**Activity Ratio نسب النشاط**

The activity ratios show the connection between sales and a given asset. It indicates the investment in one particular group of assets and the revenue the assets are producing.

Assets such as raw materials and machinery are introduced to generate sales and thereby, profits. The activity ratios show the speed at which the assets are converted into sales.

Activity ratios play an active role in evaluating the operating efficiency of the business as it not only shows how the company generates revenue but also how well the company is managing the components in its balance sheet.

### ACCOUNTS RECEIVABLE TURNOVER RATIO

The accounts receivables turnover ratio, also known as debtor’s ratio, is an activity ratio that measures the efficiency with which the business is utilizing its assets. It measures how many times a business can turn its accounts receivables into cash.

It is calculated by dividing the net credit sales during a specific period by the average accounts receivables. The average accounts receivable is calculated by adding the value of the accounts receivable at the beginning of the desired period to the value at the end and then dividing it by two.

Accounts Receivable Turnover = Net Credit Sales / Average Accounts Receivable

### WORKING CAPITAL RATIO

The working capital turnover ratio indicates a business effectiveness in utilizing its working capital. Working capital is the total amount of current assets minus the current liabilities.

The ratio is calculated by dividing the net sales by the working capital. The ratio helps you figure out the net annual sales generated by the average amount of working capital during a year.

Working Capital Ratio = Net Sales / Working Capital

### ASSET TURNOVER RATIO

The asset turnover ratio measures the efficiency with which a company utilizes its assets to generate sales. The ratio calculates net sales as a percentage of assets.

Asset Turnover Ratio = Sales / Average Total Assets

This ratio is calculated at the end of a financial year and can vary widely from one industry to another. The higher the asset turnover ratio, the better the company is performing.

### FIXED ASSET TURNOVER RATIO

This ratio measures the business’ ability to generate sales from fixed assets such as property, plant and equipment. To calculate the ratio, you need to divide the net sales by the total property, plant, and equipment net of accumulated depreciation.

Fixed Asset Turnover Ratio = Net Sales / (Fixed Assets – Accumulated Depreciation)

A high turnover ratio indicates the assets are being utilized efficiently for generating sales.

### INVENTORY TURNOVER RATIO

The inventory turnover ratio details the efficiency with which inventory is managed. The ratio shows how well the business manages its inventory levels and how frequently they are replenished.

It is calculated by dividing the cost of goods sold by the average inventory for the same period.

Inventory Turnover Ratio = Cost of Goods Sold / Average Inventory

### DAYS PAYABLE OUTSTANDING

The ratio measures the number of days a business takes to pay its invoices and bills to its vendors, suppliers or other companies. It is calculated by:

Days Payable Outstanding = Accounts Payable / (Cost of Sales/ Number of Days)

The number of days is taken as 90 days for a quarter or 365 days for a year. The ratio indicates how well the cash flow is being managed.

Example : these information about ABC co.

|  |  |
| --- | --- |
| Income statement | Amount  |
| * Sales
* Cost of goods sold:
* Gross Profit:
* Administrative overhead
* Profit before interest and taxes
* Interest:
* Taxes:
* Depreciation
* Net profits:
 | $3,200,000$1,920,000* $1,280,000
* $875,000
* $405,000
* $32,000
* $128,00
* $57,000
* $188,000
 |

|  |  |  |  |
| --- | --- | --- | --- |
| Assets  |  | Liabilities and Equity  |  |
| * Cash:
* Accounts receivable:
* Inventory:
* Fixed assets:
* Total assets:
 | $60,000$357,000$530,000$1,200,000* $2,147,000
 | * Accounts payable:
* Short-term bank loans:
* Long-term debt:

Equity: Total liabilities and Equity  | $385,000$130,000$550,000$1,082,000$2,147,000 |

Calculate : 1. Gross profit ratio, 2. Net profit ratio, 3. Operating profit ratio, 4. Operating net profit ratio. 5. Activity ratio

Solution :

 (i) Gross Profit Ratio = Gross profit / Sales × 𝟏𝟎𝟎

 =1280000 /3200000 x 100

 = 40%

(ii) Net Profit Ratio =Net Profit / Sales × 𝟏𝟎𝟎

 = 188000 / 3200000 x 100

 = 5.9 %

(iii) Operating Ratio = Gross profit (+)Operating Expenes / Sales × 𝟏𝟎𝟎

 = 1280000 + 875,000 / 3200000 x100

 = 67.3 %

(vi) Operating Profit Ratio = Operating Net Profit / Sales x 100

 = 405,000 / 3200000 x100

 = 12.6 %

(vii) Accounts Receivable Turnover = Net Credit Sales / Average Accounts Receivable

= 3200,000 / 357,000

=8.9 =9

(viii) Working Capital Ratio = Net Sales / Working Capital

 = 3200000/ (2,147,000 – 1065000)

 = 3200000/ 1082000

 = 2.9 =3

(viiii) Asset Turnover Ratio = Sales / Average Total Assets

 = 3200000/ 2147000

 = 1.49 = 1.5

(x) Fixed Asset Turnover Ratio = Net Sales / (Fixed Assets – Accumulated Depreciation)

 = 3200000 / (1,200,000 – 57000)

 = 3200000/ 1143000

 = 2.79 = 2.8

(xi) Inventory Turnover Ratio = Cost of Goods Sold / Average Inventory

 = 1920000 / 530,000

 = 3.6

(xii) Days Payable Outstanding = Accounts Payable / (Cost of Sales/ Number of Days)

 = 385,000 /( 1920000 / 365)

 = 73

**Miscellaneous Group Ratios نسب المجموعة المتنوعة**

1. **Balance Sheet Ratios نسب الميزانية العمومية**

 These ratios are classified into the following categories, viz. :

 i. Current Ratio نسبة التداول

 Current ratio indicates the solvency of the business, i.e. abilities to meet the liabilities of the business as and when they fall due.

Formula : current ratio = Current Assets (CA) / Current Liabilities (CL)

ii. Proprietary Ratio : نسبة الملكية

It is primarily the ratio between proprietor's funds and total assets. It indicates the strength of the funding of the company.

 Formula: Proprietary Ratio = Proprietor’s Funds / Total Assets

iii. Debt Equity Ratio نسبة حق المديونية

 This ratio is calculated to measure the comparative proportions of outsiders funds and shareholders' funds invested in the company.

 The Debt-Equity Ratio indicates how many Dinars have come from borrowings for every Dinar of shareholders' funds.

Formula: Debt Equity Ratio = Long−term Debts / Shareholders Funds

* A low debt equity ratio indicates that the management of the firm is following a very conservative policy which is quite satisfactory from creditors angle.
* A very high debt equity ratio indicates a risky situation as proportion of borrowed funds is quite high.

**2. Profit and Loss Account Ratios نسب حساب الأرباح و الخسائر**

 These ratios are classified into the following categories, viz.:

 i. Net Profit Ratio نسبة صافي الربح

* This ratio shows the earnings left for shareholders (equity and preference) as a percentage of net sales.
* This ratio measures overall efficiency of all the functions of a business firm like production, administration, selling, financing, pricing, tax management etc.
* This ratio is very useful for prospective investors as it reveals the overall profitability of the firm.
* Higher the ratio, the better it is because it gives an idea of overall efficiency of the firm.
* This ratio is calculated as follows :

 Formula : Net Profit Ratio =Net Profit / Net sales x 100

ii. Operating Ratio نسبة التشغيل

* Operating Ratio is the relationship between cost of activities and net sales.
* Operating Ratio show at what percentage the operating expenses are comprised in net sales.
* This Ratio is expressed as a percentage

Formula : Operating Ratio = Operating cost / Net sales ×100

**Exercise : From the following Balance-sheet of XYZ Ltd.,**

 calculate the following ratios: 1. Current ratio, 2. Liquid ratio, 3. Absolute liquidity ratio, 4. Current assets to Fixed assets ratio, 5. Debt to equity ratio, 6. Proprietary ratio, 7. Capital gearing ratio, 8. Fixed assets ratio.

 Balance Sheet as on 31st March, 2019

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
| Equity Capital 6% Preference Capital General Reserve Profit and Loss A/c Provision for Taxation Bills Payable Bank Overdraft Creditors 12% Debentures  | 1,000,000500,000100,000400,000176,000124,00020,00080,000500,000 | Goodwill (At cost)Plant and MachineryLand and BuildingFurnitureInventoriesBills ReceivableDebtorsBankinvestments(Short-term) | 500,000600,000700,000100,000600,00030,000150,000200,00020,000  |
|  | 2,900,000   |  | 2,900,000 |

Solution :

1. Current Ratio = Current Assets / Current Liabilities = 1,000,000 / 400,000 = 2.5:1

Note : Current assets include inventories, debtors, bills receivable, bank balance and short-term investments. Current liabilities include creditors, bills payable, bank overdraft, taxation provision.

1. Liquid Ratio = Current Assets / Liquid Liabilities

 = 1,000,000 (−) 600,000 /400,000 (−) 20,000

 Liquid Assets= Current Assets (-) Stock

 Liquid Liabilities = Current Liabilities (-) Bank Overdraft

Overheads = 400,000 / 380,000 = 1.05:1

 III. Absolute Liquidity Ratio = Cash at Bank (+) Short−term Investments / Current Liabilities = 220,000 /400,000 = 0.55:1

1. Current assets to fixed assets = Current Assets / Fixed Assets

 = 1,000,000/ 1,900,000 = 0.526:1

 Note : Fixed assets include Goodwill, Plant and Machinery, Furniture and Land and Building.

1. Debt to Equity Ratio

a. Long−term Debt / Shareholders Funds = 500,000 / 1,000,000 + 500,000 + 100,000 + 400,000

 Equity Capital (+) Preference Capital (+) General Reserve (+) Profit and Loss A/c = 500,000 / 2,000,000 =0.25:1

b. Long−term Debt / Long−term Debt + Shareholders Funds = 500,000 / (500,000+2,000,000 )

 a. = 500,000 / 2,500,000

 b. = 0.20:1

 VI. Proprietary Ratio = Shareholders Funds / Total Assets

 = 2,000,000 / 2,900,000 = 0.69 : 1

 VII. Capital Gearing Ratio = Fixed Interest Bearing Securities / Equity Capital+Reserves and Surplus

 =1,000,000 {500,000 Preference + 500,000 Debt} / 1,000,000 + 500,000

 = 1,000,000 / 1,500,000 = 0.66:1

 VIII. Fixed Assets Ratio = Fixed Assets / Capital Employed

 = 1,900,000 / 2,500,000 (Shareholders' Funds + Long-term debt)

 = 0.76:1