CHAPTER 20

TURNOVER

Objectives

At the end of this chapter, students should be able to explain turnover; state its importance and relationship of capital investment to it; calculate the average stock; rate of turnover; percentage of both gross and net profits on turnover and finally state the variations in different businesses.

20.1 Meaning of Turnover

This is the volume of sales made. Where parts of goods sold are returned to the seller, turnover would be sales less returns, i.e. net sales.

20.2 Relationship of Capital Investment to Turnover

Absolute turnover, on its own does not indicate efficiency of business operation, until the volume of turnover is related to the amount of capital invested to the business. As an illustration, consider these two business organizations.

Here although 'B' has a larger absolute turnover than A (i.e.. ₦500,000 to ₦300,000). But when viewed against the value of investment put into the business, 'B'-isless efficient than 'A' i.e. 5% B to 10% for A.

	'A'	'B'
Turnover	₦300,000	₦500,000
Capital employed	₦3,000,000	₦10,000,000
Percentage(%)		
of capital employed	$\frac{300,000}{300,0000} \times 100\%$	$\frac{500,000}{100,00000} \times 100\%$
	= 10%	= 5%

20.3 Calculating the Rate of Turnover

That is turnover / capital, i.e. percentage of turnover to capital employment is to express total turnover / sales as a percentage of capital investment. See no B above.

20.4 Calculation of Percentage of Gross Profit to Turnover

	'A'	'B'
	₦	₦
Working:- Gross profit of	100,000	120,000
Turnover as in (ii) above	300,000	
Rate of Gross profit to turnover		1,200,000

For $\dfrac{\text{Gross profit}}{\text{Turnover}} \times 100\%$ = $\dfrac{\text{Gr. profit}}{\text{Turnover}} \times 100\%$

$$\frac{\text{Gr. profit}}{\text{Turnover}} \qquad \frac{100,000}{300,000} \times 100\% \qquad \frac{120,000}{500,000} \times 100\%$$

$$= 33\tfrac{1}{3}\% \qquad\qquad = 24\%$$

Again business A is more profitable with 33% to 24% for B

20.5 Calculating Percentage of Net Profit to Turnover

This is expressed as $\dfrac{\text{Net Profit}}{\text{Turnover}} \times 100\%$

	'A'	'B'
If net profit is	₦50,000	₦95,000

Rate of Net Profit on Turnover = $\dfrac{50,000}{300,000} \times 100\%$ $\dfrac{90,000}{500,000} \times 100\%$

$$= 16\tfrac{2}{3}\% \qquad\qquad = 18\%$$

Here 'B' seems more efficient at 18% as against $16\tfrac{2}{3}\%$ for A.

It can be observed that expenses in 'B' must be relatively lower to the expenses in 'A' for the gross profit (margin) of 33…"% to have come down to 162â…"%, i.e. by almost 50% as against a reduction from gross profit to 162â…"% whereas reduction in B's rate in only 6%.

20.6 Additional Methods of Measuring Efficiency as Related to Stock

(i) *Average Stock:* This is the amount of stock that is held during an accounting period. It is arrived at by adding opening and closing stocks together and dividing by two, for instance,

Opening Stock	=	₦1,000,00
Closing Stock	=	₦500,00
Total	=	₦1,500,00

Average stock   =   ₦1.500.00 + 2 = ₦750.00

A large figure of average stock indicates that, much capital is being held in stock and it is not a sign of good performance. On the other hand, a small average stock figure is an indication of economy of capital tied to stock - it shows good performance.

(ii)   *Cost of Goods Sold:*
       It is obtained thus:

Opening Stock	₦1,000,00
Plus Purchases +	4000,00
Less closing stock -	500,00
Cost of Goods Sold =	₦4,500,00

(iii)   *Rate of Stock-turnover:* This is the number of times average stocks are turned into sales during a given period, usually one year. It is usually referred to as 'stock-turn'. The formula is: cost of sales divided by average stock.

Using the figure above = $\frac{\text{cost of sales}}{\text{average}}$ = $\frac{4,500}{750}$ times = 6 times

20.7 Variations in Turnover in Different Types of Business

It is imperative to note that a high rate of stock-turnover does not necessarily mean a high rate of profit. In fact, businesses which are reputed for their high stock-turnover rates are those noted for their small profit margins. Examples are retailers of salt, pepper, tomatoes, etc. These items being daily essentials of life are demanded many times over within a week or a month; but their profit margins are small. Alternatively, dealership in Mercedes-benz or expensive colour television sets usually record low stock-turnover rates, since a few people can afford to buy more than one in about five years. Yet, the profit margin on a single sale could be enormous.

All the same, once there is a profit margin, however small, any increase in the turnover rate is bound to increase the total amount of profit figure. We shall later go on into some measures for improving turnover rates and profit margins.

20.8 Measures for Improving Stock-Turnover Rate and Profit Margin

(i)   **By Advertising:** More advertising can be undertaken in order to bring the existence of the products and their uses more effectively to the notice of the consumers (real and potential). However, the extra costs of advertizing must be more than compensated for by the resultant increase in sales yields. If the advertisements are successful, both the stock-turnover and net profit would increase.

(ii)   **By Reducing Prices:** This is to create greater demand for the products and thus increase both stock-turnover rate and net profit. The increase in sales proceeds must be more than the loss of revenue through reduced prices, i.e., in the language of Economics, the demand for such goods must be elastic. A price reduction might not necessarily generate increase in sales because:

(a)   Some customers might regard such goods as being inferior and switch demand to more expensive goods. The economists regard this attitude as 'snobbish' appeal and such goods as 'snobbish' goods.

(b)   Some goods have no elastic demand, e.g. salt or pepper. No price reduction will generate substantial increase in demand.

(c)   Price reduction might be risky, since customers might always be expecting price reduction indefinitely.

(iii)   **By Increasing Price:** The idea is to increase proceeds from the same volume of sales, i.e., to increase the net profit. This measure might lead to a reduction rather than an increase in stock-turnover rate. Only in the case of goods demanded for their value, as reflected in their prices, are likely to lead to both an increase in rate of stock-turnover and net profit.
If total proceeds from sales would now be higher than before the price increase, then demand for such goods must have been inelastic. In adopting this measure, the prices of similar goods and substitutes must be carefully watched if demand would not be switched away to the substitute goods.

(iv)   **Marked-up Price Policy:** This is similar to price increase, the vendor of the goods would have put his own percentage of profit on top of his cost price (c.p.) e.g. 20% marked-up price on goods costing ₦100.00 would be ₦120.00

Working C.P	=	₦100.00
20% Marked-up	=	₦20.00
Marked-up rise	=	₦120.00

All the notes on the price increase above would apply.

(v)   **Cost Reduction:** This is by increasing production costs. If the benefit is passed to the customers in form of reduction selling prices, it will enhance increased stock-turnover and net profit. Even where sales prices remain the same, such reduction will have the effect of increasing net profit. Nevertheless, care must be taken to ensure that costs reduction does not adversely affect efficiency of production assets.

(vi)   **Stock Reduction:** Since much capital is often tied down on large stock, a lot of savings can be made by reduction in stock-holding. However, in periods of low prices, large stock-holding might be economical. The gains from cheaper stock purchases must be weighed against costs of capital and stock-holding, Care must be taken to ensure that stock-reduction does not lead to 'stock-out' i.e. stock shortages.

(vii)   **Reduction in Credit Facilities:** Credit control costs money, and large credits can give rise to bad debts. Hence, it is argued that a reduction in credit facilities can improve the profit margin.

It can also be argued that a reduction in credit facilities may lead to a reduction, rather than an increase in stock turnover rate, especially if competitors do not engage in credit reduction to customers. The net effect on the profit margin is, therefore, controversial.

20.9 Stock-Taking

We have seen above, the important roles of stocks, and we have just discussed how stocks can be used as measures of efficiency of operations in terms of average stocks; and from there on, using average stock as a function of rate of stock-turnover by dividing cost of average stocks. The cost of sales itself is dependent on the opening and closing stocks of the period. Hence, it can be seen clearly how important it is that stock-taking should be properly handled. Stock-taking is â€˜the physical checking of all stocks on hand with stock-records and finding out reasons for any likely discrepancies, and rectifying sameâ€™.

Methods of Stock-taking

There are three main methods:

(i)   *Annual Stock-taking:* This takes place once a year and preferably towards the end of the financial year for reasons of inclusion in the end of the year final accounts. One advantage of this method is that, the burden of stock-taking is lightened by the once-a-year only exercise. However, the obvious disadvantage is that shortages and the reasons for them will not be discovered on time. Such discrepancies become greater over a long period of time. In shops and offices where stocks are worth millions of Naira, it would be financially suicidal to take stocks only once a year.

(ii)   *Periodic Stock-taking:* This is stock-taking at very frequent intervals of about two weeks or one month. If the annual stock-taking obscures most discrepancies for long, periodic stock-taking serves to expose such anomalities more often. Its only disadvantage is that much time is spent on stock-taking. Where, much sales and production hours are lost in the process.

(iii)   *Perpetual Inventory:* This is otherwise known as a *continuous stock-taking.* The stock record are kept on a continuous basis by recording the balances on every receipt and issue of stocks. There is no need to close down for stock-taking with this method. Time is saved and any irregularities and reasons for them are identified promptly.

Generally in stock-taking, any differences should be reported to the higher officer in charge of stocks. The reasons should be investigated while preventive measure to prevent similar future occurrences should be promptly taken. After these, the correct figure should be inserted by the appropriate authority.

Stock Valuation

The stock figure quoted in any accounting or financial report is a function of valuation. Stocks read what valuation has been put on them. It is, therefore, important to state here some of the important methods of valuation. The following are some of the methods of valuation:

(i) *Cost Price:* This is a valuation based on the price paid for the goods. This has the advantage of valueing the stocks at the actual and realistic prices paid for them. However, where many goods are bought at different prices, the exercise can be cumbersome.

(ii) *Market Price:* This is the current price ruling in the market. This is advantageous since stock bears its present replacement value. The disadvantages is that in periods of changing prices, the valuation might bear no similarity to the actual prices paid for the stocks.

(iii) *Cost of Market Price:* This is considering two prices and taking the one that is lower. The idea is to take a conservative view of the stocks to avoid over-valuation, such a valuation might not be realistic to the actual prices paid for the goods. However, the inland revenue favours this method.

(iv) *Specific Prices:* This is to identify those large and expensive items with their prices and value them similarly. This method might produce some realistic valuation, but where such items were purchased in different large batches and on different dates, the job of identification could be tiring.

(v) *Average Price:* Multiply the number of items in a batch by the unit price. Add the values for all the batches constituting the stock together and divide the last figure by the total number of items constituting the stock.
     Example: Stock of a shoe retailer.

		₦ K
20/7/81	60 pairs of shoes at ₦ 10.00 per pair	600.00
25/7/81	40 pairs of shoes at ₦ 12.00 per pair	480.00
30/7/81 100	pairs of shoes at ₦ 8.00 per pair	800.00
	Total 200	1.880.00

Average Price $\frac{₦1,880.00}{200}$ = ₦9.40

One obvious disadvantage of this method is that, the average corresponds to none of the three different prices paid on the three different dates.

Summary

The following accounting ratios are explained fully in this chapter.

1. *Average stock:* Opening and closing stock Ã· 2
   It shows value of stock pile up at a given period.

2. *Cost of sales:* Opening stock + purchases - closing stock. It is the cost value of sales.

3. *Rate of stock Turnover:* Cost sales Ã· average stock. It indicates how often stock is turned to sales.

4. *Methods of improving profitability:* By advertising; price reduction; increasing price; costs reduction; marked-up; stock reduction; reduction in credit facilities.

5. *Methods of stock-takin*
   (i)   Annual - yearly

   (ii) Period - at certain intervals

   (iii) Perpetual - continuous

6. *Methods of stock valuation*

   (i)   *Cost price* - buying price at time of purchase.

   (ii) *Market price* - current ruling price.

   (iii) *Specific price* - identification of different prices with different items of businesses.

   (iv) *Average weighted price:* Each quantity of different goods multiplied by each price and the value decided by the total quality of goods.

Revision Questions

A. *Essay Questions*

1. Write short notes on the following, emphasising how each affects the profit-margin of a business.

   (a)   Cost of sales.

   (b)   Average stock.

   (c)   Rate of stock-turnover.

2. (a)   State three important methods of stock-taking.

   (b)   Give examples of the type of business for which each is appropriate.

3. Purchases were made in a building organization as follows:

	packets of nails at ₦10.00 per pack.
6/8/87 100	packets of nails at ₦12.00 per pack.
15/8/87 60	packets of nails at Nl 1.00 per pack.

The nails were issued to work as follows:

18/3/87	50 packets.
8/8/87	100 packets.
30/8/87	70 packets.

You are required to compute the cost of issues to production on

(a)
(i)   Average price

(ii)   Weighted average.

(b)   Under each valuation, you are required to show the value of stock-in-hand.

         ₦

4.	Stock Jan. 1,2001	800
	Stock 31 Dec, 2001	2,400
	Purchases	9,600
	Sales	12,300
	Expenses	1,500

From the above extract, calculate

(a)	Cost of goods sold	(3 marks)
(b)	Rate of turnover	(7 marks)
(c)	Gross Profit	(3 marks)
(d)	Netprofit	(3 marks)
(e)	Percentage of gross profit on turnover	(4 marks)

(NECO 2002)

5. The following balances were extracted from the books of OBIOMA Industries Ltd.

         ₦

Opening stock	4,000
Closing stock	20,000
Purchases	40,000

Returns Outwards	2,000
Sales	60,000
Returns Inwards	2,000

From the above information calculate

(i)	Net purchases	(2 marks)
(ii)	Net sales	(2 marks)
(iii)	Cost of goods sold	(2 marks)
(iv)	The rate of turnover	(2 marks)

Briefly explain the following

(i)	Authorized capital	(3 marks)
(ii)	Working capital	(3 marks)
(iii)	Paid-up capital	(3 marks)
(iv)	Called-up capital	(3 marks)

NECO 2003

B. Objective Questions

1. Which of the following gives the correct calculation of the stock of turnover?

A. $\dfrac{\text{Opening stock} + \text{Closing stock}}{2}$

B. Opening stock + Purchases less closing stock

C. $\dfrac{\text{Average stock}}{\text{Cost of goods sold}}$

D. $\dfrac{\text{Cost of goods sold}}{\text{Average stock}}$

(WASSCE 1999)

2. A retailer's mark-up is his
   A. net profit
   B. gross profit
   C. turnover
   D. cost price

(WASSCE 1999)

3. Which of the following is likely to have the highest rate of stock turnover?
   A. Bread
   B. Jewellery
   C. Machinery
   D. Furniture

Use the following information to answer questions 4-6.
A trader's opening stock was ₦1000. His purchases was ₦28,000. Goods returned outward ₦200 and the closing stock was ₦800.

4. What is the average stock?
   A. ₦29,000.00
   B. ₦28,000.00
   C. ₦1,000.00
   D. ₦900.00

5. Cost of goods sold is
   A. ₦30,100.00
   B. ₦27,900.00
   C. ₦28,000.00
   D. ₦1,800.00

6. What is the rate of stock turnover?
   A. 32.2 times
   B. 31.3 times
   C. 31.0 times
   D. 2.0 times

7. Which of the following is the formula for calculating average stock?

   A. $\dfrac{\text{Opening stock} + \text{Returns Inward}}{2}$

   B. $\dfrac{\text{Opening stock} + \text{Returns Outward}}{2}$

   C. $\dfrac{\text{Opening stock} + \text{Closing stock}}{2}$

   D. $\dfrac{\text{Opening stock} + \text{Purchases}}{2}$

8. The number of times the average stock of a business is sold within a given period of time is
   A. turnover
   B. rate of turnover
   C. stock turn ratio
   D. current ratio

Use the following information about Pembis Commercial Enterprises to answer questions 9 and 10.

Stock 1st Jan. 2000	=	₦2,000.00
Stock 31st Dec. 2000	=	₦4,000.00
Purchases during the period	=	₦6,000.00
Rent paid during the period	=	₦1,000.00

9. The average stock is
    A. ₦2,000.00
    B. ₦3;000.00
    C. ₦6,000.00
    D. ₦8,000.00

10. The cost of goods sold is
    A. ₦2,000.00
    B. ₦4,000.00
    C. ₦6,000.00
    D. ₦8,000.00

Project

From the final accounts constructed above in the project in chapter 19, you are required to state 5 ratios to denote the efficiency of that company.