the financial statements and given by the fomular

$$\text{Growth rate} = \frac{\boldsymbol{current\ year - previous\ year}}{\boldsymbol{previous\ year}} \times 100\%$$

This is also known as horizontal analysis as it enables analysis of financial information on a line by live basis and to establish trends going forward.

Profitability Ratios

These measure the organisation success in generating a return and encompasses various ratios as follows, done using horizontal analysis always.

(i) **Gross profit** = $\frac{gross\ profit}{sales}$ x 100%

This measures how the company is generating a gross return to cover its expenses and still remain with an acceptable profit afterwards.

(ii) **Operation profit** = $\frac{\textbf{Earnings before interest and times (EBIT)}}{\textbf{sales}}$ x 100%

This measures how the company has been able to generate returns from its total asset base before the return is attributed to various provides of finance.

(iii) **Net profit Margin** = $\frac{\textbf{net profit for the period}}{\textbf{sales}}$ x 100%

This measures what was finally achieved by the entity as a return for it efforts in the period.

Return on Total Assets

This measures how successful the company has been in generally on return for the company through the use of company Assets and is sometime measured before or after tax so one has to be careful.

Return on assets = $\frac{\textbf{earning before interest and tax}}{\textbf{total assets}}$

Earning before interest after tax
Or

Return on capital employed (ROCE)

Measures how the company has been able to generate a return from the funding made available to it and is obtained as follows:

Return on capital employed = $\frac{\boldsymbol{earnings\ before\ interest\ and\ tax}}{\boldsymbol{equity+\ non-\ current\ liabilities}}$ (EBIT)

Return on equity

This measures the return generated for the owners of the company by the entity and is obtained as follows:

Return on equity (ROE) = $\frac{\boldsymbol{Earnings\ after\ tax\ or\ profit\ for\ the\ period-preference\ dividend}}{\boldsymbol{equity}}$

DuPont Analysis

This helps management better manage returns by helping management identify areas where they can improve the company's performance.

It can be used to improve return on assets or Return on Equity.

ROTA = $\frac{EBIT}{Revenue}$ x $\frac{Revenue}{Assets}$

Return on equity = $\frac{earnings\ after\ tax}{revenue}$ X $\frac{Revenue}{Assets}$ X $\frac{Assets}{Equity}$

All the above fomulars help management to improve any performance criteria they might want to improve and the other ratios used in the analysis is the Asset turnover and the financial equity multiplier.

Asset turnover $= \frac{Revenue}{Assets}$

This measures how will management is able to use the company's assets to generate revenue.

Equity multiplier $= \frac{Assets}{Equity}$

This measures how skilful management is managing how it has financed the operations of the entity.

Utilisation Ratios

- Utilisation ratios measures the effectiveness in employing company resources to achieve company's goals. The show management skill and tact in employing company's resources and are as follows and includes the two ratios above the equity multipliers and Asset turnover ratio.

Non – current Assets turnover ratio

This measures how well management are utilising Non - current Assets of the company to generate revenue. It sort of quantities management's creativeness in utilising company assets to generate revenue – and is obtained as follows:

Non – current Asset turnover ratio $= \frac{Revenue}{Non\ current\ Assets}$

Answer is always given in times.

Inventory Turnover

This measures how well management have been able to convert inventory into revenue and is given by the following formula:

Inventory turnover = $\frac{cost\ of\ sales}{average\ inventory}$

Debtors Turnover

Measures how well management have been in managing debtors and is given by the following fomular.

Debtors turnover = $\frac{credit\ sales\ /\ revenue}{average\ debtors}$

Creditor's turnover

This measures how well management have managed the current liabilities of the entity and is obtained by the following fomular:

= $\frac{credit\ purchases}{average\ creditors}$

 # NB ÷ Asset Turnover ratios are generally good the higher they are, the good , it is for the firm/ company except for creditors turnover ratios which we want to be lower.

Liquidity ratios

These ratio measures the liquidity risk associated with the firm. It gives a measure of how well the company will be able to meet its commitments in the short term.

Current ratio

This measures the primary liquidity of a company in that it measures.
If the company has enough current assets to cover its current's liabilities and is obtained by the following formular.

Current ratio = $\frac{current\ Assets}{Current\ Liabilities}$

Quick ratio

This measures how well the company will be able to meet its commitment if creditors are to demand to be paid all at once and is obtained by the following formular.

Quick ratio / Acid test ratio $= \frac{Current\ Assets\ - Inventory}{Current\ Liabilities}$

Cash ratio

This measures how much cash the firm has on hand at a particular period in time to cover its commitment. Generally firms should not keep large volumes of cash as cash does not earn any return if kept in cash and is obtained by the following formula:

Cash Ratio $= \frac{cash + marketable\ securities}{current\ liabilities}$

Inventory days

This measures how many days the company takes to convert inventory into sales or revenue's and is obtained from the following fomular.

Inventory days $= \frac{365}{inventory\ turnover}$

Debtor Days

This measures how many days debtors take to pay the company after take purchase on credit and is obtained by the following formular:

Debtor days $= \frac{365}{Debtors\ turnover}$

Creditors Days

This measures how long the company takes to pay its creditors and is obtained by the following formular:

Creditors days = $\frac{\boldsymbol{365}}{\boldsymbol{creditors\ turn\ over}}$

Cash operating cycle

This measures the time it takes an organisation it takes to convert its raw materials into cash and is obtained by the following:

Debtor days + inventory days = creditors days = cash operating circle.

Coverage ratios

This measures how on entity is able to cover its current commitments from its available resources. The company use this to argument its measurement of risky.

Interest cover ratio

This measures the number of times operating profit is able to cover its interest cover. The higher the ratio the safer it is for the firm.

Cash coverage ratio

This measures the ability of available cash resources to cover the company's commitments. The general form of the formular is as follows:

Cash coverage ratio = $\frac{\boldsymbol{cash+\ marketable\ securities}}{\boldsymbol{cash\ liabilities\ payable}}$

Leverage ratio

This ratio measures the financial risk associated with the level of debt financing that the company has taken on, and is obtained by the following formular:

$$\frac{long\ term\ debt}{equity}$$

Debt ratio

Measures the percentage of total funds provided by debt holders and is symptomic of how much an organisations assets are financed by debts and is given by the following formular

$$\frac{Total\ debt}{Total\ Assets} = \textbf{Debt ratio}$$

Market ratios

These are ratios that are used by market participants to evaluate the performance of a company and also to value a company, and are as follows

(i) Earnings per share (EPS)

This measure the net profit of an entity attributable to holders of equity and is given by the formular.

$$\textbf{EPS} = \frac{Earnings\ (Net\ Profit)}{Number\ of\ shares\ issued}$$

(ii) Dividend pay-out ratio

This measures how much of the company's profits are paid out or dividends and is obtained as follows

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

Dividend cover

This measures how much the profit of the company can cover dividend payments and is obtained by the following fomular

Dividend cover = $\frac{Net\ Profit}{Dividend\ payable}$ or $\frac{EPS\ \ (Savings\ per\ share)}{DPS\ \ (Dividend\ per\ share)}$

Price earnings ratio

It is a ratio that tries to value the company by using it earnings. It measures the number of years it takes for a company to cover its market price through earnings per share and is obtained by the following year:

Price earnings / ratio = $\frac{Market\ share\ Price}{Earnings\ per\ share}$

This ratio is only available for listed companies, it can also be used to value competitive unlisted companies that are similar to the listed company.

Earnings Yeild

It is a measure at the expected earnings at the company against its market price and is obtained by the following formular

Earnings yeild = $\frac{Earings\ per\ share}{Market\ share\ Price}$

Dividend yield

Measures the return from distributions that the shareholders will earn from their investment in relation to its share price. The formular is as follows

$$\textbf{Dividend yield} = \frac{\boldsymbol{Dividend\ per\ share}}{\boldsymbol{Market\ share\ price}}$$

NB : Whenever using ratio analysis, it is never done in isolating one always have to look comparative companies and make judgements based on how the company is performing is compared to its competitors, as looking at the company's own history will not provide the full picture. Even when company alone we always use number of year to obtain the full picture.

Working Capital Management

- Working Capital refers to Current Assets (Gross working capital) and Net working capital refers to Current Assets Less Current Liabilities.
- Net working capital is an important indicator of the short term solvency of an organisations, the higher the net working capital the better the short term solvency of the company.
- Net working capital is also related to Liquidity (the time it takes to convert assets into cash) the higher the Net assets of the entity, the Less Liquid the company will be.
- Working Capital also affect the profitability of the company in which higher net working capital usually lead to moderately high profits and lower levels of Net assets lead to less profit.

Inventory Management

- Inventory levels differ from company to company, as it depends on the type and complexity of the business. The financial manager has a role to play by providing advice to make sure that inventory is managed effectively.

The **advantages** of holding inventory includes the following:

i. Reduce stock outs risks, where the company runs out of stock.
ii. Prevent disruptions in the manufacturing operations due to shortage of Inventory.
iii. Prevents lost sales.

The **disadvantage** of having inventory or holding too much inventory indicate the following:

i. Holding costs (cost of having inventory)
ii. Ordering costs (cost of placing orders to have inventory)
iii. Requires storage space to maintain inventories in good condition
iv. System to manage it (like software system)
v. Obsolesce risk in that inventory might become absolute while being in custody of the company.

So holding inventory has costs associated with it and these costs need to be minimised by the organisation.

Organisation can manage inventory by instituting the EOQ system and the IT system which we learned in the MAC 2601 module.

Managing Accounts unenviable

- In order to improve its sales and profitability an organisation may grant Credit its customers.
- However granting Credit to customer increases the risk of Bad debts, that the debt will not be collected, thereby reducing profits.
- Therefore managing trade renewables involves a trade of between increasing profits and minimising costs associated with Trade.
- Like bad debts and collection and holding cost (opportunity costs)
- To do Accounts receivable management companies institute a Credit policy

Credit policy / credit terms

It is the policy that is used to control the level of Accounts receivable that an entity has at any time and is affected by the following

(i) Credit vetting

This involves the entity assessing whether customers will be able to pay the debts they require and this end they will be required to provide the following:

(a) Name and address
(b) Trade references or credit report from a credit bureau to see payment history of the client e.g. Experian or Trans Union
(c) Income statements or Income reports (payslips etc.)
(d) Setting the credit limits of the customer

(ii) Credit Period

This refers to the amount of time debtors are given to settle their outstanding balances. A longer Credit period is regarded as a lenient credit period and a shorter one as a thigh credit.

Shot credit period reduces sales and a lenient one increases sales.

(iii) Discounts

This is usually offered to debtors to induce them to pay quicker before the credit period expires.

The credit policy indicates the discount percentage offered and period which payment has to be made in order to qualify for the discount.

A large discount will improve liquidity but reduce profitability as the amount of the discount reduces revenue.

(iv) Collection parody

This refers to the methods that an organisation employ's to collect overdue amounts received as collections are actively chased.

If chasing of collection is too aggressive it might damage business relationships with customers.

Example of credit terms

Usually given as 3/10 net 60 meaning that a discount of 3% will be given if paid within 10days, but the amount has to be paid in 60days irrespective.

Cost of giving discounts

The cost of giving trade discounts is as follows on the policy given above

$$\left[\left(1+\frac{3}{100-3}\right)^{\frac{360}{(60-10)}}-1\right] \text{ x } 100\%$$

Managing Accounts payable

- This refers to management of Accounts payable. Trade payable is a form of financing that is provided by Creditors to finance the working Capital of the Entity.
- Trade payables are relatively easy to obtain and is mostly interest free unless the debt becomes overdue.
- However is Trade payables are not paid on a timely fashion, this could lead to a deterioration of business relationship with suppliers who may refuse to extend further credit to the entity.
- Proper management of trade payables it affect profitability and the .liquidity position of the entity.

Managing cash and cash equivalents

- Management of working capital ultimately comes down to cash and is reflected in the cash Balance of the entity.
- Cash is the life blood of an entity and without it companies would die, most new firms ultimately fail because of ineffective management of cash.
- Cash also has to be managed, too high a balance leads to cost interest and too low a level increases liquidity and Bankrupt risk.
- Firms hold cash for various reasons which include the following:

(i) Transactionary Motive

Here the company holds balances of cash in order to transact with suppliers, employees, term authorities.

Transactions nowadays are conducted either via cash or bank transfers.

(ii) Pre cautionary Motives

Here firms keep money balances for safety reasons against unforeseen or unpredictable circumstances or transactions.

Example of foreseeable transaction might include legal cost or lawsuits

(iii) Speculative purposes

Here companies keep cash balances to take advantages of opportunities that might arise or obligations that may arise as a result of business relationship.

Managing Cash

- To manage its cash the company prepares a cash budget which may be prepared on a weekly, basis or daily or monthly basis.
- Management use cash budget to plan for the period ahead, estimate short term requirements and evaluate subsequent performance.
- Management can manage cash by using techniques such as Maturing matching where the company matches it obligations to its maturities of cash.
- Management can also accelerate cash availability for debtors and involves payment methods as follows:
  - (i) **Cheque payments** - used to be popular years ago but has lost its appeal, now only used by few organisation. Cheques take long to clear as there is a lengthy administrative process resulting in a delay of receipt of cash.
  - (ii) **Electronic Funds Transfer** – is an electronic Transfer of funds that takes place where the customer uses the same bank the entity – where banks are different this may result in a delay of two or three days.
  - (iii) **Direct debit** – is a payment method where funds automatically deducted from the clients bank.
  - (iv) **Credit cards** - is another method of payment in the retail industries.

The payment is reflected in the organisation account within two day credit card fees are expensive.

To keep itself more liquid a company may delay making payment without running supplies credit terms.

To also better improve the liquidity of the company which it would have bought when it had excess funds.

Working Capital Policy

- This details how much working capital the entity is willing to keep at any particular movement and how that working capital will be financed.
- Having a higher level of net working capital would cost and reduce profitability as a result of opportunities lost and holding costs of inventory.
- Working capital policy entails managing the balances in each company of working capital and how it is financed.

Working capital policy should have the following **components**:

a. Balances of each component of working capital required
b. How the working capital should be financed, either by long term sources of finance or short term sources of finance and nature there.
c. Management each component of working capital.

Working capital investment policy

- Generally the level of working capital needed by an entity is dictated by the sales level the entity aims to reach or sustain.
- If not working capital and where it is lower it is considered to be an aggressive policy.
- Working capital is also influenced by the business cycle of the entity , seasonal companies or companies with seasonal sales might stock high levels of working capital to deal with quick sales when the sales are high in season.
- So management need to excise it judgement in managing it working capital.

- Generally an entity should maintain a permanent level of working capital to support sales and temporary working capital that fluctuates with sales in accordance with the season.

Working Capital Financing Policy

Generally there are two ways of financing working capital, conservatively and aggressively. Working capital financing policy has an effect on profitability and liquidity.

Conservative financing policy

- Here the company use more of long term sources of fund to finance its working capital requirements and less of short term sources of funding.
- Short term sources of funding will be used making to finance working capital where the company is having peak sales and where s ales can lower excess funds are used to invest in financial investment.

Advantage

Reduce the risk of not being able to fund the change in working capital requirement and reduces liquidity risk.

Disadvantages

The primary disadvantage is that list of financing of long term funds tends to be higher given a normal yeild curve for interest rates.

Aggressive Financing Policy

Here the company make use of more short term to finance the working capital of the entity. Here the short terms sources of finance and financing most of the working capital of the entity and little of it is financed by long term sources of finances.

Advantages

An aggressive working Capital financing policy increases profitability as working capital financing costs fall as short term sources of financing a cheaper than long term sources of financing.

Disadvantages

It increase liquidity and bankrucy risks as the company may not be able to repay all funds should provide demand them at once.

Moderate Financing Policy

This policy lies between the aggressive financing policies for working Capital. It matches the maturity of obligations to the maturity of assets.

Capital Investment

Generally companies or entities make investments where they expect to make a return whether the return be interest or dividends.

Investing involves buying Assets and these assets may be long term in nature or short term (working capital).

Long term Assets (capital Assets) that an entity purchases will used for a long time in the entitles generations and the risk that is attached to them is great.

When making capital investment, management's objective is to invest in assets that create long term sustainable value for the entity.

Capital investment are undertaken if they create value for the entity that is if the value of the cash and cash equivalents exceeds the value used to purchase those investments.

Capital investments produce most of the company's revenue over a number of years and therefore represent an important decision for management to make.

Capital Budget Preparation

Capital budgeting is done for various reasons and include the following:

(i) Motor Repairs or upgrade

(ii) Replacement

(iii) Expansion

To evaluate a capital decision involves 4 processes

(a) Idea generation

Here the company comes up with new idea of a product or ideas to expand the production capacity of the entity.

It could also be to reduce production costs without changing the operations of the entity or to reduce negative market externalities like pollution, industrial accidents that damage the workforce.

(b) Profect Evaluation

Have the company looks at all alternatives of the idea proposed and choose the best option of available alternatives taking into account the funding of the profect capabilities.

The cashflows that will be used on the Capital project and the cash that is generated by the project will be analysed using discounted cashflow techniques.

Risk associated with the Capital project or idea and how they affect the entity will also be taken into account.

(c) Profect selection

Have the management of the company create criteria to evaluate the attractiveness of the profect. The criteria used by the Management Board will be moisten with the organisation's long term objectives. The criteria would look at financial factors.

Capital profect and classified ad different way as follows:

(i) **Independent profect** - there are profects in which one has no effect on another. Acceptance of one does not produced by the acceptance of another. Cash flows generated by each profect are independent of other profect.

(ii) **Mutually** - exclusive profect - these are profects that compete against one another and acceptance of are automatically mean the refection of the other.

(iii) **Divisible and indivisible profect** – Divisible profect are profect that can be broken down into smaller parts and be implemented as those smaller parts. An indivisible profect is in its entity or not at all.

(iv) **Chain projects** – these are profect in which accdeptance of the next profect depend on the acceptance of the previous profect.

Profect cash flows computation

- Profect evaluation use. Cashflow and discountes cashflow technologies mostly to accept investment decision.
- Only relevant cash flows are used in evaluating profects that is cashflow that will be affectes by the profect or will affect the profect.

(e.g.) Acqusition cost of Machinery

Proceeds on sale of assets at end of profect useful life.

Initial investment in working capital

Centralisation cashflow (the reduction in existing company sales as in result of the profect).

The only incremental or differential cashflows are used in evaluating profects

When calculating operating cashflow are also has to consider the effect of transaction on cashflow, depreciation not allowed for tax purposes but wear and tear allowances according to legislation).

Capital budgeting techniques

Payback period

This method of investment appraisal look at how long it takes an entity to recover or recoup amount invested in to a project without taking the time value of money into consideration.

E.g. a company make an investment into a profect of R1000 000 and generate cashflow of R600 000 in year R500 000 in year 2 and R300 000 in year 3 find the payback period of the project.

Solution

Period	**Cash flow**	**Cumulative cashflow**
0	(1000 000)	(1000 000)
1	600 000	(400 000)

2	500 000	100 000
3	300	400 000

The period where the cash flow changes from negative to positive.

Therefore the company recovered its investment between that period its obtained as follows:

1 year (before change) $+ \frac{40000}{500\,000} \; \frac{Amount\ left + recover}{cashflow\ of\ that\ \ year}$

= 1.8 years

Accounting rate of return / return on investment

This method of investment evaluation is the same as find the average profit ability of the company entity over the profects useful life and is given by the following formular.

Net present value method

This is an investment model that is mostly used for investment evaluation purposes.

In the Net present value methods cash flow are discounted using an appropriate discount rate like the WACC or other rate as determined by the Board of the company.

Net present value is obtained as follows:

NPV = Sum of the Present Values of Cash inflow less initial investment or mathematically.

NPV = $\sum_{t\ e}^{A=T} \frac{cf_t}{(1+k)^t}$ = initial investment

Profitability Index (PI)

- The profitability index is a cost benefit ratio of projects that uses discounted cash flow techniques.
- It measures the value created per unit rand of investment and if it is greater than it created value and if it is lesser than 1 in destroys value.

- The profitability Index is calculated as follows:

$$\textbf{PI} = \frac{\textit{Sum of present value of all cash inflows}}{\textit{Intial Investment}}$$

Internal Rate of Return

It is an evaluation method that tries to find the investment rate between cash flows generated by and investment as compared to the investment.

It does so by assuming a Net Present Value of zero and the project with the highest rate will be chosen over those with lower rate, we have already covered how to calculate the IRR using interpolation and extrapolation.

Past Exam papers

May / June 2014

QUESTION 1 (15 marks) (18 minutes)

a) Sibongile invested an amount of money at a compound interest rate of 11% per annum He will receive an amount of R5 500 annually indefinitely

REQUIRED:
Calculate the present value (PV) of the amount Sibongile has invested by using the mathematical formula
Show the mathematical formula used and detailed workings. [Use four decimal places for your calculations and round your final answer to the nearest rand] (2)

b) Sarah obtained a loan of R250 000 to fund her new business venture According to the loan agreement the loan must be repaid over the next six years, payable quarterly at an interest rate of 8% per annum

REQUIRED:
Calculate the quarterly repayment amount due by Sarah by using the mathematical formula
Show the mathematical formula used and detailed workings [Use four decimal places for your calculations and round your final answer to the nearest rand] (6)

c) Your sister wants to save money in order to build up a nest egg for unforeseen expenses. She will invest her annual bonus of R6 000 at the beginning of each year Her investment will earn interest at a rate of 6% compounded annually She needs your help to calculate the value of her investment after five years

REQUIRED:
Calculate the value of your sister's investment after five years by using the relevant equation and factor tables Show the equation used and detailed workings [Use four decimal places for your calculations and round your final answer to the nearest rand] (4)

d) "The calculation of interest on a principal amount and adding interest to the principal for investment in the following period "

REQUIRED:
Name the term for the above type of interest (1)

e) Mike wants to invest an amount of money today at a compound interest rate of 4% to have a total amount of R100 000 after 20 years

REQUIRED:
Calculate the amount Mike needs to investment today in order to have the R100 000 available after 20 years Use the relevant equation and factor tables. Show the equation used and detailed workings [Use four decimal places for your calculations and round your final answer to the nearest rand] (2)
[15]

QUESTION 2 (19 marks) (23 minutes)

PART A
Lutho Platinum Limited is a successful mining company They want to increase current production and thereby also the net profit They will need additional funds to finance the new production assets of R200 million The aim of the directors of the company is to increase the returns for equity holders and therefore they need to investigate different options for financial leverage to benefit the shareholders.

The following information regarding the current situation of Lutho Platinum Limited is available

Total assets	R 400 000 000
Equity	R 400 000 000
Company tax rate	28 %
Current interest rate	9%
Earnings before interest and tax (EBIT)*	R115 000 000

*The additional production assets will generate an increase of 10% on the current operating returns (EBIT).

The tables below present the incomplete financial leverage situation of Lutho Platinum Limited

- Option 1 (table 1) presents the situation where the additional production assets are funded by equity only.
- Option 2 (table 2) presents the situation where the additional production assets are acquired by using 50% equity and 50% debt funding

TABLE 1 (option 1)

Funded by equity only	
Total assets R600 million	
Equity R600 million (R400 m + R200 m)	
Debt R0 million	
	R m
Earnings before interest & tax (EBIT)	?,?
Interest	(?,?)
Profit before tax	?,?
Income tax expense	(?,?)
(a) Net profit	?,?
(b) Return on assets (ROA) = Formula ?	
= ? / ?	= ?,? %
(c) Return on equity (ROE) =Formula ?	
= ? / ?	= ?,? %

TABLE 2 (option 2)

50% equity and 50% debt funding	
Total assets R600 million:	
Equity R500 million (R400 m + R100 m)	
Debt R100 million (R0 + R100 m)	
	R m
Earnings before interest & tax (EBIT)	?,?
Interest	(?,?)
Profit before tax	?,?
Income tax expense	(?,?)
Net profit	?,?
Return on assets (ROA)	
= ? / ?	= ?,? %
Return on equity (ROE)	
= ? / ?	= ?,? %

REQUIRED:

Present, in the given table format above the calculations and figures for the

a) net profit of both option 1 and option 2 (4)
b) the return on assets (ROA) for both option 1 and option 2 (2)
c) the return on equity (ROE) for both option 1 and option 2 (2)
d) Give a short explanation why the inclusion of debt funding (option 2) increases the return on equity (ROE) (2)
e) Calculate the capital structure for option 2. (3)

PART B

The following is an extract from the statement of financial position of Lamu Limited

	R
Ordinary issued shares	20 000 000
Non-distributable reserves	900 000
Retained income	2 400 000
Debentures at 12%	8 000 000
Long-term loan at 11% (book value)	5 000 000
	36 300 000

Additional information:

1 There are currently 5 000 000 shares in issue The shareholders required rate of return is 15% p a
2 The current dividend is R2,30 per share and the expected growth in dividends is 3% per year
3. The market value of the debentures is R 6 894 500
4 The market interest rate for similar debentures is 18% (13% after tax)
5 The long-term loan agreement provides that interest is charged at 11% The current JIBAR rate for similar loans is 12% Assume that the market value of the loan is equal to the book value.
6. The tax rate is 28%

REQUIRED:

Use the **table format** and calculate the weighted average cost of capital (WACC) of Lamu Ltd at market value [Set your calculator on four decimal places for the calculations of this question and round your final answers to two decimal places Show the formulas used and detailed calculations](6)
[19]

QUESTION 3 (26 marks) (31 minutes)

J&A Kitchens (Pty) Ltd supply and install built-in cupboards in houses
The following financial statements of J&A Kitchens (Pty) Ltd are provided to you

Statement of profit or loss and other comprehensive income for the year ended 28 February 2013

	2013 R'000	2012 R'000
Revenue	11 225	6 558
Cost of sales	(7 844)	(4 023)
Gross profit	3 381	2 535
Operating costs	(998)	(596)
Distribution costs	(450)	(155)
Administrative expenses	(20)	(174)
Other expenses	(121)	(150)
Net operating profit /(loss)	1 792	1 460
Interest and other income	477	398
Earnings before interest and tax (EBIT)	2 069	1 858
Interest expense	(952)	(458)
Profit before tax	1 117	1 400
Income tax expense	(313)	(392)
Net profit	804	1 008

Statement of financial position as at 28 February 2013

	2013	2012
ASSETS	R'000	R'000
Non-current assets		
Property, plant and equipment	6 556	2 665
Other investments	295	195
Total non-current assets	6 851	2 860
Current assets		
Inventories	302	105
Trade and other receivables	1 133	654
Cash and cash equivalents	756	90
Total current assets	2 191	849
TOTAL ASSETS	9 042	3 709
EQUITY AND LIABILITIES		
Capital and reserves		
Share capital	2 000	2 000
Retained earnings	1 454	650
Total equity	3 454	2 650
Non-current liabilities		
Interest-bearing borrowings	3 948	190
Deferred tax	256	102
Total non-current liabilities	4 204	292
Current liabilities		
Trade and other payables	1 086	523
Current tax payable	42	56
Current provisions	256	188
Total current liabilities	1 384	767
TOTAL EQUITY AND LIABILITIES	9 042	3 709

Additional information:

1. J&A Kitchens (Pty) Ltd have 2 million issued shares
2. The opening balance of inventory as at 01/03/2011 was R102 000
3. The amount of sales on credit is 70% of revenue for both years
4. The profitability and performance ratios (based on book values) were correctly calculated as follows ROE 23,28% (2012 38,04%) and ROA 22,88% (2012 50,09%)
5. Actual credit purchases amounted to R9 167 000 (2012: R4 590 000). Assume 365 days per year.
6. The credit terms of the supplier is 2/10 net 40 and is strictly enforced
7. The cost of normal short-term funding (e g a bank overdraft) is 20%
8. Value added tax (VAT) is calculated at 14% and must be taken into account where relevant

REQUIRED:

a) Name and explain the <u>main reason</u> why creditors are users of the financial information of a company (2)

b) Show the formulas and detailed calculations of the following ratios for J&A Kitchens (Pty) Ltd for both financial years 2012 and 2013

(i) Operating profit margin (3)
(ii) Asset turnover rate (3)
(iii) Payable (creditor) days (3)
(iv) Cash ratio (and explain what the ratio for 2013 implies) (4)
(v) Financial leverage effect (and explain what the ratio for 2013 indicates) (4)

c) Under separate headings list one advantage and one disadvantage of using trade accounts payable (trade creditors) as a type of finance (short-term credit) (2)

d) Calculate the nominal annual cost of credit if J&A Kitchens follows the policy of paying for the purchases on the latest date allowed and advise J&A Kitchens on why they should or should not forfeit discounts by postponing payments [Round your final answer to two decimal places] (5)
[26]

QUESTION 4 (20 marks) (24 minutes)

The mining ventilation company, MineVec (Pty) Ltd realised that their current equipment does not comply with the safety and security regulations of the Mining Ventilation Society. They have to purchase new ventilation equipment for their projects They have gathered information on two possible options, equipment Jaiko or equipment Hamber

The following information regarding the equipment was gathered:

	Equipment	
	Jaiko	Hamber
	R	R
Cost price	160 000	195 000
Working capital required	15 000	15 000
Net operating income before tax* (year 1)	21 662	28 560
Net operating income before tax* (year 2)	21 662	29 200
Net operating income before tax* (year 3)	23 100	29 200
Net operating income before tax* (year 4)	24 220	30 100
Realisable value at end of useful life-current	7 500	1 800
Useful life	4 years	4 years

Additional information:

1 Taxation

- Wear and tear allowances are calculated on the straight-line method at 20% per annum, on the cost of the asset
- Normal income tax rate - 28%

2 Depreciation is calculated on a straight-line basis over the useful life of the equipment
3 *Depreciation was **included** in the net operating income before tax
4 Management requires a 13% after-taxation return on all capital investments
5 Assume that all cash flows occur at the end of each year, except the initial capital outlays, which occur at the beginning of year 1
6 The net present value of Jaiko's cash flows has already been correctly calculated as R7 679 at 12% and -R4 085 at 15% and the IRR as 13,96% p a

REQUIRED:

a) Calculate the IRR of equipment Hamber, using the information provided to calculate the net present value at 12% and 15% respectively Then interpolate between 12% and 15% (19)

b) Advise management which of equipment Jaiko or Hamber should be purchased and motivate your recommendation (1)

[Work to three decimal places and round off all other calculations to the nearest rand] [20]

QUESTION 5 (20 marks) (24 minutes)

This question consists of ten multiple-choice questions Each question must be considered independently, except where specific reference is made to information in another question Each question has only one correct answer, and the marks per question (5 1 – 5 10) are indicated in brackets after each question

Please answer the ten questions in your examination answer book and list the question numbers below one another, from 5.1 – 5 10, with your corresponding answer next to it, for example:
5 1 (a)
5 2 (b)

The questions are as follows

5 1 The acronym SMART defines the criteria that should be met for an organisation's strategic objectives What does this acronym stand for?

a) Specific, Movable, Attainable, Relevant, Typical
b) Specific, Measurable, Achievable, Reliable, Time-bound
c) Specific, Measurable, Attainable, Relevant, Time-bound
d) Sustainable, Measurable, Attainable, Reliable, Typical (2)

5 2 Which one of the following are all examples of external stakeholders for Shoprite Ltd?

a) Community at large, government, professional bodies and pressure groups
b) Employees, local authorities, pressure groups and banks
c) Professional bodies, shareholders, managers and government
d) Pressure groups, community at large, government and suppliers (2)

5 3 The political, economic, social, technological and competitive environments are all examples of the external factors that have an influence on the strategy of an organisation. Which one of the following statements best represents the social environment of an organisation?

a) Fair-trade laws, tax laws, minimum wages legislation and local and general elections
b) Unemployment, inflation, tax rates, disposable income
c) Scientific improvements that affect the competitive position of the organisation
d) Actions of management that protect and improve the welfare of society as a whole as well as the interests of the organisation and its owners (2)

5 4 Which of the following statements are **not** characteristics of a private company?

(1) They are permitted to offer shares to the public
(2) They may have more than 50 shareholders
(3) The name of the company must end with "Ltd"
(4) The board of the company must have at least one director or any other minimum number as stipulated in the memorandum of incorporation.
(5) They are subject to fewer disclosure and transparency requirements than before the new Companies Act.

a) Statements (1), (2) and (3)
b) Statements (1) and (3)
c) Statements (2), (4) and (5)
d) Statements (3) and (4) (2)

5 5 Which one of the following definitions best describes sustainability for businesses?

a) All the products, processes and manufacturing activities meet customer needs, while at the same time treating the environment in such a manner that it does not decrease the ability of future generations to meet their own needs
b) The potential for long-term maintenance of well-being which has environmental and social dimensions
c) A set of processes, customs, policies, laws and institutions affecting the way the business is managed
d) The growth of an investment in a business The investment can be sold after a few years for a profit. (2)

5 6 Which of the following statements are **TRUE** regarding secondary market transactions in the capital markets?

(1) Secondary market transactions generate cash flow for the organisation
(2) The securities of an organisation are made more attractive to other investors in an active secondary market, thereby increasing the price of the securities
(3) A secondary market transaction is created when a holder of an organisation's securities sell these securities to another investor.
(4) The management of an organisation should be aware of secondary market transactions and the organisation's share price as their compensation is often linked to the share price of the organisation
(5) The level of the organisation's share price in the secondary market will determine how much can be raised by future issues of shares

a) Statements (1), (2) and (4)
b) Statements (2), (3), (4) and (5)
c) Statements (1), (2), (3) and (4)
d) Statements (1), (2), (3), (4) and (5) (2)

5 7 Which one of the following statements is **FALSE** regarding debt financing?

a) Debt requires repayment of capital and interest
b) The cost of obtaining some kinds of debt is lower than issuing ordinary shares
c) Interest relating to debt financing can be deducted from taxable income
d) Debt does not have an effect on the risk profile of an organisation (2)

5 8 Vermon (Pty) Ltd bought a machine from Amanzi (Pty) Ltd. Amanzi granted a loan to Vermon for the purchase and a contract was signed between the two parties stipulating the conditions, interest rate, instalment amount, payment frequency and the period of the agreement
What form of finance will this be?

a) Sale and leaseback
b) Bond
c) Instalment sale agreement
d) Mortgage loan (2)

5 9 What type of risk is described in the following definition?
"The risk originates from activities or non-activities in the normal economy "

a) Financial risk
b) Information risk
c) Economic risk
d) Reputation risk (2)

5.10 Which one of the following alternatives is **not** one of the four risk objectives as defined by COSO?

a) Financial objective
b) Strategic objective
c) Compliance objective
d) Reporting objective (2)
[20]

SOLUTIONS

Question 1(a)

(a) **Present Value of Perpetuity** = $\frac{\boldsymbol{Interst\ Amount}}{\boldsymbol{rate}}$

= $\frac{R5500}{0.11}$ = **R50 000.00**

(b) Quarterly payment due @ R8% on a R250 000 loan

PV = Annuity x $\left[\frac{1-(1+r)^{-1}}{r}\right]$

250 000 = $\left[1 - \frac{\left(1+\frac{0.08}{4}\right)^{-(6x4)}}{\left(\frac{0.08}{4}\right)}\right]$ x x

250 000 = 18.9139x

x = $\frac{R250\ 000}{18.9139}$ = R13217.79 per Quarter

(c) Value after five year

FV = Annuity x $\left[\frac{(1+r)^{n+1}}{r} - 1\right] - 1]$

= R6000 $\left[\frac{(1+0.06)^{(5+1)}}{0.06} - 1\right]$

= R35852

(d) Compound Interest

(e) PV = $\frac{FV}{(1+r)^t}$ = $\frac{R100\ 000}{(1+0.04)^{20}}$ = **R45 639**

Question 2

(a) Net profit

	Option 1	**Option 2**
(115 000 000+10% x 200 000 000)	**R**	**R**
Earnings before interest and tax	135 000 000	135 000 000
Interest expenses (option B) (100 000 000 x 9%)	-	(900 000)
Profit before tax	135 000 000	126 000 000
Income tax expenses @ 28 of profit)	(37 800 000)	(35 280 000)
	97 200 00	90 720 000

(b) Return on Assets

	Option 1	**Option 2**
Return on Assets = **EBIT**	135 000 000x100%	135 000 000 x100%
Assets	600 000 000	600 000 000
	=22.5%	=22.5%

(c) Return on equity = $\frac{Net\ earnings}{equity}$

	Option 1		Option 2
=	$\frac{97200000}{600000000}$ 100% =	X	$\frac{90720000}{500\ 000\ 000}$ X 100%
=	16.2%		=18.14%

(d) Return increases as it increases the assets and revenue of the entity in a fixed cost.

(e) Capital structure for option 2

Debt: equity = $\frac{100\ 000\ 000}{600\ 000\ 000}$ = 1;6 or 1 is 106 or 16.7% Debt 73.4% equity

Part B

WACC Calculation

Component	Amount	Weight	Cost	Cost
Equity (c1)	98700 000	0.892	15%	13.38%
Debentures	6894500	0.062	13%	0.806%
Long term loan	5000000	0.046	8.64%	0.0397%
	110594 500	**1**		**14.23%**

$P_0 = \frac{D_1}{Ke-q} = \frac{2.30(R19.74)}{0.15-0.03}$ R19.74

500 000 X R19.74 =

Question 3

(a) They would want to know if entity will be able to pay back debts owed to them and if they would also be in business in future to form their customers in future.

(b) (i) Operating profit Margin = $\frac{operating\ profit}{sales}$ x 100%

	2013	**2012**
	$\frac{1792}{11225}$ x 100%	$\frac{1460}{6558}$ x 100%
=	**15.96%**	**22.26%**

(ii) Asset Turnover Ratio = $\frac{Revenue}{Assets}$

	$\frac{11225}{9042}$	$\frac{6558}{3709}$
	=1241Times	**= 1.768 Times**

(iii) Creditor days = $\frac{creditors}{purchases}$ x 365days

= $\frac{1086}{9187}$ x 365	$\frac{523}{4390}$ x 365
43Days	**43Days**

Cash ratio	**2013**	**2012**
	-756	-90
	1384	767
	= 0.54:1	0.117:1

The cash ratio improved in 2013 from 11% of current liabilities to 54% of current liabilities in 2014.

(iv) Financial leverage effect $\frac{Assets}{Equity}$

2013	2012
9042	3709
3454	2650
=2.618 times	**=1.40 times**

The financial leverage of the company has received and

(c) Advantage

- It increases profit as it is a cheap source of finance

Disadvantage

- It increases liquidity risk.

(d)Normal cost of credit of F and A Kitchens

2 x $\frac{365}{(40-10)}$ = **24.33%**

Question 4

Net present values of Humber

	0	1	2	3	4
Cost price	(19500)				
Realisation value					1800
Working capital	(15000)				15000
Net operating income		28560	29200	29200	30100
Depreciation $\left(\frac{195000-1800}{4}\right)$		48300	48300	48300	48300
Tax expenses		(10601)	(10780)	(10780)	(616)
Net cashflows	(210000)	66259	66720	66720	94584
Discount rate @ 15%	1	0.8696	0.7561	0.6575	0.5718
NPV = (4314)	**(210 000)**	**57288**	**50447**	**43868**	**54083**

Tax expense calculation

		1	2	3	4
Net operating income		28560	29200	29200	30100
depreciation		48300	48300	48300	48300
		76860	77500	77500	78400
Wear & tear allowance 220%		(39000)	(39000)	(39000)	(39000)
Scraping allowance (39000-1800)		-	-	-	(37200)
Taxable Income		**37860**	**38500**	**38500**	**2200**
Tax thereof@ 28%		10601	10780	10780	616
NPV@12%					
	0	**1**	**2**	**3**	**4**
Net cash flow	(210 000)	66259	66720	66720	94584
Due factors@12%	1	0.8429	0.7972	0.7118	0.6355
	(210 000)	**59163**	**53189**	**47491**	**60108**

NPV = 9951

Interpolation = 12 + (15-12) $\left(\frac{9951}{9951-\ -4314}\right)$

= 14.09%

(b)Management should invest in pofect hamber

Question 5

5.1 C

5.2 A

5.3 D

5.4 A

5.5 A

5.6 B

5.7 D

5.8 C

5.9 A

5.10 A

Oct/Nov 2013

QUESTION 1 (15 marks) (18 minutes)

a) The company you are working for pays a thirteenth cheque to all employees in the month of their birthday. Your birthday is in December and you want to invest your thirteenth cheque of R13 000 at the beginning of January each year for the following four years. The special savings account in which you will invest the R13 000 at the beginning of each of the next four years earns 7% compound interest per annum. Calculate the value of your investment at the end of the four years.

Make use of the mathematical formula to calculate your answer.
[Show the mathematical formula and detailed workings. Round your calculations to four decimal places and your final answer to the nearest rand.] (6)

b) Sibongile will invest an amount of R7 000 at the end of each year for the next six years in a money market account that earns 6% compound interest per annum. Determine the current value of her intended investment?

Make use of the factor table method to calculate your answer and show detailed workings.
[Show the equation you used as well as your workings. Round your workings to four decimal places and your final answer to the nearest rand.] (2)

c) Tony has an investment which earns effective interest of 11% per annum. Interest is compounded quarterly. What is the nominal rate of his investment?
[Show the formula you used to determine the nominal rate as well as your workings. Use four decimal places for your calculations and round your final percentage to two decimal places.](3)

d) Your bank is giving a fixed term deposit option that calculates interest at the end of each month at an annual compound interest rate of 9%. What is the periodic rate of this fixed term deposit option?
[Round your workings to four decimal places and your final answer to the nearest rand.] (2)

e) Louisa would like to pay a deposit of R50 000 on a house in four years time. How much will she need to invest today at a rate of 6% compound interest per annum in order to have the R50 000 as deposit after four years?

Make use of the factor table method to calculate your answer.
[Show the equation you used as well as the detailed workings. Use four decimal places and round your final answer to the nearest rand.] (2)
[15]

QUESTION 2 (19 marks) (23 minutes)

REQUIRED:

a) Define and explain the theory of capital structure (3)

b) List two reasons why debt financing is attractive for the owners of an organisation. (2)

c) Table 1 below presents the current situation of Duplo Limited and Table 2 the situation when an additional capital asset to the value of R200 million is acquired by using equity funding.

(Assume that the additional asset will generate the same operating returns (EBIT) as the current asset in Table 1).
Give a short explanation why the return on equity (ROE) in Table 2 stays the same as in Table 1. (4)

TABLE 1

Current financial leverage situation	
Total assets R200million:Equity R200 million	
Earnings before interest (EBIT)	40,0m
Interest (no debt)	0,0
Profit before tax	40,0m
Income tax expense	(11,2m)
Net profit	28,8m
Return on assets (ROA)	$= \frac{40}{200} \times \frac{100}{1}$
	= 20%
Return on equity (ROE)	$= \frac{28,8}{200} \times \frac{100}{1}$
	= 14,4%

TABLE 2

Acquire an additional asset of R200 million, funded by equity only	
Total assets R400million:Equity R400million	
Earnings before interest (EBIT)	80,0
Interest (no debt)	0,0
Profit before tax	80,0
Income tax expense	(22,4)
Net profit	57,6
Return on assets (ROA)	$= \frac{80}{400} \times \frac{100}{1}$
	= 20%
Return on equity (ROE)	$= \frac{57,6}{400} \times \frac{100}{1}$
	= 14,4%

d) Express Limited holds R200 000 par value debentures in Amco Limited. The annual interest payment is 8% and the debentures are redeemable after four years at face value. The current market return for similar debentures with a life of four years is 10%. Assume a company tax rate of 28%.

The current market price of Express Limited's shares is R20,57 and the last dividend was R2 per share. It is anticipated that the earnings and dividends of the company will show a constant growth of 14% per annum in the future. The beta for Duplo Limited is 1,2 and the risk free rate is 13%. The market rate of return is 22,8%.

(i) Calculate the current cost of equity for Express Limited by using the dividend growth model. (3)

(ii) Calculate the current cost of equity for Express Limited by using the capital asset pricing model (CAPM). (3)

(iii) Calculate the current market value of the debentures by using the mathematical formula. (4)

[Set your calculator on four decimal places for the calculations of this question and round your final answers to two decimal places. Show the formulas used and detailed calculations.]

[19]

QUESTION 3 (24 marks) (29 minutes)

The directors of Great Lawn Ltd are concerned about their latest financial results and have asked you to analyse some of their financial information.

You are given the following extract from the comparative statement of profit or loss and other comprehensive income of Great Lawn Ltd for five years:

	2012 R'000	2011 R'000	2010 R'000	2009 R'000	2008 R'000
Revenue	8 560	11 596	7 750	2 554	3 621
Operating costs	(1 536)	(2 320)	(998)	(890)	(905)
Net profit/(loss)	435	1 389	1 490	(236)	314

Additional information:

1. Great Lawn Ltd is an expert in landscaping. They offer a professional garden design service and have a large customer base.
2. In 2009, a new competitor, Green Gardens, entered the market and offered special prices to customers. However, in the following years the old customers returned to Great Lawn due to their excellent services.
3. Great Lawn Ltd expanded their marketing campaigns in 2011.
4. In 2012 government increased the minimum wages and Great Lawn Ltd had to retrench a large number of employees, hence also losing some customers. Employee costs are included in the operating costs.
5. The amount of credit sales is 50% of the relevant year's revenue (for 2012 and 2011).
6. The balance of the trade and other debtors at the end of 2012 was R1 013 000 (2011: R985 000).

REQUIRED:

a) Redraft the extract of the comparative statement of profit or loss and other comprehensive income of Great Lawn Ltd for five years by using the following techniques: (Clearly indicate in the heading of each case the technique that was used)

   (i) Indexed statements [Round your answer to **no** decimal place]
   (ii) Common size statements [Round your answer to **one** decimal place]

(15)

b) Provide context to (comment and interpret) the financial analysis done in (a) above with reference to the additional information supplied to you. (3)

c) Calculate the following ratios only for 2012 and 2011 by using the ratio analysis technique: (Clearly indicate the specific ratio calculated in each case.)

   (i) Net profit margin (2)
   (ii) Receivable days (debtors' collection period) (4)

[24]

QUESTION 4 (22 marks) (26 minutes)

Earthmoving Limited is considering the purchase of an additional bulldozer with an extra crusher attached. This bulldozer will enable them to demolish flat materials like concrete, as well as to gather and lift loose materials. These functions of the new bulldozer will enhance their earthmoving works.

The following information regarding the new bulldozer is available:

	R
Cost price	2 810 000
Depreciation – per annum	936 667
Realisable value end of useful life	500 000
Estimated useful life	3 years

Additional information:

1. The estimated net income (excluding depreciation) before tax, from the additional bulldozer will be R1 090 800 during its first operational year. An 8% per annum increase in the net income before tax is expected as from the beginning of the second operational year.

2. The current tax rate is 28% and it is expected to remain unchanged during the period of the bulldozer's useful life.

3. The tax authority is prepared to grant an annual wear and tear allowance of R562 000, on the bulldozer, for tax purposes.

4. Management requires a 12% per annum after tax return on capital projects of this nature.

5. All the cash flows, except the initial capital outlays which occur at the beginning of the year, occur at the end of the financial year concerned.

REQUIRED:

a) Use the net present value method to determine whether the additional bulldozer should be acquired by the company. [Work to three decimal places and round off all other calculations to the nearest rand]. (16)

b) Calculate the bulldozer's payback period (4)

c) Define the accounting rate of return (2)

[22]

QUESTION 5 (20 marks) (24 minutes)

This question consists of ten multiple-choice questions. Each question must be considered independently, except where specific reference is made to information in another question. Each question has only one correct answer, and the marks per question (5.1 – 5.10) are indicated in brackets after each question.

Please answer the ten questions in your examination answer book and list the question numbers below one another, from 5.1 – 5.10, with your corresponding answer next to it, for example:
5.1 (a)
5.2 (b)

The questions are as follows:

QUESTION 5 (continued)

5.1 With regards to the core values of an organisation, which one of the following statements is **TRUE**?

a) It describes the purpose of the organisation and it broadly states the reason why the organisation exists.
b) It describes the principles that guide an organisation by describing how every employee should behave.
c) It describes where the organisation wants to go in future.
d) It describes the measures of progress and targets to be achieved by the organisation in a specific time frame. (2)

5.2 Which of the following statements describe corporate culture in the internal environment of an organisation?

(1) It entails the employee's values, symbols and shared beliefs.
(2) It presents a language for interpreting issues and events.
(3) It is the "glue" that holds everyone together.
(4) It is the workforce of an organisation.
(5) It entails the management of certain events such as workplace conflict.

a) Statements (1), (2) and (3)
b) Statements (1), (2) and (4)
c) Statements (2), (3) and (5)
d) Statements (3), (4) and (5) (2)

5.3 Which of the following list of stakeholders are **NOT** considered to be secondary stakeholders of Edcon Ltd?

a) CIMA
b) Government
c) Standard bank
d) The department of labour (2)

5.4 The following statements are given to you:

(1) Manage the business in such a way as to maximise long-term value.
(2) Set strategic objectives that recognise the importance of maximising long-term value.
(3) Measure the return over a period of time to see whether the overall objectives of long-term value maximisation are being achieved.
(4) Establish appropriate means of measuring capital return to determine the value that has been created for owners/investors.

QUESTION 5 (continued)

The above statements all relates to _____?

a) Capital growth
b) Corporate governance
c) Sustainability
d) Profitability (2)

5.5 Which of the four stages of the growth in the structure of an organisation correlates with the stage in the life cycle of the organisation that is described in the following extract?

"An owner starts up and manages a small business. The owner makes all the decisions and there is not much delegation of authority. The tasks are performed by the individuals according to their abilities and needs. A formal structure is not yet established and rules and guidelines are not fully in place."

a) Entrepreneurial structure
b) Functional structure
c) Holding organisation structure
d) Divisionalised structure (2)

5.6 Which of the following statements describe characteristics of ordinary preference shares?

(1) When the share price increases the shareholders will benefit. Their wealth will increase with both the dividend and capital growth of the share.
(2) It bears less risk to the investor. In case of liquidation preference shareholders are paid from remaining funds before ordinary shareholders.
(3) The dividend is expressed as a fixed percentage of the capital amount.
(4) Voting rights are attached to each class.
(5) It is a hybrid form of finance.

a) Statements (1), (2), (4) and (5)
b) Statements (2), (3) and (5)
c) Statements (2), (4) and (5)
d) Statements (1), (3), (4) and (5) (2)

5.7 Which one of the following list is **NOT** an example of a long-term loan?

a) Instalment sale agreement
b) Bank loan
c) Bank overdraft
d) Sale and leaseback (2)

QUESTION 5 (continued)

5.8 Which of the following statements regarding forms of finance are **FALSE**?

(1) Revolving credit is a form of debtors financing which results in improving the debtor's collection period.
(2) A bank overdraft is the facility that allows an organisation to use more money than is available in its bank account.
(3) A bond/debenture is a long-term contract between the organisation that issues the bond/debenture and the buyer thereof.
(4) An instalment sale agreement is a long-term loan raised against the value of fixed property. It is normally secured over the value of the property offered as security.

a) Statements (1), (3) and (4)
b) Statements (1) and (4)
c) Statements (2) and (4)
d) Statements (2), (3) and (4) (2)

5.9 Which of the following risks will result in huge penalties and fines or the suspension of operating licenses for an organisation if not adhering to legislation or regulations?

a) Reporting risk
b) Strategic risk
c) Compliance risk
d) Operational risk (2)

5.10 The following statements relates to the methods to identify risk.

(1) Stakeholder consultation is a technique used involving data collection. It could include a survey of stakeholders by interview or questionnaires.
(2) The process to break down a business process into its different component parts to be able to examine all the risk processes is called fish bone.
(3) Swot analysis is the analysis of all technological, political, ecological, legal, economic and social factors that could affect an organisation.
(4) Benchmarking is the process that could be applied by management by identifying the best risk management practices in the industry, or in another industry where similar processes exist and comparing the results thereof to the organisation's own results and processes.
(5) Diagnostics is the process used where a group tries to find a solution for a specific problem by gathering random ideas contributed by the group.

Which of the above statements are **FALSE**?

a) Statements (1), (2) and (3)
b) Statements (2) and (3)
c) Statements (2), (4) and (5)
d) Statements (3) and (5) (2)

[20]

SOLUTIONS

QUESTION 1 (15 marks) (18 minutes)

(a) Future value – annuity due/in advance

Study guide 1, p. 89

Mathematical formula:

$$\text{FV annuity due} = \quad \text{I x} \left[\frac{(1+\text{i})^{n+1} - 1}{\text{i}} - 1 \right]$$

$$= \text{R13 000 x} \left[\frac{(1+0{,}07)^{4+1} - 1}{0{,}07} - 1 \right]$$

$$= \text{R13 000 x} \left[\frac{(1{,}07)^{5} - 1}{0{,}07} - 1 \right]$$

$$= \text{R13 000 x} \left[\frac{(1{,}4026 - 1)}{0{,}07} - 1 \right]$$

$$= \text{R13 000 x} \left[\frac{0{,}4026}{0{,}07} - 1 \right]$$

= R13 000 x (5,7507 – 1)

= R13 000 x 4,7507

= R61 759,6071

= R61 760 (rounded to the nearest rand) (6)

OR alternatively: (Take note that the mathematical formula was required. The alternatives are presented just for a better understanding of how the tables, factors and equations are linked.)

By using factors in the mathematical formula:-

The factor of Table D must be converted to a factor relating to an investment made at the beginning of the period. (See SG 1, p.118 and SG 1, p. 149 below the table).

Factor Table D at 7% at the end of each of four years
= 4,4399 x 1,07 (use 1 + i)
= 4,7507
Then R13 000 x 4,7507 = R71 760

OR use

factor for periods (n+1), then n = 5 and subtract 1
5,7507 – 1
= 4,7507
Then R13 000 x 4,7507 = R71 760

(b) Present value - ordinary annuity

Study guide 1, p. 93, 129 – 130

Factor table method:

PV = I x PV of R1 per period factor

Table B at 6% for 6 years = 4,917
R7 000 x 4,917 = R34 419 (2)

(c) Nominal rate

Study guide 1, p. 103

Where i = effective interest rate
= 11%

n = number of periods per annum used to compound interest
= 4 (quarterly)

Nominal rate $= n[(1 + i)^{1/n} - 1]$

$= 4[(1 + 0,11)^{1/4} - 1]$

$= 4[(1,11)^{1/4} - 1]$

$= 4(1,0264 - 1)$

$= 4(0,0264)$

$= 0,1057 \times 100$

= 10,57% (rounded to two decimal places) (3)

(d) Periodic rate (rate charged or paid each period)

Study guide 1, p. 100

Where n = 12 (monthly = each month)

i_{Nom} = 9%
= i periodic x n
9% = 0,75% x 12

Periodic rate (i_{PER}) $= \frac{i_{Nom}}{n}$

$= \frac{9\%}{12}$

= 0,75% (rounded to two decimal places) (2)

(e) Present value – single amount

Study guide 1, p. 91 – 92 and p. 117 for equation

Present value single amount:
PV = FV x (PV of R1 per period) (Table A at 6% for 4 years = 0,792)

R50 000 x 0,792 = R39 600 (rounded to the nearest Rand)

OR

Mathematical formula

$PV = \left[\frac{FV}{(1+i)^n}\right]$ where $(1 + i)^n$ = future value of R1 per period factor in Table D = 1,2625

$= \left[\frac{50\,000}{1{,}2625}\right]$

= 39 603,96

= R39 604 [Rounding difference may occur depending whether table A or table D was used.] (2)

[15]

QUESTION 2 (19 marks) (23 minutes)

(a) Define and explain the theory of capital structure: (SG 1, p. 179 – 180)
(Any three for 1 mark each - max 3 marks)

① It is the manner in which an organisation's non-current assets are financed.
② It is normally expressed in percentages of each type of capital used (the proportion of debt versus equity)
③ It entails the mix of equity and long-term debt that an organisation employs to finance its long-term investments and/or operations.
④ The mix determines which percentage of the organisation's cash flow is attributable to owners/ or investors (equity) and which percentage is attributable to lenders (debt).
⑤ The mix of equity and long-term debt of an organisation will affect the value
⑥ and risk of the organisation.

(3)

(b) List two reasons why debt funding is attractive for the owners of an organisation. (SG 1, p. 181)
(Any two for 1 mark each - max 2 marks)

① Interest on debt is deductible for tax purposes – therefore it is a cheaper form of financing.
② The return on equity (ROE) increases when expansion is funded by debt. (or: the leverage effect has the benefit that the return for equity holders increase when expansion is funded by debt.)
③ The leverage effect (benefit) accrues up to the point of optimal debt:equity ratio.

(2)

(c) Explanation (2 reasons) why the ROE stays the same in Table 1 and Table 2. (SG 1, p. 182)

The reasons are:
① There was NO change in the capital structure

② Duplo Ltd is still only equity funded – thus there is NO debt funding (4)

(d) Express Ltd

(i) Dividend growth model: to calculate current cost of equity (Ke) (SG 1, p. 203)

Required rate of return:

$K_e = \frac{D_1}{P_0} + g$ [and $D_1 = D_0 \times (1 + g)$]①

$Ke = \frac{(2 \times 1,14)}{20,57} + 0,14$

$= \frac{2,2800}{20,57} + 0,14$

$= 0,1108 + 0,14$

$= 0,2508$

$= 25,08\%$

① $D_1 = D_0 \times (1 + g)$

R2 x (1 + 0,14)

R2 x 1,14

(3)

(ii) CAPM model: to calculate current cost of equity (Ke) (SG 1, p. 206)

Required return/cost of equity:

$K_e = R_f + \beta (R_m - R_f)$

$= 13\% + 1,2 (22,8\% - 13\%)$

$= 0,13 + 1,2 (0,228 - 0,13)$

$= 0,13 + 0,1179$

$= 0,2476$

$= 24,76\%$ (3)

(iii) Market value of debentures (SG 1, p. 195)

k_d or i = current market rate (pre-tax) = 10%

I = 8% x R200 000 = R16 000 (coupon payment)

R = R200 000

n = 4

Then:

$$M_v = \left\{ I \times \left[\frac{1-\frac{1}{(1+i)^n}}{i} \right] \right\} + \left[\frac{R}{(1+i)^n} \right]$$

$$= R16\,000 \times \left[\frac{1-\frac{1}{(1+0,1)^4}}{0,1} \right] + \left[\frac{200\,000}{(1+0,1)^4} \right]$$

$$= R16\,000 \times \left[\frac{1-\frac{1}{1,4641}}{0,1} \right] + \left[\frac{200\,000}{1,4641} \right]$$

$$= R16\,000 \times \left[\frac{1-0,6830}{0,1} \right] + R136\,602,6911$$

$$= R16\,000 \times \left[\frac{0,3170}{0,1} \right] + R136\,602,6911$$

$$= (R16\,000 \times 3,1700) + R136\,602,6911$$

$$= R50\,720,0000 + R136\,602,6911$$

$$= R187\,322,6911 \quad (4)$$

OR alternatively use equations (Take note that the mathematical formula was required. The alternatives are presented just for a better understanding of how the tables, factors and equations are linked.)

Market value (M_v) of debt (SG 1, p. 193)

Where:

I = 8% x R200 000 = R16 000
R = R200 000
N = 4

and

M_v = PV of all cash flows (interest paid) + PV of redemption value

Interest paid: = PV of annuity of R16 000 at 10% for 4 years
= R16 000 x PV factor at 10% for 4 years (use Table B)
= R16 000 x 3,170
= **R50 720**

Plus

Redemption value: = PV of R200 000 at 10% after 4 years
= R200 000 x PV factor at 10% after 4 years (use Table A)
= R200 000 x 0683
= **R136 600,00**

∴ R50 720 + R136 600

Therefore v_d = **R187 320 (difference due to rounding**

[19]

QUESTION 3 (24 marks) (29 minutes)

a) **Redraft** the extract of the comparative statement of profit or loss and other comprehensive income of Great Lawn Ltd by using the following techniques:

(I) INDEXED STATEMENTS

	2012 %	2011 %	2010 %	2009 %	2008 %
Revenue	236	320	214	71	100
Operating costs	170	256	110	98	100
Net profit	139	442	475	(75)	100

(ii) COMMON SIZE STATEMENTS

	2012 %	2011 %	2010 %	2009 %	2008 %
Revenue	100.0	100.0	100.0	100.0	100.0
Operating costs	17.9	20.0	12.9	34.8	25.0
Net profit	5.1	12.0	19.2	-9.2	8.7

b) **Context**

Additional information to be used for context to the financial analysis.

2009 New competitor entered the market – they offered special prices to customers.
Great Lawn lost customers therefore:

2009 **REVENUE decreased** (lower than base year – 2008) due to lower sales to less customers
OPERATING COST decreased slightly (lower than base year) but not as much
NETT PROFIT decreased a lot due to decrease in revenue because of less customers

2010 Old customers returned to Great Lawn

2010 **REVENUE increased** (much higher than 2009 and 2008) due to higher revenue from more customers (those that returned)
OPERATING COST increased a bit due to higher volume of sales to more customers
NETT PROFIT increased from 2008 and 2009 due to higher revenue from more customers (those that returned) and smaller increase in operating cost

2011 Great Lawn expanded their marketing campaign – they got a lot of new customers

2011 **REVENUE increased** (higher than 2010, 2009 and 2008) due to higher revenue from new customers (those that reacted on the marketing campaign)
OPERATING COST ALSO increased a lot due to higher volume of sales to new customers
NETT PROFIT decreased from 2010 due to the fact that the higher revenue from new customers (those that reacted on the marketing campaign) was offset by the large increase in operating cost

2012 Minimum wages increased – a large number of employees was retrenched and therefore also customers were lost.

2012 **REVENUE decreased** (much lower than 2011) due to lower sales to less customers
OPERATING COST decreased a bit due to retrenchments (compared to 2011) less workers for wages
NETT PROFIT decreased a lot from 2011 due to lower revenue from less customers and only small decrease in operating cost due to retrenchments.

Summary:

In the indexed statements, revenue slightly declined in 2009 due to the new competitor that entered the market. It then increased up to 320% in 2011 from the base year. It declined again in 2012 due to the retrenchment of employees and that resulting in the loss of some customers.

In the indexed statements, operating costs slightly declined in 2009 due to the decrease in revenue because of the new competitor that entered the market. It then increased up to 256% in 2011 from the base year due to the increase in revenue. It declined again in 2012 due to the retrenchment of employees resulting in less salary costs. This is confirmed by viewing the common size statements.

In the indexed statements, the net profit declined in 2009 due to the decrease in revenue because of the new competitor that entered the market. It then increased up to 442% in 2011 from the base year due to the increase in revenue. It declined again in 2012 due to the retrenchment of employees and that resulting in the loss of some customers and a decline in revenue. This is confirmed by viewing the common size statements.

(3)

c) **Ratio analysis technique**:

(i)- **Net profit margin**

		2012 R'000		2011 R'000	
$\frac{\text{Net profit}}{\text{Revenue}} \times 100$	=	$\frac{435}{8\,560} \times 100$	=	$\frac{1\,389}{11\,596} \times 100$	
	=	5,08%	=	11,98%	

(2)

(ii)-**Receivable days**

Take note that when receivable days (debtors' collection period) are required, you should add VAT to the amount of credit sales. See studyguide 2, p. 33 (top and example). This is because the trade receivables amount already include VAT, therefore the credit sales should also be calculated inclusive of VAT.
The same applies for payable days (creditors' payment period). See studyguide 2, p. 33 and 34.

From 2014 the cover page of the examination paper will indicate "Ignore VAT and capital gains tax except where indicated in the question. Example: The question will state that value added tax (VAT) is calculated at 14%.

		2012 R'000		2011 R'000	
$\frac{\text{Receivables}}{\text{Credit sales}} \times 365$	=	$\frac{1\,013 \text{ given}}{4\,280^{①}} \times 365$	=	$\frac{985 \text{ given}}{5\,798^{②}} \times 365$	
	=	86 days	=	62 days	

(4)

Credit sales (excluding VAT: 50% of revenue)
① 8 560 x 50% = 4 280
②11 596 x 50% = 5 798

OR

Credit sales (including VAT: 50% of revenue)
① 8 560 x 50% x 1,14 = 4 879,2 rounded to 4 879
②11 596 x 50% x 1,14 = 6 609,72 rounded to 6 610

$\frac{\text{Receivables}}{\text{Credit sales}} \times 365$	=	$\frac{1\,013 \text{ given}}{4\,879^{①}} \times 365$	=	$\frac{985 \text{ given}}{6\,610^{②}} \times 365$	
	=	76 days	=	54 days	

[24]

QUESTION 4 (22 marks) (26 minutes)

a) Net present value (Study guide 2, p.116 – 126)

	Years			
	0	1	2	3
	R	R	R	R
Cost price	(2 810 000)	-	-	-
Net cash inflow (excl depreciation)		1 090 800	1 178 064	1 272 309
Realisable value	-	-	-	500 000
Taxation ①		(148 064)	(172 498)	(24 167)
Net cash in/(outflow)	(2 810 000)	942 736	1 005 566	1 748 142
Factor at 12% (Table A)	1,000	0,893	0,797	0,712
Present value	(2 810 000)	841 863	801 436	1 244 677
Net present value	**77 976**			

(15)

① **Taxation**

	Years		
	1	2	3
	R	R	R
Net income	1 090 800	1 178 064	1 272 309
Wear and tear	(562 000)	(562 000)	(562 000)
Scrapping allowance ②			(624 000)
Taxable amount	528 800	616 064	86 309
Taxation at 28%	148 064	172 498	24 167

②**Scrapping allowance**

	R
Cost	2 810 000
Less: Wear and tear	1 686 000
Tax value at end of useful life	1 124 000
Realisable value	500 000
Scrapping allowance	(624 000)

Conclusion:
The net present value is positive, which indicates that the required 12% per annum after tax return has been achieved. The bulldozer must be acquired. (1)
(16)

b) The payback period (Study guide 2, p.107 – 109)
Cost price (capital outlay) to be recovered = R2 810 000 Thus:

Year	Capital outlay	Cash received	Balance
0	(R2 810 000)	-	(R2 810 000)
1	-	R942 736	(R1 867 264)
2	-	R1 005 566	(R861 698)
3	-	R1 748 142	R886 444

$$\therefore \frac{R\ 861698}{R1\ 748142} \times \frac{12}{1} \text{ (months)}$$

= 0,493 x 12
= 5,915 months (fraction)

Principle Payback period = Full years plus amount outstanding year-end BEFORE full recovery / Net cash flow the break-even year (fraction). The machine will be repaid within 2 years and 5,9 months. (Full years + fraction!) (4

c) The accounting rate of return (Study guide 2, p.110 – 113)

This is based on an investment's (project's) **average net PROFIT after tax** (not cash flow), divided by its **average book value**. It is also called the average rate of return on investment/capital (ROI or ROC) method.

The accounting rate of return method **calculates the average rate of return generated by the investment over its useful life** (life span). If this return exceeds a target rate of return (set by management), the investment project should be undertaken. (2)

QUESTION 5 (20 marks) (24 minutes)

5.1 Alternative (b) is the correct answer (SG 1, p. 8)

Alternative (a) is an example of a mission statement
Alternative (c) is an example of a vision statement
Alternative (d) is an example of strategic objectives

5.2 Alternative (a) is the correct answer (SG 1, p. 28 – 29)

Statement (4) describes human resources (SG 1, p. 29)
Statement (5) describes industrial relations (SG 1, p. 29)

5.3 Alternative (c) is the correct answer. This is an example of a primary stakeholder (SG 1, p. 17)

5.4 Alternative (a) is the correct answer (SG 1, p. 52)

5.5 Alternative (a) is the correct answer (SG 1, p. 73)

5.6 Alternative (b) is the correct answer (SG 1, p. 164)

Statement (2) and (4) is a characteristic of ordinary shares (SG 1, p.164)

5.7 Alternative (c) is the correct answer (SG 1, p. 170 – 172)

5.8 Alternative (b) is the correct answer

Statement (2) is correct (SG 1, p. 172)
Statement (3) is correct (SG 1, p. 168)

Statement (1) is incorrect – definition of factoring (SG 1, p. 172)
Statement (4) is incorrect – definition of mortgage loan (SG 1, p. 170)

5.9 Alternative (c) is the correct answer (SG 2, p. 182)

5.10 Alternative (d) is the correct answer (SG 2, p. 190 – 191)

Statement (3) relates to PESTEL analysis.
Statement (5) relates to brainstorming [20]