# MANAGEMENT ACCOUNTING

## Accounting profession option

Senior Student Book

## Experimental version

Kigali, 2023

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## FOREWORD

Dear Student,

Rwanda Basic Education Board (REB) is honoured to present Senior 6 Management Accounting book for the students of Accounting Profession Option which serves as a guide to competence-based teaching and learning to ensure consistency and coherence in the learning of the Management Accounting. The Rwandan educational philosophy is to ensure that you achieve full potential at every level of education which will prepare you to be well integrated in society and exploit employment opportunities.

The government of Rwanda emphasizes the importance of aligning teaching and learning materials with the syllabus to facilitate your learning process. Many factors influence what you learn, how well you learn and the competences you acquire. Those factors include the relevance of the specific content, the quality of teachers' pedagogical approaches, the assessment strategies and the instructional materials available. In this book, we paid special attention to the activities that facilitate the learning process in which you can develop your ideas and make new discoveries during concrete activities carried out individually or in groups.

In competence-based curriculum, learning is considered as a process of active building and developing knowledge and meanings by the student where concepts are mainly introduced by an activity, situation or scenario that helps the student to construct knowledge, develop skills and acquire positive attitudes and values.

For efficiency use of this textbook, your role is to:

- Work on given activities which lead to the development of skills;
- Share relevant information with other students through presentations, discussions, group work and other active learning techniques such as role play, case studies, investigation and research in the library, on internet or outside;
- Participate and take responsibility for your own learning;
- Draw conclusions based on the findings from the learning activities.

To facilitate you in doing activities, the content of this book is self-explanatory so

that you can easily use it yourself, acquire and assess your competences. The book is made of units as presented in the syllabus. Each unit has the following structure: the unit title and key unit competence are given and they are followed by the introductory activity before the development of managerial concepts that are connected to real world problems more especially to production, finance, accounting and economics .

The development of each concept has the following points:

- Learning activity which is a well set and simple activity to be done by students in order to generate the concept to be learnt;
- Main elements of the content to be emphasized;
- Worked examples; and
- Application activities to be done by the user to consolidate competences or to assess the achievement of objectives.

Even though the book has some worked examples, you will succeed on the application activities depending on your ways of reading, questioning, thinking and handling calculations problems not by searching for similar-looking worked out examples.

Furthermore, to succeed in Management Accounting, you are asked to keep trying; sometimes you will find concepts that need to be worked at before you completely understand. The only way to really grasp such a concept is to think about it and work related problems found in other reference books.

I wish to sincerely express my appreciation to the people who contributed towards the development of this book, particularly, REB staff, development partners, universities Lecturers and secondary school teachers for their technical support. A word of gratitude goes to Secondary Schools Head Teachers, Administration of different Universities (Public and Private Universities) and development partners who availed their staff for various activities.

Any comment or contribution for the improvement of this textbook for the next edition is welcome.

**Dr. MBARUSHIMANA Nelson**

**Director General, REB.**

## ACKNOWLEDGEMENT

I wish to express my appreciation to the people who played a major role in the development of this Management Accounting book for Senior 6 students in Accounting Profession Option. It would not have been successful without active participation of different education stakeholders.

I owe gratitude to different universities and schools in Rwanda that allowed their staff to work with REB in the in-house textbooks production initiative.

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Finally, my word of gratitude goes to the Rwanda Basic Education Board staffs who were involved in the whole process of in-house textbook elaboration.

**Joan MURUNGI**

**Head of CTLR Department**

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# UNIT 1 | FORECAST INCOME AND EXPENDITURE

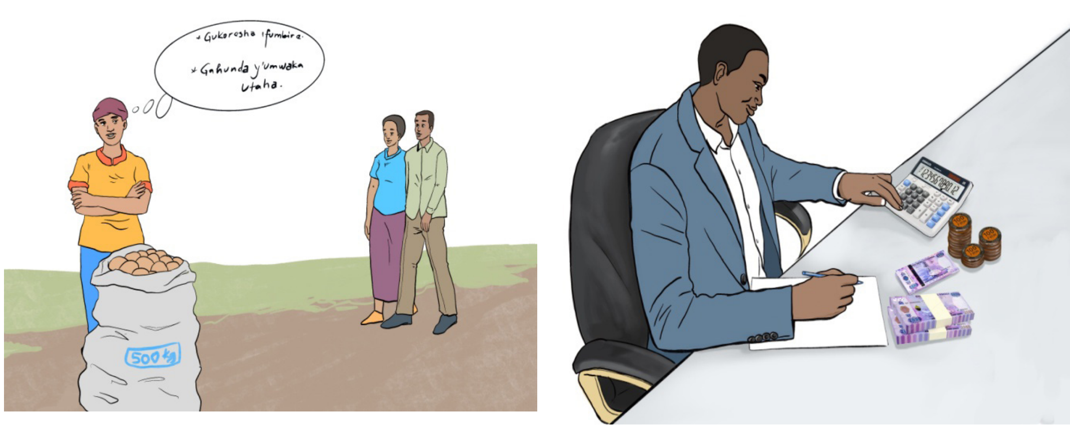
**Key unit competence:** To be able to forecast an income and expenditure for an accounting period.

**Introductory activity:**

| Period | Actual Demand | |
|---|---|---|
| 1 | 60 | 55 (assume |
| 2 | 55 | 55 + 0.3 x (60 – 55) = 56.5 |
| 3 | 51 | 56.5 + 0.3 x (55 – 56.5) = 56.05 |
| 4 | 58 | 56.05 + 0.3 x (51 – 56.05) = 54.53 |

(i) Image shown management meeting of ABZ Manufacturing Ltd. What the participants are trying to do?

## 1.1 Introduction to forecasting




**Learning Activity 1.1**

**Questions:**

i) Which kind of agents intervening in the specified activities?

ii) Which actictvities Accountant is trying to do?

iii) Where accountant can get information to support him in performing his task?

### *1.1.2.Definition of concepts*

- **Forecasting**

It refers to the practice of predicting what will happen in the future by taking into consideration events in the past and present. Basically, it is a decision-making tool that helps businesses cope with the impact of the future's uncertainty by examining historical data and trends. It is a planning tool that enables businesses to chart their next moves and create budgets that will hopefully cover whatever uncertainties may occur.

- **Financial forecasting**

It is predicting a company's financial future by examining historical performance data, such as revenue, cash flow, expenses, or sales. This involves guesswork and assumptions, as many unforeseen factors can influence business performance. Common types of forecasts include cash flow forecast, projected profit and loss and balance sheet forecast.

- **Difference between Budgeting and Forecasting**

Budgeting and forecasting are both tools that help businesses plan for their future. However, the two are distinctly different in many ways:

- **Budgeting**

It involves creating financial statements for a specific period, such as projected revenue, expenses, cash flow and investments. It is usually conducted with input from many different departments in order to come up with a holistic and detailed report. Therefore, the budgeting process takes time to complete. The company uses the budget to guide it in its financial activities. In other words, a budget is a plan for a company's future.

While **budget** are usually made for an entire year, forecasts are usually updated monthly or quarterly. Through forecasting, a company can project where it's going, and it may adjust its budget and allocate more or less funds to an activity, depending on the forecast. In summary, budgets depend on the forecast.

**Forecasting** is a common statistical task in business, where it helps to inform decisions about the scheduling of production, transportation and personnel, and provides a guide to long-term strategic planning. However, business forecasting is often done poorly, and is frequently confused with planning and goals. They are three different things.

- **Forecasting**

It is about predicting the future as accurately as possible, given all of available the information , including historical data and knowledge of any future events that might impact the forecasts.

Goals are what business would like to have happen. Goals should be linked to forecasts and plans, but this does not always occur. Too often, goals are set without any plan for how to achieve them, and no forecasts for whether they are realistic.

Planning is a response to forecasts and goals. Planning involves determining the appropriate actions that are required to make your forecasts match your goals.

Forecasting should be an integral part of the decision-making activities of management, as it can play an important role in many areas of a company. Modern organizations require short-term, medium-term and long-term forecasts, depending on the specific application.

### *1.1.2. Source of information in forecasting*

The data used for forecasting methods can either come from primary sources or secondary sources. Primary sources provide first-hand information, collected directly by the person or organization that is doing the forecasting, Secondary sources provide information that has already been gathered and processed by

a third-party organization.

Collection of data is a first step in any statistical investigation. It is the basis for any analysis and interpretations. Before collection of data, planner needs to know the source in which you can get information. Below is key source of information in forecasting

a) **Market or industry data**: Market or industry is Secondary source supplying information that has been collected and published by other entities. Examples of this type of information might be industry reports, growth rate of economy, inflation, interest rate, tax incentives, etc. These data are useful for predicting future. As this information has already been compiled and analyzed, it makes the process quicker.

b) **Competitors**: A competitor is a person, business, team, or organization that competes against you or your company. If somebody is trying to beat you in a race, that person is your competitor. Information like sales quantity, competitor's price, market share, financial performance and position will help business to predict future

c) **Key customers:** A customer is a person or business that buys goods or services from another business. Customers are crucial because they generate revenue. Without them, businesses would cease to operate. Any decision and forecast that business need to make it is necessary to first look at customer's capacity to pay, quality needed, volume needed. For example, in forecasting sales volume you need to know how much customer is willing and able to buy.

d) **Suppliers:** A supplier is a person, company, or organization that sells or supplies something such as goods or equipment to you. In forecasting any company needs to gather information from suppliers to know how many resources you are going to receive, the willingness of suppliers to continue to serve you and financial capabilities of supplier to continue to serve in future.

e) **Procurement department:** Also called the purchasing or sourcing department, the procurement department is where the procurement process starts and finishes. This is the place where the procurement manager discusses the time for procurement process, list of goods, list of suppliers, products price levels and tender awarded should go with the other team members. This is also where each member of the procurement team does its respective assignments. That is why it is very important for the company to do forecast after consulting procurement department.

f) **Humana resource department:** Human resources (HR) department is the division of a business that is charged with finding, screening, recruiting, and training job applicants. It also administers employee-benefit programs. Human resource department is key source of information for forecasting

the labor cost and the availability of human contribution. Leaves, needed skills labor, capacity building cost, tasks and responsibilities, salaries and wages, fringe benefits, labor turnover, labor contracts.... )

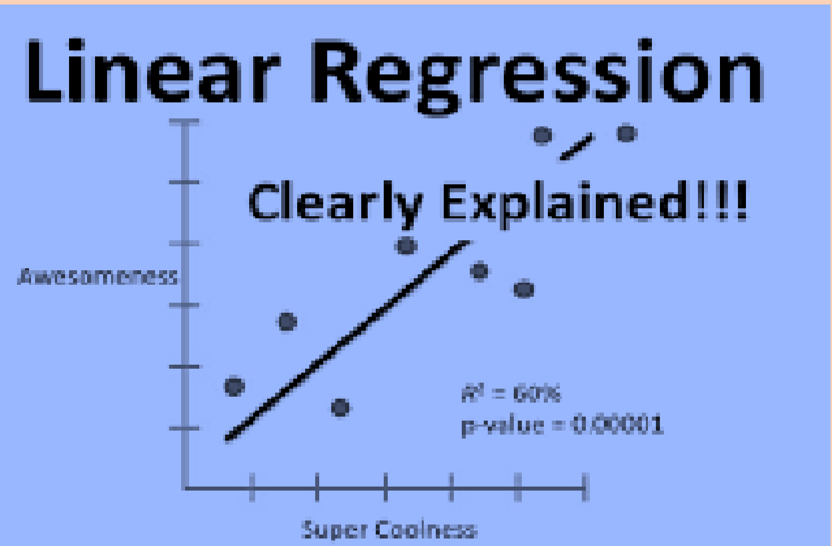
g) **Financial goal and objectives:** Financial objectives are the goals or targets related to the financial performance of a business. There are six types of financial objectives: revenue objectives, cost objectives, profit objectives, cash flow objectives, investment objectives and capital structure objectives. Those objectives offer information to budgeting department to be based on in forecasting future.

**Application activity 1.1**

1. Define the following concepts:
   A. Forecasting.
   B. Budgeting
   C. Financial Forecasting
2. Manager of XYZ Ltd has planned to forecast future sales but he is unsure on where he can get reliable information to be based on while making prediction. Advise him five key sources of information for forecasting.

## 1.1.Forecasting Methods for income and expenditure

**Learning Activity 1.2**



i) What are two variables shown on above image?

ii) What come to your mind once you see image above?

There are two primary categories of forecasting: quantitative and qualitative.

N = Total number of periods

**A.Quantitative Methods**

When producing accurate forecasts, business leaders typically turn to quantitative forecasts, or assumptions about the future based on historical data.

### *1.1.1.Straight Line*

The straight-line method assumes a company's historical growth rate will remain constant. Forecasting future revenue involves multiplying a company's previous year's revenue by its growth rate. Although straight-line forecasting is an excellent starting point, it doesn't account for market fluctuations or supply chain issues.

For arriving to the forecasted future revenue or cost the following step will be followed:

1. The first step in straight-line forecasting is to determine the sales/cost growth rate that will be used to calculate future revenues.
2. To forecast future revenues, take the previous year's figure and multiply it by the growth rate.

For example, Total income of Akeza Ltd for year ended 31 December 2021 and 2022 is Frw 24,000,000 and Frw 30,000,000 respectively. Compute growth rate and forecast revenue for the year ended 2023if the calculated will continue to grow by same growth.

*Solution:*

$$\text{Growthrate} = \frac{\text{currentsalesvalue} - \text{Previoussalesvalue}}{\text{Previoussalesvalu}} * 100$$

$$\frac{30{,}000{,}000 - 24{,}000{,}000}{24{,}000{,}000} * 100$$

25% so, revenue will grow by 25% in 2023

Forecasted revenue by using straight-line = 30,000,000*(1+25%) = Frw 37,500,000

### *1.1.2. Moving Average*

A moving average is an average of the results of a fixed number of periods. Since it is an average of several time period, it is related to the mid-point of the overall period.

Moving average involves taking the average of previous periodsto forecast the

future. This method involves more closely examining a business's high or low demands, so it's often beneficial for short-term forecasting. For example, you can use it to forecast next month's sales by averaging the previous quarter. Moving average forecasting can help estimate several metrics. While it's most commonly applied to future stock prices, it's also used to estimate future revenue.

To calculate a moving average, use the following formula:

A1 + A2 + A3 … / N

Formula breakdown:

A = Average for a period

N = Total number of periods

### 1.1.3.Time series

This is a sequence of variable values like sales or production that change over a uniform set of time. The variable values represent statistical data while time can be in seconds, hours, days, weeks, etc.

Time series analysis is a specific way of analyzing a sequence of data points collected over an interval of time. In time series analysis, analysts record data points at consistent intervals over a set period of time rather than just recording the data points intermittently or randomly.

All-time series contain at least one of the following four components:

1. **Secular trend:** The general underlying tendency of the time series data to increase, decrease or remain constant for a long period of time.
2. **Seasonal variations:** Are periodic movements of the data where the duration is less than a year. The factors that mainly cause these variations are:
   a) Climatic changes
   b) The customs and habits that people follow at different times
3. **Cyclical variations:** Are periodic movements within the time series data where the duration is more than a year. They are not as regular as the seasonal variations but their sequence of change is the same. The causes of the cyclical variations are the four phases of an economic cycle which include: the boom/peak, decline/downturn, depression/trough and recovery/upswing.
4. **Random/ irregular erratic variations:** These are completely

unpredictable variations within the data caused by unpredictable events like sickness, machine breakdown, weather conditions, strikes etc. They are non-recurring influences which cannot be mathematically captured yet they have profound consequences on a time series.

The equation for trend is:

Y = a+ bx

Formula breakdown:

Y= Dependent variable  (the forecasted number)

b = line's slope

x = Independent variable (time numbered from 0 upwards)

a= Y-intercept

$$b = \frac{\text{[illegible]}}{n\sum X^2 - (\sum X)^2}$$

$$a = \frac{\sum Y}{n} - b\frac{\sum X}{n}$$

Example: Sales of product A between 2017 and 2021 were as follows:

| Year | Units sold ('000s) |
|---|---|
| 2017 | 20 |
| 2018 | 18 |
| 2019 | 15 |
| 2020 | 14 |
| 2021 | 11 |

**Required:Calculate the trend line of sales and forecast sales in 2022 and 2023.**

**Answer:**

**Trend Line**

| X | Y (000) | XY  (000) | X2 Y (000) | Y2 Y (000) |
|---|---|---|---|---|
| - | 20 | - | - | 400 |
| 1 | 18 | 18 | 1 | 324 |
| 2 | 15 | 30 | 4 | 225 |
| 3 | 14 | 42 | 9 | 196 |
| 4 | 11 | 44 | 16 | 121 |
| **10** | **78** | 134 | 30 | 1,266 |

N=5

$$B=\frac{n\sum XY-\sum X\sum Y}{n\sum x2-(\sum x)2}=\frac{(5*8140)-(100*400}{5*2040-(100)2})==\frac{-110}{50}=-2.2$$

$$A=\frac{\sum y}{n}-b*\frac{\sum x}{n}=\frac{78}{5}--2.2*(\frac{10}{5})==20$$

y=20-2.2x

**Sales and forecast sales in 2022 and 2023**

Using the trend line, predicted sales in 2022 (year 5) would be:

20 – (2.2* 5) = 9 ie 9,000 units and

Predicted sales in 2023 (year 6) would be:

20 – (2.2 * 6) = 6.8 ie 6,800 units.

### *1.1.4.Simple Linear Regression/least squares method*

Linear regression analysis (the least squares method) is one technique for estimating a line of best fit. Once an equation for a line of best fit has been determined, forecasts can be made. Simple linear regression forecasts metrics based on a relationship between two variables: dependent and independent. The dependent variable represents the forecasted amount, while the independent variable is the factor that influences the dependent variable.

The equation for simple linear regression is:

Y = a+ bx

Formula breakdown:

Y = Dependent variable (the forecasted number)

b = Regression line's slope

x = Independent variable

a= Y-intercept

$$b=\frac{n\sum XY-\sum X\sum Y}{n\sum X^2-\left(\sum x\right)^2}$$

a= (∑y)/n–b* (∑x)/n

Example: The least squares method

a) Using the data below for variables X (output) and Y (total cost), calculate an equation to determine the expected level of costs, for any given volume of output, using the least squares method.

| Time period | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Output ('000 units) | 20 | 16 | 24 | 22 | 18 |
| Total cost (Frw '000) | 82 | 70 | 90 | 85 | 73 |

b) Prepare a forecast for total costs if output is 22,000 units.

**Solution:**

**a) Working**

| X | Y (000) | XY(000) | (000) | (000) |
|---|---|---|---|---|
| - | 20 | - | - | 400 |
| 1 | 18 | 18 | 1 | 324 |
| 2 | 15 | 30 | 4 | 225 |
| 3 | 14 | 42 | 9 | 196 |
| 4 | 11 | 44 | 16 | 121 |
| **10** | **78** | **134** | **30** | **1,266** |

N=5

$$b=\frac{n\sum XY-\sum X\sum Y}{n\sum X^2-\left(\sum x\right)^2}=\frac{(5*8140)-(100*400)}{5*2040-(100)^2}=\frac{-110}{50}=-2.2$$

$$a=\frac{\sum y}{n}-\text{b}*\frac{\sum x}{\text{n}}=\frac{78}{5}-(-2.2)*\left(\frac{10}{5}\right)=20$$

y=20-2.2x

Note that the fixed costs are Frw 28000 (when x=0 costs are Frw 28000) and the variable cost per unit is Frw 2.60.

b) Forecast for total costs if output is 22,000 units = Frw 28+2.6*22=85.2 =85,200

**A.Qualitative Methods**

When it comes to forecasting, numbers don't always tell the whole story. There are additional factors that influence performance and can't be quantified.

Qualitative forecasting relies on experts' knowledge and experience to predict performance rather than historical numerical data.

These forecasting methods are often called into question, as they're more subjective than quantitative methods. Yet, they can provide valuable insight into forecasts and account for factors that can't be predicted using historical data.

### 1.1.5.Market Research

Market research is essential for organizational planning. It helps business leaders obtain a holistic market view based on competition, fluctuating conditions, and consumer patterns. It's also critical for start-ups when historical data isn't available. New businesses can benefit from financial forecasting because it's essential for recruiting investors and budgeting during the first few months of operation.

When conducting market research, begin with a hypothesis and determine what methods are needed. Sending out consumer surveys is an excellent way to better understand consumer behavior when you don't have numerical data to inform decisions.

### 1.1.6. Delphi Method

This method incorporates both judgmental and subjective factors. It is an iterative process that allows experts to make an objective forecast. There are 3 groups of participants involved namely:

1. **Decision makers**: group usually consists of 5 - 10 experts who will be making the actual forecast.
2. **Staff personnel:** assist the decision makers by preparing, distributing, collecting and summarizing a series of questionnaires and survey results.
3. **Respondents:** The respondents are a group of people whose views and judgments are valued and are being sought. This group provides input to the decision makers before the forecast is made. In this method, it is crucial to select participants from different functional fields due to the following reasons:

- To get diverse opinions
- To have diversity of ideas and experience
- To reduce prediction error
- To improve on quality of final results

## 1.2. Forecasting Models for income and expenditure

**Application activity 1.2**

Alex Mugabo is Budget manager of MG factory a company based in Kigali to produce and sales furniture to household. The following table shows the actual units sold from 2010 to 2016 by MG factory.

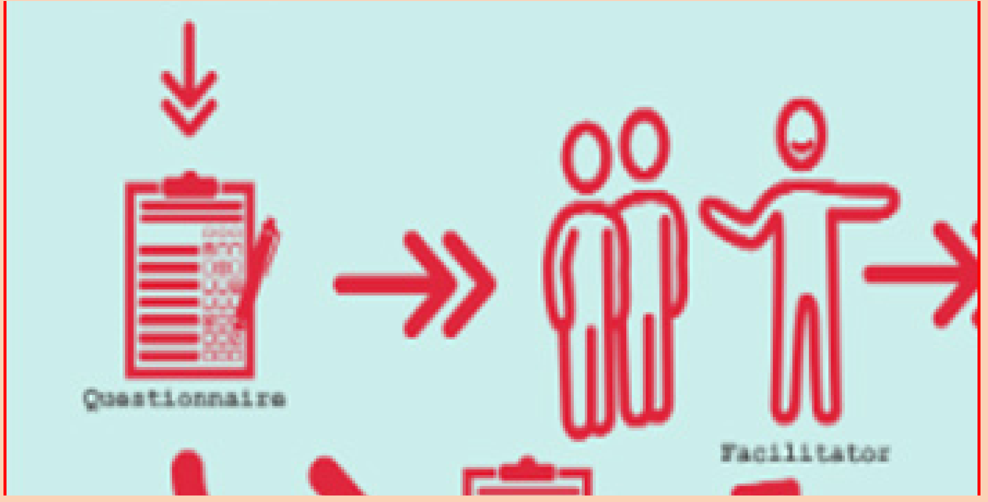
| Years | Sales Units |
|---|---|
| 2010 | 390 |
| 2011 | 380 |
| 2012 | 460 |
| **2013** | **450** |
| 2014 | 470 |
| 2015 | 440 |
| 2016 | 500 |

**Required**

d) Take a moving average of the annual sales over a period of three years

e) Based on calculated moving value in a) Advice Alex on future sales

**Learning Activity 1.3**




vi. Based on knowledge acquired from previous methods of forecasting what is method identified in the image above?

vii. What the participants in this image trying to do?

Forecasting models are one of the many tools' businesses use to predict outcomes regarding sales, supply and demand, consumer behavior and more. These models are especially beneficial in the field of sales and marketing. There are several forecasting methods businesses use that provide varying degrees of information. From the simple to the complex, the appeal of using forecasting models comes from having a visual reference of expected outcomes.

There are numerous ways to forecast business outcomes; there are four main types of models that companies use to predict revenue and expenditure in the future.

### *1.2.1. Time Series Model*

This type of model uses historical data as the key to reliable forecasting. You'll be able to visualize patterns of data better when you know how the variables interact in terms of hours, weeks, months or years. Time series has four main components which are trend, seasonal variations, cyclical variations and random variations.

### *1.2.2. Econometric Forecasting Model*

Econometric forecasting models are systems of relationships between variables

such as GNP, inflation, exchange rates etc. Their equations are then estimated from available data, mainly aggregate time series. Econometric models attempt to quantify the relationship between the parameter of interest (dependent variable) and a number of factors (explanatory variables) that affect the dependent variable. A simple example of an econometric model is one that assumes that monthly spending by consumers is linearly dependent on consumers' income in the previous month.

### *1.2.3. Judgmental forecasting Model*

Various forecasting models of the judgmental kind utilize subjective and intuitive information to make predictions. For instance, there are times when there is no data available for reference. Launching a new product or facing unpredictable market conditions also creates situations in which judgmental forecasting models prove beneficial.

**Product life cycle and market knowledge:** Management should know that, most products have a limited product life cycle which will show different sales and profitability patterns at different stages of the life cycle.

In time series method, analysis makes the assumption that the sales figures will continue to change in line with the trend. Such statistical projections are helpful in forecasts but a manager should not ignore knowledge of the market or product itself.

The trend will not continue unchanged in practice as most products have a limited product life cycle which will show different sales and profitability patterns at different stages of the life cycle.

The product life cycle is generally thought to split naturally into five separate stages: Development, Launch, Growth, Maturity and Decline.

So, a business has to consider not only its products' sales trends but also the stage of the life cycle of each product and the state of the market for that product.

However, the analysis could go even further, into the general state of the environment in which the business operates. This can often be efficiently done by carrying out a PEST analysis. This examines the following factors: Political, Economic, Social, And Technological

### 1.2.4. Delphi Model

This method is commonly used to forecast trends based on the information given by a panel of experts. It assumes that a group's answers are more useful and unbiased than answers provided by one individual. The total number of rounds involved may differ depending on the goal of the company or group's researchers.

These experts answer a series of questions in continuous rounds that ultimately lead to the "correct answer" a company is looking for. The quality of information improves with each round as the experts revise their previous assumptions

following additional insight from other members in the panel.

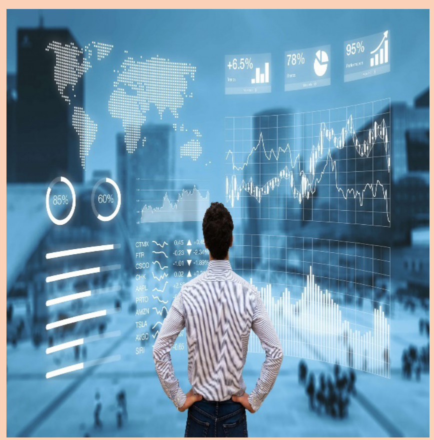
**Application activity 1.3**

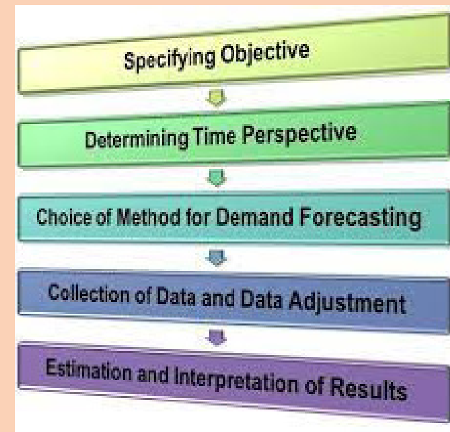
Most products have a limited product life cycle which will show different sales and profitability patterns at different stages of the life cycle.

**Required :**

List and explain four cycles of products

**Learning Activity 1.4**






i. Based on image above what does this man trying to do?

### 1.3. The Process /Step of Forecasting

Management of institutions/ company needs to follow carefully the process in order to get accurate results. Below is the process for forecasting

#### 1.3.1. Determine what the forecast is for

The first step in the process is to determine what kind of forecast you need to make. Remember that forecasts are made in order to plan for the future. To do so, we have to decide what forecasts are actually needed. This is not as simple as it sounds. For example, do we need to forecast sales or demand? These are two different things, and sales do not necessarily equal the total amount of demand for the product. Both pieces of information are usually valuable.

#### 1.3.2. Select the items for the forecast.

This step involves identifying what data are needed and what data are available. This will have a big impact on the selection of a forecasting model. For example, if you are predicting sales for a new product, you may not have historical sales information, which would limit your use of forecasting models that require quantitative data.

#### 1.3.3. Select the time horizon.

A time horizon is a fixed point of time in the future at which point certain processes will be evaluated or assumed to end. Forecasts in Business are classified according to period, time and use. There are long term forecasts and short-term forecasts. Operation managers need long range forecast for making strategic decisions related to products, processes and facilities. They also need short term forecasts to assist them in making decisions about production issues that span, only few weeks. Forecasting forms an integral part of planning that why production managers must be aware about the horizon of forecasts.

### 1.3.4. Select the forecast model, type and method.

Based on what you want to forecast for, you should select appropriate model and type that will give you reliable results, there are number of factors that will influence you in choosing right forecasting model, amount and types of available data, degree of accuracy required, forecast time horizon and kind of data. Appropriate method of sales forecasting is selected by the company taking into account all the relevant information, purpose of forecasting and the degree of accuracy required.

### 1.3.5. Gather data to be input into the model

There are generally two kinds of information available for forecasting: statistical data which is generally historic numerical data and the accumulated judgment and expertise of key personnel. Also, other relevant data such as the time and length of any significant production downtime due to equipment failure or industrial disputes may prove useful and therefore may also be collected in gathering data they will consider primary source of information (information collected from internals) and secondary source of information (information collected from externals) all that information will give required data in forecasting.

### 1.3.6. Make the forecast.

Perform initial analysis of the data to see if it is usable. Check trends and patterns shown in the data to see if they are helpful. Cut out any unwanted data. Using your chosen model, run the data, analyze it, and make the forecast.

### 1.3.7. Verify and Implement the results

Every step is checked, refinements and modifications are made at the end you will get outcomes from the forecasting model and plan accordingly. Forecasting isn't a measure just to get the business up and running. Successful companies use their market forecast to calculate their progress and use it as a management tool to run the business better.

## Application activity 1.4

The General Manager of AOB Limited is planning to launch a new product Urwiwacu which is new product to Rwanda market and the rest of east Africa but is unsure on profitability of Urwiwacu. CEO convening meeting with chief operation Manager, Sales Manager and budget manager to discuss the feasibility of the proposal to launch Urwiwacu. The following concerns were raised by the participants: the budget manager has concern of timing the launch of Urwiwacu due to the lack of sufficient information related to the cost, revenue and profitability. He has concern over the method that AOB can use to estimate the profit expected from Urwiwacu. The Chief Operation Manager tells the meeting that the raw materials needed for production will be available at a high cost and this is due to the lack of local supplier. The sales manager says that the department has been trying to collect data related to Urwiwacu and tells the participants that the product is needed on market and customer will be happy to buy product but he was not sure of price to be charged in order to cover cost and remain with profit. General manager requests all participants to take one month and come up with forecasted revenue and cost from Urwiwacu product.

**Required:** You have completed senior six and you are hired by AOB ltd in department of budgeting. Referring to the case above Apply first 4 steps of forecasting

## 1.4. Challenges to forecasting

**Learning Activity 1.5**

a) What do you think about the problems this man would have after looking above photo?

Every large businesses or medium perform financial forecasting for various reasons such as projecting future sales, understanding working capital needs, launching new product and more. With accurate financial forecasting, businesses can easily achieve both their short-term and long-term goal but forecasting has its challenge:

**a) Forecasting Time Period**

Shorter the period more is the accurate financial forecasting. Longer the period less is the accurate and difficult financial forecasting. Mostly, less difficulty comes for a short span and more difficulty comes for a long span. In simple words, we say the shorter forecasting period will always be more accurate as compared to the larger prediction time.

**b) Data Collections**

Collecting and gathering all the business finance data to proceed further can never be easy. This task can take a week to weeks to gather all the information to build the cash flow projection and revenue forecast. Collecting these data for forecasting is one of the huge financial forecasting problems.

**c) Problems with the Input data**

Forecasts using linear analysis can be common, but this type of forecasting fails to account for the uncertainty in the future. In statistics, the assumption of linearity is necessary when certain assumptions are made about the future.

However, there is no assurance that a relationship between two variables will continue in the future. Many factors come into play when you're making a forecast, especially when it's on an important matter. Human error which is common can mean the difference in wrong predictions.

**d) Unforeseeable Events**

Another financial forecasting problem is unforeseeable. In spite of the businesses achieve the quantitative and qualitative forecasting techniques to make their prediction accurate, unforeseeable can never be achieved. These components can vary inherently, and reach the risks of forecasting. For example, let us take an example of supermarket that opens the store with the pillar financial growth. It leads to affecting the other supermarket in the particular area. It can never be forecasted.

**e) Accuracy of past data**

Financial forecasting is performed based on past business data to predict the future. Take an instant that your business average growth as 10% as a stable one for the past 4 years, you could predict your business finance for the next 4 years as 10%. While you use this kind of system wider, then you are on the way to financial forecasting problems.

If a company has variable results year over year, using the previous period data is worthless. Additionally, the financial data will not be available for the startups, as they should go by approximate estimation without any accurate idea.

Note, Apart from the above-mentioned challenges there are many other challenges such as Social changes, Technological advances, Environmental changes, Political and economic changes, No easy way to capture forecast assumptions of all managers, Lack of tools to analyze historical trends, etc.

**Application activity 1.5**

You are employed by ABZ company as sales officer. Budget department sent to you target sales value for first quarter but you are not sure if you will achieve target.

You know that forecasts are subject to error, but the likely errors vary from case to case due to:

a) The further into the future the forecast is for; the more unreliable it is likely to be.

b) The less data available on which to base the forecast, the less reliable the forecast.

c) The pattern of trend and seasonal variations cannot be guaranteed to continue in the future.

d) There is always the danger of random variations upsetting the patterns.

**Required**: Explain 3 main challenges of forecasting.

## Skills Lab 1

The students visit one of the nearest manufacturing industries. Let us take MUTEXRWA Industry as our case study.

Let us approach production departmental manager and share us the methods used in forecasting their production volume and the challenges they face with. We have selected one kind of products they produce which is Uniforms clothes for secondary schools. The Sales departmental manager is about sharing how forecasting is most useful in their prediction of production sales level. “We collect forecasting information from Ministry of education to know school calendar year and new schools are about opening.

We mostly use time series method based on the calendar year set by Ministry of Education as it is the key determinant of our uniform clothes demand, this where the method of time series comes as the time series has a component called seasonal variation,

For previous academic terms we have much data recorded in our financial statements and their trend analysis report is there, we base on the above historical trends data and we use time series mathematical calculations to predict the production demand for the future.

Let Sales production manager also tells us about the challenges MUTEXRWA faces in forecasting,

“There are less data available to be based on, this lead less reliability on forecast because in our sector the demand of uniform clothes is limited, the many customers demand diversity design of clothes, We also meet with challenges of Technology changes, here I want to mean that the past is not a reliable indication of likely future events. For example, the availability of faster machinery may make it difficult to use current output levels as the basis for forecasting future production output, there many other factors out of our control such Economical and political factors.

Also as in forecasting uncertainty future events there are many assumptions used, this become challenge to our company because each manager has his/ her own assumption. Apart from the above challenges, I would like to conclude by saying that forecasting is the useful tool in company as it is used to predict company future operations" Said by MUTEXRWA Sales departmental manager.

Before leaving this industry, let us also have a short interview with MUTEXRWA Production departmental Manager. Let us ask him whether forecasting is the recommendable basing on its result to their industry. "Yes, forecasting is highly recommendable to all companies as it helps of predicting what will happen in the future by taking into consideration events in the past and present and this enables businesses to predict their next moves and create budgets that will hopefully cover whatever uncertainties may occur" said by Production departmental manager.

**End of unit assessment 1**

**Question 1**

Time series is method for forecasting where independent variable is time. What do you understand by time series? Give examples of time series.

**Question2**

If manager wants to forecast; he will need to collect information to be based on, those collected information are either primary source or Secondary source.

Advise him 5 sources of forecasting information and specify whether that source is primary or secondary.

**Question 3**

The data below shows the monthly sales (Frw million) made by Mukungwa ltd. for the year 2020.

Month

| Month | Sales (FRW 000) |
|---|---|
| January | 190 |
| February | 180 |
| March | 204 |
| April | 272 |
| May | 255 |
| June | 196 |
| July | 212 |
| August | 238 |
| September | 245 |
| October | 264 |
| November | 280 |
| December | 270 |

**Required**

c) Calculate the moving average of order 3

**Question 4**

Methods for forecasting are classified into Quantitative and Qualitative. Explain 2 qualitative methods.

**Question5**

Most of time forecast and actual results differ significantly. Elaborate clearly 3challenges of forecasting.

**Question 6**

In forecasting steps there is time horizon, Explain three forecasting time horizons in forecasting

# UNIT 2 BUDGET AND BUDGETARY CONTROL

**Key unit competence:** To be able to maintain budget and budgetary control within organization.

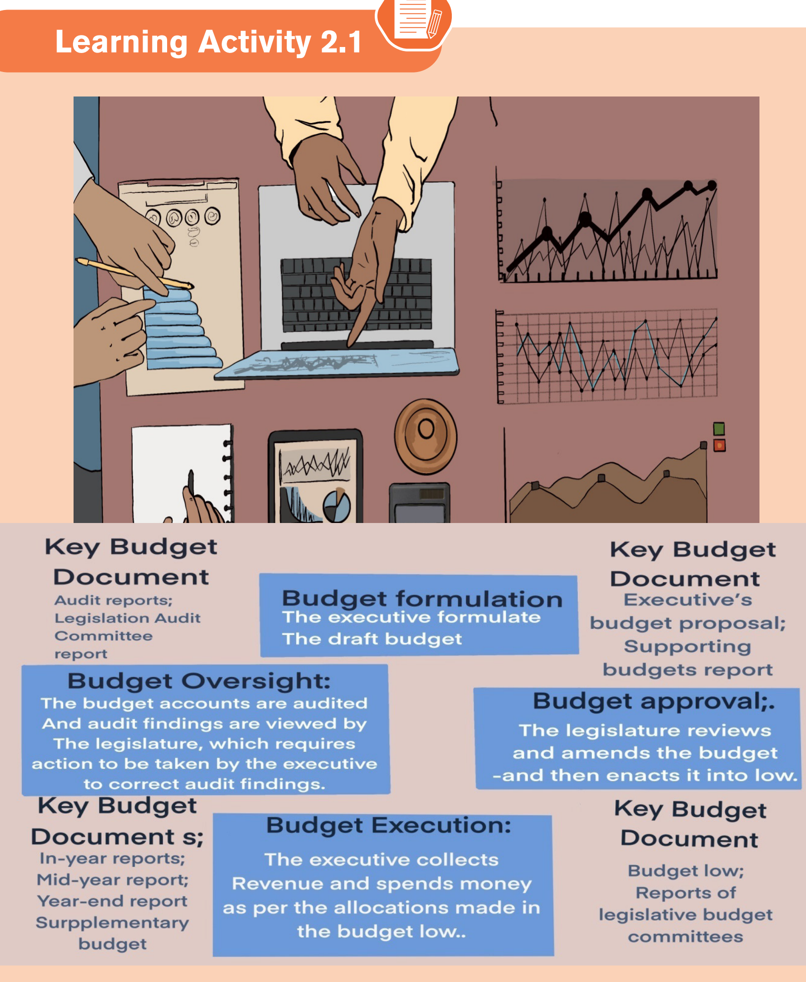
**Introductory activity:**

**Questions:**

1. Identify the different books brought by every participant in meeting as seen on the above picture.
2. Suggest the main motif of the above meeting.
3. Enumerate the two responsibilities of chief Budget Committee in budgeting process.
4. Suggest the above meeting is held in manufacturing business; enumerate the list of participants according to their function in budgeting process.
5. One of the purposes of the above meeting is to increase the production of business. What is approach the participants should adopt to achieve the organizational objective?

## 2.1. Budget

**Learning Activity 2.1**




**Questions**

6. Outline the main stages of budgeting

### *2.1.1. Definition of concepts*

**Budget**: is a financial and quantitative statement, prepared and approved prior to a defined period of time, of the policy to be pursued during that period for the purpose of attaining a given objective.

Budget is also defined as a quantified plan in monetary terms, prepared and approved prior to a defined period of time, usually showing planned income to be generated and expenditure to be incurred during that period. It shows the projections or future estimates of output, costs and revenues.

This implies that the budget is a plan of management intentions to attain the specified objectives.

a) **Budgets**: is an estimate of income and expenditure for a set period of time for portion or part of business/ organization.

b) **Budgeting**: Is the process of preparing and using budgets to achieve management objectives.

c) **Budget manual**: Is a book containing charts of organization, details of budget procedures, account codes for items of expenditure and revenue, timetables of process, clearly defines the responsibility of persons involved in the budgeting system. Is a rule book which lays down the budgeting procedures, organization structure, designations of responsibility and budget time table.

d) **Budget period**: Is a specific period on which the budget is supposed to be prepared for. The budget period may be one month, six months, one year or five year. If the budgets are prepared for a longer period then these budgets may be divided into short periods. These short periods are known as control periods for the purpose of budgetary control.

e) **Master budget**: Is a budget contains various subsidiary or functional budgets. It is the kind of summary of all budgets including even budgeted profit, loss account and balance sheet.

f) **Key factors**: those are limiting factors or principal budget factors. Those factors limit the activities of an organization. The key factors may include limited demand, limited production capacity and shortage of labor, shortage of material, less space or lack of finance… As the challenges, the key factors affect the preparation of budgets. For example, if the limiting factor is shortage of material or labor then the production cannot be increased beyond some limits. Similarly, the limited demand will affect the sales.

g) **Budget committee**: those are persons responsible for the coordination and administration of the budget process. The chief executive of this committee is the chairman who is usually a senior member of the management. The other member of the budget committee may be department heads.

h) **Budget officer**: is a person who is responsible for formulating the general procedure of the budget preparation and submits to budget committee the budgets for a specific period from departments.

i) **Budget control**: is a process of comparing actual results on regular basis with budgeted results. The aim of budget control is not only to check at which rate the budget was unrealistic in implementation pathway but also inefficiency use of available resources.

### 2.1.2.Advantages / importance and disadvantages of budget

- **Advantages of budget**

Within an organization, each activity carried out presents certain benefits not only to the business owner but also to the stakeholders. Certain advantages include efficiency and improvement in the working of organization, easy way of communicating the plans to the various units of organization. Assigning the responsibilities through establishing the divisional, departmental or sectional budgets, minimizing the possibilities of buck passing if the budget figures are not met, a way of motivating managers to achieve the goals set for their units. Serving as a benchmark for controlling on-going operations, developing a team spirit, reducing wastage and losses by revealing them in time for collective action, serving as a basis for evaluating the performance of managers and entire business production process.

- **Disadvantages of budget**

Although high number of advantages of budget, some authors present its disadvantages namely conflict arises because of competition for resource allocation, budgets are perceived by the work force as pressure devices imposed ~~by~~ to management, the pressure in the budgeting system may result in inaccurate record keeping, manager may overestimate cost in order that they will not be held responsible in future for over spending accompanied with uncertainties in the system.

### 2.1.3. Skills needed for budget preparation

Skills budget preparation is a comprehensive program that focuses on the essential skills required to understand the processes of costing and budgeting within organizations. The structure designed to address all the relevant issues concerning cost analysis, budget preparation and performance measurement. The effective budget preparation requires not only knowledge but also skills. The necessary skills to every participant (head of center) in budget preparation are from field relating to accounting and finance, inventory planning, budgeting and forecasting, cash flow management, accounting standards, capital structure, sales and marketing, economic factors analysis.

### 2.1.4. Stages in budgeting process

Budgeting process is a set of stages along with every center manager has to fulfill a certain number of responsibilities. The procedures involved in preparing a budget will differ from organization to organization, but the step by step approach described is indicative of the steps followed by many organizations.

The preparation of budget may take several periods where budget committee may meet several times before an organization's budget is finally agreed.

**The main stages are:**

– **Budget formulation**

- **Communicating details of budget policy**

The need to prepare budget and needed guidelines is communicated to those people responsible for preparation of budgets. Management must ensure that all policy effects should be made aware to staff who are participating in budget making. Managers responsible for preparing the budget must be aware of the way it is affected by the plan so that it becomes part of the process of meeting the organization's objectives.

- **Determining the factors that restrict performance**

This period represents the resource that constrains the productivity or capacity of the firm. Management should strive and identify the factor that restricts performance, since this factor determines the point at which the annual budgeting process should begin. However, the proper identification of the budget factor enables management to allocate resources in the most efficient manner.

Example of limiting factors may include machine, labor, and raw material.

– **Budget approval**

- **Preparation of revenue /Sales budget**

This provides a forecast of future sales or revenue to be made. This stage is a bit burdensome because it involves the forecast and analysis of economic factors or market forces. Since all other operational (functional) budgets are based on the sales or revenue budget, it is important that the sales budget must be prepared first.

- **Preparation of budgets**

The managers who are responsible for meeting the budgeted performance should prepare the budget for those areas for which they are responsible. The preparations of budgets should be a "bottom-up" process. All these budgets are integrated and coordinate into a master budget

- **Negotiation of budgets**

The step at which the lower cadres who originate sectional budget usually negotiates the budgets with their subordinates or with their supervisors in their lines of command. At each stage of the process, the budget would be negotiated between the manager who had prepared the budget and their superior until agreed by both parties.

- **Coordination and review of budgets**

The independent budgets prepared by different sections or department managers should be reviewed and reconciled to ensure that they address the same objectives. Such review may indicate that some budgets are out of balance with others and need modification. The budget officer must identify such inconsistencies and bring them to the attention of the manager concerned. However, the revision of one budget may lead to the revision of all budgets.

During this process, the budgeted statement of profit or loss and budgeted statement of financial position and cash budget should be prepared to ensure that all the individual parts of the budgets combine into an acceptable master budget.

- **Final acceptance of the budgets**

After the prepared budgets have been harmonized and accepted, they are integrated into a master budget. A master budget is compressive plan which include sales budget, production budget, material usage, labor cost and factory overhead cost budgets.

  – **Budget execution**

Once a budget is approved by the budget committee, business departments/ centers are authorized to spend money, consistent with the legal appropriations for each line item. The budget execution includes different stages namely the authorization stage , the commitment stage, the verification stage (this signifies that goods have been delivered fully or partially according to the contract, or the service has been rendered and the bill has been received), Payment authorization or payment order stage, Payment stage (at this stage, the bill is paid by cash, check, or electronic transfer), Accounting stage (the cash transactions are recorded as complete in the books, which allows a reconciliation from the cash based).

  – **Budget review**

This covers a control stage which must be carried out in order to establish whether the set of objectives or target are being achieved. The review exercise will also involve the taking of action to address any anomaly. The important point to note is that the budgeting process does not end for the current period once the budget period begun; budgeting should be seen as a continuous and dynamic process.

### *2.1.5.* Techniques in budgetary process

Budgeting is a process with stages across the time. Due to the time for which the budget is prepared, the budgeting process uses different techniques including

economic techniques consisting to planning for future markets, technological evolutions and environment parameters, statistical techniques focusing on linear adjustment, correlation analysis, regression analysis; discounting techniques basing on profitability analysis, investments choice (NPV, IRR) and accounting techniques that point on cost accounting, financial accounting and variances analysis.

### 2.2.6. Classification of budget

Budget can be classified basing on different attributes which includes the function they serve, the time they are covering and the ability to change them when need arises. Hence the following are classification.

**a) Types of budget according to time**

The period budgets cover a fixed period of time but continuous budgets are updated and this procedure provides a base to review the budgets of longer periods after shorter intervals. The type of budget according to time can be prepared for one year (annual budgets); for six months (semi-annual budgets); for three months (quarterly budgets) and one month (monthly budgets).

**b) According to the ability to change**

The rate of change of budget improves two main types of budget namely fixed budget which is designed to remain unchanged irrespective of the volume of output or turnover attained for specific period of time and flexible budget which is designed to adjust the costs according to actual level of activity attained. For the preparation of flexible budgets, the costs are divided into fixed and variable elements.

The main objective of a flexible budget is to provide an instrument of control. The actual results should be compared with flexible budget of the activity level achieved. This comparison helps the management to evaluate the performance of the organization.

**c) According to the function**

A functional budget is one which relates to any of the functions of an enterprise. The following describes the various functional budgets as used in different organizations.

- **Sales budget**

Shows the number of units of different products which a firm wants to sell in next incoming determined period. The sales budget indicates the amount of sales in units and value the company intends to sale in the next coming period. This is an important budget which must be prepared before any other budget

is prepared because all other budgets are relaying on it. The preparation of this budget involves the need to make sales forecasts and prediction of economic factors and market forces that will influence the sales budget to be prepared.

- **Production budget**

The production budget provides production units to satisfy the sales forecasts and to achieve the desired level of closing finished goods inventory. It gives the details of goods to be produced in a specific period.

Throughout the production budget preparation, Unit to produce = budgeted sales (units)+ desired closing inventory of finished goods – opening stock of finished goods.

- **Production cost budget**

This represent the quantity of products to be manufactured expressed in terms of cost. This budget summaries the materials utilization budget, labor budget and the factory overhead budgets. The cost of units to be produced in a period is given by units needed multiplied by the units cost.

- **The direct materials utilization budget**

The direct materials are simply the function of the production budget, with an allowance made for any waste. This budget indicates the amount of materials in units that will be needed to meet the production requirements. The preparation of this budget is based on the information drawn from the production budget and the materials utilization budget must provide material units to satisfy the units to be produced.

- **The direct purchase budget**

This kind of budget express the direct materials utilization budget and closing level inventory in monetary terms. This means that the units of materials to be purchased are expressed in terms of costs by multiplying materials purchase price by units involved.

*Unit needed= raw material units needed for production desired closing inventory of raw materials- opening stock of raw materials*

The main advantage of materials purchases budget is to enable the purchase department to plan its programs well in advance and make its purchases under the best conditions.

- **The direct labor cost budget**

This budget estimates the adequate labor in number and grades to enable the production budget to be realized. The labor budget prepared must disclose the number of each type or grade of workers required in a period to achieve the

budget output, period of training necessary for different types of worker.

However, the labor cost to be incurred in a period is computed by multiplying number of labor needed for production by the rate per direct labor hour.

Budgeted labor hour = budgeted production units × number of hours per units

Budgeted labor cost = budgeted labor hours × rate per hour

- **The factory overhead cost budget**

This budget is prepared to accommodate all manufacturing factory costs that cannot be traced to specific products or services. These are usually referred to as common cost or overhead costs. The factory overhead budget covers indirect labor costs, indirect material costs and indirect expenses.

- **Cash budget**

It comprises the details of expected cash receipts and cash payments in specific next period. In other words, cash budget involves a projection of future cash receipts and cash disbursements over various time intervals. It consists of the projected cash receipts (inflows) and the planned cash disbursement (outflows).

Moreover, Cash receipts include collection from debtors, cash sales, dividend received, sale of assets, loans received and issue of shares and debentures whereby payment include wages and salaries, payment to creditors and suppliers, rent and rates, capital expenditure, dividend payable.

- **The capital expenditure budget**

Capital expenditure budget refers to the plan of purchase of durable, fixed assets. Always it is a long term budget set for three to five or more years. It requires frequent revision because of the changes in cost of land, buildings, machinery and equipment.

- **Budgeted profit and loss account and balance sheet.**

At the end of budgeting process, the budget officer in accordance with budget committee prepares the forecasted results through the final accounts namely profit and loss account and balance sheet. This budgeted profit and loss account should be real and perfect if the planned operations and activities are exhaustively implemented.

### *2.1.7. Approaches to budgeting*

Application of budgeting process using different methods and techniques as early explained requires certain approaches for achieving the same framework institutional objectives. The following are certain different approaches used in

organizational budgeting process.

– **Incremental Budgeting /Rolling / Revolving / Continuous**

In this approach, the previous budget is used as a reference point in preparing of budgets. This approach involves making adjustment to the previous budget figures. The budgets formulated using this approach tends to reinforce the status quo and they are often extrapolations of the past. This approach prepares budgets by updating periodically the previous budgets by adding a new incremental time period such as quarter, a month.

This approach presents some weaknesses like to justify previous budgets as correct. Inefficiencies in the previous budgets are carried forward to the next budget, it discourages innovation and creativity to the budget preparation, it promotes complacency on part of management or managers.

– **Zero-Based Budgeting (ZZB) or Priority budgeting**

It involves a budget for each cost centre from zero-base. It sets budget for every activity in an organization from zero bases. It assumes that the budget is being made at the first time. However, it presents both advantages (leads to efficient allocation of resources, encourages the identification and removal of inefficient or obsolete operations from the budget, encourages innovation and creativity in budgeting, forces managers to look for alternatives activities and challenge the status quo) and disadvantages (time consuming or wasting and can generate a lot of paper work, skilled manpower /managers are required to draw the decisions packages and rank them, it requires the skilled managers who are expensive therein).

– **Activity Based Budgeting (ABB)**

This seeks to challenge traditional budgets especially those budgets that are based on departments or functions (cost centers). This is the modern approach to budgeting and it is based on the principle that there are activities that drive costs and these activities should be identified with cost pools. The budget is prepared based on the activities to be carried out by each cost centre.

– **Self-Imposed Budgeting (SIB)**

It is also called participative budgeting; Participative budgeting involves employees throughout an organization in the budgetary process, most people will perform better and make greater attempts to achieve a goal if they have been consulted in setting that goal. Such participation can give employees the feeling that “this is our budget” rather than the all-too-common feeling that “this is their budget you imposed on us”.

To the business and other partners, self-imposed budget present advantages on one hand where individuals at all levels of the organization are recognized

as members of the team whose views and judgments are valued by the top management, budget estimates prepared by employees themselves tend to be more accurate and reliable, if people are not able to meet budget specifications, they have only themselves to blame. But when a budget is imposed to them, they can always say that the budget was unreasonable or unrealistic to start with and therefore was impossible to meet.

On other hands there some challenges; too much participation and discussion the self-imposed budgeting will be time-consuming (delay), difficult to agree mutually on the same estimates, the problem of budget padding can be severe and too much budgetary slack, before a budget is accepted, the budgets prepared by lower-level managers should be carefully reviewed by immediate supervisors that necessitate more time.

### *2.8.1.Characteristics of good budget*

Practically and typically, the business is different one from another. This implies that the content of budget is different from another as business is different one from another. But whatever the difference, the structure remains the same with same following characteristics if processed perfectly. The good budget must be participative (every party in business has own duties and responsibilities to fulfill for achieving the business target), Comprehensiveness (the contents must be comprehensive to the whole organization), Standards (it should have measures of performance), Flexibility (allow for changing due to reasonable circumstances), Feedback (constantly monitor performance) and analysis of costs and Revenues.

### *2.1.9. Hierarchy of budget in an enterprise*

The hierarchical budget differs from one business to another due to respective business operational sector. As discussed from 2.1.6, the end of each budget process is finalized with pointing out the results throughout the budgeted profit and loss account and balance sheet.

With the same budget process end, the hierarchical budgeting is different to different businesses. However, the following hierarchical can be observed meanwhile. It presents Sales budget, Production budget and budgeted stock levels, Direct materials usage budget, Direct materials purchase budget, Direct labor budget, Factory overheads budget, Administration overheads budget, Selling and distribution overheads budget, Departmental budgets, Muster budget, Cash budgets and Profit and loss accounts and balance sheets

### 2.1.10. Preparation of budget

AKABUYE PLC manufactures two types of product for the printing industry. Budgeted sales of the products, known as P and Q for 2020 are:

| Product | quantity | price |
|---|---|---|
| P | 3,000 | 80 |
| Q | 7,000 | 70 |

Stocks of these products were as under:

| Product | opening stock | closing stock |
|---|---|---|
| P | 2,000 units | 1,500 units |
| Q | 1,800 units | 2,500 units |

Required: Prepare sales budget

Answer:

Sales budget

| Product | quantity | sales price/unit FRW | sales value FRW |
|---|---|---|---|
| P | 3,000 | 80 | 240,000 |
| Q | 7,000 | 70 | 490,000 |
| | | | 730,000 |

For different businesses, the pictures of budget are not exhaustive but the cash budget has the common manner of being presented. It looks like.

| Particulars : | Time | Time | Time | Time |
|---|---|---|---|---|
| Opening cash balance<br>Add: cash receipts | ..........<br>.......... | ............<br>............ | ..........<br>.......... | ...........<br>............ |
| Total cash available (A) | ******** | ******* | ******* | ******** |
| Less: Cash payment<br>Purchases of fixed assets<br>Salary and wages<br>Income tax<br>Creditors<br>Other expenses | <br>...........<br>...........<br>...........<br>...........<br>........... | <br>...........<br>...........<br>...........<br>...........<br>........... | <br>...........<br>...........<br>...........<br>...........<br>.............. | <br>..............<br>...........<br>.............<br>...............<br>............... |
| Total payment (B) | ******** | ******* | ******** | ********* |
| Closing balance(A - B) | ........... | ............ | ............. | ............. |

## 2.1.11. *Impact of external and internal factors on budget*

**– Impact of external factors on budget**

External factors on budget means the variables beyond the business that can change or influence (positively or negatively) the specific budget for given period of time.

- **General trade prospects**

The general trade prospects (diagnosis, predictions) gathered in this connection from trade papers and magazines affect the sales considerably.

- **Technology factor**

Technology is used extensively in modern business, from production to product selling and customer support. Technology allows a company to save time and labor costs while achieving more efficiency which in the long run can result in a competitive advantage. Technology factor includes automation (is the use of robots to perform repetitive tasks formerly done by humans), e-commerce (is the buying and selling of goods and services on the internet) and digital media (are online channels that get businesses in contact with their customers).

- **Orders on hand**

In case of industries where production is quite a lengthy process, orders on hand also have a considerable influence in the amount of sales.

- **Seasonal fluctuations**

Past experience will be the best guide in this respect. However, efforts should be made to minimize the effects of seasonal fluctuations by giving special concessions or off-season discounts thus increasing the volume of sales.

- **Potential markets**

Market research should be carried out for ascertaining the potential markets for the company's products. Such an estimates like expected population growth, purchasing power of consumers and buying habits of the people should always be brought to play.

- **Availability of material and supply**

Adequate supply of raw materials and other supplies must be ensured before drafting the sales program. The rate at which the raw materials are available would like to influence the quantity to produce.

- **Competition level**

Competitive influence refers to the impact of competition in the business environment. The impact can come from changes in price, product, or business strategy. For example, if a company selling similar products at a similar price to your business suddenly drops its price to attract more customers, you may have to reduce the price as well or risk losing customers. The volume of budget in terms of units, money to receive or to pay will change depending on the structure of market in fraction of competitiveness.

To avoid the negative impact of competitive influence, a company can develop competitive advantages. These are attributes that allow the company to outperform its rivals. A business can gain a competitive advantage by investing in a high-quality labor force, exceptional customer support, stellar products, extra services, or a reputable brand image.

- **Political situation**

This refers to new legislation that affects consumers, employees, and businesses rights. Political factors are grouped into consumer laws (these are laws that ensure businesses will provide consumers with quality goods and services), employment laws (these are laws that protect employee rights and regulate the relationship between employees and consumers) and intellectual property laws (these are laws that protect creative work within the business world, e.g. copyrights of music, books, films, and software).

- **Economic factors**

Businesses and the economy have a mutual relationship. The success of businesses results in a healthier economy, whereas a strong economy allows businesses to grow faster. Thus, any changes in the economy will have a significant impact on taxes rate, unemployment, interest rate and inflation that consequently affect the organizational budget.

Changes in tax, interest rates, and inflation can result in a rise or fall in

aggregate demand, which affects economic activity. For example, with lower taxes, individuals and households have more income at their disposal to spend on goods and services. This contributes to higher demand, resulting in more production and jobs created. As a result, business activities grow and the economy flourishes.

- **Availability of capital**

The budget provides guidance to the amount of funds that may be needed for procurement of capital assets during the budget period. The budget is prepared after taking into account the available productive capacities, probable reallocation of existing assets and possible improvement in production techniques. If necessary separate budgets may be prepared for each item of assets, such buildings budget, a plant and equipment budget.

- **Social factors**

Social influence on business refers to changes in consumer tastes, behavior, or attitude that might affect business sales and revenues. For example, nowadays, consumers are paying more attention to environmental issues such as climate change and pollution. This puts pressure on firms to adopt eco-friendly solutions to their production and waste disposal that affect the budget therein.

– **Impact of internal factors on budget**

Internal factors on budget means the variables under the control of the business that can change or influence (positively or negatively) the specific budget for given period of time. Internal factors include values, organizational structure, culture and management style, human resources, labor unions, and physical and technological resources.

- **Plant capacity**

How much can be budgeted and produced depends upon the available plant capacity. There must be sufficient capacity to process the annual requirements and also to meet seasonal high demands.

- **Receipts and payments method**

In case of this method the cash receipts from various sources and the cash payments to various agencies are estimated. In the opening balance of cash, estimated cash receipts are added from the total, the total of estimated cash payments is deducted to find out the closing balance. The length (delaying or not method) can lead to inefficiency of budget.

## Application activity 2.1

Questions:

4. Present the hierarchy of budget in given enterprise.

5. Referring to environment in which is located your school; explain the factors that can lead to non execution of budget.

6. AKABUYE PLC manufactures two types of product for the printing industry. Budgeted sales of the products, known as P and Q for 2020 are:

| Product | quantity | price |
|---|---|---|
| P | 3,000 | 80 |
| q | 7,000 | 70 |

Stocks of these products were as under:-

| Product | opening stock | closing stock |
|---|---|---|
| P | 2,000 units | 1,500 units |
| Q | 1,800 units | 2,500 units |

Required: Prepare production budget

7. AGAHOZO PLC is producing the bricks at new village. For three months ago, it budgeted to produce 100,000 bricks at Frw 50. The expected labor cost was Frw 180,000, raw materials were Frw 100,000 and overhead expenses were Frw 80,000. At the end of three months all heads of departments hold a meeting to present how budgeted plans were implemented. The sales manager presents the total sales of 120,000 bricks at Frw 60; the production manager shows the use of raw materials values to Frw 120,000, labor cost value to Frw 150,000 and overheads expenses Frw 160,000. You are one of decision maker of the above manufacturing business; you are required to compare the planned and actual results and advise the top management.

## 2.2. Budgetary control

**Learning Activity 2.2**

AGAHOZO PLC is producing the bricks at new village. For three months ago, it budgeted to produce 125,000 bricks at FRW 50. The expected labor cost was Frw 200000, raw materials were Frw 80,000 and overhead expenses were FRW 8000. At the end of each three months all heads of departments hold a meeting to present how budgeted plans were implemented and give recommendation. The sales manager presents the total sales of 150,000 bricks at Frw 60, the production manager shows the use of raw materials values to Frw 120,000, and overheads expenses Frw 25,000.

Question

1. What was the objective of meeting hold at each every three months at AGAHOZO PLC?
2. What do expect as the results from the actual results of activities and the planned

### *2.2.1. Definition of concepts*

– Budgetary control

It is the process of preparing budgets for the future period, comparing the standards set by the budget with the actual performance, finding out the reasons for the differences in performance, and taking corrective actions.

Budgetary control is also method of controlling the total expenditure on material, wages and overhead by comparing actual performance with planned performance.

– Variance

Variance in management is the difference between the planed variables and actual variables (amount, units, value).

### *2.2.2. Budgetary control objectives, purpose and tools.*

Budgetary control has different objectives including formulation of the policy of the business, coordinating the business activities, controlling each function set through the budget. The budgetary control finally shows the variance that is the difference between planned, budgeted or standard cost (S6, Unit 4) and actual costs and similarly in respect of revenues.

The purpose of budgetary control system is to assist management in planning and controlling the resources of their organization by providing appropriate control information. The information will only be valuable, however, if it is interpreted correctly and used purposively by managers and employees. However, the managers who set the budget or standards are often not the managers who are then made responsible for achieving budget targets. A supervisor might get weekly control reports, and act on them; their supervision might get monthly report, and decide to take different control actions. Different managers can get in each other's way and resent the interference from others.

Whatever the types of budget to be controlled; only three factors to take into consideration in budgetary control are standard variables (cost and revenues), actual variables (cost and revenues) form both which results in variance.

### 2.2.3. Advantages of budgetary control

Compels management to think about the future, which is probably the most important feature of a budgetary planning and control system. Force management to look ahead, to set out detailed plans for achieving the targets for each department, operation and (ideally) every manager, to anticipate and give the organization purpose and direction.

Budgetary control clearly defines areas of responsibility and promotes coordination and communication and provides a basis for performance appraisal (variance analysis). A budget is basically a yardstick against which actual performance is measured and assessed. Control is provided by comparisons of actual results against budget plan. Departures from budget can then be investigated and the reasons for the differences can be divided into controllable and non-controllable factors.

Budgetary management enables remedial action to be taken as variances emerge and motivates employees by participating in the setting of budgets by improving the allocation of scarce resources.

### 2.2.4. Budgetary control process

There are five steps to an effective budgetary control system that including preparation of budgets, communicating and agreeing budgets with all concerned, having an accounting system that will record all actual costs, preparing statements that will compare actual costs with budgets, showing any variances and disclosing the reasons for them, and taking any appropriate action based on the analysis of the variances.

Action(s) that can be taken when a significant variance has been revealed will depend on the nature of the variance itself. Some variances can be identified

to a specific department and it is within that department's control to take corrective action. Other variances might prove to be much more difficult, and sometimes impossible, to control.

## Application activity 2.2

AMARA PLC is a manufacturing company producing the cement from western province of Rwanda. The number of customers is increasing day to day due to the development of construction sector across the country. For each six months, the heads of department from AMARA PLC hold a meeting for evaluating the six past months and preparing the upcoming six months production'. From this meeting, different alternatives are discussed with the purpose of getting high effective and efficiency production to meet the consumers' testes and preferences. Chief budget committee has to present all necessary documents related to production budget, sales budget, labor cost budget and overheads budget to ensure the proper use of available resources. Given the data from the previous periods, the budget committee adopts new technology in production, new system in labor management, requesting fund from neighbor financial institutions. The new management planning results not only in high increase in production, increase of salaries and remarkable construction development sector but also exclusion of some unnecessary employees, changing the raw materials previously used and imposing the overtime to the less number of remaining staff.

Questions

1. What do you suggest as the main advantages of budget
2. Enumerate the main disadvantages of budget

## Skills Lab 2

Students guided by their teacher, visit the bursary officer of their respective schools.

The bursary officer provides the documents showing the different budget lines of schools.

The students read carefully and interpret the given information from the received documents.

The teacher asks the students in manageable team to prepare the budget for nine months from the information provided by bursary officer.

## End of unit assessment 2

3. **Respond by true or false**

   a) **Budget** is defined as a document outlining the revenue of one year and expenses of six months for the same business

   b) **Budget** is a financial and quantitative statement, prepared and approved prior to a defined period of time, of the policy to be pursued during that period for the purpose of attaining a given objective

   c) Budget is the same as budgeting in matter of budgetary control

   d) Master budget is different from budget manual

   e) The sales budget cannot be semi-annually

1. List the characteristics of good budget
2. Classify the budget according to their function
3. Enumerate the disadvantages of budget.
4. Explain Approaches to budgeting

# UNIT 3 ANALYSIS OF TYPES OF BUDGET ACCORDING TO FUNCTION

**Key unit competence:** To be able to analyze the rationale behind different types of budget

**Introductory activity:**

From the following' information you are required to prepare a sales budget for the half year ending 30th April 2019

| Product | Budgeted Sales | Estimated stock (kg) | |
|---|---|---|---|
| | | Opening (Units) | Closing (Units) |
| A | 3,000 | 500 | 1,000 |
| B | 2,000 | 100 | 600 |
| C | 2,500 | 500 | 1,500 |
| D | 4,000 | 1,000 | 500 |

Questions:

**Required:** Prepare the following functional budgets

i) Sales budget

## 3.1. Sales budget analysis

**Learning Activity 3.1**

The Morning Businesses PLC develops and manufactures two agri-products (A and B). To achieve the high performance and satisfying the customers' needs and wants; the Morning Businesses prepares the budgets to identify, plan, track and allocate personnel and financial resources across their operations. Company prepares a sales budget to determine how much revenue expected to generate from their products and services and how much to spend for specific period of time.

Questions:

1. Explain the two main contents of sales budget
2. Enumerate the reasons of cash budget preparation.

### 3.1.1. Factors of sales budget

The preparation and implementation of sales budget is subject of certain number of variables that lead to the fluctuations of this budget. Those factors include production costs, taste and preferences of customers, Expansion or contraction of the investment, Increase or decrease in stocks and debtors, Rate of inflation anticipated, Policy decisions like credit control, dividends and taxation.

### 3.1.2. Calculation/ presentation of sales budget

**Illustration**

**ABARCO Plc** sales two types of products for the printing industry. For better of maximizing the profit Budgeted sales of the products, known as P and Q for 2024 are:

Question:

Prepare sales budget

| Product | quantity | price |
|---|---|---|
| P | 3,000 | 120 |
| q | 7,000 | 100 |

Answer:

| Details/Products | P | Q |
|---|---|---|
| Sales (units) | 3,000 *120=360,000 | 7,000*100=700,000 |

### 3.1.3. Interpreting results and advising the management

There is no format for a cash budget and no regulations regarding how it should be set out but whatever the format, cash budget includes necessary the sources of cash receipts and the total cash receipts for the period, source of

cash payments and the total cash payments for the period, net cash flow for the period, bank balance brought forward and bank balance carried forward.

**Illustration:**

**RWANDEKO PLC** is a business located in Muhanga District and producing different goods. The business plan for first four months 2023 is presented in the following table and opening balance for the specified period is Frw 25,000 .

| Details | January | February | March | April |
|---|---|---|---|---|
| **Account receivable collected** | 180,000 | 185,000 | 180,000 | 192,000 |
| **Cash sales** | 10,000 | 12,000 | 15,000 | 18,000 |
| **Asset sales** | 30,000 | - | 10,000 | 25,000 |
| **Direct material** | 87,000 | 91,000 | 99,000 | 107,000 |
| **Asset purchase** | 20,000 | - | 50,000 | - |
| **Direct labor** | 19,000 | 20,000 | 23,000 | 25,000 |
| **Selling & Administrative** | 35,000 | 35,000 | 38,000 | 38,000 |
| **Dividend payments** | - | 100,000 | - | - |
| **Manufacturing overheads** | 29,000 | 30,000 | 34,000 | 37,000 |
| **Beginning cash** | | 55,000 | (24,000) | (63,000) |

With the above data, the sales Manager of RWANDEKO PLC is in responsible to prepare sales budget for not only meeting the business objective but also satisfying the consumers and maximizing the profit.

### Presentation of sales budget

| Details | January | February | March | April |
|---|---|---|---|---|
| **Beginning cash** | 25,000 | 55,000 | -24,000 | -63,000 |
| **Source of cash** | | | | |
| +cash sales | 10,000 | 12,000 | 15,000 | 18,000 |
| +account receivable | 180,000 | 185,000 | 180,000 | 192,000 |
| Asset sales | 30,000 | 0 | 10,000 | 25,000 |
| **=Total cash available** | **245,000** | **252,000** | **181,000** | **172,000** |
| **Uses of cash** | | | | |

| | | | | |
|---|---:|---:|---:|---:|
| Direct materials | -87,000 | -91,000 | -99,000 | -107,000 |
| Direct labor | -19,000 | -20,000 | -23,000 | -25,000 |
| Manufacturing overhead | -29,000 | -30,000 | -34,000 | -37,000 |
| Selling & administrative | -35,000 | -35,000 | -38,000 | -38,000 |
| Assets purchases | -20,000 | 0 | -50,000 | 0 |
| Dividend payments | 0 | -100,000 | 0 | 0 |
| = Total use of cash | -190,000 | -276,000 | -244,000 | -207,000 |
| **Net cash Position** | **55,000** | **-24,000** | **-63,000** | **-35,000** |

### *3.2.4. Interpreting results and advising the management.*

Normally the planned cash inflow should equal to cash outflow. However, if there are any unusually large cash balances (**ref to 3.1.2 January end cash balance**) indicated in the cash budget, these balances are dealt with in the financing budget, where suitable investments are indicated for them. Similarly, if there are any negative balances (**ref to 3.1.2 February, March and April end cash balances**) in the cash budget, the financing budget indicates the timing and amount of any debt needed to offset these balances.

From the estimates (Unit **3.1.2)** it is a simple step to calculate the excess of cash receipt over cash payments in each month. In some months cash payments may exceed cash receipts and there will be a **deficit** for the month, this occurs during **February, March and April** for 3.1.2 because of large amount of dividends and investment in non current asset. For surplus budget (January 2023), the management of business is advised to expand the business in different products or other capital budget. In case of negative sub-period balances, it shows the **cash effect of all plans made within the budgetary process** and therefore its preparation can lead to a modification of budgets if it shows that there are insufficient cash resources to finance the planned operations.

The cash budget balance periods give management an indication of **potential problems** that could arise and allows them the opportunity to take action to avoid any problems. Management will need to take one of the following appropriate actions depending on the potential position.

| Cash position | Appropriate management action |
|---|---|
| Short-term surplus | • Pay suppliers early to obtain discount<br>• Attempt to increase sales by increasing receivables and inventories<br>• Make short-term investment |
| Short-term shortfall | • Increase accounts payable<br>• Reduce receivables<br>• Arrange overdrafts |

| | |
|---|---|
| Long-term surplus | • Make long-term investment<br>• Expand<br>• Diversify<br>• Replace/update non-current assets |
| Long-term shortfall | • Raise long-term finance (issue of share capital)<br>• Consider shutdown/disinvestment opportunities |

## Application activity 3.1

3. Umulisa plc has started a business 10 years ago investing Frw 15,000,000 allocated in building society. She maintains a bank account showing a small credit balance and she plans to approach her bank for the necessary additional finance. She asks the planning officer for advice and provides the following additional information.

    - Arrangements have been made to purchase non-current assets costing Frw 8million These will be paid for at the end of September and are expected to have a five-year life, at the end of which they will possess a nil residual value.
    - Inventories costing Frw 5 million will be acquired on 28 September and subsequent monthly purchases will be at a level sufficient to replace forecast sales for the month.
    - Forecast monthly sales are Frw 3million for October, Frw 6million for November and December, and Frw 10.5 million from January 2024 onwards.
    - Selling price is fixed at the cost of inventory plus 50%.
    - Two months' credit will be allowed to customers but only one month's credit will be received from suppliers of inventory.
    - Running expenses, including rent but excluding depreciation of non-current assets, are estimated at 1.6 million FRW per month.
    - Umulisa PLC intends to make monthly cash drawings of Frw 1million.

Prepare sales budget for six months for Umulisa Plc

## 3.2. Purchase budget analysis

**Learning Activity 3.2**

**ABARCO Plc** manufactures two types of product for the printing industry. For better of maximizing the profit Budgeted sales of the products, known as P and Q for 2024 are:

**Learning Activity 3.2**

| Product | quantity | price |
|---|---|---|
| P | 3,000 | 80 |
| q | 7,000 | 70 |

Stocks of these products were as under: -

| Product | opening **stock** | **closing stock** |
|---|---|---|
| **P** | 2,000 units | 1,500 units |
| **Q** | 1,800 units | 2,500 units |

Questions:

**a)** Prepare purchase budget

### *3.2.1. Factors of purchase budget*

However, there are a number of additional considerations that can make the purchases budget considerably more complex including inventory beginning balance, desired service level, process of product / services of production, availability of cash (cash liquidity), labor turnover, season variables, availability of raw materials, number of employees, investment in plant and equipment, materials and supplies, utilities, cost of transportation to market, costs associated with administration and manufacturing.

### *3.2.2.* Calculation/ presentation of purchase budget

The units of materials to be purchased are expressed in terms of costs by multiplying materials purchase price by units involved.

- Units needed = raw material units needed for production desired closing inventory of raw materials- opening stock of raw materials
- Labor cost = Labor cost per person * rate per worker per period.

However,

The purchase is **cost of sales + ending inventory –opening inventory.**

**Example, ABARICOM Plc** manufactures three products (Water (W), Juice (J) and Saccarose (S)) as drinking products. For better maximizing the profit; purchase budget information of the three given products' raw materials known as W and J and S for 2024 are:

| Product quantity | | price |
|---|---|---|
| W | 3,000 | 80 |
| J | 7,000 | 70 |
| S | 5,000 | 60 |

Stocks of these products were as under:-

| **Product** | **opening stock** | **closing stock** |
|---|---|---|
| **W** | 2,000 units | 1,500 units |
| **J** | 1,800 units | 2,500 units |
| **S** | 1,600 units | 2,000 units |

**Answer:**

**Purchase budget**

| **Details / Products** | **W** | **J** | **S** |
|---|---|---|---|
| Sales (units) | 3,000 *80=240,000 | 7,000*70=490,000 | 5,000*60=300,000 |
| +Closing stock | 1,500*80=120,000 | 2,500*70=175,000 | 2,000*60=120,000 |
| -Opening stock | 2,000*80=160,000 | 1,800*70=126,000 | 1,600*60=96,000 |
| | **200,000** | **539,000** | **444,000** |

### *3.2.3.Interpreting results and advising the management*

For any business, the purchase budget is purely linked to production and production cost budget. Referring to example 3.2.2, the purchase manager would present the cash outflow of Frw 200,000, Frw 539,000 and Frw 444,000 respectively to products W, J and S for achieving the business objective.

As shown @3.2.2, during the period purchases of 1,183,000 are required in order to be able to sell goods costing Frw 240,000, Frw 490,000 and Frw 300,000 respectively to W, J and S. (cost of sales) and to increase inventory levels by 160,000, 126,000 and 96,000 (beginning inventory) to Frw 120,000, Frw 175,000 and Frw 120,000 (ending inventory).

## Application activity 3.2

1. CALISONITH Plc is a business producing the cassava bread located in Ruhango District. The following accounting record of payment information has been made available from the purchase department for the last six months of 2019 (and of only sales for January 2020).

i) The units to be sold in different months are:

- July: 2,200
- August: 2,200
- September: 3,400
- October: 3,800
- November: 5,000
- December: 4,600
- January 2020: 4,000

ii) There will be no work-in- progress at the end of any month.

iii) Finished units equal to half the sales for the next month will be in stock at the end of every month (including June 2019)

iv) Budgeted production and production costs for the year ending December 2019 are as following:

- Production units: 44,000
- Direct materials per unit: FRW 10.00
- Direct Wages per unit: FRW 4.00
- Total factory overheads apportioned to the product: FRW 88,000

Prepare:

a) Production budget for the last six months of 2019

b) Production cost budget for the same period of 2019

## 3.3. Cash budget analysis

Questions:

The following information was extracted from the books of MANZI Plc, a company which started trading one year ago:

| Month 2010 | sales FRW | Purchases FRW |
|---|---|---|
| April | 150,000 | 100,000 |
| May | 160,000 | 110,000 |
| June | 160,000 | 90,000 |
| July | 170,000 | 90,000 |
| August | 200,000 | 80,000 |
| September | 200,000 | 130,000 |
| October | 180,000 | 140,000 |
| November | 180,000 | 60,000 |

The following information is available:

Cash in hand at the end of May 2010 will be Frw 180,000

1. 60% of the sales proceeds are received in the current month, 30% in the following month and the balance is received in two months after sales
2. Suppliers are paid one month after delivery of goods.
3. Corporation tax for 2009 amounting to FRW 20,000 will be paid on 30th September 2010
4. Contractor's retention monies amounting to FRW 50,000 will be paid on 30th June 2010
5. The shareholders at their last extraordinary general meeting increased the share capital by FRW 70,000 and the first call of FRW 40,000 will be received in October 2010
6. In October 2010, the company is due to receive FRW 20,000 as compensation for civil suit
7. The monthly administration expenses amounting to Frw 33,000 include factory depreciation charge of FRW 4,000 and preliminary expenses of FRW 3,000
8. Office equipment worth FRW 13,000 will be paid for in November 2010

**Required:**

Prepare a cash budget for the period 1st June to 31st December 2011

### 3.3.1. Factors of cash budget

Cash budget is an estimate of cash receipts and their payment during a future period of time. It deals with other budgets especially materials, labor, overheads and research and development budget. It estimates cash inflows and use of cash during a specific period of time. It provides on one hand the sources of cash including receipts from debtors, interest on loan, dividends on shares, and other incomes from the sales of fixed assets, bill receipts and on other hand cash utilization including payment to creditors, payment of fixed assets purchased and daily routine payments such as wages, rent, postages, telephone and entertainment expenses. The cash budget is also changed due to expansion or contraction of the investment, increase or decrease in stocks and debtors, rate of inflation anticipated, policy decisions like credit control, dividends and taxation.

### 3.3.2. Calculation/ presentation of cash budget

Whatever the type of business is, the important objective is more liquidity obtained from more sales, it is from this assumption that cash budget must be prepared at the first rank from other business budget. The following is how business cash budget looks like

| Particulars : | Period | Period | Period | Period | Period |
|---|---|---|---|---|---|
| Opening cash balance | ........ | ...... | ..... | ...... | ................. |
| Add: cash receipts | ... | ....... | ..... | ....... | |
| **Total cash available (A)** | ******** | **** | ******* | ***** | ***** |
| **Less: Cash payment** | | | ............... | | ......... |
| Purchases of fixed assets | ......... | ......... | | ........... | |
| Salary and wages | ......... | | | | |
| Income tax | ......... | | | | |
| Creditors | ......... | | | | |
| Other expenses | ......... | | | | |
| **Total payment (B)** | ****** | ***** | ***** | ****** | ***** |
| **Closing balance(A - B)** | .... | ... | ...... | ...... | ........ |
| | | | | | |

### 3.3.3. Interpreting results and advising the management

The cash budget allow managers to ensure that cash is available for revenue expansion, to indicate when, where and how much cash will be needed (activity), to preserve the cash throughout the year (saving), to guide management on financing capital expenditure (efficiency) and revealing surplus cash for investment (effectiveness).

**Application activity 3.3**

A firm expects to have Frw 30,000 as opening balance on 1st May, 2018 and requires you to prepare an estimate of the cash position for three months May to July 2018. The following information is supplied to you.

| Month | Sales (FRW) | Purchases (FRW) | Wages (FRW) | Factory Expenses (FRW) | Office Expenses | Selling Expense |
|---|---|---|---|---|---|---|
| March | 40,000 | 24,000 | 6,000 | 3,000 | 4,000 | 3,000 |
| April | 46,000 | 28,000 | 6,500 | 3,500 | 4,000 | 3,500 |
| May | 50,000 | 32,000 | 6,500 | 4,000 | 4,000 | 3,500 |
| June | 72,000 | 36,000 | 7,000 | 4,400 | 4,000 | 4,000 |
| July | 84,000 | 40,000 | 7,250 | 4,250 | 4,000 | 4,000 |

**Other Information**

i) 25 % of the sales are for cash, remaining will be collected in the month following that of sales.

ii) Suppliers supply goods on two month's credit.

iii) Delay in payment of wages and all others expenses is: One month

iv) Income tax Frw 10,000 is due and to be paid in July.

v) Preference share dividend of 10% on Frw 100,000 is to be paid in May.

## Skills Lab 3

The students accompanied with their trainers, visit the business operating in area of school. They focus their journey to selling and purchase departments where are shown data of purchase, stocking and selling purchased or manufactured products. They ask different questions regarding the planning and budgeting the cash, purchase and sales budgets.

## End of unit assessment 3

1. Describe the budget according to the functional factor
2. Explain what is meant by incremental budgeting and discuss its suitability for a government department budgeting for office rental costs and for advertising expenditure on a new health initiative.
3. The government's Education department has a budget of Frw 1,704m for utilities for the year ending June 20x2. Two contracts are in place for water and energy, with fixed amount for the year if usage remains within agreed limits. The water contract, comprising one quarter of the total utilities budget, is paid in equal amount each month. Energy is paid in four equal instalments in July, September, December, and March.The budget holder has received the following budget monitoring report for the six months July to December 20x1 which shows the water budget to be under spent by Frw 213m and the energy budget to be over spent by Frw 532,5m.

| Products/ Periods | Original Budget for year ending 30 June 20x2 (FRW m) | Original Budget for July to December 20x1 (FRW m) | Actual expenditure for July to December 20x1 (FRW m) | Variance (FRW m) |
|---|---|---|---|---|
| Water | 852 | 426 | 213 | (213) |
| Energy | 852 | 426 | 958.5 | 532.5 |

The budget holder says the payments are fixed and the expenditure for the year to date has been in accordance with expectations of the contracts. Water and energy usage remained within the agreed limits of the contracts for the period.

Prepare a revised budget monitoring report, using a profiled budget based on the information provided for the utility contracts.

# UNIT 4 STANDARD COST

**Key unit competence:** To be able to control account using standard costing

**Introductory activity:**

**Read the following case study and answer the given questions**

The management must continually search for ways to obtain maximum operating effectiveness from the available resources. One of the most important functions of management accounting is facilitating managerial control. A manufacturing firm is usually concerned with producing its product at the lowest possible costs consistent with the quality it wishes to maintain. Actual costs become a factor in determination of the net income for the period. Such actual cost information can also be useful in establishing basis for product costing and pricing, as it reflects a desirable level of performance. Management, in assigning responsibility for the actual results of operations, wants to know that those results were measured accurately. For that reason a measure of acceptable performance i.e, a standard must be applied to actual results. So the standard cost is an effective management tool for planning, decision-making, coordinating and control.

1.Complete the following sentence:

a. Predetermine cost are………………..used for cost control and performance evaluation

2. What is the importance of Standard costing in budgetary control?

## 4.1. Introduction to standard costing

**Learning Activity 4.1**

Standard cost accounting can be a highly beneficial tool for managers who are attempting to plan a more accurate budget. Accurate budgets could lead to a more profitable and efficient business at the end of the day. This is because a standard costing system provides managers with a projected idea of the spending costs.

Standard costing is the practice of estimating the expense of a production process. It's a branch of cost accounting that's used by a manufacturer, for example, to plan their costs for the coming year on various expenses such as direct material, direct labour or overhead. These manufacturers will also be able to compare the standard cost to actual costs.

1. What does it mean "standard costing".
2. Outline the benefits of standard costing in the company

### *4.1.1. Definition of standard costing*

According to the Chartered Institute of Management Accountants (C.I.M.A) standard costing is defined as "the preparation and the use of standard costs, their comparison with actual costs and analysis of variance their causes and point of incidence"

Brown and Howard have defined it as "a technique of cost accounting which compares the standard cost of each product or service with actual cost to determine the efficiency of the operation so that any remedial action may be taken immediately".

Standard costing is planned, generally established well before production begins, and provide management with goals to attain (planning) and a basis for comparison with actual results (control). Standard costs are costs per unit while a budget is total costs. Standard costs are also known as planned costs, predicted costs and scheduled costs.

**Standard cost:** is defined in the CIMA official Technology as" the planned unit cost of the product, components or service produced on a period.

**Historical costs:** means actual or past costs and historical costing is a system in which actual costs incurred in the past are ascertained.

### *4.1.2. Standard costing steps*

The following are the steps which are to be taken while doing standard costing:

a) **Setting the standard or establishing standards:** The first step is to set standards on the basis of management's estimation. Basically standards are set considering the past data, future trends, and production plan.

b) **Ascertaining actual results or Determination of actual costs**: When standards are set the second step is to determine the costs for each element like material, labor and overhead.

c) **Comparison of Actual value costs and standard costs:** The next step is to compare the standard cost with the actual cost to determine the variance.

d) **Determination of causes:** once the comparison is done, the next step is to find out the reason for the variance so that corrective measures can be taken

e) **Investigation of the variance or Disposition of variance:** The last step involves the disposition of variance by transferring it to the profit and loss account

### *4.1.3. Purpose of standard costing*

In accounting, a standard costing is a tool for planning budget, managing and controlling costs and evaluating cost management performance. A standard costing system involves estimating the required costs of a production process. But before the start of the accounting period, determine the standards and set regarding the amount and cost of direct materials required for production process and the amount and pay rate of direct labour required for the production process. In addition, these standards are used to plan a budget for the production process. At the end of the accounting period, use the actual amounts and costs of direct material. Then utilize the actual amounts and pay rates of direct labour to compare it to the previously set standards. When you compare the actual costs to the standard costs and examine the variance between them, it allows manager to look for ways to improve cost control, cost management, and operational efficiency

### *4.1.4. Advantages and Disadvantages of standard costing*

- Advantages of standard costing

The advantages to be derived from a system of standard costing will vary from one business to another, possible advantages are as follows:

a) It serves as a basic for measuring operating performance and cost control
b) It aids price fixing
c) c) Standard costing facilitates evaluation of jobs and introduction of incentives
d) It serves as basis for inventory valuation
e) It facilitates delegation of authority
f) Standard costing facilitates coordination
g) It reduces wastes
h) Standard costing is also used for the measurement of profit
i) iStandard costing is used in planning, budgeting and decision making
 – Disadvantages.

Standard costing system suffers from certain disadvantages.

a) The system may not be appropriate to the business
b) The staff may not be capable for operating the system
c) A business may not be able to keep standards up-to-date
d) Inaccurate and unreliable standards cause misleading results and thus may not enjoy the confidence of the users of the system
e) Operations of the standard costing
f) Standard costing is expensive and unsuitable in job order industries which are manufacturing non-standardised products.

### *4.1.5. Types of standard costing*

There are four types of standard costing. These are explained as under:

**a) Ideal Standards**

These standards costs represent perfect performance. They assume 100% efficiency that there are no losses or idle time. They represent the minimum costs that are possible under the most efficient operating conditions. Ideal standard costs are not generally used in practice as they are in practice as they are likely to have demotivation effect on staff.

**b) Basic Standards**

These are standard costs that do not change over many years. The advantage of this type of standard cost is that it provides a base for comparison with actual costs over a period of years. However, change may occur in prices; method of production; or other factors so that basic standard costs are no longer useful as they do not represent current costs; they do not accurately represent what the

organisation expects to achieve now.

**c) Expected Standards or Attainable standards**

These are also known as attainable standards. They are based on normal operating conditions and an allowance is made for average wastages and inefficiencies. In this case, it is assumed that there will be some loss of production due to power failure, machinery breakdown or labour turnover etc. An expected or attainable standard can be defined as" standard which can be attained if a standard unit of work is carried out efficiently, a machine properly operated or material properly used". These can be used for product costing, for cost control, for stock valuation and as a basis for budgeting.

**d) Current Standards**

Current standard costs should be tough but realistic. They should be tough so that staff will have to work hard to achieve the standards but they also must be realistic because if not, staff will not be motivated to work hard. Currently standard costs are the most suitable for companies to use. They provide information for planning and control purposes.

**e) Normal standard**

These are such standards which are expected if normal circumstances prevail. Term normal represents the normal conditions of the business in the absence of any unexpected fluctuations (either favourable or unfavourable). Even through normal standards are more of theoretical in nature as reality cannot be sufficiently predicted with all its fluctuations in advance. Also, circumstances may change in such a way that factors which were expected to be controllable are not so controllable by the managers.

**Application activity 4.1**

1. Which of the following is true about standard costing?

   a. It is a technique of implementing cost control within the organisation

   b. It helps in planning out business activities within the organisation

   c. Both a and b are incorrect

   d. Both a and b are correct

2. Which of the following industries is standard costing most suited for?

a. It is suitable for industries that produce standard product

b. It is suitable for enterprises that are engaged in service activities

c. It is suitable for industries that produce non-standard products

d. None of the above

3. Which of the following is an advantage of the standard costing system?

a. It helps in promoting and measuring efficiencies within an organisation

b. It helps to control and reduce the overall costing within an organisation

c. It helps to fix the selling price for the products manufactured within an organisation

d. All of the above

4. Which of the following activities is true about the cost variance under the standard costing system?

a. Cost variance is the difference between the standard cost and actual cost

b. Cost variance is the difference between the standard cost and the budgeted cost

c. Cost variance is the difference between the standard cost and the marginal cost

d. Cost variance is the difference between the actual cost and marginal cost

5. Which of the following activities is the standard costing system used for?

a. It is a basis for implementing cost control and fixing the price of products through variance analysis

b. It helps to ascertain the cost -volume relationship between product manufactured by the business

c.It helps to establish the breakeven point for the products manufactured by the company

d. None of the above

6. A………standard is a standard for certain period, for certain conditions and for certain circumstances

a. basic

b. current

c. normal

d. ideal

7. This is a standard which is established for, unaltered over a long period of time

a. Basic standard

b. Current standard

c. Normal standard

d. Ideal standard

8. Basic standards are more

a. Idealistic

b. Realistic

c. Both (a) and (b)

d. None of the above

9. Define" standard costing"

10. What are the steps of standard costing?

11. What is the main purpose of standard costing?

12. Explain the 5 advantages and 5 disadvantages of standard costing

13. List the various types of standards

6. A………standard is a standard for certain period, for certain conditions and for certain circumstances

a. basic

b. current

## 4.2. Comparison between budget control and standard costing

**Learning Activity 4.2**

**Read the following information and answer the question below:**

Both Standard Costing and Budgetary Control are the methods that provide a reference point for assessing performance and analysing discrepancy between actual and estimated figures.

But as Budgetary Control makes side-by side comparisons, the regular changes are made in the budgets, and so it eliminates the need to mention the variance. And this is what the majorly missing from the standard costing.

From the information above, compare budget control to standard costing.

### *4.2.1. Similarities between budget control and standard costing*

Budget control and standard costing are comparable systems of cost accounting in that they are both predetermined and forward-looking. Both standard costing and budgetary control achieve the same objective of maximum efficiency and cost reduction by establishing a predetermined standard, comparing actual performance with the standard, and taking corrective measures where necessary. Thus, both are useful tools for management in controlling costs.

### *4.2.2. Difference between budget control and standard costing*

The following are the major differences between standard costing and budgetary control:

- Standard costing is a cost accounting system, in which performance is measured by comparing the actual and standard costs. Budgetary control is a control system which actual and budgeted results are compared continuously in order to achieve the desired results.
- Standard costing is limited to, cost data, but budgetary control is related to cost as well as economic data of the enterprise.
- Standard costing is a unit concept, but budgetary control is a total concept.
- Standard costing has a restricted scope, limited to production costs only, whereas budgetary control has a comparatively wider scope as it covers all the operations of the whole organization.

- In standard costing the comparison is made between actual cost and standard cost of actual output. On the other hand, in budgetary control the comparison is made between the actual and budgeted performance.
- Standard costs do not change due to short-term changes in the conditions, but budgeted costs may change.
- Standard costing applies to manufacturing concerns. In contrast to budget control, which applies to all organisations.

## Application activity 4.2

I. Multiple choice questions

1. Budgetary control helps in implementation of:
   a. Standard Costing
   b. Marginal Costing
   c. Ration Analysis
   d. Technical Analysis

2. Standard costing is a tool, which replaces the bottleneck of the………… costing
   a. present
   b. future
   c. historical
   d. none of the above

3. Both standard costing and budgetary control have the following common feature(s)
   a. Both techniques are based on the presumption that cost is controllable
   b. In both techniques, results of comparison are analysed and reported to management
   c. Both have a common objective of improving managerial control
   d. All of the above

4. What are the similarities between budget control and standard costing?

5. Differentiate between budget control from standard costing

## 4.3. Using standard costing in budgetary control

**Learning Activity 4.3**

Read the following information and answer the question below

A standard costing system involves estimating the required costs of a production process. Standard costs are estimates of actual costs in a company's production process because actual costs cannot be known in advance.

How is standard costing used in budgetary control?

### *4.3.1. Use of variance in the budgetary management*

Variance analysis is used in budgeting and in management accounting. Management of business use variances in decision making. Variance analysis helps project managers in outlining sudden and systematic changes between the amounts budgeted for a project and the actual amount spent. This term is also applicable in sales, for instance, if an individual budgets of Frw 80,000 for sales in a particular month and the actual sales is Frw 42,000, the variance is Frw 38,000. For further the use of variance will be discussed in detail in the following unit 5.2.

**Application activity 4.3**

1. How variance is used in budgetary management?
2. Explain the useful of standard costing in budgetary control?

**Skills Lab 4**

Students visit the purchase department from their respective schools and the purchase officer gives the different articles and their respective prices on the markets. Referring to those prices the students present the standards costs of each product to be bought by schools for next week.

## End of unit assessment 4

END UNIT ASSESSMENT

1. Complete the following statement

   A Standard cost is............................

2. What are two main uses of standard costing?

3. A control technique which compares standard costs and revenues with actual results to obtain variances which are used to stimulate improved performance is known as:

   A. Standard costing

   B. Variance analysis

   C. Budgetary control

   D. Budgeting

4, What are the types of standard costing?

5.. Which statement is true?

A. Standard which includes no allowance for losses, wastes and inefficiencies. It represents the level of performance which is attainable under perfect operating conditions.

B. A standard which includes some allowance for losses, wastes and inefficiencies. It represents the level of performance which is attainable under efficient operating conditions.

C. A standard which is based on currently attainable operating conditions.

D. standard which is kept unchanged, to show the trend in cost.

6. Choose the best definition from the following of a standing hour?

An operating hour in which there no exceptional events, e.g machine breakdowns

An hour during which only standard unit are made

The amount of work achievable in an hour, working at standard efficiency levels

An hour during which only standard hourly rates are paid to labour

# UNIT 5 VARIANCE ANALYSIS

**Key unit competence:** To be able to interpret the variance and advice the top management

**Introductory activity:**

Read the following case study of Specialty Food ltd profit Report for the month of June.

MUHIRE, the new management accountant, has just completed his first month's work. He has entered a huge amount of data into the finance and accounting system and is now faced with a pile of report. One such report is shown below.

Specialty Foods ltd profit Report: June (unit-FRW)

| | Budgeted | Actual | Difference |
|---|---|---|---|
| Profit | 10,000 | 9,000 | (1000) |
| Sales | 110,000 | 120,000 | 10,000 |
| Costs | 100,000 | 111,000 | 11,000 |

a) Explain the meaning of the above report

b) What is the budget variance analysis?

## 5.1. Identify any significant deviation

**Activity 5.1**

Read the following case study and answer the question below:

The chocolate Cow Ice Cream Company has grown substantially recently, and management now feels the need to develop standard and compute variances. A consulting firm was hired to develop the standards and the format for the variance computation. One standard in particular that the consulting firm developed seemed too excessive to plant management. The consulting firm's standard was production of 100 gallons of ice cream every 45 minutes. The plant's middle level of management thought the standard should be 100 gallons every 55 minutes, while the top management of the company thought that the consulting firm's standard would provide more motivation to the employees.

1.Why is the company establishing a standard costs for production

2.What are some factors the company may need to consider before selecting one of the proposed standard costs

### *5.1.1. Meaning of Variance*

**Variance:** is the difference between a forecasted variable and the actual variable. Variances are common in budgeting, but you can have a variance in anything that you forecast. In many accounting applications, a variance is considered to be "the difference between an actual cost and standard coast". The act of computing and interpreting variances is called Variance Analysis.

**-Variance analysis:** refers to identifying and examining the difference between the standard numbers expected by the business and the actual numbers achieved.

Frank wood and Allan Sangster defined **variance analysis** as" a mean of assessing the difference between a predetermined cost and actual cost.

Analysing variance helps businesses understand current outgoings and ~~them~~ budgeting for future expenses. Businesses often carry out variance analysis a quantitative investigation into differences between planned and actual costs and revenues.

Variance analysis can be applied to both revenues and expenses. When actual results are better than planned, variance is referred to as "**favourable**". If results are worse than expected, variance is referred to as" **adverse**" or" **unfavourable**"

### *5.1.2. Purpose of variance analysis*

Variance analysis helps to reveal where your business exceeded expectations and where it came up short.

A company must use variance analysis to determine how managers have performed to achieve their objectives. In this case, variance analysis enhances the benefits of budgeting. Variance analysis promotes responsibility in various areas. Variance analysis can also identify any errors in a budget.

Variance analysis can provide information to prepare budgets in the future. Variance analysis fixed that by establishing actual performance.

### *5.1.3. Structure of variance*

The total difference between the budgeted profit and actual profit for a specific period is divided into various parts. These parts relate to material, labour, overhead and sales variances. The particular variances which are computed in any given organization are those which are relevant to its operations.

The operating profit variance is the difference between budgeted and actual operating profit for a specific period. This variance is the sum of all other variances. i.e. cost variances and sales variances.

### *5.1.4. Causes of budget variance*

There are three primary causes of budget variance: errors, changing business condition, and unmet expectations.

1. Errors by the creators of the budget can occur when the budget is being compiled. There are a number of reasons for this, including faulty math, using the wrong assumptions, or relying on stale or bad data.

2. Changing business conditions, including changes in the overall economy or global trade, can cause budget variances. There could be an increase in the cost of raw materials or new competitors may have entered the market to create pricing pressure. Political and regulatory changes that were not accurately forecast are also included in this category

3. Budget variance will also occur when the management team exceeds or underperforms expectations. Expectations are always based on estimates and projects, which also rely on the values of inputs and assumptions built into the budget. As a result, variances are more common than company

managers would like them to be.

### 5.1.5. Types of budget variance

There is a need of knowing types of variance before measuring the variance. Generally ,the variances are classified on the following basis.

**a) On the basis of element of cost**

1. Material variance
2. Labour variance
3. Overhead variance

**b) On the basis of controllability**

1. Controllable variance
2. Uncontrollable variance

**c) On the basis of impact**

1. Favourable variance
2. Unfavourable variance

**d) On the basis of nature**

1. Basic variance
2. Sub-variance

### 5.1.6. Calculation of budget Variance

A brief explanation of the above mentioned variance is presented below

**1. Material variance**

It is the difference between actual cost of material used and the standard cost for the actual output. The difference between the standard cost of direct materials and the actual cost of direct materials that an organisation uses for production is known as Material variance

**Types/Methods of Material cost variances are:**

a) **Material cost variance (MCV):** It is the difference between the standard cost of materials and actual cost. If actual cost is less than the standard cost, it is a favorable variance and vice versa.

Material cost variance formula:

**MCV**= Standard cost - Actual cost

In other words, (Standard Quantity × Standard Price) - (Actual Quantity × Actual Price)

**Example**: The standard and actual figures of product 'Z' are as under

| | Standard | Actual |
|---|---|---|
| Material quantity | 50 units | 45 units |
| Material price per unit | FRW 1,000 | FRW 800 |

Required: Calculate material cost variance?

**Solution**

**-Standardcost=(SQ)x(SP)=50 units x 1,000FRW =50,000FRW**

**Less Actual cost =(AQ)x(AP) = 45 units x 800 FRW=36,000FRW**

**Material cost variance = SC – AC=50,000FRW-36,000FRW=14.000FRW**

Material variance is further sub-divided into two heads:

b) **Material Price variance (MPV):** It arises when the price paid of materials is different from the pre-determined price. It is calculated by multiplying the actual Quantity with the difference between standard and actual price.

**MPV**= (Standard Price-Actual Price) ×Actual Quantity

**Example:** The Standard and Actual figures of product 'Z' are as under

| | **Standard** | **Actual** |
|---|---|---|
| Material Quantity | 50 units | 45 units |
| Material price per unit | FRW1,000 | FRW 800 |

Required: Calculate price variance?

**Solution**

**Price Variance = Actual Quantity (Standard Price – Actual Price)**

= 45 units (FRW1,000 – FRW 800 )

=45 units (FRW 200)

=FRW9,000 (F)

**c) Material usage (or Quantity) Variance (MQV):** It measures the difference in material cost arising, from higher of less consumption of material than the standard consumption. It is calculated by multiplying the standard Price with the difference between the standard Quantity and actual Quantity

MUV= (Standard Quantity-Actual Quantity) × Standard Price

Example: The Standard and Actual figures of product 'Z' are as under

| | **Standard** | **Actual** |
|---|---|---|
| Material Quantity | 50 units | 45 units |
| Material price per unit | FRW 1,000 | FRW 800 |

Required: Calculate Usage or Quantity Variance?

**Solution**

**Quantity Variance= Standard Price(Standard Quantity–Actual Quantity**)

=FRW 1,000 (50 units – 45 units)

=FRW 1,000 (5 units)

=FRW 5,000 (F)

In other words, Material Cost Variance = Material Usage Variance + Material Price Variance

= FRW 5,000 + FRW 9,000

= FRW14,000

Example 2: NXE Manufacturing Concern furnishes the following information

| | |
|---|---|
| Standard: Material for 70 kg finished products | 100 kg |
| Price of material | FRW 1 per kg |
| Actual: Output | 210,000 kg |
| Material used | 280,000 kg |
| Cost of Material FRW 252,000 | |

Calculate: a) Material price Variance

b) Material usage or Quantity Variance

c) Material Cost Variance

**Solution**

**Standard Quantity of input for actual output (SQ) =210,000kg×** $\frac{100\,k}{70\,k}$

**=300,000 kg**

**Actual Price (AP) = (**Frw **252,000 ÷ 280,000 kg) =** FRW **0.90 per kg**

a) Material Price Variance = (SP -AP)×AQ

= (1- 0.90) × 280,000

**=** FRW **28,000 (F)**

b) Material usage Variance = (SQ – AQ) ×SP

**= (300,000 – 280,000) × 1**

**=** FRW **20,000 (F)**

c) Material Cost Variance =(SQ × SP) – (AQ ×AP)

**= (300,000 × 1) – (280,000 × 0.90)**

**=** FRW **48,000 (F)**

**Check MCV = MPV + MUV**

**48,000 FRW (F) = 28,000 FRW (F) + 20,000 FRW (F)**

**d) Material Mix variance (MMV):** This variance arises when more than one type of materials is used in manufacturing the product and the quantities of materials issued are not in predetermined proportion. It is that part of direct material usage variance, which is due to difference between the standard and actual composition of a mixture. It is obtained by multiplying the standard price of materials with the difference between revised standard Quantity and the Actual Quantity.

**Mix variance=**Standard Price (Revised SQ-Actual Quantity)

**RSQ=** $\frac{std.Quantity\ for\ each\ material}{Total\ std.Qty}$ ×Actual mix total or

Mix variance=Standard Cost of Revised Standard Mix– Standard Cost of Actual Mix

If actual quantity is less than revised standard quantity, it is favorable variance and vice versa.

**e) Material Yield (or Sub-usage) Variance (MYV):** It is that portion of direct material usage variance, which is due to the difference between standard yield and actual yield.

Yield Variance = SR per unit (Actual yield – Standard yield)

$$\text{Standard Rate} = \frac{\textit{Standard cost of Standard Mix}}{\textit{Standard output from Std. Mix}}$$

$$\text{Standard Yield} = \left(\frac{\textit{Std output from Std Mix}}{\textit{Standard Mix Total}}\right) * \text{Actual Mix Total}$$

**f) Material Revision Variance**: If revised Standard quantity is less than standard quantity, it is a favorable variance and vice versa. Where weights of standard Mix and actual Mix are the same.

Revised usage variance =SP (SQ -RSQ)

### 1. Labor Variance

It is the difference between the actual direct wages paid and the direct labor cost allowed for the actual output to be achieved. Labor variance arises when there is a difference between the actual cost associated with a labor activity from the standard cost.

**Types /Methods of Labor Variance:**

The various types of Labor variances are:

i. **Labor cost variance:** LCV is the difference between Standard cost of Labor (wages as per standards) and actual cost of labor.This variance may be computed as:

LCV = (Standard rate ×Standard time) – (Actual rate × Actual time)

Or

Standard Cost -Actual Cost, if the standard output and the actual output are not the same.

LCV = (Standard rate × Standard time for actual output STAO))-(Actual rate × Actual time).

**Example:** Standard wage rate is FRW 20 per hour and Standard time is 10

hours. But actual wage rate is Frw 22.5 per hour and actual hours used are 12 hours

Calculate Labor cost Variance

**Solution**

**Labor Cost Variance = (Std. Rate × Std. Hours) - (Actual Rate × Actual Hours)**

= (FRW **20 ×10) - (**FRW **22.5 ×12)**

= FRW **200 -** FRW **270**

= FRW **-70 (U)**

Here Labor variance is Adverse because actual labor cost exceeds Standard cost by FRW 70

ii) **Labor Rate Variance(LRV):**is that portion of labor cost variance which arises due to difference between Standard rate of wages specified and actual rate of wages paid.LRV = (Standard rate-Actual rate) × Actual time

**iii)Labor Efficiency (time) Variance(LEV)** is that portion of Labor cost which arises due to difference between standard time specified(for Actual output labor hours) and actual time taken by labor.

Its computation is:

**i) If standard output and actual output are the same**:

LEV= (Standard time-Actual time) × Standard rate

**ii) If standard output and actual output are not the same:**

LEV = (Standard time for each output (STAO) – Actual time) × Standard rate

In the above example standard output and Actual output are not the same.

Variation LEV = (STAO -Actual time) × Standard rate

**Example:** The standard and actual figures of a firm are as under:

| | |
|---|---|
| Standard time for the job | 1,000 hours |
| Standard rate per hour | FRW 50 |
| Actual time taken | 900 hours |
| Actual wages paid | FRW 36,000 |

Required: Calculate the following Variances

a) Labor Rate Variance

b) Efficiency Variance

c) Total Labor Cost Variance

Solution

a) **Std. labor cost = (1,000 hours × 50) =** FRW **50,000**
b) **Actual wages paid =** FRW **36,000**
c) **Actual rate per hour =** FRW **36,000 / 900 hours =** FRW **40**

**Variances**

i) **Labor Rate Variance = actual time (Std. rate -Actual rate)**
**= 900 hours (**FRW **50 –** FRW **40)**
**=** FRW **9,000 (F)**

ii) **Efficiency Variance = Std. rate per hour(Standard time – Actual rate)**
**=** FRW **50 (1,000 hrs. - 900 hrs)**
**=** FRW **5,000 (F)**

iii) **Total Labor Cost Variance =Standard Labor Cost – Actual Labor Cost**

**= (**Frw **50 ×1000 hours) –**FRW **36,000**

**=**FRW **50,000 –**FRW **36,000**
**=** FRW **14,000 (F)**

iv) **Labor Mix Variance**

LMV arises due to change in composition of labor force (like mix in material).

It tells the management how much labor efficiency variance occurs due to change in its composition and thus it a part of labor efficiency variance.

Its computation is:

i) If standard composition/mix of time and actual composition of time (time spent by them) is same.

LMV =Standard cost of standard composition – Standard cost of actual composition

Or

Total actual time spent by labour (standard rate per hour of standard mix – standard rate per hour of actual mix)

Or

ii) If standard composition/mix of time and actual composition of time is not the same.

$$LMV = \left(\frac{\text{Tot hrs of actual cpst}}{\text{Tot hrs of strd cpst}}\right) \times (\text{Strd cst of strd cpst} - \text{strd cst of AM})$$

**NOTES**
**Tot: Total**
**Hrs: Time**
**Cpst: Composition**
**Strd: Standard**
**AM: Actual Mix**

Or

LMV=Standard rate of labor (Revised standard hours composition-Actual hours composition)

$$\text{Revised standard hours composition} = \frac{\textit{Total time of actual mix}}{\textit{Total time of standard mix}} \times \text{Standard time}$$

If the standard composition of labor force is revised due to the shortage of particular type of labor and total standard time and total actual time is equal.

### v) Idle Time Variance

Idle time means abnormal wastage of time due to strikes, power failure, and breakdown of machinery. If idle time occurs, the actual hours worked by labor are less than standard hours specified for them. Due to this reason, idle time Variance is always adverse.

Its computation is:

**Idle time variance** =Standard rate (idle hours)

If idle time occurs labor efficiency variance is the sum of LEV and idle time variance.

Total labor efficiency variance =LEV+LIV

### vi) Labor Yield Variance

**LYV** is that portion of labor efficiency variance which reveals the variance in labor cost due to difference between actual yield or production output and standard yield/production.

**i)** If standard composition and actual composition of labor time are same.

**LYV =** Standard cost per unit (actual yield-Standard yield)

**ii)** If standard composition and actual composition of labor time is not same.

**LYV=**Standard cost per unit

$$\text{Standard Cost per Unit} = \frac{\text{Total Standard Cost}}{\text{Net normal standard yield / production}}$$

$$\text{Strd Yield for actual composition} = \frac{Strd\ Yield}{Strd\ mix\ of\ time} \times \text{Actual mix of time}$$

### 3. Overhead variance

Overhead variance is the difference between the standard cost of overhead allowed for actual output (in terms of production units or labour hours) and the actual overhead cost incurred.

There are two types of **Overhead Cost Variance:**

- Fixed overhead variance
- Variable overhead variance

**Fixed Overhead Variance:** This is a cost that is not directly related to output; it is a general time-related cost. Specially, fixed overhead variance is defined as the difference between standard cost and fixed overhead allowed for the actual output achieved and the actual fixed overhead cost incurred.

Formula to calculate Fixed Overhead Variance:

FOV=Actual output ×Standard fixed overhead rate-Actual fixed overheads

The following are the other variances:

**i. Expenditure Variance**

This shows the over/under absorption of fixed overheads during a particular period. When the actual output exceeds the standard output, it is known as over-recovery of fixed overheads. Expenditure variance (EV) is expressed as follows:

**EV = (Standard overhead – Actual overhead)**

**ii. Volume Variance**

It is favorable if the actual output is less than the standard output, and vice -versa.

This is due to the nature of fixed overheads, which are not expected to change with the change in output. This variance can be expressed

as:
**Volume Variance = (Actual output ×Standard rate)-Budgeted fixed overheads**

Volume variance can further be divided into three variances, which are:

a) Capacity Variance
b) Calendar Variance
c) Efficiency Variance

**a) Capacity Variance** This is the portion of volume variance that arises due to high or low working capacity. It is influenced by **idle time**, machine breakdown, strikes or lockouts, or shortages of materials and labor. Thus, Standard rate (Revised units – budgeted hours)

**b) Calendar Variance** This variance arises due to the difference in the number of working days when the actual number of working days is greater than the Standard working days. It is regarded as a favorable type of variance. It is expressed in the following way:

**Calendar variance = No. of working days more or less × Standard (st.) rate per unit**

**c) Efficiency Variance** This is the portion of volume variance that is due to the difference between the budgeted output efficiency achieved. This is due to Labor working efficiency. Thus, it can be expressed as:

**Efficiency Variance = Std. rate (Actual production – Std. production) in unit**

**Example:** Using the information given below compute the fixed overhead cost, Expenditure, and Volume variance

| | |
|---|---|
| Normal capacity | 5,000 hours |
| Budgeted fixed overhead rate | FRW 10 per Standard hour |
| Actual level of capacity utilized | 4,400 Standard hours |
| Actual fixed overhead | FRW 52,000 |

**Solution**

a) Fixed overhead cost variance=Absorbed overhead – Actual overhead

= (4,400 hrs × FRW 10) - 52,000

= FRW 8,000 (A)

b) Expenditure Variance = Budgeted overhead – Actual overhead

= (5,000 hrs.× Frw 10) – FRW 52,000

= FRW2,000 (A)

c) Volume Variance =Absorbed overhead – Budgeted overhead

=(4,400 hrs. × FRW10) – (5,000 hrs.× FRW 10)

= FRW 44,000 – Frw 50,000

= FRW 6,000 (A)

**Working**

Overhead Cost Variance= Expenditure variance + Volume Variance

8,000(A) = 2,000(A) + 6,000(A)

**2. Variable overhead Variance**

Variable overheads consist of expenses other than direct material and direct labor which vary with the level of production. If variable overhead consists of indirect materials, then in this case it varies with the direct material used. On the other hand, if variable overhead is depending on number of hours worked then in this case it will vary with labor hours or machine hours. If nothing is mentioned specially then we take labor hours as basis. Variable overhead cost variance calculation is similar to labor cost variance.

**Variable overhead cost variance = (standard variable overhead for production -Actual variable overheads)**

The variable overhead cost variance is divided into two parts

Variable overhead expenditure variance

Variable overhead Efficiency variance

**Variable overhead Expenditure variance= (**Standard variable Overheads for actual hours) –(Actual variable overhead)

**Variable overhead Efficiency Variance= (**Standard Variable Overheads for production) – (Standard Variable Overheads for Actual Hours)

**Example:** From the following information of G ltd,

Calculate i) variable Overhead Cost Variance

ii)Variable Overhead Expenditure variance

iii)Variable Overhead Efficiency Variance

| | |
|---|---|
| Budgeted production | 6,000 units |
| Budgeted variable Overhead | FRW 120,000 |
| Standard time for one unit of output | 2hours |
| Actual production | 5,900 units |
| Actual Overhead incurred | FRW 122,000 |
| Actual hours worked ~~worked~~ | 11,600 hours |

**Solution**

Workings: 1. Standard cost per unit = $\frac{120,000\ FRW}{6,000\ units}$ = FRW 20

2. Standard cost per hour = $\frac{120,000\ FRW}{6,000\ unit \times 2 hours}$ = FRW 10

i) Variable Overhead Cost Variance = (Standard Overhead for actual production – Actual Overhead incurred)

= FRW 20 ×5,900 units – FRW 122,000

= FRW 4,000 (A)

ii)Variable Overhead Expenditure Variance =

Standard Overhead for Actual hours – Actual Overhead

= FRW 10 ×11,600 hours – FRW 122,000

= FRW 6,000 (A)

iii)Variable overhead Efficiency Variance=

Standard rate per hour × (Standard hours for actual production – Actual hours)

= FRW 10 (2hours×5,900 units – 11,600 hours)

= FRW 2,000 (F)

**4. Sales Margin variance**

The standard sales margin is the difference between the standard selling price of a product and its product cost. It is known as the standard profit for the product

Total sales margin variance is the difference between the budgeted margin from sales and the actual margin when the cost of sales is valued at the standard cost of production. This is the sum of sales margin price variance and sales margin quantity variance.

a) Sales Margin Price Variance

This is that portion of the total sales margin variance which is the difference between the standard margin per unit and the actual margin per unit for the number of units sold in the period.It is calculated as under:

Sales Margin Price Variance=Actual sales-(Standard selling price-Actual sales quantity)

Sales Margin Quantity Variance

This is that portion of the total sales margin variance which is the difference between the budgeted number of units sold and the actual number sold valued at the standard margin per unit. It is calculated as under:

Sales Margin Quantity Variance=Standard sales Margin or profit (Actual Sales Quantity – Budgeted Sales Quantity)

**Example**: From the following information, calculate the sales variances

| | |
|---|---|
| Sales selling price per unit | FRW 30 |
| Standard Cost per unit | FRW 25 |
| Budget sales | 2,000 units |
| Actual sales (units) | 2,200 units |
| Actual sales(value) | FRW 63,800 |

**Solution**

**Sales Margin Price Variance**

=Actual sales - Standard selling price (Actual sales in unit)

= FRW 63,800 – FRW 30 (2,200)

= FRW 63,800 – FRW 66,000

= FRW 2,200 (A)

Note: Actual sales price per unit = FRW 63,800 / 2,200= Frw 29

Actual selling price per unit is lower than the standard selling price, so this

variable is Adverse or Unfavorable.

**Sales Margin Quantity Variance**

=Standard profit per unit (Actual sales in units – Budgeted sales in units)

= FRW 5 (2,200 – 2,000)

= FRW 5 (200)

= FRW 1,000 (F)

Standard profit per unit = Standard selling price – Standard cost

= FRW 30 – FRW 25

= FRW 5

Actual sales in units are greater than budget sales in units, so this variance is favorable.

Total sales variance =Sales margin price variance + Sales margin quantity variance

= FRW 2,200 (A) + FRW 1,000 (F)

= FRW 3,200 (A)

**5. Controllable Variance**

A Variance is controllable whenever an individual or a department or section or division may be held responsible for the variance.

According to ICMA, London,

Controllable cost variance is a cost variance which can be identified as a primary responsibility of a specified person.

**6. Uncontrollable Variances**

External factors are responsible for uncontrollable variances. The management has no power or is unable to control the external factors. Variance for which a particular person or a specific department or section or division can't be held responsible are known as uncontrollable variances.

**7. Favourable variances**

Whenever the actual costs are lower than the standard costs at per-determined level of activity, such variance termed as favourable variances. The management is concentrating to get actual results at cost lower than the standard costs. It

shows the efficiency of business operation.

**8. Unfavourable variances**

Whenever the actual costs are more than the standard costs at predetermined level of activity, such variances termed as unfavourable variances. These variances indicate the inefficiency of business operation and need deeper analysis of these variances.

**9. Basic Variances**

Basic variances are those variances which arise on account of monetary rates (i.e.price of raw materials or labour rate) and also on account of non- monetary factors (such as physical units in quantity or time)

**10. Sub Variance**

Basic variance arising due to non-monetary factors are further analysed and classified into sub-variances taking into account the factor responsible for them. Such sub variances are material usage variance and material quantity variance

### *5.1.7. Reconciliation Statement budgeted profit with actual profit*

We have discussed above various cost variances and sales margin variances. Sometimes the budgeted profit and actual profit are given and the students are required to reconcile the budgeted profit with actual profit after calculating various variances. The layout of a reconciliation statement is given as under:

Statement showing the reconciliation of Budgeted Profit with Actual Profit

| | | | FRW | | FRW |
|---|---|---|---|---|---|
| Budgeted Profit | | | | | xx |
| | | | | | |
| **Sales margin variances** | | | F | A | |
| Sales margin price variance | | | xx | - | |
| Sales margin quantity variance | | | - | xx(xx)A | |
| Adjusted budgeted profit | | | | | xx |
| **COST VARIANCES:** | | | | | |
| Direct materials | F | A | | | |
| Price | xx | - | | | |
| Usage | - | xx | | | |
| Total | | | xx | - | |
| Direct labour | | | | | |
| Rate | xx | xx | | | |
| Efficiency | - | xx | | | |
| Idle time | - | - | | | |

| | | | | |
|---|---|---|---|---|
| Total | | | - | xx |
| Variable overhead | | | | |
| Expenditure | - | xx | | |
| Efficiency | xx | - | | |
| Total | | | - | xx |
| Fixed overhead | | | | |
| Expenditure | xx | - | | |
| Efficiency | - | xx | | |
| Capacity | - | xx | | |
| Total | | | - xx | (xx) A |
| Actual profit | | | | xx |

**Example**

The budgeted and actual profit statements of Ideal Manufacturers Ltd for the latest financial year are given below:

**Profit Statement**

| | Budgeted | | Actual | |
|---|---|---|---|---|
| | | FRW | | FRW |
| Sales | | 400,000 | | 396,000 |
| Less costs of Sales | Frw | | Frw | |
| Direct material | 100,000 | | 114,000 | |
| Direct labour | 80,000 | | 76,000 | |
| Variable overhead | 40,000 | | 50,000 | |
| Fixed overhead | 20,000 | 240,000 | 24,000 | 264,000 |
| Trading profit | | 160,000 | | 132,000 |

The following information is also relevant:

i) The budgeted profit per unit sold was expected to be Frw 80 arrived at as follow:

| | | FRW |
|---|---|---|
| Selling price | | 200 |
| **Factory Costs** | | |
| Direct material -10 units each FRW 5 per unit | 50 | |
| Direct Labour -2 hours each FRW 20 per hour | 40 | |
| **Factory overheads** | | |
| Variable: -2 hours each FRW 10 per hour | 20 | |
| Fixed: -2 hours each FRW 5 per hour | 10 | 120 |
| | | **80** |

ii) The sales and production budget had been set at 2,000 units. However, only 1,800 units were produced and sold at a price as FRW220 per unit

iii) Actual inputs and costs incurred were as follows:-

Direct material : 19,000 units at Frw 6 per unit

Direct labour : 4,000 hours at Frw 19 per hour

Variable factory overhead incurred : Frw 50,000
Fixed factory overhead incurred : Frw 24,000

**Required**

Prepare a Statement reconciling the budgeted profit of Frw 160,000 to the actual profit of Frw 132,000

**Solution**

**Statement showing the reconciliation of budgeted profit with actual profit**

| | | | FRW |
|---|---|---|---|
| Budgeted profit | | | 160,000 |
| **Sales margin variances** | **F** | **A** | |
| | FRW | FRW | |
| Sales margin price variance | 36,000 | - | |
| Sales margin quantity variance | - | 16,000 | 20,000 |
| Adjusted budgeted profit | | | 180,000 |

| **Cost Variances** | **F** | **A** | **F** | **A** | |
|---|---|---|---|---|---|
| | FRW | FRW | FRW | FRW | |
| Direct materials: | | | | | |
| Price | - | 19,000 | | | |
| Usage | - | 5,000 | - | 24,000 | |
| Direct Labour: | | | | | |
| Rate | 4,000 | - | | | |
| Efficiency | - | 8,000 | - | 4,000 | |
| Variable Overhead: | | | | | |
| Expenditure | - | 10,000 | | | |
| Efficiency | - | 4,000 | - | 14,000 | |
| Fixed Overhead: | | | | | |
| Expenditure | - | 4,000 | | | |
| Volume | - | 2,000 | | 6,000 | |
| (48,000) | | | | | |
| **Actual profit** | | | | | **132,000** |

## 5.1.8. Accounting entries of Variance

The difference between Standard and Actual figures are called variances. These variances may be favourable or unfavourable. These are recorded into cost accounts. For this purpose, the following procedures are adopted:

a) Variance is calculated at the time of occurrence or when the respective elements of cost are charged to production.

b) Variance accounts are maintained for each type of variance.

c) Transfers between the work – in- progress, finished goods and cost of sales are made at the standard figures.

d) Stocks of raw materials, work-in- progress and finished goods are valued at standard cost.

e) Unfavorable price or expenditure variances are credited to the respective

control account and debited to the respective variance account. For example, adverse labor rate variance is debited to the labor rate variance account and credited to wages control account. Similarly, adverse material price variance is debited to material price variance account and credited to stores control account. Favorable price or expenditure variances are debited to respective control account and credited to respective variance account.

f) Unfavorable usage or efficiency variances are debited to respective variance account and credited to work-in-progress account. For example, adverse material usage variance of adverse labor efficiency variance is debited to material usage variance account or labor efficiency account and credited to W.I.P. account. If the usage or efficiency variances are favorable then debit W.I.P. account and credit respective variance account.

g) At the end of the year, the balances in the variance accounts are transferred to the profit and loss account. It means adverse variances are debited to the profit and loss account and favorable variances are credited to the profit and loss account.

Example; ABC Ltd. makes and sells a single product, Z. The company operates a standard cost system and during a period, the following details were recorded:

**Opening trial Balance**

| | FRW | FRW |
|---|---|---|
| Cost Ledger control A/C | | 50,000 |
| Stores Control A/C (at standard) | 20,000 | |
| Finished goods control A/C (at standard) | 30,000 | |
| | **50,000** | **50,000** |

There was no opening W.I.P

The sales and production budgets have been set at 1,500 units. However, only 1,400 units were produced and sold at a price of Frw 310 per unit.

The budgeted fixed overhead was Frw 30,000

| The standard cost card of product 'Z' is per unit | | FRW |
|---|---|---|
| Direct materials | (12 kg each FRW 10) | 120 |
| Direct labour | (5 hours each FRW 15) | 75 |
| Variable overheads | (5 hours each FRW5) | 25 |
| Fixed overheads | (5 hours each FRW 4) | 20 |
| | | 240 |
| Standard profit | | 60 |
| Standard selling price | | 300 |
| During the period the following details were recorded: | | Frw |
| Purchases of materials | (19,200 kg ) | 172,800 |
| Direct wages | (7,200 hours ) | 115,200 |
| Variable overheads | | 28,800 |

| Fixed overheads | 32,400 |
|---|---|

Material issues to production were 18,200 kg

**Required**

Using the above information, prepare all cost and variances accounts and a profit and loss account and a closing trial balance

**Solution**

**Cost Variance** **FRW**

Material price ( 19,200 × FRW10 ) – Frw 172,800 FRW= 19,200 (F)
Material usage = FRW 10 (18,200 – 16,800 ) = 14,000 (A)
Labour efficiency= FRW 15 (7,200 – 7,000 ) = 3,000 (A)
Labour rate = (7,200 × FRW 15 ) – FRW 115,200= 7,200 (A)
Variable O.H. expenditure =(7,200 ×FRW 5 ) – FRW 28,800 = 7,200 (F)
Variable O.H. Efficiency= FRW 5 (7,200 – 7,000)= 1,000 (A)
Fixed O.H. expenditure = FRW 32,400 – Frw 30,000=2,400 (A)
Fixed O.H. Volume = FRW 20 (1,400 - 1,500)=2,000 (A)

**Sales Margin Variances**

Sales margin price = (FRW 300 ×1,400) – (FRW 310 ×1,400) =14,000(F)

**Note:**

In this question, sales margin quantity variance is not required because, actual sales are taken at standard price.

COST ACCOUNTS

Cost ledger control A/C

| | FRW | | FRW Balance |
|---|---|---|---|
| Sales | 434,000 | b/f | 50,000 |
| Balance c/d | 60,000 | Purchases | 172,000 |
| | | Wages | 115,200 |
| | | Variable O.H. | 28,800 |
| | | Fixed O.H. | 32,400 |
| | | Profit | 94,800 |
| | **494,000** | | **494,000** |

Stores Ledger control A/C

| | FRW | | FRW |
|---|---|---|---|
| Balance b/f | 20,000 | W.I.P | 182,000 |
| Cost Led: control A/C | 172,800 | Bal c/d | 30,000 |
| Mat. Price Var: | 19,200 | | |
| | **212,000** | | **212,000** |
| Bal: b/d | 30,000 | | |

Wages control A/C

| | FRW | | FRW |
|---|---|---|---|
| Cost Ledger Control A/C | 115,200 | Lab: rate Var: | 7,200 |
| | | W.I.P. | 108,000 |
| | **115,200** | | **115,200** |

Variable O.H Control A/C

| | FRW | | FRW |
|---|---|---|---|
| Cost Led: Control A/C | 28,800 | W.I.P | 36,000 |
| V.O.H Exp: Variance | 7,200 | | |
| | **36,000** | | **36,000** |

Fixed O.H. Control A/C

| | FRW | | FRW |
|---|---|---|---|
| Cost Led: Control A/C 32,400 | | F.O.H. Exp: var. | 2,400 |
| | | F.O.H. Volume Var. | 2,000 |
| | | W.I.P. | 28,000 |
| | **32,400** | | **32,400** |

W.I.P. Control A/C

| | FRW | | FRW |
|---|---|---|---|
| Store Control A/C 182,000 | | Mat: Usage var. | 44,000 |
| Wages Control A/C 108,000 | | Labour Eff: var. | 3,000 |
| V.O.H. Control A/C 36,000 | | V.O.H. Eff.var. | 1,000 |
| Fixed O.H. Control A/C 28,000 | | Finished Goods control A/C | 336,000 |
| | **354,000** | | **354,000** |

Finished Goods Control A/C

| | FRW | | FRW |
|---|---|---|---|
| Bal:b/f | 30,000 | Cost of Sales A/C | 336,000 |
| W.I.P. A/C | 336,000 | Bal c/d | 30,000 |
| | **366,000** | | **366,000** |

Cost of Sales A/C

| | FRW | | FRW |
|---|---|---|---|
| Fin: Goods Cont. A/C 336,000 | | P&L A/C | 336,000 |
| | **336,000** | | **336,000** |

Sales A/C

| | FRW | | FRW |
|---|---|---|---|
| Sales margin price var. 14,000 | | Cost Led: Control A/C | |
| P&L A/C | 420,000 | 434,000 | |
| | **434,000** | | **434,000** |

## VARIANCE ACCOUNTS

Material price

| | FRW | | FRW |
|---|---|---|---|
| P&L A/C | 19,200 | Store Cont. A/C | 19,200 |
| | **19,200** | | **19,200** |

Material usage

| | FRW | | FRW |
|---|---|---|---|
| W.I.P A/C | 14,000 | P&L A/C | 14,000 |
| | **14,000** | | **14,000** |

Labour Rate

| | FRW | | FRW |
|---|---|---|---|
| Wages Cont. A/C | 7,200 | P&L A/C | 7,200 |
| | **7,200** | | **7,200** |

Labour Efficiency

| | FRW | | FRW |
|---|---|---|---|
| W.I.P A/C | 3,000 | P&L A/C | 3,000 |
| | **3,000** | | **3,000** |

V.O.H Expenditure

| | FRW | | FRW |
|---|---|---|---|
| P&L A/C | 7,200 | V.O.H. Control A/C | 7,200 |
| | **7,200** | | **7,200** |

V.O.H Efficiency

| | FRW | | FRW |
|---|---|---|---|
| W.I.P A/C | 1,000 | P&L A/C | 1,000 |
| | **1,000** | | **1,000** |

Sales Margin Price

| | FRW | | FRW |
|---|---|---|---|
| P&L A/C | 14,000 | Sales Control A/C | 14,000 |
| | **14,000** | | **14,000** |

F.O.H. Expenditure

| | FRW | | FRW |
|---|---|---|---|
| F.O.H. Cont. A/C | 2,400 | P&L A/C | 2,400 |
| | **2,400** | | **2,400** |

F.O.H. Expenditure

| | FRW | | FRW |
|---|---|---|---|
| F.O.H.Cont. A/C | 2,000 | P&L A/C | 2,000 |
| | | | **2,000** |
| | **2,000** | | |

**PROFIT STATEMENT**

| | | FRW |
|---|---|---|
| Sales | | 420,000 |
| Less: Cost of Sales (at standard) | | 336,000 |
| Standard profit on actual sales | | 84,000 |
| Add: Sales margin price variance | | 14,000 |
| | | 98,000 |
| Add: **Favourable cost Variances** | | |
| | FRW | |
| Material usage var. | 19,200 | |
| Variable O.H. expenditure var: | 7,200 | |
| 26,400 | | |
| **124,400** | | |
| Less: **Adverse Cost Variances** | | |
| Material usage var: | 14,000 | |
| Labour rate var: | 7,200 | |
| Labour efficiency var. | 3,000 | |
| V.O.H. Efficiency var. | 1,000 | |
| Fixed O.H. Expenditure var: | 2,400 | |
| Fixed O.H. Volume var: | 2,000 | |
| 29,600 | | |
| Actual profit | | |
| **94,800** | | |

**Closing Trial Balance**

| | FRW | FRW |
|---|---|---|
| Cost ledger Control A/C | | 60,000 |
| Store control: A/C | 30,000 | |
| Finished goods control A/C | 30,000 | |
| | **60,000** | **60,000** |

## Application activity 5.1

**1.Calculate the Labor cost variance from the following:**

**Standard production ;100 units**

**Standard hours :500 hours**

**Wages rate per hour** : FRW **2**

**Actual production :85 units**

**Actual time taken :450 hours**

**Actual wages rate paid : Frw 2.10 per hour**

2.For making 10kg of Sugar,the standard material requirement is:

| Material | Quantity(kg) | (FRW) Rate per kg. |
|---|---|---|
| A | 8 | 6 |
| B | 4 | 4 |

In March,1000 kg.of yarn was produced. The actual consumption of materials is as under

| Material | Quantity(kg) | (FRW) Rate per kg. |
|---|---|---|
| A | 750 | 7 |
| B | 500 | 5 |

Calculate: 1) Material Cost Variance

2) Material Price Variance

3) Material usage Variance

## *5.2. The use of budgetary control to ensure organization achievement of target*

**Learning Activity 5.2**

Read the following information and answer the question below

Budgetary control is a system of controlling costs which includes the preparation of budgets, coordination the departments and establishing responsibilities, comparing actual performance with the budgeted, and acting upon results to achieve maximum profitability.

What are the functions of budgets in achieving the goal of an organization?

### *5.2.1 Management efficiency with budgetary control*

Budgetary control is known as setting up particular budget by management to know the variation between the company's actual performance and budgetary performance.

It is also helps managers utilize these budgets to monitor and control various costs within a particular accounting period.

Importance of budgetary control is reflected from the fact that it helps the management to efficiently track the company's performance. Such monitoring ensures that the deviation of the company's actual performance from the budgeted one is always under the scanner and can be rectified before it too late.

**Application activity 5.2**

What are the benefits of having budgetary control mechanism to a business?

## 5.3. Report and Recommendation to Management

Read the following information and answer the questions below.

The reporting to management is a process of providing to various levels of management, so as to enable them judging the effectiveness of their responsibility centres and become a base for taking corrective measures.

Question:

What are the benefits of report and recommendation to management?

### *5.3.1. Report to Management*

Reporting to management can be defined as an organized method of providing each manager with all the data and which he needs for his decision, when he needs them and in a form which aids his understanding and stimulates his action.

Finally, compile all of the results into a singular report for management. The report should contain the identified variances and the root causes of each variance. It should also contain corrective actions and recommendations for management on what to do.

### *5.3.2. Recommendation to Management*

Management recommendations means determinations of, amount of, level of intensity, timing of, any restrictions , conditions , mitigation , or allowances for activities proposed for a project area pursuant to this rule.

Before approaching management with any recommendation, first point out the following:

- Clarify your thoughts through the act writing.
- Serve as notes you can refer to during your discussion
- Provide your manager with written record to refer to late

## Application activity 5.3

MUHIRE, the production manager at OMEGA Industries, recently received his performance report from KAGISHA, the company's controller. The report contained the following information:

| | Actual Cost | Standard Cost | Variance |
|---|---|---|---|
| Direct materials | FRW 38,200 | FRW 36,600 | Frw 1,600 (U) |
| Direct labour | FRW 19,450 | FRW19,000 | Frw 450 (U) |
| Variable Overhead | FRW 62,890 | FRW 60,000 | Frw 2,890 (U) |

KAGISHA asked MUHIRE to respond to his performance report. If you were MUHIRE, how would you respond? What additional information might you need to prepare your respond?

## Skills Lab 5

Students visit the manufacturing company located in their school environment with their teacher. The later requests in favour of students the budget prepared for last 10 months. The planning officer or budget officer provide again the document showing the actual cost incurred. Referring to those two different documents, the students in manageable groups are requested to calculate the variance if any and advice the current managers.

## End of unit assessment 5

I. Multiple choice questions

1. Overhead Cost Variances is

a) The difference between overheads recovered on actual output –actual overhead incurred

b) The difference between budgeted overhead cost and actual overhead cost

c) Obtained by multiplying standard overhead absorption rate with the different between standard hours for actual output and actual hours worked

d) None of the above

2.Which of the following variance arises when more than one material is used in manufacture of a product

A. Material price variance
B. Material usage variance
C. Material yield variance
D. Material mix variance

3.Controllable variance are best disposed-off by transferring to

A. Cost of goods sold
B. Cost of goods sold and inventories
C. Inventories of work-in-progress and finished goods
D. Costing profit and loss account

4. XYZ Company has established the following standards for factory overheads.

| | |
|---|---|
| Variable Overhead per unit | FRW 10 |
| Fixed Overhead per month | FRW 100,000 |
| Capacity of the plant 20,000 units per month | |

The actual data for the month are as follows:

| | |
|---|---|
| Actual overheads incurred | FRW 300,000 |
| Actual output (units) | 15,000 units |

Required: Calculate overhead variances

a) Production Volume variance
b) Overhead expenses variance

5. Following the information is available from the records of a factory

| | Budget 5. Following the information is available from the records of a factory | Actual |
|---|---|---|
| Fixed overhead for June,2022 | FRW 10,000 | FRW12,000 |
| Production in June,2022 (units) | 2,000 | 2,100 |
| Standard time per unit (hours) | 10 | - |
| Actual hours worked in June | - | 21,000 |

Calculate:

a) Fixed overhead cost variance

b) Expenditure variance

c) Volume variance

# UNIT 6 UNDERSTANDING LOAN / CREDIT POLICY

**Key unit competence:** To be able to explain the loan/credit procedures

**Introductory activity:**

Mr. Nkundurwanda is a business man operating his business in Rwanda in small scale business. Apart of his main activity Mr. Nkundurwanda has family responsibilities which require him more finances. The capital amount of his business amounted to Frw 10,000,000, Due to the progress of his business he is in need of Frw 10,000,000 more which will help his business to grow and continue to expand and operate in different countries. In this process there are many alternatives to deal with this issue and Mr. Nkundurwanda needs to find the best one which will meet his needs.

Questions;

What is the activity of Mr. Nkundurwanda?

What are the challenges do you think that Mr. Nkundurwanda is facing?

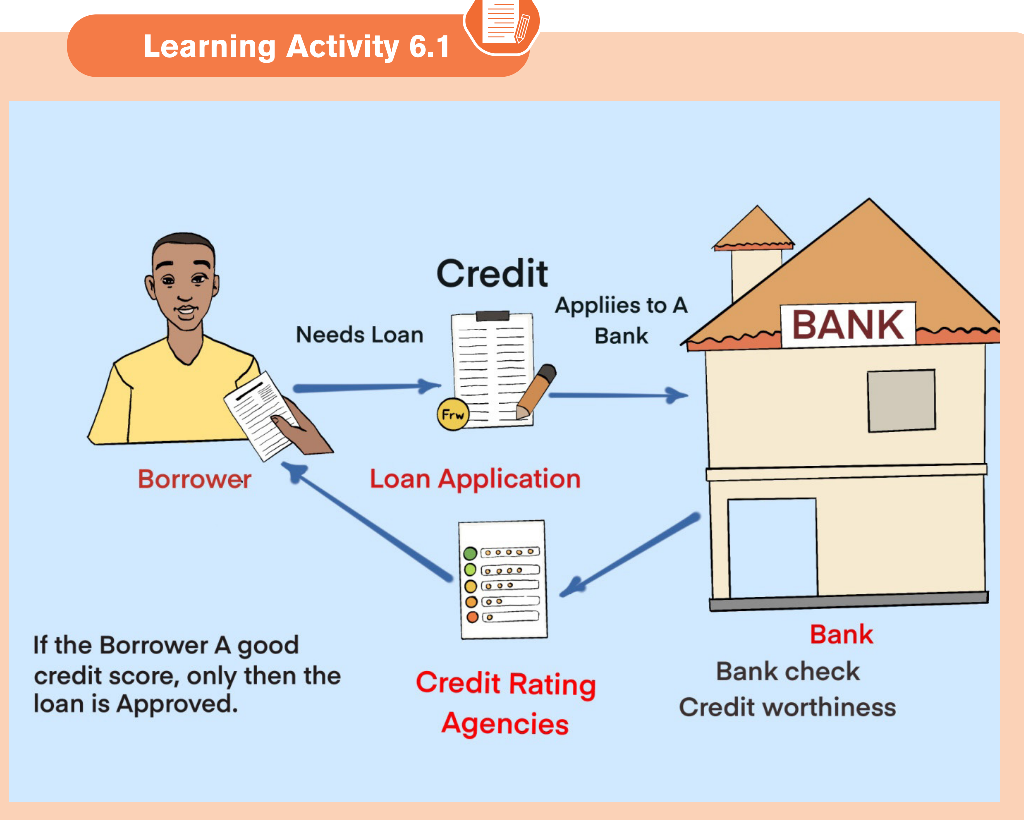
What are the potential alternatives Mr. Nkundurwanda needs to think about to overcome those challenges?

Among alternatives which one you can you advise Mr. Nkundurwanda to take?

What will be the importance of alternative chosen by Mr. Nkundurwanda?

## 6.1, Introduction to loan policy

**Learning Activity 6.1**




Answer the following questions

1) What do you understand about this picture?

2) What is the role of the bank in this picture?

3) What is the relationship between bank and borrower

### *6.1.1. Definition of concepts related to the credit*

**a. Credit**

"By credit, we mean the power which one person has to induce another to put economic goods at his deposal for a time on promise or future payment. Credit is thus an attribute of power of the borrower." Prof. Kinley.

"Credit is purchasing power not derived from income but created by financial institutions either as on offset to idle income held by depositors in the bank or as an addition to the total amount or purchasing power." Prof. Cole.

"The term credit is now applied to that belief in a man's probability and solvency which will permit of his being entrusted with something of value belonging to another whether that something consists, of money, goods, services or even credit itself as and when one may entrust the use of his good name and reputation." Prof. Thomas.

On the basis of those definitions it can be said that credit is the exchange function in which, creditor gives some goods or money to the debtor with a belief that after sometime he will return it. In other words Trust is the Credit .

### b. Credit policy

A credit policy includes detailed guidelines for the size of the loan portfolio, the maturity period of the loan, security against loan, the credit worthiness of the borrower, the liquidation of loans, the limits of lending authority, the loan territory, etc.

Credit policy provides some directions for the use of funds, to control the size of loans and influences the credit decision of the bank. So, the loan policy is a necessity for a bank.

In formulating the loan policies, the policy formulators must be very cautious because the lending activity of the bank affects both the bank and the public at large. All the influencing factors should be considered such as Size of loan account; Credit for infrastructure; Types of loan portfolio; Acceptable security; Maturity of the loan; Compensating balance; Lending criteria; Loan territory; Limitations of lending authority.

### c. Credit monitoring

A good lending is that the amount lent, should be repaid along with interest within the stipulated time. To ensure that safety and repayment of the funds, banker is necessary to follow-up the credit, supervise and monitor it. Credit monitoring is an important integral part of a sound credit management. The bank should always be careful for that fund properly utilized for what it has been granted. Banker keeps in touch with the borrower during the life of the loan. There are some steps from the banker's point of view, to ensure the safety of advance which are documentation, disbursement of advance, inspection, submission of various statements, annual review and market information.

### d. Credit services

It is the business of providing loans, other forms of credits and information about credits to people and companies.

#### e. Credit delivery

In credit delivery, the borrowers are allowed to draw funds from the account to the extent of the value of inventories and receivables less stipulated margin within the maximum permissible credit limit granted by the bank.

### *6.1.2 Types of credit*

The credit assistance provided by a banker is mainly of two types, one is fund based credit support and the other is non-fund based. The difference between fund based and non-fund based credit assistance provided by a banker lies mainly in the cash out flow. Banks generally allow fund based facilities to customers in any of the following manners.

✓ **TRADITIONAL CREDIT PRODUCTS**

- **Cash credit**

Cash credit is a credit that given in cash to business firms. It is an arrangement by which, a bank allows its customers to borrow money up to a certain limit against tangible securities or share of approved concern. Cash credits are generally allowed against the hypothecation of goods/ book debts or personal security. Depending upon the nature of requirements of a borrower, bank specifies a limit for the customer, up to which the customer is permitted to borrow against the security of assets after submission of prescribed terms and conditions and keeping prescribed margin against the security.

- **Overdraft:**

A customer having current account, is allowed by the banks to draw more than his deposits in the account is called an overdraft facility. In this system, customers are permitted to withdraw the amount over and above their balances up to extent of the limit stipulated when the customer needs it and to repay it by the means of deposits in account as and when it is convenient. Customer of good standing is allowed this facility but customer has to pay interest on the extra withdrawal amount.

- **Demand loans**

A demand loan has no stated maturity period and may be asked to be paid on demand. Its silent feature is, the entire amount of the sanctioned loan is paid to the debtor at one time. Interest is charged on the debit balance.

- **Term loans**

Term loan is an advance for a fixed period to a person engaged in industry, business or trade for meeting his requirements like acquisition of fixed assets etc. The maturity period depends upon the borrower's future earnings. Next to

cash credit, term loans are assumed of great importance in an advance portfolio of the banking system of country.

- **Bill purchased**

Bankers may sometimes purchase bills instead of discounting them. But this is generally done in the case of documentary bills and that from approved customers only. Documentary bills are accompanied by documents of title to goods such as bills of lading or lorry and railway receipts. In some cases, banker advances money in the form of overdraft or cash credit against the security of such bills.

- **Bill discounted**

Banker lends the funds by receiving a promissory note or bill payable at a future date and deducting that from the interest on the amount of the instrument. The main feature of this lending is that the interest is received by the banker in advance. This form of lending is more or less a clean advance and banks rely mainly on the creditworthiness of the parties.

✓ **INNOVATIVE CREDIT PRODUCTS**

Since the liberalization period there have been drastic changes in the way loans have been granted to individual customers and businessmen. The changing pattern of banks from universal to branch banking after the liberalization period also forced banks to adopt easy lending. Technology has supported the development of financial service industry and reduced the cycle of money to the shortest possible duration.

- **Credit cards**

Credit cards are alternative to cash. Banks allow the customers to buy goods and services on credit. The card comprises different facilities and features depending on the annual income of the card holder. Plastic money has played an important role in promoting retail banking.

- **Debit cards**

Debit card can be used as the credit card for purchasing products and also for drawing money from the ATMs. As soon as the debit card is swiped, money is debited from the individual's account.

- **Housing loans**

Various types of home loans are offered by the banks these days for purchasing or renovating house. The amount of loan given to the customer depends on the lending policies and repayment capacity of the customer. These loans are usually granted for a long period.

- **Auto loans**

Auto loans are granted for the purchase of car, scooter and others. It may be granted for purchasing vehicle.

- **Personal loans**

This is an excellent service provided by the banks. This loan is granted to the individuals to satisfy their personal requirements without any substantial security. Many banks follow simple procedure and grant the loan in a very short period with minimum documents.

- **Educational loans**

This loan is granted to the student to pursue higher education. It is available for the education within the country or outside the country.

- **Loans against securities**

These loans are provided against fixed deposits, shares in the market, bonds, mutual funds and life insurance policy.

- **Consumption loans for purchase of durables**

Banks fulfill the dreams and aspirations by providing consumer durable loans. These loans can be borrowed for purchasing television, refrigerator, laptop, mobile, etc.

### *6.1.3. Importance of loan*

Credit plays an important role in the gross earnings and net profit of commercial banks and promotes the economic development of the country. The basic function of credit provided by banks is to enable an individual and business enterprise to purchase goods or services ahead of their ability. Today, people use a bank loan for personal reasons of every kind and business venture too. The following are other importance of loan;

- **Exchange of ownership**

Credit system enables a debtor to use something which does not own completely.

- **Employment encouragement**

With the help of bank credit, people can be encouraged to do some creative business work which helps increasing the volume of employment.

- **Increase consumption**

Credit increases the consumption of all types of goods. By that, large scale production may be stimulated which leads to decrease cost of production. In

turn also it lowers the price of product which in result rising standard of living.

- **Saving encouragement**

Credit gives encouragement to the saving habit of the people because of the attraction of interest and dividend.

- **Capital formation**

Credit helps in capital formation by the way that it makes available huge funds to unable people to do something. Credit makes possible the balanced development of different regions.

- **Development of entrepreneurs**

Credit helps in developing large scale enterprises and corporate business. It has also helped the different entrepreneurs to fight against difficult periods of financial crisis. Credit also helps the ordinary consumers to meet requirements even in the inability of payment.

- **Priority sector development**

Credit helps in developing many priority sectors including agriculture. This has greatly helped in rising agriculture productivity and income of the farmers. Banks in developing countries are providing credit for development of SSI in rural areas and other priority sectors too.

### *6.1.4. Importance of liquidity management*

Liquidity refers to the ability of an organization to pay its suppliers on time, meet its obligation costs, such as wages and salaries and to pay longer-term outstanding amounts such as loan repayment. Adequate liquidity is often a key factor in contributing to the success of failure of a business. For example liquid assets include cash, short term deposits, trade receivables and inventories. Those are called Working capital of a business.

Cash is the most liquid of assets and it is part of working capital of the business. However, the time taken to convert trade receivables into cash and the time taken to pay creditors affect the liquidity position of the business.

Liquid assets are current asset items that will, or could soon, be converted into cash, and cash itself. Two common definitions of liquid assets are all current assets or all current assets with the exception of inventories.

The main source of liquid assets for a trading company is Sales. A company can obtain cash from sources other than sales, such as the issue of shares for cash, a new loan or the sale of non current assets but company cannot rely on these

and in general, obtaining the liquid funds depends on making sales and profits.

The management needs to carefully consider the level of investment in working capital and to consider the impact that this is having on a company's liquidity position; an overview of this is given by the cash operating cycle/working capital cycle.

**Cash operating cycle/working capital cycle** is the period of time between the outflow of cash to pay the raw materials and the inflow of cash from customers. The number of days credit taken by accounts receivable has a direct effect on the amount of time money is tied up for in working capital. Therefore, managing the period of credit customers take is vital to the management of the organization's liquidity.

### 6.1.5. Granting loan

Granting credit to customers is essential for many organizations and brings many benefits to both organizations and the customers. However, the risks associated with granting credit should be monitored and managed carefully.

**a. Applicant profile**

To make prudent credit decision, bank essentially should know well the borrower well. Without these information bank cannot judge the loan application. Creditworthiness of the applicants is evaluated to ensure that the borrower conforms to the standards prescribed by the bank. It can be said that a loan properly made is half-collected. So, a bank should make proper analysis before making any credit decision. With increasing credit risks, banks have to ensure that loans are sanctioned to „safe and „profitable projects. For this, they need to fine tune their appraisal criteria.

**b. Application form**

It is a document on which the lender bases the decision to lend. A loan application is neither a pledge by the applicant nor a commitment by the lender. It contains essential financial and other borrower information. Detailed business plan, projected income statements showing profit and loss, balance sheet, and cash flow statement are required for a business loan. Loan amount and purpose, period and means of repayment, and guaranties and/or collateral offered are required of a company applying for a loan. Banks generally use standard forms for the applicant to fill-in. It is also known as credit application.

**c. Information required for granting credit**

When assessing the credit status of either on established or a new customer there are a range of sources of information that the credit controller can use.

Some are external to the business and others are internal to the business.

The credit controller needs to consider the customer's ability and willingness to pay within the stated credit terms and also that the customer will remain solvent. No single source of information can guarantee either of these but there are varieties of sources which can be pooled for a final decision on credit status to be made

External sources: Bank Reference, Trade reference, Credit reference agencies, Office of Register General, Management accounts from the customer, Media publication, Internet searches.

Internal sources: Staff knowledge communicated by conversations, emails, meetings, customer visit, financial analysis of either external published financial statements or internal management and previous trading history.

### 6.1.6. Evaluating credit worthiness

The purpose of analyzing the financial statements for credit control assessment is to find the indicators of the customer's performance and position in four main areas as follow:

Profitability Indicators; Liquidity indicators; Debt indicators; Cash flow indicators

*Profitability Ratios*

When credit has been granted one major concern will be the profitability of the customer. If the customer is not profitable in the long term then it will eventually go out of the business and this may mean a loss, in the form of an irrecoverable debt, if it has been granted credit.

Gross profit margin: Gross profit/Revenue*100% It shows how profitable the trading activities of business are.

Net profit margin: PAT/Revenue*100%. It indicates the overall profitability of the business

Return on capital employed (ROCE): Net profit/Capital employed*100%

Net asset turnover: Capital employed/Revenue. It measures the number of times that revenue represents capital employed (or net assets).

*Liquidity Ratios*

The purpose of calculating liquidity ratio is to provide indicators of the short-term and medium-term stability and solvency of the business. It is also to assess if the business can pay its debts when they fall due. There are two overall ratios:

Current ratio: Current assets /Current Liabilities. Ideal ratio is 2:1

Quick ratio or acid ratio: (Current assets-Inventory)/Current liabilities. Ideal ratio is 1:1

### Gearing Ratios

When assessing a customer's credit status, the credit controller will also be concerned with the longer-term stability of the business. One area of anxiety here is the amount of debt in the business ' capital structure and its ability to service this debt by paying periodic interest charges.

Main measures are:

Gearing ratio= Long term debt/ (Long term debt + Equity)*100%. Is a measure of the proportion of interest-bearing debt to the total capital of the business.

Interest cover = Profit before interest and tax / Interest. It is calculated as the number of times that the interest could have been paid, it represents the margin of safety between the profits earned and the interest that must be paid to service the debt capital.

### Credit scoring

Credit scoring is a method of assessing the credit worthiness of an individual or organization using statistical analysis and is used by the organizations such as banks, utility companies, insurance companies and landlords to assess the ability of an individual or organization to repay any loans or pay for services or goods.

A credit score is a number ranging from 300-850 that depicts a consumer's creditworthiness. The higher the credit score, the more attractive is the borrower. A credit score is based on credit history such as number of open accounts, total levels of debt, and repayment history.

Lenders use credit scores to evaluate the probability that an individual will repay loans in a timely manner.

Your credit score, a statistical analysis of your creditworthiness, directly affects how much or how little you might pay for any lines of credit you take out.

Illustration

A company has share capital of Frw 200million, resources totaling Frw 188million and a loan of Frw 100 million . The net profit for the year is Frw 45million, after deducting depreciation of Frw 12 million and interest of Frw 6million.

Solution:

*Opening a new customer account*

Once a decision has been made to grant credit to a customer then a file and account in the trade receivable ledger must be set up.

The following information will be required: Business name of the customer; the contract name and title within the customer's business; business address and telephone number; the credit limit agreed upon; the payment terms agreed.

**Refusal of credit**

The credit controller may decide that it is not possible to trade with a new potential customer on credit terms.

It is a big decision for the credit controller as the business will not wish to lose this potential customer's business but the credit controller will have taken a view that the risk of non- payment is too high for credit terms to be granted.

It simply means that on the evidence available to the credit controller, the chance of non-payment is too high for the company to take the risk.

The reasons are the following:

A non-committal or poor bank reference

Poor trade references

Concerns about the validity of any trade references submitted

Adverse press comment about the potential customer

Poor credit agency report

Indications of business weakness from analysis of financial statements

Lack of historical financial statements available

Information from a member of the business's credit circle

The credit controller will consider all the evidence available about a potential customer and the reason for the refusal of credit may be due to a single factor noted above or a combination of factors.

**Communication of changes or refusal**

If a credit facility is to be changed or not granted to a potential customer then this must be communicated in a tactful and diplomatic manner. The reason for

the change or refusal of credit must be politely explained and any future actions required from potential customer should also be made quite clear.

**Communication method**

It is common to communicate the reasons for the refusal of credit in a letter initially. In the letter the credit controller may suggest that a telephone call may be appropriate in order to discuss the matter and any future actions.

### 6.1.7. Terms and conditions associated with Overdraft and loan

Most of us are familiar with the concept of an overdraft, which is a form of short-term borrowing from the bank, available to both business and personal customers. The overdraft allows the account holder to continue withdrawing money even when the account has no funds in it or has insufficient funds to cover the amount of withdrawal. If a bank is approached for an overdraft, then it will normally agree an overdraft facility. This is the amount by which the business's account is allowed to be overdrawn. It is then up to the customer to determine how much of this overdraft facility is to be used by having an actual overdraft. And loan is credit facility under which a bank allows funds withdrawn to exceed fund deposited in accordance with specified terms and conditions

Among the terms and conditions associated with overdraft and loan application, it should be disposed within a reasonable period of time and state specific time period from the date of acknowledgement, within which the decision on loan request will be conveyed to the borrower.

In case of rejection, specific reasons should be conveyed in writing. Credit limits which may be sanctioned may be mutually settled.

Terms and conditions governing credit facilities such as margin security should be based on due diligence and creditworthiness of borrower.

Lender should ensure timely disbursement of loans sanctioned.

Lender should give notice of any change in the terms and conditions including interest rates and service charges.

### 6.1.8. Types of investments, risks and their terms and conditions

There are five major factors to be considered when any investor chooses investments

| Choosing investments | |
|---|---|
| Security | Investments should at least maintain their capital value |
| Liquidity | If investments are with short-term funds, these should be convertible back into cash at short notice |
| Return | Aim to make highest return compatible with acceptable level of risk |
| Spreading risks | Spreading investments over several types of security, so losses on some are offset by gains on others |
| Growth prospects | Most profitable investments are in businesses with good growth prospects |

### a. certificate of deposit (CD)

A certificate of deposit is a document issued by a bank or building society which certifies that a certain sum, has been deposited with it, to be repaid on a specific date. The term can range from seven days to five years but is usually for six months. CDs are negotiable instruments which means, they can be bought and sold. Therefore, if the holder does not want to wait until the maturity date, the CD can be sold in the money market. CDs offer a good rate of interest, are highly marketable and can be liquidated at any time at the current market rate. The market in CDs is large and active; therefore they are an ideal method for investing large cash surpluses.

### b. Government securities

- **Bills of exchange**

A bill of exchange can be defined as an unconditional order in writing from one person to another, requiring the person to whom it is addressed to pay a specified sum of money, either on demand (a sight bill) or at some future date (a term bill). A cheque is a special example of a type of bill of exchange.

- **Trading in bills of exchange**

Most bills of exchange are term bills with a duration or maturity of between two weeks and six months and can be in any currency. If one company draws a bill on another company, this is known as a trade bill. However, the market in these is small. Most bills are bank bills, which are bills of exchange drawn and payable by a bank, the most common of these is known as a banker's acceptance. There is an active market in such bills and a company with surplus cash could buy a bill of exchange at a discount and either hold it to maturity or sell it in the market before maturity again at a discount. The difference between the price at which the bill is purchased and the price at which it is sold or it matures is the return

to the investor. Commodities (Gold) are physical products such as gold. They are traded on commodity exchanges where standard contracts are bought and sold.

### c. Shares Equity

An Equity investment is generally the purchase of shares in another company. Often this takes place through a stock market. Income is from dividend payments and capital gains on the increase in the share value.

Investments in companies that are traded on a stock exchange are very easily sold, so these are a relatively liquid form of investment. However, unless the investment is a speculative one, in anticipation of a rapid increase in the company'svalue, investments in equity are normally held for longer periods.

### Property and land

Investing in property and land is generally a very safe investment. However, the costs of maintaining and generating an income from property and land are higher than for other forms of investment.

These are generally long-term investments due to the costs and time associated with purchasing and selling land and property.

### Diversification and types of investment

A business should aim to create a diversified portfolio of investments, with a spread of risk and return. Marketable securities can be ranked in order of increasing risk and increasing expected return.

Government securities *Low risk*

Other 'public' corporation stocks

Company loan stocks

Other secured loans

Unsecured loans

Convertible loan stocks

Preference shares

Equities *High risk*

**Government stock**

The risk of default is negligible and hence, this tends to form the base level for returns in the market. The only uncertainty concerns the movement of interest rates overtime, and hence, longer dated stocks will tend to carry a higher rate of interest.

Company loan stock

Although there is some risk of default on company loan stock (also called corporate bonds), the stock is usually secured against corporate assets.

**CDs and Bills of Exchange**

The riskiness of CDs and bills of exchange varies with the creditworthiness of the issuers. They are riskier than government securities, but less risky than shares.

**Application activity 6.1.**

**Questions**

8. Give and explain the types of loans
9. What is the purpose of analyzing financial statements in evaluating the credit worthiness?
10. Discuss the importance of liquidity management
11. List external sources of available external information which help to understand creditworthiness?
12. What do you understand by A certificate of deposit (CD)?

## 6.2. Effect of legislation to credit control

Learning Activity 6.2

Questions:

What do you observe on the above picture?

Explain the function of each image found in this picture

After watching careful this picture  is there any relationship between the images in the picture?

### *6.2.1. Law legislating the credit and remedies for breaches*

**a. Relevant contract law and remedies for breaches**

- **What is a contract?**

A contract is a legally enforceable agreement between two or more parties.

Main elements of contract: Agreement; Consideration and Intention to create legal relations

- **The importance of contract**

The importance of contract law is that if a contract is made between two parties and if one party does not satisfactory carry out its side of the agreement, the other party can take the defaulting party to court for breach of contract.

**The following are the main legal contract elements**

a) **Offer**: An offer is the beginning of a contract.

b) **Acceptance**. An offer can be accepted in writing, in person or over the phone. Volunteer of each group to operate or Free Consent of each group.

c) **Consideration**. Consideration is something of value that the parties are contracting to exchange.

d) **Mutuality of obligation**; each contracted party has reciprocal duties and responsibilities, one to another.

e) **Competence/Capacity**: Competent parties who have the legal capacity to contract. By this each party legally assign what is able to do to another and to the business concerned.

f) **Legality**: all job contracts must be legal tender.

An invitation to treat

Care must be taken to distinguish between an offer and the invitation to treat. An invitation to treat is an invitation by the seller of goods for the buyer to make an offer to buy them at that price. Examples are advertisements, catalogues, and the price tickets displayed on goods.

Duration of an offer

If an offer is made then it does not have to remain in place indefinitely. There are a number of ways in which an offer can be brought to an end:

If there is a set time period for an offer, then the offer will lapse at the of time period. If there is no express time period set then the offer will lapse after a reasonable period of time.

An offer can be revoked by the offeror at any point in time before it has been accepted. Revocation of an offer means that the offer is at cancelled.

An offer comes to an end if it is rejected. An offer can be rejected by a counter offer. Eg. If an offer is made to sell an item for Frw 1M and the offeree replies to say that he will buy at Frw 0.9M this is a rejection of the original offer to seller.

The offer comes to an end when a valid acceptance is made.

Acceptance of an offer

The acceptance of an offer must be absolute and unqualified

Acceptance can be made verbally or in writing

If an offer requires a particular form of acceptance (such as verbal, in writing or by fax) then this is the form in which the acceptance must be made.
It must be unqualified- if any additional conditions or terms are included in an acceptance then takes the form of counter-offer, which rejects the original offer.

*Value*

The second required element of a contract is that of there being some value. The basis of contract law is that we are dealing with a basis of contract law is that we are dealing with a bargain of some sort, not just a promise by one of the parties to a contract to do something.

What is required for there to be a valid contract is known in legal terms as consideration. Consideration can be thought of as something given, promised or done in exchange for the action of the other party.

In terms of business transactions, the consideration given for a sale of goods is either the money paid now or the promise by a receivable to pay at a later date.

Both parties must bring something of value to the contract for it to be legally binding i.e. valid. It can be item or service.

*Unilateral Contracts*

Most contracts are known bilateral Contracts meaning that two persons or parties have taken action to form a contract. Unilateral Contracts involve an action undertaken by one person or a group alone. In contract law, Unilateral Contracts allow one person to make a promise, so only they are under an enforcement obligation

A common example is with the insurance contracts, the insurance company promises it will pay the insured person a specific amount of money if certain event happens. If the event doesn't happen, the company won't have to pay. The insured party doesn't make any promise and to his part of the deal, only needs to pay the insurance premium.

*Defective contracts*

There are situation in which an apparent contract will only have limited legal effect or even no legal effect at all.

A void contract is not a contract at all. The parties are not bound by it and if they transfer property under it, they can sometimes recover their goods even from a

third party. This normally comes about due to some form of common mistakes on a fundamental issue of the contract.

A voidable contract is contract which one party may set aside. Property transferred before avoidance is usually irrecoverable from a third party. Such contracts may be with minors, or contracts induced by misrepresentation, duress or undue influence. In these cases, it can be deemed that a party did not have legal capacity to consent to a contract. For instance here can be intoxication, mental health impairment or being too young to enter into contract. A contract may be voidable due to coercion; this is where one party to the contract may be using behaviors towards the other party.

An unenforceable contract is a valid contract, property transferred under it cannot be recovered, even from the other party to the contract. However, it either party refuses to perform or to complete their part of the performance of the contract, the party cannot compel them to do so. A contract is usually enforceable when the required evidence of its terms, for example written evidence of a contract relating to land, is not available.

*Terms in a contract*

Legally, different terms of a contract have different effects.

Express terms are terms that are specifically stated in the contract and are binding on both parties.

Conditions are terms that are fundamental to the contract and if they are broken then the party breaking them will be in breach of contract and can be sued for damages. The injured party can regard the contract as is ended.

Warranties are less important terms in a contract. If any of these are not fulfilled then there is a breach of contract but the contract remains in force. The injured party can still claim damages from the court for any loss suffered but he cannot treat the contract as is terminated.

Implied terms are terms of a contract which are not specifically stated but are implied in such a contract, either by trade custom or by law.

*Remedies for breach of contract*

A breach of contract arises where one party to the contract out of its side of the bargain, such as a credit customer who does not pay. The following are some of the remedies:

Action for the price- a court action to recover the agreed price of the goods/ services

Monetary damages- compensation for loss

Termination-one party refusing to carry on with the contract

Specific performance-a court order that one of the parties must fulfill its obligations

Quantum merit -payment ordered for the part of the contract performed

Injunction- one party to the contract being ordered by the court not to do something

In terms of credit customer not having paid for goods or services provided, the most appropriate remedy would normally be an action for the price.

### *6.2.2. Terms and conditions associated with granting credit*

The credit terms offered to a customer are part of the agreement between the business and the customer and as such should normally be in writing. The terms of credit are the precise agreements with the customer as to how and when payment for the goods should be made. The most basic element of the terms of credit is the time period in which the customer should pay the invoice for the goods. There are a variety of ways of expressing these terms as follow:

Net 10/14/30 days- Payment is due 10 or 14 or 30 days after delivery of the goods.

Weekly credit-all goods must be paid for by a specific date in the following week.

Half-monthly credit-all the goods delivered in one-half of the month must be paid for by a specified date in the following half-month.

Monthly credit-all goods delivered in one month must be paid for by a specified date in the following month.

**Settlement and cash discounts**

In some cases customers may be offered a settlement discount or cash discount for payment within a certain period which is shorter than the stated credit period.

The terms of such a settlement discount may be expressed as:

Net 30 days, 2% discount for payment within 14 days. This means that the basic payment terms are that the invoice should be paid within 30 days of its date but that if the payment is made within 14 days of the invoice date a 2% discount can be deducted. It is up to the customer to decide whether or not to take advantage of the settlement discount offered.

### 6.2.3. Data Protection law

Data Protection law is becoming increasingly onerous in the modern, digital world. For instance, in Europe, the new General Data Protection Regulation legislation(GDPR) places significant responsibilities on companies to safeguard the data they use, and only to keep personal data that is authorized to be kept ,and is current, complete and accurate.

Due to mounting international regulation, pressure is being exerted on Rwandan economy to improve regulations, to in turn protect its key export markets.

Recently adopted legal frameworks in Rwanda exclusively focus on security and confidentiality of electronic communication data, leaving aside all other categories of personal data. In Rwanda, there is information and communication Technology law that provides that 'Every subscriber or user's voice or data communications carried by means of an electronic communication network or service must remain confidential to the subscriber and or user for whom the voice or data is intended (ICT, 2016:art 124), but development of the law and regulation is ongoing.

General Data Protection Regulation (GDPR) is the latest European regulation relating to data protection, which more strictly enforces data subject rights and significantly increases the potential fines for breaches.

What follows may be considered best practice based on the General Data Protection Regulation requirements:

What is personal data?

The GDPR applies to the processing data that is:

Wholly or partly by automated means or

The processing other than by the automated means of personal data which forms part of, or is intended to form part of, a filing system.

**What are identifiers and related factors??**

An individual is '**identifiable'** if you can distinguish him from other individuals.

A name is the most common means of identifying someone. However, whether any potential identifier actually identifies an individual depends on the context.

GDPR provides non-exhaustive list of identifiers, including:

Name

Identification number, location, data and

An online identifier

An online identifier includes IP address and cookie identifiers which may be personal data. Other factors can identify an individual.

There will be circumstances where it may be difficult to determine whether data is personal data. If this is the case as a matter of good practice, you should treat the information with care, ensure that you have a clear reason for processing the data and, in particular, ensure you hold and dispose of it securely.

Inaccurate information may still be personal data if it relates to an identifiable individual

**Eight principles of good practice**

Information should be:

Fair and lawfully processed

Processed for limited purposes

Adequate, relevant and not excessive

Accurate and up to date

Not kept for longer than necessary

Processed in line with the data subject's rights

No transferred to countries elsewhere unless such data is adequately protected in those countries

### *6.2.4. Legal and administrative procedures for debt collection*

***Restitutionary and compensatory damages***

Restitutionary damages aim to strip from a wrongdoer, any gains made by committing a wrong or breaching a contract. They are concerned with the reversal of benefits that we have been earned unjustly by the defendant at the expense of the claimant.

If the monetary remedy or damages is to be the loss made by the claimant, these are known compensatory damages and are intended to provide the claimant with the monetary amount necessary to replace what was lost and nothing more. Common examples are loss of wages or income.

### *Bringing a dispute to court*

If it is decided that the only course of action to recover money owed by a credit customer is that of legal action, then the first step is to instruct a solicitor. The solicitor will require details of the goods or services provided, the date the liability arose, the exact name and trading status of the customer, any background information( Such as disputes in the past) and a copy of any invoices that are unpaid.

### *Which court?*

Outstanding amounts owed to an entity are civil claims. Uncomplicated claims with a similar value will be dealt with in the local district court. Larger and more complex claims will be heard provincial courts.

### *Methods of receiving payment under a court order*

Once there has been a court order that the money due must be paid, there are a number of methods of achieving this.

| Attachment of earrings order | The Business will be paid the amount owing directly by the customer's employer as a certain amount is deducted from their weekly/monthly pay. However, this is only viable for a customer who is an individual and is in stable, consistent work. |
|---|---|
| Third-party debt order (garnishee order) | This allows the business to be paid directly<br><br>by a third party who owes the business's customer money. |
| Warranty of execution | A court bailiff seizes and sells the customer's goods on behalf of the business.<br><br>Similar to a bailiff is where a sheriff is authorized by a court to seize assets<br><br>of a customer in settlement of a debt. |
| Administration order | The customer makes regular, agreed payments into court to pay off the debt. |
| Receiver | A receiver is appointed to receive money that will be owing to the customer.<br><br>Eg: Rents |

| | |
|---|---|
| Charging order | A legal charge is taken on properly or financial assets , so the supplier is paid when the assets are sold |
| Bankruptcy | |
| Liquidation | |

### *6.2.5. Bankruptcy and insolvency*

Bankruptcy arises when an individual cannot pay his or her debts and is declared bankrupt. Insolvency is where a company cannot pay its debts as they fall due.

***Petition for bankruptcy***

A statutory demand can be issued for a payment of the amount due within a certain period of time. This may result in the customer offering a settlement. If, however, there is no settlement offer from the customer a petition for a bankruptcy will be received from the court.

Once the individual has received the statutory demand they have 21 days, either to pay the debt or reach an agreement to settle the outstanding amount.

There are time limits in making a statutory demand and these are:

The demand should be made within four months of the debts. If the debt is older than four months a court has to be contracted to explain the reasons behind the delay.

Normally a statutory demand cannot be made after six years have elapsed.

***Consequences of a petition for Bankruptcy***

The consequences of a petition for bankruptcy against receivables

If the customer pays money to any other suppliers or disposes of any property then these transactions are void.

Any other legal proceedings relating to the customer's property or debts are suspended.

An interim receiver is appointed to protect the estate.

***Consequences of a bankruptcy order***

The following are among others:

The official receiver takes control of assets

A statement of the assets and liabilities is drawn up-this is known as statement of affairs.

The receiver summons a meeting of creditors of the individual within 12 weeks of the bankruptcy order.

The creditors of the individual appoint a trustee in bankruptcy.

The assets are realized and a distribution is made to the various creditors.

The creditor who presented the petition does not gain any priority for payment over other creditors.

***Order of distribution of assets***

The assets of the bankrupt will be distributed in the following order:

Secured creditors

Bankruptcy costs

Preferential creditors such as employees, pension schemes, government taxes payable

Unsecured creditors, such as trade payables

The bankrupt's spouse

The bankrupt

***Insolvency***

The process of insolvency for a company that cannot pay its debts as they fall due is similar to that of a bankrupt individual; there are 2 main options for companies

Liquidation

Administration

***Liquidation***

In liquidation the company is dissolved and the assets are realized, within debts being paid from the proceeds and any excess being returned to their shareholders. This process is carried out by a liquidator on behalf of shareholders and/or creditors. The liquidator's job is simply to ensure that the creditors are paid and once this is done the company can be wound up. Again, unsecured creditors are a long way down the list of who is paid first, therefore there may be little left in the pot.

### *Administrative receivership*

An alternative to liquidation is that the shareholders, directors or creditors can present a petition to the court for an administration order. The effect of this is that the company continues to operate but an insolvency practitioner (administrator) is put in control of it, with the purpose of trying to save the company from insolvency, as going concern - or at least achieve a better result than liquidation.

Administrative receivership is a process whereby a creditor can enforce security against a company's assets in an effort to obtain repayment of the secured debt. It used to be the most popular method of obtaining payment by secured creditors, but legislative reforms have reduced its significance.

Administrative receivership differs from liquidation in that an administrative receiver is appointed over all of the assets and undertakings of the company. This means that an administrative receiver can normally only be appointed by the holder of a floating charge. Usually an administrative receiver will be an accountant with considerable experience of insolvency matters.

### *Retention of title clause*

A 'retention of title' clause can be written into agreements with customers. Such a clause expressly states that the buyer doesn't obtain ownership of the goods unless and until payment is made. Accordingly, if the buyer goes out of business before paying for the goods, the supplier can retrieve them. If payment is not made goods can be stopped in transit and a lien secured on the goods by the seller.

Official receivers do not need the authority of an insolvency practitioner to determine if a claim is valid. If an official receiver sells goods that are subject to a valid retention of title claim then the supplier can sue the official receiver for damages as ownership of the goods still belong to the supplier.

**Application activity 6.2**

1. Describe the role of a contract in law legislating the credit
2. Discuss on Terms and conditions associated with granting credit
3. Enumerate Legal and administrative procedures for debt collection

## Skills Lab 6

Student will visit a bank operating nearest the school especially in the credit department and ask questions related to the credit with the aim of knowing the procedure or the process of offering the credit and the low legislating the credit.

## End of unit assessment 6

Question :

Discuss on Importance of liquidity management

What is the purpose of analyzing the financial statements evaluating credit worthiness?

It is known that the relationship between a seller of goods and a buyer of goods is a contract what is a contract and what is its importance in Law legislating the credit and remedies for breaches?

Discuss on Bankruptcy and insolvency in

# UNIT 7 CREDIT MONITORING SERVICES

**Key unit competence:** To be able to evaluate credit recovery

**Introductory activity:**

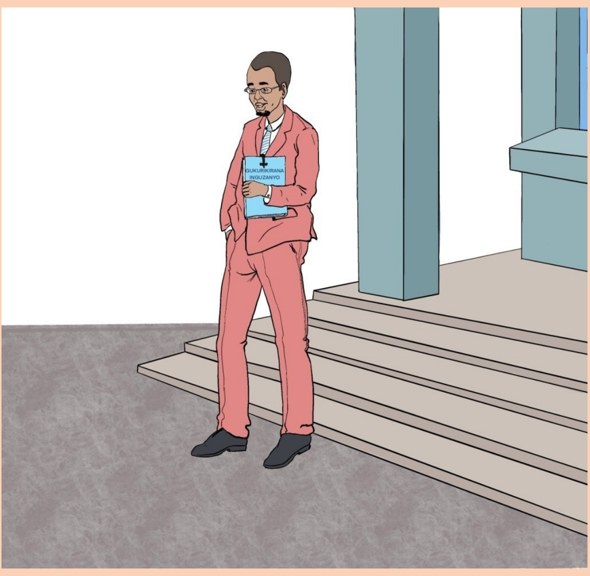
**Questions:**

1. How many images found in this introductory activity?

2 What is the function of each image in this introductory activity

3. In summary what this image tells you?

## 7.1.Monitoring Credit



**QUESTION:**

How many individuals found in this image?

What do you think is the function of the business man and other individuals in the same image

What do you think the business man is looking for?

In summary what this Image is talking about?

### *7.1.1. Credit service*

Credit represents an agreement to receive goods, services or money now and pay for them in the future.

Only you can decide how to spend your money and whether you will use credit. These decisions should be based on your ability to repay credit debt, not just on what you want to buy at the moment. To help you decide whether to use credit, consider the advantages of credit.

Advantages of Credit

Using credit has some advantages.

**Convenience:** Using credit cards when you travel or shop is more convenient than carrying cash. It also provides a handy record of transactions. Using a credit card also may give you some bargaining power if there is a dispute or disagreement involving a purchase.

**Use other people's money:** During the time between when you buy something with credit and when you pay the bill, you're actually using someone else's money rather than your own cash.

**Meet emergencies:** Unexpected costs such as car repairs or health needs can be met quickly with credit.

**Use something while you pay for it:** You can enjoy using something you need as you pay for it.

**Get something you can't afford now:** If you can't afford to pay cash for a car or other large purchase, using credit allows you to get it now.

**May get better service on something bought on credit:** If you haven't paid for something entirely and a problem arises, it may be easier to get the service needed.

**Take advantage of sales:** If you truly have a need for something on sale and don't have the cash to get it, credit allows you to get it now.

### *7.1.2. Age analysis and Financial Ratios*

In the age analysis and financial ratios, we consider the regular monitoring of receivables to identify any potential issues. This may in turn prompt a more in-depth enquiry similar to the initial granting of credit decision.

**Transactions with credit customers**

Once it has been agreed with a customer that they may trade on credit terms with the business, an account will be set up for that customer in the receivables ledger. The entries in this account will be invoices and credit notes sent to the customer and receipts from the customer.

One of the roles of the credit control team will be to monitor, on a regular basis, the transactions on each receivable's account and, in particular, the balance on the account

**Placing an order**

The first step in monitoring of a credit customer's activities is at the initial stage of each transaction when the customer places an order for more goods. When the initial agreement was made with the customer to trade on credit terms, a credit limit will have been set by the credit controller for that customer.

Credit limit refers to the maximum amount that should be outstanding on the customer's account in the receivables ledger at any point in time.

When a customer places an order, check that value of the order does not take the customer's account over their credit limit. If the value of the order means that the customer's balance exceeds the credit limit then this must be discussed with customer.

**Review of customer account**

As well as checking that each order does not mean that the customer's balance exceeds their credit limit, each customer's account should be monitored on a regular basis. The review should involve looking for debts that are not being paid within the stated credit terms and old debts that have not been paid at all.

In order for this review of customer accounts to be meaningful, it is important that the customer accounts are kept up to date and accurate so that the correct balance and position can be seen at any point in time.

**Aged receivables analysis**

An aged receivables analysis is a method of internal communication that splits the total balance on a customer's account into amounts which have been outstanding for a particular period of time. For example:

Current-up to 30 days

31 to 60 days

61 to 9 days

Over 90 days

Using the aged receivables analysis

The regular review of the aged receivables analysis should highlight the following potential problems

Credit limit exceeded

Slow payer

Recent debts cleared but older outstanding amounts

Old amounts outstanding but no current trading

**Credit limit exceeded**

If the review of the aged receivables analysis indicates that a customer's credit limit has been exceeded then this must be investigated. If a customer is highlighted in the aged receivables analysis as having exceeded his credit limit then, normally the customer will be told that no further sales will be made to him until at least some of the outstanding balances have been paid. In some circumstances, liaison between the receivables ledger and the sales department may result in an increase in the customer's credit limit.

*Slow payers*

Some business can be identified from the aged receivables listing as being slow payers: they always have amounts outstanding for, say 31-60 days and 61-90 days, as well as current amounts.

In these cases consideration should be given to methods of encouraging the customer to pay earlier. This could be in the form of a reminder letter or telephone call or perhaps the offer of a settlement discount for earlier payment.

Reminder letter: A reminder letter is a formal communication to encourage payment.

***Recent debts cleared but older amount outstanding***

If a customer is generally a regular payer and fairly recent debts have been cleared, but there is still an outstanding, this will normally indicate either a query over the amount outstanding or a problem with the recording of the invoices, credit notes or payment received.

***Old amounts outstanding and no current trading***

This situation would be of some concern for the credit control team. It would appear that the customer is no longer buying from the business but still owes money from previous purchases. In this case the customer should be contacted immediately and payment sought. If no contact can be made with the customer, or there is a genuine problem with payment (such as bankruptcy or liquidation) consideration should be given to writing off the debts as irrecoverable.

The 80/20 Rule

The 80/20 Rule is a generally observed effect. In general, 80% of the value of amount owed by the customers will be represented by 20% of the customer accounts.

According to The 80/20 Rule, if the largest accounts (making up 20% of customers) are reviewed frequently, this should mean that approximately 80% of the total of receivables balances is regularly reviewed.

The remaining smaller balances, making up only 20% of the receivables total, can then be reviewed on a less-frequent basis.

This is not an absolute law but just an observed tendency-all it means is that population of data have concentrations-there is no reasons why it should be exactly 80/20-it could be 70/30 for instance.

***Materiality***

Materiality is another approach when analyzing the receivables is to prioritize the receivables ledger by taking into account the materiality or significance of the debt. Thus, overdue debts below a certain amount should be ignored until larger, more significant debts have been pursued as priority.

This allows specific areas to be targeted by the credit control function of a business to minimize losses due to irrecoverable debts or to improve cash flow. It also takes into account that some debts may not be worth pursuing as the time and costs involved may outweigh the likely benefits.

***Increase in credit limit***

There will be occasions when a customer specifically requests an increase in credit limit. It may happen that the customer wishes to place an order which will exceed the credit limit. The aged receivables listing can be a useful tool in making a decision about any increase in credit limit, as it allows the credit controller to see the trading history of the customer, whether or not they have kept within their current limit in the past and paid according to their credit terms.

Period of credit: It can be useful for a business to be able to determine the average period of credit taken by its customers in total. If those figures are compared over time then any improvement or deterioration of credit control procedures can be observed. The most common method of measuring the average period of credit is using the accounts receivable collection period.

### 7.1.3. Incidence of Bad and doubtful debts

The aged receivables analysis can also be used to identify debts which might be irrecoverable. These consist of 'bad' or 'irrecoverable debts'. Any debts that are not paid will, of course, have a negative impact on the cash flow of the organizations as working capital will be reduced by the comparative amount of balances unpaid.

Irrecoverable and doubtful debts: An irrecoverable debt is one where it is almost certain that the monies will not be received. A doubtful debt is one where there is some doubt over the eventual receipt of the money, but it is not such a clear case as an irrecoverable debt. The reason for the distinction between the two is that in the financial accounting records an irrecoverable debt is written off, and no longer appears in the ledger or on the statement of financial position, whereas a doubtful debt has an allowance or a provision made against it-so it still appears in the ledger, and on the statement of financial position where it is neither off against the receivables balance.

**Identification of irrecoverable and doubtful debts**

The following indicate the potential irrecoverable debt:

Evidence of long-outstanding debts from the aged receivables analysis

A one-off outstanding debt when more recent debts have been cleared

Correspondence with customers, e.g. Disputes

Outstanding older debts and no current business with the customer

A sudden or unexpected change in payment patterns

Request for an extension of credit terms

Press comment

Information from the sales team

**Information about potential irrecoverable debts**

If a member of the credit control team discovers that a debt is highly likely to be classified as irrecoverable or doubtful then it will probably not be that person's responsibility to write the debt off or set up an allowance against it. This is normally the role of more senior member of the accounting function, as this will impact on the preparation of the financial statement of a business.

**Professional ethics and irrecoverable and doubtful debts**

Writing off debts as irrecoverable will have an effect on reported profits and issues can arise when debts are written off in one period and then subsequently written back in another period in an attempt to smooth profits between accounting periods.

Accounting for debts should reflect the financial reality of the situation and be dealt with adhering to the fundamental ethical principles of integrity and objectivity. This means that the accounting should be completed with honesty

and without any conflict of interest when reporting results of a business.

**Application activity 7.1**

1. What do we need to consider in the age analysis and financial ratios in credit monitoring?
2. Which of the following might typically be highlighted by analysis of an aged receivables listing?
   a. Slow payers
   b. Settlement discounts taken
   c. Exceeding a credit limit
   d. Potential irrecoverable debts
   e. Credit terms
   f. Items in dispute
3. If customer accounts in the receivables ledger are not kept accurately up to date then this can cause a number of problems. Which one of the following is not one of those problems?

A. Problem items may not be highlighted in the aged receivables listing.

B. Incorrect statements may be sent out to customers

C. The correct goods may not be dispatched to the customers

D. Orders may be taken which exceed the customer's credit limit

## 7.2 Collection Option and Procedure

**Questions:**

How many persons are in this image?

What is the role of each person in this image?

What do you think about this image in summary?

### *7.2.1. Negotiation with the customer*

Most businesses will have a policy, whether formal or informal regarding the collection of debts and the processes that will take place to chase up any outstanding amounts. Adherence or otherwise to this policy should be the starting point for customer communications and negotiations.

✓ **Debt collection process**

Debt collection process starts with sending out of the sales invoice on which the credit terms should be clearly stated. Thereafter, a variety of external communications would be sent to the customer to encourage them to pay within the credit terms and, for those overdue debts, a further series of reminders.

A typical debt collection process can be illustrated:

Invoice sent

Statement sent

Telephone reminder

Reminder letter

Stop list

External means off debt collection

- **Sales invoice**

Once a sale has been made a sales invoice can be sent to the customer. This should be promptly sent, as soon as the goods or services have been provided, and should clearly state the payment period agreed.

- **Statements**

Most businesses will then send a monthly statement to the customer, showing the balance at the end of that month and how that is made up, including invoices, credit notes and payment received.

- **Telephone calls**

An overdue debt is one which has not been paid within the stated credit period. Once a debt has become overdue it is common practice to telephone the customer to enquire about the situation, determine whether or not there is a query over the amount due and agree when the debt will be paid.

When making this type of telephone call, particular attention should be given to the following matter:

Discussion with the customer should always be courteous

The precise amount of the debt should be pointed out, and the fact that it is overdue

It should be established whether there is any query with regard to the debt and, if so, any appropriate action agreed to resolve the query

If there is no query then a date for payment of the debt should be established

It is important to keep precise notes of what has been agreed in a telephone

conversation with a customer, as this may need to be confirmed by a letter. For example, if a customer agrees over the telephone to clear an outstanding amount by paying in 4 installments then this should be confirmed to the customer in writing.

- **Reminder letters**

If there has been no response to the telephone calls requesting payment of overdue amount then this is followed up with a reminder letter.

The reminder letter will be sent out when the debts are a certain amount of time overdue. The timescale of the reminder letter will depend up on organization's policy towards debt collection but usually it is sent out seven days after a debt becomes overdue. Accordingly, if an invoice is sent to a customer with 30-days credit terms, then the first reminder letter will be sent out of 37 days after the invoice.

**Example of a typical first reminder letter is given below:**

Date:

Dear Sir/Madam,

**Account number: XXXXXXXX**

I do not appear to have received payment of the invoices detailed below. I trust that this is an oversight and that you will arrange for immediate payment to be made. If you are withholding payment for any reason, please could contact me urgently and I will be pleased to assist you.

| **Invoices No** | **Terms** | **Due date** | **Amount** |
|---|---|---|---|
| **(FRW)** | ……. | ………… | ……… |

If you have already made payment please advise me and accept my apology for having troubled you

Yours sincerely,

Controller

- **Final reminder letters**

If there is no response from the initial reminder letter then there will be little point in sending a second reminder letter. However, all this stage a telephone call might be useful to clear up any misunderstanding and to assess whether further action is required.

The option for the business at this point is generally

To put the debt into the hands of debt collection agency

To take the customer to court for payment

To suspend any further sales to the customer by placing the customer on a stop list until payment is received

An example of a typical stop list letter is given below:

Date:

Dear Sir/Madam,

**Account number: XXXXXXXX**

Further to our invoices detailed below, and our previous correspondence I do not appear to have received payment. I trust that this is an oversight and that you will arrange for immediate payment to be made. If you are withholding payment for any reason, please could you contact me urgently and I will be pleased to assist you

| **Invoices No** | **Terms** | **Due date** | **Amount** |
|---|---|---|---|
| **(FRW)** | …… | ………… | ……….. |

I regret that unless payment is received within the next seven days I will have no alternative but to stop any further sales on credit to you until the amount owing is cleared in full. If you have already made payment, please advise me and accept my apology for having troubled you. Please note that if we are forced to take a legal action you may become liable for the costs of such action which, if successful, may affect your future credit rating.

Yours sincerely,

Controller

- **Setting Up a Stop List**

When all other avenues for encouraging payment according to the terms have been exhausted, and it is sure that this is a long term issue, it is time to set up a stop list.

A stop list is effectively a blacklist of clients who are no longer to be supplied in lieu of missed, late or incomplete payments. It is crucial that a stop list is shared effectively with everyone in the organization, so everyone knows who is on the list and to ensure they don't provide any further goods or services whilst payment remains outstanding.

It is important to decide the terms of your stop list, and again share them with all members of staff. The most common use is to record a list of customers who are overdue on payment and whose access to new goods or services is restricted, until such time as all outstanding payments have been made in full.

- **External means of debt collection**

Customers with poor payment behavior and cases where collecting outstanding receivables proves particularly difficult, can cost incalculable amounts of both time and money. At times, the burdens they place on a company's receivables accounting become completely disproportionate to the debts in question. In such situations, it is advisable to outsource debt recovery to external service providers, who handle these specialized commercial and legal tasks in their function as governmentally regulated legal-services professionals.

In particularly difficult cases, collection services providers enforce claims by exerting the necessary pressure. As experts in collecting third-party claims in a businesslike manner, these companies have access to the instruments necessary for successful debt recovery.

### *7.2.2. Methods of debts collection*

With good credit management and control procedures in place, money will normally be received from credit customers. Sometimes encouragement such as reminder letters or telephone calls will be needed but payment should eventually be received.

There are specific methods that a business can use to minimize the possibility of ether the loss of the debt or resorting to legal procedures. They include among others:

a) Liaising with debt collection agencies and solicitors
b) Factoring
c) Invoice discounting
d) Debt insurance
e) Settlement discounts

**a) Debt collection agencies and solicitors**

Debt collection agencies or credit collection agencies are commercial organizations that specialize in the collection of debts. Most collection agencies are paid by results and charge a percentage of the debts collected for the business, although some require an advance subscription do their services.

The use of appropriate methods for collecting the debts may include:

Collection by telephone and letter

Collection by personal visits

Negotiation of a payment plan with the customer

They are effective methods of collecting debts that are providing difficult to obtain in the normal course of trading. As collection agencies tend to be viewed as a normal business service they are unlikely to have an adverse impact on the relationship between the business and its customers. However, the collection agency does, of course, charge a fee for its services.

Solicitor services can be utilized in the initial stages of the debt collection process by sending a 'Solicitor letter' requesting payment. This can be a cost-effective method of collection as many customers will settle on receipt to avoid further legal action. If the customers refuse to pay, solicitors will have the knowledge and experience to start the formal legal remedies that are available.

**b) Factoring services**

**Factoring** is a financing service provided by specialist financial institution, often subsidiaries of major banks, whereby money can be advanced to a company on the basis of the security of their trade receivables. A factor normally provides 3 main services and a company can take advantage of some or all of these:

Provision of finance

Administration of receivables ledger

Insurance against irrecoverable debts

### Provision of finance factor

When sales on credit are made by a business, there will be a period of time elapsing before the money for those sales is received from the business's credit customers. Many businesses may find that they require the cash sooner than the customers are prepared to pay, for example to pay suppliers or reduce an overdraft. This is particularly the case for fast growing companies.

The factor advances a certain percentage of the books value of the trade receivables, often about 80% as an immediate payment. The trade receivables are then collected by the factor and the remaining 20%, less a fee, handed over to the business when the amounts are received by the factor.

There is obviously a charge for this service and this will tend to be in two parts:

A service charge or commission charge

An interest charge on amounts outstanding

One further hidden costs of factoring can be a loss of customer confidence or goodwill, as customer will be aware that the business has factored its trade receivables; this may have a negative impact on future relations. Many customers will view the use of a factor as indication that a business is in financial difficulty, despite the increasing use if factoring within business.

**Administration of the receivables ledger by a factor**

Many factoring arrangements go further than simply providing finance on the security of the trade receivables; they will take over the entire administration of the receivables ledger. This will tend to include the following:

Assessment of credit status

Sending out sales invoices and receipts

Sending out statements

Sending out reminders

The benefit to the business is not only a cost-saving from not having to run its own receivables ledger but also the expertise of the factor in this area. A fee will, of course, be charged for this service-normally based upon on a percentage of invoices.

**c) Insurance against irrecoverable debts**

**Without recourse factoring,** if a factor has total control over all aspects of credit management of the receivables ledger then they may be prepared to offer a without recourse factoring arrangement**.**

This means that the factor has no right to claim against the business if a customer doesn't pay. Effectively, the factor is bearing the risk of any irrecoverable debts and, naturally, will charge a higher fee for accepting this additional risk.

**With recourse factoring-**In other circumstances the business will retain the risk of irrecoverable debts and this is known as with recourse factoring.

**d) Invoice discounting**

**Invoice discounting-** One of the costs of factoring is the potential loss of customer goodwill if it is known that the business is using factor to collect its debts. The reason for this is that some customers may infer cash flow problems from the use of a factor, which may not give them confidence to continue trading with the business.

An alternative therefore, is invoice discounting which is a service related to factoring. Invoice discounting is where the debts of a business are purchased by the provider of the service at a discount to their face value. The discounter simply provides cash up front to the business at the discounted amount, rather than have any involvement in the business receivable ledger.

Under a confidential invoice discounting agreement the business is still responsible for collecting its own debts. As a result, invoice discounting is often chosen by the businesses which wish to retain control of their own receivables ledger.

The cost to the business is the discount at which the trade receivables are purchased. Invoice discounting can be used for a portion of the trade receivables only and is therefore other used for a short-term or one-off exceptional cash requirement

## Application activity 7.2

**Questions**

Briefly give and explain a typical debt collection process

Enumerate methods of debt collections

After explaining what is Factoring list 3 Factoring services

## 7.3. Preparation of performance report and recommendation to management

Questions:

1. How many persons do you see in this image?

2. After observing this image, what is the role of each person?

3.What this picture talk about?

### *7.3.1. Internal reporting and write-offs*

A credit report is a statement that has information about the credit activity and current credit situation such as credit paying history and the status of the credit accounts.

Lenders also use the credit report to determine whether customer continue to meet the terms of an existing credit account. Credit reports often contain the Personal information and Your Credit accounts

- ✓ **A credit write-off and why it is necessary**

A write-off is an accounting term for the formal recognition in the financial statements that a borrower's asset no longer has value. Usually, credits are written off when they are 100 percent provisioned and there are no realistic prospects of recovery. These credits are transferred to the off-balance sheet records. Therefore, a write off is mandated when an account receivable cannot be collected.

Once a view is formed that a receivable may be potentially doubtful, or perhaps even definitely unrecoverable, steps should be taken to report the manner internally, and to provide for the doubtful debt, or intended write it off entirely**.**

**Illustration**

A company has a receivable outstanding amounting to Frw 2.4 million including VAT at 18%. The company is able to claim 90% of unpaid debts under their debt insurance policy. Assume the VAT element can be claimed from the tax authorities.

Calculate the amount that can be claimed under the policy and any amount to be written off as irrecoverable.

Answer:

(2.4 million/1.18*0.18)=366,102 VAT

The net value of the invoice is 2,033,898.

To be claimed under credit insurance:

(Frw 2,400,000 - Frw 366,102)*90% * 2.033, 898= Frw 1,830,508

To be written off as irrecoverable: Frw 2,033,898 - Frw 1,830,508 = Frw 203,390

### *7.3.2. Presentation of Internal and external recommendation*

When presenting information to management, it is important to show any findings or conclusions clearly. When looking at finance costs, such as the settlement discount cost which is offered to customers to encourage early payment, it is good practice to show the costs and benefits in implementing such a policy. For example, the benefit of the discount will hopefully result in a better liquidity position after taking into account the cost of the discount.

## Application activity 7.3

**Questions**

What do you understand about a credit report?

When an account receivable cannot be collected what will be the last step in credit collection?

## Skills Lab 7

Student will visit a company selling goods and services on credit and ask questions related to the credit collection such as; the procedure or the process of credit offering and credit collection.

## End of unit assessment 7

**Question :**

**What do you understand about Irrecoverable and doubtful debts?**

**In debt collection process it is advised to use telephone call when you are collecting debts from customers, what are elements a particular attention should be given to?**

**After explaining a reminder letter, explain when a final reminder letter should be used in debt collection process!**

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