



inseta

INSURANCE SECTOR EDUCATION
AND TRAINING AUTHORITY

LEARNER GUIDE

Unit Standard Title:	Interpret basic financial statements
Unit Standard No:	117156
Unit Standard Credits:	4
NQF Level:	4

This outcomes-based learning material was developed by Masifunde Training Centre with funding from INSETA in July 2014. The material is generic in nature and is intended to serve as a minimum standard for the industry.

This material may be used and copied for your own personal use. This material may not be republished, nor may it be reverse engineered, translated, modified or used to make derivative information of materials without the express written permission of INSETA which can be obtained by contacting insetacallcentre@inseta.org.za. Short excerpts from the material may be reproduced without authorisation on condition that the source is indicated.

Disclaimer

Whilst every effort has been made to ensure that the learning material is accurate, INSETA and Masifunde Training Centre (Pty) Ltd take no responsibility for any loss or damage suffered by any person as a result of the reliance upon the information contained herein.

Interpret basic financial statements

Introduction

Welcome to this module. The typical scope of this module is

- Analyse the basic elements of an income and expenditure statement.
- Analyse the basic elements of a balance sheet.
- Compile a personal assets and liabilities statement.
- Use the evidence in financial statements to make a financial decision

Accountancy's infancy dates back to the earliest days of human agriculture and civilization (the Sumerians in Mesopotamia, and the Egyptian Old Kingdom). Ancient economic thought of the Near East facilitated the creation of accurate records of the quantities and relative values of agricultural products, methods that were formalized in trading and monetary systems by 2000 BC. Simple accounting is mentioned in the Christian Bible (New Testament) in the Book of Matthew, in the Parable of the Talents. The Islamic Quran also mentions simple accounting for trade and credit arrangements.

Accountancy or accounting is the system of recording, verifying, and reporting of the value of assets, liabilities, income, and expenses in the books of account (ledger) to which debit and credit entries (recognizing transactions) are chronologically posted to record changes in value. Such financial information is primarily used by lenders, managers, investors, tax authorities and other decision makers to make resource allocation decisions between and within companies, organizations, and public agencies. Accounting has been defined by the AICPA as "The art of recording, classifying, and summarizing in a significant manner and in terms of money, transactions and events which are, in part at least, of financial character, and interpreting the results thereof."

Financial accounting is one branch of accounting and historically has involved processes by which financial information about a business is recorded, classified, summarized, interpreted, and communicated; for public companies, this information is generally publicly-accessible. By contrast management accounting information is used within an organization and is usually confidential and accessible only to a small group, mostly decision-makers. Open-book Accounting aims to improve accounting transparency. Tax Accounting is the accounting needed to comply with jurisdictional tax regulations. Accounting scholarship is the academic discipline which studies the theory of accountancy.

Accounting generally involves 5 major activities, these are:

1. To collect financial information
2. To record and store financial information
3. To aggregate and organise financial information
4. To present and report financial information to the public or anyone else in a way that is relatively easy to understand
5. To keep companies and their managers/owners honest and truthful

At the heart of modern financial accounting is the double-entry bookkeeping system. This system involves making at



least two entries for every transaction: a debit in one account, and a corresponding credit in another account. The sum of all debits should always equal the sum of all credits, providing a simple way to check for errors. This system was first used in medieval Europe, although claims have been made that the system dates back to Ancient Rome or Greece.

According to critics of standard accounting practices, it has changed little since. Accounting reform measures of some kind have been taken in each generation to attempt to keep bookkeeping relevant to capital assets or production capacity. However, these have not changed the basic principles, which are supposed to be independent of economics as such. In recent times, the divergence of accounting from economic principles has resulted in controversial reforms to make financial reports more indicative of economic reality.

In commercial enterprises accounting is involved in recording business transactions and then reporting the results in the form of financial statements. To make the financial statements more understandable, there are some common rules known as generally accepted accounting principles (GAAP). In the USA the lead organization for researching and issuing the accounting rules is the Financial Accounting Standards Board (FASB). All of the accounting rules are based on some underlying or basic accounting principles such as cost, matching, economic entity, going concern, revenue recognition, full disclosure, materiality, conservatism, and others. Accountants also strive for the financial reporting to be relevant and reliable.

As noted above the accounting system is known as double-entry, because every transaction will involve at least two accounts in a company's general ledger. The accounting system requires that at least one account be debited (amount entered on the left side) and one account be credited (amount entered on the right side).

The accrual basis of accounting provides a better picture of a company's financial results than the cash basis of accounting. Under the accrual basis of accounting, revenues and assets are reported when they are earned; expenses and liabilities are reported when they are incurred.

The output of the accounting system includes three main financial statements: balance sheet, income statement, and cash flow statement. The balance sheet reports the financial position of a company at a moment in time, such as April 30, 2012. The balance sheet reports a company's assets, liabilities, and shareholders' equity. The income statement reports the company's profitability during a period of time. The statement of cash flows reports the changes in cash during the same period of time. The notes to the financial statements are an integral part of the financial statements.



In this module we will be looking at accounting from a novice's perspective, and also not as part of the recording process, but rather the interpretation of said figures and the action such interpretations should elicit.

Module 1

The basic elements of an Income and Expenditure statement

This Module deals with:

- The purposes of an income and expenditure statement and an indication of how often these statements are required for two case studies
- Sources of income and expenditure for three different kinds of financial statements
- Sources of income and expenditure with reference to an income and expenditure statement
- Three income and expenditure statements examined and evaluated in terms of financial viability of the enterprise

Business decisions are assessed and measured in financial terms. It is therefore necessary to have a financial manager as a specialist to provide insight into financial matters. It is important to note that all managers in the business, regardless of their own functional area need a sound understanding of basic accounting principles. Just think about the last time you had to justify personnel requirements, negotiate operating and capital budgets, deals with financial performance appraisals, and propose future business directions that are, at least partly, based on financial merits.

Have you noted that the managers who are able to talk in a language that finance people understand, are listened to and have their requests granted more often than those that don't? Not only will talking the right language assist you in obtaining the necessary resources, it will also help you see the complete picture so that you can ask for the right resources at the right time and for a financially sound reason.

Making profit is the reason for a business' existence. When a business does not make a profit and becomes insolvent, it is no longer what accountants call "a going concern". It no longer contributes to the economy. Making profit at all costs is however not the ideal. Just think about Enron and the likes and it becomes clear that profit maximization alone cannot be in the long-term interests of the shareholders.

As the owners of the business, they want to see their investment grow in the share price that rises over time. It becomes clear that managing finances and ethics is undeniably intertwined. It is thus argued that a business should not solely be in pursuit of profit, but that it should strive to become a good corporate citizen and, in so doing, attract profits as a consequence.

If what shareholders want is a long term and growing return on their investment managers have to conduct business in an ethical manner. The goal thus becomes maximizing returns within an ethical business practice. As a manager and in particular in your capacity as financial manager you could be exposed to the risks associated with maximizing profits at any cost. It is therefore important to include these short comments about ethical business practices and the goals of business.

We find the results of "financial accounting" (or put differently: the financial story the accountant and auditor is telling) in the annual financial statements. This report summarizes the business' financial performance. From the "annual", we can deduce that it covers the previous accounting period, in this case a yearly period. It also includes a snapshot of the business's financial position at the end of the period.

Instances of “clever or creative accounting” have led to annual reports becoming increasingly complex. Shareholders and stakeholders expect more information, from different angles, to ensure transparency in the financial affairs of the business. The reports are not only pages upon pages of tables and numbers, but it also contains explanations and commentary that makes it easier for us to understand and to follow the story properly.

The most important information from a financial point of view for managers are contained in the annual report is the income statement, the balance sheet, and the cash flow statement. However, during the workshop, we will only discuss the Income statement and Balance sheet.

Financial reports do not have to only be compiled and published annually. Managers should often receive reports to gauge whether they are on track. Timely and complete information can assist a manager to take rapid corrective action. You will note that by the end of the study block we would have discussed all aspects from the business through to your personal financial statements. A logical classification of the vast amount of financial information requires a system of accounts. The accountant may use a computerised system or a manual system. Whether an automated or manual system is used, it must provide the following five types of accounts:

- assets (for example machinery, equipment, accounts receivable)
- liabilities (for example accounts payable, bank overdraft, long-term loan)
- owners' equity (for example capital contributed by the owners of the organisation such as ordinary shareholders)
- revenue (for example income generated by selling stock)
- expense (for example water and electricity, salaries, interest paid)



An organisation enters into hundreds and even thousands of transactions each day. The many individual transactions that make up the various ledgers (a group of accounts is known as a ledger) are recorded in the accounts (debits and credits are posted to the accounts), and at the end of the accounting period, the balances of all the accounts are determined in order to summarise the information in financial statements.

Financial statements are needed and used by various stakeholders, such as:

- Shareholders. Shareholders finance the organisation and they need to determine the organisation's worth to them.
- Management. Management requires financial statements to help them plan and control the activities of the organisation in a way that will accomplish the objectives of the organisation.

- Creditors of the organisation. Creditors lend capital to the organisation and they need to assess the organisation's ability to pay them back when the payment is due.
- Labour unions. Labour unions negotiate salary and other relevant conditions of service of employees. They need financial statements as a basis of their negotiations.
- Investment analysts. They investigate organisations for investment purposes and therefore use financial statements.
- The state. The state requires financial statements for checking whether the amount of corporate taxes paid is correct, and for statistical purposes.



1.1 The purposes of an income and expenditure statements and an indication of how often these statements are required

The income statement is one of the three financial statements - the other two are the balance sheet and cash flow statement - with which investors need to become familiar. The purpose of this section is to provide an understanding of the components of the income statement in order to simplify investment analysis and make it easier to apply it to your own investment decisions.

In the context of corporate financial reporting, the income statement summarizes a company's revenues (sales) and expenses quarterly and annually for its fiscal year. The final net figure as well as various others in this statement is of major interest to the investment community.

Income statements come with various monikers. The most commonly used are "statement of income", "statement of earnings", "statement of operations" and "statement of operating results". Many professionals still use the term "P & L", which stands for profit and loss statement, but this term, is seldom found in print these days. In addition, the terms "profits", "earnings" and "income" all mean the same thing and are used interchangeably.

The portion of the income statement that deals with operating items is interesting to investors and analysts alike because this section discloses information about revenues and expenses that are a direct result of the regular business operations. For example, if a business creates sports equipment, then the operating items section would talk about the revenues and expenses involved with the production of sports equipment.

The non-operating items section discloses revenue and expense information about activities that are not tied directly to a company's regular operations. For example, if the sport equipment company sold a factory and some old plant equipment, then this information would be in the non-operating items section.

The period of time interval might be one year, nine months, three months, one month, 52 weeks, 13 weeks, four weeks, and so on. The elements or components of the income statement are revenues, gains, expenses, and losses. A single-step income statement format shows revenues and gains minus expenses and losses...and the resulting bottom line: net income. For the bottom line of the income statement to report a meaningful net income, it should be prepared under the accrual-basis of accounting. This means that revenues are reported when they are earned—when the

merchandise or services are delivered—and not when the money is collected. Expenses are matched with revenues or are reported when they occur—and not when the expenses are paid.

If a company's shares are publicly traded, its net income must also be presented on the income statement as earnings per ordinary share. The net income reported on a corporation's income statement is part of the retained earnings reported on the balance sheet. As a result, the income statement is a link between the balance sheet at the beginning of the accounting period and the balance sheet at the end of the accounting period.

Income and expenditure statements are thus a report of the money you made and the money that you spent during a period of time. You can do a statement for a month, a quarter or a year or any time period.

1.1.1 Definitions

- **Income**

For the purposes of this module, income is defined as money that has been made within the time period of the statement. It is an important accounting concept to correctly account for income within the time period of the financial statement. This means that you should include in your income calculation money that you have made but not yet received. For example, if you were a trader and sold goods but had not yet received the money (because you had given your customer some credit terms) you should nonetheless include the sale as income for the period, even if the customer only pays you after the end of the period.

- **Expenditure**

For the purposes of this module, expenditure is defined as the costs that have been incurred within the time period of the statement. As with the concept of income, you should accrue for expenditures incurred within the time-period even if you have not paid for them. If, for example, you were doing a household income and expenditure statement for the end of September and you had not received your water and lights bill nor paid it for September, you should nonetheless include it (or a reasonable estimate) in the income and expenditure statement for September. This ensures that you have an accurate statement of the real expenditures incurred within the period.



At the end of the income and expenditure statement, you subtract Expenditure from Income and the remaining portion is what an enterprise would call Profit. If expenditures were more than Income, the negative difference is what an enterprise would call Loss.

1.1.2 The purpose of an Income and Expenditure Statement

The purpose of an Income and Expenditure Statement is to clearly show how much money was made and how much was spent within a given time period. Obviously, it is much better to have money left over when you subtract Expenditure from Income. Users of financial statements find them to be an endless mine of information on which they can base realistic business and economic decisions. Legislation requires that when doing the financial statements of a company, certain specific requirements regarding the disclosure of information must be met.

According to the Companies Act 61 of 1973 a company's financial statements have to be drawn up in accordance with generally accepted accounting practice (GAAP) as well as the specific requirements of schedule 4. In this module you are not expected to know the specific requirements but an awareness of the common elements will assist you in understanding financial statements.

Normally an individual is only required to produce a statement like this either for, as in the case study, a bank loan or sometimes when completing a tax return. There is no



requirement for an individual to produce the statement on an annual basis as required for companies by the Companies Act of 1973. It is, however, a good personal management tool and a wise person would compile such a statement and keep a good eye on it on a regular basis.

1.2 Sources of income and expenditure

Income and expenditure sources are as varied as the types of industries and businesses in operation. People too, derive their income and spend their money in all possible ways. The ways of income are many and varied: it is your task to identify these in the financial statements and be able to recognise the income from the costs.

Expenditures incurred in generating sales include the purchases of goods for resale, called purchases. Note that purchases in accounting terms have a specific meaning: it means the costs incurred in acquiring goods for resale. It does not include other costs, such as the ones listed in the Expenditure section. These must be disclosed separately.

The Cost of Sales calculation, which is Opening Stock Add Purchases Less Closing Stock, is calculated and subtracted from sales to give Gross Profit. Gross Profit is an indication of the profitability of operations, not including other expenses and overheads. In a retail environment, for example, as the business purchases goods for resale, you would not include the cost of rental of premises. This is because it is counter-intuitive to directly attribute the cost of renting the shop to any given sale. It is therefore more logical to show rental of premises in the Expenditures section. This is not a hard-and-fast rule though: depending on the operating environment and the type of costing that is being done, in some cases it is possible to apportion a rental overhead to the cost of production.

1.2.1 Financial Viability

The concept of the going concern is an important accounting concept. Financial Statements are usually prepared with the assumption that the enterprise is a going concern, without evidence to the contrary. This assumption implies that the business will continue its operations for the foreseeable future.

Financial viability implies that:

- The concern will continue its operations in the foreseeable future.
- The enterprise is sufficiently profitable (or will be in the future) to continue its operations.
- There is inherent worth in continuing operations. This is related to the concept of ongoing profits. It is important to note that sometimes companies do not make a profit every year – especially in the first few years of operations. A businessperson would examine financial statements for their financial viability and also take a view on the inherent worth. A full assessment or analysis of a company does not just look at one year in isolation: many years of operational results need to be examined for a fundamental analysis.

1.3 Sources of income and expenditure with reference to an income and expenditure statement

1.3.1 The purpose of the income statement

The income statement provides a financial summary of an organisation's financial performance during a specific period. The purpose of the income statement is to evaluate the profitability of an organisation by matching the revenue earned during a given period with the expenses incurred in the process of obtaining the revenue. If revenue exceeds the expenses, the organisation is operating at a profit. If expenses exceed revenue, the organisation is operating at a loss. The income statement is also referred to as the earnings statement, statements of operations and profit and loss statement.

To compile an income statement, the organisation's sales are firstly determined for the accounting period. Then, the cost of goods sold is subtracted. These costs are calculated by adding purchases to beginning inventory, after which ending inventory is subtracted. By subtracting the cost of goods sold from sales, results in gross profit. From gross profit, operating expenses are subtracted, to determine earnings before interest and taxes (EBIT).

Operating expenses can include the costs associated with advertising, salaries, insurance, depreciation, maintenance, fuel, packaging, printing, postage and courier expenses, rent paid, telephone costs and water and electricity. From earnings before interest and taxes, interest is deducted to determine earnings before taxes. Taxes (30 percent in the above example) are deducted from earnings before taxes to determine earnings after taxes (EAT).

The income statements prepared by various companies vary considerably as to the amount of detail shown. Often, companies use a condensed form of the income statement, which only shows sales, cost of goods sold, gross profit, operating expenses, earnings before interest and taxes, interest expenses, earnings before taxes, taxes, and earnings after tax.

1.3.2 The accounting period

Every organisation should prepare a yearly income statement. Most organisations also prepare quarterly and monthly income statements. Management, especially top management, needs to know from month to month whether revenue is increasing or decreasing, whether expenses and losses are being held at an acceptable level, and how net income compares with that of the preceding month and of the corresponding month of the preceding year. The term accounting period refers to the period covered by an income statement.

The operation of an organisation entails a continuing stream of transactions. Many transactions begin in one accounting period, but affect several succeeding periods. Not all transactions can be precisely divided by accounting periods. For example, the purchase of a building provides benefits to the organisation over all the years in which it is used. One cannot determine in advance exactly how many months or years of service will be received from such assets.

Since the appointment of these and other transactions which overlap two or more accounting periods is in the nature rather than precise measurements, it follows that income statements should be regarded as useful approximations of annual income rather than absolutely accurate determinations.



1.3.3 The Income Statement

An Income Statement is a one-page document that reflects the financial results of a business' trading activity over a given period. This period is called the "accounting period". If the accounting period is annual, the income statement will summarize all the transactions that took place during the year.

The following headings are usually found on the income statement:

- **Turnover**

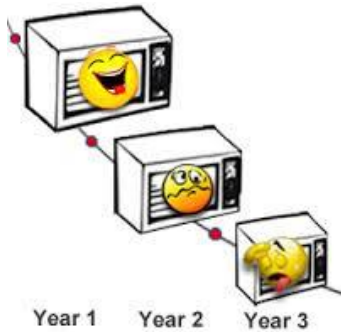
Turnover refers to the revenue that a business generates during the accounting period. The description can vary depending on the business' trading activity and some companies prefer to use "revenue", "income" or "sales".

- **Operating Expenses**

Costs that the business incurs during an accounting period are referred to as expenses. These costs can be called fixed, indirect, overheads or, more correctly, operating expenses.

- **Depreciation**

Depreciation involves allocating the historical cost of a long-term asset to expense over the useful life of the asset. Long-term or long-lived assets that are used in a business (except land) must be depreciated in order to match the asset's cost to the accounting periods when revenues are earned from using the asset. In other words, depreciation is not an attempt to value an asset. Rather, depreciation is an attempt to achieve the matching principle.



Since the depreciation reported in the financial statements is based on the useful life of an asset, there can be different depreciation amounts from one company to another using a similar asset. For example, a new machine might be useful for 10 years in a company that processes soft metals, but a similar machine might be useful for only 5 years in a company that processes hard metals. The result might be annual depreciation expense of R10, 000 for 10 years for one company, while another company's financial statements will report R20, 000 per year for 5 years. (The depreciation for tax purposes will likely be still another amount, since tax depreciation is based on income tax regulations.)

There are different methods for calculating depreciation expense. Generally, companies use straight line depreciation for its financial statements. The straight line method means the annual depreciation expense will be the same amount for each full year of use. Alternatively, some companies might use an accelerated method of depreciation such as double-declining balance or sum-of-the-years' digits. The accelerated methods mean more depreciation expense in the early years of an asset's life and less in the later years of an asset's life. Another method of calculating depreciation is the units of production or units of activity method. Under the units of activity method, more depreciation is recorded in the accounting periods when the asset's use is greater. In periods when the asset is used less, the amount of depreciation is smaller.

The accounting entry for recording depreciation for financial purposes is a debit to Depreciation Expense and a credit to Accumulated Depreciation. Accumulated Depreciation is a contra asset account that is reported in the balance sheet classification Property, Plant and Equipment.

The term depreciation in accounting should thus not be interpreted as reducing or losing value. It is an accounting term that refers to the cost of a fixed asset spread over a period. This period is usually the useful life of the asset.

The term depreciation in accounting should thus not be interpreted as reducing or losing value. It is an accounting term that refers to the cost of a fixed asset spread over a period. This period is usually the useful life of the asset.

An example will clarify:

A restaurant purchases a commercial dishwasher. It will operate for 3 years and over that, time will make their production more efficient (thereby reducing expenses) and will boost their output (thereby increasing their turnover). Obviously, the business will benefit financially from owning the machinery for the full 3 years.

Suppose that the machinery cost R60, 000 to purchase. The company incurred a R60, 000 expense in year one. The company will however increase its profit because of the machine over a period of 3 years. When it comes to depreciation, remember that the

expense must also be accounted for over the same period. What the accountant will do is look at the accounting guidelines in terms of useful life for this type of machinery, let us say its 3 years and divide the cost by the period.

To clarify: depreciation in accounting terms a way in which the cost of the dishwasher is spread over the years in which it will assist the business to generate profit. In this example R20, 000 will be included in the operating expenses in the Income statement for the next 3 years. As mentioned above in South Africa, the Receiver of Revenue provides guidelines for the depreciation of fixed assets for tax allowance purposes. Note that these guidelines do not affect the useful life of the asset and should, therefore, have no impact on the accounting treatment of the asset. The depreciation amount is not actually paid to anyone and is not a cash item.

- **Amortization**

Amortization refers to the “depreciation” of an intangible asset. It is the expensing of the cost of an intangible asset over a period. Goodwill is the most common intangible asset that is amortized. It is not a cash item and has no impact on cash flow.

- **Operating Profit**

This is Sales minus Operating Expenses. In other words, the profit made after all the operating expenses have been paid. It does not take the deduction of interest and tax into consideration. Operating profit establishes if the business can produce enough revenue to pay what it costs to be operational. As such, tax is not considered an operating expense. Disposing of a fixed asset and the “income” derived from the transaction is also not included in the operating profit.

- **Net Profit Before Tax**

Net profit before tax (NPBT), sometimes called net income before tax, is what is left after all the expenses (except the tax) have been paid.

- **Net Profit After Tax**

The amount of profit left after tax has been calculate and deducted. This amount is then available for the payment of dividends and/or retention for business growth.

An example of an Income statement

Name of the financial statement Period Of which year Currency and denomination Value of income generated form main business activity	Income Statement For the year ended 29 February	
	2011 Rm	2012 Rm
Value of income generated form main business activity	Sales 7,022	5,804
Expenses incurred in business operations	Operating expenses (6,300)	(4,801)
Profit from operations	Operating profit 722	1,003
Losses and gains of an unusual nature	(Loss)/gain on disposal of assets (255)	552
Normal company tax	Net income before tax 467	1555
Profit of loss after all expenses have been met	Taxation (30)	(30)
	Net income after tax 437	1525

Module 2

The basic elements of a balance sheet

This Module deals with:

- The purpose of a balance sheet and an indication of how often a balance sheet is necessary for two case studies
- A balance sheet analysed and evaluated in terms of equity or financial net worth
- The concept of an asset and the assets in a balance sheet are classified in terms of fixed and current assets
- The concept of a liability and the liabilities in a balance sheet classified in terms of long term and current liabilities
- Balance sheets for an entity are compared and evaluated in terms of performance over two years and a decision is made based on evidence in the balance sheet

2.1 The purpose of a balance sheet and an indication of how often a balance sheet is necessary

The balance sheet is one of the main financial statements. It is also known as the statement of financial position. The balance sheet reports the amount of assets, liabilities, and shareholders' (or owner's) equity at a specific moment (or point in time).

The balance sheet usually reports assets by classifications such as current assets, investments, property, plant and equipment, and other assets. Liabilities are classified as current liabilities and long-term liabilities.

Typical assets listed on the balance sheet include cash, accounts receivable, inventory, supplies, prepaid insurance, land, buildings, equipment, and intangible assets such as goodwill.

Typical liabilities include notes payable, accounts payable, wages payable, interest payable, income taxes payable, and bonds payable.

Shareholders' equity is the difference between the amounts reported for assets and liabilities.

2.1.1 The purpose of the balance sheet

The purpose of a balance sheet is to show the financial position of an organisation at a particular date, for example the balance sheet as at 28 February 2012. It is thus a snapshot of the financial position of the company for that specific day. A balance sheet consists of a listing of assets, shareholders' interests, and liabilities of the organisation.

The balance sheet consists of three distinct elements, namely the assets (fixed as well as current assets), shareholders' interest, and liabilities (including long-term debt and current liabilities).

Assets are economic resources that are owned by an organisation and are expected to be of benefit during future operations. Assets could be tangible, for example, buildings, equipment and machinery, or it may be intangible, for example legal claims or patent rights.

Fixed assets are assets that will be retained for a longer period than the accounting period of the organisation, which is usually a year. Fixed assets include land, buildings, equipment, machinery, and motor vehicles. Fixed assets are usually shown at its original costs, but if depreciation is applicable, it will be shown at the depreciated value.

Current assets are short-term assets, which are expected to be converted into cash during the accounting period. Current assets include inventory (or stock), accounts receivable (debtors) and cash deposited or cash on hand. When examining a balance sheet, it is important to note that the rand values in the balance sheet do not indicate the prices at which the assets could be sold, or the cost at which it could be replaced. This is known as the going-concern concept – assets are acquired for use and not for resale.

Shareholders' interest (also known as owners' equity) represents the resources invested by the owners and is equal to the total assets less the liabilities. In the case of a public company, shareholders' interest may take the form of ordinary share capital and retained earnings, and is indicated as shareholders' interest in the balance sheet. If the company uses preference shares, which are not redeemable, then these could also be classified as shareholders' interest. Shareholders' interest is based on the par value at which the shares were sold, and may be calculated by multiplying the number of shares issued by the par value per share.

Once shares trade on the stock exchange, they will take on a market value, which will differ from the par value. However, the balance sheet will not reflect changes in the market value of the shares, but will always reflect the original par value figures. Shareholders may come and go as they buy and sell shares of the company. The amount of capital contributed by the original shareholders does not alter and is at the disposal of the company for as long as it exists and remains solvent.

Liabilities are debts. Liabilities can be divided into two basic categories, namely long-term debt in the form of loans with a maturity exceeding one year, and current liabilities with a maturity of less than one year. Examples of current liabilities are accounts payable, tax payable and wages and salaries payable.

A balance sheet is separated into two distinct parts: The Capital Employed section and the Employment of Capital section. Based on the basic accounting equation $A=O+L$ (Assets = Owners Equity + Liabilities), the two sections of the balance sheet reflect the calculation of the equation. Sometimes it is indistinct which part of the balance sheet belongs to which part of the accounting equation. In theory, the Capital Employed section represents the O part, in other words, the Owners equity part. The Employment of Capital section is made up of the other two parts, Assets – Liabilities.

It can be confusing as to why sometimes Liabilities especially, are shown in the Capital Employed part and not in the Employment of Capital. It is not within the range of this module to go into the complexities of long-term financing, but suffice to say that simply speaking, the money that the owner of a business puts into the business, or retains as profits, is shown in the Capital Employed Section, and the rest is shown in the Employment of Capital Section.

The Capital Employed section reflects the money the owner has put into the business. This, as mentioned above, is the owner's investment in the operation.

It usually consists of the share capital of the business (if it is a company: certain forms of trading operations such as sole traders or partnerships, do not have share capital, but reflect the investment of the traders/partners.)

- **Share Capital**

This is the Equity of the business. Usually, a company is incorporated with an authorised share capital that is divided amongst the owners of the business. These shares, as in publicly traded companies on the stock exchange, are tradable in certain circumstances and can be bought and sold. They reflect the division of ownership and profit sharing. If you own shares in a company, you are entitled to a share of profits in proportion to your shareholding. Often, companies pay out profits from operations in the form of dividends. Note too, that a company is not forced to pay out dividends; the managers of the company may retain profits within the company to achieve and further the company's objectives. The board of directors must consider whether to pay out or retain profits, which has an impact on the trading price of the shares. Obviously (although this is not necessarily a direct relationship) the more that companies pay out in dividends, the happier shareholders will be and that would raise demand for shares, thereby increasing the share price.

- **Employment of Capital section**

The term "employment of capital" means what has been done with the money that the owners of the business have invested in the operations. This is the calculation of net Assets less Liabilities.

A primary feature of a balance sheet, as indicated in the name of the statement, is that it MUST balance. If a balance sheet does not balance, it is not a balance sheet!

In terms of disclosure as required the Companies Act 61 of 1973, there are many items that are disclosed in a company's Annual Financial Statements. Often, how the figures that appear on the balance sheet are arrived at is shown in Notes to the Balance Sheet. An example of a common note would be the calculation of depreciation for Fixed Assets.

Balance sheets are invaluable tools for the analysis of companies' net worth. By understanding and interpreting the clues within the balance sheet, the analyst can evaluate the value of the company, and make decisions accordingly.

2.2 A balance sheet analysed and evaluated in terms of equity or financial net worth

The balance sheet shows the financial position of the business on the last day of the accounting period. This is usually the point where the non-accounting people start commenting that the Income statement made sense but why have the balance sheet?

Before we continue to answer that question, we need to have a look at the accounting equation.

2.2.1 The Accounting Equation

The accounting equation is $\text{Assets} = \text{Liabilities} + \text{Owner's (Shareholders') Equity}$. The accounting equation should remain in balance at all times because of double-entry accounting or bookkeeping. (Double-entry means that every transaction will affect at least two accounts in the general ledger.)

Here are some examples of how the accounting equation remains in balance. An owner's investment into the company will increase the company's assets and will also increase owner's equity. When the company borrows money from its bank, the company's assets increase and the company's liabilities increase. When the company repays the loan, the company's assets decrease and the company's liabilities decrease. If the company pays cash for a new delivery van, one asset (cash) will decrease and another asset (vehicles) will increase. If a company provides a service to a client and immediately receives cash, the company's assets increase and the company's owner's equity will increase because it has earned revenue. If the company provides a service and allows the client to pay in 30 days, the company has increased its assets (Accounts Receivable) and has also increased its owner's equity because it has earned service revenue. If the company runs a radio advertisement and agrees to pay later, the company will incur an expense that will reduce owner's equity and has increased its liabilities.

From our examples, you can see that owner's equity increased when the owner made an investment in the business and also when revenues were earned. Owner's equity decreased when the owner withdrew assets from the business and when expenses were incurred.

The three basic elements for this equation are: Assets, Liabilities, Equity

The equation is:	$\text{Assets} = \text{Liabilities} + \text{Equity}$
------------------	--

Equation means making it balance. The two sides of the equation must always be equal to each other. In the following example, very elementary numbers are used as illustration, as the purpose of the activity is not to test mathematical skill, but to ensure that we understand why the balance sheet is so important. The entire purpose of keeping financial records is to ensure that the books in the end balance, hence the Balance sheet.

The following headings are usually found on the Balance sheet:

2.3 Assets

Assets are items that have a monetary value. These items must be owned by the business. These assets are necessary as they are used by the business to generate profit or cash inflows.

Assets are things that the business owns. They can take the form of Fixed Assets, which are the things used in the production of income, like office furniture and equipment, motor vehicles,



tools and machinery, or software on the computers, or Current Assets. Current assets are generally short-term collectibles and can be liquidated within a period of less than 3 months. Debtors, cash in bank, fixed deposits and suchlike, all comprise the company's current assets.

Note that particularly these days, fixed assets need not be physical assets. The special section of intellectual property laws allows that patents, copyrights, research and development and suchlike are regarded as intellectual assets, and as such do not have a physical presence, but do have a real value to the business.

An important implication of Fixed Assets is that the value of the asset is written down over a period of years through the calculation of the mechanism called depreciation. Depreciation is charged to the income statement as an expense. For example, the Receiver of Revenue allows that motor vehicles may be written down over a 4-year period. That means that the value of the car is charged to the income statement over four years. It is beyond the scope of this module to examine the complexities of depreciation in detail, but it is important for you to know that the value of Fixed Assets decreases with time through the calculation of depreciation.

2.3.1 Fixed assets

These have a life cycle longer than the normal accounting period of the business. The intention on acquisition of these assets is to use them to make the business more efficient – not to sell them in the short-term to make a profit. The value of the fixed assets that is shown in the balance sheet is commonly known as the “book” value, which means that it is the historical (original) cost of the asset less accumulated depreciation.

You will recall that when we discussed depreciation earlier we said that in each accounting period an amount of depreciation appears as an expense in the income statement. This figure is a total of the amount of depreciation that is calculated for each individual fixed asset. If the business has owned a fixed asset for longer than one accounting period, all the annual amounts of depreciation that have been calculated for that particular asset and include as an expense in successive income statements are added together and the total is called accumulated depreciation. This is then deducted from the historical cost of the asset to arrive at the book value.

2.3.2 Current Assets

In line with the word current, as in present, these assets are cash and all other assets that can quickly be converted into cash. That is within the accounting period of the business. These assets are cash, accounts receivable (trade debtors), positive bank balances, stock etc. The total of current assets is also described as working capital.

2.3.3 Investments

Investments are not considered fixed nor are they considered current. Remember the Round Corner Grocer? If it had invested money in the Zebra Crossing Pub, the investment would be reflected on the balance sheet. The investment is often

shareholding in another company, in which case, the two businesses are often connected and the only way in which a value can be placed on this investment is to obtain the up-to-date financial statements. If the company's business is related to investment activities, investments in this case could be listed securities, property, loans to other institutions etc. and will be dealt with as assets.

2.3.4 Intangible Assets

Just like investments, intangible assets are neither fixed nor current and, as the title suggests, do not physically exist. Goodwill or a company's brand is a good example of an intangible asset.

2.4 Liabilities

Liabilities are an obligation that legally binds an individual or company to settle a debt. When one is liable for a debt, they are responsible for paying the debt or settling a wrongful act they may have committed. For example, if John hits Jane's car, John is liable for the damages to Jane's vehicle because John is responsible for the damages. In the case of a company, a liability is recorded on the balance sheet and can include accounts payable, taxes, salaries, accrued expenses, and deferred revenues. Current liabilities are debts payable within one year, while long-term liabilities are debts payable over a longer period.



To be liable is thus to be obliged to pay. Liabilities are obligations of a business to pay people who are owed. As is the case with assets, liabilities are either long-term or current.

Liabilities are thus debts that the company owes. This may take the form of an overdraft to the bank, creditors due for payment, or other loans the company may have taken.

2.4.1 Long-Term Liabilities

These liabilities are also known as non-current liabilities. These are liabilities payable outside of the accounting period. That is more than one year after the date of the balance sheet. Long-term liabilities of the company are reflected in the Capital Employed section of the balance sheet. These consist of debts that the company has acquired which have to be paid off in periods longer than the current year. An example would be the bond or mortgage loan on a property that the company purchased. Another example, in a listed company, would be debentures. These are special loan instruments that the company can issue to raise finance, and must be repaid to the investors.

2.4.2 Current Liabilities

These are liabilities payable within the accounting period usually within a period of one year from the date of the balance sheet and paid from cash flow. Typically, these liabilities would be bank overdrafts or other forms of short-term borrowing, accounts

	ASSETS	
	Non-current assets	
Fixed assets	Property	3000 3000
	Plant	2500 2000
	Equipment	1350 1250
	Total non-current assets	6850 6250
	Current assets	
Amount owing by customers	Accounts receivable	2500 2600
	Inventory	1500 950
	Cash	800 900
Value of working capital	Total current assets	4800 4450
	TOTAL ASSETS	11650 10700
	LIABILITIES AND EQUITY	
	Shareholder's funds	
"Face" value of shares issued	Issued share capital	6000 6000
	Preference shares	500 500
Profit that have been earned and retained from past years. This accumulates so the growth was R500m	Retained earnings	2500 2000
"Book" value of shareholders' interest in the company	Total shareholders' equity	9000 8500
	Non-current liabilities	
Debt payable more than 1 year from balance sheet date	Long-term debt	1000 1200
	Total non-current liabilities	1000 1200
	Current liabilities	
Amount due to suppliers	Accounts payable	1650 1000
Debts payable within 1 year from balance sheet date	Total current liabilities	1650 1000
	TOTAL LIABILITIES AND EQUITY	11650 10700

2.5.1 Notes to the Financial Statements

In the income statement and the balance sheet, there are often a series of numbers in a column against some of the figures. These numbers correspond to the number of the note found in this last section of the financial statement.

The types of information found in the notes usually comprise the following;
Accounting policies for example stock valuation and fixed asset depreciation methods, etc.

Explanation of information found in the income statement and balance sheet for example amount of accumulated depreciation.

Additional information that must be disclosed but which does not belong in the income statement or balance sheet like the contingent liabilities.

These notes give the accountant, auditors CEO or CFO the opportunity to explain or clarify entries on the statements. This promotes the transparency of the financial statements.

2.6 Cash Flow Statements

The cash flow statement (or statement of cash flows) is one of the main financial statements. The cash flow statement explains how a company's cash and cash equivalents have changed during a specified period of time.

The cash flow statement is organized into three sections:

1. Cash provided and used in operating activities,
2. Cash provided and used in investing activities,
3. Cash provided and used in financing activities.

The operating activities section begins with the net income during the period of the statement. Since the company's net income was calculated and reported under the accrual basis of accounting, the amount of net income needs to be adjusted to a cash amount. The first adjustment is to add back the amount of depreciation, depletion, and amortization expenses, since these expenses had reduced net income but did not reduce the company's cash. Next, any gains or losses on the sale of long-term assets used in the business are listed, since the entire amount received from the sale is reported as investing activities. Lastly, the changes in the current assets (other than cash) and the changes in current liabilities are listed. For example, if inventory has increased, the amount of the increase in inventory is subtracted because additional cash would have been used to increase the amount of inventory. The amount by which a current liability decreased is also subtracted, since it is assumed that cash was used to decrease the current liability. All of the items reported in the operating activities section are combined into a final number: the net amount of cash provided by operating activities.

The second section of the cash flow statement reports the investing activities. The changes in the long-term asset account balances are reported in this section. For example, if a company's long-term investment in another company has increased during the period, the amount of the increase is reported as a negative amount in the investing activities section—an indication that cash was used. The same is true for the purchase of property, plant and equipment for use in the business—an increase in the

equipment account indicates that cash was used to purchase equipment. If a long-term investment or plant asset is sold, the entire proceeds from the sale are reported as a positive amount in the investing activities section. This indicates that cash was provided or increased from the sale. (Any gain or loss on the sale is an adjustment to the net income reported in the operating activities section of the statement.)

The third section of the cash flow statement contains the company's financing activities. This section lists the changes in long-term liabilities and shareholders' equity. For example, if loans payable has increased by R1, 000,000, it is assumed that cash of R1, 000,000 was provided. The R1, 000,000 will appear as a positive amount in the financing activities section of the statement. If loans payable decreased, then the amount of the decrease will be reported as a negative amount—indicating that cash was used to retire the bonds. The amount of dividends declared and paid will also appear as a negative amount, since cash was used. If the company sells some of its shares, the amount received will be reported as a positive amount since it provided cash. If the company purchases some of its shares, the amount will appear as a negative amount in the financing activities section because cash was used.

In addition to the three main sections of the cash flow statement, it is also necessary to disclose significant non-cash transactions (e.g. exchanging stock for land) and other items required by generally accepted accounting principles.

In the next module, you will have an opportunity to apply these concepts to your own financial situation.

Module 3

Personal Assets and Liabilities Statements

This Module deals with:

- A personal assets and liabilities statement compiled based on own financial situation over the past year
- The situations when an assets and liabilities statement are required and an indication of the advantages of keeping such records

3.1 Personal Assets and Liabilities Statement

Personal finance is the application of the principles of finance to the monetary decisions of an individual or family unit. It addresses the ways in which individuals or families obtain, budget, save, and spend monetary resources over time, taking into account various financial risks and future life events. Components of personal finance might include checking and savings accounts, credit cards and consumer loans, investments in the shares, retirement plans, insurance policies, and income tax management.

A key component of personal finance is financial planning, a dynamic process that requires regular monitoring and re-evaluation. In general, it has five steps:

Assessment: One's personal financial situation can be assessed by compiling simplified versions of financial balance sheets and income statements. A personal balance sheet lists the values of personal assets (e.g., car, house, clothes, stocks, bank account), along with personal liabilities (e.g., credit card debt, bank loan, mortgage). A personal income statement lists personal income and expenses.

Setting goals: Two examples are "retire at age 65 with a personal net worth of R2000,000" and "buy a house in 3 years paying a monthly mortgage servicing cost that is no more than 25% of my gross income". It is not uncommon to have several goals, some short term and some long term. Setting financial goals helps direct financial planning.

Creating a plan: The financial plan details how to accomplish your goals. It could include, for example, reducing unnecessary expenses, increasing one's employment income, or investing in the stock market.

Execution: Execution of one's personal financial plan often requires discipline and perseverance. Many people obtain assistance from professionals such as accountants, financial planners, investment advisers, and lawyers.

Monitoring and reassessment: As time passes, one's personal financial plan must be monitored for possible adjustments or reassessments.

Typical goals most adults have are asset and saving goals, paying off credit cards and or student loan debt, retirement, college costs for children, medical expenses, and estate planning.

3.2 The situations when an assets and liabilities statement are required and an indication of the advantages of keeping such records

An individual should thus also compile his or her personal statement of assets and liabilities to determine the net worth of his/her estate.

Situations where an assets and liabilities statement are required:

- You may need to compile an asset and liabilities statement
- When applying for a bank loan
- When required by the Receiver of Revenue
- For personal records

It is always advantageous to keep track of your personal net worth. This allows you to assess your financial situation when making decisions, for example, to obtain a loan. It allows you to see at a glance, whether or not, for the loan example, you could afford to repay the loan. It also allows you to present the records easily as you might be required to do. It is a relatively simple exercise to keep the records up-to-date with each new purchase of goods. It means that you can see at a glance how much your things are worth and how much you owe others.

Personal assets represent everything a person owns. Assets typically found in a household can be divided into two groups, namely fundamental and investment assets.

Fundamental assets are those assets a family owns due to the function they perform in the household. Examples of fundamental assets are cash on hand; cash in bank accounts, deposits at banks, a house, or houses, motor vehicles, equipment, and personal property. Personal property refers to furniture, clothing, and jewellery.

Investment assets, on the other hand, are assets acquired in order to earn a return on these assets. They do not perform a specific function in the household. Examples of investment assets are securities (shares, debentures, and fixed-interest bearing securities), the cash value of life and endowment insurance, and other investments such as coins.

All debt is classified as personal liabilities. As with assets, some liabilities are short term and other are long term.

Long-term liabilities may be long-term debt and mortgage bonds on fixed property, such as a home, holiday home, sectional title, and time-share unit or business property.

Short-term liabilities may be an overdrawn bank account, a loan from a private person, arrears expenditure (for example credit card purchases, medical and dental services, repairs, water and electricity, property tax), creditors, and any other accounts payable.

An individual's personal wealth is not measured solely by the amount of assets (in monetary value) he or she owns – the liabilities attached to such assets must also be taken into account. Of particular importance is the manner in which the assets are financed.

An individual's net worth (or owner's equity) is determined by deducting all liabilities from the total assets. Net worth is obtained by redeeming all liabilities from the

available assets, even if it means that some assets have to be sold (or converted into cash). The net worth of an individual is calculated as follows:

$$\text{Net worth} = \text{total assets} - \text{total liabilities}$$

Keeping records of personal assets and liabilities has certain advantages, for example:

- The net worth indicated in the balance sheet, indicates the person's wealth.
- By comparing two or more years' balance sheets, one can see whether this wealth has accumulated or declined.
- A person's net worth can be used for retirement planning.



Module 4

Making financial decisions

This Module deals with:

- The financial strengths and weaknesses of an entity analysed and suggestions of ways to improve income and reduce costs
- The concept of a cost to income ratio and suggestions on how to improve the ratio
- The relationship between turnover, income, revenue, sales/earnings and profit with examples
- The concept of cash flow in terms of liquidity

4.1 The financial strengths and weaknesses of an entity analysed and suggestions of ways to improve income and reduce costs

When it comes to investing, analysing financial statement information (also known as quantitative analysis), is one of, if not the most important element in the fundamental analysis process. At the same time, the massive amount of numbers in a company's financial statements can be bewildering and intimidating to many investors. However, through financial ratio analysis, you will be able to work with these numbers in an organized fashion.

The objective of this section is to provide you with a guide to sources of financial statement data, to highlight and define the most relevant ratios, to show you how to compute them and to explain their meaning as investment evaluators.

4.2 The Concept of Cost to Income Ratio

The cost to income ratio is an important indicator of the value of the company. It is used a lot in investment analysis to ascertain how easily the company can increase profits.

If the cost to income ratio is very low, it means that margins are small and that the company must increase turnover by large volumes to attain relatively small increases in profit.

The cost to income ratio is derived as follows:

- Net Costs/Income

Example:

T-Square Inc. has an annual income of R500, 000, derived from the sales of drawing equipment. Their net costs are R300, 000.

T-Square Inc.'s cost to income ratio is therefore

$300, 000/500, 000 = 3/5$ (or expressed as a ratio, 3:5)

To interpret this: T-Square Inc. made R200, 000 worth of profits from R500, 000 worth of sales. Or put differently, for every R3 spent R5 is generated, or yet again differently, for every R5 generated R2 is profit.

4.3 The Relationship between Turnover, Income, Revenue, Sales/Earnings and Profit

Turnover, income, revenue, sales/earnings and profit are all commonly used terms in accounting and finance. We will discuss and define each of these terms, and give examples to demonstrate how each of these is derived.

Turnover is the term used to describe the sales or income that the company earned from pursuing its operations. In a retail or selling organisation, this would be the sales that the company made from retailing to third parties. In an insurance-type organisation, turnover might be derived from commissions, or the sales of policies. Turnover is usually the first item that appears on a company income statement.

Income can be viewed as the net receipts received from the operations of the business. It excludes the money received from extraordinary items. Extraordinary items are significant, material transactions that would not be defined as normal transactions for the company. An example would be the sale of a company which the holding company holds title to.

Revenue is all the money that the company received in the course of its business. It includes earnings from extraordinary items, as defined above. Also included would be interest earned on cash balances in bank accounts, as well as income from subsidiaries. The sales/Earnings ratio considers the relationship between sales, which are derived from the ordinary operations of the business, and the net earnings of the company, which include extraordinary items and interest. The Sales/Earning ratio indicates what proportion of income comes from normal day-to-day business and which comes from other business. Consider, as a demonstration, a company that has very small trading sales, but declares large earnings due to the profit on sale of land that it owned. If you looked at the income statement, it may appear that the company was doing very well and earning a lot of money. But in fact, the directors may be disposing of company assets that might affect the future earnings of the company.

Profit is the difference between Income and Expenses. In a public company, the profits of the company are regarded as available for distribution. This is what the shareholders of the company will receive as dividends, assuming that the directors don't retain earnings for the purposes of furthering the business's aims. Last of all, the Profit available for distribution is the monies that will be paid out to shareholders as dividends. It is important to notice where this is placed: dividends are paid out of the profits after tax. This is because it would prejudice the Receiver of Revenue's claim on company profits if the taxation charges were calculated after distribution. It would be

possible to take all of the money out of the company and not leave the taxman his share, which he would not approve of.

4.4 Cash Flow in terms of liquidity

The final statement in the Annual Financial Statements is the cash flow statement. For reference sakes, an old name for this was the Source and Application of Funds. The cash flow statement is aimed at showing interested parties where money came from and where it went. When a cash flow statement is done, non-cash items, such as the depreciation expense, are removed from the calculation to reflect the movement of cash through the enterprise.

The concept of liquidity can be understood as such: if, for example, your family has three houses, but no money in the bank, your family might suffer a cash flow problem. Technically speaking, the family is wealthy: it has a net asset value of the sum of the values of the houses (assuming there are no liability claims over it). But with no money in the bank, liquidity is a problem, as all the money the family has is tied up in the houses.

When you have cash in the bank, you are said to be liquid. When you don't have cash in the bank, but your money is tied up in assets, you are said to be illiquid. That means you expect the cash within a short period of time. So, the concept of cash flow in terms of liquidity is how much money is coming into and going out of your bank account

4.5 Financial Ratios

Financial statements are used to assess the financial performance and condition of an organisation. The measurement and evaluation of information presented in the financial statements is known as analysis and interpretation, or ratio analysis, and is the link between financial statements and the decision-making process. The inputs in ratio analysis are the organisation's income statement and balance sheet for the periods under scrutiny. The data provided by these statements can be used to calculate ratios that permit the evaluation of certain aspects of financial performance and condition.

Financial ratios are part of the broader topic financial statement analysis. Since most of the financial ratios are calculated from amounts reported on recent financial statements, they are historic in nature. The following financial ratios are calculated by using amounts reported on the balance sheet: working capital, current ratio, quick ratio, debt to equity ratio, and debt ratio. The first three ratios are indicators of a corporation's liquidity. The latter two ratios are indicators of a company's degree of leverage.

The following financial ratios use amounts from both the balance sheet and the income statement: inventory turnover, accounts receivable turnover, return on equity, and return on assets. For example, the inventory turnover ratio is calculated by dividing the cost of goods sold (from the income statement) by the average inventory amounts that are found on the balance sheets.

Other financial ratios use amounts only from the income statement. For example the gross margin ratio is the gross profit divided by net sales. The return on sales is the net income divided by net sales. These financial ratios are indicators of a company's

profitability. If a company's shares are publicly traded, the Management Discussion section of its annual report to shareholders provides helpful information behind the financial ratios. Among the dozens of financial ratios available, we've chosen a few measurements that are the most relevant to the investing process:

1. Debt or Solvency Ratios
2. Liquidity Measurement Ratios
3. Profitability Indicator Ratios
4. Activity Ratios

- **Comparative analysis**

A ratio on its own is useless. It is difficult to gain any meaningful information from a ratio unless it is compared to something. There are two types of comparison;

Industry comparative analysis involves comparing the financial ratios of different organisations in the same industry at the same point in time. The purpose is to identify any deviations from the industry norm.

Time series analysis involves comparing the historic ratios of the organisation over time in order to determine whether it is progressing as planned. Any significant year-to-year changes should be identified and evaluated to assess whether they are symptomatic of major problems.

Both comparisons are usually done.

The process of financial analysis is a three-step process;

Step 1: Calculation of financial ratios

Step 2: Comparison of results

Step 3: Interpretation of results

Financial ratios can be grouped within the broad categories of business performance that they are attempting to examine. These performance categories are debt management, liquidity, profitability, asset management, and investor ratios.

4.5.1 Debt/Solvency/Gearing Ratios

Debt management plays an important role in financial management and the extent of a firm's financial leverage (use of debt financing) has a number of implications. The greater the firm's financial leverage, the higher its financial risk. The financial risk is the measure of volatility of profits caused by having debt finance. However, additional risks yields additional return and if the firm earns more on the borrowed funds than it pays in interest, the return on owners' equity will be greater.

By raising funds through debt, the shareholders can obtain finance without losing control of the firm.

Debt management ratios attempt to assess the impact of financial advantage on risk.

There are two types of debt ratios; those that measure the degree of indebtedness in relation to other balance sheet figures (equity, for example) and those that measure ability to repay debt (also known as coverage ratios).

Debt ratio
$$\frac{\text{Total liabilities}}{\text{Total assets}}$$

This provides a picture of the degree to which assets are funded by outsiders' funds in relation to funds provided by the owners in other words it measures the total amount of debt that the firm uses to finance its assets. The higher the total debt ratio, the higher the financial risk, while a very high ratio might be unattractive because of the high level of risk, a very low ratio would also be unattractive because of the leveraged returns foregone.

Simply put: The higher this ratio, the greater degree of indebtedness the business has with less financial leverage.

Borrowing ratio
$$\frac{\text{Total interest-bearing liabilities}}{\text{Total assets}}$$

This ratio indicates the level of total assets that has been funded by interest-bearing debt. Would the business be able to settle its outstanding debts if the lenders suddenly called-in their loans.

Interest cover
$$\frac{\text{Operating profit}}{\text{Interest}}$$

This ratio measures the business' ability to make contractual interest payments. The higher the number, the better able the business is to meet its interest obligations. It measures a firm's ability to pay its interest obligations by comparing earnings before interest and taxes (EBIT) to the interest expense

A ratio of 3 and, sometimes closer to 5, is often suggested. A higher ratio allows for a greater margin of safety for both the business and lenders of interest-bearing debt. It is also referred to as the times interest earned ratio.

4.5.2 Liquidity Ratios

The term 'liquidity' refers to how quickly an asset can be converted into cash without large discounts to its value. Some assets such as accounts receivable can easily be converted into cash with only small discounts. Other assets such as buildings can only be converted quickly into cash if large discounts are given. An organisation with a good proportion of liquid assets will be more able to meet its bills as they become due than an organisation with fewer liquid assets. Three measures of liquidity can be used, namely the current ratio, the quick ratio and net working capital.

The current ratio is calculated by dividing current assets by current liabilities. The current ratio indicates the extent to which the claim of short-term creditors is covered by assets that can be translated into cash in the short term

Current $\frac{\text{Current assets}}{\text{Current liabilities}}$

The ideal is normally regarded as 2:1 but this will depend entirely on the industry in which the business operates.

The quick ratio measures the organisation's ability to pay off short-term obligations without relying on the sale of inventories. The quick ratio is calculated by deducting inventories from current assets and dividing the remainder by current liabilities. The higher this ratio, the more liquid the organisation.

Quick ratio $\frac{\text{Current assets} - \text{inventory}}{\text{Current liabilities}}$

Net working capital is not an actual ratio and is calculated by subtracting current liabilities from current assets. The net working capital is not useful for comparison with the industry, as it is used as an internal control method.

Net working capital $\text{Current assets} - \text{current liabilities}$

4.5.3 Profitability Ratios

Profitability ratios show the combined effect of liquidity, asset management, and debt management on operating results. Without exception, high profitability ratios are preferred. Four different measures of profitability can be used, namely gross profit margin, net profit margin, return on investment and return on equity.

A gross profit margin measures gross profit relative to sales. It indicates the amount of funds available to pay the firm's expenses other than cost of sales. The higher the gross profit margin, the better the prospect of the business surviving, adversity and growing.

Gross profit margin $\frac{\text{Gross profit}}{\text{Turnover}} \times 100$

A net profit margin relates profits (net of all expenses) to sales. It is the profit that remains for the ordinary shareholders. Indicates the percentage of profit made from turnover after all costs have been deducted. A falling net profit margin may be an indicator of falling turnover or lack of control of operating expenses.

Net profit margin $\frac{\text{Net profit after tax}}{\text{Turnover}} \times 100$

The return on total assets is often referred to as Return on Investment, (ROI) this ratio indicates how efficiently the assets are being used in generating profit.

$$\text{Return on total assets or ROI} = \frac{\text{Net profit after tax}}{\text{Total assets}} \times 100$$

Return on equity (ROE) measures the rate of return on the shareholders' invested funds. ROE is calculated as follows:

$$\text{Return on equity} = \frac{\text{Net profit after tax}}{\text{Equity}} \times 100$$

The decisions necessary for improving profits involve the future and must be based on the current and future amounts. The past amounts, such as the amounts in your accounting records, are historical, sunk, and irrelevant amounts. (No decision will affect or change the past.) Those past amounts are useful only if they help you to estimate the relevant future amounts. Irrelevant amounts also include any future amounts that will not be different between alternatives. Hence, decisions to improve profits need only be concerned with the current and future revenues, costs, and expenses that will differ among alternatives.

The relevant amounts in the decision to replace a machine would be the cost to remove the old machine, the cost to purchase and set up the new machine, proceeds from the sale of the old machine, the future cost savings (such as utilities, labour, less scrap, etc.) increased sales in the future due to the new machine's features, changes in income taxes, and any other incremental changes. Ultimately the decision is whether or not the additional cash outlay today is worth the additional cash inflows in the future.

When examining the future cash flows, it is critical that you consider the time value of money. This is done by applying present value factors to the incremental cash amounts. After all, cash in the future is not as valuable as cash in the present.

When you look at the differences in the future amounts, be sure you look hard at the difference in net income. The difference in the bottom line is more important than the difference in sales. Don't strain your organization for little additional profit.

4.5.4 Asset management and activity ratios

Asset management ratios are designed to measure how effectively management is using the organisation's assets to generate sales. Four ratios are normally used, namely inventory turnover, average collection period, average payment period and total asset turnover.

Inventory turnover measures the rand value of sales that are generated per rand of inventory and indicates the number of times a firm replaces its inventories every year.

$$\text{Inventory turnover} = \frac{\text{Cost of sales}}{\text{Inventory}}$$

The average collection period indicates how many days it takes, on average, to collect a credit sale. Also known as the Accounts receivable turnover. Indicates the average number of days taken to collect trade debts from customers. It should be compared

with the terms being offered by the business to its customers to gain an impression of how these accounts are managed.

Average collection period/ Accounts receivable turnover

$$\frac{\text{Accounts receivable}}{\text{Turnover}} \times 365$$

The average payment period is calculated in the same manner as the average collection period. Also known as the accounts payable turnover. It indicates the average number of days taken to pay suppliers. It should be compared with the terms being offered by the suppliers to gain an impression of the way in which the business meets its most important commitments.

Average payment period/ Accounts payable turnover

$$\frac{\text{Accounts payable}}{\text{Cost of sales}} \times 365$$

Total asset turnover ratio measures how efficiently the firm is using its assets to generate sales. This ratio highlights the relationship between turnover and assets.

It is calculated as follows:

$$\text{Total asset turnover} = \frac{\text{Sales}}{\text{Total assets}}$$

Bibliography

Jennings, G. 2004. Best companies to work for in South Africa. Cape Town: Corporate Research Foundation Publishing.

Marx, J; De Swardt, C; Beaumont-Smith, M; Naicker, B & Erasmus, P. 2004. Financial Management in Southern Africa. 2nd ed. Cape Town: Pearson Education.

Swart, N. 2002. Personal financial management. 2nd ed. Cape Town:Juta.