

KENYATTA UNIVERSITY
INSTITUTE OF OPEN LEARNING

CAC 201:
ACCOUNTING FOR LIABILITIES AND
EQUITIES.

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DEPARTMENT OF ACCOUNTING AND FINANCE

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LESSON ONE

1.0 Current Liabilities And Contingencies

Objectives

After studying this lesson, you should be able to:

1. Define a liability and specify its characteristics
2. Distinguish short-term (current) from long-term liabilities
3. Record transactions that involve such liabilities as short-term notes payable, product warranty liabilities and unearned revenues
4. Understand the accounting for interest-bearing and non-interest-bearing current liabilities
5. Explain the difference between liabilities and contingent liabilities

1.1 Current Liabilities

1.1.1 Definition Of Liability

Liabilities represent obligations that require the future payment of assets or performance of services. Not every expected future payment is a liability. To qualify as a liability, the future payment must be a present obligation of the debtor that resulted from a past transaction. Because liabilities result from past transactions, they normally are enforceable as legal claims against the enterprise. However, in some circumstances, an obligation should be recognized as a liability on the debtor's balance sheet, even if it is not legally enforceable as of that date.

The Financial Accounting Standards Board (FASB) has comprehensively defined liabilities as "probable future sacrifices of economic benefits arising from present obligations of a particular entity to transfer assets or provided services to other entities in the future as a result of past transactions or events". According to this definition, a liability has three characteristics:

1. There is a present duty to one or more other entities that is expected to be settled by transfer of assets or provision of services in the future.
2. It is an unavoidable obligation i.e. the duty or responsibility obligates a particular entity.
3. The transaction or event creating the obligation has already occurred.

When a liability conforming with the definition given above is incurred, it should be immediately recognized and recorded.

1.1.2 Definition Of Current Liability

American Institute of Certified Public Accountants defined Current (short-term) liabilities as "obligations whose liquidation is reasonably expected to require the use of existing resources properly classified as current assets, or the creation of other current liabilities." Current assets are those assets that are expected to be converted to cash or used in normal operations during the operating cycle of the business, or one year from the

balance sheet date, whichever is longer. The time dimension that applies to current assets also generally applies to current liabilities. Liabilities that do not conform to this definition are called long-term, or noncurrent liabilities. Long-term liabilities are discussed in the next lesson.

Note: The operating cycle is the period elapsing between the acquisitions of goods
 In addition, services involved in the manufacturing process and the final cash realization resulting from sales and subsequent collections.

1.1.3 Types Of Current Liabilities

Current liabilities include **accounts payable**, **notes payable**, **unearned revenues** and **dividends payable**. They also include liabilities such as taxes, salaries and wages. They are discussed below.

(a) Accounts Payable

Accounts payable, usually called traded accounts payable, arise when an entity purchases goods, supplies, or services in the normal course of business and there is a time lag between the time of purchase and the time of payment. Since the time lag generally is short (often less than 60 days), accounts payable normally are recorded at their face amount rather than at their present value. Accounts payable can be recorded net of purchase discounts (cash discounts). Alternately, an allowance for purchase discounts can be deducted from gross accounts payable in the balance sheet to obtain a proper valuation of accounts payable. A typical purchase entry for a company that has a perpetual inventory system and that records accounts payable net of purchase discounts is given below. We assume a gross purchase price of \$100,000 and payment of 2/10, net30. Thus the net purchase price is \$ 98,000:

Inventory	98,000	
Accounts payable		98,000

The amount and the due date of an account payable normally are stated in the invoice from the seller. Usually, accounts payable and purchases are recorded when title passes to the buyer.

(b) Short-Term (Current) Notes Payable

Notes payable are written promises to pay a certain sum of money on a specified future date and may arise from sales, financing, or other transactions. In some industries, notes (often referred to as trade notes payable) are required as part of the sales/purchases transaction in lieu of the normal extension of open account credit. Notes payable to banks or loan companies generally arise from cash loans.

(i) Trade notes payable (note given to secure a time extension on an account)

Trade notes payable current obligations to suppliers for which there are written promissory notes. Trade notes payable typically arise when the terms of payment

include a longer payment period than is normal for trade accounts payable. The due date, the amount of the obligation and the interest rate, if any, are stated in the promissory note. The generally accepted practice is to report a trade note payable at its face value.

Illustration:

Assume that Hardrock Company cannot pay its past-due Sh 600,000 account with Apex Company. As an accommodation, Apex Company agrees to accept Hardrock Company's 60-day, 12%, Sh.600, 000 not in granting an extension on the due date of the debt on August 23,2000. Hardrock Company records the issuance of the note as follows:

Aug. 23,2000	Accounts payable-Apex Co.	600,000	
	Notes payable		600,000
	<i>(Gave a 60-day, 12%notetoextend the due Date on the amount owed).</i>		

It should be noted that the note does not pay off debt. Rather, the form of the debt is merely changed from an account payable to a note payable. Apex Co. should prefer holding the note to the account because, in case of default, the note is a very good written evidence of the debt's existence and its amount.

When the note becomes due, Hardrock Company will pay Apex Company Sh.612, 000 and record the payment of the note and its interest with this entry:

Oct.22	Notes Payable	600,000	
	Interest expense	12,000	
	Cash		612,000
	<i>(Note paid with interest)</i>		

(ii) Borrowing from a bank/ loan companies

When lending money, banks/loan companies typically require that the borrower sign a promissory note. Sometimes, the note states that the signer of the note promises to pay the principal sum plus interest. If the note is written in this way, the face value of the note is the principal and the lending transaction is called a loan. This generally involves interest-bearing notes being issued. An interest-bearing note explicitly states a rate of interest. This rate is called the *stated rate of interest*

Alternatively note may be silent regarding interest and simply state that the signer promises to pay a given amount. In this case, the face amount of the note includes the amount borrowed plus the interest to be charged and the lending transaction involves discounting the note. This is a case of zero-interest-bearing note (noninterest-bearing notes) being issued. Notes designated as noninterest-bearing do not state an explicit interest rate but, instead, implicitly reflect a rate of interest called the *effective rate, or yield*. In other words, regardless of designation, all commercial debt instruments implicitly or explicitly require the debtor to pay interest because the cost of using money over time cannot be avoided. The stated rate determines the amount of cash interest that

will be paid on the principal amount of the debt. In contrast, the effective rate of interest is the market interest rate based on the actual cash, or cash equivalent, amount due. The effective rate is used to discount the future cash payments on a debt to the cash equivalent borrowed.

Interest-bearing note issued

Interest-bearing notes specify a rate of interest. The debtor receives cash, other assets, or services and pays back the face amount of the note plus interest at the stated rate on one or more interest dates. When the stated rate approximately reflects the note’s risk, the stated and effective interest rates are the same. This is the usual case.

Illustration 1:

Assume that Githurai National Bank agrees to lend \$100,000 on March 1, 2002, to Rocky Co. if Rocky Co. signs a \$100,000, 12%, 4-month note. With an interest-bearing note, the amount of assets received upon issuance of the note generally equals the note’s face value. Rocky Co. therefore will receive \$100,000 cash and will make the following journal entry:

March 1	Cash	100,000	
	Notes payable		100,000
	<i>(To record the issuance of 12%, 4-month Note to Rocky Co)</i>		

Interest accrues over the life of the note and must be recorded periodically. If Rocky Co. prepares financial statements semiannually, an adjusting entry is required at June 30 to recognize interest expense and interest payable of \$4,000 (\$100,000 x 12% x 4/12). The formula for computing interest and its application to Rocky Co.’s note are shown below:

Face value of note	X	Annual interest rate	X	Time the note has been held in terms of one year	=	Interest
<i>\$100,000</i>	<i>x</i>	<i>12%</i>	<i>x</i>	<i>4/12</i>	<i>=</i>	<i>\$4,000</i>

The adjusting entry is:

June 30	Interest expense	4,000	
	Interest payable		4,000
	<i>(To accrue interest for 4 months on the Githurai National Bank note)</i>		

In the June 30 financial statements, the current liabilities section of the balance sheet will show notes payable \$100,000 and interest payable \$4,000. In addition, interest expense of \$4,000 will be reported under “other expenses and losses” in the income statement. If Rocky prepared financial statements monthly, the adjusting entry at the end of each month would have been &1,000 (\$100,000 x 12% x 1/12).

At maturity (July 1, 2002), Rocky Co. must pay the face value of the note (\$100,000) plus \$4,000 interest ($\$100,000 \times 12\% \times 4/12$). The entry to record payment of the note and the accrued interest is as follows.

July 1	Notes payable	100,000	
	Interest payable	4,000	
	Cash		104,000
	<i>(To record payment of Githurai National Bank interest-bearing note and accrued interest at maturity)</i>		

Illustration 2:

Assume that on October 1, 2002, Sky Company borrows \$10,000 cash on a one-year note with 12% interest payable at the maturity date. The accounting year ends December 31, and the maturity date of the note is September 30, 2003. This transaction requires the following accounting and reporting:

Entries during 2002:

October 1, 2002- To record the interest-bearing note at its present value:

Cash	10,000	
Note payable		10,000

December 31, 2002- Adjusting entry for accrued interest:

Interest expense ($\$10,000 \times 0.12 \times (3/12)$)	300	
Interest payable		300

Reporting at December 31, 2002 – Interest-bearing note payable:

Income statement:

Interest expense	\$300
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Balance sheet:

Current liabilities:	
Note payable	\$10,000
Interest payable	300

Entry at maturity:

September 30, 2003- payment of face amount plus interest at maturity:

Interest payable	300	
Interest expense ($\$10,000 \times 0.12 \times 9/12$)	900	
Note payable, short-term	10,000	
Cash		11,200

Noninterest-bearing Notes issued (Zero-interest-bearing Note)- discount

The label “noninterest-bearing” is misleading description because such notes do, in fact, bear interest. The face amount includes both the amount borrowed and interest as a single amount to be paid back at the maturity date. The borrower receives the difference between the face amount and the interest on the note. The cash received is the discounted value of the face amount using the effective interest rate. The difference between the discounted cash value and the face amount of the note is the interest. The effective interest rate is determined by reference to market rates for instruments of similar risk rather than specified on the note.

Illustration 1:

Suppose that on December 11, 2003, XYZ Ltd. discounts at 15% its own \$6,000, 60 – day, noninterest-bearing note payable. The amount of the discount is \$150 ($\$6,000 \times 15\% \times 60/360$ -assume 360 days a year), and the company records the transactions as follows:

Dec. 11	Cash	5,850	
	Discount on Notes Payable	150	
	Notes Payable		6,000
	<i>(Discounted noninterest-bearing, 60-day note at 15%)</i>		

Thus the net liability equals the \$5,850 of the cash borrowed ($\$6,000 - \150).

If this company’s accounting period ends on December 31, it needs to recognize 20 days’ interest on this note as an expense of the 2003 accounting period. This amount is \$50 [$\$150 \times 20/60$]. Therefore the company must make the following adjusting entry on December 31, 2003:

Dec. 31	Interest expense	50	
	Discount on notes payable		50
	<i>(To record 2003 interest expense)</i>		

This adjusting entry records interest expense of \$50 in 2003 and removes the same amount from the discount on notes payable. The \$50 then appears on the 2003 income statement as an expense. The entry also leaves \$100 in the discount account until it is reported as an expense of 2004.

On the December 31, 2003, balance sheet, the \$100 is deducted from the \$6,000 nominal balance of the note payable, so that the net liability is shown at the proper amount of \$5,900. If this note is the only one the company has outstanding, the December 31, 2003, balance sheet is as follows:

Current liabilities:		
Notes payable		6,000
Less discount on note payable		<u>100</u>
(Unamortized discount)		
Net liability		<u>5,900</u>

When the note matures, XYZ Ltd. is required to pay the full-face amount of the note, \$6,000. XYZ Ltd records the payment with this entry:

Feb. 9, 2004	Notes payable	6,000	
	Cash		6,000
	<i>(Paid the discounted note)</i>		

In addition, XYZ Ltd. must record the interest expense, as follows:

Feb. 9, 2004	Interest expense (\$150 x 40/60)	100	
	Discount on notes payable		100
	<i>(To record interest expense)</i>		

Illustration 2:

Assume that on October 1, 2001, Goik Ltd. signs an \$11,200, one-year, noninterest-bearing note but receives only \$10,000 cash. The effective rate of interest is therefore 12% (\$1,200/10,000). The present value of this note is \$10,000:

$$\$11,200(\text{PVIF}_{12\%,1 \text{ year}}) = \$11,200 (0.89286) = \$10,000$$

Accounting entries and reporting

Entries during 2001

October 1, 2001- To record a noninterest-bearing note payable at its gross amount

Cash	10,000	
Discount on note payable, short term	1,200	
Note payable, short-term		11,200

December 31, 2001- Adjusting entry for accrued interest:

Interest expense (1200 x 3/12)	300	
Discount on note payable		300

Reporting at December 31, 2001- Noninterest-bearing note payable:

Income statement:

Interest expense	300
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Balance sheet:

Current liabilities:		
Note payable	11,200	
Less: unamortized discount	<u>900</u>	10,300

Entries at maturity date:

September 30, 2002- payment of the face amount of the note:

Interest expense (\$1,200 x 9/12)	900	
Note payable	11,200	
Discount on note payable		900
Cash		11,200

Accounting for short-term notes payable having unrealistic stated interest rates

Sometimes a noncash asset is acquired and a note is given with a stated rate of interest that is less than the current market rate (the effective rate) of interest for the level of risk involved. When this happens, the stated rate is unrealistic for measuring interest expense. The correct cost of the asset is the present value of the future cash payments discounted at the current market rate of interest rather than at the stated interest rate.

Illustration 1:

Assume that a machine is purchased on January 1, 2003, with a one-year, \$1,000, 6% interest-bearing note. The current market rate of interest for obligations with this level of risk is 12%.

1. Cost of the machine:

$$(\$1,000 + \$60)(\text{PVIF}_{12\%, 1\text{year}}) = (1060)(0.89286) = \$946.43$$

2. Entries:

January 1, 2003- acquisition date:

Machine	946.43	
Note payable, short-term		946.43

December 31, 2003- payment date:

Note payable, s-tem	946.43	
Interest expense (946.43 x 0.12)	113.57	
Cash (\$1000 + \$60)		1,060

The current market interest rate for similar notes with the same risk is used as the effective rate. If the competitive cash price of the noncash asset received is known, it could also be used to establish the effective rate⁴ of interest.

(c) Unearned Revenues

Cash collected in advance of the delivery of a good or service creates a liability, but it does not yet qualify for recognition as revenue. Examples of revenues collected in advance include college tuition, rent, ticket sales and magazine subscriptions. Such transactions are recorded as a debit to cash and a debit to an appropriately designated current liability account. This account is often titled unearned revenues.

Subsequently, when the product or service is delivered and the revenue is earned, the liability account is decreased and the appropriate revenue account is credited. This entry is typically one of the year-end adjusting entries.

Illustration 1:

Assume that on November 1, 2004, Silib Company collects rent of \$6,000 for the next six months. The accounting period ends December 31. The entries are:

November 1, 2004- rent collected in advance:		
Cash	6,000	
Rent revenue collected in advance		
(Or unearned rent revenue)		6,000
December 31, 2004- adjusting entry for the portion earned:		
Rent revenue collected in advance		
(Or unearned rent revenue)	2,000	
Rent revenue (6,000 x 2/6)		2,000

The remaining unearned rent revenue of \$4,000 is reported as a current liability because Silib Company has an obligation to provide the space during the following four months.

Illustration 2.

Assume that Kenyatta University sells 10,000 season football tickets at \$50 each for its five-game home schedule. The entry for the sale of season tickets is:

Cash	500,000	
Unearned football ticket revenue		500,000
<i>(To record sale of 10,000 season tickets)</i>		

As each game is completed, the following entry is made:

Unearned football ticket revenue	100,000	
Football ticket revenue		100,000
<i>(To record football ticket revenues earned)</i>		

Any balance in an unearned revenue account is reported as a current liability in the balance sheet. As revenue is earned, a transfer from unearned revenue to earned revenue occurs.

(d) Dividends Payable

A cash dividend payable is an amount owed by corporation to its stockholders because of board of directors' authorization. At the date of declaration, the corporation assumes a liability that places the stockholders in the position of creditors in the amount of dividends declared. Because cash dividends are always paid within one year of declaration, they are classified as current liabilities.

Accumulated but undeclared dividends on cumulative preferred stock are not a recognized liability because preferred dividends in arrears are not an obligation until the board of directors authorizing the distribution of earnings takes formal action. Nevertheless, the amount of cumulative dividends unpaid should be disclosed in a note or it may be shown parenthetically in the capital stock section.

Dividends payable in the form of additional shares of stock are not recognized as a liability. Such stock dividends do not require future outlays of assets or services and are revocable by the board of directors at any time before issuance. Even so, such

undistributed stock dividends are generally reported in the stockholders' equity section because they represent earnings in the process of transfer to paid-in capital.

(e) Property Taxes Payable

Property taxes based on the assessed value of real and personal property are the primary source of revenue for most local governments. There are two basic questions in accounting for property for property taxes:

1. When should the liability for property taxes be recorded on the books of the taxpayer?
2. When should property tax expense be recognized in the taxpayer's income statements?

Two different procedures for accounting for property taxes commonly are found in practice. Both of these procedures recognize property tax expense over the fiscal year of the government taxing unit. The two procedures differ with respect to when the liability for property taxes is recorded. Under the procedure, the property taxes payable account is credited on the lien date. Under the alternative procedure, property taxes payable are accrued monthly on the taxpayer's books during the fiscal year of the government.

Recognition of the entire tax liability on the lien date, which typically precedes the payment date, results in recording a debit to deferred property tax expense account and a credit to property tax payable for the unpaid property taxes. The debit to deferred property tax expense is conceptually troublesome because it implies that unpaid property taxes are an asset, which, of course, is not the case. On the other hand, accruing property payable monthly as each month's property tax expense is recognized avoids recording a nonexistent asset. Monthly accrual of property taxes payable seems to be preferable and is illustrated below.

Assume that Jack company's fiscal year ends on December 31 and that in February Jack receives its property tax bill for Sh12,000, based on a January 1 assessment. Also assume that the fiscal year of the government tax unit begins on April 1, which is the lien date for the property taxes. The property taxes are paid in equal installments on June 1 and August 1.

If property taxes are accrued monthly, the following entry is made at the end of both April and May, which are first two months of the property tax year:

Property tax expense	1,000	
Property taxes payable		1,000

When the first Sh6000 payment is made on June 1, the following entry is made:

Property tax expense	2,000	
Deferred property tax expense	4,000	
Cash		6,000

An asset account, deferred property tax expense, is debited for the excess of the cash payment over the amount of property taxes payable that were accrued by June 1.

On June 30 and July 31, property tax expense for June and July is recorded with the entry:

Property tax expense	1,000	
Deferred property tax expense		1,000

(f) Bonuses Payable

Bonus payable is another current liability that depends on the company’s results. If bonuses are based on revenues on units of output, they will be calculated by multiplying the bonus factor (say one cent per unit of output or per shilling of revenue).

Bonus calculations is more complicated if it is based on income. This is because of the circular relationship between income and bonus. Income is affect bonus and bonus affect income. It is the duty of the company to formulate bonus policy (also called bonus plans)

Bonus plans may be formulated in a variety of ways:

- Income before bonus expense and before income taxes ($B = b I$)
- Income after bonus expense but before income taxes [$B = b (I - B)$]
- Income after income taxes but before bonus expense [$B = b (I - T)$]
- Income after bonus expense but after income taxes [$B = b (I - B - T)$]

- Where b = the bonus rate
- I = income before bonus and taxes
- B = bonus payable
- T = taxes payable

Because bonus in a tax allowable expense, $T = t(I - B)$, where t = tax rate.

Example:

Assume that Marufurufu Mingi company operates a bonus plan for its employees based on *income after tax but before bonus expense*. Taxes payable is Sh100,000 and the bonus rate is 2 percent. The tax rate is 30 percent.

Solution

Steps:

1. Construct an equation for the company’s bonus plan
2. Construct an equation for calculating income taxes
3. Substitute known data in the equation and solve unknown variables

Therefore,

$B = b(I - T)$, where $T = t(I - B)$

$$\begin{aligned}
B &= b[I-t(I-B)] \\
&= 0.2[\text{Sh}100,000 - 0.3(\text{Sh}100,000-B)] \\
&= 0.2(\text{Sh}100,000 - \text{Sh}30,000 + 0.3B) \\
&= \text{Sh}2,000 - \text{Sh}600 + 0.006B \\
0.994B &= \text{Sh}1,400 \\
B &= \text{Sh}1,408.45
\end{aligned}$$

The journal entries would be:

Bonus expense	1,408.45	
Bonus payable		1,408.45

The bonus expense should appear on the income statement as a combination with salaries and wages. Bonus payable will be shown on the balance sheet among the current liabilities.

1.2 Contingencies

A contingency is an existing condition involving uncertainty as to possible gain or loss to an enterprise that will ultimately be resolved when one or more future events occur or fail to occur. (Chasteen 2005).

Contingencies are classified as being either loss contingencies or gain contingencies. Loss contingencies are the source of contingent liabilities. They occur when an uncertain existing condition, situation, or set of circumstances will be resolved by the occurrence or non occurrence of a future event that may result in impairment of an asset or the incurrence of a liability. Among the examples of loss contingencies provided by FASB statement No. 5 are collectibility of receivables; obligations related to product warranties and product defects; risk of loss or damage of property by fire, explosion, or other hazards; pending or threatened litigation; actual or possible claims or assessments; guarantees of indebtedness of others; and agreements to purchase receivables that have been sold.

When a loss contingency exists, the likelihood that a future event or events will confirm the impairment of an asset or the incurrence of a liability can range from very likely to very unlikely. Within this range, FASB has chosen to identify three levels of likelihood:

1. Probable- the event is likely to occur.
2. Reasonably possible- the chance that a future event will occur is more than remote but less than probable
3. Remote- the chance that a future event will occur is slight.

The accounting treatment for a particular loss contingency depends in part on whether the related future event has a probable, reasonably possible, or remote chance of confirming impairment of an asset or incurrence of liability.

There are three ways to account for and report loss contingencies:

1. Accrual of an estimated loss from the contingency, which should be reported in the body of financial statements.

2. Disclosure, but not accrual, of the loss contingency.
3. Neither accrual nor disclosure of the loss contingency.

1.2.1 Loss Contingencies That Should Be Accrued.

An estimated loss from a contingency should be accrued if both of the following conditions are met:

1. Information available before issuance of financial statements indicates that it is probable that an asset has been impaired or a liability has been incurred by the date of the financial statements. It is implicit in this condition that it must be probable that one or more future events will occur confirming the fact of the loss.
2. The amount of loss can be reasonably estimated.

In addition to requiring accrual of a loss contingency that meets both of the conditions for accrual, satisfactory disclosure would include a footnote in the financial statements describing the circumstances surrounding the loss contingency.

There are some situations when condition 1 is met but only a range of loss can be reasonably estimated in response to condition 2. For example, an unfavorable verdict on a lawsuit against the firm might be probable, but the amount of loss can only be estimated to be in the range of Sh.3 million to Sh.6 million. In these situations, when some amount within the range appears to be better estimate of the loss than any other amount within the range, that amount should be accrued by a charge to income. If no single amount within the range appears to be a better estimate of the loss than any other, the minimum amount in the range should be accrued. If there is a reasonable possibility of loss in excess of the amount accrued, the additional possible should be disclosed. When the minimum loss in the range of possible losses is used, the reporting entity should disclose the difference between the maximum and minimum possible losses as upper limit on potential additional loss. Examples of loss contingencies that generally should be accrued include guaranties and product warranties, premium and coupons and litigation , claims, and assessments. They are discussed below.

Guarantees And Product Warranties

Most products and services are accompanied by a guarantee or a warranty that the product or service will be advertised and that it is free of defects. Guarantees and warranties typically are effective for some limited period of time, such as 90 days or one year, during which the seller or manufacturer will repair or replace the product without charge or will refund some, all, or even more than the original purchase price.

Guarantees or warranties create loss contingencies because there is an existing circumstance. The seller can usually estimate based on past experience of potential warranty expense associated with total sales occurring during some period.

Accounting Treatment Of Guarantees And Warranties

Illustration:

Turesia Ltd. sold 10 drill press during July for Sh.3,000 cash each and that past experience has been that warranty expense is equal to about 2% of sales. In this case, entries to record the aggregate sales and estimated warranty expense and liability for July would be:

Cash	30,000	
Sales revenue (10 * 3,000)		30,000
Estimated warranty expense	600	
Estimated warranty liability (2%*30,000)		600

If actual costs of Sh.400 are incurred when the warranty work is done, these costs are recorded as follows:

Estimated warranty liability	400	
Wages payable, parts inventory, cash, etc.		400

When warranty expense is not a material item or when it is not possible to develop a reasonable estimate of warranty expense and related liability during the period of sale, it is acceptable to use cash basis of accounting for warranty expense (i.e. recognize the warranty when payment is made).

Premiums And Coupons

It is fairly common practice for sellers to give premiums such as cash or merchandise to customers in exchange of coupons, labels, wrappers, etc. that accompany purchased merchandise. Since the motive of premiums or coupons is to increase sales, the matching principle requires that these expenses be included in the period of sales.

Illustration:

Assume that Turesia Ltd. offered an official-size football in exchange of 10 super cereal boxtops plus Sh.10. assume that a total of 100,000 boxes of super cereal were sold for Sh.3 each during the accounting period and that estimates are that 40% of boxtops will be turned in for footballs.

Turesia Ltd. must obtain an inventory of footballs to be given out as premiums. Also, assume that Turesia Ltd acquired 5,000 footballs at Sh.12.50 each for this purpose. The entry to record this acquisition would be:

Inventory of premiums	62,500	
Cash (5000 x 12.50)		62,500

The entry to record sales of the 100,000 boxes of super cereal at Sh.3 per box would be:

Cash	300,000	
Sales		300,000

In conjunction with the current period's sales, estimated premium expense would be debited for the Sh.2.50 per football cost in excess of the Sh.10 charge to the customer for the 4,000 footballs given out or expected to be given out in exchange boxtops ($100,000/10 \times 40\% = 4,000$ footballs). Redemption of 30,000 boxtops and receipt of Sh.30,000 in exchange for 3,000 footballs during the accounting period would be recorded as:

Cash	30,000	
Premium expense (3,000 x Sh.2.50)	7,500	
Inventory of premiums (3,000 x 12.50)		37,500

At the end of the accounting period, the adjusting entry to record estimated premium expense and the associated obligations for premiums still outstanding that are related to the current period's sales of super cereal would be:

Cash	2,500	
Estimated premium obligation (1,000 x Sh.2.50)		2,500

Litigation, Claims, And Assessments

Accrual of loss contingencies for threatened litigation, pending litigation, claims, or assessments is appropriate only if:

1. The cause for action occurs by the date of the financial statements.
2. Information available before the issuance of the financial statements indicates that it is probable that an asset has been impaired or a liability has been incurred as of the date of the financial statements.
3. It is possible to make a reasonable estimate of the amount of loss that may arise from the loss contingency.

Among the factors to be considered in determining the probability that an asset has been impaired or a liability has been incurred are the nature of the litigation, claim, or assessment; the progress of the case; the opinions or views of management, legal counsel, and other advisers; the experience of the entity in previous similar cases; the experience of other entities; and any decision of the entities management as to how the entity will respond to the lawsuit, claim or assessment

Even if evidence available before the issuance of financial statements suggests an unfavorable outcome for the defendant, it cannot reasonably be expected that the defendant will publish a specific estimate of a loss in its financial statements. To do so could weaken the company's position in the litigation. Therefore, footnote disclosure of contingencies associated with litigation is the norm.

1.2.2 Loss Contingencies That Should Be Disclosed But Not Accrued

A loss contingency that fails to meet the conditions for accrual should be disclosed in a footnote. Remote loss contingencies that have the characteristics of guarantees should be disclosed. (e.g. direct and indirect guarantees of indebtedness of others, letters of credit, and guarantees to repurchase receivables)

Disclosure is not required for a loss contingency related to an unasserted claim or assessment when there is no evidence that a potential claimant is aware that the claim is possible. If it is probable that the claim will be asserted, and there is reasonable possibility that the outcome will be unfavorable, a loss contingency should be disclosed.

Information on impairment of an asset or liability incurred after the financial statements are prepared but before they are issued should be disclosed to keep the financial statements from misleading.

1.2.3 Loss Contingencies That Are Neither Accrued Nor Disclosed

General or unspecified business risks (strikes, wars, recessions, etc.) do not meet the conditions for accrual of loss contingencies. Disclosure is not required for remote loss contingencies that are not guarantees or for which a reasonable estimate of possible loss cannot be made.

Gain Contingencies

A gain contingency arises when an uncertain existing condition, situation, or set of circumstances will be resolved with the occurrence or nonoccurrence of a future event that may result in an increase in assets or a decrease in liabilities. Claims against others for patent infringement, upward price determination, and claims for reimbursement under condemnation proceedings are examples of gain contingencies.

Gain contingencies should be recognized only when the gain is realized. If the gain is material, it should be disclosed in the financial statements. However, care must be taken to ensure that the disclosure does not make the reader to become overly optimistic about the gain.

Review problem

On August 1, 2005, McKentany Ltd. (a company that records adjusting entries only once per year) issued bonds with the following characteristics:

1. Sh.50,000 total face value.
2. 12% stated rate.
3. 16% yield rate.
4. Interest dates are February 1, May 1, August 1, and November 1.
5. Bond date is October 31, 2004.
6. Maturity date is November 1, 2009.
7. Sh.1,000 of bond issue costs were incurred.

Required:

1. Provide all entries required for the bond issue through February 1, 2006, for McKentany using the interest method.
2. On June 1, 2007, McKentany retired Sh.20, 000 of bonds at 98 through open market purchase. Provide the entries to update the bond issue and to retire the bonds using the interest method.

3. Provide the entries required on August 1, 2007, under the following methods of discount amortization:
- Interest method
 - Straight-line method

Solution

1/8/2005- issue bonds and incur issue costs:

Bonds issue cost	1,000	
Cash		1,000
Cash	43,917	
Discount on bonds payable	6,083	
Bonds payable		50,000
$(50,000 \times PVI, 4\%, 17) + (0.03 \times 50,000 \times PVA, 4\%, 17) = 43,917$		

1/11/2005- interest payment date:

Interest expense	1,757	
Discount on bonds payable		257
Cash		1,500
Bonds issue expense	59	
Bonds issue cost		59
$(1,757 = 43,917 \times .04.) \quad (1,500 = 50,000 \times 0.03) \quad (59 = 1000/17)$		

1/12/2005- adjusting entry:

Interest expense	1,178	
Discount on bonds payable		178
Interest payable		1,000
Bonds issue expense	39	
Bonds issue cost		39
$(1,178 = 43,917 + 257) \times 0.04 \times 2/3 \quad (1,000 = 1,500 \times 2/3) \quad (39 = 59 \times 2/3)$		

1/2/2006

Interest expense	589	
Interest payable	1,000	
Discount on bonds payable		89
Cash		1,500
Bonds issue expense	20	
Bonds issue cost		20
$(589 = (43,917 + 257) \times 0.04 \times 1/3) \quad (20 = 59 \times 1/3)$		

On May 1, 2007, the remaining term of the bond is two and one-half years, or 10 quarters, and the Sh.20,000 of bonds to be retired have the following value:
 $Sh.18,378 = Sh.20,000 \times PVI, 4\%, 10 + (Sh.20,000 \times 0.03 \times PVA, 4\%, 10)$

On May 1, 2007, the remaining discount on the portion of the bonds to be retired is therefore Sh.1,622 (Sh.20,000-Sh.18,378).

1/6/2007- update relevant bond accounts before retirement:

Interest expense	245	
Discount on bonds payable		45
Cash		200
Bonds issue expense	8	
Bonds issue cost		8

1/6/2007- removes relevant bond accounts:

Bonds payable	20,000	
Extraordinary loss, bond extinguishment	1,404	
Discount on bonds payable		1,577
Bonds issue cost		227
Cash (0.98*Sh.20,000)		19,600

Sh.245 = $18,378 * 0.04 * 1/3$; Sh.200 = $20,000 * 0.03 * 1/3$; Sh.8 = $1,000 * 1/17/1/3 * 0.4$;
 Sh.1,577 = $1,622 - 45$

3. On may 1, 2007, the remaining term of the bonds is two and one-half years, or 10 quarters, and the remaining Sh.30,000 of bonds have the following book value:

$$\text{Sh.27,567} = \text{Sh.30,000} * \text{PVI}, 4\%, 10 + \text{Sh.30,000} * \text{PVA}, 4\%, 10.$$

On May 1, 2007, the remaining discount is therefore Sh.2,433 (Sh.30,000 - Sh.27,567).

a. 1/8/2007- interest payment date.

Interest expense	1,103	
Discount on bonds payable		203
Cash		900
Bonds issue expense	35	
Bonds issue cost		35

$$\text{Sh.1,103} = \text{Sh.27,567} * 0.04; \quad \text{Sh.900} = \text{Sh.30,000} * .03; \quad \text{Sh.35} = 0.60 * 1,000/17.$$

b. Under SL method, the discount is amortized $\text{Sh.358} * 6,083/17$ per quarter on the entire bond issue.

1/8/2007- interest payment date:

Interest expense	1,115	
Discount on bonds payable		215
Cash		900
Bonds issue expense	35	
Bonds issue cost		35

$$\text{Sh.215} = 358 * 0.6$$

Questions

1. give a conceptual definition of a liability.
2. conceptually, how should a liability be measured?
3. explain how the measurement of a liability is related to its cause.
4. why are most liabilities recognized at maturity value at the beginning of their term?
5. compute the present value of a Sh10,000, one year note payable that specifies no interest, although 10 percent would be realistic rate. What is the amount of the principal and interest?
6. in evaluating the balance sheet, some bankers say the liability section is one of the most important parts. What are the reasons to justify this position?
7. some liabilities are reported at their maturity amount. In general, when should liabilities prior to maturity date, be reported at less than their maturity amount?
8. how is the cost principle involved in accounting for current liability?
9. define current liability.
10. Differentiate between secured and unsecured liability. Explain the reporting procedure for each.
11. distinguish between the stated rate of interest and the effective rate of interest (yield) on a debt.
12. briefly define the following terms related to a note payable: principal, face, and maturity amounts.
13. distinguish between an interest bearing note and a non interest bearing note.
14. assume that Sh4,000 cash is borrowed on a Sh4,000, 10 percent, one year note payable that is interest bearing and another Sh4,000 cash borrowed on a Sh4,400 one year note that is non-interest bearing. For each note give the following:
 - a. face amount of the note.
 - b. Principal amount of the note.
 - c. Maturity amount of the note.
 - d. Total interest paid.
15. are all declared dividends a liability between declaration and payment dates? Explain.
16. why is unearned revenue classified as a liability?
17. what is the accounting definition of a contingency? What are the three characteristics of a contingency? Why is the concept important?
18. how does the accountant measure the likelihood of the outcome of a contingency? In general, how does this affect the accounting for and reporting of contingency?
19. briefly explain the accounting and reporting of loss contingency.
20. what costs are being recognized by firms for environmental obligations?

Exercises

- 1-1** Two cases have been presented to you as below:
- a) On January 1, 2002, a heavy duty truck was purchased with a list price of Sh35,500,000. payment included a Sh5,500,000 cash and a two year, non-interest

bearing note of Sh30,000,000 (maturity date, December 31, 2003). A realistic interest rate for this level of risk is 12%. The accounting period ends December 31.

- b) On January 1, 2002, a small truck was purchased and payment was made as follows: cash, Sh5 million, and a one year, 6%, interest bearing note of Sh15 million, maturity date, December 31, 2002 (which also is the end of the accounting period). A realistic interest rate for this level of risk is 12%.

Required:

Give all the entries for each of the purchase from the inception of transactions to maturity. Ignore depreciation.

- 1-2** On May 1, 2002, Rayani borrowed Sh140,000 cash and signed a six month, 12% interest bearing note-payable for that amount. Rayani's accounting period ends on December 31.

Required:

- a. give all the required entries from May 1, 1998, through, the maturity date of the note.

- 1-3** On April 1, 2002, Maritim manufacturing purchased a machine for use in its operations by paying Sh120,000 cash and signing an Sh1,300,000 (face amount) noninterest bearing note due in one year (on March 31, 2003). The going rate of interest for this type of note was 14% per year. The company uses straight line depreciation . the accounting period ends on December 31. assume a five year life for the machine and 10% residual value.

Required:

- a. Give all entries from April 1, 2002, to March 31, 2003.
b. Show how all the related items would be reported on the 2002 income statement and balance sheet

- 1-4** Vintage company completed the following selected transactions in 2002 and 2003:

- a. at the end of 2002, accrued wages that have not yet been recorded amounted to Sh70,000. these accrued wages were paid in the January 15, 2003, payroll, which amounted to Sh210,000.
b. On November 1, 2002, rent revenue for the following six months was collected, Sh27,000.
c. On October 1, 2002, vintage received Sh4000 as a deposit for a customer for some special containers that are to be returned on or about March 31, 2003. vintage agreed to give the customer credit at an annual rate of 6% interest on deposit. The containers were returned on April 1, 2003.

Required:

Give all of the required entries (omit closing and reversing entries) during 2002 and 2003 for each of the above transactions. Accounting period ends on December 31.

- 1-5** Riyaad company paid salaries for the month amounting to Sh120,000. Of this amount, Sh30,000 was received by employees who had already been paid the Sh53,000 maximum amount of annual earnings taxable in one year. Of the Sh120,000, Sh14,000 was paid to employees who had already reached the Sh7,000 maximum wages. Withholding taxes amounted to Sh36,000, and Sh1,450 was withheld from the Sh120,000 for investment in company stock as per agreement with certain employees.

Required:

Give the entries to record (a) salary payment and the liabilities for the deductions, (b) employer payroll expenses, (c) remittances of taxes.

- 1-6** Mercury Ltd. sales a line of products that carry a three year warranty against defects. Based on industry experience, the estimated warranty expense related to sales are : first year after sale, 1 percent of sales; second year after sale, 3 percent of sales; and third year after sale, 5 percent. Sales and actual warranty expenditure for the first three years were as follows:

	Cash sales	Actual warranty expenditures
2002	Sh80,000	Sh1,000
2003	110,000	4,100
2004	120,000	9,800

Required:

- Give entries for three years for (a) the sale, (b) the estimated warranty expense, and (c) the actual expenditures.
- What amount should be reported as a liability on the balance sheet at the end of each year?

- 1-7** Comoros Inc. is preparing the financial statements at December 31, 2003. during 2003, a worker fell while undertaking duties at the inspection unit. The employee has filed a lawsuit for Sh110,000 because of sustained injury. The lawyer employed by the company has carefully assessed all the implications of the suit. If the suit is lost, the lawyer's reasonable estimate is that the Sh110,000 will be assessed by the court.

Required:

How should the contingency be handled during 2003 in each of the following cases? Give all necessary entries and any notes:

- assume that the lawyer and the management concluded that it is reasonably possible that the company will be liable and the estimated liability is Sh110,000.
- Assume, instead, tat the lawyer, the accountant, and management have reluctantly concluded that it is probable that the suit will be successful.

- c. Assume, instead, that the lawyer, the accountant, and management have reluctantly concluded that the suit has no merit and chances of contingency loss are remote.

1-8 Lumer company (in 2002) experienced a significant increase in the property appraisal for taxes. The company paid property taxes of Sh50,000. However, it expects tax for 2003 to decrease. Both the government year and the company's year end on December 31. The following occurred in 2003:

January 20 - paid the 2002 property taxes.

January 30 – estimated a 10% decrease in property taxes for 2003. The company accrues property taxes each month.

July 10 – received a tentative tax notice assessment for taxes, Sh1,140,000, preliminary tax rate per Sh100 valuation, Sh5. The company will revise its estimate to these assessments.

December 28 – received final tax notice, 2003 tax assessed, Sh55,500, payable by January 24, 2004.

January 24, 2004 – paid the 2003 property tax.

Required:

Journal entries related to property taxes from January 1, 2003, to January 31, 2004.

LESSON TWO

2.0 LONG-TERM LIABILITIES

Learning Objectives

After studying this lesson, you should be able to:

1. Describe the formal procedures associated with issuing long-term debt
2. Identify various types of bond issues
3. Describe the accounting valuation for bonds at date of issuance
4. Apply the methods of bond discount and premium amortization
5. Describe the accounting procedures for the extinguishment of debt.
6. Explain the accounting procedures for long-term notes payable.
7. Explain the reporting of off-balance sheet financing arrangements
8. Indicate how long-term debt is presented and analyzed

2.1 Introduction to Long-Term Debt

Long-term debt consists of probable future sacrifices of economic benefits arising from present obligations that are not payable within a year or the operating cycle of the business, whichever is longer. Bonds payable, long-term notes payable, mortgages payable, pension liabilities and lease liabilities are examples of long term liabilities.

Generally, long-term debt has various covenants or restrictions for the protection of both lenders and borrowers. The covenants and other terms of the agreement between the borrower and the lender are stated in the bond indenture or note agreement. Items often mentioned in the indenture or agreement include the amount authorized to be issued, interest rate, due date or dates, call provisions, property pledged as security, working capital and dividend restrictions, and limitations concerning the assumption of additional debt. Whenever these stipulations are important for a complete understanding of the financial position and the results of operations, they should be described in the body of financial statements or the notes thereto.

2.2 Bonds Payable

Bonds are the most common type of long-term debt on a company's balance sheet. The main purpose of bonds is to borrow for the long-term when the amount of capital needed is too large for one lender to supply. By issuing bonds in Sh. 100, Sh. 1,000 or even Sh. 10,000 denominations, a large amount of long-term indebtedness can be divided into many small investing units, thus enabling more than one lender to participate in the loan.

A bond arises from a contract known as a bond indenture and represents a promise to pay:

- (i) A sum of money at designated maturity date, plus
- (ii) Periodic interest at a specified rate on the maturity amount (always known as *par value* or *face value*)

A paper certificate evidences individual bonds and the bond interest payments usually are made semiannually, although the interest rate is generally expressed as an annual rate. An entire bond issue may be sold to an investment banker who acts as a selling agent in the process of marketing the bonds. In such arrangements, investment bankers may either underwrite the entire issue by guaranteeing a certain sum to the corporation, thus taking the risk of selling the bonds for whatever price they can get (firm underwriting), or they may sell the bond issue for a commission to be deducted from the proceeds of the sale (best efforts underwriting). Alternatively, the issuing company may choose to place privately a bond issue by selling the bonds directly to a large institution, financial or otherwise, without the aid of an underwrite (private placement).

2.2.1 Types Of Bonds

- **Serial bonds.** These are bonds that mature at different dates. As a result, the entire bond issue is repaid gradually over a period of years. For example, a company may issue 100 \$ 1,000 serial bonds that mature at the rate of \$10,000 per year over a 10-year period
- **Term bonds.** These are bond issues that mature on a single date. For example a company may issue 100 \$1,000 term bonds with a maturity value of \$100,000, all of which mature 10 years from the date of issue.
- **Registered bonds.** These are bonds in the name of the owner. Interest payments on registered bonds are usually made by cheques mailed to the registered owner. This arrangement also offers some protection from loss or theft.
- **Bearer bonds (coupon bond).** This is not registered in the name of the owner and may be transferred from one owner to another by mere delivery. They are payable to whoever holds them (the bearer). The holder of a bearer bond is presumed to be its rightful owner.
- **Callable bonds.** Are those that give the issuer the right to call and retire the bonds before maturity.
- **Convertible bonds.** These are bonds that are convertible into other securities of the corporation for a specified time after issuance.
- **Income bonds.** These are bonds that pay no interest unless the issuing company is profitable i.e. interest is dependent on issuer's income

2.2.2 Accounting For Bond Issues

Bonds may be issued at par (face value), below face value (at a discount), or above face value (at a premium). They also are sometimes issued between interest dates.

Bonds Issued At Par On Interest Date

When bonds are issued on an interest date at par (face value), no interest accrued and no premium or discount exists. The accounting entry is made simply for cash proceeds and the face value of the bonds.

Illustration:

XYZ Company issued \$800,000 of 10%, 10-year term bonds at 100 i.e. at par (100% of the face value) dated January 1, 2004, with interest payable semiannually on January 1

and July 1. The accounting period for the company ends on December 31. The entry on the books of the issuing co. would be:

2004
 Jan. 1 Cash 800,000
 Bonds payable 800,000
 (Sold 10%, 10-year bonds at par)

When the first semiannual interest is paid on these bonds ($\$800,000 \times 0.1 \times \frac{1}{2} = 40,000$), the transaction is recorded as follows:

July 1 Bond interest expense 40,000
 2004 Cash 40,000
 (Paid the semiannual interest on bonds)

At the year end December 31, the accrued interest expense is recognized and the entry is recorded as follows:

Dec. 31 Bond interest expense 40,000
 2004 Bond interest payable 40,000
 (To recognize the accrued interest expense)

When the second semiannual interest is paid on the bonds, the transaction is recorded as follows:

Jan. 1 Bond interest payable 40,000
 2005 Cash 40,000
 (Payment of the semiannual interest)

When the bonds are paid at maturity, the entry is:

2013
 Dec.31 Bonds payable 800,000
 Cash 800,000
 (Paid bonds at maturity)

Note: *Bond interest payable is classified as a current liability because it is scheduled for payment within the next year.*

Bonds Issued At A Discount Or Premium

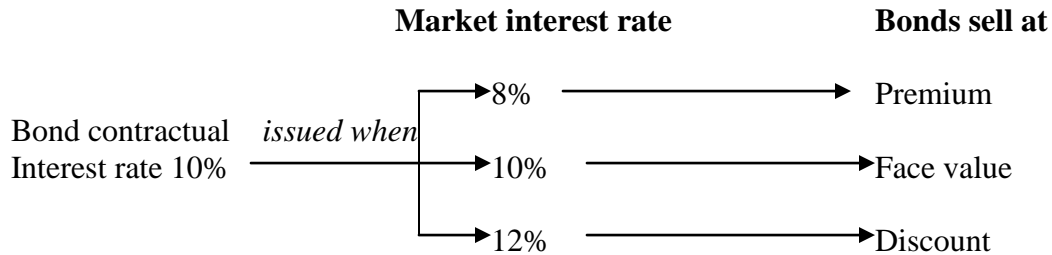
In the previous illustrations, we assumed that the contractual (stated) interest rate paid on bonds and the market (effective) interest rate were the same. The contractual interest rate is the rate applied to the face (par) value to arrive at the interest paid in a year. The market interest rate is the rate investors demand for loaning funds to the corporation.

When the contractual interest rate and the market rate are the same, bonds sell at face value, as shown above.

However, market interest rates change daily. They are influenced by the type of bond issued, the state of the economy, current industry conditions and the company's performance. The contractual and market interest rates often differ. As a result, bonds sell below or above face value.

To illustrate, suppose that investors have one of the two options: (1) purchase bonds that have a market interest rate of 10%, or (2) purchase bonds that have a contractual interest rate of 8%. If the bonds are of equal risk, investors will select the 10% investment. To make the investments equal, investors will demand a rate of interest higher than the 8% contractual interest rate. But investors cannot change the contractual interest rate. What they can do is to pay less than the face value for the bonds. By paying less for the bonds, investors can obtain the market rate of interest. In these cases, bonds sell at a discount.

On the other hand, the market interest rate may be lower than the contractual interest rate. In that case investors will have to pay more than face value for the bonds. That is, if the market rate interest rate is 8% and the contractual interest rate is 9%, the issuer will require more funds from the investor. In these cases, bonds sell at a premium. These relationships are shown graphically as follows:



Issuing bonds at an amount different from the face value is common. This is because by the time a company prints the bond certificates and markets the bonds, it will be a coincidence if the market rate and the contractual rate are the same.

(a) Issuing bonds at a discount

A discount on bonds payable results when a company issues bonds that have a contract rate below the prevailing market rate. For the same level of risk, investors can get the market rate of interest elsewhere for the use of their money. Thus they will buy the bonds only at a price that will yield the prevailing market rate on the investment. To estimate the expected market price of the bonds, determine the present value of the expected cash flows by discounting the cash flows from the bond investment at the current market interest rate.

Illustration:

On January 1, 2000, Togat Ltd. issued Sh. 100,000 par value, 5-year life of 8% term bonds with interest payable on July 1 and January 1. The market rate of interest for the

company's bonds is 10%. In exchange for the purchase price, investors of these bonds obtain the right to receive two different future cash inflows. First, the right to receive Sh. 100,000 at the end of the bond issue's five-year life and secondly, the right to receive Sh. 4,000 in interest at the end of each six-month interest period throughout the five-year life of the bonds.

To determine the price at which the bonds will be issued, the present value of the future cash flows is calculated by discounting the amounts to be received at the effective (market) rate of interest. The difference between the maturity value of the bonds and the present value of the bonds is the discount. The calculation of both the present value and the discount amount on bonds is as follows:

Maturity value of the bonds payable		Sh. 100,000
Present value of Sh. 100,000 due in 10 periods (in 5 years)		
At 5% per period (semiannual rate) $(100,000 \times PVIF_{10, 5\%} = 0.6139)$	61,390	
Present value of Sh. 4,000 received semiannually for 10 periods		
At discounted at 5% $(4,000 \times PVIF_{10, 5\%} = 7.7217)$	<u>30,887</u>	
Present value of the bonds (issue price)		<u>92,277</u>
Discount on bonds payable		<u>7,723</u>
<i>Note: because interest is paid semiannually, the interest rate used is 5% (10% x 6/12) while the number of periods is 10 (5 years x 2)</i>		

The maximum price that informed investors would pay for the bonds is Sh. 92, 277. If the company accepts this amount, then the entry to record the issuance of the bonds at a discount on January 1, 2000, is:

Cash	92, 277	
Discount on bonds payable	7, 723	
Bonds payable		100,000
<i>(Sold 8%, 5-year bonds at a discount on the date of issue)</i>		

In the company's financial statements, the bonds will appear in the long-term liability section of the January 1, 2000 (date of issue), balance sheet as shown below.

Long-term liabilities:		
Bonds payable	100,000	
Less unamortized discount	<u>7,723</u>	92,277

Normally, any unamortized discount on bonds payable is deducted from par value of the bonds on the balance sheet to show the carrying (or book) value of the bonds. Thus Sh. 92,277 represents the carrying value of the bonds at the date of issue.

The issuance of bonds at a discount (below par value) causes the total cost of borrowing to differ from the bond interest paid. That is, at maturity the issuing company must pay not only the stated (contractual) interest rate over the term of the bonds, but also the face value (rather than the issuance price). Therefore, the difference between the issuance

price and face value of the bonds- the discount- is an additional cost of borrowing. This additional cost should be recorded as bond interest expense over the life of the bonds. The total cost of borrowing Sh. 92,277 for Tegat Ltd. is Sh. 47,723, calculated as follows.

10 Semiannual interest payments of 4,000	40,000
Add bond discount	<u>7,723</u>
Total cost of borrowing	<u>47,723</u>

The total cost of borrowing can also be computed as follows.

Maturity value of bonds	100,000
Semiannual interest payments (4,000 x 10)	<u>40,000</u>
Amount to be paid to bondholders	140,000
Amount borrowed from bondholders	<u>92,277</u>
Total cost of borrowing (interest expense)	<u>47,723</u>

Amortizing The Bond Discount

When accounting for bonds two things must be accomplished. First, the total cost of borrowing (total interest expense) must be allocated to each accounting period that benefits from the use of the cash proceeds, according to the matching principle. Secondly, the carrying value of the bonds must be determined on each balance sheet date. Two alternative accounting methods are used to accomplish these objectives. They are the *straight-line method* and the *effective interest method*.

(i) Straight-line method

This method allocates an equal amount of discount or premium (and the total interest expense) to each six-month interest period over the term of the bond. For bonds sold at a premium, annual interest expense equals the cash interest less the annual premium amortization. For bonds sold at a discount, annual interest expense equals the cash interest plus the annual discount amortization. In determining the bond discount amortized, the following formula is applied:

$$\text{Bond discount /No. Of interest periods} = \text{bond discount amortized.}$$

Applying the straight- line method on our example above- Tegat Ltd- bond discount amortized is Sh.772 (7723/10). This amount of Sh.772 is to be amortized at the end of each interest period (every six months). Thus the total interest expense for each interest period is the Sh. 4,772 i.e. sum of the Sh. 4,000 cash paid and the Sh.772 amortized discount. This Sh.4,772 amount is also equal to one tenth of the total expense of Sh.47,723.

The entry to record the payment of bond interest and the amortization of bond discount on the first interest date (July 1, 2000).

July 1	Bond Interest Expense	4,772	
	Discount on bonds payable		772

Cash 4,000
*(To record payment of six month's interest and amortization
of the discount)*

At December 31, the company's year end, the adjusting entry is:

Dec. 31	Bond Interest Expense	4,000	
	Discount on Bonds Payable		772
	Bond Interest Payable		4,000

(To record accrued bond interest and amortization of bond discount)

Over the term of the bonds, the balance in discount on bonds payable will decrease annually by the same amount until it has a zero balance at maturity. Thus the carrying value of the bonds at maturity will be equal to the face value.

Preparing a bond discount amortization schedule as shown below is useful. The schedule shows interest expense, discount amortization, and the carrying value of the bond for each interest period. The interest expense recorded each period for Tegat Ltd. Bond is Sh. 4,772. also note that the carrying value of the bond increases Sh. 772 each period until it reaches its face value sh. 100,000 at the end of period 10.

Tegat Ltd					
Table 1. Interest Expense and Bond Discount Amortization : Straight line method					
Semiannual Interest Periods	(A) Interest to be paid (4% X 100,000)	(B) Interest expense to be recorded (A) + (B)	(C) Discount Amortized (sh. 7723/10)	(D) Unamortized Discount (D) – (C)	(E) Bond Carrying value (sh. 100,000 – D)
Issue date				Sh. 7,723	Sh.92,277
1	4,000	4,772	772	6,951	93,049
2	4,000	4,772	772	6,179	93,821
3	4,000	4,772	772	5,407	94,593
4	4,000	4,772	772	4,635	95,365
5	4,000	4,772	772	3,863	96,137
6	4,000	4,772	772	3,091	96,909
7	4,000	4,772	772	2,319	97,681
8	4,000	4,772	772	1,547	98,453
9	4,000	4,772	772	775	99,225
10	4,000	4,775*	775*	--0--	100,000

column (A) remains constant because the face value of the bonds (sh. 100,000) is multiplied by the semiannual contractual interest rate (4%) each period.

Column (B) is computed as the interest paid (Column A) plus the discount amortization (Column C)

Column (C) indicates the discount amortization each period.

Column (D) decreases each period by the same amount until it reaches zero at maturity.

Column (E) increases each period by the amount of discount amortization until it equals the face value at maturity.

*Note: * sh. 3 difference due to rounding*

(ii) Effective Interest Method

To compute the interest and amortization of a bond discount for each period under the effective interest method, a constant interest rate is applied to the carrying value of the bonds at the beginning of the interest period. This constant rate equals the market rate, or effective rate, at the time the bonds are issued. The amount to be amortized each period is the difference between the interest computed by using the effective rate and the actual interest paid to bondholders.

As an example, we use the same facts presented earlier- a Sh. 100,000 bond issue at 8%, with a five-year maturity and interest to be paid twice a year. The market, or effective, interest rate at the time the bonds were issued was 10%. The bonds were sold for sh. 92,227, a discount of sh. 7,723. the interest and amortization of the bond discount are shown in Table 2 below.

Tegat Ltd						
Table 2. Interest Expense and Bond Discount Amortization : Effective interest method						
	(A)	(B)	(C)	(D)	(E)	
Semiannual Interest Period	Carrying value at beginning of period	Interest for the period (A) X 5%	Interest to be paid to bondholders (4% X 100,000)	Discount to be Amortized (B) – (C)	Unamortized Discount at end of period	Bond Carrying value at end of period Sh. 100,000 – (E)
0 (Issue date)					Sh. 7,723	Sh.92,277
1	92,277	4,614	4,000	614	7,109	92,891
2	92,891	4,645	4,000	645	6,464	93,536
3	93,536	4,677	4,000	677	5,787	94,213
4	94,213	4,711	4,000	711	5,076	94,924
5	94,924	4,746	4,000	746	4,330	95,670
6	95,670	4,784	4,000	784	3,546	96,454
7	96,454	4,823	4,000	823	2,723	97,277
8	97,277	4,864	4,000	864	1,859	98,141
9	98,141	4,907	4,000	907	952	99,048
10	99,048	<u>4,952</u>	<u>4,000</u>	<u>952</u>	<u>0</u>	100,000
		<u>47,723</u>	<u>40,000</u>	<u>7,723</u>		

Comparing Table 1 with Table 2 above the following points are noted about the effective interest method:

1. The interest expense (column (B) results from multiplying each beginning carrying amount by 5% semiannual market rate that prevailed when the bonds were issued. For example, in period 1 , the expense is sh. 4,614 (sh.92,277 x 5%) and , in period 2 it is sh. 4,645 (sh.92,891 x 5%).
2. The amount of discount to be amortized each period is determined by subtracting the cash interest paid to the bondholders from the reported interest expense

When the interest method is used to amortize a discount, the periodic entries involve the accounts as straight- line method entries. However, the amount involved are different for example, the entry to record the payment to the bondholders and to amortize the discount at the end of the first semiannual interest period of the bond issue in table Table 2 is:

July 1	Interest Expense	4,614	
2000	Discount on bonds Payable		614
	Cash		4,000
	<i>(To record payment to the bondholders and amortization of a portion of the discount)</i>		

similar entries, differing only in the amount of interest expense recorded and discount amortized, are made at the end of each semiannual interest period in the life of the bond issue.

(b) Issuing Bonds At A premium

When a corporation offers to sell bonds carrying a contract rate of interest above the premium market rate for the risks involved, the bonds will sell at a premium. That is, buyers will bid up the price of the bonds, going as high, but no higher, than a price that will return the current market rate of cash flows from investment, determined by discounting these cash flows at the market rate of interest for the bonds.

Illustration

Assume that Momonik Corporation offers to sell bonds that have a Sh. 100,000 par value and a five-year life. The interest is to be paid semiannually at a 12% annual rate. On the day of issue(May 1, 2003), the market rate of interest for the corporation’s bonds is 10%. Buyers of these bonds discount the expected receipt of Sh. 100,000 after 10 six-month periods, and the expected receipt of Sh. 6,000 semiannually for 10 periods at the current market rate of 5% per six- month period. The calculation is:

Present value of Sh. 100,000 to be received after 10 periods,	
Discounted at 5% per period (100,000 x 0.6139).....	sh. 61,390
Present value of sh. 6,000 to be received periodically for	
10 periods, discounted at 5% (sh. 6,000 x 7.7217).....	sh. 46,330
	<u>sh.107,720</u>

If the bonds are sold for sh. 107,720 on their issue date of May 1, 200003, the corporation records the sale as follows:

2003	Cash	107,720	
May 1	Premium on bonds payable		7,720
	Bonds payable		100,000

(Sold bonds at a premium on their date of issue)

when a balance sheet is prepared on May 1, 2003, the bonds appears as foolow:

long term liabilities:

12% bonds payable, due May, 2008.....	100,0000	
Add Unamortized premium based on the 10% market rate for bond interest prevailing on the date of issue.....	<u>7,720</u>	107,720

Note that any unamortized premium is added to the par value of the bonds to show the carrying amount of the bonds on the balance sheet.

Amortizing the Premium

Over the life of these bonds, the issuing corporation will pay back sh. 160,000, which consists of the 10 periodic interest payments of sh. 6,000 plus the sh. 100,000 par value. Because it borrowed sh. 107,720, the total interest expense will be sh. 52,280 computed as under:

Amount paid:

Ten payments of sh. 6,000	60,000
Maturity amount	<u>100,000</u>
Total paid	160,000
Less: Amount borrowed	<u>107,720</u>
Total interest expense	<u>52,280</u>

This amount also equals the difference between the cash payments and the premium:

Ten payments of sh.6,000	60,000
Premium	<u>(7,720)</u>
Total interest expense	<u>52,280</u>

The allocation of this total interest expense over 10 semiannual periods is accomplished by amortizing the premium. Table 2-3 shows an amortization schedule for the bonds using the interest method.

Table 2-3 Interest and amortization of a bond premium : Effective interest method

semiannual interest period	(a) Beginning carrying value	(b) Interest for the period (a) x 5%	(c) Interest to be paid to bondholders 6% x 100,000	(d) Premium to be amortized (c) - (b)	(e) Unamortized premium at end of period	(f) Carrying value of period 100,000 +(e)
Issue date					7,720	107,720
1/11/2003	107,720	5386	6,000	614	7,106	107,106
1/5/2004	107,106	5355	6,000	645	6,461	106,461
1/11/2004	106,461	5323	6,000	677	5,784	105,784
1/5/2005	105,784	5289	6,000	711	5,073	105,073
1/11/2005	105,073	5254	6,000	746	4,327	104,327
1/5/2006	104,327	5216	6,000	784	3,543	103,543
1/11/2006	103,543	5177	6,000	823	2,720	102,720
1/5/2007	102,720	5136	6,000	864	1,856	101,856
1/11/2007	101,856	5093	6,000	907	949	100,949
5/1/2008	100,949	<u>5051*</u>	<u>6,000</u>	<u>949</u>	0	100,000
		<u>52280</u>	<u>60,000</u>	<u>7,720</u>		

* Adjusted to compensate for accumulated rounding off

From the above table, it can be observed that the premium to be amortized each period (column d) is determined by subtracting the interest expense (column b) from the cash interest paid to the bondholders (column c). the ending carrying amount equals the sum of the Sh. 100,000 par value and the unamortized premium (column e).

Based on the above table, the entry to record the first semiannual interest payment and premium amortization is:

Nov. 1,	Bond Interest expense	5,386	
2003	Premium on Bonds Payable	614	
	Cash		6,000
	<i>(To record payment of bond interest and amortization of bond premium)</i>		

Similar entries, with decreasing amounts of interest expense and increasing amounts of premium amortization, are made at the end of the remaining periods in the life of the bond issue. Note that the amortizing of the premium has the effect of reducing interest expense below the amount paid in cash. In effect, each cash payment retires part of the principal balance of the bonds. This process continues until the final payment, when the carrying value equals the par value of sh. 100,000.

When bond are sold, the bond interest periods often do not coincide with the issuing company's accounting periods. In these cases, an adjustment for accrued interest at the end of each accounting period must be made. For example, the bonds described in the table above were issued on May 1, 2003, and interest was first recorded and paid on November 1 of that year. By December 31,2003, two months' interest has accrued on

these bonds. If the accounting period ends on that date, the following adjusting entry is required:

Dec. 31	Bond Interest Expense (5,355 x 2/6)	1,785	
2003	Premium on Bonds Payable (645 x 2/6)	215	
	Interest Payable (6000 x 2/6)		2,000
	<i>(To record two month's accrued interest and one third of the premium amortization applicable to the interest period)</i>		

two months are one third of a semiannual interest period. Therefore, the amounts in the entry are one third of the amounts applicable to the second interest period in the life of the bond issue. Similar entries will be made on each December 31 throughout the life of the issue. However, the amounts differ because the interest method of amortizing the premium produces a different measure of the expense in each interest period.

On May 1, 2004, this entry will record the semiannual payment of interest:

May 1, 2004	Bond Interest Payable	2,000	
	Bond Expense (5,355 x 4/6)	3,570	
	Premium on Bonds Payable (645 x 4/6)	430	
	Cash		6,000
	<i>(Paid the interest on the bonds, a portion of which was previously accrued, and amortized four months' premium)</i>		

Bonds issued (sold) between interest dates

Bond interest payments are usually made semiannually on dates specified in the bond indenture. When bonds are issued on other than the interest accrued from the last interest payment date to the date of issue. The purchasers of the bonds, in effect, pay the bond issuer in advance for that portion of the full 6-month;s interest payment to which they are not entitled, not having held the bonds during that period. The purchasers will receive the full 6-months' interest on the next semiannual interest payment date.

Illustration:

Assume that Tarit Corporation sells \$1,000,000, 9% bonds at par plus accrued interest on March 1, 2004. Interest is payable semiannually on July 1 and January 1. The accrued interest is \$15,000 ($\$1,000,000 \times 9\% \times 2/12$). The total proceeds on the sale of the bonds, therefore, are \$1,015,000. The entry to record the sale two months after the issue date is:

March 1	Cash	1,015,000	
	Bonds payable	1,000,000	
	Bond interest payable	15,000	
	<i>(To record sale of bonds at face value plus accrued interest)</i>		

At the end of the four months, on the June 30 semiannual interest date, the purchasers of these bonds are paid a full six months' interest of \$45,000 ($1,000,000 \times 9\% \times 6/12$). This payment includes four months' interest earned by the bondholders after March 1 and the two months' accrued interest collected from them at the time the bonds were sold. Thus at the first interest date, two things must be done with regard to bond interest: (1) Eliminate the bond interest payable balance and (2) recognize interest expense for the 4 months (March 1- June 30) the bonds have been outstanding. Interest expense in this example is \$30,000 ($\$1,000,000 \times 9\% \times 4/12$). The entry on July 1 for the \$45,000 interest payment is:

July 1	Bond interest payable	15,000	
	Bond interest expense	30,000	
	Cash		45,000
	<i>(To record payment of bond interest)</i>		

2.2.3 Accounting for Bond Retirements

bonds may be retired either when they are redeemed by issuing corporation or when they are converted into common stock by bondholders. The appropriate entries for these transactions are as below:

Redeeming bonds at maturity

The carrying value of the bonds at the end of their 5-year life (Sh 100,000) is equal to the face value of the bonds. Assume that interest for the last period is paid and recorded separately.

Required:

The entry to record redemption of bonds.

Solution:

Bonds payable	100,000	
Cash		100,000

To record redemption of bonds at maturity.

Redeeming bonds before maturity

When bonds are retired before maturity, it is necessary to:

- 1) Eliminate the carrying value of the bonds at the redemption date.
- 2) Record the cash paid.
- 3) Recognize the gain or loss on redemption.

Illustration:

Comoros Ltd. Has sold its Sh. 100,000 bonds at a premium. At the end of eight period, Comoros retires these bonds at 103 after paying the semi annual interest. The carrying value of the bonds at redemption date is Sh 101,623. You are required to record this transaction.

Bonds payable	100,000
Premium on bonds payable	1,623

Loss on Bond redemption	1,377	
Cash		103,000
To record redemption of bonds at 103.		

Converting Bonds into Common Stock

When bonds are converted into common stock and conversion is recorded, the current market prices of the bonds and stock are ignored. Instead the carrying value of the bonds is transferred to paid-in capital accounts. No gain or loss is recognized.

Illustration:

Saunders association converts Sh 100,000 bonds sold at face value into 2,000 shares of Sh 10 par value common stock. Both bonds and common stock have a market value of Sh 130,000. you are required to journalize these transaction.

Bonds payable	100,000	
Common Stock		20,000
Paid-in Capital in excess of par		80,000
To record redemption of bond conversion.		

Accounting for Long Term Notes Payable

A long term note payable may be secured by a mortgage that pledges title to specific assets as security for a loan. Mortgage notes payable are recorded initially at face value. Subsequent entries are required for each installment payment. To illustrate, assume that porter Ltd. Issues a Sh 500,000, 12%, 20-year mortgage note on December 31, 2002. the terms provide for semi-annual installment payments of Sh 33,231. the installment payment schedule for the first 2 years is as follows:

	(a)	(b)	(c)	(d)
semiannual interest period	Cash Payment	Interest expense (d) x 6%	Interest to be paid to bondholders	Premium to be amortized
Issue date				500,000
1	33231	30000	3231	496,769
2	33231	29806	3425	489,344
3	33231	29601	3630	489,714
4	33231	29383	3848	485,866

The entries to record the mortgage loan and first installment payment are as follows:

<u>December 31.</u>		
Cash	500,000	
Mortgage Notes payable		500,000
To record Mortgage loan.		

<u>June 31</u>		
Interest expense	30,000	
Mortgage Notes payable	3,231	

Paid-in Capital in excess of par	33,231
To record semi-annual payment on mortgage.	

Demonstration problem

Cynthia Inc. needs Sh 2 million for additional financing. On December 31, 2002, it borrowed money by issuing Sh 500,000, 11%, 10-year convertible bonds. The bond sold at face value and pay semi-annual interest on January 1 and July 1. Each Sh 1,000 bond is convertible into 30 shares of Cynthia Inc. Sh 20 par value common stock. Prepare journal entries for:

- a) issuance of the bonds on January 1, 2003.
- b) Interest expense on July 1, and December 31, 2003.
- c) The payment of interest on January 1, 2004.
- d) The conversion of all bonds to common stock on January 1, 2004, when the market value of common stock was Sh 67 per share.

Solution:

a) 2003 January 1.		
Cash	500,000	
Bonds payable		500,000
To record issue of 11%, 10-year convertible bonds at face value.		
b) (i) 2003 July 1		
Bonds interest expense	27,500	
Cash		27,500
To record payment of semi-annual interest.		
(ii) 2003 December 1		
Bonds interest expense	27,500	
Bonds interest payable		27,500
To record payment of semi-annual interest accrued.		
c) 2004 January 1		
Bonds interest payable	27,500	
Cash		27,500
To record payment of semi-annual interest accrued.		
d) 2004 January 1		
Bonds payable	500,000	
Common Stock		300,000
Paid-in Capital in excess of par value		200,000
To record conversion of bonds into common stock.		

Questions

1. list and briefly explain the primary characteristics of long-term debt securities.

2. explain the difference between the stated rate of interest and effective rate on a long-term debt security.
3. contrast the following classes of bonds: (a) serial versus term bonds, (b) registered versus bearer bonds, (c) callable versus convertible bonds.
4. what are the principal advantages and disadvantages of bonds versus common stock for (a) the issuer, and (b) the investor?
5. distinguish between par amount and the price of the bond. When are they the same?
6. Explain the significance of bond discount and bond premium to (a) the issuer and (b) the investor.
7. assume that a Sh1,000, 12% (payable semi annually), 10 – year bond is sold at an effective rate of 10%. How will you compute the price of this bond?
8. what is the difference between straight-line and interest methods of amortizing bond discount or premium?
9. what are convertible bonds? What major advantages do they provide?
10. when bonds are sold or purchased between interest dates, accrued interest must be recognized. Explain why.
11. why is discount on bonds amortised?

Exercises

2-1 Nairobi Traders co. authorized Sh600,000 of 12% (interest payable semi-annually), 10-year bonds. The bonds were dated January 1, 2002; interest dates are June 30 and December 31. assume four different cases with respect to the sale of the bonds:

- Sold on January 1, 2002, at par
- Sold January 1, 2002, at 102
- Sold January 1, 2002, at 98
- Sold on march 1, 2002 at par

Required:

- a. For each case, what amount of cash interest will be paid on the first interest date, June 30, 2002?
 - b. In what cases will the effective rate of interest be (a) the sane, (b) higher, or (c) lower than the stated rate?
 - c. After the sale of bonds prior to the maturity date, in what cases will the carrying or the book value of the bonds (as reported on the balance sheet) be (a) the same, (b) higher, or (c) lower than the maturity or face amount?
 - d. After the sale of the bonds in the first three cases, which case will report interest expense (a) the same, (b) higher, or (c) lower than amount of cash interest paid each period?
- 2-2** Compute the bond prices for each of the following situations (show computations and round to the nearest shilling)
- i. A 10-year, Sh1000 bond with annual interest at 8% (paid semi-annually) purchased to yield 6% interest.

- ii. An 8-year Sh1,000 bond with annual interest at 6% (paid semi-annually) purchased to yield 8% interest
- iii. A 10-year, Sh1000 bond with annual interest at 8% (paid semi-annually) purchased to yield 8% interest.

2-3 Yashin corporation issued to Baidoa corporation a Sh60,000, 12% (interest paid semi-annually on June 30 and December 31), a 10-year bond dated and sold on January 1, 2002. assumptions: case A – sold at par; case B – sold at 103; case C – sold at 97.

Required:

In parallel columns of the issuer and the investor, , give the appropriate journal entries for each case on January 1, 2002, and June 30, 2002. assume that the difference between the interest method and straight-line method of amortization is not material; therefore, use straight-line amortization.

2-4 On January 1, 2002, New corporation issued to Old corporation a Sh20,000, 7% (interest payable June 30 and December 31) , 10-year bond, dated January 1, 2002. the bond was sold at 6% effective interest. Old intends to hold the bond to maturity.

Required:

- a. Compute the price of the bond.
- b. In parallel columns for the issuer and investor, give the appropriate journal entries on January 1, 2002 and June 30, 2002. Assume the difference between the interest method and the straight-line method of amortization is material; therefore use the interest method.

2-5 Remi corporation sold Sh150,000 3-year, 8%(payable semi-annually) bonds for Sh156,400 plus accrued interest. Interest is payable each February 28, and August 31. the bonds were dated March 1, 2002, and were sold on July 1, 2002. the accounting period ends on December 31.

Required:

- a. How much accrued interest should be recognized at the date of sale?
- b. How long is the amortization period?
- c. Give entries for Remi corporation through February 2002. use straightline amortization.

2-6 Michali issued 40, 6%, Sh1000 bonds on January 1, 2002. the bonds pay interest every December 31. these bonds were issued to yield 7% and they mature on December 31, 2004.

Required:

- a. Prepare the complete amortization table using the interest method.
- b. Explain why, in economic terms, the interest expense recognized each year exceeds the cash interest paid.

LESSON THREE

3.0 Leases

3.1 Basics Of Leasing

A lease is a contractual agreement that conveys the right to use property, plant or equipment (land and /or depreciable assets) for a stated period in return for stipulated, and generally periodic cash payments (rents). The owner of the property is referred to as the lessor, and the renter is the lessee. Leased property can include both real and personal assets. Personal property includes both tangible assets (such as machinery, equipment, or transportation vehicle), and certain intangibles (such as patents).

Advantages Of Leasing

- 100% financing. Leasing may resolve a lessee's cash problems by making financing available for up to 100 percent of the leased asset value. Bank loans are typically limited to 80 percent of the asset's value. In addition, interest rates on leases may be negotiated at fixed rates, whereas some bank loans feature only variable rates.
- Protection against obsolescence. Leasing equipment reduces risk of obsolescence to the lessee, and in many cases passes the risk in residual value to the lessor. This is especially true in the case of operating leases, which generally have relatively short lives.
- Off-balance-sheet financing. Certain leases do not add debt on a balance sheet or affect financial ratios, and may add to borrowing capacity. Such off-balance-sheet financing is critical to some companies.
- Flexibility provided. Lease agreements may contain less restrictive provisions than other debt agreements. Innovative lessor can tailor a lease agreement to the lessee's special needs. For instance, rental payment can be structured to meet the timing of cash revenues generated by the equipment so that payments are made when the equipment is productive.
- Less costly financing. Some companies find leasing cheaper than other forms of financing. For example, start-up companies in depressed industries, or companies in low tax brackets may lease as a way of claiming tax benefits that might otherwise be lost.
- Increased liquidity. The use of sale-leaseback arrangements may permit the firm to increase its liquidity by converting an existing asset into cash, which can be used as working capital. A firm short of working capital or in liquidity squeeze can sell an owned asset to a lessor and lease the asset back for a specified number of years

- Temporary requirement of the asset. Leasing may enable the lessee to avoid owning assets that are needed only temporally, seasonally, or sporadically
- Availability of the equipment. In case of industrial equipment that might need to be built to order and can require lengthy asset-implementation delays, leasing ready –to-use equipment can be attractive.

Disadvantages Of Leasing

- Lower quality product. Leasing ready-to-use (as opposed to custom built) equipment may result in lower-quality product and ultimately lost sales to the lessee.
- Obsolescence considerations. If a lessee leases (under financial lease) an asset that subsequently becomes obsolete, it still has to make lease payments over the remaining life of the lease. This is true even if it is unable to use the leased assets. In many instances, a lessee will continue to use obsolete assets since it must pay for them. This type of situation can weaken a firm's competitive position by raising (or failing to lower) production costs and therefore forcing the sale price of its products to be increased in order to earn a profit.
- High interest costs. In some instances, the 100 percent financing of leased assets also means a higher interest cost so that the firm might be better off borrowing to purchase the asset.
- Uncertainty over the availability of the asset. Seasonal leasing entails uncertainty that equipment will be available when needed.
- Lack of salvage value. At the end of the term of the lease agreement, the salvage value of the assets, if any, is realized by the lessor. If the firm had purchased the assets, it could have realized their salvage value. If assets are expected to appreciate over the life of a lease agreement, it may be wiser to purchase them, although various other factors must be considered in making this decision

3.2 Categories Of Leases

The two basic types of leases available to the business firm are **capital (finance) and operating leases**. Capital leases have essentially the same effect on the lessee and the lessor as a purchase-sale transaction. That is, the outcome is just as if the lessee obtained a loan from the lessor and used the proceeds to purchase the leased asset. When an asset is leased under a capital lease, the lessee records the asset as if it has been purchased and records a liability equal to the present value of the future lease payments. In most cases, this amount approximates the fair value of the leased asset.

Operating Lease

In contrast to capital leases, operating leases do not have the characteristics of purchase-sale transaction. It merely gives the lessee the right to use the leased asset for the period covered by the contract. That is, the lessee does not acquire an ownership interest in the leased property, and risks of ownership remain with the lessor.

When a lease is identified as an operating lease, the lessee's obligation to make payments is not recorded as a liability. Because these operating leases are not recorded as liabilities,

they do not appear on the balance sheet. This kind of leasing activity is sometimes called off-balance sheet financing.

Capital Lease

Whether a lease is classified as an operating lease or as a capital lease can have a significant effect on the financial statements. As a result, the financial statements of different lessees will not be comparable unless the companies use the same criteria to classify their leases. To make financial statements more comparable, the Financial Accounting Standards Board (FASB) has established rules or criteria that accountants use to decide how leases should be classified according to the FASB's decision, a lease that meets any of the following criteria is a capital lease.

1. Ownership of the leased asset is automatically transferred to the lessee at the end of the lease period. (Transfer of ownership test)
2. The lessee has the option to purchase the leased asset either during or at the end of the lease period at a bargain price. The price must be sufficiently less than the asset's expected fair value so that the option is likely to be exercised (The bargain purchase option test)
3. The period covered by the lease is 75% or more of the estimated service life of the leased asset (Economic life test / 75% test)
4. The present value of the minimum payments under the lease is 90% or more of the fair value of the leased asset (Recovery of investment test / 90% test). The rationale for this test is that if the present value of the minimum lease payments is reasonably close to the market price of the asset, the asset is effectively being purchased.

A lease that does not meet any of these four criteria is classified by the lessee as an operating lease.

To illustrate accounting for leases, assume that Bobek Company plans to produce a product with a new machine that has a cash price of approximately \$32,800 and an estimated 10-year life with no salvage value. Bobek Company does not have that much cash available and plans to lease the machine starting on December 31, 2000. Bobek Company will lease the machine under one of the following contracts, both of which require it to pay for maintenance, taxes, and insurance on the machine:

- (a) Lease the machine for five years, with annual payments of \$7,500 payable at the end of each of the five years. The machine will be returned to the lessor at the end of the lease period.
- (b) Lease the machine for five years, with annual payments of \$10,000 payable at the end of each of the five years. The machine will become the property of Bobek Company at the end of the lease period.

If Bobek had chosen to borrow sufficient cash to purchase the machine, it would have paid interest at an annual rate of 16%.

3.3 Accounting For Leases

3.3.1 Accounting For An Operating Lease

The first lease contract does not pass ownership to the lease, does not have a bargain purchase option, and covers only half of the asset's 10-year useful life. Therefore, it does not meet any of the first three criteria of a capital lease. Also, the present value of the lease payments, discounted at the 16% interest rate, is \$24,557 ($\$7,500 \times 3.2743$). This amount is less than 90% of \$32,800, so the lease also does not meet the fourth criterion of a capital lease. Therefore, the lease must be classified as an operating lease.

If Bobek Company chooses contract (a), no entry is made at the time the lease contract is signed. Later, each annual rental payment is recorded with an entry like the following one, which records the first payment at the end of 2001:

2001			
Dec.31	Machinery rental expense	7,500	
	Cash		7,500
	<i>(Paid the annual rent on a leased machine)</i>		

Bobek Company also must record any expenses it incurs for maintenance, taxes and insurance on the machine. In addition, Bobek should add a footnote to its financial statements that gives a general description of the leasing arrangements. However, because the leased machine was not recorded as an asset, no entries are made for depreciation expense.

3.3.2 Accounting For A Capital Lease

The second lease contract, (b), meets the first capital lease criterion in that title to the asset is transferred to Bobek at the end of the lease. The contract also meets the fourth criterion because the present value of the five \$10,000 payments is \$32,743 ($\$10,000 \times 3.2743$), which is greater than 90% of the \$32,800 cash price of the asset. Thus, it is a capital lease. In effect, this lease is a credit purchase transaction with the lessor providing financing to the lessee for acquiring the machine.

Illustration:

Nyaru Company plans to produce a product with a new machine that has a cash price of approximately Sh.32,000 and an estimated life of 10 years with no salvage value. Nyaru Company does not have enough money and plans to lease the asset starting on December 2003. Nyaru will lease the machine under one of the following contracts.

- a. Lease the machine for five years, with annual payments of Sh.7,500 payable at the end of each of the five years. The machine will be returned to the lessor at the end of the lease period.
- b. Lease the machine for five years, with annual payments of Sh.10,000 payable at the end of each of the five years. The machine will become the property of the lessor at the end of the lease period.

If Nyaru had chosen to borrow sufficient cash to purchase the machine, it would have paid interest at an annual rate of 16%.

The second lease contract, (b), meets the first capital lease criterion that title to the asset is transferred to Nyaru at the end of the lease. The contract also meets the fourth criterion because the present value of the five Sh.10,000 payments is Sh. 32,743 (Sh.10,000 x 3.2743), which is greater than 90% of the Sh.32,800 cash price of the asset. Thus, it is a *capital lease*. In effect, this lease is a credit purchase transaction with the lessor providing financing to the lessee for acquiring the machine.

3.3.3 Recording The Lease Liability

If Nyaru Company chooses the second lease contract; it should record the asset and the liability at the Sh.32,743 (present value of the five lease payments). Nyaru makes this entry on the day the lease is signed:

31 Dec. 2003	Machinery	32,743.00	
	Discount on lease financing	17,257.00	
	Long-term lease liability		50,000.00
	<i>Purchase of machinery through a long-term lease contract.</i>		

In effect, the cost of the leased machine is Sh.32,743. Like the cost of any other asset, this amount should be charged to depreciation expense over the machine's expected life of 10 years. Sometimes, however, the terms of a lease are such that the expected service life of the leased asset is limited to the term of the lease. This condition exists if the lessee does not obtain ownership at the end of the lease and the lease period is shorter than the asset's expected life.

3.3.4 Reporting A Long-Term Asset Liability On The Balance Sheet

As we saw for a non-interest bearing note, the Sh.17,257 discount on the lease liability is an interest component of the transaction. The net liability that results from the lease is the gross long-term lease liability less the amount of the discount. The two items should appear as follows on Nyaru Company's December 31, 2003, balance sheet:

Long-term lease liability	Sh.50,000	
Less unamortized discount based on 16% interest rate	<u>17,257</u>	32,743

Note: to simplify the illustration, we have disregarded the requirement that the lease liability be divided into its current and non-current portions.

Entries to record depreciation, lease payments, and interest.

If Nyaru Company depreciates the machine on a straight-line basis over its 10-year life, it will make the following entries at the of the first year in the life of the lease:

31 Dec. 2004	Depreciation expense on machinery	3,274.3	
	Accumulated depreciation on machinery		3,274.3
	<i>To record depreciation expense on machinery.</i>		
31 Dec. 2004	Long-term lease liability	10,000	
	Cash		10,000
	<i>Cash paid on annual lease</i>		
31 Dec. 2004	Interest expense	5,239	

Discount on lease financing 5,239
Amortized portion of discount on lease financing.

The first entry records straight-line depreciation equal to the asset's cost of Sh.32,743 divided by 10 years. The second entry records the first of the five Sh.10,000 lease payments as a reduction in the gross lease liability. The third entry records Sh.5,239 as interest expense on the net liability. To calculate this amount, apply the 16% interest rate to the Sh.32,743 (Sh.32,743 x 16%)

Illustration 3-1 contains two schedules: the first is illustration shows the allocation of the interest expense of Sh.17,257 over the five years of the lease. This schedule includes the column that shows the decrease in gross liability from the annual Sh.10,000 payment.

The second schedule in illustration 3-1 shows the amortization of the discount on the lease liability. To determine the amount of the discount to be amortized each year, the net liability at the beginning of each year is multiplied by 16%. For example, the amount of discount to be amortized in 2005 is Sh.4,477 (Sh.27,982 x 16%). Each ending net liability amount is found by subtracting the ending unamortized discount column (e) from the ending gross liability column (f). For example, the December 31, 2005, carrying amount is Sh.22,459 (Sh.30,000-Sh.7,541). Notice that the gross liability in column (f) gets smaller by Sh.10,000 for each annual payment made on December 31. This process eventually reduces the gross and net liability measures to zero.

The **carrying amount** of the lease is the difference between the sums of the remaining rental payments less the unamortized discount. After posting the December 31, 2004, entries to record the Sh.10,000 payment and the amortization of the discount, the carrying amount of the lease appears on the December 31, 2004, balance sheet as follows:

Long-term liability	Sh.40,000	
Less unamortized discount based on 16% interest	<u>12,018</u>	27,982

Illustration 3-1: allocation of interest for a 5-year lease liability, Sh.10,000 payable per year, with an initial net balance of Sh.32,743

	(a) Beginning Net liability	(b) interest expense (a) x 16%	(c) less annual payment	(d) ending net liability (a) + (b) – (c)
Year				
2004	Sh.32,743	Sh.5,239	Sh.10,000	Sh.27,982
2005	27,982	4,477	10,000	22,459
2006	22,459	3,593	10,000	16,052
2007	16,052	2,568	10,000	8,602
2008	8,620	<u>1380</u>	10,000	-0-
Total expense		<u>17,257</u>		

3.3.5 Terminating Of Lease Agreements

A capital lease agreement may terminate due to a change of provisions in the lease, renewal or extension of the original lease, or expiration of the lease terms. Termination can be viewed from two perspective dimensions:

1. Lessor's perspective- on termination, the net carrying value of investment is removed from the accounts, and the leased asset is recorded at the lower of its original cost, present fair value, or present carrying amount.
2. Lessee's perspective- on termination, both the net carrying value of the leased asset and the lease liability are removed from the accounts. A gain or loss is recognized in the period of termination for any difference.

Example:

On January 1, 1998, Lessor company and Lessee company signed a 3-year concealable lease for an asset with an estimate life of three years.

- Three lease payments of Sh36,556 are to be made at the beginning of each year.
- The fair market value of the asset at the inception of the lease is Sh100,000, which is also the carrying value (cost) on the Lessor's books.
- The leased asset will revert to the lessor at the end of the 3-year period.
- The lessee's incremental borrowing rate is 10%.
- Both companies apply the straight-line method of depreciation. Salvage value is zero.
- Accounting year ends on December 31, for each party.
- Lessor's implicit interest rate (target rate of return) is 10%.

The lessee decided to terminate the lease agreement on January 1, 1999, before making the lease payment of Sh36,556. The fair market value of the asset on this date was Sh61,000.

Required:

Show the entries to terminate the lease agreement in the books of both the lessor and the lessee.

Date	<i>Solution:</i> annual lease Payments (Shs)	annual interest (10%) (Shs)	decrease (Increase) in Lease liability (Shs)	lease liability balance (Shs)
1/1/98				100,000
1/1/98	36,556	—	36,556	63,444
12/31/98	—	6,344	(6,344)	69,788
1/1/99	Lease is terminated.			

Entries in Lessor's books:

Asset	61,000	
Unearned interest revenue	3,324	
Loss on lease termination	8,788	
Lease receivable		73,112*

*To record lease receivable terminated. (*Sh109,688-Sh36,556.)*

Entries on Lessee's books:

Lease liability	69,788	
Accumulated depreciation	33,333	
Leased asset		100,000
Gain on lease termination		3,121

To record lease liability terminated.

Demonstration problem 1

Prepare the journal entries for the following 2003 transactions of Chesonok Company Ltd.

- a) Chesonok accrued estimated property taxes during the first eight months of 2003 at the rate of Sh.2,000 per month. On September 10, Chesonok learned that the 2003 tax bill would be Sh.21,720. The due date for these taxes is December 31. Show the property tax entries on September 30 and October 31.
- b) During September, Chesonok sold Sh.140,000 of merchandise under a 180-day warranty. Prior experience shows that the costs of fulfilling the warranty will equal 5% of the selling price. Record the month's warranty expense and increase in the warranty liability as a September 30 adjusting entry. Also record an October 8 expenditure of Sh.300 cash to service an item sold in September.
- c) On October 10, Chesonok arranged with suppliers to pay 25% of an overdue Sh.10,000 account payable by Chesonok to the supplier. The remaining balance was converted to an Sh.7,500, 90-day note bearing 12% interest.
- d) On October 15, Chesonok borrowed Sh.98,000 by discounting its Sh.100,000, 60-day note payable to the bank. The discount rate charged by the bank was 12% per year.
- e) An December 1, Chesonok acquired a machine by giving an Sh.60,000, noninterest bearing note due in one year. The rate of interest available to Chesonok for this type of debt was 12%.
- f) On December 14, Chesonok paid the note described in (d).
- g) On December 31, Chesonok accrued interest on the notes described in (c) and (e). Show separate adjusting entries assuming a 360-day year.

In addition to preceding transactions, Chesonok entered into a three-year lease of machinery on January 1, 2003 and agreed to make three payments of Sh. 30,158 on December 31, 2003, 2004, and 2005. The appropriate interest rate for this lease is 10%. Title to machinery will pass to Chesonok at the end of the lease, and the lease should be recorded as a capital lease.

- h) Show the record entering into the lease.

- i) Prepare a table that shows the amount of interest expense to allocate to each year of the lease.
- j) Show the entries to record the first payment on December 31, 2003; the interest expense for 2003, and the depreciation expense for 2003. The machine's useful life is predicted to be five years, with no salvage value, and straight-line depreciation is used.
- k) Show how the leased asset and lease liability would appear on the balance sheet as of December 31, 2003.

Solution

a. Sept. 30	property tax expense	290	
	Estimated property taxes payable		290
	<i>Actual liability on Sept. 30 (Sh.21,720 x 9/12)</i>	<i>Sh.16,290</i>	
	<i>Recorded liability as of Aug. 31 (Sh.2000 x 8)</i>	<u><i>16,000</i></u>	
	<i>Additional liability to record Sept. 30</i>	<u><u><i>290</i></u></u>	
Oct. 31	property tax expense	1,810	
	Estimated property taxes		1,810
	<i>Sh.21,720/12 = 1,810 per month</i>		
b. Sept.30	warranty expense	7,000	
	Estimated warranty liability		7,000
	<i>Sh.140,000 x 5% = 7,000</i>		
Oct. 8	estimated warranty liability	300	
	Cash		300
c. Oct. 10	accounts payable	10,000	
	Cash		2,500
	Notes payable		7,500
d. Oct. 15	cash	98,000	
	Interest expense		2,000
	Notes payable		100,000
	<i>Sh.100,000 x 12% x 60/360 = 2000</i>		
e. Dec. 1	machinery	53,574	
	Discount on notes payable		6,426
	Notes payable		60,000
	<i>Sh.60,000 x 0.8929 = 53,574</i>		
f. Dec. 14	notes payable	100,000	
	Cash		100,000
g. Dec. 31	interest expense	205	
	Interest payable		205

Oct. 10 to Dec. 31 = 82 days (Sh.7,500 x 12% x 82/360)

Interest expense	535.74	
Discount on notes payable		535.74
Dec. 1 to Dec. 31 = 30 days (Sh.53,574 x 12% x 30/360)		

h. Jan. 1	machinery	75,000	
	Discount on lease financing	15,474	
	Long-term lease liability		90,474
	Sh.30,158 x 2.4869 =75,000; Sh.30,158 x 3 = 90, 474		

i. Allocation of interest for a 3-year, Sh.15,474 per year lease liability payable, with an initial balance of Sh.75,000.

	(a)	(b)	(c)	(d)
	Beginning Net liability	10% interest expense	less annual payment	ending net liability
	(a) + (b) – (c)			
Year: 2003	Sh.75,000	Sh.7,500	Sh.(30,158)	Sh.52,342
2004	52,342	5,234	(30,158)	27,418
2005	27,418	<u>2,740</u>	(30,158)	- 0 –
Total		<u>15,474</u>		

Amortization schedule for a 3-year, Sh.75,000 lease liability, discounted at 10%.

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	Gross Lease (Beg.)	unamortized Discount (Beg.)	net liability (Beg.)	discount to be Amortized	unamortized discount (End)	End gross liability	End net liability
2003	Sh.90,474	Sh.15,474	Sh.75,000	Sh.7,500	Sh.7,974	Sh.60,316	Sh.52,342
2004	60,316	7,974	52,342	5,234	2,740	30,158	27,418
2005	20,158	2,740	27,418	<u>2,740</u>	-0-	-0-	-0-
Total				<u>15,474</u>			

j. Dec.31	long-term lease liability	30,158	
	Cash		30,158
	Interest expense	7,500	
	Discount on lease financing		7,500
	Depreciation expense on machinery	15,000	
	Accumulated depreciation on machinery		15,000
	Sh.75,000/5 = 15,000		

k. Long term lease liability	Sh.60,316	
Less unamortized discount based on 10% interest	<u>7,974</u>	52,342

Demonstration problem 2.

The Spade Agro Company patented and successfully marketed a new agricultural product. However, to expand its ability to produce and market the product, the company needed Sh.4 million of additional financing. On January 1 2003, the company borrowed money in the following ways:

1. Spade signed a Sh.800,000, 10% installment note that is to be repaid in five annual payments. Each payment is to include a principal of Sh.160,000 plus accrued interest. The payments will be made on December 31, 2003-2007.
2. Spade also signed a second Sh.800,000 10% installment note calling for five annual installment payments that are equal in amount. The payments will be made on December 31, 2003-2007.
3. Spade also issued three separate groups of five-year bonds, each with a face value of Sh.800,000. On January 1, 2003, the market interest rate for all three groups of bonds was 10% per year.
 - a. Group A will pay 10% interest on June 30 and December 31, 2003-2007.
 - b. Group B will pay 12% interest on June 30 and December 31, 2003-2007.
 - c. Group C will pay 8% interest on June 30 and December 31, 2003-2007.

Solution

Period Ending	beginning principal Balance	periodic payment	interest expense of period	portion of principal payment	ending principal balance
12/31/2003	Sh.800,000	Sh.240,000	Sh.80,000	Sh.160,000	Sh.640,000
12/31/2004	640,000	224,000	64,000	160,000	480,000
12/31/2005	480,000	208,000	48,000	160,000	320,000
12/31/2006	320,000	192,000	32,000	160,000	160,000
12/31/2007	160,000	<u>176,000</u>	<u>16,000</u>	<u>160,000</u>	-0-
Total		<u>1,040,000</u>	<u>240,000</u>	<u>800,000</u>	

- b. The entry for the first payment on this note on December 31, 2003.

Dec. 2003	interest expense	80,000	
	Notes payable	160,000	
	Cash		240,000

Made first payment installment note.

2. A. calculation of the dollar amount of five equal payments for the second installment note:

The present value of Sh.1 to be paid annually for the five years, discounted at 10%, is Sh.3.7908. Therefore:

$$\text{Periodic payment} = \text{Sh.}800,000 / 3.7908 = \text{Sh.}211,037$$

b. The amortization schedule for the second installment note:

Period Ending	beginning principal Balance	periodic payment	interest expense of period	portion of principal payment	ending principal balance
12/31/2003	Sh.800,000	Sh.211,037	Sh.80,000	Sh.131,037	Sh.668,963
12/31/2004	668,963	211,037	66,896	144,141	524,822
12/31/2005	524,822	211,037	52,482	158,555	366,267
12/31/2006	366,267	211,037	36,627	174,410	191,857
12/31/2007	191,857	<u>211,037</u>	<u>19,180</u>	<u>191,857</u>	-0-
Total		<u>1,055,185</u>	<u>255,185</u>	<u>800,000</u>	

c. The entry for the first payment on this note on December 31, 2003.

Dec. 31, 2003	interest expense	80,000	
	Notes payable	131,037	
	Cash		211,037
	<i>Made first payment installment note.</i>		

3. A. Jan. 2003	cash	800,000	
	Bonds payable group A		800,000
	<i>Issued 10% bonds at face value</i>		

b. The entry for the first payment on interest on the bonds on June 30, 2003			
Jun. 30, 2003	interest expense	40,000	
	Cash		40,000
	<i>Paid interest on 10% bonds.</i>		

4.a. calculating the issue price of 12% bonds

Present value of Sh.800,000 to be paid after 10 periods discounted at 5% (Sh.800,000 x 0.6139)	Sh.491,120
Present value of Sh.48,000 to be periodically for 10 periods discounted at 5% (Sh.48,000 x 7.7217)	<u>370,642</u>
Present value of the bonds	<u>861,762</u>

b. The entry for issuance of the 12% bonds on January 1, 2003.

Jan. 1, 2003	cash	861,762	
	Bonds payable group B		800,000
	Premium on bonds payable group B		61,762

Issued 12% bonds at a premium.

c. The premium amortization table for the 12% bonds (interest method)

	Beg. Carrying Amount	Interest expense for the Period	interest to be paid to bondholders	premium to be amortized	unamortized discount at End. Of period	End carrying amount
30/6/03	Sh.861,762	Sh.43,088	Sh.48,000	Sh.4,912	Sh.56,850	Sh.856,850
31/12/03	856,850	42,843	48,000	5,157	51,693	851,693
30/6/04	851,693	42,585	48,000	5,415	46,278	846,278
31/12/04	846,278	42,214	48,000	5,686	40,592	840,592
30/6/05	840,592	42,030	48,000	5,970	34,622	834,622
31/12/05	834,622	41,731	48,000	6,269	28,353	828,353
30/6/06	828,353	41,418	48,000	6,582	21,771	821,771
31/12/06	821,771	41,089	48,000	6,911	14,860	814,860
30/6/07	814,860	40,743	48,000	7,257	7,603	807,603
31/12/07	807,603	<u>40,397</u>	<u>48,000</u>	<u>7,603</u>	-0-	800,000
Total		<u>418,238</u>	<u>480,000</u>	<u>61,762</u>		

d. The entry for the first payment of interest of bonds on June 30, 2003:

Jun. 30, 2003	interest expense	43,088	
	Premium on bonds payable, group B	4,912	
	Cash		48,000
	<i>Paid interest on 12% bonds.</i>		

e. The entry that would be made on Jan. 1, 2005, for the retirement of the 12% bonds at the contractual price of Sh.832,000:

Jan. 1, 2005	bonds payable group B	800,000	
	Premium on bonds payable group B	40,592	
	Gain on retirement of bonds		8,592
	Cash		832,000

5.a. Calculating the issue price of the 8% bonds:

Present value of Sh.800,000 to be paid after 10 periods discounted at 5% (Sh.800,000 x 0.6139)	Sh.491,120
Present value of Sh.32,000 to be periodically for 10 periods discounted at 5% (Sh.48,000 x 7.7217)	<u>247,094</u>
Present value of the bonds	<u>738,214</u>

b. The entry for the issuance of the 8% bonds on January 1, 2003:

Jan.1,2003	cash	738,214
	Discount on bonds payable group C	61,786

Bonds payable group C 800,000
Issued 8% bonds at a discount

c. The discount amortization table for the 8% bonds (interest method):

	Beg. Carrying Amount	Interest expense for the Period	interest to be paid to bondholders	premium to be amortized	unamortized discount at End. Of period	End carrying amount
30/6/03	Sh.738,214	Sh.43,088	Sh.32,000	Sh.4,91	Sh.56,875	Sh.743,125
31/12/03	743,125	42,843	32,000	5,156	51,719	748,281
30/6/04	748,281	42,585	32,000	5,414	46,305	753,695
31/12/04	753,695	42,214	32,000	5,685	40,620	759,380
30/6/05	759,380	42,030	32,000	5,969	34,651	765,349
31/12/05	765,349	41,731	32,000	6,267	28,384	771,616
30/6/06	771,616	41,418	32,000	6,581	21,803	778,197
31/12/06	778,197	41,089	32,000	6,910	14,893	785,107
30/6/07	785,107	40,743	32,000	7,255	7638	792,362
31/12/07	792,362	<u>40,397</u>	<u>32,000</u>	<u>7,638</u>	-0-	800,000
Total		<u>418,238</u>	<u>480,000</u>	<u>61,762</u>		

d. The entry for the first payment of interest on the bonds on June 30, 2003:

Jun. 30, 2003	interest expense	36,911	
	Discount on bonds payable, group C		4,911
	Cash		32,000
	Paid interest on 12% bonds.		

Questions

1. What is a lease?
2. What are the advantages of leasing a plant asset over purchasing it?
3. Distinguish between an operating lease and a capital lease.
4. When a capital lease is to be recorded, how do you determine the amount to be debited in the asset account?
5. What is carrying amount of a lease?
6. What circumstances might lead to termination of a lease?

Exercises

3-1 Western Engineering Co. leased a machine on January 1, 2003, under a contract calling for four annual payments of Sh15,000 on December 31 of 2003 through 2006, with the machine becoming the property of the lessee after the fourth payment. The machine was predicted to have a service life of six years and no salvage value, and the interest rate available to Western Engineering for equipment loans was 12% on

the day the lease was signed. The machine was delivered on January 10, 2003, and was immediately placed in service. On January 4, 2008, it was overhauled at a total cost of Sh2,500. The overhaul did not increase the machine's efficiency but it did add two additional years to the expected service life. On June 30, 2010, the machine was traded in on a similar new machine having a Sh42,00 cash price, a Sh3,000 trade-in allowance was received, and the balance was paid in cash.

Required:

- a. Determine the initial net liability created by this lease and the cost of the leased asset.
- b. Prepare a table showing the calculation of the amount of the interest expense allocated to each year the lease is in effect and the carrying amount of the liability at the end of each of those years.
- c. Prepare the entry to record the leasing of the machine.
- d. Prepare entries that would be made on December 31, 2004, to record the annual depreciation on a straight-line basis, to record the lease payment, and to amortize the discount. Also show how the machine and the lease liability should appear on the December 31, 2004, balance sheet.
- e. Prepare the entries to record the machine's overhaul in 2008 and depreciation at the end of that year.
- f. Prepare the entries that would be needed to record the exchange of the machines on June 30, 2010.

Round all amounts to the nearest shilling.

3-2 The Clare drilling company needs two new trailers, each having an estimated service life of 12 years. The trailers could be purchased for Sh50,000 each, but Clare does not have enough cash to pay for them. Instead, Clare agrees to lease Trailer 1 for four years, after which the trailer remains the property of the lessor. In addition, Clare agrees to lease Trailer 2 for six years, after which the trailer remains the property of the lessor. According to the lease contracts, Clare must pay Sh13,000 annually for each trailer, with the payments to be made at the end of each lease year. Both leases were signed on December 31, 2003, at which time the prevailing interest rate available to Clare for equipment loans was 14%.

Required:

- a. Determine whether each of these two leases is an operating or capital lease.
- b. Prepare any required entries to record entering into the lease of (a) Trailer 1 and (b) Trailer 2.
- c. Prepare the entries required on December 31, 2004, for (a) Trailer 1 and (b) Trailer 2. Use straight-line depreciation for any capital leases. (Remember if the asset remains the property of the lessor, the lessee must take depreciation over the capital lease).
- d. Trailer 1 was returned to the lessor on December 31, 2007, the end of the fourth and final year of the lease. Prepare the required entries of December 31, 2007, for (a) Trailer 1 and (b) Trailer 2.

- e. Show how Trailer 2 and the lease liability for the trailer should appear on the balance sheet as December 31, 2007 (after the year end lease payment).
Round all amounts to the nearest shilling.

3-3 Stone Pint company leased a machine on January 1, 1998, under a contract calling for six annual payments of Sh130,000 on December 31 of 1998, through 2003. with the machine becoming the property of the lessee after the sixth payment. The machine was predicted to have service life of seven years and no salvage value, and the interest rate available to Stone Point for equipment loans was 9% on the day the lease was signed. The machine was delivered on January 8, 1998, and was immediately placed in service. On January 2, 2001, it was overhauled at a total cost of Sh29,200.

The overhaul did not increase the machine's efficiency but it did add an additional three years to its expected service life. On September 30, 2004, it was traded on a similar new machine having a Sh330,000 cash price. A Sh65,000 trading allowance was received, and the balance was paid in cash.

Required:

- a. Determine the initial net liability created by this lease and the cost of the leased asset.
- b. Prepare a table that shows the calculation of the amount of interest expense allocated to each year the lease is in effect and the carrying amount of the liability at the end of those years.
- c. Prepare the entry to record the leasing of the machine.
- d. Prepare the entries that would be made on December 31, 1999, to record the annual depreciation on straight-line basis, to record the lease payment, and amortize the discount. Also show the machine and the lease liability as at December 31, 1999 on the balance sheet.
- e. Prepare the entries to record the machine's overhaul in 2001 and depreciation at the end of that year.
- f. Prepare the entries that would be needed to record the exchange of the machines on September 30, 2004.

Round all amounts to the nearest shilling.

3-4 Geoffrey Sachs & Co. Ltd. leased two new trucks for use in transportation of relief food. Each of the trucks has an estimated life of 6 years. Truck 1 was leased for two years. Truck 2 was leased for three years. Each lease agreement calls for Sh750,000 annual lease payments at the end of that year. At the end of each lease, the truck will be returned to the lessor. Both leases were signed on December 31, 2000, at which the prevailing rate available to the company for equipment loans was 12%. Each of the Trucks could have been purchased for Sh1,900,000 cash.

Required:

- a. Determine whether each of these two leases is an operating or a capital lease.

- b. Prepare any required entries to record entering into the lease of (a) Truck 1 and (b) Truck 2.
- c. Prepare entries required on December 31 2001, for (a) Truck 1 and (b) Truck 2. Use straight-line depreciation for any capital leases. (Remember, if the asset remains the property of the lessor, the lessee must take depreciation over the period of the capital lease).
- d. Truck 1 was returned to the Lessor on December 31, 2002, the end of the second and final year of the lease. Prepare required entries as of December 31, 2002, for (a) Truck 1 and (b) Truck 2.
- e. Show how Truck 2 and the lease liability for the truck should appear on the balance sheet as of December 31, 2002 (after the year-end lease payment).

Round all amounts to the nearest shilling.

LESSON FOUR

4.0 Stockholders Equity

Learning Objectives

After you have studied this chapter, you should:

1. Be able to describe the characteristics, advantages, and disadvantages of the corporate form of business organization.
2. Know the different types of investments shareholders make in firms and the rights of each.
3. Be able to describe and demonstrate accounting and reporting practices for the issuance of the various forms of capital stock.
4. Understand the accounting and reporting practices for treasury stock, including both the cost method and the par value method.
5. Understand the accounting and reporting practices for the retirement of callable and redeemable stock and for the conversion of convertible preferred stock.
6. Understand the accounting and reporting practices for the various stock compensation plans.
7. Understand how donated capital is treated in books of account.

4.1 The Corporate Form

A corporation is generally defined as a body of persons granted a charter legally recognizing them as a separate entity having its own rights, privileges, and liabilities distinct from those of its owners. Of the three forms of business organizations (sole proprietorship, partnership and the corporations), corporations are fewest in number. However, In terms of the aggregate amount of resources controlled, goods and services produced, and the people employed, the corporation is the most important form of business organization. Thus an understanding of corporations and corporate accounting is important to accounting students.

Corporations may be classified by the nature of ownership as follows:

1. Private sector corporations:
 - (a) Stock: private corporations that issue stock as evidence of ownership interest, and seek profits and increased wealth for the owners.
 - (i) Open corporations – stock corporations whose stock is widely held and is available for purchase by the public.
 - Listed corporations – stock is traded on an organized stock exchange, such as the Nairobi Stock Exchange

- Unlisted or over-the-counter corporations- stock traded in a market in which securities dealers buy from and sell to the public.
- (ii) Closed corporations- stock corporations whose stock is held by few individuals (perhaps a family) and is not available for purchase by the public.
- (b) Nonstock: private corporations that do not seek profits or issue stock, such as churches, charities and colleges.

2. Public sector corporations: corporations owned by governmental units.

4.1.1 Forming A Corporation

To form a corporation, incorporators (individuals wishing to form the corporation), file an application with the relevant state official (usually registrar of companies). The application will contain the memorandum of association and articles of association. If approved by the state, the articles become a contract of corporate charter. The company is then authorized to do business. The incorporators hold a meeting to elect the board of directors and pass a set of bylaws to guide the company's operations. The board of directors then holds a meeting to elect officers of the corporation. Finally, capital is raised through the issuance of shares of stock and operations begin.

Advantages Of Corporations

Corporations have advantages created by the characteristics of its form of business organization. Some of these advantages are:

12. Corporations are separate legal entities- a corporation conducts its affairs with the same rights , duties , and responsibilities as a person.
13. Shareholders are not liable for corporations debt- as separate legal entity; a corporation is responsible for its own acts and its own debts. Shareholders do not contribute to the losses of the company beyond the amounts of their shares.
14. Ownership rights are easily transferred- the ownership of a corporation is represented by shares that can be transferred and disposed of any time the owners wish to do so. The transfer of shares from one person to another has no effect on the management of the corporation.
15. Perpetual life- corporations life may continue indefinitely (as long as it is successful) because it is not tied to the physical life of the shareholders.
16. Shareholders do not have a mutual agency relationship- the shareholders of a corporation do not have mutual agency relationship that exists for partners. Thus, a shareholder who is not a manager does not have to bind the corporation to contracts.
17. Ease of capital accumulation- buying shares in a corporation is always more attractive to investors than forming a partnership. Shares can be transferred easily; shareholders are not liable for the corporation debts; the life of the corporation is not limited to life of members; and stockholders do not have a mutual agency relationship.

18. Professional management- corporations management and ownership are separate. This allows the corporation to hire the best talent available to manage the business.

Disadvantages Of A Corporation

1. Government regulation- corporations are created by fulfilling the requirements of government laws. These laws subject a corporation to considerable state regulation and control.
2. Taxation- corporations are subject to the same property and payroll taxes as single proprietors or partnerships. In addition, corporations are subject to taxes that are not levied on either of the other two. In addition, the income of a corporation is taxed twice, first as income of the corporation, and as a personal income of the shareholders when dividends are paid.
3. Agency problem- sometimes the management of a corporation makes decisions that are not in the interest of shareholders. Due to the legal constitution of the corporation, the wishes of the shareholders may be overruled by the wishes of the directors.

4.1.2 Organizing A Corporation

The authority to manage a corporation is given by the shareholders to the board of directors, and by the board of directors to the corporate officers (managing director and key personnel). Corporate officers carry out the management functions of the company.

4.1.3 Organization Costs

The costs of forming a corporation are called *organizational costs*. Such costs, which are incurred before the incorporation begins operation, include incorporation fees, drawing up articles and memorandum of association, and other expenditures incidental to incorporation.

Theoretically, organization costs benefit the entire life of the corporation. For that reason, a case can be made for recording them as intangible assets and amortizing them over the life of the corporation. However, the life of a corporation normally is not known, so accountants amortize organizational costs over the early years of the corporation life. Most organizations amortize these costs over a five-year period.

Illustration:

Assume that a corporation pays a lawyer Sh50,000 for services rendered in July 1999 to prepare the application for a certificate of incorporation with the state. The entry to record this transaction would be:

1990	July 31	organizational costs	50,000	
		Cash		50,000

Lawyers fee for services rendered in incorporation.

If the corporation amortizes the costs over a five-year period, the entry to record the amortization at the end of the fiscal year would be

2000	June 30	amortization expense, organization costs	10,000	
		Organization costs		10,000

To amortize organizational costs for one year.

4.2 The Concept of Owners Equity

The shareholders are the bona fide owners of the corporation. However, the shareholders there must give a consideration to the company for them to be called owners. This consideration is the shares that they buy from the company and is called *owners equity*. As the company grows, the owners equity will increase in value through **Retained earnings**.

The primary categories of stockholders' include the following:

- Capital stock (Contributed capital)
 - Common Stock.
 - Preferred Stock.
 - Paid-in capital in excess of par value- Common
 - Paid-in capital in excess of par value- Preferred
 - Contributed capital from treasury stockholders
- Retained earnings
 - Unappropriated Retained earnings
 - Appropriated Retained earnings
- Unrealized capital

The above items that constitute owners equity are explained below:

4.2.1 Contributed Capital

(a) Common Stock

A Corporation can issue two basic types of stock: common stock and preferred stock. If the Corporation issues only one kind, it is called **common stock**. Common stock is the company's residual equity. This means all other creditors and preferred stockholders claims to the company's assets rank ahead of those of the common stockholders in the case of liquidation. Because common stock is generally the only stock that carries voting rights, it represents the means of controlling the Corporation.

Characteristics Of Common Stock

Shares of capital stock, represented by the stock certificates, evidence ownership in a corporation. Shares may be bought, sold, or otherwise transferred by stockholders without the consent of the corporation (unless there is an enforceable agreement not to do so). Ownership of common stock usually entitles the holder to:

- The right to vote in stockholder meetings and influence the management of the corporation.
- The right to participate in the earnings of the Corporation through dividend declared by the board of directors.
- The right to share in the distribution of assets of the corporation at liquidation.
- The right to purchase shares of common stock of the corporation on a pro rata basis when new issues are offered for sale. This preemptive right is designed to provide the stockholder the opportunity to maintain a proportional ownership in the Corporation.

The first three rights are basic and generally hold in all companies. These basic rights are shared proportionately by all stockholders of each class of stock unless the charter or bylaws specifically provide otherwise. When there are two or more classes of stock, ownership rights vary depending on the class.

Common stockholders are the residual owners of the corporation. Their position is less secure than that of creditors and preferred stockholders. The corporation owes its creditors contractual payments on specified dates, and preference stockholders usually have a priority as to dividend and liquidation amount per share. Thus, common stockholders have the greatest exposure to the risks of corporate failure because their rights to cash flows comes after creditor and preferred stockholder claims have been met. Although common stock is usually voting stock, some corporations issue two or more classes of common stock: one class has voting rights (often classified as Class A), and any other (Class B and other classes) is nonvoting. This arrangement permits control by a small group and still allows access to capital markets.

(b) Preferred Stock

Preference stock confers preferences or specific rights that distinguish it from common stock. The most common preference is a priority claim on dividends, usually at a stated rate or amount. In exchange for this preference, the preferred stockholders often sacrifice voting rights and the rights and the right to dividends beyond the stated rate or amount.

In general, these preferences affect a variety of rights:

- Voting.
- Cumulative or non cumulative dividends.
- Nonparticipating, partially participating, or fully participating with common stockholders in dividends in excess of the stated preferred dividend.
- Assets in liquidation.
- Convertibility to other securities.
- Redemption.

Preferred stock usually is par value with dividend preference expressed as percentage of par. For example, 6 percent preferred stock has a dividend of 6 percent of the par value of each share. Preference does not guarantee a dividend, but when the corporation declares dividends, preferred stockholders must get a 6 percent dividend before common stockholders receive any dividends. In the case of no-par preferred stock, the dividend preference is expressed as a specific shilling amount per share, such as Sh 5 per preferred share.

(c) Paid-In Capital In Excess Of Par Value- Common/Preferred

When shares are sold at a price that is higher than the par value, the difference between the share price and the par value is called a premium. The premium per share multiplied by number of shares sold is called *paid-in capital in excess of par value*- common or *paid-in capital in excess of par value- preferred* if it arises from sale of common stock or preferred stock respectively.

(d) Contributed Capital From Treasury Stock

Treasury stock are shares of the company repurchased by the company itself. These shares can be resold to the general public. When such shares are sold for a higher amount than the purchase price, the extra amount raised will be capitalized as *Contributed capital from treasury stock*.

Unrealized capital- increases or decreases in stockholders' equity that does not arise from contributions from stockholders or from the Retained earnings.

A share of stock is a unit of ownership in a Corporation. A stock certificate is issued to the owner. It shows the number of shares of the Corporation's stock owned by the stockholders. Stockholders can transfer their ownership at will. To help with the initial issue, of capital stock, called an initial public offering (IPO); a Corporation often uses an underwriter (an intermediary between the investing public). For a fee, the underwriter usually guarantees the sale of the stock. The Corporation records the amount of the net proceeds of the offering less the underwriters fees, legal and printing expenses, and any other direct costs of the offering in its capital stock and additional paid-in capital accounts.

4.2.2 Retained Earnings

Retained earnings are the earnings of the corporation since its inception, less any losses, dividends, or transfers to contributed capital. Retained earnings are not a pool of funds to be distributed to the stockholders; they represent instead, earnings reinvested in the Corporation.

Unappropriated Retained earnings are past profits that have been set aside but not allocated for specific utilization; therefore, available for distribution to stockholders.

Appropriated Retained earnings on the other hand are set aside for specific commitments and cannot be distributed to stockholders.

4.2.3 Unrealized Capital

Unrealized capital is the increase or decrease in stockholders' equity that do not arise from contributions from stockholders or from Retained earnings.

4.3 Classification Of Capital Stock

Following are the definitions of various classifications of capital stock:

- a. **Authorized**- the number of shares of stock that can be issued legally, as specified in the charter of the corporation.
- b. **Issued**- the number of shares of authorized capital stock has been issued to stockholders.
- c. **Unissued**- the number of shares of authorized capital stock that has not been issued to stockholders (the difference between authorized and issued shares)
- d. **Treasury shares**- shares previously issued and later repurchased by the corporation that are still held (the difference between issued shares and outstanding shares).

- e. **Outstanding**- the number of shares issued, less the number of shares repurchased and currently held by the company as treasury stock.
- f. **Subscribed**- unissued shares of stock set aside to meet subscription contracts (that is, shares sold on credit and not yet paid for). Subscribed stock is usually not issued until the subscription price is paid in full.

4.4 Accounting Treatment Of Stockholders' Equity

On the balance sheet, the assets and liabilities of a corporation are handled like the assets and liabilities of other forms of business. The main difference between accounting for corporations and accounting for sole proprietorships lies in the treatment of owners equity. Categories of stockholders' equity are accounted for , and reported separately on the balance sheet.

4.4.1 Presentation Of Stockholders' Equity On The Balance Sheet

In a corporations balance sheet, the owners claims to the businesses are called stockholders equity and are presented on the balance sheet as follows:

Stockholders' Equity

Contributed capital:

Preferred stock- Sh. 50 par value, 10,000 shares Authorized, issued, and outstanding	Sh. 500,000
Preferred stock subscribed, 1,000 shares	<u>40,000</u>
540,000	
Common stock no-par value, 10,000 shares authorized; 8,000 shares, issued and outstanding, stated value Sh.5	40,000
Common stock- Sh. 5 par value, 300,000 shares Authorized, 200,000 shares issued and outstanding	<u>1,000,000</u>
1,040,000	
Paid-in capital in excess of par value, preference	100,000
Paid in capital in excess of par value, common	<u>500,000</u>
<u>600,000</u>	
Total contributed capital	
2,180,000	

Retained earnings:

Appropriated for bond sinking fund	50,0000
Unappropriated	<u>170,000</u>
Total Retained earnings	
220,000	

Unrealized capital:

Unrealized loss on investments in securities available for sale	
<u>(10,000)</u>	
Total stockholders equity	
<u>2,390,000</u>	

4.4.2 Accounting For Stock Issues.

The primary objectives in accounting for the issuance of stock are:

- (1) To identify the specific sources of paid in capital
- (2) To maintain the distinction between paid in capital and retained earnings.

Issuing par value common stock for cash.

Par value does not indicate a stocks' market value. Therefore, the cash proceeds from issuing par value stock may be equal to, greater than, or less than par value. When the issuance of common stock for cash is recorded, the par value of shares is credited to common stock. The portion of proceeds that is above or below par value is recorded in a separate paid-in capital account.

To illustrate, assume that Kerio Flowers Co. issues 1,000 shares of Sh1 par value common stock at par for cash. The entry to record this transaction is:

Cash	1,000	
Common stock		1,000
<i>To record issuance of 1,000 common shares of Sh1 at par value</i>		

If Kerio Flowers Co. issues 1,000 shares of Sh1 par value common stock at Sh5 for cash. The entry to record this transaction is:

Cash	5,000	
Common stock		1,000
Paid-in capital in excess of par value		4,000

To record issuance of 1,000 common shares of Sh1 at a premium

The total paid-in capital from these two transactions is Sh6,000, and the legal capital is Sh2,000. If Kerio Flowers has retained earnings of Sh500, the stockholders equity will be Sh6,500 presented in the balance sheet as follows:

Stockholders' equity	
Paid in capital	
Common stock.	Sh2,000
Paid-in capital in excess of par value	<u>4,000</u>
Total paid in capital	6,000
Retained earnings	<u>500</u>
Total stockholders' equity	<u>6,500</u>

When stock is issued for less than par value, the account paid-in capital in excess of par value is debited, if a credit balance exists in this account. If a credit balance does not exist, then the amount less than par is debited to retained earnings.

4.4.3 Issuing No-Par Common Stock For Cash

When no par common stock has a stated value, the entries are similar to those illustrated for par value stock. The stated value represents legal capital. Therefore it is credited to common stock. In addition, when the selling price of no-par stock exceeds stated value, the excess is credited to paid-in capital in excess of stated value. For example, assume that instead of Sh1 par value stock, Kerio Flowers has Sh5 stated value no-par stock and the company issues 5,000 shares at Sh8 per share for cash. The entry is:

Cash	40,000	
Common stock		25,000
Paid-in capital in excess of stated value		15,000
<i>To record issue of 5,000 shares sold at Sh5 stated value no-par stock.</i>		

Paid-in capital in excess of stated value is reported as part of paid-in capital in the stockholders' equity section.

What happens when no-par stock does not have a stated value? In that case, the entire proceeds become legal capital and are credited to common stock. Thus, if Kerio Flowers does not assign a stated value to its no-par stock, the issuance of the 5,000 shares at Sh8 per share is recorded as follows:

Cash	40,000	
Common stock		40,000
<i>To record issue of 5,000 shares of no-par stock.</i>		

The amount of legal capital for Kerio Flowers stock with a Sh5 stated value is Sh25,000. Without a stated value, it is Sh40,000.

4.4.4 Issuing Common Stock For Services Or Non-Cash Assets

Stock may also be issued for services or for non-cash assets. In such cases, what cost should be recognized in the exchange transaction? To comply with the cost principle, in a non-cash transaction cost is the cash equivalent price. Thus, cost is either the fair market value of the consideration given up, or the fair market value of the consideration received, whichever is more clearly determinable.

To illustrate, assume that Mutwola and Co. advocates have helped Maisha company incorporate. They have billed the company Sh5,00 for their services. They agree to accept 4,000 shares of SH1 par value common stock in full settlement of their bill. At the time of the exchange, there is no established market price of for the stock. In this case, the market value of the consideration received, Sh5,000, is more evident. Accordingly the entry will be:

Organization expense	5,000	
Common stock		4,000
Paid-in capital in excess of par value		1,000

To record issuance of 4,000 shares of Sh1 par value stock to advocates

Note that organizational costs are expenses as incurred. If in contrast, Maisha company is an existing publicly owned company and its Sh5 par value stock is publicly traded at Sh8 per share. The company issues 10,000 shares of stock to acquire recently advertised land at Sh90,000. The most evident value in this non-cash transaction is the market price of the consideration given, Sh80,000. The transaction will be recorded as follows:

Land	80,000	
Common stock		50,000
Paid-in capital in excess of par value		30,000
<i>To record issuance of 10,000 shares of Sh5 par value stock for land.</i>		

Example:

Chesonok Ltd begins operations on March 1 by issuing 100,000 shares of Sh10 par value common stock for cash at Sh12 per share. On March 15 it issues 5,000 shares of common stock to advocates in settlement of their bill of Sh50,000 for organization costs. Journalize the issuance of shares; assuming the stock is not publicly traded.

Solution:

Mar. 1	cash	1,200,000	
	Common stock		1,000,000
	Paid-in capital in excess of par value		200,000
<i>To record issuance of 100,000 shares at a premium</i>			
Mar. 15	organization expense	50,000	
	Common stock		50,000
<i>To record issuance of 5,000 shares for advocate's fees</i>			

Issuing preferred stock

The accounting treatment for preferred stock is the same as that of common stock. The only difference is that preferred stock account and paid-in capital in excess of par value, preferred stock are credited instead of common stock and paid-in capital in excess of par value, common stock respectively.

For example, assume that Kerio Flowers has issued 10,000 shares of Sh5 par value, 8% non-cumulative preferred stock at Sh8 per share for cash. The entry is:

Cash	80,000	
Preferred stock		50,000
Paid-in capital in excess of par value, preferred		30,000
<i>To record issue of 10,000 shares sold at a premium.</i>		

4.4.5 Capital Stock Sold On A Subscription Basis

During the start-up of a corporation, prospective stockholders may sign a contract to purchase a specific number of shares on credit, with payment due later. A corporation

may sell capital stock on credit anytime after incorporation. Such contractual agreements are known as stock subscriptions, and the stock involved is called subscribed capital stock.

Example 1:

Standard co. , a large publishing firm, posted a page on the World Wide Web facilitating trading in stock. This medium allows the firm to access the capital market even without paying underwriters or brokers.

When a legal contract is involved, accounting recognition must be given to these transactions. The agreed contractual price is debited to stock subscriptions receivable. Capital stock subscribed is credited for the par, stated, or assigned amount per share. The difference is credited to contribute capital in excess of par (or stated value) as though the subscriber had paid for the subscribed shares in full.

Example 2:

Suppose that Standard Co. receives subscriptions for 5,000 shares of Sh5 par common stock at Sh40 per share. The subscription terms require a down payment of 20 percent, with the remainder of the purchase price to be paid in two equal installments, at the end of three months and six months from the subscription date. The entry to record the subscriptions is as follows:

Cash	40,000	
Subscriptions receivable	160,000	
Common stock subscribed		25,000
Paid-in capital in excess of par value		175,000

Standard Co common stock subscribed for par value of the subscribed shares (Sh5*5,000 shares = Sh25,000) and credits paid-in capital in excess of par value (Sh35*5,000 = Sh175,000). At the end of three months, Standard records the collection of the first installment of the receivable as follows:

Cash	80,000	
Subscriptions receivable		80,000

At the end of the six months, Standard records the collection of the remaining balance of the receivable and the issuance of shares:

Cash	80,000	
Subscriptions receivable		80,000
Common stock subscribed	80,000	
Common stock		80,000

4.4.6 Defaults On Stock Subscriptions

When a company issues capital stock on subscription basis, the possibility exists that some or all of the receivable will not be collected. If a subscriber to a capital stock is unable or unwilling to pay the full purchase of the subscribed shares, the subscriber is said to be in default.

When a subscriber is in default, the issuing company has the following options:

- (1) Return the amount paid in
- (2) Keep the amount paid in without issuing shares
- (3) Return the amount paid less any deficiency in the amount realized on reissuance
- (4) Keep the amount paid in and issue shares to the defaulting subscriber based on the amount paid in

Continuing with the Standard Co. example, assume instead that a subscriber to 50 shares of stock at Sh 40 per share defaults on the last installment of the subscription. The account balances relating to the defaulting subscriber are:

Subscriptions receivable (Sh16*50shares)	Sh800
Common stock subscribed (Sh5*50)	250
Paid-in capital in excess of par value(Sh35*50)	1,750

Standard has already received cash of Sh400 (down payment) plus Sh800 (first installment), or a total of Sh1200 (Sh24*50 shares). Accounting for the alternative treatments available to Standard for the Sh1200 of cash paid in before default is as follows:

- (1) Return the amount paid in to the defaulting subscriber

Common stock subscribed		250
Paid-in capital in excess of par value	1,750	
Subscriptions receivable		800
Cash		1,200

- (2) Keep the amount paid in without issuing shares

Common stock subscribed		250
Paid-in capital in excess of par value	1,750	
Subscriptions receivable		800
Contributed capital from defaulted subscriptions		1,200

- (3) Return the amount paid less any deficiency in the amount realized on re-issuance: Assume the shares are re-issued for Sh38 a share

Common stock subscribed		250
Paid-in capital in excess of par value	1,750	
Subscriptions receivable		800
Cash		1,200
Cash (Sh38*50)	1,900	
Common stock		250
Paid-in capital in excess of par value		1,650
Payable to defaulting subscriber	1,200	
Cash		1,100

Paid-in capital in excess of par value	100
----------------------------------------	-----

- (4) Keep the amount paid in and issue shares to the defaulting subscriber based on the amount paid in (issue 30 shares to the defaulting subscriber i.e. $1200/40 = 30$).

Common stock subscribed	250	
Paid-in capital in excess of par value	700	
Common stock		250
Subscriptions receivable		800

4.4.7 Lump-Sum Stock Issuance

To increase the attractiveness of its stock and to generate additional capital, a corporation sometimes issues two or more types of stock as a unit- for example, one share of common stock and one share of preferred stock. The issuing company must allocate the amount received between the two classes of securities issued based on relative fair values of the securities at the time of issuance. If the company knows only one of the fair values of the securities issued, it must assign the known fair value to the appropriate security and then allocate the remainder of the amount received to the security whose fair value is not determinable.

To illustrate, assume that Raipia Ltd. offers a package consisting of one share of Sh10 par common stock and one share of Sh100 par preferred stock for Sh150. Raipia issues 1,000 of the units. At the time of issuance, the market price of the common stock is Sh50 per share, and the market price of the preferred stock is Sh30 per share. Raipia allocates the Sh150,000 ($Sh150 \times 1,000$) to the common and preference stock as follows:

Fair value of common ($Sh50 \times 1000$ shares)	Sh50,000
Fair value of preference shares ($Sh100 \times 1000$)	<u>130,000</u>
Total fair value	<u><u>180,000</u></u>

Allocation to common: $50,000/180,000 \times 150,000 = 41,667$

Allocation to preferred: $130,000/180,000 \times 150,000 = 108,333$

Total allocation 150,000

The required journal entry is:

Cash	150,000	
Common stock ($Sh10 \times 1,000$)		10,000
Paid-in capital in excess of par value- common		31,667
Preference stock ($Sh100 \times 1,000$)		100,000
Paid-in capital in excess of par value- preference		8,333

If instead, the market price of the preferred stock is not determinable, and the market price of the common stock is known to be Sh50 per share, Raipia allocates the Sh150,000 as follows:

Cash received	Sh150,000
Allocated to common stock (Sh50*1,000)	<u>(50,000)</u>
Allocated to preferred stock	<u>100,000</u>

Note that the approach to valuing a lump-sum issuance of securities is comparable to the problem of valuing two or more assets received in a lump-sum exchange. In both cases, the allocation is based on fair values.

4.5 Stock Issue Costs

Corporations incur legal, accounting, administrative, and promotional costs when they issue capital stock. For example, a company might announce a proposed offering on capital stock in the Daily Newspaper. The cost of advertisement is a cost the stock issue. Because stock issue costs do not relate to operations, they should not affect reported earnings. Corporations incur these costs in association with capital transactions rather than earnings activities. Therefore, stock issue costs are recorded as a reduction of the contributed capital associated with shares. The net amount of capital generated is the issue price of the securities minus the stock issue costs.

4.6 Treasury Stock

Treasury stock is capital stock, either common or preferred, that has been issued and reacquired by issuing company and has not subsequently been resold or retired. The company normally gets the stock back by purchasing the shares on the market.

A company may purchase its own stock for several reasons:

1. It may want stock to distribute to employees through stock option plans.
2. It may be trying to maintain a favorable market for its stock.
3. It may want to increase its earnings per share.
4. It may want to have additional shares of stock available for such activities as purchasing other companies.
5. It may want to prevent a hostile takeover.

A treasury stock purchase produces the assets and stockholders' equity of the company. It is not considered a purchase of assets, as the purchase of shares in another company would be. Treasury stock is capital stock that has been issued but no longer outstanding. Treasury stock can be held for an indefinite period, reissued, or retired. Like unissued stock, treasury stock has no right until it is reissued. Treasury stock does not have voting rights, rights to share dividends, rights to share in assets during liquidation, and is not considered outstanding in calculation of book value. However, there is no much difference between unissued shares and treasury stock. Treasury stock can be reissued at par, at a premium or at a discount.

4.6.1 Purchase Of Treasury Stock

When a treasury stock is purchased, it is normally recorded at cost. The transaction reduces both the assets and the stockholders' equity of the firm. For example, assume that on September 15 Stage Buses Ltd. purchases 1,000 shares of its common stock on the market at a price of Sh50 per share. The purchase would be recorded as follows:

Sep. 15	Treasury stock, common	50,000	
	Cash		50,000
	<i>To record 1000 common shares acquired as treasury stock.</i>		

The treasury stocks are recorded at cost. The stockholders section of Stage balance sheet shows the cost of treasury stock as a reduction from the total of contributed capital and retained earnings as shown below.

Contributed capital:

Common stock- Sh5 par value, 100,000 shares authorized, 30,000 shares issued, 29,000 shares outstanding	Sh150,000
Paid-in capital in excess of par value, common	<u>30,000</u>
Total contributed capital	180,000
Retained earnings	<u>900,000</u>
Total contributed capital and retained earnings	1,080,000
Less treasury stock, common (1,000 shares at cost)	<u>(50,000)</u>
Total stockholders' equity	<u><u>1,030,000</u></u>

4.6.2 Sale Of Treasury Stock

Treasury shares can be sold at cost, above cost or below cost. For example, assume that on November 15, the 1,000 treasury stock of Stage is sold for Sh50 per share. The entries would be:

Nov. 15	Cash	50,000	
	Treasury stock- common		50,000
	<i>Reissued 1,000 shares of treasury stock for Sh50 per share</i>		

Suppose that the Stage treasury shares were sold for Sh60 and not Sh50. the entries would be:

Nov. 15	Cash	60,000	
	Treasury stock- common		50,000
	Paid-in capital in excess of par value- treasury		10,000
	<i>Reissued 1,000 shares of treasury stock for Sh60 per share</i>		

Note: gain or loss on treasury stock is not recognized.

When Treasury stock is sold below par (although it is rarely to sell at a discount), the paid-in capital in excess of par value- treasury account is used to write off the discount. However, if the amount is not enough or the account is non existent, retained earnings is used to write of the discount.

Suppose that the Stage treasury shares were sold for Sh42 and not Sh50. Assume also that the paid-in capital in excess of par value- treasury stock has a balance of Sh4,000. The entries would be:

Nov. 15	Cash	42,000	
	Paid-in capital in excess of		
	Par value- treasury	4,000	
	Retained earnings	4,000	
	Treasury stock- common		50,000
	<i>Reissued 1,000 shares of treasury stock for Sh42 per share</i>		

4.6.3 Retirement Of Treasury Stock

If a company determines that it will not reissue stock it has purchased, with the approval of its stockholders it can retire the stock. When shares of stock are retired, all items related those shares are removed from the related capital accounts. When stock that cost less than its original contributed capital is retired, the difference is recognized in paid-in capital retirement of stock. On the other hand, if the stock had cost more than its par value, the difference is debited to retained earnings.

Example:

Stage through resolution passed by the shareholders wants to retire its 10,000 treasury stock purchased for Sh100,000. These shares were originally issued for Sh6 and its par value was Sh5. show the entries to record this transaction.

	Common stock	50,000	
	Paid-in capital in excess of par value,	10,000	
Common 1,000	Retained earnings	40,000	
	Treasury stock, common		100,000

Retirement of 10,000 shares that cost Sh50 and were issued originally at Sh6 per share.

4.7 Donated Capital

The issuance of capital through donations (for example, a city may donate land to a corporation to induce it to locate there). The corporation receiving the asset records the donated asset at its fair value, with a corresponding credit to donated capital. This event affects capital rather than earnings, and thus no gain or loss arises. The donated capital account usually appears in the balance sheet in the additional capital contributed section of stockholders' equity.

4.8 Stock Rights

Corporations issue stock rights as a preliminary step to issuing additional shares of stock. A stock right entitles the older to acquire shares of the issuing corporation's stock according to specified terms. The most common situations in which companies issue stock rights are:

1. To satisfy the preemptive right of existing stockholders in connection to issuance of additional shares of stock.

2. To enhance the marketability of another type of security, such as bonds or preferred stock.
3. To give executives and employees an opportunity to acquire shares of stock in connection with company stock plans.

The accounting procedures for stock rights depend on the circumstances under which the company issues the rights.

Illustration:

Kenya Couriers will issue to holders about 930,000 five-year warrants to purchase a common share at Sh55 each.

The warrants will be distributed to stock of record Feb. 11 at the rate of one warrant for each 100 shares held. These warrants would expire Feb. 28, but Kenya Couriers reserves the right to move up the expiry date if the common rises to at least Sh95 a share for 10 consecutive days. Cash will be given in lieu of fractional warrants.

Kenya Couriers closed on the Nairobi Stock exchange on Feb. 10 at Sh 39.625, down Sh2. the company currently has about 93 million shares outstanding.

When a company issues warrants as evidence of preemptive rights, it does not need to make a formal accounting entry. The company should instead record a memorandum entry specifying the number of rights issued. The memorandum entry appears in the general journal and provides description of the agreement. The corporation must be certain enough unissued shares are available to permit exercise of the rights.

Stockholders can either exercise the stock rights, sell them, or them expire. The issuing company must account for only those shares exercised. For example, if a stockholder exercises preemptive rights to acquire 100 shares of Sh10 par common at Sh25 per share, the company must make the following journal entry:

Cash (Sh25*100)	2,500	
Common stock		1,000
Paid-in capital in excess of par value-common		1,500

Fractional Share Rights

When a stock dividend is issued, not all shareholders may own the exactly number of shares needed to receive whole shares. For example, if a firm issues a 5 percent stock dividend and a shareholder owns 30 shares, the stockholder is entitled to 1-½ shares (30 x 0.05). One way of issuing firm to deal with this problem is to distribute fractional share rights.

Assume Fiat company has 1 million outstanding shares of common stock, par \$5. Fiat declares 5% stock dividend. The market value of common shares before the stock dividend is \$80 per share. The number of shares to be issued as the stock dividend is 5% of the number of shares outstanding, or 50,000 shares.

Assume also that the firm's shareholders' ownership is such that 42,000 whole shares can be issued. The firm would issue fractional share rights for the remaining shares to be issued. Each fractional share right would entitle the holder to acquire 1/20 of a share. Since there are 8,000 shares yet to be issued, there would be 160,000 (8,000*20) fractional share rights issued, each costing \$4 (\$80/20). A buyer of the fractional rights would need 20 fractional shares to be issued with one share of common stock.

The entries to record the issuance of stock dividend and fractional share rights are:

To record the 42,000 shares issued as a stock dividend at market value:

Retained earnings	3,360,000	
Common stock at par		210,000
Paid-in capital in excess of par value, common		3,150,000

To record the issuance of 160,000 fractional share rights:

Retained earnings	640,000	
Common stock fractional share rights		640,000

The common stock share rights account is included in paid-in capital. When rights are turned into the company for redemption, the common stock fractional share rights account is debited, and common stock, as well as additional paid in capital (if needed), is credited. Suppose for example 20,000 fractional shares are turned in for 100 shares of common stock. The entry to record would be:

Common stock fractional share rights (200084)	8,000	
Common stock, \$5 par (100 shares)		500
Paid-in capital in excess of par value, common		7,500

4.9 Stock-Based Compensation

Over the past couple of decades an increasing number of firms have established plans under which employees receive:

- Shares of stock.
 - Options to acquire shares of stock at a specified price during a specified period.
 - Other financial instruments of the employer.
 - Compensation based on price of the employer's stock.
- These plans come in many different formats and have different titles, including:
- Employee stock purchase plans.
 - Equity participation plans.
 - Stock option plans.
 - Restricted stock plans.

Compensation expense is credited in 2000 because estimated total compensation expense at the end of 2000 is Sh180,000, whereas a total of Sh240,00 was recorded in two previous years.

If the executives exercise all the SARs in 2001, when the quoted market price is Sh36, total compensation expense is Sh320,000 [(Sh36-Sh20) *20,000 shares]. Because Curio recognized compensation expense of Sh180,000 in prior periods, an additional Sh140,000 arises in 2001 at the measurement date, which in this case is also the date of exercise:

Liability under stock plan	180,000		
Compensation expense		140,000	
Cash			320,000

Curio were likely to meet the obligation by the issuance of stock instead of by the payment of cash, Curio would credit an additional contributed capital account, contributed capital- stock appreciation rights, instead of crediting the liability.

There are three common schemes of compensation plans affecting common stock equity.

1. Fixed stock option plan
2. Performance based stock option plan
3. Tandem plan involving stock options or cash

Fixed Stock Option Plan

Companies usually avoided recognition of compensation expense by setting the option equal to the market price at the date of the grant. As a result, even though the plans were designed to provide compensation, no compensation expense was reported for fixed stock option plans.

Illustration:

Assume that SachKom Company has a broad-based stock option plan under which the options granted must be exercised within 10 years of grant date. The exercise price is set equal to the market price of the stock at the date of grant, and the options granted on January 1 each year, the corporation tax rate is 34 percent, and recognition of an asset for compensation cost results in a temporary difference for tax purposes.

Information about SachKom options granted on January 1, 2000, is as follows:

Options granted	900,000
Employees granted options	3,000
Stock price at January 1	Sh50.00
Fair value of each option	Sh18.02
Expected forfeitures per year	3%

The fair value of each option is estimated using the Black-Scholes option-pricing model. Compensation cost will be either fair value at the grant date for all options that actually vest. The number of options that will vest is estimated at the grant date and is adjusted in later years for actual experience. Assume actual turnover is 3% in 2000 and 2001 but increase to 4% in 2002.

The number of options expected to vest from the options granted on January 1, 2000, is 821,406 ($900,000 \times 0.97 \times 0.97 \times 0.97$). Therefore, the estimated fair value of the award on that date is Sh14,801,736 ($821,406 \times \text{Sh}18$), of which Sh14,801,736/3years) would be recognized in 2000 and 2001. In 2002, because actual forfeitures are four percent rather than the expected three percent, the number of vested options decreases to 812,938 ($900,000 \times 0.97 \times 0.97 \times 0.96$), and total compensation cost decreases to Sh14,649,143 ($812,938 \times \text{Sh}18.02$). Thus compensation cost for 2002 is only Sh4,781,319 [$\text{Sh}14,649,143 - (\text{Sh}4,933,912 \times 2)$].

Journal entries at January 1 2000, are as follows:

Prepaid compensation	14,801,736	
Contributed capital- options outstanding		14,801,736

To recognize the value of options granted on January 1 2000.

Contributed capital- options outstanding	5,032,590	
Deferred tax liability		5,032,590

To recognize deferred tax liability arising from granting options on January 1, 2000. ($14,801,736 \times 0.34$)

Repaid compensation is an asset account, and options outstanding are a stockholders, equity account. The tax basis of the prepaid compensation is zero, because the exercise price is equal to the quoted market price on the date of the grant (SH50). Therefore, SachKom has a temporary difference of Sh14,801,376, resulting in a deferred tax liability of Sh5,032,590.

At December 31 2000, compensation expense must be reduced proportionately:

Compensation expense	4,933,912	
Prepaid compensation		4,933,912
To recognize compensation expense for 2000.		

Deferred tax liability	1,677,530	
Deferred tax benefit		1,377,530

To adjust the deferred tax liability for the decrease in prepaid compensation ($\text{Sh}4,933,912 \times 0.34$).

The net after tax-effect of recognizing compensation expense for 2000 is thus Sh3,256,382 ($\text{Sh}4,933,912 - \text{Sh}1,677,530$). At the end of 2001, the same journal entries would be made. However, at the end of 2002, SachKom would have to adjust value of options granted at the beginning of 2000 to reflect the actual experience in 2002 (4percent turnover) and the related deferred tax liability in addition to the normal year-end entries:

Options outstanding	152,593	
Prepaid compensation		152,593

To adjust the value of options granted on January 1, 2000, for actual forfeitures in 2002 (Sh14,801,736 – Sh14,649,143).

Deferred tax liability	51,882	
Options outstanding		51,882

*To adjust deferred tax liability to reflect the decrease in total compensation cost for the January 1, 2000, stock options (Sh152,593*0.34).*

Compensation expense	4,781,319	
Prepaid compensation		4,781,319

To recognize compensation expense for 2002.

Deferred tax liability	1,625,648	
Deferred tax compensation		1,625,648

*To adjust the deferred tax liability for the decrease in the temporary difference for prepaid compensation (Sh4,781,319*0.34).*

To complete the illustration, assume that all options are exercised at the same time and that the market price at the exercise date is Sh70. the journal entry to record the exercise is as follows:

Cash (812,938*Sh50)	40,646,900	
Options outstanding	9,668,435	
Common stock (no par)		50,315,335

To record issuance of stock upon exercise of options

The debit to options outstanding is net of income taxes charged to equity [Sh14,469,143 – (Sh14,469,143*0.34) = Sh9,668,435].

We also assume that the difference between the market price of stock on the exercise date and the exercise price is deductible by SachKom for tax purposes. Under FASB, the tax consequences of an event that changes the contributed capital must be allocated to contribute capital. Thus the deductible amount for tax purposes is Sh16,258,760 [812,938*(Sh70 – Sh50)] and the tax benefit is Sh5,527,978 (Sh16,258,760*0.34), requiring the following journal entry:

Income tax expense	5,527,978	
Paid in capital		5,527,978

To allocate to equity the tax benefit deductible compensation cost upon exercise of options

The above entry is necessary because the tax-deductible amount of Sh5,527,978 reduced income tax expense and increased net income by that amount. To allocate the benefit of tax deduction to paid in capital, income tax expense must be impressed (debited); thus reducing net income, paid in capital must be increased (credited)

If some or all of the options had been allowed to expire, the portion of options outstanding account balance relates to expired options would have been closed to paid in capital. Expiration of stock options has no effect on income.

Performance Based Stock Option Plan

This scheme allows covered employees to receive cash, stock, or both based on the difference between a specified amount per share and the market price at some future date. For these plans, the amount and form of compensation were not determinable until the date of exercise. However, because of the services for which the options were granted usually preceded the date of exercise, compensation expense were estimated for periods between the date of grant and the date of exercise.

Illustration:

Assume that SachKom company granted a performance based stock award rather than a fixed option award. Under this plan, the number of options in which employees vest depends on the increase in the market share of SachKom over a three year period. Specifically, on January 1, 2000, SachKom grants to each of 1,000 employees a maximum of 300 10-year options on shares of common stock. The options vest on December 31, 2002. Each employee will vest in a minimum of 100 options and maximum of 300 options. If market shares increase by more than 10% over the three period, each employee will receive a total of 200 options. If market share increases by more than 20% over the 3-year period, each employee will receive a total of 300 options. We continue to assume that common stock price on January 1 2000 is Sh50 and that the estimated fair value of each option is Sh18.02 at the grant date. Given these assumptions, the estimated fair value of performance based awards depends on the number of options that are expected to be earned during the vested period

If SachKom estimates that at the date of grant and in 2000 and 2001 market share will increase by between 10% and 20%; however, the market share increases by more than 20% in 2002 and each employee vests its options on 300 shares.

Given that the forfeiture rates from turnover are 3% in 2000, 3% in 2001 and 4% in 2002, the cost in 2002 must be adjusted for the unanticipated increase in forfeitures. In 2000 and 2001, the company estimated 913 employees ($1,000 \times 0.97 \times 0.97 \times 0.97$) would remain throughout the three-year period and vest. However, the actual number of vested employees ate the end of 2002 is only 903 ($1000 \times 0.97 \times 0.97 \times 0.96$).

The value of the awards is estimated at the end of each year based on the number of options expected to vest, the expected increase in the market share, and the estimated fair value of each option. Compensation expense is recognized ratably over the vesting period, with adjustments as required for changes in estimates. The following schedule shows the amounts that should be recognized in each of the three years:

Year	Total value of award	pretax cost	cumulative pretax cost
2000	Sh3290452($Sh18.02 \times 200 \times 913$)		Sh1096817($Sh3290452/3$)
	Sh1096817		

2001	Sh3290452(Sh18.02*200*913) Sh2193634	Sh1096817(Sh3290452/3)
2002	Sh4881618(Sh18.02*200*903) Sh4881618	Sh2687984(Sh4881618-2193634)

The journal entries required during each of the three years would be parallel to those in the first illustration. For example, at January 1 2000, the following entries would be made:

Prepaid compensation	3,290,452	
Options outstanding		3,290,452
<i>To record the value of options granted on January 1, 2000.</i>		

Options outstanding	1,118,754	
Deferred tax liability		1,118,754
<i>To record the value differed tax liability arising from options granted (Sh3290452*0.34)</i>		

Tandem Plan Involving Stock Options Or Cash SARs

Stock option plans under which awards with two separate components can be exercised are called *tandem plans* or *combination plans*. From an accounting standpoint, each component is viewed separately and compensation cost is measured and recognized for each grant. Plans that have two components, the exercise of one of which cancels the other, are referred to as tandem plans.

Illustration:

Assume that on January 1, 2000, SachKom company grants employees a choice of either 900,000 stock options or 900,000 stock appreciation rights (SARs) payable in cash. Vesting occurs on December 31, 2002. Exercise of either stock option or SARs cancels the other portion of the award.

Because employees can require SachKom to pay cash or to settle the obligation under the tandem plan, SachKom incurs a liability at the grant date. If the company would choose whether to settle the award in stock or cash, it would treat the award as an equity instrument like the previous two illustrations. If employees exercise the options rather than the SARs, the liability is settled by issuing common stock and not cash.

The fair value of SachKom's liability at the grant date is Sh14,801,736, as in the previous illustration. However, because the total compensation cost will not be known until the exercise expiration date, SachKom does not account for the liability at grant date. Instead, at the end of 2000, when the stock price is Sh55, the company would estimate the total liability at Sh4,107,030 (821406 cash SAR expected to vest * Sh55 increase in the stock market price) and record 1/3 amount, Sh1,369,010, as compensation expense for 2000:

Prepaid compensation	2,738,020	
Compensation expense	1,369,010	
Liability under stock option plan		4,107,030

To record liability under stock option plan and allocate 1/3 compensation expense in 2000 and 2/3 to prepaid compensation.

At the end of each year, the company would re-measure the liability based on the current market price of its common stock and the number of cash SARs vested or expected to vest. Changes in the amounts of liability are recognized as compensation expense of the period in which the changes occur.

Review Problem

The Max corporation was organized in 2000 in Kenya. Its charter authorizes the corporation to issue 1,000,000 of Sh 1 par value common stock and an additional 25,000 shares of 4 percent, Sh20 par value cumulative convertible preferred stock. The transactions relating to the company’s stock during 2000 are as follows:

- Feb. 12 issued 100,000 shares of common stock for Sh125,000.
- 20 issued 3,000 shares of common stock for accounting and legal services. The services were billed at Sh3,600.
- Mar. 15 issued 120,000 shares of common stock to Morris in exchange for a Building and land valued at Sh100,000 and Sh25,000 respectively.
- Apr. 2 purchased 20,000 shares of common stock for treasury at Sh1.25 per Share.
- Jul. 1 issued 25,000 shares of preferred stock for Sh500,000.
- Sep. 30 sold 10,000 of the shares in treasury for Sh1.5 per share.
- Dec. 31 the company reported net income of Sh40,000 for 2000, and the board Declared dividends of Sh25,000, payable on January 15, to stockholders on record on January 8. Dividends included preferred stock cash dividends for half year.

Required

- (i) Prepare the journal entries necessary to record these transactions. Then close the income summary and cash dividends declared accounts to retained earnings. Following the December 31 entry to record dividends, show dividends payable for each class of stock.
- (ii) Prepare the stockholders’ equity section of the balance sheet as at 31st December 2000

Answer to review problem

(i) Journal entries:

2000

Feb.	12	Cash	125,000	
		Common stock		100,000
		Paid-in capital in excess of par value, Common		25,000

		<i>To record issue of shares for cash at a premium</i>	
	20	Organization costs	3,600
		Common stock	3,600
		Paid-in capital in excess of par value, Common	600
		<i>To record issue of shares for legal services</i>	
Mar.	15	Building	100,000
		Land	25,000
		Common stock	120,000
		Paid-in capital in excess of par value, Common	5,000
		<i>To record issue of shares for land and building</i>	
Apr.	2	Treasury stock, common	25,000
		Cash	25,000
		<i>To record purchase of treasury stock</i>	
Jul.	1	Cash	500,000
		Preferred stock	500,000
		<i>To record issue of preference shares</i>	
Sep.	30	Cash	15,000
		Treasury stock	12,500
		Paid-in capital, Treasury stock	2,500
		<i>To record sale of treasury stock at a premium</i>	
Dec.	31	Cash dividends declared	25,000
		Cash dividends payable	25,000
		<i>To record dividends declared (preference and common)</i>	
	31	Income summary	40,000
		Retained earnings	40,000
		<i>To close income to Retained earnings account</i>	
	31	Retained earnings	25,000
		Cash dividends declared	25,000
		<i>To record appropriation of Retained earnings to dividends</i>	

(ii) Stockholders' equity section of the Balance Sheet.

Max Corporation
Balance Sheet
As At 31st December 2000

Contributed capital	
Preferred stock, 4 percent, cumulative, Sh20 par value, 25,000 shares authorized, Issued and outstanding	Sh500,000
Common stock, Sh1 par value, 1,000,000 Authorized shares, 223,000 shares issued And outstanding	223,000
Paid-in capital in excess of par value, common	30,600
Paid-in capital, treasury	<u>2,500</u>
Total contributed capital	Sh756,100
Retained earnings	<u>15,000</u>
Less Treasury stock, common (10,000 shares at cost)	12,500
Total stockholders' equity	<u><u>Sh758,600</u></u>

Questions

1. Identify and describe the components of stockholders' equity.
2. What is the difference between preferred stock and common stock?
3. What is the difference in accounting for the issuance of par value stock, stated value stock, and true no par stock?
4. At what amount should a corporation record stock issued for noncash assets or services?
5. In what ways may a corporation treat amounts paid in by defaulting subscribers?
6. When two or more types of stock are issued as a unit, how does a corporation determine the amount to be assigned to each type of stock?
7. What is the acceptable method of accounting for stock issue costs?
8. Describe the accounting for the conversion of preferred stock into common stock.
9. Identify three circumstances in which corporations commonly issue stock rights.
10. Distinguish between a fixed option plan and a performance stock option plan.
11. What are the features of a non-compensatory plan?
12. What are some reasons that corporations acquire their own shares? What is the name of such stock? What is the effect on a corporation of acquiring its own stock?
13. How is donated capital accounted for and presented in the balance sheet?

4-1 At the beginning of 2001, Scoth company incurred two organization costs: (1) attorney's fees with a market value of Sh5,000, paid with 3,000 shares of Sh1 par common stock, and (2) incorporation fees paid to the state of Sh3,000. Prepare the separate journal entries necessary to record those transactions and to amortize organization costs for the first year, if the company elects to write off organization costs over five years.

4-2 Prepare stockholders' equity section of Melbourne Ltd. balance sheet from the following accounts and balances on December 31, 20xx.

Account name	<i>Dr.</i>	<i>Cr.</i>
--------------	------------	------------

Common stock- Sh10 par, 60,000 shares authorized, 40,000 issued, and 39,000 shares outstanding	Sh400,000
Paid-in capital in excess of par value, common	200,000
Retained earnings	30,000
Treasury stock, common (1,000 shares, at cost)	Sh15,000

4-3 Car and General Ltd based at Industrial area deals in motor vehicle sales. It has authorized the issue of 10,000 shares of common stock. The company sold 5,000 shares at Sh15 per share. Prepare journal entries to record the sale of stock for cash under each of the following alternatives: (1) the stock has a par value of Sh5, and (2) the stock has no par value but a stated value of Sh10 per share.

4-4 Makadara corporation issued 8,000 shares of Sh1 par value common stock for some land. The land had a fair value of Sh50,000. Prepare the journal entries necessary to record the issuance of stock for the land under each of the following independent alternatives: (1) the stock was selling at Sh7 per share on the day of the transaction, and (2) management attempted to place a value of the common stock but could not do so.

4-5 at the end of 2004, Glider corporation had the following balances in its stockholders' equity section:

Common stock, par value Sh5; authorized, 500,000 shares; Issued and outstanding, 300,000 shares	Sh1,400,000
Contributed capital in excess of par value	700,000
Retained earnings	<u>12,000,000</u>
Total	<u><u>14,100,000</u></u>

The following transactions occurred during 2005:

10,000 shares were acquired for Sh340,000

12,000 shares were acquired for Sh240,000

15,000 shares of treasury stock were reissued at Sh28 per share

Required:

Journal entries to record the treasury stock transaction.

4-6 Johnson corporation common stock has a Sh2.50 par value. Outstanding shares had been issued at prices ranging from Sh7 to Sh20 per share, with an average paid in capital per share of Sh15. In 2003, the company acquired and immediately retired 40,000 of these common shares.

Required:

Prepare the journal entries to record the acquisition and retirement assuming:

1. The shares were acquired for Sh12 per share.
2. The shares were acquired for Sh20 per share.

4-7 at the beginning of 1998, Christine corporation granted appreciation rights (SARs) to three of its key executives. Under the terms of the SAR plan, each executive was entitled to receive, at their option, cash, shares of Christine’s Sh1 par value common stock, or a combination of both cash and stock. The amount to be received was to be determined by the difference between the quoted market price of Christine’s common stock at the date of exercise and a predetermined price of Sh10 per SAR.

Christine granted a total of 30,000 SARs, which were exercisable after January 1, 2001, and the executives were required to be in employ of the company at the date of exercise. The per share market price of company’s common stock at the ends of 1998, 1999, and 2000 was Sh19, Sh28, and Sh26, respectively. All of SARs were exercised on January 2, 2001, and the appropriate amount of cash was paid.

Required:

Prepare all journal entries required in connection with the SAR plan for 1998 through 2001.

4-8 Prepare the journal entries to record the following stock transactions of Bahati company.

- Oct 5 purchased 1,000 shares of its own Sh2 par common stock for Sh20, the current market price.
- 17 sold 250 shares of treasury stock purchased on Oct. 5 for Sh25 per share.
- 21 Sold 400 shares of treasury stock purchased on Oct. 5 for Sh18 per share.

On October 28, the company retired the remaining 350 shares of treasury stock. The shares were originally issued at Sh5 per share. Prepare the necessary journal entry.

4-9 Crocodile corporation is authorized to issue 200,000 shares of common stock. On August 1, the company sold 10,000 shares at Sh25 per share. Prepare journal entries to record the sale of stock for cash under each of the following independent alternatives.

- (a) The stock has a par value of Sh25.
- (b) The stock has a par value of Sh10.
- (c) The stock has no par value.
- (d) The stock has a stated value of Sh1 per share.

Some of the account balances of Mali Mali Company at December 31, 2001 are shown below:

6% preferred stock (Sh100par, 2,000 shares authorized)	Sh20,000
Paid-in capital in excess of par value, preferred stock	3,000
Common stock (Sh10par, 100,000 shares authorized)	500,000
Paid-in capital in excess of par value, common	100,000
Unappropriated Retained earnings	304,000
Treasury stock- preferred (50 shares at cost)	5,500
Treasury stock- common (1,000 shares at cost)	16,000
Retained earnings appropriated for contingencies	75,000
Retained earnings appropriated for fire insurance	95,000

The price of the company’s common stock has been increasing steadily on the market; it was Sh21 on January 1, 2002, advanced to Sh24 by July 1, and to Sh27 at the end of the

year 2002. The preferred stock is not openly traded but was appraised at Sh120 per share during 2002.

Required:

Give the proper journal entries for each of the following:

- (i) The company incurred a fire loss of Sh71,000 to its warehouse.
- (ii) The company resold the 50 shares of preferred stock held in treasury for Sh116 per share.
- (iii) The city of Kisumu, in an effort to persuade the company to expand into that city, donated to Mali Mali Co. a plot of land with appraised value of Sh42,000 (credit to revenue from contribution).
- (iv) At the annual board of directors meeting, the board decided to set-up an appropriation in retained earnings for the future construction of a new plant. Such appropriation to be for Sh125,000 per year. In addition, to increase the appropriation for possible contingencies by Sh25,000 and to eliminate the appropriation for fire insurance and begin purchasing such insurance from Lake star insurance company.

4-10 On December 15, 2002, the directors of Baraka Chai voted to appropriate Sh90,000 of retained earnings in the business assets equal to appropriation for use in expanding the corporations factory building. This was the fourth of such appropriations; after it was recorded, the stockholders' equity section of Baraka balance sheet appeared as follows:

Paid-in capital:

Common stock, par Sh20 150,000 shares authorized,	<u>Shs.</u>
100,000 issued	2,000,000
Paid-in capital in excess of par value, common	<u>3,600,000</u>
Total paid-in capital	5,600,000

Retained earnings:

Unappropriated	1,800,000	
Appropriated for plant expansion.	<u>360,000</u>	
Total Retained earnings		<u>2,160,000</u>

Total stockholders' equity 7,760,000

On January 9, 2003, the corporation entered into a contract for the construction of the factory addition for which retained earnings were appropriated. On November 1, 2003, the addition was completed and the contractor was paid Sh330,000. On December 14, 2003, the board of directors voted to return the balance of Retained earnings appropriated for plant expansion account to unappropriated Retained earnings. The corporation's stock was selling as Sh47 in the market on December 14, 2003. Baraka Chai reported net income for 2002 of Sh530,000 and for 2003 of Sh600,000.

Required:

1. Prepare the appropriate entries for Baraka Chai for the information above (December 15, 2002 to January 23, 2004).
2. Prepare stockholders' equity section of the balance sheet for Baraka Chai as December 31, 2003, in proper accounting form.

4-11 The following is a summary of all relevant transactions of Miss Kenya Fashions Ltd since it was organized in 2000:

In 2000, 15,000 shares were authorized and 7,000 shares of common stock (Sh50 par value) were issued at a price of Sh57. In 2001, 1,000 shares were issued as a stock dividend when the stock was selling for Sh62. 300 shares of common stock were bought in 2002 at a cost of Sh66 per share. These 300 shares are still in the company's treasury.

In 2001, 10,000 preferred stock were authorized and the company issued 4,000 of them (Sh1,000 par value) at Sh113. Some of the preferred stock was reacquired by the company and later re-issued for some Sh4,700 more than it cost the company.

The corporation earned a total of Sh 610,000 in net income after tax and an appropriation was made in 2002 by the board of directors from Retained earnings amounting to Sh75,000 for fixed asset replacements.

Required:

Prepare the stockholders equity section of the balance sheet for Miss Kenya Fashions Ltd. as of December 31, 2002. Account for the treasury stock using the cost method.

4-12 Chesonok company was formed on July 1, 1999. It was authorized to issue 600,000 shares of Sh10 par value common stock and 200,000 shares of 8% Sh25 par value, cumulative, non participating preferred stock. Chesonok Co. has a July 1 – June 30 financial year.

The following relate to stockholders' equity account:

Common stock.

Before 2001 – 2002 financial year, the company had 220,000 shares of common stock shares issued as follows:

1. 190,000 shares were issued for cash on July 1, 1999, at Sh31 per share.
2. On July 24, 1999, 10,000 shares were exchanged for a plot of lands which the seller Sh140,000 in 1993 and had an estimated market value of Sh440,000 on July 24, 1999.
3. 20,000 shares were issued on March 1, 2001; the shares had been subscribed for Sh42 per share on October 31, 2000.

During the 2001 – 2002 financial year, the following transactions took place:

October 1, 2001 subscriptions were received for 20,00 shares at Sh46 per share. Cash of Sh184,000 was received in full payment for 4,000 shares and stock certificates were issued. The remaining subscription for 16,000 shares were to be paid in full by September 30, 2002, at which time the certificates were to be issued.

November 30, 2001 the company purchased 4,000 shares of its own stock at market price of Sh39 per share. The company uses the cost method to record treasury stock.

June 20, 2002 the company sold 1000 shares of treasury stock that it had purchased on November 30, 2001, for Sh42,000

Preferred stock

Chesonok issued 100,000 shares of preferred stock at Sh44 per share on July 1, 2000.

Retained Earnings

As of June 30, 2001, Chesonok Retained earnings account had a balance of Sh1,380,000. For the fiscal year ending June 30, 2002, Chesonok reported net income of Sh80,000.

In March of 2001, Chesonok received a term loan from Makentany Inc. Makentany requires Chesonok to establish a sinking fund and restricted Retained earnings account for an amount equal to the sinking fund deposit. The annual sinking fund payment of Sh100,000 is due on April 30, each year; the first payment was made as scheduled on April 30, 2002.

Required:

Prepare the stockholders' equity section of the balance sheet as at 30th June 2002.

LESSON FIVE

5.0 Dividends, Convertibles, Warrants, And Earnings Per Share

Learning Objectives

After you have studied this chapter, you should:

1. Understand the nature of dividends
2. Be able to account for the various types of dividends
3. Know how to account for warrants and convertibles
4. Understand how to calculate Earnings Per Share for companies with simple or complex capital structure
5. Be able to account for stock compensation plans

5.1 Dividends

A dividend is the distribution of a corporation assets to its stockholders. Each stockholder receives assets, usually cash, in proportion to the number of shares of stock held. The board of directors has sole authority to declare dividends.

Dividends can be paid quarterly, semi annually, or at other times declared by the board. Companies are not allowed to pay dividends that exceed the retained earnings. When a dividend exceeds retained earnings, the Corporation is, in essence returning to the stockholders part of their contributed capital. It is called a liquidating dividend and is usually paid out when a company is going out of business or reducing its operations. Having sufficient retained earnings in itself does not justify the distribution of a dividend. If cash or other readily distributable assets are not available for distribution, the company might have to borrow money to pay a dividend.

There are three important dates associated with dividends:

Date of declaration- the date when the board of directors formally approves and announces the dividend declaration. In the case of cash or property dividend, the

declaration is recorded as a debit to retained earnings and a credit to dividends payable. Except where there are cases of fraud or illegality, a formal declaration of cash, script, or property dividend is legally binding contract between the corporation and the shareholders. Therefore, entries are made on the declaration day.

In the case of stock dividend, no distribution of corporation assets is required meaning that stock dividend declaration is revocable up to the date of issuance. Because there is no liability, no entry will be recorded on the declaration date.

Date of record- on the record date, the list of current stockholders is prepared. Those holding stock at this date receive the dividend, regardless of purchase or sale of stock after this date. No entry is made on the accounts on this date. The record date is selected by the board of directors and is usually stated on the declaration date. Between the declaration date and the date of record, the stock is said to be cum- dividend; if the stockholder sells the shares to another person, the right to cash the dividend will be transferred to the buyer. On the other hand, between record date and the date of payment, the stock is said to be ex- dividend; if the stockholder sells the shares to another person, the right to cash the dividend remains with the stockholder.

Date of payment- The date of payment is the date on which the dividend is paid to the stockholder on record at the date of payment of cash or property dividends, the liability recorded at the date of declaration is debited and the appropriate asset account is credited. A stock dividend distribution is usually recorded on the date of issue.

5.1.1 Types Of Dividends

Cash dividends are the usual form of distributions to stockholders. Before a cash dividend can be issued to common stockholders, any preference dividends (including those in arrears) must be paid.

Property dividends.

Corporation s occasionally pays dividends with non-cash assets, called property dividends or dividends in kind. The property may be securities held in other companies, real estate, merchandise, or any other non-cash asset designated to pay dividends. A property dividend is recorded at the current market value of the asset transferred. When corporation s book value of the property is different from the market value on declaration date, the corporation recognizes a gain or loss on disposal of the asset as of the declaration date.

Most property dividends are the securities of other companies held as an investment. This kind of property dividend reduces the problem of indivisibility of units that would occur with most other non-cash assets.

Property distribution in form of stock should be differentiated from a spin-off. Spin-off is a distribution of the shares of a wholly or substantially owned subsidiary to shareholders. The shareholders then own the subsidiary directly, rather than indirectly through the corporation. A spin-off is a form of reorganization and conceptually different from property dividend.

Example:

Chelsea Inc. currently records its interest in Harambee Inc. at \$1 million, but the current market value of Harambee shares is \$2 million. Chelsea has decided to issue Harambee shares as property dividends to its stockholders. The board of directors of Chelsea then declares \$2,000,000 dividends by issuing the common shares of Harambee Inc.

Declaration date:

Investment in stock of Harambee	1,000,000	
Gain on disposal of investment		1,000,000
Retained earnings	2,000,000	
Property dividend payable		2,000,000
<i>To record property dividends payable</i>		

Distribution (payment) date:

Retained earnings	2,000,000	
Investment in stock of Harambee		2,000,000
<i>To record property dividends distributed</i>		

Liquidating Dividends

A return of additional contributed capital rather than Retained earnings is a liquidating dividend. Owners' equity accounts rather than retained earnings are debited. Any dividend not based on retained earnings is a liquidating dividend to the extent that it is not debited to retained earnings.

Liquidating dividend is appropriate where there is no intention to conserve the resources of the corporation for assets replacement. A mining company, for example, might pay such dividend when it is exploiting a non-replaceable asset. Such dividends are not income to the investor but represent a return of capital and are usually not taxable.

Example:

Manchester united corporation declares a cash dividend of \$40,000 and informs the stockholders that 75% of it is a liquidating dividend. The entries to record are:

At declaration date:

Retained earnings	10,000	
Capital repayment	30,000	
Dividends payable		40,000
<i>To record dividends payable in cash 75% being liquidating dividends</i>		

At payment date:

Dividends payable	40,000	
Cash		40,000

To record dividends paid in cash 75% being liquidating dividends

Any error that overstates the revenues or understates expense can cause retained earnings to be overstated. In such cases, if reported Retained earnings (prior to correction) are used in full for dividends, part of the dividend would be **un-intentional liquidating dividend**. Unintentional liquidating dividend paid, and later discovered, require an entry to correct the retained earnings account and any other affected accounts.

Script Dividends

A corporation that has a temporary cash shortage may issue a script dividend to maintain its continuing dividend policy. A script dividend also called a liability dividend) is represented by promissory notes, called script. A script declaration generally means that relatively long time (six months to a year) will elapse between declaration and payment. The script can become a marketable financial instrument.

A script issue specifies the due date and rate of interest. Script usually is payable at a specified date, with the interest period usually at the time from the declaration date to the payment date. If a dividend is payable as part cash and part script, the interest period may start on the cash dividend payment date.

A script dividend is recorded by a debit to retained earnings and a credit to a liability account titled “scrip dividends payable”. Any interest payable should be debited to interest expense account; interest is not part of the dividend.

Example:

Assume that Metro merchants declares a dividend of 50 cents per share on its 100,000 outstanding shares of no-par capital stock. Script is issued in full for the dividend; specify a 10 percent interest rate and a maturity date of six months after declaration date.

The entries are:

At declaration date:

Retained earnings	50,000	
Script dividends payable		50,000
<i>To record dividends payable by scripts</i>		

At Script payment date (six months after declaration)

Script dividends payable	50,000	
Interest expense	2,500	
Cash		52,500
<i>To record script dividends paid</i>		

Stock Dividends

A stock dividend is a proportional distribution of additional shares of the corporations common or preferred stockholders. It is not real, or true, dividend, because there is no distribution of assets to stockholders. A stock dividend changes neither the assets , liabilities, or total stockholders’ equity of the issuing corporation, nor the proportionate

ownership of any stockholder. It merely increases the number of shares.

A stock dividend is usually accompanied by the transfer of an amount from retained earnings to contributed capital accounts. Sometimes stock dividend is recorded as a transfer from additional paid in capital to capital stock. When a class of stock other than the one already held by the recipients issued, it is a special stock dividend (such as preferred stock issued to common stockholders).

Companies issue stock dividends for several reasons, including:

- To indicate that the firm is planning to retain a portion of earnings permanently in the business
- To continue dividend distributions without disbursing cash needed for operations.
- To increase the number of shares outstanding, reducing the market price per share and possibly leading to increase trading shares in the market.

5.1.2 Stock Dividend Entries

Issuance of stock dividends can be accounted using any of the following methods:

- Market value method- for small stock dividends, which are equal to or less than 20 percent of the total stock.
- Par value method- for large stock dividend which, are more than 20 percent of the total stock.
- Special stock dividend.

The three methods are illustrated below:

Data before dividends (same for each case)

Preference stock, par value \$20, 10,000 shares authorized, 5,000 outstanding	
\$100,000	
Common stock, par value \$10, 20,000 shares authorized, 10,000 outstanding	
100,000	
Paid-in capital in excess of par value, preference	10,000
Paid-in capital in excess of par value, common	15,000
Retained earnings	150,000
Total stockholders' equity	375,000

Stock dividend entry at date of issuance of dividend shares (each situation is independent)

Case A: a small stock dividend, market value method- a 10 percent common stock dividend is declared on the common stock. The stock dividend is capitalized at market value, which is \$24 immediately after the issuance.

Retained earnings (10000*0.10)*\$24	24,000	
Common stock par \$10 (1000 shares)		10,000
Paid-in capital in excess of par value, common		14,000

To record stock dividends issued at market value

Case B: a large stock dividend, par value method- a 50 percent common stock dividend is declared on the common stock. The market value per share drops to \$16 on the ex-dividend date from \$24 before issuance. The stock dividend is capitalized at par value.

Retained earnings (10000*0.50)*\$10	50,000	
Common stock par \$10 (5000 shares)		50,000

To record stock dividends issued at par

Case C: a special stock dividend, par value method- a 20 percent common stock dividend is declared on the common stock and preference stock. The market value per share after the issuance is \$24.

Retained earnings (3000 shares)*\$24	72,000	
Common stock par \$10 (3000 shares)		30,000
Paid-in capital in excess of par value, common		42,000

To record special stock dividends issued at market value

*(10,000 shares + 5,000 shares) x 20% = 3,000 shares.

Recording a stock dividend- further illustrations

Example 1:

Assume a 10 percent common stock dividend is declared on 100,000 shares of \$1 par common stock issued and outstanding; market price on the declaration date is \$4 per share, and immediately after the issue it is \$5 per share.

Issuance date (record transactions at \$5 market price)

Retained earnings	50,000	
Common stock		10,000
Contributed capital in excess of par		40,000

Example 2:

A stock dividend consisting of preferred stock issued to common stockholders is a special stock dividend. In this case, the market value of the dividend (the preferred shares) should be capitalized. Issuance of such a dividend should not have impact, if any, on the market value of common stock. Stockholders would appear to receive a dividend equal to the market value of shares received.

Cash and property dividends are not paid on treasury stock. Stock dividends, however, may be paid on treasury stock in certain situations where the statutes of the land allow. Even where state statutes allow stock dividend to be paid on treasury stock, not all corporations do so. The decision depends, in part, on why the treasury stock is held. If treasury stock is held primarily in connection with stock option plan, the corporation is likely to issue a stock dividend on the treasury stock.

5.2 Convertibles

Convertibles are those securities that can be surrendered in exchange of a different class of security. Most convertible securities are normally converted into common stock. Convertible securities sometimes enable those investors who are risk averse to invest in a different kind of security, while at the same time acquiring the right to change the security to another form in the future.

5.2.1 Convertible Preferred Stock

A corporation can make its preferred stock more attractive to investors by adding convertibility. People who hold convertible preferred stock can exchange their shares of preferred stock for shares of the company's common stock at a ratio stated in the preferred stock contract. Convertibility appeals to investors first, because preferred stock earn regular dividends than common stock and secondly, because the convertibility of preference shares allows the holders of these shares to gain value should the common stock price improve.

Illustration:

Assume that Cynmos international outstanding stock includes 100 shares of 10%, Sh100 par value convertible preferred stock. The stock was originally issued for Sh103 per share. Each preferred share is convertible into four shares of Sh10 par value common stock. If all preferred shares are converted on May 1, the entry to record the conversion is:

May 1	preferred stock	100,000	
	Contributed capital in excess of par value, Preferred stock.	3,000	
	Contributed capital in excess of par value, Common stock.		63,000
	Common stock, Sh10 par value		40,000

5.2.2 Convertible Bonds

Bonds that can be converted into common stock at the bondholders option are called convertible bonds. A convertible bond combines the benefit of a bond with the privilege of exchanging it for stock at the holder's option.

Corporations issue convertibles for two reasons: one is the desire to raise equity capital without giving up more ownership control than necessary. The second reason is that companies may want to obtain stock financing at a cheaper rate.

Accounting for convertible bonds involves reporting issues at the time of: issuance, conversion and retirement. For the purpose of our study we shall deal with the first two cases, (i.e. issuance and conversion of bonds)

The method for recording convertible bonds at the date of issue follows the method used to record straight debt issues. Any discount or premium that result from the issuance of

convertible bonds is amortized to its maturity date because it is difficult to predict when, if at all, conversion will occur.

The entry made by the Corporation to record the conversion of bonds into common stock is similar to the one used to record conversion of preferred stock. The carrying amount of the convertible bonds becomes the book value of the capital contributed for new shares. The conversion of bonds changes liability into stockholders equity and no loss or gain on conversion is recorded.

Illustration:

Cynmos international has Sh. 1 million of outstanding bonds payable with an unamortized discount of Sh8000. The bonds are convertible at the rate of Sh1000 bond for 90 shares of the company's Sh10 par value common stock. On the interest date of may 1, some of the bondholders present Sh100000 of these bonds for conversion, representing one tenth of the total.

The entry to record the conversion is:

May 1	Bonds payable	100,000	
	Discount on bonds payable		800
	Common stock, Sh10 par value		90,000
	Contributed capital in excess of par value,		9200

In this entry, note that the total amount credited to the contributed capital accounts is the Sh99200 carrying value of the bonds. No recognition is given to the current market value of the common stock, and no gain or loss is recorded.

5.3 Warrants

Warrants are certificates entitling the owner to acquire shares of stock on a certain price within a stated period. Like convertible securities warrants, if exercised, become common stock and usually have dilutive effect (reduce earnings per share).

A substantial difference between convertible securities and warrants is that warrants the holder of the warrants is required to pay a certain amount of money to obtain the shares. The issuance of warrants or options to buy additional shares normally arises under three situations:

1. When issuing different types of securities, such as bonds or preferred stock, warrants are often included to make the security more attractive.
2. Upon the issuance of additional common stock, existing shareholders have a preemptive right to purchase common stock first. Warrants may be issued to evidence that right.
3. Warrants, often referred to as stock options, are given as compensation to executives and employees.

The problem in accounting for stock warrants are complex and present many difficulties- some of which remain unresolved to date.

Warrants can be separated into two different instruments namely:

- (1) The bond, and
- (2) The warrant giving the holder the right to purchase the stock.

Detachable warrants (separate bond and separate warrant) can be traded separately, and therefore, the market value can be determined. Two methods of allocation are available:

- (1) The proportional method
- (2) The incremental method

Proportional Method

Assume that Cynmos international is offering detachable 5-year warrants to buy one share of common stock (par value of Sh5) at Sh25 (at the time when the share was selling for approximately Sh50) enabled it to price its offering of bonds at par with a moderate 8.75% yield. To place a value on the two securities, one would determine (1) the value of bonds without the warrants and (2) the value of the warrants. For example, assume that Cynmos bonds (par Sh1000) sold for 99 without the warrants. The market value of the warrants at the time was Sh30. before sale; the warrants will not have a market value. The allocation is based on an estimate of market value, generally as established by an investment banker, or on the relative market value of the bonds and the warrants soon after they are issued and traded. The price paid for 10,000, Sh 1,000 bonds with the warrants attached was par (i.e. Sh1,000,000). The allocation between the bonds and warrants would be made in this manner.

Fair market value of bonds without warrants (10,000,000 x 0.99)	Sh9,900,000
Fair market value of warrants (10,000 x 30)	300,000
Aggregate fair market value	Sh10,200,000

$$\text{Allocate to bonds: } 9,900,000/10,200,000 \times 10,000,000 = \text{Sh}9,705,882$$

$$\text{Allocate to warrants: } 300,000/10,200,000 \times 10,000,000 = \text{Sh}294,118$$

Total allocation	Sh10,000,000	
Accounting entries: Sell of bonds.		
Cash	9,705,882	
Discount on bonds payable	294,118	
Bonds payable		10,000,000
Accounting entries: Sell of warranties.		
Cash	294,118	
Paid in capital- stock warrants		294,118

Accounting entries: When all warrants are exercised.

Cash (10,000 x 25)	250,000	
Paid in capital –stock warrants	294,118	
Common stock (10,000 x 5)		50,000
Paid in capital in excess of par		494,118

Accounting entries: When warrants are not exercised.

Paid in capital –stock warrants	294,118	
Paid in capital –expired warrants		294,118

Incremental Method

In instances where the fair value of either the warrants or the bonds is not determinable, the incremental method is used. That is, the security for which the market value is determinable is used and the remainder of the purchase price is allocated to the security for which the market value is not known.

Assume that Cynmos warrants are valued at Sh300,000, but the market price of the bonds without the warrants is not known. The entries will be as follows:

Cash	9,000,000	
Discount on bonds payable	300,000	
Bonds payable		10,000,000

5.4 Earnings Per Share

Among the most commonly quoted statistics on the financial reports are earnings *per share* (EPS) of common stock. Investors use EPS data when they evaluate the past performance of a Corporation, project its future earnings, and weigh investment opportunities.

EPS calculations may be simple or complex depending on the company’s capital structure. A company has a simple capital structure if it has only common stock with no options or rights that can be converted to common stock.

$$\text{EPS} = \frac{\text{Net income} - \text{Preferred dividends}}{\text{Common shares outstanding}}$$

NB: If preferred stock is cumulative, the current year’s dividends must be subtracted even if it was not declared. If preferred stock is not cumulative, the current year’s dividends are subtracted only if it was declared.

5.4.1 EPS For Companies With Simple Capital Structure

A firm has a simple capital structure if stockholders’ equity consists only of common stock or if no potential common stock exists that on conversion or exercise could dilute (decrease) earnings per common share. For simple capital structure, a single EPS presentation showing *basic* EPS is appropriate.

Illustration:

Assume that in 2004, Blue Company earned a Sh400,000 net income and paid preference shareholders Sh75,000 as dividends. Common shares outstanding at the end of the year were 50,000 shares. What is the EPS?

$$\text{EPS} = \frac{400,000 - 75,000}{50,000} = \text{Sh}6.5$$

However, the calculation becomes more complex if the number of common shares outstanding changes during the period. The number of common shares outstanding may change (1) because the company sells additional shares or buys treasury shares; (2) because of stock dividends and stock splits.

Illustration: where additional shares are bought or sold in the year.

In 2004, Blue Company earned Sh400,000 and preference dividends were Sh75,000. However, on July 1, 2004, Blue sold additional 40,000 common shares. In addition, on November 1, 2004, Blue purchased 30,000 treasury shares. Financial year ended on 31st December 2004. Common shares at the beginning of the year was 50,000 calculate the weighted-average number of shares outstanding during 2004.

Solution:

Time period	Shares outstanding	Weighted amount Of shares.
January to June	50000	6/12*50000 = 25,000
July to October	50000+40000 = 90000	4/12*90000 = 30,000
November to December	90000-30000 = 60000	2/12*60000 = 10,000
Weighted average common shares outstanding		65,000

$$\text{EPS} = \frac{400,000 - 75,000}{65,000} = \text{Sh}5$$

Illustration: where there are stock splits and stock dividends

A stock split or a stock dividend is different than a stock sale. When stock is sold, the company receives new assets that it uses to generate additional earnings. On the other hand, stock splits and stock dividends do not provide additional assets for the company. Instead, a stock split or stock dividend simply means that a company's earnings must be allocated to a larger number of outstanding shares.

Because of the nature of stock splits and stock dividends, they are treated differently from stock sales when calculating the weighted-average number of shares outstanding. When stock split or stock dividend occurs, the number of shares outstanding during previous portions of the year must be restated to reflect the stock split or dividend. Assume that the stock transactions in 2004 included a stock split, as follows:

- Jan. 1: 50,000 common shares were outstanding.
- Jul. 1: Blue sold 40,000 additional shares of common stock.

Nov.1: Blue purchased 30,000 common shares as treasury stock.

Dec. 1: Outstanding common shares were split 2 for 1.

Given these changes in the number of shares outstanding during 2004, calculate the weighted-average number of shares as follows:

Time period	Shares outstanding	Restated for stock split	Weighted amount of shares.
January to June	50000	2	$6/12 * 50000 = 50,000$
July to October	$50000 + 40000 = 90000$	2	$4/12 * 90000 = 60,000$
November	$90000 - 30000 = 60000$	2	$1/12 * 60000 = 10,000$
December	120000	-	$1/12 * 120000 = 10,000$
Weighted average common shares outstanding			130,000

Note that every time stock was sold or purchased, the resulting number of outstanding shares was restated for the subsequent stock split. The same type of restatement is required for stock dividends. If, for example, the 2 for 1 stock split on December 1 had been adjusted by a multiplier of 1.10 instead of 2. The calculation of Blue Company's earnings per share for 2004 is:

$$\text{EPS} = \frac{400,000 - 75,000}{130,000} = \text{Sh}2.5$$

5.4.2 EPS For Companies With Complex Capital Structures

Companies with complex capital structures have outstanding securities such as bonds or preferred stock that are convertible into common stock. These securities that can be converted to common stock are also called *potential common stock*. EPS calculations for companies with complex capital structures are more complicated. Often, such companies must present two types of earnings per share calculations: primary earnings per share and fully diluted earnings per share.

Suppose that a corporation has convertible preferred stock outstanding throughout the current year. However, consider what the effects would have been if the preferred shares have been converted at the beginning of the year. The result of this assumed conversion would have been to increase the number of common shares outstanding and to reduce preferred dividends. The net result may have been to reduce earnings per share, or to increase earnings per share. When the assumed conversion of a security reduces earnings per share, the security is said to be dilutive; those that increase earnings per share are antidilutive.

Primary And Basic Earnings Per Share

Based on detailed rules, convertible securities are evaluated at the time they are issued. If eventual conversion appears highly probable, the convertible security is called a common

stock equivalent. **Primary earnings per share** are calculated as if dilutive common stock equivalents had already been converted at the beginning of the period. On the other hand, if conversion is not probable, all the net income after interest and preferred stock dividends will be available to common stockholders. EPS calculated (using income attributable to common stockholders \div weighted average number of common stock) is called the **basic earnings per share**.

Fully Diluted Earnings Per Share

Common stock equivalent have terms that make their eventual conversion very probable. Other convertible securities are less apt to be converted. Nevertheless, the effect may be to reduce earnings per share; in other words, the assumed conversion may have a dilutive effect. Fully diluted earnings per share are calculated as if all dilutive securities had already been converted.

The Concept Of Dilution

Convertible securities and stock purchase warrants are not actually common stock, but they do enable the holder to obtain common stock through conversion or exercise. Thus, in EPS calculations, they are potentially dilutive securities. Potentially dilutive securities include convertible preferred stock, convertible bonds, stock purchase rights, stock warrants, and contingent shares.

The exercise of a potentially dilutive security increases the number of shares of common outstanding. Dilutive securities reduce the earnings per share of common stock. Conservatism influences the rules for the calculation of EPS in that we are required to include the effect of dilutive securities only when the corporation realizes a profit. When the corporation realizes a loss, the effect of convertible securities will be antidilutive as only the common stock will be considered when calculating EPS.

The purpose of including dilutive securities in EPS calculations is to place substance over form and to provide a reasonably conservative measure of corporate profitability per share of common stock outstanding. In addition, the inclusion of dilutive securities in EPS calculations provides relevant and timely information about the effect that exercise or conversion of these securities could have on EPS.

At conversion, convertible securities are exchanged for common stock. The method used to measure the dilutive effects of potential conversion on EPS is called the *if-converted method*. This method of bond conversion assumes: (1) the conversion of convertible securities at the beginning of the period (or at the time of issuance of the security, if issued during the period), and (2) the elimination of related interest, net of tax. Thus the denominator- the weighted average number of shares outstanding- is increased by the additional number of shares assumed issued and the numerator- net income- is increased by the amount of interest expense, net of tax associated with those potential common shares.

Example: Convertible bonds – If-Converted method

Current year net income for Cynmos International is Sh600,000. All year 1,000, 6%, Sh1,000 debentures were outstanding, each convertible to 20 common shares. The weighted average shares outstanding before considering potentially dilutive securities is 200,000, and the tax rate is 40%.

Required: calculate the basic earnings per share and the dilutive earnings per share.

Solution:

a) Basic EPS = $\text{Sh}600,000 / 200,000 = \text{Sh}3.00$

b) Dilutive EPS (DEPS)

$$= (600,000 + 36,000) / (200,000 + 20,000) = \text{Sh}2.89$$

$$\text{Additional net income} = 1,000 * 6\% * \text{Sh}1,000 * (1 - 40\%) = \text{Sh}36,000$$

$$\text{Additional shares (also called the denominator effect)} = 1,000 * 20 = 20,000$$

Example: Convertible bonds- Converted during the financial year

Assume Cynmos issued the debentures on October 1 (financial year ends on December 31)

a) Basic EPS will remain at Sh.3.00

b) Dilutive EPS = $(600,000 + 9,000) / (200,000 + 5,000) = \text{Sh}2.97$

$$\text{Additional net income (also called the numerator effect)}$$

$$= 3/12 \times 1,000 * 6\% * \text{Sh}1,000 * (1 - 40\%) = \text{Sh}9,000$$

$$\text{Additional shares (denominator effect)} = 3/12 \times 1,000 * 20 = 5,000$$

Example: Convertible Preference shares – If-Converted method

Current year net income for Cynmos International is Sh600,000. All year 10,000, 4%, Sh1,00 cumulative convertible preference shares were outstanding, each convertible to 5 common shares. The weighted average shares outstanding before considering potentially dilutive securities is 200,000, and the tax rate is 40%.

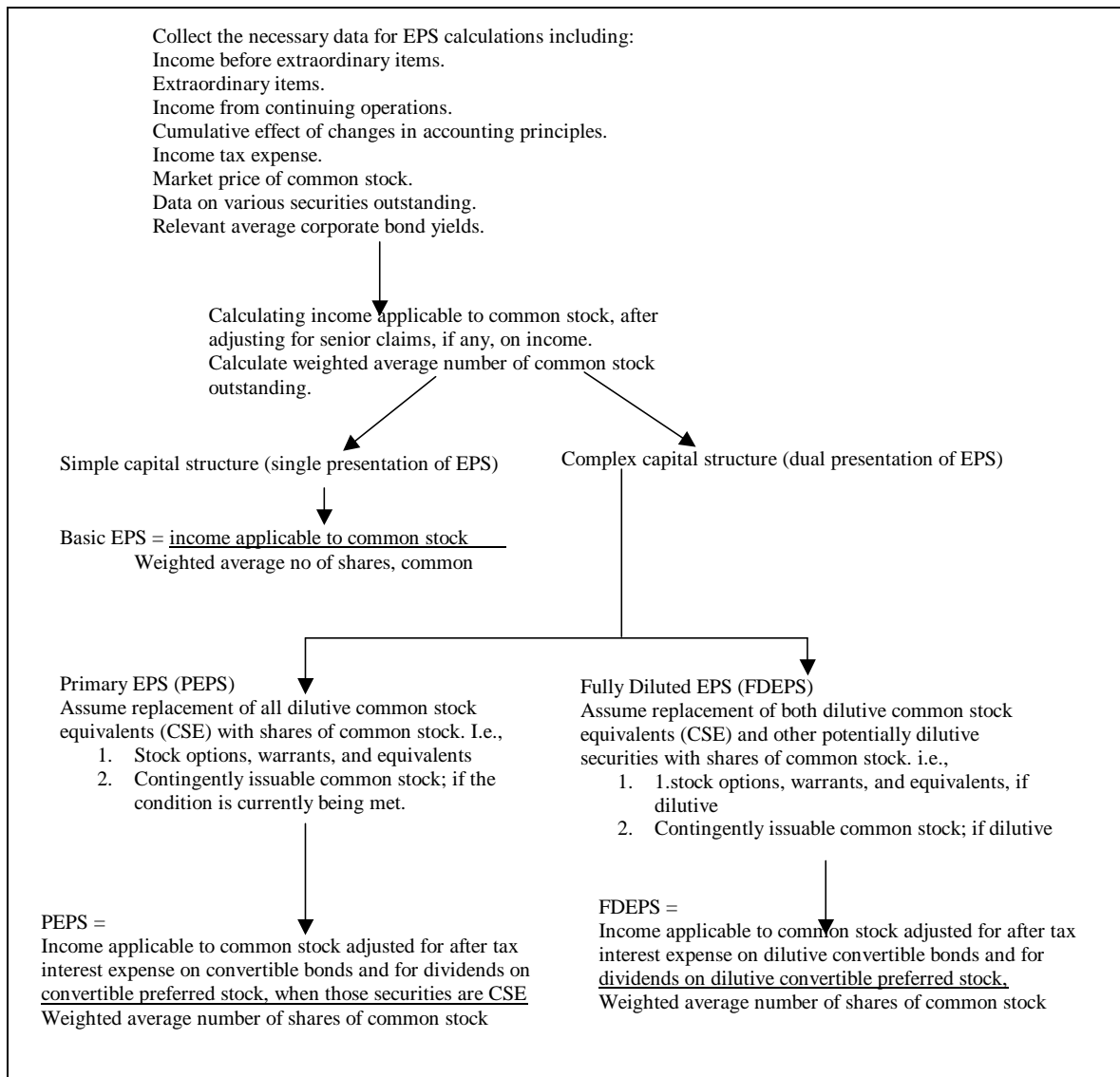
a) Basic EPS = $(600,000 - 40,000) / (200,000) = \text{Sh}2.80$

b) Dilutive EPS = $(600,000 - 40,000 + 40,000) / (200,000 + 50,000) = \text{Sh}2.40$

$$\text{Additional net income (numerator effect)} = \text{preference dividends saved} = 40,000$$

$$\text{Additional shares (denominator effect)} = 10,000 * 5 = 50,000$$

Summary Of EPS Calculation



Review Questions

Q1. The Gillette company has the following shareholders' equity section as of December 31, 2003:

Preferred stock, Sh100 par, 8 percent cumulative, voting, 10,000 shares issued and outstanding	Sh1,000,000
Common stock, Sh20 par, 100,000 shares authorized, 70,000 shares issued and outstanding	1,400,000
Additional paid-in capital	<u>800,000</u>
Total paid in capital	3,200,000
Retained earnings	<u>3,000,000</u>
Total stockholders' equity	<u><u>6,200,000</u></u>

There are no dividends in arrears on the preferred stock. During 2004 the following events occurred:

1. Earnings during 2003 total Sh600,000. The board of directors declares a cash dividend totaling Sh280,000 to be paid as appropriate to preferred stockholders and common stockholders. Later a stock dividend of 10 percent is declared on common stock. The market value of common stock is Sh68 per share on the date stock dividend is declared.
2. In order to familiarize stockholders with one of the company's new products, the board declares a property dividend of one ounce of new perfume the company produces for every share of outstanding common stock (before the above stock dividend). The cost of the perfume is 60 cents per ounce, and has a wholesale market value of Sh1 per ounce. Any gain or loss in this transaction is already included in the earnings reported above.
3. At the end of 2004, the board declares a three-for-two stock split. With the split, the number of common shares authorized to be issued is increased to 150,000. At the date of stock split, the market value of common stock is Sh 75 per share. The directors recommend that the stock split be treated as a stock dividend.

Required

1. Show all computations and entries to record the above transactions.
2. Show the stockholders' equity section as of December 31, 2004.
3. Assume the three-for-two stock split was accounted for as a stock dividend. Show the computations and entries to record it, and the stockholders' equity section of December 31, 2004.

Solution

1. *Computations and entries:*
To close the 2004 earnings to Retained earnings:

Income summary	600,000	
Retained earnings		600,000
To transfer income of the year to Retained earnings		

Computation of dividends payable:

Total dividends	280,000	
Preferred stock dividends (Sh1,000,000*0.08)	<u>80,000</u>	
Balance (common stock dividends)	<u>200,000</u>	

The entry to record dividends payable:

Retained earnings	280,000	
Dividends payable, preferred		80,000
Dividends payable, common		200,000
<i>To record dividends payable</i>		

The number of shares issued as stock dividend is:

$$70,000 \text{ shares outstanding} \times 0.10 = 7,000 \text{ shares}$$

Since the stock dividend is less than 20 percent, it is recorded at market value. The amount to be capitalized as permanent capital is:

$$7,000 \text{ shares} \times \text{Sh}68 \text{ per share} = \text{Sh}476,000$$

Retained earnings	476,000	
Common stock (at par) (7,000 X 20)		140,000
Additional paid-in capital		336,000

Computations and entries to record the property dividend:

The property dividend is recorded at market value, with the gain being recorded for the amount by which the market value of the perfume exceeds the book value:

Market value of property dividend (70,000 x Sh1)	70,000	
Cost of property dividend (70,000 x Sh0.60)	<u>42,000</u>	
Gain on disposal of inventory	<u>28,000</u>	

These entries record the property dividend.

Record the gain when the dividend is declared:

Inventory held for property dividend	70,000	
Inventory, at cost		42,000
Gain on disposal of inventory		28,000.

Record declaration of dividend:

Retained earnings	70,000	
Property dividend payable		70,000

When property dividend is distributed:

Property dividend payable	70,000	
Inventory held for property dividend		70,000

The three-for-two split occurs after all the above transactions; therefore, the number of common shares to be split is 70,000 plus the 10 percent stock dividend (7,000 shares), or a total of 77,000 shares with a par value totaling Sh1.54 million. Every two shares outstanding will become three new shares; hence, there will be $77,000 \times \frac{3}{2} = 115,500$ new shares outstanding after the split. The new par value per share is

$$\text{Sh}1.54 \text{ million} / 115,500 = \text{Sh}13.33 \text{ per share (or Sh}20 \text{ par} / 1.5 = 13.33)$$

A memo entry can be made to record the stock split, or a formal entry can be made in the accounting records as follows:

Common stock (Sh20 par)	1,540,000	
Common stock (Sh13.33 par)		1,540,000

There is no change in paid-in capital and no capitalization of Retained earnings for this transaction.

2. The Gillette company has the following stockholders' equity section as of December 31, 2004:

Stockholders' Equity

Preferred stock, Sh100par, 8 percent cumulative, Voting, 10,000 shares issued and outstanding	Sh1,000,000
Common stock, Sh13.33par, 150,000 shares authorized, 115,500 shares issued and outstanding	1,540,000
Additional paid in capital	<u>1,136,000</u>
Total paid in capital	3,676,000
Retained earnings	<u>2,774,000</u>
Total stockholders' equity	<u>6,450,000</u>

Retained earnings balance is determined as follows:

Stockholders' Equity

	Dr	Cr
Beginning b/f		3,000,000
2004 earnings		600,000
Cash dividends	280,000	
Stock dividends	476,000	
Property dividends	70,000	

Balance C/F	<u>2,774,000</u>	<u>3,600,000</u>
	<u>3,600,000</u>	<u>3,600,000</u>

3. The three for two stock split is equivalent to a 50 percent stock dividend, which would be recorded at par value.

Number of shares to be issued = $77,000 \times 0.5 = 38,500$ shares.

The entry to record the stock split accounted for as a 50 percent stock dividend:

Retained earnings	770,000	
Common stock, at par		770,000

The stockholders' equity section is:

Preferred stock, Sh100par, 8 percent cumulative, Voting, 10,000 shares issued and outstanding		Sh1,000,000
Common stock, Sh20 par, 150,000 shares authorized, 115,500 shares issued and outstanding		2,310,000
Additional paid in capital	<u>1,136,000</u>	
Total paid in capital	4,446,000	
Retained earnings	<u>2,004,000</u>	
Total stockholders' equity		<u>6,450,000</u>

Q2. Compute the basic EPS using the following data for the Proto corporation involving non convertible cumulative preferred stock.

Capital stock:	<u>Shares</u>
Common stock, Sh1, outstanding on January 1, 2004	90,000
Common stock issued on May 1, 2004	6,000
Preferred stock, par Sh20, 6%, Cumulative, non-convertible	2,500

Income for the year ending 31 December 2004	<u>Shillings</u>
Net income before extraordinary item	134,000
Extraordinary item net of tax	<u>10,000</u>
	<u>144,000</u>

Solution

2. For the numerator (income): preferred dividend claim = $2,500 \times \text{Sh}20 \times 6\%$
= Sh3,000
3. For the denominator (shares): weighted average of the shares outstanding during 1998:

= $90,000 \times 4/12$ (for January to May)	= 30,000 shares
Add $96,000 \times 8/12$ (for May to December)	= <u>64,000 shares</u>
	<u>= 94,000 shares</u>

Weighted shares can also be calculated as follows:

$$\begin{aligned} 90,000 * 12/12 \text{ (for January to December)} &= 90,000 \text{ shares} \\ \text{Add } 6,000 * 8/12 \text{ (for May to December)} &= \underline{4,000 \text{ shares}} \\ &= \underline{\underline{94,000 \text{ shares}}} \end{aligned}$$

$$\text{EPS} = 144,000 - 3000 / 94,000 = \text{Sh}1.50$$

Note: if tax has not been deducted from extraordinary income, the amount net of tax should be calculated given the tax rate or tax amount. If tax rate or tax amount is not given, the whole amount is treated as if it is net of tax.

Q3. A company has outstanding Sh 1 million 8 percent convertible debentures due in five years. Each Sh1,000 convertible debenture is converted into 40 shares of common. Under the if converted method, what are the effect of the numerator and the denominator of the diluted EPS calculation? Assume a 40 percent tax rate.

Solution.

Numerator effect: the after tax will be added back to the numerator. If the debentures are assumed converted, the interest will no longer be paid but the firm will also not receive tax deduction for interest expense. Ad back $0.08 \times \text{Sh}1,000,000 \times (1 - 0.40) = \text{Sh}48,000$

Denominator effect: add the shares due to the conversion:
 $(\text{Sh}1,000,000 / 1,000) \times 40 = 40,000 \text{ shares.}$

DEPS is computed by adding the numerator and the denominator effects to basic EPS, if and only if the result is a final figure less than basic EPS

Questions

1. Describe the various kinds of dividends.
2. What is the relevance of the declaration date with respect to dividends?
3. For purposes of calculating income applicable to common stock, how do dividends on cumulative preferred stock differ from dividends on non-cumulative preferred stock?
4. What is the reasoning behind the calculation of a weighted average number of common stock for an accounting period?
5. What does the term dilution mean in the context of EPS calculations?
6. What does the term anti-dilution mean in the context of EPS calculations?
7. Distinguish between a single presentation and dual presentation of EPS.
8. Distinguish between primary and fully diluted EPS.
9. What accounting treatment is required for convertible bonds?
10. Explain how conversion feature of convertible debt has a value (a) to the issuer and (b) to the purchaser.
11. Define the following terms.
 - a. Basic earnings per share.

- b. Potentially dilutive security.
 - c. Diluted earnings per share.
 - d. Complex capital structure.
 - e. Potential common stock
12. What is meant by the term antidilution? Give an example.
13. EPS can affect market prices of common stock. Can market prices affect EPS? Explain.

Exercises

5-1 Thomson Ltd. has authorized 100,000 shares of Sh10 par common stock, of which 80,000 are issued and 70,000 are outstanding. On May 15, the board of directors declares a cash dividend of Sh1 per share payable on June 15 to stockholders of record on June 1. Prepare the entries as necessary for each of the three dates.

5-2 The Zawadi corporation has 1,000 shares of its Sh1000, 8 percent cumulative preferred stock outstanding and 20,000 shares of its Sh1 par value common stock outstanding. In its first three years of operation, the board of directors paid cash dividends as follows: 20x1, none; 20x2, Sh20,000; and 20x3, Sh40,000.

Required:

Determine the total cash dividends and dividends per share paid to the preferred and common stockholders for each of the three years.

5-3 Methuselah Ltd pays dividends at the end of each year. The dividends paid for 20x1, 20x2, and 20x3 were Sh40,000, Sh30,000, and Sh90,000 respectively. Calculate the total amount of dividends paid each year to common and preferred stockholders under each of the following independent capital structures: (1) 10,000 shares of Sh100 par, 6 percent non-cumulative preferred stock and 30,000 share of Sh10 par common stock. (2) 5,000 shares of Sh100 par, 7 percent cumulative preferred stock and 30,000 shares of Sh 10 common stock. There were no dividends in arrears at the beginning of 20x1.

5-4 Turchi Inc. has 10,000 shares of Sh10 par value common stock outstanding. It declares a Sh1 per share cash dividend on November 1, to stockholders on record on December 1. The dividend is paid is paid on December 31. Prepare the entries for the declaration and payment of the cash dividend.

5-5 Soldier corporation has 10,000 shares of Sh10 par value common stock outstanding. It declares a 10 percent stock dividend on December 1 when the market value per share is Sh12. the dividend shares are issued on December 31. Prepare the entries for the declaration and payment of the stock dividend.

5-6 Cynthia Inc. has successfully developed a new spreadsheet program. To produce and market the program, the company needed Sh2.0 million of additional financing. On December 31, 2002, Cynthia borrowed money as follows.

1. Cynthia issued Sh500,000, 11%, 10 year convertible bonds. Each Sh1,000 bond is convertible into 30 shares of Cynthia's Sh20 par value common stock.

2. Cynthia issued Sh1,000,000, 10%, 10-year bonds for Sh885,301. interest is payable semiannually on January 1 and July 1. Cynthia uses straightline method of amortization.
3. Cynthia also issued a Sh500,000, 12%, 15-year mortgage note payable. The terms provide for semiannual installment payments of Sh36,324 on June 30 and December 31.

Required:

For the convertible bonds, prepare journal entries for:

1. the issuance of bonds on January 1, 2003.
2. the conversion of all bonds into common stock on January 1, 2004, when the market value of common stock was Sh67 per share.

5-7 On June 1, 2002, Eagle corporation and Cock Merchants merged to form Flamingo Inc. 800,000 shares were issue to complete the merger. The new corporation reports on a calendar year basis. On April 1 2003 the company issued an additional 400,000 shares of stock for cash. All 1,200,000 shares were outstanding on December 31, 2003.

Flamingo also issued Sh600,000 of 20-year, 8 percent convertible bonds at par on July 1, 2003. Each Sh1,000 bond convertible to 40 shares of common at any interest date. None of the bonds have been converted to date.

Flamingo is preparing its annual report for the fiscal year ending December 31 2003. The annual report will show earnings per share figures based upon a reported after tax net income of Sh1,540,000 (the tax rate is 40 percent).

Determine for 2003:

1. The number of shares to be used for calculating:
 - a. Basic earnings per share.
 - b. Diluted earnings per share.
2. The earnings figures to be used for calculating:
 - a. Basic earnings per share.
 - b. Diluted earnings per share.
3. The Basic earnings per share.
4. The Diluted earnings per share.

5-8 For each of the unrelated transactions described below, present the entry(entries) required to record each of the transaction.

1. Grand corp. issued Sh20,000,000 par value 10 percent convertible bonds at 99. If the bonds had not been convertible, the company's investment banker estimates they would have been sold at 95. Expenses of issuing the bonds were Sh70,000.
2. Makatiat Ltd. issued Sh20,000,000 par value 10 percent bonds at 98. One detachable stock purchase warrant was issued with each Sh100 par value bond. At the time of issuance, warrants were selling for Sh4.

3. On July 1, 2001, Timber Co. called its 11 percent convertible debentures for conversion. The Sh10,000,000 par value bonds were converted into 1,000,000 shares of Sh1 par value common stock. On July 1, there was Sh55,000 of unamortized discount applicable to the bonds, and the company paid an additional Sh75,000 to the bondholders to induce conversion of all the bonds.

5-9 On January 1, 2004, the Ngozi corporation had 480,000 shares of common stock outstanding. During 2005, it had the following transactions that affected the common stock account.

February	1	issued 120,000 shares
March	1	issued a 10% stock dividend
May	1	acquired 100,000 shares of treasury stock
June	1	issued a 3-for-1 stock split
October	1	reissued 60,000 shares of treasury stock

Required:

- Determine the weighted average number of shares outstanding as of December 31, 2005
- Assume that Ngozi earned net income of Sh3,500,000 during 2005. In addition, it had 100,000 shares of 9%, Sh100 nonconvertible, noncumulative preferred stock outstanding for the entire year. Because of liquidity considerations, however, the company did not declare and pay a preferred dividend in 2005. Compute earnings per share for 199, using the weighted average number of shares determined in part (a).
- Assume the same facts in part (b), except that the preferred stock was cumulative. Compute EPS for 2005.
- Assume the same facts in part (b), except that net income included an extraordinary gain of Sh864,000 and a loss from discontinued operations of Sh432,000. Both items are net of tax. Compute EPS for 2005.

5-10 A portion of the combined statement of income and retained earnings of Simon Inc. for the current year is as follows:

Income before extraordinary item		Sh15,000,000
Extraordinary loss, net of applicable		
Income tax *		<u>1,340,000</u>
Net income		13,660,000
Retained earnings b/f		<u>85,250,000</u>
		96,910,000
Dividends declared:		
On preferred stock- Sh6 per share	Sh300,000	
On common stock- Sh1.75 per share	<u>14,875,000</u>	<u>15,175,000</u>
Retained earnings C/F		<u>Sh81,735,000</u>

*During the year, Simon suffered a major casualty loss of Sh1,340,000 after applicable income tax reductions of Sh1,200,000.

At the end of the current year, Simon has outstanding 8,500,000 shares of Sh10 par comm. Stock and 50,000 shares of 6% preferred stock.

On April 1 of the current year, Simon issued 1,000,000 shares of common stock for Sh32 per share to help finance the casualty.

Required:

Compute the EPS on common stock for the current year as it should be reported to stockholders.

5-11 Moses and Green associates was given the assignment of determining the basic and diluted earnings per share values of Timsales Ltd. for the year ending December 31, 2001. The following information is available.

1. The company is authorized to issue 8 million shares of Sh 10 par, common stock. As of December 31, 2000, 3 million shares had been issued and were outstanding.
2. The per share price of common stock on selected dates were as follows:

	<u>Price per share in Shs</u>
July 1, 2000	20.00
January 1, 2001	21.00
April 1, 2001	25.00
July 1, 2001	11.00
August 1, 2001	10.50
November 1, 2001	9.00
December 1, 2001	10.00

3. A total of 700,000 shares of an authorized 1.2 million shares of convertible preferred stock had been issued on July 1, 2000. The stock was issued at its par value of Sh25, and it has cumulative dividend of Sh3 per share. The stock is convertible into common stock at the rate of one share of preferred stock to one share of common. The rate of conversion is automatically adjusted for stock splits and stock dividends. Dividends are paid quarterly at the end of September, December, March, and June.
4. Sam is subject to a corporation tax rate of 40 percent.
5. The after tax net income for the year ended December 31, 2001 was Sh13.55 million

The following specific activities took place during 1998.

1. January 1- a 5% common stock dividend was issued. The dividend had been declared on December 1, 2000, to all stockholders on record on December 29, 2000.
2. April 1- a total of 200,000 shares of the Sh3 convertible preferred stock was converted into common stock. The company issued new common stock and

- retired the preferred stock. This was the only conversion of the preferred stock during 2001.
3. July 1- a 2-for-1 split of the common stock became effective on this date. The board of directors had authorized the split on June 1.
 4. August 1- a total of 300,000 shares of common stock were issued to acquire a factory building.
 5. November 1- a total of 24,000 shares of common stock were purchased on the open market at Sh9 per share. These shares were to be held as treasury stock and were still in the treasury of December 31, 2001.
 6. Common stock cash dividends- cash dividends to common stockholders were declared and paid as follows:
 - April 15 – 30cents per share
 - October – 20cents per share
 7. Preferred stock cash dividends – cash dividends to preferred stock holders were declared and paid as scheduled.

Required:

- (a) Journalize the entries.
- (b) Determine the number of shares used to compute basic earnings per share for the year ended December 31, 2001.
- (c) Determine the number of shares used to compute diluted earnings per share for the year ended December 31, 2001.
- (d) Compute the adjusted net income to be used as the numerator in the basic earnings per share calculation for the year ended December 31, 2001.

5-12 Sober drinks, a company dealing with the manufacture of beverages is preparing the comparative financial statements to be included in the annual report to stockholders. Sober fiscal year ends on December 31.

Income from operations before taxes was Sh1,400,000 and Sh660,000, respectively, for fiscal year ended December 31, 2004 and 2003 respectively. Sober experienced an extraordinary loss of Sh500,000 because of the Tsunami disaster on December 26 2004. A 40% combined income tax rate pertains to all of Sober's profits, gains, and losses.

Sober's capital structure consists of preferred stock and common stock. The company has not issued any convertible securities or warrants and there are no outstanding stock options. Sober issued 50,000 shares of Sh100 par value, 6% cumulative preferred stock in 1990. All of this stock is outstanding, and no preferred stock dividends are in arrears.

There were 1.5 million shares of Sh1 par common stock outstanding on June 1, 2002. On September 1, 2002, Sober sold an additional 400,000 shares of common stock at Sh17 per share. Sober distributed a 20% stock dividend on common stock outstanding on December 1, 2003. These were the only common stock transactions during the past two fiscal years.

Required:

1. Determine the weighted average number of common shares that would be used in computing EPS on the current comparative income statement for the year ended December 31, 2003 and December 31, 2004.
2. Starting with income from operations before income taxes, prepare a comparative income statement for the years ended December 31, 2004 and 2003. The statement will be part of Sober's annual report to stockholders and should include appropriate EPS presentations.
3. The capital structure of a corporation is the result of past financing decisions. Furthermore, the EPS data presented on a corporation's financial statements is dependent upon the capital structure.
 - a. Explain why Sober is considered to have a simple capital structure.
 - b. Describe how EPS data would be presented for a corporation that has a complex capital structure.

5-13 The stockholders' equity section of Solomon and Solomon Co. balance sheet on January 1 of the current year is as follows:

Paid-in capital:

Common stock, par Sh50 40,000 shares authorized, 20,000 issued	Sh1,000,000
paid-in capital in excess of par value, common	<u>400,000</u>
total paid-in capital	1,400,000

Retained earnings:

Unappropriated	Sh328,800	
Appropriated for plant expansion.	120,000	
Appropriated for treasury stock	<u>61,200</u>	
Total Retained earnings		<u>510,000</u>

Less cost of treasury stock (600 shares)	<u>61,200</u>
Total stockholders' equity	<u><u>1,848,800</u></u>

The following selected transactions occurred during the year:

- (i) paid cash dividends of Sh1.25 per share on the common stock. the dividend had been properly recorded as declared last year.
- (ii) Declared a 10% stock dividend on common stock when the shares were selling at Sh113 each in the market.
- (iii) Issued a certificate for the stock dividend.
- (iv) The board appropriated Sh40,000 of retained earnings for plant expansion, eliminated the appropriation for treasury stock, and declared cash dividend of Sh1.65 per share on the common stock.
- (v) The company reported net income of Sh235,000 for the year.

Required:

- (a) prepare journal entries for the above transactions.
- (b) Prepare Retained earnings statement for the current year.

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