Advanced Bank Management (For CAIIB Examination)

The content of this book has been developed keeping in view courseware for the First paper of Advanced Bank Management of CAIIB.

An attempt has been made to cover fully the syllabus prescribed for each module/subject and the presentation of topics may not always be in the same sequence as given in the syllabus. Candidates are also expected to take note of all the latest developments relating to the subjects covered in the syllabus by referring to RBI circulars, financial papers, economic journals, latest books and publications in the subjects concerned.

Although due care has been taken in publishing this study material, yet the possibility of errors, omissions and/or discrepancies cannot be ruled out.

We welcome suggestion for improving the book and its contents. You may write back to us at admin@jaiibcaiib.co.in

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Dedicated to the thought
"Jodi Tor Dak Shune Keu Na Ashe Tobe Ekla Chalo Re"

Module A
Economic Analysis

Unit 1- Fundamentals of Economics,Microeconomics,Macroeconomics and Types of Economies

Adam smith was father of modern economics. In his legendary book *An Enquiry into the Nature and Causes of wealth* (published 1776) he defined economics as study of wealth**.**

Prof Alfred Marshall defined it as "Economics is a study of mankind in the ordinary business of life." According to him wealth is the means to welfare. His definition came to be known as *welfare definition.*

Lionel Robins said "Economics is the science which studies human behavior as a relationship between ends and scarce means which have alternative uses. Important points (i) Man has unlimited wants (ii) the means to satisfy these wants are limited. (iii) Even these limited means have alternative resources (iv) Man has to make a choice. His definition is known as *scarcity definition*.

Microeconomics: Branch of economics which studies individual household and firms

Macroeconomics: Concept given in John Maynard Keynes book *General Theory of Employment, Interest and Money.* It deals with the performance, structure, behavior of national or regional economy. It studies GDP, unemployment rates and price indices.

Three major problems of economics: (i) What to produce (ii) How to produce (iii) For whom to produce.

How to solve these problems depend upon the type of economy which are given as below:

Market Economy: Individuals and private firms decide about what to produce and consume. Firm produce commodities which yield highest profit by techniques which are least costly. Extreme case of market economy is "laissez-faire economy"

Command Economy: Where Government decides what to produce for whom to produce and how to produce.

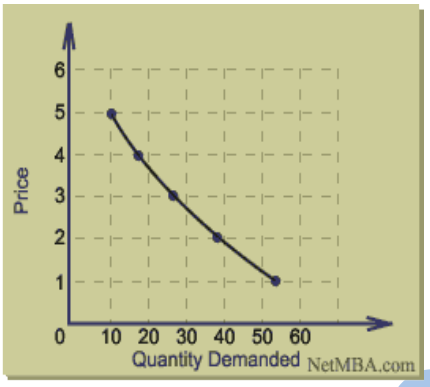
Mixed economy: Mixture of both market and command economy**.**

The demand curve is the graph depicting the relationship between the price of a certain commodity and the amount of it that consumers are willing and able to purchase at that given price. Presenting the data in tabular form would result in a demand schedule, an example of which is shown below.

Demand Schedule

Price	Quantity Demanded
5	10
4	17
3	26
2	38
1	53

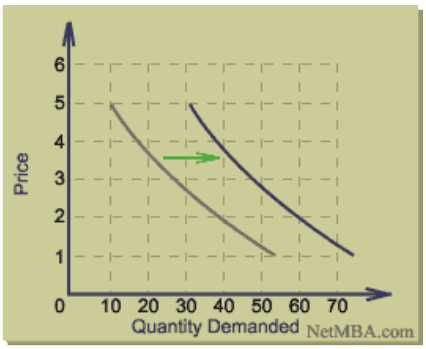
Demand Curve



By convention, the demand curve displays quantity demanded as the independent variable (the x axis) and price as the dependent variable (the y axis). The *law of demand* states that quantity demanded moves in the opposite direction of price (all other things held constant), and this effect is observed in the downward slope of the demand curve.

When there is a change in an influencing factor other than price, there may be a shift in the demand curve to the left or to the right, as the quantity demanded increases or decreases at a given price. For example, if there is a positive news report about the product, the quantity demanded at each price may increase, as demonstrated by the demand curve shifting to the right:

Demand Curve Shift



A number of factors may influence the demand for a product, and changes in one or more of those factors may cause a shift in the demand curve. Some of these demand-shifting factors are:

- Customer preference
- Prices of related goods
    - Complements - an increase in the price of a complement reduces demand, shifting the demand curve to the left.
    - Substitutes - an increase in the price of a substitute product increases demand, shifting the demand curve to the right.
- Income - an increase in income shifts the demand curve of normal goods to the right.
- Number of potential buyers - an increase in population or market size shifts the demand curve to the right.
- Expectations of a price change - a news report predicting higher prices in the future can increase the current demand as customer

The Supply Curve

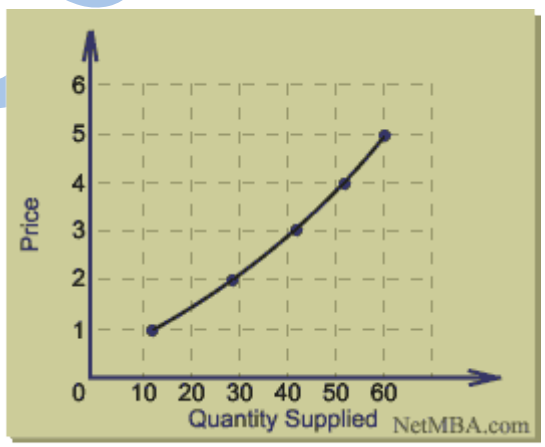
Price usually is a major determinant in the quantity supplied. For a particular good with all other factors held constant, a table can be constructed of price and quantity supplied based on observed data. Such a table is called a supply schedule, as shown in the following example:

Supply Schedule

Price	Quantity Supplied
1	12
2	28
3	42
4	52
5	60

By graphing this data, one obtains the **supply curve** as shown below:

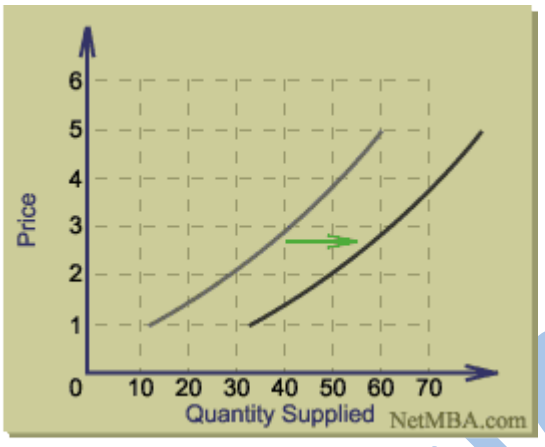
Supply Curve



As with the demand curve, the convention of the supply curve is to display quantity supplied on the x-axis as the independent variable and price on the y-axis as the dependent variable.The *law of supply* states that the higher the price, the larger the quantity supplied, all other things constant. The law of supply is demonstrated by the upward slope of the supply curve.A change in price results in a change in quantity supplied and represents movement along the supply curve.

Shifts in the Supply Curve : While changes in price result in movement along the supply curve, changes in other relevant factors cause a shift in supply, that is, a shift of the supply curve to the left or right. Such a shift results in a change in quantity supplied for a given price level. If the change causes an increase in the quantity supplied at each price, the supply curve would shift to the right:

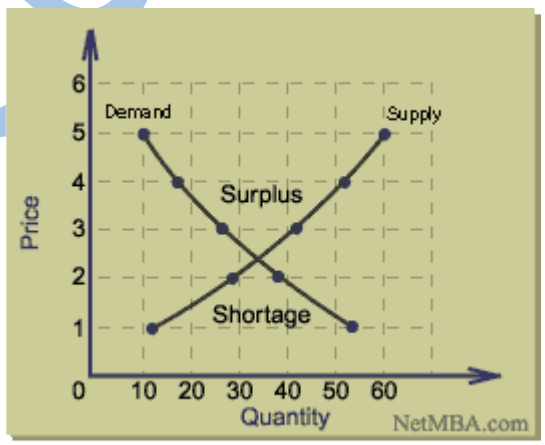
Supply Curve Shift



There are several factors that may cause a shift in a good's supply curve. Some supply-shifting factors include:

- Prices of other goods - the supply of one good may decrease if the price of another good increases, causing producers to reallocate resources to produce larger quantities of the more profitable good.
- Number of sellers - more sellers result in more supply, shifting the supply curve to the right.
- Prices of relevant inputs - if the cost of resources used to produce a good increases, sellers will be less inclined to supply the same quantity at a given price, and the supply curve will shift to the left.
- Technology - technological advances that increase production efficiency shift the supply curve to the right.
- Expectations - if sellers expect prices to increase, they may decrease the quantity currently supplied at a given price in order to be able to supply more when the price increases, resulting in a supply curve shift to the left.

Supply and Demand



On this graph, there is only one price level at which quantity demanded is in balance with the quantity supplied, and that price is the point at which the supply and demand curves cross.

The law of supply and demand predicts that the price level will move toward the point that equalizes quantities supplied and demanded. To understand why this must be the equilibrium point, consider the situation in which the price is higher than the price at which the curves cross. In such a case, the quantity

supplied would be greater than the quantity demanded and there would be a surplus of the good on the market. Specifically, from the graph we see that if the unit price is 3 (assuming relative pricing in dollars), the quantities supplied and demanded would be:

Quantity Supplied = 42 units, Quantity Demanded = 26 units

Therefore there would be a surplus of 42 - 26 = 16 units. The sellers then would lower their price in order to sell the surplus.Suppose the sellers lowered their prices below the equilibrium point. In this case, the quantity demanded would increase beyond what was supplied, and there would be a shortage. If the price is held at 2, the quantity supplied then would be: Quantity Supplied = 28 units, Quantity Demanded = 38 unitsTherefore, there would be a shortage of 38 - 28 = 10 units. The sellers then would increase their prices to earn more money.

The equilibrium point must be the point at which quantity supplied and quantity demanded are in balance, which is where the supply and demand curves cross. From the graph above, one sees that this is at a price of approximately 2.40 and a quantity of 34 units.

Numerical Module A

Q1. **Calculate broad money M3**

Currency with public- Rs 100000
Demand deposit with banking sys-Rs 200000
Other deposit with RBI- Rs 200000
Savings deposit of post office savings banks- Rs40000
Time deposits with banking sys-Rs 200000
All deposit with post office banking sys in cluding Rs 40000 of NSC total-Rs 100000

a) Rs 500000
b) Rs 700000
c) Rs 800000
d) Rs 900000

Ans: b

Solution- M3 =m1+time deposit with banking system
So M1=currency with public+ demand deposit with the bankingsys+other deposits with rbi
M1=100000+200000+200000
M1=500000
Than m3=500000+200000
Ans m3=700000

Ques . data of abc country….

Recoveries of loan & advance	Rs 1000
Recoveries of short term loans and advances from states and loans to govt servants	Rs300
Misc capital receipt	Rs 200
Market loans	Rs 300
Short term borrowings	Rs 500
External assistance (Net)	Rs 200
Securities issued against small savings	Rs 200
State provident fund	Rs 100
Other receipts (Net)	Rs 400
Total non tax revenue	Rs 3000
Net tax revenue	Rs 1000
Draw down cash balance	Rs 2000

@total revenue receipt=net tax revenue+Total non tax revenue

6 a) calculate capital receipt……

A) Rs 1200
B) Rs 900
C) Rs 2600
D) Rs 1700

Ans: This is sample preview. All pages not displayed

Module B
Business Mathematics

Chapter 12- Time value of money

If you are offered the choice between having Rs 10,000 today and having Rs 10,000 at a future date, you will usually prefer to havè Rs 10,000 now. Similarly, if the choice is between paying Rs10,000 now or paying the samè Rs 10,000 at a future date, you will usually prefer to pay Rs 10,000 later. It is simple common sense. In the first case by accepting Rs 10,000 early, you can simply put the money in the bank and earn some interest. Similarly in the second case by deferring the payment, you can earn interest by keeping the money in the bank. Therefore the time gap allowed helps us to make some money. This incremental gain is time value of money. Now let me ask a question, if the bank interest was zero (which is generally not the case), what would be the time value of money? As you rightly guessed it would also be zero. As we understood above, the interest plays an important role in determining the time value of money.

Compound Interest

If interest is calculated on original principal amount it is simple interest. When interest is calculated on total of previously earned interest and the original principal it compound interest. Naturally, the amount calculated on the basis of compound interest rate is higher than when calculated with the simple rate.

$$A = P\left(1 + \frac{r}{n}\right)^{nt}$$

Question 1. An amount of $1,500.00 is deposited in a bank paying an annual interest rate of 4.3%, compounded *quarterly*. What is the balance after 6 years?

$$A = 1500\left(1 + \frac{0.043}{4}\right)^{4(6)} \approx \$1{,}938.84$$

Question 2: If you deposit Rs 4000 into an account paying 6% annual interest compounded yearly, how much money will be in the account after 5 years?

Question 3How much money would you need to deposit todayat 9% annual interest compounded yearly to have Rs 12000 in the account after 6 years?

ANNUITY

An annuity is a series of regular, equally spaced, payments over a defined period of time (often called the term) at a constant rate of interest. Example of annuities includes: regular payments into a RD account or superannuation fund, loan payments.

Annuities can be of two types

(i) An **Ordinary annuity** :is an annuity where the regular payment is made at the end of the successive time periods. For eg Ram invests Rs 1 lakh at the end of every year for 6 years is an example of ordinary annuity. Sneha invest Rs 5000 every month in her RD account for 2 years is an example of ordinary annuity. What we need to remember is that payment/deposit need to be made at the end of the period. That period can be a week, a month, a quarter or year.

Let's take an example. Ram invests Rs 1lakh at the end of every year what amount will he receive after 6 years if rate of interest is 5%. Here what we are trying to find is that how much money will Ram get after 6 years. For first year interest will be received on Rs 1lakh in next year on this compounded sum and so on. To calculate this the formula is :

$$FV_a = P\left[\frac{(1+i)^n - 1}{i}\right]$$

Whereas:
P = Payment
i = rate
n = number of periods

So in above question answer would be : FV = 100000{ $\frac{(1.05)^6 - 1}{0.05}$ } = $\frac{(1.34 - 1) * 100000}{0.05}$ = Rs 6,80,000

Where Rs 80,000 represents the interest earned by the Ram on deposit.

Questions 4 : Shyama is planning to invest Rs 6000 every year for next 5 years in a RD. If her bank is paying 8% rate of interest how much money will shyama have at the end of 5th year.

Question 5. Prerna plans to buy her own house which she estimates will cost around Rs 40 lakh at the end of 4 year. How much money she should save every year if rate of interest is 10%

Question 6: Subodh saves Rs 1,00,000 each year which he invests at the end of the year in a chit fund scheme. If interest received is 7 % how much money can subodh expect to get after 7 years.

The questions given above tell us how much money we will get in future if we invest equal sum of amount regularly. The questions can be modified a little and we can ask what is the present value of an annuity. For eg Ram receives Rs 5000 every year for 10 years. What is the value of these cash flows at present if rate of interest is 10 %. We know that Rs 5000 are received every year son 10 years we will get Rs 50,000. But these 50,000 are received over a period of 10 years, what is their value today is the question

Let's see how to solve this using formula

PV(ordinaryAnnuity) =

$$P\left[\frac{1-(1+r)^{-n}}{r}\right]$$

$P = Periodic\ Payment$
$r = rate\ per\ period$
$n = number\ of\ periods$

In the above example P= 5000 , r= 10% t= 10 yrs

PV= $\frac{5000\ \{1-(1.10)^{-10}\}}{0.10}$ = $\frac{5000}{0.10} * \left(1 - \frac{1}{(1.10)^{10}}\right)$

= $\frac{5000 * 1.59}{2.59 * 0.10}$ = Rs 30,695 Thus The 50,000 received over 10 years will be worth Rs 30,695 today

Future Value of Annuity Due

Annuity Due: Payments are required at the beginning of each period. Rent is an example of annuity due. You are usually required to pay rent when you first move in at the beginning of the month, and then on the first of each month thereafter.

What is different here from ordinary annuity is that payment is made at the beginning. For example you invest one lakh rupee at the end of every year for 6 year, rate of interest being 5 %. What is the amount you will receive at the end of 5 years?

Formula for calculating FV is

$$FV_{\text{Annuity Due}} = C * \left[\frac{(1+i)^n - 1}{i}\right] * (1+i)$$

FV = 1,00,000 * [$\frac{(1.05)^6 - 1}{0.05}$] (1.05) = $\frac{1,00,000 * (1.34-1) * 1.05}{0.05}$ = Rs 7,14,000

Now compare it with the amount you received in ordinary annuity. It was Rs 6,18,000, in annuity due it is Rs 7,14,000,since period on which you earn interest is higher amount received will be higher.

Questions 7 Shobhit pays Rs 10, 000 annual rent at the beginning of every year for 4 years. If rate of interest is 8 %, what is the value of rent paid by Shobhit in 4 years.

Question 8 Your mother is planning to retire this year. Her firm has offered her a lump sum retirement payment of $50,000 or a $6,000 lifetime annuity due-whichever she chooses. Your mother is in reasonably good health and expects to live for at least 15 more years. Which option should she choose, assuming that an 8 percent annual interest rate is appropriate to evaluate the annuity?

Question 9 A loan of Rs 50,000 is due 10 years from today. The borrower wants to make annual payments at the beginning of each year into a sinking fund that will earn interest at an annual rate of 10 percent. What will the annual payments have to be?

Present value of Annuity Due

Ram receives Rs 5000 every year in the beginning of the year for 10 years. What is the value of these cash flows at present if rate of interest is 10 %.

$$PV_{\text{Annuity Due}} = C * \left[\frac{1-(1+i)^{-n}}{i}\right] * (1+i)$$

PV= 5000 * [$\frac{1-(1.10)^{-10}}{0.10}$] (1.10) = $\frac{5000 * 1.59 * 1.10}{0.10 * 2.59}$

= Rs 33764. Thus we see when it was annuity due amount to be received was Rs 30,695 and in annuity due amount is Rs 33764.

Unit 13- Sampling Methods

Population means an aggregate of items to be studied for investigation. Population can be finite or infinite. It will not be always possible to study the whole population due to the massiveness of resources which will be involved. Thus a sample is chosen from the entire population. By studying this sample, behaviour & characteristic of the population is predicted. For example during elections exit polls are conducted based on which results for entire elections are predicted.

There are two methods of calculating sample

(i) **Random or probability sampling**: where each item has equal probability of being selected

(ii) **Non Random or judgment sampling:** where identification is done on personal knowledge or opinion of the investigator.

RANDOM SAMPLING

There are four main types of random sampling.

1. **Simple Random Sampling** : where samples are selected by a method that permit each possible sample to have an equal probability of being picked up and each item in the entire population has an equal chance of being included in the sample.

2. Systematic Sampling:

3. **Stratified Sampling** : To use stratified sampling, we divide the population into relatively homogenous groups, called strata. Stratified sampling is appropriate when the population is already divided into groups of different sizes and we wish to acknowledge this fact. Example - middle class, upper class, lower middle class, etc. or according to age, race, sex or any other stratification

4. **Cluster Sampling**: In cluster sampHng, we divide the population into groups or clusters and then select a random sample of these clusters. We assume that these individual clusters are representative of the population as a whole.

Comparison of Stratified and Cluster Sampling

With both stratified and cluster sampling, the population is divided into well-defined groups. We use stratified sampling when each group has small variation within itself but there is wide variation between the groups. We use cluster sampling in the opposite case - when there is considerable variation within each group but the groups are essentially similar to each other.

Concept of deviation and standard error

Standard Deviation (often abbreviated as "Std Dev" or "SD") provides an indication of how far the individual responses to a question vary or "deviate" from the mean. **SD tells the researcher how spread out the responses are** -- are they concentrated around the mean, or scattered far & wide?

Let's say you've asked respondents to rate your product on a series of attributes on a 5-point scale. The mean for a group of ten respondents (labeled 'A' through 'J' below) for "good value for the money" was 3.2 with a SD of 0.4 and the mean for "product reliability" was 3.4 with a SD of 2.1. At first glance (looking at the means only) it would seem that reliability was rated higher than value. But the higher SD for reliability could indicate (as shown in the distribution below) that responses were very polarized, where most respondents had no reliability issues (rated the attribute a "5"), but a smaller, but important segment of

respondents, had a reliability problem and rated the attribute "1". Looking at the mean alone tells only part of the story, yet all too often, this is what researchers focus on. The distribution of responses is important to consider and the SD provides a valuable descriptive measure of this.

Respondent:	Good Value for the Money:	Product Reliability:
A	3	1
B	3	1
C	3	1
D	3	1
E	4	5
F	4	5
G	3	5
H	3	5
I	3	5
J	3	5
Mean	3.2	3.4
Std Dev	0.4	2.1

standard deviation equation for an entire population:

$$\sigma = \sqrt{\frac{\sum(x - \bar{x})^2}{N}}$$

Calculate the standard deviation from the following data. 14, 22, 9, 15, 20, 17, 12, 11

Solution:

Deviations from actual mean.

Values (X)	$\bar{X} - X$	$(\bar{X} - X)^2$
14	-1	1
22	7	49
9	-6	36
15	0	0
20	5	25
17	2	4
12	-3	9
11	-4	16
120		140

$$\bar{X} = \frac{120}{8} = 15$$

$$\sigma = \sqrt{\frac{\Sigma (x - \bar{x})^2}{}}$$

$$= \sqrt{\frac{140}{8}}$$

$$= \sqrt{17.5} = 4.18$$

Standard Error

The Standard Error ("Std Err" or "SE"), is an indication of the *reliability* of the mean. A small SE is an indication that the sample mean is a more accurate reflection of the actual population mean. Most survey research involves drawing a sample from a population. We then make inferences about the population from the results obtained from that sample. If a second sample was drawn, the results probably won't exactly match the first sample. If the mean value for a rating attribute was 3.2 for one sample, it might be 3.4 for a second sample of the same size. If we were to draw an infinite number of samples (of equal size) from our population, we could display the observed means as a distribution. We could then calculate an average of all of our sample means. This mean would equal the true population mean. We can also calculate the Standard Deviation of the distribution of sample means. The Standard Deviation of this distribution of sample means is the Standard Error of each individual sample mean. Put another way, Standard Error is the Standard Deviation of the population mean.

Sample:	Mean
1st	3.2
2nd	3.4
3rd	3.3
4th	3.2
5th	3.1
Mean	3.3
Std Dev	0.13

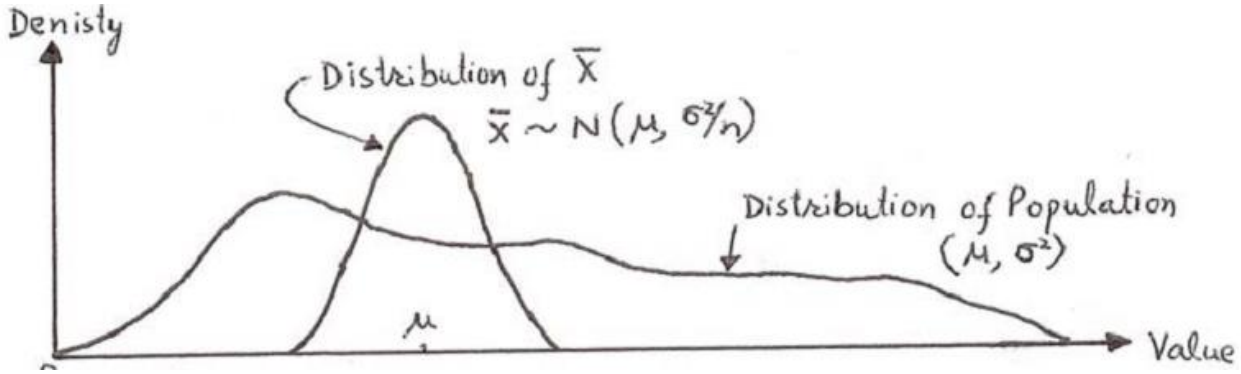
Central Limit theorem

Central limit theorem is perhaps the most important theorem in all of statistical inference. It assures us that the sampling distribution of the mean approaches normal as the sample size increases.

1. Actually, a sample does not have to be very large for the sampling distribution of the mean to approach normal.

2. Statisticians use the normal distribudon as an approximation to the sampling distribution whenever the sample size is at least 30, but the sampling distribution of the mean can be nearly normal with samples of even half the size.

3. The significance of the central limit theorem is that it permits us to use sample statistics to make inferences about population parameters without knowing anything about the shape of the frequency distribution of that population



The expected value of X is μ

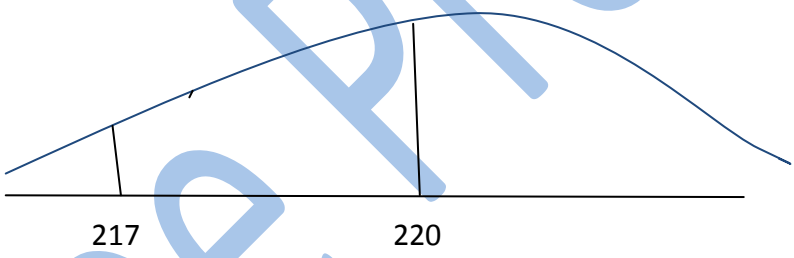
The standard deviation of $\overline{X}$ is $\sigma/\sqrt{n}$

Question 1. ABC Tool Company makes Laser XR; a special engine used in speedboats. The company's engineers believe that the engine delivers an average power of 220 horsepower, and that the standard deviation of power delivered is 15 horsepower. A potential buyer intends to sample 100 engines (each engine to be run a single time). What is the probability that the sample mean X will be less than 217 horsepower?

Solution 1 **Population mean** **μ = 220 horsepower**

Population standard deviation **σ = 15 horsepower**

Sample size **n = 100**

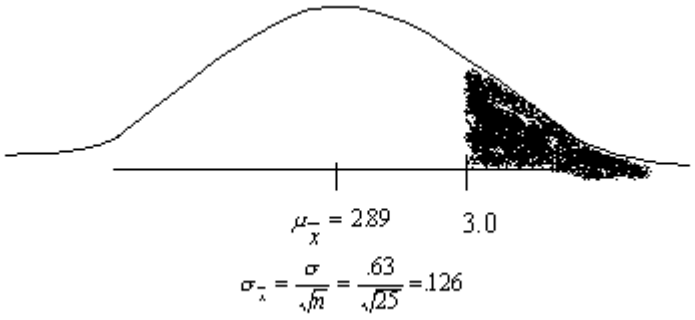


Lets apply central limit theorem. What we know is that population mean is 220. From this chart we understand that 220 is the middle value. What we need to find is how many values are less than 217. Ie area left to the number 217For this we need to find z value.

$$Z = \frac{\overline{X} - \mu}{\sigma/\sqrt{n}}$$

$Z = \frac{217 - 220}{15/\sqrt{100}}$ = -3/1.5 = -2 , We need to find the value of 2 from z table which will come to 0.47725. Now this 0.47725 represents the probability that value of sample mean will be between 217 and 220. Now to find the value that mean will be less than 217 we need to subtract 0.47725 from 0.50. 220 is the midpoint. It implies area from left to 220 is 0.50 and area from 220 to right is 0.50 (total probability being 1). Thus 0.47725 means area between 217 to 220 is 0.47725. To find area less than 217 we subtract 0.47725 from 0.50 and answer would be 0.0228.

Question 2 : The average GPA at a particular school is μ=2.89 with a standard deviation σ=0.63. A random sample of 25 students is collected. Find the probability that the average GPA for this sample is greater than 3.0.



The average is $\mu_{\bar{x}} = 2.89$ standard error is $\sigma_{\bar{x}} = \frac{\sigma}{\sqrt{n}} = \frac{.63}{\sqrt{25}} = .126$

The z-score is $z = \frac{3 - 2.89}{.126} = \frac{.11}{.126} = .87$. Looking up this z-score in the normal curve table yields a probability of .3078. The final answer is 0.5-.3078=.1922.

Question 3: An unknown distribution has a mean of 90 and a standard deviation of 15. Samples of size n = 25 are drawn randomly from the population. Find the probability that the sample mean is between 85 and 92.

Question 4: The time it takes students in a cooking school to learn to prepare seafood gumbo is a random variable with a normal distribution where the average is 3.2 hours with a standard deviation of 1.8 hours.

i. Find the probability that the average time it will take a class of 36 students to learn to prepare seafood gumbo is less than 3.4 hours.

ii. Find the probability that it takes one student between 3 and 4 hours to learn to prepare seafood gumbo

Question 5: The length of time, in hours, it takes an "over 40" group of people to play one soccer match is normally distributed with a mean of 2 hours and a standard deviation of 0.5 hours. A sample of size n = 50 is drawn randomly from the population.Find the probability that the sample mean is between 1.8 hours and 2.3 hours.

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Module C
Human Resource Management

Unit 20- Fundamentals of Human Resources Management

There are four factors of production (i) Land (ii) Capital (iii) Entrepreneur (iv) Labour. Of all these four factors dealing with labour is the most complex as it involves not only quantitative but also qualitative factors.

To understand the problem of people management we need to first understand an organization. Organization means coming together of people in order to attain a common goal or purpose. To achieve this common goal, activities must be organized in the most systematic and analytical way and individual's relation to that given activity must be understood.

Industrial revolution, which started in 1760, made production of goods on mass level possible. It meant that more factories were set up; more people were employed to produce goods and from here labour became an important factor of production and thus started the process of people management. Robert Owen (1771-1858) called them "vital machine" while Charles Babbage (1792-1871) advocated division of labour by breaking the task into simple units which was thus assigned to different individuals as per there capacity.

However in initial years it was assumed that people will simply work for which they will be paid. Qualitative factors like job satisfaction, expectations, aspirations, interactions, social prestige were ignored and were taken up later in the whole process of human resource management.

As mentioned above, labour is an important factor of production and thus managing it was crucial for proper functioning of business. From there the process of personnel management started which included *acquiring, training, evaluating and compensating* the employees.

HRM & HRD

As understanding of human behavior developed it was felt that human beings develop a stake in the enterprise which they work and hence their motivation, development and growth is critical factor in the development and growth of the organization. HRM is umbrella for all systems related to people management and HRD is subsystem of HRM.

HRM thus constitutes the following:

(i) **Administration**: which involves acquisition, evaluation, promotion, salary and long term benefits
(ii) **Maintenance**:it involves labour management, grievance and discipline management.
(iii) **HRD**: Includes developmental systems such as induction and socialization of individuals, development and growth, performance appraisal and counselling and career planning.

Role of HR Professionals:

(i) **Supportive Role**: Strengthen of operating and executive level
(ii) **Develop systems** that deal with people and research new organizational dynamics.
(iii) **Managerial role**: Plan future manpower, retain, motivate, planning growth of individual.
(iv) **Develop competence**: which includes technical and managerial competence.
(v) **Process role**: Create coping skills in the organization, create culture and values in the organization.

Confederation of Indian Industries developed a HR competency model which enlists 19 HR competencies a HR head must have. Nine of them are behavioural competencies, viz. drive, creativity, self-confidence, initiative,communication, team work, influence, problem solving and inter personal skills. Then there are ten functional competencies, viz. business knowledge, change management, diversity management, service orientation, execution excellence, financial perspective, building expertise, personal credibility, relationship management and strategic thinking and alignment.

Development of HR functions in India:

It started at the time of Indian Independence with the passing of Indian Factories act 1948. Labour welfare officers, who were recruitment officersandprimarily involved were managing workers. By 1950s provisions of Industrial dispute act started percolating and legal aspect was added to managing people. This meant people with specific knowledge of these laws were needed and institutes like Indian Institute of Personnel Management (IIPM) and National Institute of Labour Management (NILM) were established. In 1982 both the above institutes merged to form National Institute of Personnel Management (NIPM).

Some Indian visionaries like J.N.Tata who long back emphasized upon human resource management and instituted practices and processes in his company TISCO which were in some form or other were legislated.

Module D

Credit Management

Unit 26- Overview of Credit Management

PRINCIPLES OF CREDIT

(a) safety of funds (b) purpose (c) profitability (d) liquidity (e) security (f) risk spread

TYPES OF BORROWERS

A borrower can be:

(a) An individual (b) Sole proprietary firm (c) Partnership firm and joint ventures (d) Hindu undivided family (e) Companies (f) Statutory corporations (g) Trusts and co-operative Societies

TYPES OF CREDIT

Bank credit can be either fund-based or non fund-based. In fund-based credit, there is actual transfer of money from the bank to the borrower. In non fund based credit, there is no transfer of money, but the commitment by the bank on behalf of the client, may result in future transfer of money to the beneficiary of such a commitment.

RBI guidelines

The banks have to report their business, for public reporting purposes, based on the geographical segments, as 'domestic' and 'international'. In addition, as per RBI guidelines, banks have adopted the following business segments, for public reporting purposes, from March 31, 2008:

(a) Treasury (b) Corporate/Wholesale Banking (c) Retail Banking (d) Other Banking Business

An indicative list of items to be included under each category is as under:

(a) Treasury 'Treasury' for the purpose of Segment Reporting should include the entire investment portfolio.

(b) Retail Banking

The Retail Banking would include exposures which fulfill the following four criteria of orientation, product, granularity and low value of individual exposures for retail exposures laid down in Basel Committee on Banking Supervision document 'International Convergence of Capital Measurement and Capital Standards: A Revised Framework':

(i*) Orientation Criterion*: The exposure is to an individual person or persons or to a small business; Person under diis clause would mean any legal person capable of entering into contracts and would include but not be restricted to individual, HUF, partnership firm, trust, private limited companies, public limited companies, co-operative societies, etc. Small business is one where the total annual turnover is less than Rs. 50 crore. The turnover criterion will be linked to the average of the last three years in the case of existing entities and projected turnover in the case of new entities.

(ii) *Product Criterion*: The exposure takes the form of any of the following: revolving credits and lines of credit (including overdrafts), term loans and leases (e.g. instalment loans and leases, student and educational loans) and small business facilities and commitments.

(iii)*Granularity Criterion*: No aggregate exposure to one counterpart should exceed 0.2 per cent of the overall retail portfolio.

(iv) *Low Value of Individual Exposures*: The maximum aggregated retail exposure to one counterpart should not exceed the absolute threshold limit of Rs.5 crore.

(c) **Corporate/Wholesale Banking**

Wholesale Banking includes all advances to trusts, partnership firms, companies and statutory bodies, which are not included under 'Retail Banking'.

(d) **Other Banking Business**

'Other Banking Business' would include all other banking operations not covered under 'Treasury', 'Wholesale Banking' and 'Retail Banking' segments. It will also include all other residual operations such as para banking transactions/activities

COMPONENTS OF CREDIT MANAGEMENT

Loan Policy of the Bank

The loan policy normally contains guidelines about the following aspects:

(a) Exposure limits for single borrowers and groups

(b) Exposure limits for individual sectors like real estate, capital market, steel, cement, software etc

(c) Discretionary powers at various levels for sanctioning of credit proposals. Normally, the policy also lays down the powers of various authorities for allowing over drawings/ad-hoc limits.

(d) Appraisal

1. What is meant by Priority Sector?

Priority sector refers to those sectors of the economy which may not get timely and adequate credit in the absence of this special dispensation. Typically, these are small value loans to farmers for agriculture and allied activities, micro and small enterprises, poor people for housing, students for education and other low income groups and weaker sections.

2. What are the different categories under priority sector?

Priority Sector includes the following categories:

(i) Agriculture (ii) Micro and Small Enterprises (iii) Education (iv) Housing (v) Export Credit (vi) Others

3. What are the Targets and Sub-targets for banks under priority sector?

Categories	Domestic commercial banks / Foreign banks with 20 and above branches (As percent of ANBC or Credit Equivalent of Off-Balance Sheet Exposure, whichever is higher)	Foreign banks with less than 20 branches (As percent of ANBC or Credit Equivalent of Off-Balance Sheet Exposure, whichever is higher)
Total Priority Sector	40	32
Total agriculture	18	No specific target.
Advances to Weaker Sections	10	No specific target.

4. What constitutes 'Direct Finance' for Agricultural Purposes?

(i) Loans to individual farmers [including Self Help Groups (SHGs) or Joint Liability Groups (JLGs), i.e. groups of individual farmers] engaged in Agriculture and Allied Activities, *viz.,* dairy, fishery, animal husbandry, poultry, bee-keeping and sericulture.

(ii) Loans to corporates including farmers' producer companies of individual farmers, partnership firms and co-operatives of farmers directly engaged in Agriculture and Allied Activities, *viz.,* dairy, fishery, animal husbandry, poultry, bee-keeping and sericultureup to an aggregate limit of Rs 2 crore per borrower.

(iii) Loans to small and marginal farmers for purchase of land for agricultural purposes.

(iv) Loans to distressed farmers indebted to non-institutional lenders.

(v) Bank loans to Primary Agricultural Credit Societies (PACS), Farmers' Service Societies (FSS) and Large-sized Adivasi Multi Purpose Societies (LAMPS) ceded to or managed/ controlled by such banks for on lending to farmers for agricultural and allied activities.

5. What constitutes 'Indirect Finance' to Agriculture?

(i) If the aggregate loan limit per borrower is more than `2 crore in respect of para. (4) (ii) above, the entire loan will be treated as indirect finance to agriculture.

(ii) Loans upto Rs 5 crore to Producer Companies set up exclusively by only small and marginal farmers under Part IXA of Companies Act, 1956 for agricultural and allied activities.

(iii) Bank loans to Primary Agricultural Credit Societies (PACS), Farmers' Service Societies (FSS) and Large-sized Adivasi Multi Purpose Societies (LAMPS).

6. What constitutes Micro and Small Enterprises under priority sector?

Bank loans to Micro and Small Manufacturing and Service Enterprises, provided these units satisfy the criteria for investment in plant machinery/equipment as per MSMED Act 2006.

Manufacturing sector	
Enterprises	**Investment in plant and machinery**
Micro Enterprises	Do not exceed twenty five lakh rupees
Small Enterprises	More than twenty fivelakh rupees but does not exceed five crore rupees
Enterprises	**Investment in equipment**
Micro Enterprises	Does not exceed ten lakh rupees
Small Enterprises	More than ten lakh rupees but does not exceed two crore rupees

7. What is the loan limit for education under priority sector?

Loans to individuals for educational purposes including vocational courses upto `10 lakh for studies in India and `20 lakh for studies abroad are included under priority sector.

8. What is the limit for housing loans under priority sector?

Loans to individuals up to `25 lakh in metropolitan centres with population above ten lakh and `15 lakh in other centres for purchase/construction of a dwelling unit per family excluding loans sanctioned to bank's own employees.

9. What is included under Weaker Sections under priority sector?

Priority sector loans to the following borrowers are considered under Weaker Sections category:-

(a) Small and marginal farmers;

(b) Artisans, village and cottage industries where individual credit limits do not exceed `50,000;

(c) Beneficiaries of Swarnjayanti Gram Swarozgar Yojana (SGSY), now National Rural Livelihood Mission (NRLM);

(d) Scheduled Castes and Scheduled Tribes;

(e) Beneficiaries of Differential Rate of Interest (DRI) scheme;

(f) Beneficiaries under Swarna Jayanti Shahari Rozgar Yojana (SJSRY);

(g) Beneficiaries under the Scheme for Rehabilitation of Manual Scavengers (SRMS);

(h) Loans to Self Help Groups;

(i) Loans to distressed farmers indebted to non-institutional lenders;

(j) Loans to distressed persons other than farmers not exceeding `50,000 per borrower to prepay their debt to non-institutional lenders;

(k) Loans to individual women beneficiaries upto `50,000 per borrower;

10. What is the rate of interest for loans under priority sector?

The rate of interest on various priority sector loans will be as per RBI's directives issued from time to time, which is linked to Base Rate of banks at present. Priority sector guidelines do not lay down any preferential rate of interest for priority sector loans.

Provisioning Norms:

Sr	Category	Sector	Provision requirement
1	Standard	Agriculture & Small enterprises	0.25% of funded O/s
		Medium enterprises	0.40% of funded O/s
		Commerical Real Estate	1 % of funded O/s
		Commerical Real Estate Residential housing	0.75 % of funded O/s
		Housing Loan at teaser rates	2% during teaser rate period and o.40% after rate reset
2.	Substandard Asset	All sectors - Secured	15 % of outstanding without any allowance for ECGC and available security
		Unsecured	25 %
3.	Doubtful asset	Unsecured	100%
		Secured	Up to one year 25 One to three years 40 More than three years 100
4.	Loss asset		100%

Unit 27 Analysis of Financial statements

Format of Financial Statements:

There is no prescribed format for partnership firms or proprietorship firms. For Banking companies format of Balance sheet and P/L have been prescribed under Banking regulation act. For others, while format of balance sheet is prescribed under Companies act, no format for P/L is prescribed. Companies act specified that P/L account must show true and fair view of the state of affairs of the company and must give specific information as required by schedule –IV of companies act. Balance sheet can be made either in horizontal form or vertical form.

Horizontal Format		**Vertical Format**
Liabilities	Assets	I.Sources of Funds 1. ShareHolders' funds (a) Share Capital (b) Reserves and surplus 2. Loan Funds (a) Secured loans (b) Unsecured loans II Application of Funds 1. Fixed assets 2. Investments 3. Current assets, loans and advances Less: current liabilities & provisions Net Current assets 4. Misc Expenditures
Share Capital Reserves and surplus Secured Loans Unsecured Loans Current liabilities Provisions	Fixed assets Investments Current assets Loans and advances Misc Expenditures	

As per IT rule April- March is considered as the financial year for tax purpose. However as per companies act, this can be different, only restriction , as per companies act , is that maximum duration of the financial year can be 15 months, and can be extended upto 18 months with the permission of registrar of companies.. Every company has to prepare financial statements even if there is no activity during the accounting period or project is not completed.

In view of the needs of various uses of ratios the ratios, which can be calculated from the accounting data are classified into the following broad categories

A. Liquidity Ratio
B. Turnover Ratio
C. Solvency or Leverage ratios
D. Profitability ratio

A. LIQUIDITY RATIO

It measures the ability of the firm to meet its short-term obligations, that is capacity of the firm to pay its current liabilities as and when they fall due. Thus these ratios reflect the short-term financial solvency of a firm.

The various ratios that explains about the liquidity of the firm are

1. Current Ratio
2. Acid Test Ratio / quick ratio

1. **CURRENT RATIO**

The current ratio measures the short-term solvency of the firm. It establishes the relationship between current assets and current liabilities. It is calculated by dividing current assets by current liabilities.

Current Ratio = Current Asset / Current Liabilities

Current assets include cash and bank balances, marketable securities, inventory, and debtors, excluding provisions for bad debts and doubtful debtors, bills receivables and prepaid expenses. Current liabilities includes sundry creditors, bills payable, short- term loans, income-tax liability, accrued expenses and dividends payable.

2. **ACID TEST RATIO / QUICK RATIO**

It has been an important indicator of the firm's liquidity position and is used as a complementary ratio to the current ratio. It establishes the relationship between quick assets and current liabilities. It is calculated by dividing quick assets by the current liabilities.

Acid Test Ratio = Quick Assets / Current liabilities

Quick assets are those current assets, which can be converted into cash immediately or within reasonable short time without a loss of value. These include cash and bank balances, sundry debtors, bill's receivables and short-term marketable securities

B. TURNOVER RATIO/ Activity Ratio

Turnover ratios are also known as activity ratios or efficiency ratios with which a firm manages its current assets. The following turnover ratios can be calculated to judge the effectiveness of asset use.

1. Inventory Turnover Ratio
2. Debtor Turnover Ratio
3. Creditor Turnover Ratio
4. Asset Turnover ratio

1. **INVENTORY TURNOVER RATIO**

This ratio indicates the number of times the inventory has been converted into sales during the period. Thus it evaluates the efficiency of the firm in managing its inventory. It is calculated by dividing the cost of goods sold by average inventory.

Inventory Turnover Ratio = Cost of goods sold / Average Inventory''

Average inventory is simple average of the opening and closing balances of inventory. In certain circumstances opening balance of the inventory may not be known then closing inventory may be considered as average inventory

2. **DEBTOR TURNOVER RATIO**

This indicates the number of times average debtors have been converted into cash during a year. It is determined by dividing the net credit sales by average debtors.

Debtor Turnover Ratio = Net Credit Sales / Average Trade Debtors

Net credit sales consist of gross credit sales minus sales return. Trade debtor includes sundry debtors and bill's receivables. Average trade debtors (Opening + Closing balances / 2)

When the information about credit sales, opening and closing balances of trade debtors is not available then the ratio can be calculated by dividing total sales by closing balances of trade debtor

Debtor Turnover Ratio = Total Sales
Trade Debtors

3. **CREDITOR TURNOVER RATIO**

It indicates the number of times sundry creditors have been paid during a year. It is calculated to judge the requirements of cash for paying sundry creditors. It is calculated by dividing the net credit purchases by average creditors.

Creditor Turnover Ratio = Net Credit Purchases
Average Trade Creditor

Net credit purchases consist of gross credit purchases minus purchase return

When the information about credit purchases, opening and closing balances of trade creditors is not available then the ratio is calculated by dividing total purchases by the closing balance of trade creditors.

Creditor Turnover Ratio = Total purchases
Total Trade Creditors

4. **ASSETS TURNOVER RATIO**

The relationship between assets and sales is known as assets turnover ratio. Several assets turnover ratios can be calculated depending upon the groups of assets, which are related to sales.

a) Total asset turnover.
b) Net asset turnover
c) Fixed asset turnover
d) Current asset turnover
e) Net working capital turnover ratio

C. SOLVENCY OR LEVERAGE RATIOS

The solvency or leverage ratios throws light on the long term solvency of a firm reflecting it's ability to assure the long term creditors with regard to periodic payment of interest during the period and loan repayment of principal on maturity or in predetermined instalments at due dates. There are thus two aspects of the long-term solvency of a firm.

a. Ability to repay the principal amount when due
b. Regular payment of the interest.

The ratio is based on the relationship between borrowed funds and owner's capital it is computed from the balance sheet, the second type are calculated from the profit and loss a/c. The various solvency ratios are

1. Debt equity ratio
2. Debt to total capital ratio
3. Proprietary (Equity) ratio

4. Fixed assets to net worth ratio
5. Fixed assets to long term funds ratio
6. Debtservice(Interestcoverage)ratio

1. DEBT EQUITY RATIO

Debt equity ratio shows the relative claims of creditors (Outsiders) and owners (Interest) against the assets of the firm. Thus this ratio indicates the relative proportions of debt and equity in financing the firm's assets. It can be calculated by dividing outsider funds (Debt) by shareholder funds (Equity)

Debt equity ratio = Outsider Funds (Total Debts)
Shareholder Funds or Equity

The outsider fund includes long-term debts as well as current liabilities. The shareholder funds include equity share capital, preference share capital, reserves and surplus including accumulated profits. However fictitious assets like accumulated deferred expenses etc should be deducted from the total of these items to shareholder funds. The shareholder funds so calculated are known as net worth of the business

6. INTEREST COVERAGE RATIO

This shows the number of times the earnings of the firms are able to cover the fixed interest liability of the firm. This ratio therefore is also known as Interest coverage or time interest earned ratio. It is calculated by dividing the earnings before interest and tax (EBIT) by interest charges on loans.

Debt Service Ratio = Earnings before interest and tax (EBIT)
Interest Charges

PROFITABILITY RATIOS

The profitability ratio of the firm can be measured by calculating various profitability ratios. General two groups of profitability ratios are calculated.

a. Profitability in relation to sales.
b. Profitability in relation to investments.

Profitability in relation to sales

1. Gross profit margin or ratio
2. Net profit margin or ratio
3. Operating profit margin or ratio
4. Operating Ratio
5. Expenses Ratio

1. GROSS PROFIT MARGIN OR RATIO

It measures the relationship between gross profit and sales. It is calculated by dividing gross profit by sales.

Gross profit margin or ratio = Gross profit X 100
Net sales

Gross profit is the difference between sales and cost of goods sold.

Questions for Practise

Question 1Calculate current ratio from the following information:

	Rs.		Rs.
Stock	50,000	Cash	30,000
Debtors	40,000	Creditors	60,000
Bills Receivable	10,000	Bills Payable	40,000
Advance Tax	4,000	Bank Overdraft	4,000

Solution

Current Assets = Rs.50,000 + Rs.40,000 + Rs.10,000 + Rs.4,000 + Rs.30,000
= Rs.1,34,000
Current Liabilities = Rs.60,000 + Rs.40,000 + Rs.4,000 = Rs. 1,04,000
Current Ratio = Rs.1,34,000 : Rs.1,04,000 = 1.29 : 1.

Question 2 Calculate quick ratio from the information given in illustration 1.

Solution

Quick Assets = Current Assets – Stock – Advance Tax
Quick Assets = Rs. 1,34,000 – (Rs. 50,000 + Rs. 4,000) = Rs. 80,000
Current Liabilities = Rs. 1,04,000
Quick ratio = Quick Assets : Current Liabilities
= Rs. 80,000 : Rs. 1,04,000
= 1:.77