

**ANALYSIS
OF
FINANCIAL STATEMENTS**

تحليل

القوائم المالية

تأليف

الأستاذ الدكتور

سعود جايده مشكور

جامعة المثنى

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**First Edition
2018**



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تمنع القوانين والتعليمات الدولية والمحلية منعاً باتاً طباعة عدد محدود من صفحات هذا الكتاب أو جميع صفحاته، باستخدام أي طريقة من طرائق الطباعة والتصوير والاستنساخ والعرض والترجمة والتسجيل المرئي والمسموع والحاسوبي وغيرها من الأساليب التقنية، بدون الموافقة الخطية من المؤلف.

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❖ Introduction

Financial analysis has emerged since the beginning of the financial function as an independent function and as other functions in the firm and has emerged

specifically in 1900 when field studies were conducted using the analysis in the study of the financial position of the enterprises. This function of Financial analysis was in the United States of America in 1900, when a study was conducted on 981 companies through the use of seven financial ratios to study the status of these companies.

Financial analysis generally functions as the basis for the development of this function. It also follows the developments in both the financial and accounting functions that, after the Second World War, became the basic rule from which the function of financial management and accounting function was launched until it became an integral part of the administration Financial and autonomous subject taught in universities and schools specialized in the field of finance and business.

The concept of financial analysis is based on two types of analysis: Ratio Financial Analysis and Quantitative Analysis. Analysis generally means diagnosing a situation and highlighting weaknesses or strengths.

The concept of analysis using ratios is based on the definition of the ratio, where (%) means "the relationship between two variables or two items that share common characteristics or a similar situation". If the analysis is based on ratios, it is intended to establish relationships between two accounting variables that have common relationships or characteristics to study a particular case.

The concept of analysis using quantitative methods can be said to have been used in the second half of the twentieth century as a result of the evolution of financial function in the field of business and financial decision-making. Then the analysis using quantitative methods is the method that uses quantitative methods in the analysis of phenomena or activities carried out by organizations and the creation of relationships between the variables that control the direction of its activities and decisions to organize events such as investments, loans and financial portfolios and other programs .

The syllabus of this book contains all the topics which are adopted by the Accounting Sectorial Committee, in Iraq Ministry of Higher Education and Scientific Research, for the third class in Colleges of Administration & Economic, the chapters of this book are the following:-

Chapter (1) : Overview of Financial Statements Analysis

Chapter (2): Financial Statements

Chapter (3): Financial Statements Analysis Preview

- Chapter (4): Fund Flow Statement
- Chapter (5): Cash Flow Analysis
- Chapter (6): Analyzing the Activities of Cash Flows Statement
- Chapter (7): Common Size Analysis
- Chapter (8): Financial Ratios Analysis
- Chapter (9): Financial Leverage
- Chapter (10): Predict Financial Failure

We hope that all the students, professional, and users will easily be find out their interests and benefits in this book, because it involve many subjects in financial analysis supported by practical examples and exercises. In addition, this book includes a translation of all the terms, titles and some important texts from English to Arabic in order to simplify the process of understanding. We hope that we have succeeded in accomplishing this modest scientific work.

The Author
2018

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CHAPTER (1)

Overview

of

Financial Statements Analysis

نظرة عامة الى تحليل القوائم المالية

LEARNING OBJECTIVES

الأهداف التعليمية:

After reading this chapter, you can certainly be able to understand the following subjects :

❖ Introduction to Financial Analysis

- **Financial Statement Analysis (Meaning)**
- **Definitions of Financial Statement Analysis**
- **Users of Financial Statements Analysis**

❖ Types of Financial Analysis

❖ Components of Financial Analysis

CHAPTER 1

Overview

of

Financial Statements Analysis

نظرة عامة الى تحليل القوائم المالية

❖ Introduction to Financial Analysis

Financial Statement Analysis is a method of reviewing and analyzing a company's accounting reports (financial statements) in order to gauge its past, present or projected future performance. This process of reviewing the financial statements allows for better economic decision making.

تحليل القوائم المالية هو طريقة لمراجعة وتحليل التقارير المحاسبية للشركة (القوائم المالية) من أجل قياس أدائها المستقبلي أو الحالي أو المتوقع في المستقبل. تتيح عملية مراجعة الكشوف المالية اتخاذ قرارات اقتصادية أفضل.

Globally, publicly listed companies are required by law to file their financial statements with the relevant authorities. For example, publicly listed firms in America are required to submit their financial statements to the Securities and Exchange Commission (SEC). Firms are also obligated to provide their financial statements in the annual report that they share with their stakeholders. As financial statements are prepared in order to meet requirements, the second step in the process is to analyze them effectively so that future profitability and cash flows can be forecasted.

الغرض الرئيسي من تحليل القوائم المالية هو استخدام المعلومات حول الأداء السابق للشركة من أجل التنبؤ بكيفية حدوثها في المستقبل. ومن الأهداف المهمة الأخرى لتحليل البيانات المالية تحديد مجالات المشاكل المحتملة واستكشاف الأخطاء وإصلاحها.

The main purpose of financial statement analysis is to utilize information about the past performance of the company in order to predict how it will fare in the future. Another important purpose of the analysis of financial statements is to identify potential problem areas and troubleshoot those.

- **Financial Statement Analysis (Meaning)**

1. Financial statement analysis is an analysis which highlights the important relationships in the financial statements.
2. It focuses on evaluation of past operations as revealed by the analysis of basic statements.
3. Financial statement analysis embraces the methods used in assessing and interpreting the result of past performance and current financial position as they relate to particular factors of interest in investment decisions.
4. Financial statement analysis is an important means of assessing past performance and in forecasting and planning future performance.
5. Financial statement analysis is a systematic and specialized arrangement of information for the purpose of its interpretation.

- **Definitions of Financial Statement Analysis**

تعريف تحليل القوائم المالية

- (a) "Financial statement analysis is an information processing system designed to provide data for decision-making models, such as the portfolio selection model, bank lending decision models and corporate financial management models."

" تحليل القوائم المالية هو نظام لمعالجة المعلومات مصمم لتوفير بيانات لنماذج اتخاذ القرار ، مثل نموذج اختيار المحفظة ، ونماذج قرارات الإقراض المصرفي ونماذج الإدارة المالية للشركات" .

- (b) "Financial statements analysis is largely a study of relationship among the various financial factors in a business as disclosed by a single set of statements and a study of the trends of these factors as shown in series of statements."

" تحليل القوائم المالية يمثل بشكل واسع دراسة العلاقة بين مختلف العوامل المالية في المنشأة التجارية كما هو مفصّل عنه في مجموعة واحدة من الكشوفات ودراسة اتجاهات هذه العوامل كما هو مفصّل عنه في سلسلة من الكشوفات" .

- **Users of Financial Statements Analysis** مستخدمو تحليل القوائم المالية

There are different users of financial statement analysis. These can be classified into internal and external users. Internal users refer to the management of the company who analyzes financial statements in order to make decisions related to

the operations of the company. External users do not necessarily belong to the company but still hold some sort of financial interest. These include owners, investors, creditors, government, employees, customers, and the general public. These users are elaborated on below:

1. Management الإدارة

The managers of the company use their financial statement analysis to make intelligent decisions about their performance. For instance, they may gauge cost per distribution channel, or how much cash they have left, from their accounting reports and make decisions from these analysis results.

2. Owners المالكين

Small business owners need financial information from their operations to determine whether the business is profitable. It helps in making decisions like whether to continue operating the business, whether to improve business strategies or whether to give up on the business altogether.

3. Investors المستثمرين

Investors who have purchased shares in a company need financial information to know the method which used by the company in performance evaluation process. The investors use financial statement analysis to determine what to do by through their investments in the company, So depending on how the company is doing, the investors will either hold onto their shares, sell them or buy more.

4. Creditors الدائنين

Creditors are interested in knowing if a company will be able to pay its debts or loans as they become due. The creditors use cash flow analysis of the company's accounting records to measure the company's liquidity, or its ability to make short-term payments.

5. Government الحكومة

Governing and regulating bodies of the state look at financial statement analysis to determine how the economy is performing in general so they can plan their financial and industrial policies. Tax authorities also analyze a company's statements to calculate the tax burden that the company has to pay.

6. Employees العاملين

Employees need to know if their employment is secure and if there is a possibility to increase their salaries. The employees want to be abreast of their company's profitability and stability. Employees may also be interested in knowing the company's financial position to see whether there may be plans for expansion and hence, career prospects for them.

7. Customers المستهلكين

Customers need to know about the ability of the company to service its clients into the future. The need to know about the company's stability of operations is heightened if the customer (i.e. a distributor of specialized products) is dependent wholly on the company for its supplies.

8. General Public الجمهور العام

Anyone in the general public, like students, analysts and researchers, may be interested in using a company's financial statement analysis. They may wish to evaluate the effects of the firm on the environment, or the economy or even the local community. For instance, if the company is running corporate social responsibility programs for improving the community, the public may want to be aware of the future operations of the company.

❖ Types of Financial Analysis

أنواع التحليل المالي

The classification of financial analysis can be made either on the basis of material used for the same or according to modus operandi of the analysis.

(A) According to Material Used (النسبي) طبقاً لاستخدام المادي

(a) External Analysis التحليل الخارجي

1. This is effected by those who do not have access to the detailed accounting records of the concern.
2. This group comprising investors, credit agencies, government and public depends almost entirely on published financial statements.
3. With the recent development in the government regulations requiring business concern to make available detailed information to the public through audited accounts, the position of the external analysis has been considerably improved.

(b) Internal Analysis التحليل الداخلي

1. This is effected by those who have access to the books of accounts and other information relating to the business concern.
2. Any financial analysis conducted with reference to a part or the whole unit.
3. This type of analysis is meant for managerial purpose and is conducted by executives and employees of the business concerns as well as governmental agencies which have statutory control and jurisdiction over such units.

(B) According to Modus Operandi of Analysis طبقاً لطريقة عمل التحليل

(a) Horizontal Analysis التحليل الأفقي

1. When financial statements for a certain number of years are examined and analyzed, the analysis is called "Horizontal Analysis."
2. Horizontal analysis is also called "**Dynamic Analysis**". التحليل الديناميكي.
3. This is based on the data or information spread over a period of years rather than on one date or period of time as a whole.

(b) Vertical Analysis التحليل العمودي

1. This refers to analysis of ratios developed for one date and for one accounting period.
2. *Vertical* analysis is also known "**Static Analysis**". التحليل الاستاتيكي أو الثابت.

3. Vertical analysis does not facilitate a proper analysis and interpretation of figures in perspective and also comparisons over a period of years. As such this type of analysis is not generally resorted to by the financial analysts.

❖ Advantages and Disadvantages of Methods of Financial Statements Analysis مزايا وعيوب طرق تحليل القوائم المالية

There are two main methods of analyzing financial statements: horizontal or trend analysis, and vertical analysis. These are explained below along with the advantages and disadvantages of each method.

• Horizontal Analysis التحليل الأفقي

Horizontal analysis is the comparison of financial information of a company with historical financial information of the same company over a number of reporting periods. It could also be based on the ratios derived from the financial information over the same time span. The main purpose is to see if the numbers are high or low in comparison to past records, which may be used to investigate any causes for concern.

التحليل الأفقي هو مقارنة المعلومات المالية للشركة مع المعلومات المالية التاريخية لنفس الشركة خلال عدد من فترات إعداد التقارير. ويمكن أن يعتمد أيضًا على النسب المستمدة من المعلومات المالية على مدار الفترة الزمنية نفسها. الهدف الرئيسي هو معرفة ما إذا كانت الأرقام مرتفعة أو منخفضة مقارنة بالسجلات السابقة ، والتي يمكن استخدامها للتحقيق في أي أسباب للقلق.

This method of analysis is simply grouping together all information, sorting them by time period: weeks, months or years. The numbers in each period can also be shown as a percentage of the numbers expressed in the baseline (earliest/starting) year. The amount given to the baseline year is usually 100%. This analysis is also called dynamic analysis or trend analysis.

❖ Advantages and Disadvantages of Horizontal Analysis

مزايا وعيوب التحليل الأفقي

When the analysis is conducted for all financial statements at the same time, the complete impact of operational activities can be seen on the company's financial condition during the period under review. This is a clear advantage of using horizontal analysis as the company can review its performance in comparison to the previous periods and gauge how it's doing based on past results.

A disadvantage of horizontal analysis is that the aggregated information expressed in the financial statements may have changed over time and therefore will cause variances to creep up when account balances are compared across periods.

Horizontal analysis can also be used to misrepresent results. It can be manipulated to show comparisons across periods which would make the results appear stellar for the company.

❖ **Vertical Analysis** التحليل العمودي

Vertical analysis is conducted on financial statements for a single time period only. Each item in the statement is shown as a base figure of another item in the statement, for a given time period, usually for year. Typically, this analysis means that every item on an income and loss statement is expressed as a percentage of gross sales, while every item on a balance sheet is expressed as a percentage of total assets held by the firm. Vertical analysis is also called static analysis because it is carried out for a single time period.

يتم إجراء التحليل الرأسي على البيانات المالية لفترة زمنية واحدة فقط. يتم عرض كل بند في البيان كشكل أساسي لبند آخر في البيان ، لفترة زمنية محددة ، عادة للسنة. عادةً ما يعني هذا التحليل أنه يتم التعبير عن كل بند في بيان الدخل والخسارة كنسبة مئوية من إجمالي المبيعات ، بينما يتم التعبير عن كل عنصر في الميزانية العمومية كنسبة مئوية من إجمالي الأصول التي تحتفظ بها الشركة. يسمى التحليل الرأسي أيضًا التحليل الثابت لأنه يتم تنفيذه لفترة زمنية واحدة.

❖ **Advantages and Disadvantages of Vertical Analysis**

مزايا وعيوب التحليل العمودي

Vertical analysis only requires financial statements for a single reporting period. It is useful for inter-firm or inter-departmental comparisons of performance as one can see relative proportions of account balances, no matter the size of the business or department.

Because basic vertical analysis is constricted by using a single time period, it has the disadvantage of losing out on comparison across different time periods to gauge performance. This can be addressed by using it in conjunction with timeline analysis, which shows what changes have occurred in the financial accounts over time, such as a comparative analysis over a three-year period. For instance, if the cost of sales comes out to be only 30 percent of sales each year in the past, but this year the percentage comes out to be 45 percent, it would be a cause for concern.

❖ Components of Financial Analysis مكونات التحليل المالي

The first step toward improving financial literacy is to conduct a financial analysis of your business. A proper analysis consists of five key areas, each containing its own set of data points and ratios.

1. Revenues الإيرادات

Revenues are probably your business's main source of cash. The quantity, quality and timing of revenues can determine long-term success.

- **Revenue growth (revenue this period - revenue last period) ÷ revenue last period.** When calculating revenue growth, don't include one-time revenues, which can distort the analysis.
- **Revenue concentration (revenue from client ÷ total revenue).** If a single customer generates a high percentage of your revenues, you could face financial difficulty if that customer stops buying. No client should represent more than 10 percent of your total revenues.
- **Revenue per employee (revenue ÷ average number of employees).** This ratio measures your business's **productivity**. The higher the ratio, the better. Many highly successful companies achieve over one million Dinar in annual revenue per employee.

2. Profits الأرباح

If you can't produce quality profits consistently, your business may not survive in the long run.

- **Gross profit margin (revenues – cost of goods sold) ÷ revenues.** A healthy gross profit margin allows you to absorb shocks to revenues or cost of goods sold without losing the ability to pay for ongoing expenses.
- **Operating profit margin (revenues – cost of goods sold – operating expenses) ÷ revenues.** Operating expenses don't include interest or taxes.

This determines your company's ability to make a profit regardless of how you finance operations (debt or equity). The higher, the better.

- **Net profit margin (revenues – cost of goods sold – operating expenses – all other expenses) ÷ revenues.** This is what remains for reinvestment into your business and for distribution to owners in the form of dividends.

3. Operational Efficiency الكفاءة التشغيلية

Operational efficiency measures how well you're using the company's resources. A lack of operational efficiency leads to smaller profits and weaker growth.

- **Accounts receivables turnover (net credit sales ÷ average accounts receivable).** This measures how efficiently you manage the credit you extend to customers. A higher number means your company is managing credit well; a lower number is a warning sign you should improve how you collect from customers.
- **Inventory turnover (cost of goods sold ÷ average inventory).** This measures how efficiently you manage inventory. A higher number is a good sign; a lower number means you either aren't selling well or are producing too much for your current level of sales.

4. Capital Efficiency and Solvency كفاءة راس المال والملاءة المالية

Capital efficiency and solvency are of interest to lenders and investors.

- **Return on equity (net income ÷ shareholder's equity).** This represents the return investors are generating from your business.
- **Debt to equity (debt ÷ equity).** The definitions of debt and equity can vary, but generally this indicates how much leverage you're using to operate. Leverage should not exceed what's reasonable for your business.

5. Liquidity السيولة

Liquidity analysis addresses your ability to generate sufficient cash to cover cash expenses. No amount of revenue growth or profits can compensate for poor liquidity.

- **Current ratio (current assets ÷ current liabilities).** This measures your ability to pay off short-term obligations from cash and other current assets. A value less than 1 means your company doesn't have sufficient liquid resources to do this. A ratio above 2 is best.
- **Interest coverage (earnings before interest and taxes ÷ interest expense).** This measures your ability to pay interest expense from the cash you generate. A value less than 1.5 is cause for concern to lenders.

Exercise

The following information abstracted from a company books for the financial year ended 31/12/2019. (Amounts in thousands)

1 - The profit and loss account for the year ended 31/12/2019

particulars	amount
Total revenues	2,500,000
(-) Cost of goods sold	(1,500,000)
= Gross Profit	1,000,000
Operating expenses	(450,000)
= Profit before extraordinary items	550,000
+ Net capital gains and losses(100,000 – 130,000 capital gains capital losses)	(30,000)
= Profit before interest and taxes	520,000
(-) Interest	(120,000)
= Profit before tax	400,000
(-) Taxes	(132,000)
= Net profit after tax	268,000

2 - The Balance sheet as it is in 31/12/2019

amount	Liabilities and Equity	amount	assets
5,000,000	Equity	3,000,000	Fixed Assets
1,200,000	Reserves are not subject to tax	<u>(400,000)</u>	(-) depreciation Accum.
1,500,000	Long-term loans (8%)	2,600,000	Net fixed assets
750,000	Current liabilities	640,000	Prepaid expenses
190,000	Revenue received in advance	3,300,000	Stock
		1,200,000	Accounts receivable
		900,000	Cash
8,640,000	total	8,640,000	Total

Additional information

- Revenue last period 2,000,000
- Revenue from client 1,500,000
- Average number of employees 1,500

Required: - calculate the following:

1. Revenue growth
2. Revenue concentration
3. Revenue per employee
4. Gross profit margin
5. Operating profit margin
6. Net profit margin
7. Accounts receivable turnover
8. Inventory turnover
9. Rate of return on equity
10. Total Debt to equity Ratio
11. Current ratio
12. Interest coverage

تمرين

فيما يلي المعلومات المستخرجة من سجلات إحدى الشركات عن السنة المالية المنتهية في 2019/12/31م.
(المبالغ بالألاف)

1- حساب الأرباح والخسائر عن السنة المنتهية في 2019/12/31م

المبالغ	البيــــــــــــــــان
2500000 (1500000)	المبيعات (-) تكلفة المبيعات
1000000 (450000)	= مجمل الربح (-) المصاريف التشغيلية
550000 (30000)	= الربح قبل المفردات الاستثنائية + صافي المكاسب و الخسائر الرأسمالية (100000 مكاسب رأسمالية - 130000 خسائر رأسمالية)
520000 (120000)	= الربح قبل الضرائب والفوائد (-) الفوائد
400000 (132000)	= الربح قبل الضرائب (-) الضرائب
268000	= صافي الربح بعد الضرائب

2- الميزانية كما هي في 2019/12/31م

المبلغ الكلي	الجزئي	الأصول	المبالغ	حقوق الملكية والمطلوبات
	3000000 (400000)	الأصول الثابتة (-) مجمع الاندثار	5000000 1200000	حقوق الملكية احتياطيات غير خاضعة للضريبة
2600000		صافي الأصول الثابتة	190000	إيرادات مستلمة مقدما
640000		مصاريف مدفوعة مقدما	1500000	قروض طويلة الأجل (8%)
3300000		المخزون	750000	المطلوبات المتداولة
1200000		الذمم المدينة		
900000		النقدية		
8640000			8640000	

المطلوب:- استخراج كلا مما يأتي :

1. نمو الإيرادات
2. تركيز الإيرادات
3. العائد لكل موظف
4. إجمالي هامش الربح
5. هامش ربح التشغيل
6. هامش صافي الربح
7. دوران الذمم المدينة
8. دوران المخزون
9. معدل العائد على حقوق المساهمين
10. نسبة مجموع الديون إلى حقوق الملكية
11. النسبة التداول
12. نسبة تغطية الفائدة

Solution

1.

Revenue growth = (revenue this period - revenue last period) ÷ revenue last period

$$2,500,000 - 2,000,000 \div 2,000,000 = 0.25 = 25\%$$

2. Revenue concentration = (revenue from client ÷ total revenue)

$$1,500,000 \div 2,500,000 = 0.6 = 60\%$$

3. Revenue per employee = (total revenue ÷ average number of employees)

$$2,500,000 \div 1500 = 1667$$

4. Gross profit margin = (total revenues – cost of goods sold) ÷ revenues

$$2,500,000 - 1,500,000 \div 2,500,000 = 0.40 = 40\%$$

5. Operating profit margin (total revenues – cost of goods sold – operating expenses) ÷ total revenues.

$$(2,500,000 - 1,500,000 - 450,000) \div 2,500,000 = 0.22 = 22\%$$

6. Net profit margin (revenues – cost of goods sold – operating expenses – all other expenses) ÷ revenues.

$$(2,500,000 - 1,500,000 - 450,000 - 252,000) \div 2,500,000 = 0.12 = 12\%$$

7. Accounts receivables turnover= (net credit sales ÷ average accounts receivable).

$$1,000,000 \div 1,200,000 = 0.83$$

8. Inventory turnover = (cost of goods sold ÷ average inventory)

$$1,500,000 \div 3,300,000 = 0.45 = 45\%$$

9. Return on equity = (net income ÷ shareholder's equity)

$$268,000 \div 6,200,000 = 0.043 = 4,3\%$$

10. Debt to equity (debt ÷ equity).

$$2,440,000 \div 6,200,000 = 0.3935 = 39.35\%$$

11. Current ratio (current assets ÷ current liabilities).

$$6,040,000 \div 940,000 = 6.425$$

12. Interest coverage (earnings before interest and taxes ÷ interest expense).

$$520,000 \div 120,000 = 4.333.13$$

Questions

1. What do you mean by financial statements ?
2. Define of Financial Statement Analysis.
3. What are the Users of Financial Statements Analysis?
4. Explain the Types of Financial Analysis.
5. Classifies the methods of financial analysis.
6. Explain the External Analysis.
7. Explain the Internal Analysis.
8. Define Horizontal Analysis.
9. Define Vertical Analysis.
10. Explain Advantages and Disadvantages of Horizontal Analysis.
11. Explain Advantages and Disadvantages of Vertical Analysis.
12. What are the Components of financial analysis?



CHAPTER (2)

Financial Statements

القوائم المالية

LEARNING OBJECTIVES

الأهداف التعليمية:

After reading this chapter, you can certainly be able to understand the following subjects :

❖ Basic of Analysis

- **Financial Statements (meaning)**
- **Important Definitions of Financial Statements**
- **Nature of Financial Statements**
- **Objectives of Financial Statements**
- **Importance of Financial Statements**
- **Interpretation of Financial Statements**

❖ Business Activities

❖ Financial Statements Reflect Business Activities

❖ Additional Information

- **Elements of Financial Statements**
- **Chart of Accounts**
- **Basic Financial Statements**
- **Preparation of Final Accounts of Sole Proprietary Firm**

- **Making Financial Decisions on the Basis of Financial Statements**

CHAPTER (2)

Financial Statements

القوائم المالية

❖ Introduction

Financial statements are the final outputs for applying the accounting cycle which supply with creditable, relevant, and timely financial information to take rational economic decision.

The object of a firm is to get profit. It is something of vital importance to all firms. The profit made by a firm is the difference between the total revenues earned and the total expenses incurred during a particular period of time. The owner is also interested to know their financial position. The preparation of Trading and Profit and Loss Account and Balance Sheet is known as the preparation of final accounts.

القوائم المالية هي المخرجات النهائية لتطبيق الدورة المحاسبية التي تزود معلومات مالية موثوقة وذات صلة وفي الوقت المناسب لاتخاذ القرار الاقتصادي العقلاني.

❖ Basic of Analysis أساسيات التحليل

• Financial Statements (meaning) القوائم المالية (المعنى)

1. Financial Statement is a statement prepared for evaluating past performance and predicting future performance.
2. Financial Statements are regarded as indices of business enterprises performance and position.
3. The term 'Financial statement' as used in modern accounting refers to two statements, the position statement reflecting the assets, liabilities and capital of a business entity on a particular date called the balance sheet, and the other called the profit and loss account showing the results of the business operations during a given period.

يشير مصطلح "البيان المالي" كما هو مستخدم في المحاسبة الحديثة إلى بيانين ، بيان يبين الموقف الذي يعكس الأصول والخصوم ورأس مال لوحدة تجارية في تاريخ معين يسمى الميزانية العمومية ، والآخر يسمى حساب الأرباح والخسائر يظهر نتائج العمليات التجارية خلال فترة معينة.

- **Important Definitions of Financial Statements**

- (a) "The financial statements provide a summary of the accounts of a business enterprise , the balance sheet reflecting the assets , liabilities and capital as on a certain data and the income statements showing the results of operations during a certain period ". (John N. Meyer 2009).
- (b) "The end product of financial accounting is a set of financial statements prepared by the accountant of a business enterprise that purport to reveal the financial position of the enterprise the result of its recent activities, and an analysis of what has been done with earnings". (Smith and Ashburn 2017).

أ. "توفر القوائم المالية ملخصاً لحسابات منشأة تجارية ، فالميزانية العمومية تعكس الأصول والخصوم ورأس المال معتمدة على بيانات معينة، وقائمة الدخل التي تبين نتائج العمليات خلال فترة معينة".
ب. "المنتج النهائي للمحاسبة المالية هو مجموعة من القوائم المالية التي أعدها المحاسب لمشروع تجاري يهدف إلى الكشف عن المركز المالي للمشروع نتيجة أنشطته الأخيرة ، وتحليلاً لما تم إنجازه بالأرباح".

- **Nature of financial statements** طبيعة القوائم المالية

6. The American institute of certified public accountants (AICPA) states the nature of financial statements as , "financial statements are prepared for the purpose of presenting a periodical review or report on progress by the management and deal with the status of investment in the business and the results achieved during the period under review financial statements reflect a combination of recorded facts, accounting principles and personal judgements " .
7. Financial statements are plain statements based on historical recorded facts and figures .
8. Financial statements reflect a judicious combination of recorded facts , accounting principles concepts and conventions, personal judgements and estimates .
9. According to (john N. Meyer 2009) , "The financial statements are composed of data which are the results of a combination of the following:

- (1) Recorded facts concerning the business transactions .
- (2) Conventions adopted to facilitate the accounting techniques .
- (3) Postulates or assumptions made to , and
- (4) Personal judgements used in the application of the conventions and postulates .

• **Objectives of Financial Statements** أهداف القوائم المالية

1. To communicate to their interested users , quantitative and objective information, this information is useful in making economic decisions.
2. To meet the specialized needs of conscious creditors and investors .
3. To provide reliable information about the earnings of business enterprise and its ability to operate at a profit in future .
4. To provide financial base for tax assessments .
5. To provide valuable information for predicting the future earning power of the enterprise .
6. To provide reliable information about the changes in economic resources .
7. To provide information about the changes in net resources of the organization
8. To provide reliable information about the changes in net economic resources.
9. To provide information about the changes in net resources of the organization that result from profit directed activities.
10. To play a very important role in accounting and corporate reporting.
11. To regulate equity and debenture issues by companies.

• **Importance of Financial Statements** أهمية القوائم المالية

1. The financial statements are mirror which reflect the financial position of operating strength or weakness of the business concern .
2. These statements are useful to management , investors , creditors, bankers , workers, government and public at large .
3. Financial statements are the indicators of two significant factors namely, the profitability and financial soundness of a business enterprise.

4. The following major uses of financial statements which shows its importance .

- (a) As a report of stewardship .
- (b) As a basis of fiscal policy .
- (c) To determine the legality of dividends.
- (d) As a guide to dividend policy.
- (e) As a basis for granting the credit.
- (f) As informative for prospective investors in an enterprise.
- (g) As guide to the value of investment already made.
- (h) As an aid to government supervision.
- (i) As a basis for price or rate regulation.
- (j) As a basis for taxation.

• **Interpretation of Financial Statements** تفسير القوائم المالية

- (1) Interpretation of financial statements is the mental process of understanding the terms or the simple elements resulting from the analysis of the compounded financial statements and forming opinions or inferences or conclusions about the various aspect of a business enterprise , such as solvency , profitability , efficiency etc .
- (2) Interpretation Financial Statements which follows analysis of financial statements, is an attempt to reach to logical conclusion regarding the position and progress of the business on the basis of analysis .
- (3) Interpretation Financial Statements aims to explain the meaning and significance of the data simplified by analysis.
- (4) Interpretation of financial statements is the process of drawing inferences or conclusions about the various aspects of business .
- (5) Integration Financial Statements aims to explain the meaning and significance of the data simplified by analysis.

❖ **Business Activities** أنشطة الأعمال

Business activity is the process of transforming inputs into outputs by addition value. An accounting is a system that collects, records, stores, and processes data to produce information for decision makers into several firms. The type of a business depends on size of activity which is performed by the business .Thus the accounting must be carefully addressed because of the tax, managerial, legal and liability impacts that business formation has.

From Commercial and Legal angles, a business may be organized in many ways. There are a number of different forms of Business firms. However, the common forms of organizing are: Sole proprietorship, Partnership, Limited Company and corporation.

1- Sole proprietorship المنشأة الفردية

The **Sole proprietorship** is carried on by single individual. All the profits of the business earn go to him. The sole proprietors' liability is unlimited, and he is personally liable for paying of the debts.

2- A partnership شركة التضامن

A **partnership** comprises a minimum of two and a maximum of (20) persons trading together as one firm and sharing in the profits. In addition to sharing the profits, each partner shares unlimited Liability for all the debts and obligations of the firm and is responsible for the Liabilities in the firm of his fellow partners as well as his own.

3- A Limited Company الشركة المحدودة

A **limited company** is a Legal entity and is treated by the law like a natural person; it must be run according to the rules set out by the company law. Among other provisions, it is laid down that financial statement must be prepared and audited every year and be made available for inspection on a public register.

4- Corporation شركة مساهمة

The Corporation structure consists of the shareholders and the board of directors. The shareholders appoint the board of directors to manage the company. The capital of a company is divided into units of ownership called shares. The shares of a public company are freely transferable from one individual to another.

❖ Financial Statements Reflect Business Activities

القوائم المالية تعكس أنشطة الأعمال

• Advantages of Analysis of Financial Statements

مزايا تحليل القوائم المالية

(a) Knowing the Exact Position معرفة المركز الحقيقي

10. Everybody who is interested in knowing the exact financial position of the concern is benefited by the 'analysis' of financial statement.

11. Interested party gets the valuable information about the exact facts and figures

of the concern by analyzing the financial statements by various methods.

(b) Decision-making صناعة القرار

12. Every interested party is in a position to assess the exact financial position of the concern when it analyses financial statements of that concern by reliable methods.
13. Thus, such an analysis ultimately helps that party in taking various types of decisions such as investment, sale, purchase etc.

(c) Forecasting التنبؤ

After analyzing the financial statements, one is in a position to forecast whether it would be profitable or not to invest in or to deal with the business concern.

• **Making Financial Decisions on the Basis of Financial Statements**

صناعة القرارات المالية على أساس القوائم المالية

1. The major advantage of financial statement analysis is to provide decision makers information about our a business enterprise decision-making.
2. Financial statements are used by financial institutions, loaning agencies, banks and others to make sound loan or credit decisions.
3. Financial statements helps in predicting the earning prospects and growth rate in earnings which are used by investors while comparing investment alternatives and other users interested in judging the earning potential of business enterprises.
4. Analysis of financial statements is a significant tool in predicting the bankruptcy and failure probability of business enterprises.
5. Financial statement analysis is defined as the process of identifying financial strengths and weaknesses of the firm - by properly establishing relationship between the items of the balance sheet and the profit and loss account.

• **Disadvantages of Analysis of Financial Statements**

عيوب تحليل القوائم المالية

(a) Completely Ignore Current Costs إهمال كامل للتكاليف الجارية

- Financial analysis is always based on financial statements which are generally prepared on the basis of historical costs. Thus, it may reflect distorted results.
- The financial analysis based on such financial statements would not portray the effects of price level changes over a period of time.

(b) Financial Statements are Essentially Interim Reports

القوائم المالية بالأساس تقارير مرحلية

- The amount of profit or loss as shown by the Profit and Loss account or the financial position as shown by the Balance Sheet of any unit is always based on certain accounting concepts and conventions. Therefore, these figures may not reflect the exact position.
- Further, the existence of contingent liabilities, deferred revenue expenditure etc. may make them inaccurate.

(c) Financial Analysis is Only a Means Not an End

القوائم المالية وسيلة وليست غاية

- The financial analysis should not be considered as the ultimate objective test but it may be carried further based on the outcome and revelations about the causes of variations. It is the part of the larger information processing system.
- In other words, it is a means to an end and not the end in itself and therefore, it should be used only as a starting point and conclusion should be drawn keeping in view the overall picture and the prevailing economic and political situation.

(d) Completely Ignores Non-monetary Facts إهمال الحقائق غير النقدية بالكامل

- Financial statements reveal only those facts which can be expressed in terms of money.
- For example, the financial statements will show only the amount paid to workers and staff as wages, salaries and other perks.
- But these will not reveal how loyal they are to their organization or how trained and efficient are they in the work assigned to them.
- These matters are also of considerable importance for the business and play a crucial role in efficient working of an organization.
- However, these are completely ignored in financial statement as these cannot be measured in terms of money.

❖ Additional Information

معلومات إضافية

• Elements of Financial Statements

عناصر القوائم المالية

The elements of financial statements are the general groupings of line items contained within the statements. These elements are as follows:

- **Assets** (الأصول (الموجودات)). These are items of economic benefit that are expected to yield benefits in future periods. Examples are accounts receivable, inventory, and fixed assets.
- **Liabilities** (الخصوم (المطلوبات)). These are legally binding obligations payable to another entity or individual. Examples are accounts payable, taxes payable, and wages payable.
- **Equity** (حق الملكية). This is the amount invested in a business by its owners, plus any remaining retained earnings.
- **Revenue** (الإيراد). This is an increase in assets or decrease in liabilities caused by the provision of services or products to customers. It is a quantification of the gross activity generated by a business. Examples are product sales and service sales.
- **Expense** (المصروف). This is the reduction in value of an asset as it is used to generate revenue. Examples are interest expense, compensation expense, and utilities expense.

The elements of, assets, liabilities, and equity are included in the balance sheet. Revenues and expenses are included in the income statement. Changes in these elements are noted in the statement of cash flows.

◆ **Assets** (الأصول (الموجودات))

Assets are items with money value that are owned by a business. Some examples are: cash, accounts receivable (selling goods or services on credit), equipment (office, store, delivery, etc.), and supplies (office, store, delivery, etc.).

◆ **Fixed Assets** (الأصول الثابتة)

Fixed assets are acquired by the firm its productive operations and not for resale. Fixed Assets include land, building, fixtures, and equipment. Sometimes called long-term assets, long-lived assets, or plant and equipment.

◆ **Current Assets** الأصول المتداولة

FASB was defined the current assets as follows: they are economic benefits owned by a firm which are reasonably expected to be converted into cash or used up during the entity's normal operating cycle or one year, whichever is longer.

Current assets constitute cash, items expected to be realized in cash, sold or consumed during operating cycle of the business or one year, whichever is longer.

Current assets are defined "Cash and other assets that are expected to be converted into cash or consumed in the production of goods or rendering of services in the normal course of business". Items are included under current assets on the basis of whether they are expected to be realized within one year or within the normal operating cycle of the enterprise, whichever is the longer.

The classification of current assets, one typically finds the following:

◆ **Inventories** المخزون

Inventories include those items of tangible property that are:

- (1) Held for sale in the ordinary course of business,
- (2) Used in process of production for such sale.

The cost of inventory includes all expenditures that were incurred directly or indirectly to bring an item to its existing condition and location.

◆ **Accounts Receivables** الحسابات المدينة

Accounts Receivables encompass (يشمل) monetary claims against debtors of the firm. The term of accounts receivable is commonly used to refer to (تحويل) receivables from trade customers that are not supported by written notes (أوراق مكتوبة).

◆ **Marketable Securities** الأسهم القابلة للتسويق

Marketable Securities represent temporary investments made to secure (ضمان) a return on funds. To be considered a temporary investment, a security must not only be marketable, but management must plan to dispose it if the management needs to obtain cash.

◆ **Cash** النقد

Cash is the most liquid asset owned by a firm. Cash Includes coin and currency on hand, bank deposits (if subject to immediate withdrawal, (e.g. checking accounts), negotiable paper (i.e., transferable by endorsement (تظهير), in including bank checks, money orders, bank drafts, etc.).

◆ **Owner's Equity** حقوق الملكية

Owner's Equity is sum of funds owned by the proprietors of firm for financing its activities .The difference between total of Assets and Liabilities is Owner's Equity. They can also be called capital, or net worth.

Owner's Equity = Total of Assets - Liabilities

◆ **Liabilities** الخصوم (المطلوبات)

Liabilities are debts owed by the business. Paying cash is often not possible or convenient, because the firms purchase goods and services on credit. The name of the account used is Accounts Payable. Another type of liability is Notes Payable. This is a formal written promise (موعد مكتوب) to pay a specific amount of money at a definite future date.

• **Chart of Accounts** خريطة الحسابات

Accounts in the Ledger are normally arranged in the following order: Assets, Liabilities, Owner's equity, revenues and expenses and for quick and easy reference, each account is numbered according to the accounting system applied. A complete listing of these numbers along with the respective account titles is known as a chart of accounts. The chart of accounts is shown in the following chart.

Chart of Accounts

Current Assets	Liabilities
<ul style="list-style-type: none"> ▪ Cash ▪ Accounts receivable ▪ Inventory 	<ul style="list-style-type: none"> ▪ Creditors ▪ Accounts Payable ▪ Loan Short-Term ▪ Loan Long-Term
Fixed Assets	Owner's Equity
<ul style="list-style-type: none"> ▪ Land ▪ Building ▪ Office Equipment ▪ Furniture 	<ul style="list-style-type: none"> ▪ Capital ▪ Retained Earnings ▪ Reserves
Expenses	Revenues
<ul style="list-style-type: none"> ▪ Salaries ▪ Electricity ▪ Supplies ▪ Advertisement 	<ul style="list-style-type: none"> ▪ Sales ▪ Fees Earned ▪ Interest Received ▪ Discount Received

<ul style="list-style-type: none"> ▪ Telephone ▪ Rent ▪ Insurance ▪ Depreciation 	<ul style="list-style-type: none"> ▪ Commission Received
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- **Basic Financial Statements** القوائم المالية الأساسية

The accounting process (also called the accounting cycle) consists of the following groups of functions:-

- (1) Accounting observes many events and identify and measure in financial terms those events considered evidence of economic activity.
- (2) The evidence events are recorded, classified into meaningful groups and summarized for conciseness.
- (3) Accountants report a business activity by preparing financial statements and special reports.

The purpose of financial accounting statements is mainly to show the financial position of a business at a particular point in time and to show how that business has performed over a specific period.

The three basic financial accounting statements that help achieve this function are:

- (1) **The trading account and the profit and loss account** (حساب الأرباح والخسائر) for the reporting period: an analysis of revenue and expenses of a business, exactly at the end of the year.
- (2) **A balance sheet** (الميزانية) for the business at the end of the reporting period: a statement showing the assets, liabilities and capital of a business.
- (3) **A cash flow statement** (كشف التدفق النقدي) for the reporting period: a statement showing how cash is generated and how it has been spent by the business.

Final statements consist of trading account and profit & loss account and balance sheet. All the amounts from trial balance are taken to prepare these statements.

- **Preparation of Final Accounts of Sole Proprietary Firm**

إعداد الحسابات الختامية للشركة ذات الملكية الفردية

(a) **Journal** سجل اليومية

1. '**Journal**' is derived from the French Word "Jour" which means a day. Journal therefore, means a daily record.

2. A Journal is a book of "Original Entry" or "Primary Entry".
3. First of all the business transactions are recorded in the 'Journal' and subsequently they are posted in the ledger.
4. To study "Book-Keeping", one must learn first how to journalise the business transactions.
5. To journalize the transaction means to record the two-fold effects of a transaction in terms of debit and credit. This has to be done by observing the rules of debit and credit.

• **Definition of Journal** تعريف اليومية

"A Journal is a book of original entry in which the transactions are recorded in a particular way by following the rules of debit and credit." (**Dictionary for Accountants written by E.L. Kohler 1983**).

اليومية هي سجل للقيود الأصلي الذي يتم فيه تسجيل المعاملات بطريقة معينة من خلال اتباع قواعد المحاسبية والدائنية.

Specimen (Format) of Journal:

Journal of.....

Date	Particulars	Ledger Folio (L.F.)	Debit	Credit
			IQD	IQD

(b) Ledger سجل الأستاذ

1. A ledger is the principle book of accounts.
2. All the entries made in the journal must be posted into the ledger.
3. The ledger is a book containing many ledger accounts. It is a group or set of accounts.
4. in other words, ledger is a book in which various accounts (personal, real and nominal) are opened.
5. Its source of information are the books of original entry called journals.
6. Usually, only one account is placed on each page of the ledger.
7. A businessman cannot get the information about the transactions from the Journal. For example, the amount receivable from the debtors, the amount

payable to creditors, total payments on any head of the expenditure etc. In order to get this information, a ledger has to be maintained.

8. While transferring the transactions from the journal to the ledger, the transactions are classified.

9. For each person, head of income, head of expenditure, asset, etc., separate accounts are opened in the ledger book.

سجل الأستاذ هو سجل يحتوي على العديد من الحسابات أو مجموعة من الحسابات. بمعنى آخر ، أن سجل الأستاذ هو سجل يتم فيه فتح حسابات مختلفة (شخصية وحقيقية واسمية) من واقع سجل القيد الأصلي.

Specimen (Format) of a Ledger :

Ledger							
Dr.		Name of the Account				Cr.	
Date	Particulars	Journal Folio	Amount	Date	Particulars	Journal Folio	Amount
			IQD				IQD

(c) Trial Balance ميزان المراجعة

1. "Trial Balance is a schedule or list of those debit and credit balances which are expected from various accounts in the ledger and balances of cash in hand and at bank as shown by the cash book are also included in it.

(R.N. Carter, www.slideshare.net- Published on Dec 9, 2014.)

2. "Trial Balance is a list or abstract of the balances or of total debits and total credits of the accounts in a ledger, the purpose being to determine the equality of the posted debits and credits and to establish a basic summary for financial statements". (*The Dictionary for Accounts by E. L. Kolher 1983*).

3. "The final list of balances totaled and combined is called Trial Balance".

"ميزان المراجعة هو جدول زمني أو قائمة بالأرصدة المدينة والدائنة التي تم توقعها من مختلف الحسابات في سجل الأستاذ كذلك يتضمن أرصدة النقد في الصندوق وفي البنك الظاهرة في سجل النقدية.

Specimen (Format) of Trial Balance :

Trial Balance (As on.....)

Sr. No.	Name of the Account	Ledger Folio	Debit Balances IQD	Credit Balances IQD

(d) Trading Account حساب المتاجرة

1. After preparing a Trial Balance at the end of an accounting period, the next step is to prepare the 'Trading Account'.
2. Trading Account is one of the financial statement which shows the result of buying and selling of goods and or services during an accounting period.
3. Trading Account is a flow statement and not a static statement. It is prepared for a particular accounting period and not at a particular point of time.
4. Trading Account is prepared to know the gross profit or gross loss during the accounting period.
5. The basis for the preparation of Trading account is the matching of selling prices of goods and services with the cost of the goods sold and services rendered.

$$\text{Cost of goods sold} = \text{Opening Stock} + \text{Purchases} + \text{Direct Expenses on purchases} - \text{Closing Stock}$$

حساب المتاجرة هو أحد القوائم المالية التي تظهر نتيجة شراء وبيع السلع أو الخدمات خلال فترة محاسبية. ويتم إعداد حساب المتاجرة لمعرفة إجمالي الربح أو الخسارة الإجمالية خلال الفترة المحاسبية.

Specimen of Trading Account:
Dr.

Trading A/c

Cr.

Particulars	IQD	Particulars	IQD
To Opening Stock		By Sales	
To Wages		Less : Return Inward	
To Purchases		By Closing Stock By Gross	
Less : Return Outward		Loss c/d	
To Carriage Inward			
To Motive Power			
To Factory' Expenses (★)			
To Freight			
To Gross Profit c/d			
	xxx		xxx

[(★) Factory Expenses : It includes factory lighting, factory rent, rates, factory repairs etc.]

(e) Profit and Loss Account حساب الأرباح والخسائر

1. Profit and Loss Account is an account in the books of an organization to which incomes and gains are credited and expenses and losses are debited, so as to show the net profit or loss over a given period.
2. The Profit and Loss Account has the unique characteristic feature of enabling the organization to judge the performance of the factors of production as well as enabling it to take note of the expenses for future of the organization.
3. The Profit and Loss Account enables the organization to make provision for expenses such as bad debts etc.

حساب الربح والخسارة هو حساب في سجلات المنشأة التي يتم فيها قيد الأرباح والمكاسب والمصروفات والخسائر، وذلك لإظهار صافي الربح أو الخسارة خلال فترة معينة.

Specimen of Profit and Loss Account:

Dr.	Profit and Loss A/C		Cr.
Particulars	IQD	Particulars	IQD
To Gross Loss b/d		By Gross Profit b/d	
To Salaries		By Sundry Receipts	
To Director's Fees		By Commission (Received)	
To Audit Fees		By Transfer Fees (Received)	
To Bank charges		By Interest on Investment in government Securities	
To Bad Debts		By Interest on Investment (Received)	
To R.B.D.D.		By Net Loss c/d	
To Commission			
To Preliminary Expenses			
To Advertisement			
To Printing & Stationery			
To Insurance			
To Debenture Interest			
To Bank Charges			
To Provident Fund Contribution			
To Provision for Taxation			
To Depreciation			
To Interest on Loan			
To Carriage Outward			
To Postage			
To Net Profit c/d			
	XXX		XXX

(f) Balance Sheet الميزانية العمومية

1. A Balance Sheet is one important financial statement.
2. A Balance Sheet is a statement of assets and liabilities of an enterprise at a given date.
3. It is called as Balance Sheet because it is a sheet of balances of those ledger accounts which have not been closed till the preparation of the Trading and Profit and Loss Account.
4. A Balance Sheet is a list of assets and claims of a business at some specific point of time and is prepared from an adjusted Trial Balance.
5. A Balance Sheet shows the financial position of a business by detailing the sources of funds and the utilization of these funds.

6. A Balance Sheet shows the assets and liabilities grouped, properly classified and arranged in a specific manner.

الميزانية العمومية هي قائمة بالموجودات والمطلوبات الخاصة بالأعمال التجارية في وقت محدد من الأوقات، ويتم إعدادها من ميزان مراجعة معدل. وتوضح الميزانية العمومية المركز المالي لمنشأة تجارية عن طريق تفاصيل مصادر التمويل واستخدام هذه الأموال.

Specimen of Balance Sheet:

Balance Sheet (For the Year Ended)

Liabilities	IQD	Assets	IQD
Capital		Goodwill	
Add : Net Profit		Land and Building	
Less : Net Loss		Plant and Machinery	
Less : Drawings		Furniture	
Sundry Creditors		Investments	
Bills Payable		Cash in Hand	
Loans		Cash at Bank	
Bank Overdraft		Bills Receivables	
Outstanding Expenses		Sundry Debtors	
		Prepaid Expenses	
		Stock in Trade	
Total	xxx	Total	xxx

❖ **Exercises Solved**

Exercise No.1

The Trial Balance of Gany Co. as on 31st March, 2019 was as follows :

Particulars	Dr. IQD	Cr. IQD
Capital Account		25,000
Drawings	750	
Investments	10,000	
Motor Vehicles	8,000	
Office Furniture	2,000	
Office Equipments	6,000	
Cash in Hand	550	
Purchases	47,500	
Sales		75,500
Returns	1,500	1,000
Carriage	350	
Opening Stock	14,000	
Customs duties and clearing charges	3,000	
Debtors	17,600	
Salaries	2,500	
Trade expenses	300	
General Expenses	600	
Bad Debts	250	
Reserve for Bad Debts		750
Discount	100	50
Creditors		12,600
Prepaid Insurance	100	
Outstanding Salaries		200
Total	115,100	115,100

Adjustments :

1. Closing Stock was valued at 8,000 IQD .
2. Depreciate Motor Vehicle and Office Furniture at 5 % and Office Equipment's at 10%.
3. Create 5 % Reserve for Doubtful Debts and Debtors.
4. Goods costing 100 **IQD** was taken for personal use by Mr. Ganesh and it was included in Debtors.
5. Goods worth 1,000/- **IQD** were destroyed by fire and the Insurance Company admitted a claim for 800 **IQD**.

Solution :

In the Books of Gany Co.

Dr.		Trading and Profit and Loss Account as on 31-3-2019		Cr.	
Particulars		IQD	Particulars	IQD	
To Opening Stock		14,000	By Sales 75,500		
To Purchases	47,500		(-) Returns 1,500		74,000
(-) Returns	1,000	46,500	By Goods Destroyed by fire		1,000
To Carriage		350	By Closing Stock		8,000
To Trade Expenses		300			
To Gross Profit c/d		21,850			
		83,000			83,000
To Salaries		2,500	By Gross Profit b/d		21,850
To Custom Duties and Clearing Charges		3,000	By Discount received		50
To General Expenses		600			
To Bad Debts (old)	250				
Add ; R B D D (New)	880				
Less : R B D D (Old)	750	380			
To Discount (allowed)		100			
To Depreciation :					
Motor Vehicle :	400				
Office Furniture	100				
Office Equipment	600	1,100			
To Loss by Fire		200			
To Net Profit c/d		14,020			
		21,900			21,900

Balance Sheet of Gany Co. for Year ended 31-3-2019

Liabilities		IQD	Assets		IQD
Capital	25,000		Cash in Hand		550
(-) Drawings	750		Motor Vehicles	8,000	
	24,250		(-) 5 % Depreciation	400	7,600
(-) Goods taken for Personal use	100		Investment		10,000
	24,150		Office Furniture	2,000	
(+) Net Profit	14,020	38,170	(-) 5 % Depreciation	100	1,900
Outstanding Salaries Creditors		200	Prepaid Insurance		100
		12,600	Closing Stock		8,000
			Office equipment's	6,000	
			(-) 10 % Depreciation	600	5,400
			Insurance Claim		800
			Debtors	17,600	
			(-) 5% R.D.D	880	
				16,720	
			(-) Goods taken for personal use	100	16,620
		50,970			50,970

Exercise No. 2

From the following information prepare Trading and Profit and Loss Account of Passel Co. for the year ended 31st March 2019 and Balance Sheet as on that date.

Trial Balance as on 31-3-2019

particular	Dr. IQD	Cr. IQD
Passel's Capital		35,000
Purchases and Sales	75,000	125,000
Returns	2,700	1,300
Debtors and Creditors	46,000	30,000
Bank Overdraft		10,000
Stock (1-4-2018)	30,000	
Drawings	11,000	
Miscellaneous expenses	675	
Wages	3,500	
Salaries	5,600	
Travelling expenses	660	
Advertisement	420	
Rent, Rates and Insurance	2,800	
Bad Debts	400	
Discount	300	
Interest and Commission	215	
Building	6,000	
Plant and Machinery	10,000	
Furniture	5,000	
Cash in hand	1,030	
Total	201,300	201,300

Adjustments :

1. Stock on 31st March 2019 IQD 45,000.
2. There were outstanding liabilities in respect of Rent of IQD 250, and Wages IQD 200.
3. Insurance paid in advance amounted to IQD 150 and Salaries were unpaid to the extent of IQD 350.
4. Write-off IQD 400 as further bad debts and provide for doubtful debts at 5 % on Sundry Debtors.
5. Depreciate Building by 2.5 %, Machinery by 7.5 % and Furniture by 10 %.

Solution : In the Books of Passel Co.

Dr. Trading and Profit and Loss Account as on 31-3-2019 Cr.

Particulars		IQD	Particulars	IQD
To Opening Stock		30,000	By Sales 125,000	
To Purchases	75,000		{-} Return 2,700	122,300
(-) Return	1,300	73,700	By Closing Stock	45,000
To Wages	3,500			
{ +) Outstanding	200	3,700		
To Gross Profit c/d		59,900		
		167,300		167,300
To Travelling Expenses		660	By Gross Profit b/d	59,900
To Miscellaneous Expenses		675		
To Salaries	5,600			
(+) Outstanding	350	5,950		
To Advertisement		420		
To Rent, Rates & Insurance	2,800			
(+) Outstanding	250			
(-)Prepaid Insurance	150	2,900		
To Bad Debts		400		
To Discount		300		
To Interest and Commission		215		
To Bad Debts (New)		400		
To R.D.D. (5 %)		2,280		
To Depreciation :				
Building :	150			
Plant and Machinery :	750			
Machinery :	500	1,400		
To Net Profit c/d		44,300		
		59,900		59,900

Balance Sheet of Passel Co. for Year ended 31-3-2019

Liabilities		IQD	Assets		IQD
Capital	35,000		Cash in Hand		1,030
(-) Drawings	11,000		Building	6,000	
	24,000		(-) 2.5% Depreciation	150	5,850
(+) Net Profit	44,300	68,300	Plant and Machinery	10,000	
Bank Overdraft		10,000	(-) 7.5% Depreciation	750	9,250
Creditors		30,000	Debtors	46,000	
Outstanding Expenses :			(-) Bad Debts		
Rent		250		400	
Wages		200		45,600	
Salaries		350	(-) 5% R.D.D.	2,280	43,320
			Furniture	5,000	
			(-) 10% Depreciation	500	4,500

		Closing Stock Prepaid Insurance	45,000 150
	109,100		109,100

Exercise No. 3

The following Trial Balance was taken out from the books of Baraq Co. as on 31st March 2019.

Trial Balance as on 31st March 2019

Name of the Account	Dr.	Cr.
Capital		262,500
Opening Stock	22,500	
Purchases: Cash	32,500	
Credit	37,500	
Land and Buildings	100,000	
Wages	2,500	
Bills Receivable	17,500	
Drawings	15,000	
Sales: Cash		47,500
Credit		42,500
Salaries	12,500	
Office Rent	7,500	
Insurance	2,500	
Return Inward	2,500	
Fuel and Power	3,750	
Furniture and Fixtures	62,500	
Advertisement	7,500	
Return Outwards		3,500
Discount Earned		2,500
General Expenses	3,750	
Bad Debts	2,500	
Provision for Doubtful Debts		1,500
Sundry Debtors	25,000	
Investments	37,500	
Postage and Telegram	2,500	
Sundry- Creditors		27,500
Cash in Hand	12,500	
Bills Payable		10,000
Bank Overdraft		12,500
	410,000	410,000

Adjustments :

1. Closing Stock was valued at IQD 14,000.
2. Depreciation on Furniture and Fixtures at 10% p.a.; Land and Buildings at 10%.

3. Office rent outstanding was IQD 2,500.
4. Prepaid insurance IQD 1,000.
5. Provision for Doubtful Debts to be maintained on debtors at 5%.

Required: prepare a Trading and Profit and Loss Account for the year ended 31st March, 2019 and a Balance Sheet as on that date.

Solution : In the Books of Baraq Co.

Dr. Trading and Profit and Loss A/c for the year ending 31st March 2019 Cr.

Particulars	IQD	Particulars	IQD
To Opening Stock	22,500	By Sales	
		Cash	47,500
		Credit	42,500
To Purchases			90,000
Cash,	32,500	(-) Return Inwards	2,500
Credit	37,500		
	70,000	By Closing Stock	14,000
(-) Return Outwards	3,500		
	66,500		
To Wages	2,500		
To Fuel and Power	3,750		
To Gross Profit c/d	6,250		
	101,500		101,500
To Salaries	12,500	By Gross Profit b/d	6,250
To Office Rent	7,500	By Discount earned	2,500
(+) Outstanding	2,500	By Net Loss c/d	47,500
	10,000		
To Depreciation			
Land and Building	10,000		
Furniture and Fixtures	6,250		
	16,250		
To Insurance	2,500		
(-) Prepaid Insurance	1,000		
	1,500		
To Advertisement	7,500		
To General Expenses To	3,750		
R.D.D. (New)	1,250		
(+) Bad Debts	2,500		
	3,750		
(-) R.D.D. (Old)	1,500		
	2,250		
To Postage & Telegram	2,500		
	56,250		56,250

Balance Sheet as on 31st March, 2019

Liabilities	IQD	IQD	Assets	IQD	IQD
Capital	262,500		Land and Building	100,000	
Less : Drawings	15,000				
	247,500		Less : 10% Depreciation	10,000	90,000
Net Loss	47,500	200,000			
Sundry Creditors		27,500	Furniture and Fixture	62,500	
Bills Payable		10,000	Less: 10% Depreciation	6,250	56,250
Bank Overdraft		12,500	Sundry Debtors	25,000	
Outstanding Office Rent		2,500	Less: R.D.D.@ 5%	1,250	23,750
			Investments		37,500
			Bills Receivable		17,500
			Stock in Trade		14,000
			Cash in hand		12,500
			Prepaid Insurance		1,000
		252,500			252,500

Exercise No. 4

The following is the Trial Balance of Aram Co. on 31st March, 2019

Trial Balance

Particulars	Debit IQD	Particulars	Credit IQD
Cash in Hand	1,500	Sales	120,000
Cash at Bank	7,000	Return Outwards	700
Purchases	70,000	Capital	80,000
Return Inwards	600	Sundry Creditors	60,000
Wages and Salaries	10,400	Bills Payable	6,800
Power and Fuel	7,000		
Carriage Outward	3,000		
Carriage Inward	4,000		
Stock (1-04-2018)	12,000		
Building	40,000		
Machinery	35,000		
Plant	10,000		
Establishment Charges	14,000		
General Expenses	3,000		
Drawings	10,000		
Sundry Debtors	40,000		
Total	267,500		267,500

Prepare the Trading and Profit and Loss Account for the year ended 31st March, 2019 and the Balance Sheet as on that date after considering the following adjustments :

1. Closing Stock on 31st March, 2019 IQD 16,000, Market Price of which was IQD 20,000.

2. Machinery and Plant to be depreciated at 10% p.a. and 20% p.a. respectively.
3. Goods of IQD 1,000 withdrawn by Aram Co. for personal use not recorded in books.
4. Create 5% provision for bad and doubtful debts on debtors and 5% reserve for discount on creditors.
5. Establishment Charges outstanding IQD 2,000 and Power and Fuel Prepaid IQD 1,000.

Solution : In the Books of Aram Co.

Dr. Trading and Profit and Loss Account for the year ended 31-3-2019 Cr.

Particulars	IQD	Particulars	IQD
To Opening Stock (1-4-2018)	12,000	By Sales 120,000	
To Purchases 70,000		{-} Return Inwards 600	119,400
(-) Return Outward 700	69,300		
To Wages and Salaries	10,400	By Closing Stock	16,000
To Carriage Inward	4,000	By Goods Withdrawn for Personal Use	1,000
To Gross Profit C/d	40,700		
	136,400		136,400
To Power and Fuel 7,000		By Gross Profit b/d	40,700
(-) Prepaid 1,000	6,000	By Reserve for Discount on Creditors	3,000
To Carriage Outward	3,000		
To Establishment Charges 14,000			
(+) Outstanding 2,000	16,000		
To General Expenses	3,000		
To Depreciation :			
Machinery: 3,500			
Plant: 2,000	5,500		
To P.B.D.D.	2,000		
To Net Profit c/d	8,200		
	43,700		43,700

Balance Sheet of Mr. Aram (for the year Ended 31-3-2019)

Liabilities		IQD	Assets		IQD
Capital	80,000		Cash in Hand		1,500
(-) Drawings	10,000		Cash at Bank		7,000
	<u>70,000</u>				
(-) Additional Drawing	1,000		Building		40,000
	69,000		Machinery	35,000	
(+) Net Profit	8,200	77,200	(-) 10% Depreciation	3,500	31,500
Sundry Creditors	60,000		Plant	10,000	
(-) Reserve for Discount	3,000	57,000	(-) 20% Depreciation	2,000	8,000
Bills Payable		6,800	Sundry Debtors	40,000	
Outstanding Establishment Charges		2,000	(-) 5% P.B.D.D.	2,000	38,000
			Stock		16,000
			Prepaid Power and Fuel		1,000
		143,000			143,000

Questions and Exercises

A- Questions

1. What do you mean by Financial Statements ? State its Nature.
2. Explain the Meaning and Nature of Financial Statements.
3. State the importance of Financial Statements.
4. State the Various Objectives of Financial Statements.
5. Explain Preparation of Final Accounts of Sole Proprietary Firm.
6. Explain Making Financial Decisions on the Basis of Financial Statements.
7. What is Trading Account? Give its specimen form.
8. What is gross profit?
9. What is profit and loss account? Give its specimen form.
10. What is a Balance Sheet? Give its specimen form.

11. Choose the correct answer from the following options:

- (1) Preparation of financial statements consists of :-
(a) Revenue accounts alone (b) Balance Sheet only (c) Trial Balance
- (2) Prepaid insurance appears in:-
(a) Trading account (b) Profit and Loss account (c) List of assets.
- (3) Depreciation is a:-
(a) Gain (b) Loss (c) Appreciation
- (4) Revenue earned but not received is:-
(a) A liability (b) An asset (c) Nominal account
- (5) Interest on Drawings is deducted from:-
(a) Net profit (b) Drawings (c) Capital
- (6) Closing Stock is valued at:-
(a) Cost price (b) Market price (c) Cost price or market price whichever is lower.

12. Choose the correct answer from the following:-

- (1) Gross loss will result if:
 - a- Sales revenues are greater than cost of goods sold.
 - b- Operating expenses are greater than net income.
 - c- Sales revenues are less than cost of goods sold.
 - d- Sales revenues are less than operating expenses.

13.State whether the statements given below are True or False.

- (a) Capital is a liability account.
- (b) Balance sheet consists of debit side and credit side.
- (c) All Assets will show debit balances.
- (d) All Liabilities will show credit balances.
- (e) An account with debit balance will be either expense or asset.
- (f) Adjustment entries are passed throughout out the year like other entries.

14.Choose the correct answer and write it against each of the following statements

No.	Name of account	No.	Definition
1.	Trading Account	(a)	Deducted from capital.
2.	Profit & Loss Account	(b)	Deducted from asset concerned
3.	Balance Sheet	(c)	Is a liability of the business.
4.	Purchases Returns	(d)	Is an asset of the business.
5.	Sales Returns	(e)	Deducted from sales
6.	Accrued expense	(f)	Investment made into the business by proprietor
7.	Depreciation	(g)	Indicates net profit or loss.
8.	Prepaid expense	(h)	Indicates gross profit or loss.
9.	Drawings	(i)	Not an account, but a statement.
10.	Capital	(j)	Deducted from purchases.

B- Exercises

1- Ascertain purchases from the following figures:

Cost of goods sold IQD 81000
Opening Stock IQD 6000
Closing Stock IQD 7000

2- Calculate Gross Profit from the following figures:

Cost of goods sold IQD 80000
Sales IQD 140000

3- Ascertain cost of goods sold from the following figures:

Opening Stock	IQD 4000
Purchases	IQD 21000
Closing stock	IQD 3000

4- Ascertain cost of goods sold from the following figures :

Particulars	IQD
Opening Stock	9000
Purchases	31000
Direct Expenses	5000
Indirect Expenses	3000
Closing Stock	9000

5- Ascertain Gross Profit from the following figures:

Particulars	IQD
Opening Stock	6000
Purchases	14000
Sales	21000
Closing Stock	4000
Purchase Returns	400
Returns inwards	500
Warehouse wages paid	1400
Import Charges	300

6- From the following ascertain Gross Profit and Net Profit:

Particulars	IQD
Opening Stock	2000
Carriage in	500
Purchases	15000
Manufacturing wages	3000
Sales	21000
Closing Stock	4000
Accrued Manufacturing Wages	90

Returns outwards	200
Returns inwards	700
Loss due to fire	1000
Indirect Expenses	100

7- The following information about the first half of 2018 for Quick meal restaurant:

<u>Particulars</u>	<u>Amounts IQD</u>
Purchases	10000
Sales	25000
Purchases returns	1000
Sales returns	6000
Beginning inventory	6000
Ending inventory	4000
Freight – in	2000
Selling expenses	3000
Administrative expenses	500

Required:

A: Determine the following:

1. The cost of goods purchased.
2. The cost of goods sold.
3. Gross profit.
4. Net income.

B: Prepare trading account for quick meal for the half ended June 30,2018.

8-The following balances are showed at Dec. 31, 2018 for Ali's company:

Particulars	Amounts IQD
Merchandise inventory 1/1	15000
Sales	101000
Sales returns	1000
Accounts receivables	7000
Purchases	60000
Freight - in	2000
Fright - out	4000
Cash	21000
Equipment	20000

Administrative expenses	7000
Notes receivables	12000
Accounts payable	5000
Notes payable	1000
Capital	????
Ending inventory at cost	20000
Ending inventory at market	18000

Required:

1. Prepare income statement for the year ended Dec, 31, 2018
2. Prepare trading A/c, profit and loss account.
3. Prepare the balance sheet as of Dec. 31, 2018.

2 2 2 2 2 2 2 2

CHAPTER (3)

Financial Statements Analysis Preview

نظرة إلى تحليل القوائم المالية

LEARNING OBJECTIVES

الأهداف التعليمية:

After reading this chapter, you can certainly be able to understand the following subjects :

- ❖ **Analysis Tools**
- ❖ **Valuation Models**
- ❖ **Analysis in an Efficient Market**
- ❖ **Financial Reporting and Analysis :**
 - **Reporting Environment**
 - **Statutory Financial Reports**
 - **Factors Affecting Statutory Financial Reports**

CHAPTER (3)

Financial Statements Analysis Preview

نظرة إلى تحليل القوائم المالية

❖ Financial Statement Analysis Tools أدوات تحليل القوائم المالية

Financial statements are usually the final output of a company's accounting operations. These statements contain information relating to the revenues, expenses, assets, liabilities and retained earnings of the business.

Business owners often pay close attention to this information since the statements can provide detailed information about the company's operational performance. Many business owners and managers use specific analysis tools to closely review their company's financial statements for decision-making purposes.

عادةً ما تكون البيانات المالية هي الناتج النهائي للعمليات المحاسبية في الشركة، وتحتوي هذه البيانات على معلومات تتعلق بالإيرادات والنفقات والأصول والالتزامات والأرباح المحتجزة للشركة. غالباً ما يولي مالكو النشاط التجاري اهتماماً وثيقاً لهذه المعلومات نظراً لأن البيانات يمكن أن توفر معلومات مفصلة حول الأداء التشغيلي للشركة. يستخدم العديد من أصحاب الأعمال والمديرين أدوات تحليل محددة لمراجعة البيانات المالية لشركتهم عن كتب لأغراض اتخاذ القرارات.

• Financial Ratios النسب المالية

A traditional financial statement analysis tool is financial ratios. These ratios take information from the company's financial statements and calculate economic indicators for comparison to another company or the industry standard.

Financial ratios include liquidity, asset turnover, financial leverage and profitability calculations. Liquidity ratios calculate the company's ability to meet short-

term financial obligations. Asset turnover ratios indicate how well the company uses its assets to generate profits. Financial leverage ratios calculate the long-term solvency of a company. Profitability ratios help companies determine how much profit they are generating from the sale of various goods or services.

❖ Valuation Models نماذج التقييم

Financial statements prepared in accordance with generally accepted accounting principles(GAAP) show many assets based on their historic costs rather than at their current market values. For instance, a firm's balance sheet will usually show the value of land it owns at what the firm paid for it rather than at its current market value. But under GAAP requirements, a firm must show the fair values (which usually approximates market value) of some types of assets such as financial instruments that are held for sale rather than at their original cost.

There are commonly three pillars to valuing business entities: comparable company analyses, discounted cash flow analysis, and precedent transaction analysis.

• **Discounted cash flow method** طريقة التدفق النقدي المخصوم

This method estimates the value of an asset based on its expected future cash flows, which are discounted to the present (i.e., the present value). This concept of discounting future money is commonly known as the time value of money. For instance, an asset that matures and pays \$1 in one year is worth less than \$1 today. The size of the discount is based on an opportunity cost of capital and it is expressed as a percentage or discount rate.

For a valuation using the discounted cash flow method, one first estimates the future cash flows from the investment and then estimates a reasonable discount rate after considering the riskiness of those cash flows and interest rates in the capital markets. Next, one makes a calculation to compute the present value of the future cash flows.

تقوم هذه الطريقة بتقدير قيمة أصل على أساس التدفقات النقدية المستقبلية المتوقعة ، والتي يتم خصمها إلى الحاضر (أي القيمة الحالية). يُعرف مفهوم خصم النقود في المستقبل على أنه القيمة الزمنية للنقود. فعلى سبيل المثال، فإن الأصل الذي ينضج ويدفع دولارًا واحدًا في عام واحد يساوي أقل من دولار واحد حاليًا. يعتمد حجم الخصم على تكلفة الفرصة البديلة لرأس المال ويعبر عنه كنسبة مئوية أو معدل خصم.

- **Guideline companies method** طريقة الشركات الإرشادية

This method determines the value of a firm by observing the prices of similar companies (called "guideline companies") that sold in the market. Those sales could be shares of stock or sales of entire firms. The observed prices serve as valuation benchmarks. From the prices, one calculates price multiples such as the price-to-earnings, one or more of which used to value the firm. For example, the average price-to-earnings multiple of the guideline companies is applied to the subject firm's earnings to estimate its value.

Many price multiples can be calculated. Most are based on a financial statement element such as a firm's earnings (price-to-earnings) or book value (price-to-book value) but multiples can be based on other factors such as price-per-subscriber.

تحدد هذه الطريقة قيمة الشركة من خلال مراقبة أسعار شركات مماثلة (تسمى "الشركات الإرشادية") التي تباع في السوق. هذه المبيعات يمكن أن تكون حصص الأسهم أو مبيعات الشركات بأكملها. تعمل الأسعار المرصودة كمعايير تقييم. من الأسعار، يحسب المرء مضاعفات السعر مثل السعر إلى الأرباح واحد أو أكثر منها يستخدم في تقييم الشركة. على سبيل المثال، يتم تطبيق متوسط مضاعف السعر على الأرباح للشركات الإرشادية على أرباح الشركة موضوع تقدير قيمتها.

- **Net asset value method** طريقة صافي قيمة الأصول

The third-most common method of estimating the value of a company looks to the assets and liabilities of the business. At a minimum, a solvent company could shut down operations, sell off the assets, and pay the creditors. Any cash that would remain establishes a floor value for the company. This method is known as the net asset value or cost method.

الطريقة الثالثة الأكثر شيوعاً لتقدير قيمة الشركة تتطلع إلى أصول وخصوم الشركة. كحد أدنى، يمكن لشركة ذات ملاءة مالية إيقاف العمليات، وبيع الأصول، ودفع الدائنين. وإن أي نقد من شأنه أن يبقى يؤسس لقيمة أساسية للشركة. تُعرف هذه الطريقة باسم قيمة صافي الأصول أو طريقة التكلفة.

❖ Analysis in an Efficient Market التحليل في سوق كفؤة

- Efficient Market Hypothesis فرضية كفاءة السوق

EMH Definition

The Efficient Market Hypothesis (EMH) essentially says that all known information about investment securities, such as stocks, is already factored into the prices of those securities. Therefore, assuming this is true, no amount of analysis can give an investor an edge over other investors.

فرضية كفاءة السوق: تقول فرضية السوق الفعالة (EMH) بشكل أساسي أن جميع المعلومات المعروفة عن الأوراق المالية الاستثمارية ، مثل الأسهم ، قد أخذت بالفعل بعين الاعتبار في أسعار تلك الأوراق المالية. لذلك ، بافتراض أن هذا صحيح ، لا يمكن لأي قدر من التحليل أن يمنح المستثمر ميزة على المستثمرين الآخرين.

The EMH considers how much information about a company and its stock price is readily available to investors. The less information there is, the weaker EMH is, and the more information there is, the stronger EMH is."

يعتبر EMH مقدار المعلومات عن الشركة وسعر سهمها متاحًا للمستثمرين. كلما كانت المعلومات أقل ، كلما كان ضعف EMH ، وكلما زادت المعلومات ، كلما كانت قوة إدارة المخاطر أقوى."

EMH does not require that investors be rational; it says that individual investors will act randomly but, as a whole, the market is always "right." In simple terms, "efficient" implies "normal." For example, an unusual reaction to unusual information is normal.

- Defining the Forms of EMH تعريف أشكال فرضيات كفاءة السوق

There are three forms of EMH: Weak, Semi-strong and Strong. Here's what each says about the market.

هناك ثلاثة أشكال من EMH: ضعيف ، شبه قوي وقوي. إليك ما يقوله كل منها عن السوق.

A. Weak Form EMH:

Suggests that all past information is priced into securities. Fundamental analysis of securities can provide an investor with information to produce returns above market averages in the short term but there are no "patterns" that exist. Therefore fundamental analysis

does not provide long-term advantage and technical analysis will not work.

تشير إلى أن جميع المعلومات السابقة يتم تسعيرها في الأوراق المالية. يمكن أن يوفر التحليل الأساسي للأوراق المالية للمستثمر المعلومات اللازمة لإنتاج عوائد أعلى من متوسطات السوق على المدى القصير ولكن لا توجد "أنماط" موجودة. لذلك لا يوفر التحليل الأساسي ميزة على المدى الطويل ولن يعمل التحليل الفني.

B. Semi-Strong Form EMH:

Implies that neither fundamental analysis nor technical analysis can provide an advantage for an investor and that new information is instantly priced in to securities.

C. Strong Form EMH:

Says that all information, both public and private, is priced into stocks and that no investor can gain advantage over the market as a whole. Strong Form EMH does not say some investors or money managers are incapable of capturing abnormally high returns but that there are always outliers included in the averages.

Efficient Market Hypothesis

1. The EMH argues that stock prices incorporate relevant market information arriving at fair prices.
2. Weak form EMH argues that stock prices incorporate past public information.
3. Semi-strong form argues that stock prices incorporate all current public information.
4. Strong form argues that stock prices incorporate all information including private insider knowledge.

1. تستند نظرية كفاءة السوق إلى أن أسعار الأسهم تتضمن معلومات السوق ذات الصلة والتي تصل بالأسعار إلى الاسعار العادلة.

2. نموذج السوق الضعيفة تشير إدارة البيانات المالية إلى أن أسعار الأسهم تضم المعلومات العامة السابقة.

3. نموذج السوق شبه القوية يقول بأن أسعار الأسهم تدمج جميع المعلومات العامة الحالية.

4. نموذج السوق القوية يقول بأن أسعار الأسهم تشمل جميع المعلومات بما في ذلك المعرفة الداخلية الخاصة.

❖ Financial Reporting and Analysis

التحليل والتقرير المالي

The users of financial reporting information include investors, creditors, analysts, and other interested parties. There are several sources of

information available to users. These include statutory financial reports and alternative information sources such as economic information and industry information.

يشمل مستخدمو بيانات التقارير المالية المستثمرين والدائنين والمحللين وغيرهم من الأطراف المعنية. هناك العديد من مصادر المعلومات المتاحة للمستخدمين. وتشمل هذه التقارير المالية القانونية ومصادر المعلومات البديلة مثل المعلومات الاقتصادية والمعلومات الصناعية.

- **Reporting Environment** بيئة التقرير

Financial reporting is shaped by the interplay of the parties in society that have an interest in this information, including the preparers (managers of reporting companies) and users of the information, information intermediaries, regulators and auditors. Together, these parties constitute the financial reporting environment.

يتم تشكيل التقارير المالية من خلال تفاعل الأطراف في المجتمع التي لها مصلحة في هذه المعلومات ، بما في ذلك المعدين (مديري شركات التقرير) ومستخدمي المعلومات والوسطاء المعلوماتيين والهيئات التنظيمية ومدقي الحسابات. وتشكل هذه الأطراف مجتمعة بيئة الإبلاغ المالي.

Financial reporting includes financial statements and other forms of communication that provide financial information, such as earnings announcements, analyst presentations, press releases and prospectuses. In market-based economies, financial reporting information is used by external parties for at least two reasons: to evaluate investment opportunities (ex-ante) and to monitor management (ex-post).

تتضمن التقارير المالية البيانات المالية وأشكال الاتصال الأخرى التي توفر معلومات مالية ، مثل إعلانات الأرباح ، عروض المحللون ، النشرات الصحفية والنشرات في الاقتصادات القائمة على السوق ، يتم استخدام معلومات التقارير المالية من قبل أطراف خارجية لسببين على الأقل: تقييم فرص الاستثمار (السابق ex-ante) ومراقبة الإدارة (اللاحق ex-post).

The ex-ante demand for this type of information arises from information asymmetry between the outside investors (users of the information) and the managers of the company (preparers of the information). Information asymmetry exists because managers typically have more information about the company's expected performance than outsiders. If outside capital providers lack credible information to evaluate investment opportunities, an efficient allocation of resources in a market economy is impeded. An important role of financial reporting information is therefore to mitigate information

asymmetry and provide information that is useful to assess future cash flow prospects and make investment decisions (valuation role).

The second, ex-post role of financial information emerges from agency problems between managers and outside capital providers. Once the investment is made, potential conflicts of interest between investor (owner) and management arise. In an attempt to alleviate these problems, investors use financial information to monitor management's behavior. According to this stewardship role of information, the objective of financial reporting is to facilitate contracting. Together the two distinct, but related, roles of financial reporting provide an information based perspective on financial reporting, where investors (users) have information demands and managers (preparers) have incentives to supply financial information. From this point of view, the financial reporting environment is shaped by the extent of information asymmetry and agency problems (Beyer et al., 2010).

Although financial reports have been published for hundreds of years, the regulation of these reports is a relatively recent phenomenon. In most developed economies, the regulation of accounting commenced in the early twentieth century, when the separation of ownership and management of business entities was on the rise and the information asymmetry problem emerged. Accounting systems evolved independently in most countries which led to considerable variation among countries. Depending on specific characteristics of the legal system, tax regulation and the financing system, countries developed different regulatory institutions and different accounting rules.

By the end of the twentieth century, when capital markets became more and more international, the regulatory diversity was considered to be a problem. A demand arose for international accounting standards, which would facilitate the international comparison of financial information. Currently, the vast majority of countries use some form of international accounting standards rather than domestically developed standards. The rise of international accounting standards, especially during the past decade, has shaped the assumptions on which financial reports are based as well as their primary objective.

The most influential accounting standards in the world, IFRS and US GAAP3 , state objectives in their underlying frameworks that emphasize the central role of corporate reporting for the functioning of an efficient financial market. The main concern is the usefulness of financial reporting information for investment purposes. The international consensus with respect to this decision usefulness approach is an illustration of the influence that regulators have over the shape of financial reports. In order for the financial reports to be useful they have to be credible. The regulation of financial reports and the use of accounting standards are not sufficient to achieve that. Auditors play a key role in this respect. External auditors can provide the outside users of financial reports with independent assurance that the disclosed information is credible. In many countries, public interest companies are required to have their financial statements certified by an independent auditor. Assuming higher quality audits are more costly, companies have an incentive to select an audit firm that provides the optimal level of quality. Understanding this selection process would enhance our understanding of the role that auditors play in the financial information environment.

Finally, information intermediaries, such as financial analysts, rating agencies and the financial press, generate new information about business entities and increase their visibility. For example, sell side analysts disseminate the information prepared by companies and provide additional information by means of their reports and recommendations. The role of the financial press as intermediary has not received much attention, although it spreads news from financial reports to the broader public affecting the companies' information environment. But in addition to the informational role, the scrutiny of the press may also have a disciplining effect on company's financial reporting strategy.

- **Statutory Reporting** التقرير القانوني

Statutory reporting is the mandatory submission of financial and non-financial information to a government agency. Each industry has its own set of laws and regulations that mandate reports. In many countries, International Financial

Reporting Standards (IFRS) has replaced country-specific Generally Accepted Accounting Principles for statutory reporting.

التقارير القانونية هي التقديم الإلزامي للمعلومات المالية وغير المالية إلى وكالة حكومية، إذ أن كل صناعة لديها مجموعة من القوانين واللوائح الخاصة بها التي تفوض التقارير. في العديد من البلدان ، استبدلت معايير التقارير المالية الدولية (IFRS) بدلا عن مبادئ المحاسبة المقبولة عموماً الخاصة بالبلد فيما يتعلق بالإبلاغ القانوني.

- **Definition of Statutory Financial Statements**

Statutory Financial Statements means financial statements required to be filed by the Operating Subsidiaries with insurance regulatory authorities under applicable insurance regulatory laws, including the Annual Financial Statement and the Quarterly Financial Statements for each such Operating Subsidiary.

البيانات المالية النظامية تعني البيانات المالية المطلوبة التي يتم تقديمها من قبل الشركات التابعة للهيئات التنظيمية للتأمين بموجب قوانين التأمين المعمول بها ، بما في ذلك الكشف المالي السنوي والكشوفات المالية ربع السنوية لكل من هذه الشركات التابعة.

- **Definition of Statutory Financial Statements in Loan and Security Agreement**

Statutory Financial Statements means, in relation to any member of the Group, those financial statements required to be prepared in respect of that member of the Group in its jurisdiction of incorporation and prepared in accordance with generally accepted accounting principles.

- **Definition of Statutory Financial Statements in Credit Agreement**

Statutory Financial Statements means all financial statements of the Sponsor's subsidiary insurance companies for each relevant period, prepared in accordance with Applicable Accounting Principles.

القوائم المالية النظامية تعني جميع القوائم المالية لشركات التأمين التابعة للجهة المسؤولة عن كل فترة ذات صلة ، تم إعدادها وفقاً لمبادئ المحاسبة المعمول بها.

- **Factors Affecting Statutory Financial Reports**

العوامل المؤثرة في التقارير المالية النظامية

Statutory financial reports are prepared according to the set of generally accepted accounting principles (GAAP). A regulatory hierarchy that includes the Securities and Exchange Commission, the American Institute of Certified Public Accountants, and the Financial Accounting Standards Board promulgates these principles. GAAP is also influenced in some industries by specialized industry practices. Managers prepare the statutory financial reports. Thus, the reports are subject to manipulation based on incentives of managers to present the company in its best light.

يتم إعداد التقارير المالية القانونية وفقاً لمجموعة المبادئ المحاسبية المقبولة عمومًا (GAAP). وينص الهيكل التنظيمي لكل من هيئة الأوراق المالية والبورصة (SEC) ، والمعهد الأمريكي للمحاسبين القانونيين المعتمدين (AICPA) ، ومجلس معايير المحاسبة المالية (FASB) على العمل بهذه المبادئ. كذلك تتأثر المبادئ المحاسبية المقبولة عمومًا (GAAP) في بعض الصناعات بممارسات صناعية متخصصة. يقوم المدبرون بإعداد التقارير المالية القانونية. وبالتالي ، فإن التقارير تخضع للتلاعب استنادًا إلى حوافز المديرين على تقديم الشركة في أفضل حالاتها.

There are many of external and internal factors effected on financial analysis, we can briefly mention some of them as follow:

هناك العديد من العوامل الخارجية والداخلية التي تؤثر على التحليل المالي ، يمكننا أن نذكر باختصار بعضها منها وكما يأتي.

i. Enterprise Ownership **المالكين وإدارة المنشأة**

1. Managers have the main responsibility for ensuring fair and accurate financial reporting by a company.
2. Managers have discretion in financial reporting in most cases. This discretion may result from either of two sources. First, managers often have a choice between alternative generally accepted rules in accounting for certain transactions. Second, managers often have to make estimates of uncertain future outcomes. Each of these managerial judgments creates managerial discretion.
3. Monitoring and control mechanisms include SEC oversight, internal and external auditor review, corporate governance such as Board of Director

subcommittees assembled to oversee the audit and financial reporting, and the omnipresent threat of litigation.

4. Managers have several potential incentives to manage earnings.
 - a. First, managers that earn bonus payments as a function of reported earnings may manage earnings to maximize their bonus.
 - b. Second, if the company is subject to debt contract constraints (debt covenants) such as minimum net income, minimum working capital, minimum net worth, or maximum debt levels then the manager might have incentive to manage earnings to minimize the probability that the company will violate any of the debt covenant constraints.
 - c. Third, the company might choose to manage earnings because of potential stock price implications.
 - d. Forth, coming merger or security offering, or plans to sell stock or exercise options. Managers also smooth income to lower market perceptions of risk and to decrease the cost of capital
5. There are several popular earnings management strategies:
 - a. First, managers often adhere to a strategy of increasing income where latitude exists. The motivation is to portray the success of the company more favorably.
 - b. Second, managers might take a big bath. This strategy involves taking all discretionary losses in the current period.
 - c. Third, managers might follow a strategy of income smoothing in which slightly higher than usual earnings are reduced in line with the trend of earnings and slightly lower than usual earnings are increased in line with the trend of earnings.
6. Earnings management is the “purposeful intervention by management in the earnings determination process, usually to satisfy selfish objectives”.
7. There are powerful incentives at work, which motivate companies and their employees to engage in income smoothing.

ii. Finance and capital markets الأسواق المالية والتمويل

1. The Securities and Exchange Commission SEC serves as an advocate for investors. As such, the SEC requires registrant companies to file periodic standard reports. These reports allow the SEC to oversee the financial

reporting activities of the company and allow the SEC to make key financial information available to all investors.

تعمل هيئة الأوراق المالية والبورصة (SEC) كجهة داعمة للمستثمرين. فعلى سبيل المثال ، تطلب لجنة الأوراق المالية (SEC) من شركات المسجلة في السوق إعداد تقارير دورية معيارية . تسمح هذه التقارير لـ (SEC) بالإشراف على أنشطة التقارير المالية للشركة والسماح لـ (SEC) بإتاحة المعلومات المالية الرئيسية لجميع المستثمرين.

2. Financial intermediaries (analysts) play an important role in capital markets. They are an active and sophisticated group of users that provide useful information to market participants.
3. Market approach: As the name implies, this approach directly or indirectly uses prices from actual market transactions. Sometimes, market prices may need to be transformed in some manner in determining fair value.

iii. Accounting Profession المهنة المحاسبية

The accounting profession currently establishes accounting standards. The Financial Accounting Standards Board is currently the primary rule making body. The SEC and the AICPA oversee the activities of the FASB. The FASB proposes rules by first issuing a discussion memorandum.

تقوم مهنة المحاسبة حالياً بوضع معايير المحاسبة. و حالياً مجلس معايير المحاسبة المالية هو هيئة صنع القواعد الأولية. يشرف هيئة الأوراق المالية والبورصة (SEC) والمعهد الأمريكي للمحاسبين القانونيين المعتمدين (AICPA) على أنشطة مجلس معايير المحاسبة المالية. ويقترح مجلس معايير المحاسبة المالية (FASB) القواعد من خلال إصدار مذكرة مناقشة لأول مرة.

iv. Economic growth and development نمو وتطور الاقتصاد

1. The two basic income concepts are economic income and permanent income. Economic income is typically determined as cash flow during the period plus the change in the present value of expected future cash flows, typically represented by the change in the fair value of the business's net assets. Permanent income (also called sustainable income or recurring income) is the stable average income that a business is expected to earn over its life, given the current state of its business conditions. Economic income measures change in shareholder value and is useful in evaluating the total shareholder.
2. Economic income measures the net change in shareholder value during a period.
3. Accounting income is the excess of revenues and gains over expenses and losses measured using accrual accounting.

4. Economic income is a measure of the change in shareholder value over a period of time. Permanent income is the normal, recurring amount of income that a company is able to earn each period. Accounting income has aspects of both.
5. The permanent component of accounting income is the portion of total earnings that is expected to persist indefinitely (recur). Revenues and cost of goods sold components are largely permanent income components.
6. Value irrelevant income components have no economic content and, as the name suggests, have no effect on the value of the company.
7. Core income refers to a current period's recognized income from which all transitory components have been removed.
8. Some of the major adjustments to net income for determining economic income are including various unrealized gains and losses that are included in other comprehensive income, such as unrealized gains/losses on marketable securities or net pension assets.
9. Following are some of the circumstances that can point to areas of high audit risk:
 - a. Growth industry or company with need for continuing earnings growth to justify high market price or to facilitate acquisitions.
 - b. Company in difficult financial condition requiring financing urgently and frequently.
 - c. Company with high market visibility issuing frequent progress reports and earnings estimates.
 - d. Management dominated mostly by one or a few strong-willed individuals.
 - e. Personal financial difficulties of members of management.
 - f. Deteriorating operating performance.
 - g. Excessively complex capital structure.
 - h. Management which has displayed a propensity for earnings manipulation. Problem industry displaying weaknesses, in such areas as receivable collection, inventories, contract cost overruns, dependence on few products, etc.
 - i. Dealings with insiders on related parties or stockholder lawsuits.
 - j. Turnover of key officers, legal counsel or auditors.

v. Inflation التضخم

Historical cost model generates more reliable accounting information, since all numbers are based on actual transaction, i.e. the exact price paid by the company at acquisition; Fair value model is more relevant, as it reflects market participant (e.g., investor) assumptions about the present value of expected future cash inflows or outflows arising from an asset or a liability.

vi. Legal System النظام القانوني

1. To manipulate the financial reports is limited by several monitoring and enforcement mechanisms including the SEC, internal and external auditors, corporate governance, and the possibility of litigation against the company and/or the managers.
2. Statutory financial reports are not the only source of information about a company that is available to interested parties outside of the organization. Other sources include forecasts and recommendations of information intermediaries (analysts), general economic information, general information about the company's industry, and news about the company. Also, management will often provide voluntary disclosure of information that is not required by GAAP or other regulatory mandate.

1. التلاعب في التقارير المالية محدود من خلال العديد من آليات المراقبة والتنفيذ بما في ذلك لجنة الأوراق المالية والبورصات والمراجعين الداخليين والخارجيين وحوكمة الشركات وإمكانية المقاضاة ضد الشركة و / أو المديرين.

2. التقارير المالية القانونية ليست هي المصدر الوحيد للمعلومات حول شركة متاحة للأطراف المهمة خارج المنظمة. تتضمن المصادر الأخرى تنبؤات وتوصيات وسطاء المعلومات (المحللين) ، والمعلومات الاقتصادية العامة ، والمعلومات العامة حول صناعة الشركة ، والأخبار عن الشركة. كما سنقوم الإدارة في الغالب بتوفير الإفصاح التطوعي عن المعلومات التي لا تتطلبها المبادئ المحاسبية المقبولة عموماً أو أي اختصاصات تنظيمية أخرى.

vii. Accounting regulation النظام المحاسبي المطبق

1. Earnings announcements provide summary information about the company's performance and financial position during the quarter and/or year just ended. The earnings announcement contains much less detail than the financial statements, which are only released after they are prepared and audited.

توفر إعلانات الأرباح معلومات موجزة عن أداء الشركة ومركزها المالي خلال الربع و / أو العام المنتهي. يحتوي إعلان الأرباح على تفاصيل أقل بكثير من القوائم المالية ، والتي يتم إصدارها فقط بعد إعدادها ومراجعتها.

2. Under the historical cost model, asset and liability values are determined on the basis of prices obtained from actual transactions that have occurred in the past. Under the fair value accounting model, asset and liability values are determined on the basis of their fair values (typically market prices) on the measurement date (i.e., approximately the date of the financial statements).
3. In accounting, conservatism states that when choosing between two solutions, the one that will be least likely to overstate assets and income should be selected. The two main advantages of conservatism are that:
 - a. it naturally offsets the optimistic bias on the part of management to report higher income or higher net assets; and
 - b. it is important for credit analysis and debt contracting because creditors prefer financial statements that highlight downside risk.
4. The two types of conservatism are unconditional and conditional conservatism. Unconditional conservatism understates assets (or income) regardless of the economic situation.
5. Finance and accounting researchers have established that accounting information is indeed relevant for decision making. For example, researchers have shown that accounting earnings explain much (50% - 70%) of the fluctuation in stock price changes.
6. Financial statement information has several limitations.
 - First, financial statements are released well after the end of the quarter and/or fiscal year. Thus, they are not entirely timely.
 - Second, they are only released on a quarterly basis. Investors often have a need for information more often than just on a quarterly basis. Thus, financial statements are limited by the relative infrequency of their release.
 - Third, financial statements have little forward-looking information. Investors must use the largely backward looking financial statements to generate their own beliefs about the future.
 - Fourth, financial statements are prepared using rules that are promulgated with a relevance and reliability trade-off. The need for

reliability causes the relevance of the information to be, in certain instances, compromised.

- Fifth, the usefulness of financial statement information may also be limited by the bias of the managers that prepare the statements. For example, managers in certain instances may have incentives to overstate or understate earnings, assets, liabilities, and/or equity.
7. Short-term accruals arise because of the timing differences between income and cash flows.
 8. Cash flow measures of performance almost always suffer from the timing and matching problems that accrual accounting was developed to mitigate.
 9. Cash flows are highly reliable because the receipt or payment of cash measures the cash flows. Accounting net income is less reliable than cash flows because calculating net income often requires estimations of future outcomes.
 10. Income (also referred to as earnings or profit) summarizes, in financial terms, the net effects of a business's operations during a given time period. Economic income differs from cash flow because it includes not only current cash flows but also changes in the present value of future cash flows. Similarly, accounting income considers not only current cash flow but also future cash flow implications of current transactions.
 11. Preparers of financial statements must make certain estimates of uncertain outcomes and make judgments about other uncertainties.
 12. Accounting analysis is the process of evaluating the extent to which a company's accounting numbers reflect economic reality.
 13. Accounting analysis involves several interrelated processes and tasks. First, the analyst must evaluate the quality of the financial information. Second, the analyst must adjust the financial information based on the findings in the evaluation of the quality of the financial information.
 14. Accounting distortions are deviations of reported information in financial statements from the underlying business reality. These distortions arise from accounting policy choices, errors in estimation, the trade-off between relevance and reliability, and the latitude in application.
 15. Earnings management may take many forms. Listed here are some forms to which the analyst should be particularly alert:

- a. Changing accounting methods or assumptions with the objective of improving or modifying reported results.
 - b. Misstatements, by various methods, of inventories as a means of redistributing income among the years.
 - c. The offsetting of extraordinary credits by identical or nearly identical extraordinary charges as a means of removing an unusual or sudden injection of income that may interfere with the display of a growing earnings trend.
16. The "quality" of earnings of an enterprise is a measure of the degree of care and unbiased judgment with which they are determined, the extent to which all important and necessary costs have been provided for and the variability which industry conditions subject these earnings to. Analysts must assess the quality of earnings in order to render them comparable to those of other enterprises. The quality of earnings depends, among other factors, on:
17. The degree of conservatism with which the estimates of present and future conditions are arrived at. That is, the degree of risk that real estimates or assumptions may prove over-optimistic or downright unwarranted and misleading.
18. Management's discretion in applying GAAP. This requires the analysis of discretionary and future directed costs.
19. The relation between earnings and business risk. The stability and the growth trend of earnings as well as the predictability of factors that may influence their future levels.

viii. Accounting and Standards Principles المبادئ والمعايير المحاسبية

1. Contemporary generally accepted accounting principles (GAAP) is the set of rules and guidelines of financial accounting that are currently mandated as the acceptable rules and guidelines for preparing financial reports for the external users of financial information.
2. Timing and matching problems make short-term performance measurement difficult and often less meaningful.
3. Accrual accounting calls for recognizing revenue when the revenue is both earned and realizable. Revenues are earned when the company delivers the products or services. Revenues are realized when cash is received.

4. Accrual accounting requires that the economic efforts required to generate revenues be matched against the related revenues.
5. Accrual accounting is a superior measure of performance and financial position relative to cash flows. The factors that give rise to this superiority are the more appropriate timing of revenue recognition and the more precise matching of costs against these revenues.
6. Accrual-accounting based income measures repeatedly out-perform cash flow-based measures such as operating cash flow or free cash flow at explaining changes in stock price.
7. Accounting principles can, in certain cases, create differences between financial statement information and economic reality.
8. Under the historical cost model, asset and liability values are determined on the basis of prices obtained from actual transactions that have occurred in the past. Under the fair value accounting model, asset and liability values are determined on the basis of their fair values (typically market prices) on the measurement date (i.e., approximately the date of the financial statements).
9. The fair value accounting periodically updates asset/liability values even in the absence of explicit transactions.
10. Under historical cost accounting, income is the accountants estimate of what an enterprise has “earned” during a period. Under fair value accounting, income is merely the residual amount that measures the net change in the fair values of assets and liabilities.
11. Formally, SFAS 157 defines fair value as exchange price, that is, the price that would be received from selling an asset (or paid to transfer a liability) in an orderly transaction between market participants on the measurement date.
12. Financial assets/liabilities are easier to fair value. This is because they are more homogenous and usually have liquid markets with traded quotes.
13. Some of the issues that the analyst needs to consider when evaluating fair value accounting are:
 - a. balance sheet and not income statement is the most important statement under fair value accounting;
 - b. income under fair value accounting measures change in net assets, it is not a measure of profitability and cannot be used for directly valuing an enterprise;

- c. use of fair value assumptions.
14. Different persons use accrual accounting information and cash flow information to varying degrees in their valuation models. Accrual accounting information is often used in valuation models based on price to earnings multiples, market to book multiples, and abnormal accounting earnings-based valuation models. Cash flow information is used in such models as discounted dividend and discounted cash flow models.
 15. Accounting concepts and standards are subject to individual judgments and incentives in the promulgation process. Accounting regulation is proposed by accounting regulators and then commented upon by the financial reporting community.
 16. Auditing standards are broad generalizations that come in three sets:
 - a. General standards define the personal qualities required of the independent CPA.
 - b. Standards of fieldwork cover the actual execution of the audit and cover the planning of the work, evaluation of the client's system of internal control, and the quality and sufficiency of the evidence obtained.
 - c. Reporting standards govern the preparation and presentation of the auditor's report.
 17. Auditing procedures are tests applied to a company's accounts to develop evidence to support or refute the hypothesis that the reported numbers are prepared according to generally accepted accounting principles and are fairly presented.
 18. The auditor's opinion deals with:
 - a. The fairness of presentation of the financial statements,
 - b. Their conformity with generally accepted accounting principles, and
 - c. Disclosure when a material change in accounting principles has occurred.
 19. Auditing is based on a sampling approach to the data under audit. Statistical sampling, while lending itself to many applications in theory, is more limited in actual practice.
 20. The auditor maintains that s/he expresses an opinion on management's statements. Auditors are very insistent on this point and attach considerable

importance to it. It means that, normally, the auditor did not prepare the financial statements nor did the auditor choose the accounting principles embodied in them.

ix. Other Factors عوامل أخرى

There are many factors that affect regular financial reporting: legal requirements, specialized accounting standards, tax laws and the financial structure of companies. Some of these variables can be controlled, while others cannot be controlled, resulting in a difference in the calculation of profits. For example, DAFSA, a financial analysis firm, uses the following method to calculate profits:

$$s.m = 1 - (d.m - d.r) \div [d.m]$$

This means that:

sm = indicator of measurement behavior

dm = Adjusted earnings

dr = disclosed earnings

$$\text{Measurement behavior} = (\text{Adjusted earnings} - \text{disclosed earnings}) \div \text{Adjusted earnings}$$

The measure of profit pessimistic when the indicator ($s.m > 0.95$), and can be a measure neutral when the indicator ($1 \leq s.m \leq 0.95$) and be optimistic when the indicator ($s.m > 1.05$).

• عوامل أخرى

هنالك العديد من العوامل التي تؤثر في التقارير المالية النظامية وهي المتطلبات القانونية ، والمقاييس المحاسبية التخصصية ، وقوانين الضرائب والهيكل المالي للشركات. يمكن التحكم في بعض هذه المتغيرات ، في حين لا يمكن التحكم في البعض الآخر ، مما يؤدي إلى التباين في احتساب الأرباح. فعلى سبيل المثال تستخدم شركة (DAFSA) ، وهي مؤسسة تعنى بالتحليل المالية الطريقة التالية لاحتساب الأرباح :-

$$s.m = 1 - (d.m - d.r) \div [d.m]$$

حيث أن :-

s.m = سلوك المقاييس (indicator of measurement behavior).

d.m = الأرباح المعدلة (adjusted earnings).

d.r = الأرباح المنشورة أو المعلننة (disclosed earnings).

أي أن :-

(الأرباح المعدلة - الأرباح المنشورة)

سلوك المقاييس = 1 -

الأرباح المعدلة

يكون مقياس الربح متشائم (pessimistic) حينما يكون المؤشر (س. م > 0,95)، ويمكن أن يكون المقياس محايد (neutral) حينما يكون المؤشر (1 ≤ س م ≤ 0.95) ويكون متفائل (optimistic) حينما يكون المؤشر (س م < 1.05).

Example

An Egyptian company operating in Iraq announced that annual profits, which amounted to (5,000,000) Egyptian pounds during 2019, has provided financial statements to the tax authorities by the Egyptian re-preparation of financial statements and adjusted in accordance with the laws in in Egypt.

Required: calculate the behavior of the scale, assuming the following: -

(1) adjusted earnings (6,000,000) pounds.

(2) adjusted earnings (4,000,000) pounds.

1 - The first assumption

$$S m = 1 - (6,000,000 - 5,000,000) \div 6,000,000 = 1 - 0.16 = 0,84$$

S m = 0.84 which is less than (0.95) any (pessimistic).

2 - The second assumption

$$S M = 1 - (4,000,000 - 5,000,000) \div 4,000,000 = 1 - (-1,000) / 4,000$$

$$S m = 1 - (- 0.25) = 1 + 0.25 = 1.25$$

S M = 1.25, that is more than of 1,05 (optimistic)

مثال

أعلنت إحدى الشركات المصرية العاملة في العراق أرباحها السنوية التي بلغت (5000000) جنيه مصري خلال عام 2019م، وقد قدمت القوائم المالية إلى السلطات الضريبية المصرية التي قامت بإعادة إعداد القوائم المالية وتعديلها بما يتفق مع القوانين في مصر.

المطلوب: احتساب سلوك المقياس بافتراض الآتي :- (1) الأرباح المعدلة (6000000) جنيه (2) الأرباح المعدلة (4000000) جنيه.

1- الافتراض الأول

$$س م = 1 - [6000000 \div (5000000 - 6000000)] - 1 = 0,84 = 0,16 - 1$$

س م = 0,84 وهو أقل من (0,95) أي (متشائم).

2- الافتراض الثاني

$$س م = 1 - [4000000 \div (5000000 - 4000000)] - 1 = 4000000/(1000000) - 1 = 1,25 = 0,25 + 1 = (0,25 -) - 1$$

س م = 1,25 وهو أكبر من 1,05 (متفائل)

Questions

1. Describe the Analysis Tools.
2. What are the Valuation Models?
3. Analysis in an Efficient Market
4. What are the outsiders related with the Financial Reporting and Analysis?
5. Explain the Reporting Environment .
6. What is the meaning of Statutory Financial Reports ?
7. Explain the Factors Affecting Statutory Financial Reports.



CHAPTER (4)

Fund Flow Statement

كشف التدفق المالي

LEARNING OBJECTIVES

الأهداف التعليمية:

After reading this chapter, you can certainly be able to understand the following subjects :

- ❖ **Concept of Fund**
- ❖ **Fund Flow Statement (Meaning)**
- ❖ **Important Definitions of Fund Flow Statements**
- ❖ **Uses/Advantages of Fund Flow Statement (FFS):**
- ❖ **Limitations / Disadvantages of Fund Flow Statement (FFS):**
- ❖ **Preparation of Fund Flow Statement**

CHAPTER (4)

Fund Flow Statement

كشف التدفق المالي

❖ **Concept of Fund** : مفهوم المال

- Fund refers to economic value of assets expressed in terms of money.
- In a broader sense, fund includes all resources i.e. total resources used in the business whether in the form of men, materials, money, machinery, methods etc.
- However, in the narrow sense, funds means only cash resources of the business.
- Funds is also taken as synonymous to working capital which is the excess of current assets over current liabilities.

❖ **Fund Flow Statement (Meaning)** معنى كشف تدفق الأموال

- Fund flow statement is a statement showing sources and application of funds for a period of time.
- Fund flow statement is one of the valuable tool in the hand of management to evaluate the uses of funds by the organization and in determining as to how these uses are financed.
- Fund flow statement is statement which discloses the analytical information about the different sources of fund and the application of the same in the specific accounting cycle.
- In other words, it incorporates those transactions which change either the amount of current assets or current liabilities (in the form of increased or decreased working capital) or fixed assets, long-term loans and equity capital.

- Fund flow statement is also called the 'Statement of Sources and Application of Fund 'Movement Funds Statement'.
- Fund flow statement attempts at providing a link in the completion of final statements .
- Fund flow statement is a statement in summary form that indicates the changes occurring in items of financial condition between two different balance sheet dates .

❖ **Important Definitions of Fund Flow Statements :**

تعريف مهمة لكشف تدفق الأموال

(a) "The Fund Flow Statement describes the sources from which additional funds were derived and the uses to which these funds were put".

يصف كشف تدفق الأموال المصادر التي تم الحصول منها على أموال إضافية والاستخدامات التي وضعت فيها هذه الأموال."

(b) "The Fund Flow Statement is a statement of sources and application of funds is a technical device designed to analyze the changes in the financial condition of a business enterprise between two dates.

❖ **Uses/Advantages of Fund Flow Statement (FFS)**

استخدامات / مزايا كشف تدفق الاموال

1. Fund flow statement is helpful in estimating the budgets or the amount of funds required in future for modernization and expansion programs.
2. Fund flow statement provides the information how the funds have been obtained from different sources, i.e. External, Internal etc. and how they have been spent.
3. Fund flow statement helps to know where did the profits go.
4. Fund flow statement leads to improvement in the rate of profit on assets by directing the flow of funds to those activities with higher margins.
5. Fund flow statement helps the management for declaration of dividends, planning of a dividend policy, or issue of bonus shares.
6. Fund flow statement helps in avoiding the situation of running out of funds by obtaining additional working capital, when required.
7. Fund flow statement helps in planning the temporary investment of idle funds and planning the repayment schedules of long-term debt.
8. Fund flow statement helps in planning for retirement of long-term debts.

9. Fund flow statement helps in assessing the relative points of strength and weakness of the organization.
10. Fund flow statement helps in financial planning, decision-making and allocating the resources for productive investments.

❖ **Limitations / Disadvantages of Fund Flow Statement (FFS)**

محددات / عيوب كشف تدفق الأموال

1. Non-fund transactions are ignored and hence it cannot provide full financial analysis unless supported by ratio analysis etc.
2. It is criticized for just re-arranging the financial information obtained from the financial statements.
3. It is historic statement and it does not indicate any price level changes.
4. It does not show any changes in working capital for which a separate statement has to be prepared.

❖ **Preparation of Fund Flow Statement** إعداد كشف تدفق الأموال

(a) Funds from Operations الأموال من العمليات

- The concept of funds from operations is extremely important.
- Fund from operations is the working capital flow arising out of operating activities.
- In calculating funds from operations, non-business expenses like dividend paid as well as non-cash expenses like depreciation etc. are added to the net profits shown by the Profit and Loss A/c.
- Similarly , non – cash as well as non - business income is deducted from net profits
- The method of finding out funds from operations is as follows :

Adjusted Profit and Loss A/c

Particulars	Particulars
To Non-cash Items : 1. Depreciation on fixed assets 2. Preliminary expenses written-off 3. Goodwill written-off 4. Discount on issue of shares and debentures written-off 5. Transfer to reserve 6. Proposed dividend	By Balance b/d (Opening Balance) By Non-operating Income : 1. Interest received 2. Profit on sale of fixed assets 3. Dividend received 4. Refund of taxation 5. Other items

7. Loss on sale of assets 8. Provision for taxation To Dividend Paid To Income Tax Paid To Balance c/d (Closing Balance)		By Funds from Operations (Balancing Figure)	
Total		Total	

- The funds from operations can also be calculated by preparing a statement.
- The items shown on the debit side of the adjusted Profit and Loss A/c. are added in the net profits while the items on the credit side are deducted from net profits.

(b) Statement of Changes in Working Capital كشف تغيرات راس المال العامل

- It shows net increase or decrease in working capital.
- In the funds flow statement, net increase in working capital is shown on the application side, while net decrease in working capital is shown on the sources side.
- In order to find out this figure, the following statement is prepared.

statement showing Changes in Working Capital

Particulars	Previous Year	Current Year	Increase/ Decrease in Working Capital
1.Current Assets			
Cash			
Debtors			
Bills Receivable			
Stock			
Prepaid expenses			
Income outstanding			
Short-term investments			
II. Current Liabilities:			
Creditors			
Bills payable			
Bank overdraft			
Expenses outstanding			
Short-term loans			
Total			

Net Increase / Decrease In Working Capital (1) - (II):

Notes:

- Working Capital = Current Assets - Current Liabilities.
- Increase in Current Assets means Increase in Working Capital.
- Decrease in Current Assets means Decrease in Working Capital.
- Increase in Current Liabilities means Decrease in Working Capital.

- Decrease in Current Liabilities means Increase in Working Capital.

(c) Funds Flow Statement كشف تدفق الأموال

1. Funds flow statement is a financial statement drawn to know the changes in financial position over the year.

Preformat of Fund Flow Statement:

Funds Flow Statement for the year ended on 31st March, 20XX

Sources	IQD	Application	IQD
1. Funds from business operations	-	1. Loss of funds due to operations	-
2. Issue of additional capital	-	2. Redemption of preference shares	-
3. Issue of debentures	-	3. Redemption of debentures	-
4. Sale of investments	-	4. Purchase of investments	-
5. Sale of Assets	-	5. Purchase of assets	-
6. Loans raised	-	6. Payment of loans	-
7. Non-trading receipts	-	7. Tax paid	-
8. Decrease in working capital	-	8. Dividend paid	-
		9. Non-trading payments	-
		10. Increase in working capital	-
Total	-	Total	-

Exercise No. 1

Prepare a Fund Flow Statement from the following balance sheets of ABC Company :

Particulars	January 1, 2018	December 31, 2018
	IQD	IQD
Cash	40,000	44,400
Accounts Receivable	10,000	20,700
inventories	15,000	15,000
Land	4,000	4,000
Buildings	20,000	16,000
Equipment	15,000	17,000
Accumulated Depreciation	(5,000)	(2,800)
Patents	1,000	900
Total Assets	100,000	115,200
Current Liabilities	30,000	32,000
Bills Payable	22,000	22,000
Bills Payable Discount	(2,000)	(1,800)

Capital Stock	35,000	43,500
Retained Earnings	15,000	19,500
Total Liabilities	100,000	115,200

Additional Information

1. Income for the period was IQD 10,000.
2. A building that cost IQD 4,000 and which had a book value of IQD 1,000 was sold for IQD 1,400.
3. The depreciation charge for the period was IQD 800.
4. There was an issue of IQD 5,000 of common stock.
5. Cash dividends of IQD 2,000 and stock dividends of IQD 3,500 were declared.

Solution :

Working Notes :

1) Computation of Profit on Sale of Building

Particulars	IQD
Acquisition Cost	4,000
Less : Depreciation to the date of sale (4,000 - 1,000) (Acquisition Cost - Undepreciated Book Value)	3,000
Undepreciated Book Value of Building Sold	1,000
Sales Price	1,400
Profit on Sale of Building	400

This IQD 400 has been credited to P & L A/c and IQD 10,000 profit for the year has been arrived at after credited profit of IQD 400. Since this profit is not an item of trading profit, it should be deducted from the profit figure to arrive at funds from operations. IQD 1,400 sales price of the building should be considered at an item of source of funds in the funds flow statement.

(2) Calculation of Funds from Operations :

Particulars	IQD
Income for the Period (Given)	10,000
Add : Depreciation	IQD 800
Add : Amortization of Patents	IQD 100
Add : Amortization of Discount Bonds	IQD 200
	11,100
Less : Profit on Sale of Building (W. N. -1)	400
Funds from Operations	10,700

(3) Schedule of Changes in Working Capital:

Particulars	1-1-2018	31-12-2018	Changes in Working Capital	
	(IQD)	(IQD)	Increase (IQD)	Decrease (IQD)
(A) Current Assets (CA):				
Cash	40,000	44,400	4,400	-
Accounts Receivable	10,000	20,700	10,700	-
Inventories	15,000	15,000	-	-
	65,000	80,100		
Less : (B) Current Liabilities (CL)				
Current Liabilities	30,000	32,000	-	2,000
Net Increase in Working Capital	35,000	48,100	15,100	2,000
				13,100

(4) Dr.		Equipment A/c		Cr.	
Particulars	IQD	Particulars	IQD		
To Balance b/d	15,000				
To Bank (Purchase)					
(Balancing Fig.)	2,000	By Balance c/d		17,000	
	17,000			17,000	

ABC Company
Funds Flow Statement (As on 31-12-2013)

Sources	IQD	Application	IQD
Funds from Operations	10,700	Purchase of Equipment	2,000
Sale of Building.	1,400	Equity Dividend (Cash)	2,000
Issue of Equity Shares	5,000	Increase in Working Capital	13,100
	17,100		17,100

Exercise No. 2

From the following Balance Sheets of 'Sammal Ltd.' **Prepare :**

- (a) Statement showing changes in Working Capital,
- (b) Funds Flow Statement.

Liabilities	2017 IQD	2018 IQD	Assets	2017 IQD	2018 IQD
Equity Share Capital	20,000	27,500	Machinery	9,000	22,500
General Reserve	2,500	4,000	Stock	10,000	11,500
Profit and Loss A/c	3,000	2,500	Land & Building	7,500	10,000
6% Debentures	5,000	10,000	Debtors	4,000	3,500
Creditors	4,500	7,250	Bills Receivable	3,250	4,200
Bills Payable	1,700	2,500	Goodwill	3,500	2,500
Unclaimed Dividend	300	250	Bank	2,250	2,800
Tax Provision	2,500	3,500	Discount on Issue of Debentures	—	500
	39,500	57,500		39,500	57,500

Other Information :

1. Depreciation on Machinery and Building for 2018 amounted to IQD 2,500 and IQD 1,500 respectively.
2. The above company acquired the assets of Small Co. for IQD 10,000 and paid the purchase consideration by issuing fully paid shares amounting to IQD 7,500 and by paying the balance in cash. The assets consists of Plant and Machinery IQD 5,500, Stock IQD 2,500, and Goodwill IQD 2,000.
3. Income tax paid during 2018 amounted to IQD 3,500.
4. Interim dividend paid during 2018 was IQD 5,000.
5. Debentures were issued at a discount of IQD 1,000.
6. Decided to value stock at cost, whereas previously the practice was to value stock at cost, less 20%. The stock according to the books was IQD 10,000 on 2017.

The stock on 2018 was IQD 11,500 and it was correctly valued at cost.

Solution :

(a) Statement showing Changes in Working Capital of 'Vimal Ltd.':

Particulars	2017 IQD	2018 IQD
Current Assets (CA): (Stock + Debtors + B/R + Bank)		
Less ; Current Liabilities (Creditors + B/P + Unclaimed Dividend)	22,000 6,500	22,000 10,000
Working Capital	15,500	12,000

Decrease in Working Capital = 15,500 - 12,000 = 3,500 (Source)

Now, Revalued Opening Stock (2017) = $10,000 \times \frac{100}{80} = 12,500$

This is clarified below : Let the Cost Price be IQD 100

Reduced Price = 100 - 20 = 80

Reduced Price	Cost Price
IQD	IQD
80	100
10,000	IQD
$\frac{100}{80} \times 10,000 = 12,500$	

(b) Funds Flow Statement of Sammal Ltd. for the year 2018 :

Sources	IQD	Application	IQD
Operational Profit	18,500	Purchase of Land and Building	4,000
Issue of Debentures	4,000	Purchase of Machinery	10,500
Decrease in Working Capital	3,500	Payment of Tax	6,500
		Interim Dividend	5,000
	26,000		26,000

Working Notes :

(1) Dr. Land and Building A/c Cr.

Particulars	IQD	Particulars	IQD
To Balance b/d	7,500	By Depreciation	1,500
To Bank - (Purchase) (Bal. Figure)	4,000	By Balance c/d	10,000
	11,500		11,500

(2) Dr. Plant and Machinery A/c Cr.

Particulars	IQD	Particulars	IQD
To Balance b/d	9,000	By Depreciation	2,500
To Bank - (Purchase)	5,500	By Balance c/d .	22,500
To Bank - (Purchase) (Bal. Figure)	10,500		
	25,000		25,000

(3) Dr. 6% Debenture A/c Cr.

Particulars	IQD	Particulars	IQD
To Balance c/d	10,000	By Balance b/d	5,000
		By Bank	4,000
		By Discount on Issue	1,000

	10,000		10,000
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(4) Dr.		Goodwill A/c		Cr.	
Particulars	IQD	Particulars	IQD		
To Balance b/d	3,500	By Profit and Loss A/c	3,000		
To Bank - (Purchase)	2,000	By Balance c/d	2,500		
	5,500			5,500	

Dr.		Adjusted Profit and Loss A/c		Cr.	
Particulars	IQD	Particulars	IQD		
To Interim Dividend	5,000	By Balance b/d	3,000		
To General Reserve	1,500	By Stock (Increase in Value)	2,500		
To Tax Provision	4,500	By Operational Profit	15,500		
To Depreciation	4,000	(Balancing figure)			
To Discount on Debenture	500				
To Goodwill	3,000				
To Balance c/d	2,500				
	21,000			21,000	

Exercise No. 3

The financial position of ABC Ltd. on 1st Jan., 2018 and 31th December, 2018 was as follows :

Particulars	1 st January	31 st December
Assets :		
Cash	8,000	7,200
Debtors	70,000	76,800
Stock	50,000	44,000
Land	40,000	60,000
Building	100,000	110,000
Machinery	160,000	172,000
Total Assets	428,000	470,000
Liabilities:		
Current Liabilities	72,000	82,000
Loan from Bank	60,000	50,000
Loan from Associated Co.	-	40,000
Capital and Reserve	296,000	298,000
Total Liabilities	428,000	470,000

During the year IQD 52,000/- were paid as Dividends. The provision for depreciation against machinery as on 1st Jan. 2018 was IQD 54,000/- and as on 31st Dec. 2018 IQD 72,000/-.

Required :prepare the Fund Flow Statement.

Solution :

Working Notes :

Statement Showing Changes in Working Capital:

Particulars	1-1-2018 IQD	31-12-2018 IQD	Increase in Working Capital IQD	Decreased in Working Capital IQD
(A) Current Assets (CA):				
• Cash	8,000	7,200	-	800
• Debtors	70,000	76,800	6,800	-
• Stock	50,000	44,000	-	6,000
	128,000	128,000		
(B) Current Liabilities (CL):				
• Current Liabilities	72,000	82,000	-	10,000
	72,000	82,000	6,800	16,800

Net Decrease in Working Capital: IQD 10,000 (16,800 - 6,800)

Dr.		Building A/c		Cr.	
Particulars	IQD	Particulars	IQD		
To Balance b/d	100,000				
To Bank A/c (Balancing Figure)	10,000	By Balance c/d		110,000	
	110,000			110,000	

Dr.		Machinery A/c		Cr.	
Particulars	IQD	Particulars	IQD		
To Balance b/d	214,000				
(Opening Bal (+) Provision)					
To Bank A/c (Additions) (Bal. Fig.)	30,000	By Balance c/d		244,000	
	244,000			244,000	

Dr.		Provision for Depreciation A/c		Cr.	
Particulars	IQD	Particulars	IQD		
		By Balance b/d		54,000	
To Balance c/d	72,000	By P & L A/c (Balancing Figure)		18,000	
	72,000			72,000	

Dr.		Funds from Operations		Cr.	
Particulars	IQD	Particulars	IQD		
To Depreciation Provision	18,000	By Funds from Operations	72,000		
To Dividend Paid	52,000	(Balancing Figure)			
To Balance c/d	2,000				
	72,000				72,000

**Funds Flow Statement of ABC Ltd.
(As on 31-12-2018)**

Sources	IQD	Applications	IQD
Loan from Associate Company	40,000	Purchase of Land	20,000
Funds from Operations	72,000	Purchase of Building	10,000
Net Decreases in Working Capital	10,000	Purchase of Machinery	30,000
		Repayment of Bank Loan	10,000
		Dividend Paid	52,000
	122,000		122,000

Exercise No. 4

Following are the summarized Balance Sheet of NDA Ltd. As on 31st March, 2017 and 2018. You are required to prepare a Funds Flow statement for the year ended 31st March, 2018.

Balance Sheet

Liabilities	Amount IQD	Amount IQD	Assets	Amount IQD	Amount IQD
Share Capital	200,000	250,000	Goodwill		5,000
General Reserve	50,000	60,000	Land and Building	200,000	190,000
Profit & Loss A/c	30,500	30,600	Plant and Machinery	150,000	169,000
Bank Loan	70,000	135,200	Stock	100,000	74,000
Creditors	150,000		Debtors	80,000	64,200
Provision for Tax	30,000	35,000	Cash in Hand	500	8,600
Total IQD	530,500	510,800	Total IQD	530,500	510,800

Additional information :

1. Depreciation written-off on Plant and Machinery IQD 14,000 and on Land and Building IQD 10,000.
2. Provision for tax was made during the year IQD 33,000.
3. Dividend of IQD 23,000 was paid.

Solution :

(1) Working Notes :

Statement Showing changes in Working Capital

Particulars	31-3-2017 IQD	31-3-2018 IQD	increase in Working Capital IQD	Decrease in Working Capital! IQD
(A) Current Assets:				
Stock	100,000	74,000	-	26,000
Debtors	80,000	64,200	-	15,800
Cash	500	8,600	8,100	-
Total	180,500	146,800		
(B) Current Liabilities :				
Creditors	150,000	-	150,000	-
Total	150,000		158,100	41,800

- Net Increase in Working Capital

= IQD 158,100 (-) IQD 41,800 = IQD 116,300

(2) Dr. Plant and Machinery A/c Cr.

Particulars	IQD	Particulars	IQD
To Bal. b/d	150,000	By Adj. P & L A/c. (Dep. ⁿ)	14,000
To Bank A/c (Machinery Purchased)	33,000	By Bal. c/d	169,000
	183,000		183,000

(3) Dr. Land and Building A/c Cr.

Particulars	IQD	Particulars	IQD
To Bal. b/d	200,000	By Adj. P&L A/c (Dep. ⁿ)	10,000
		By Bal. c/d	190,000
	200,000		200,000

4) Dr. Provision for Taxation A/c Cr.

Particulars	IQD	Particulars	IQD
To Bank A/c	33,000	By Bal. b/d	30,000
To Bal. c/d	35,000	By Adj. P&L A/c	38,000

	68,000		68,000
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(5) Dr. Funds From Operations / Adjusted P & L A/c Cr.

Particulars	IQD	Particulars	IQD
To Dep. ⁿ on P & M	14,000	By Bal. b/d	30,500
To Dep. ⁿ on L & B	10,000	By Operational Profit	90,100
To Dividend Paid	23,000	(Balancing Figure)	
To Provision for Tax	33,000		
To General Reserve	10,000		
To Bal. c/d	30,600		
	120,600		120,600

**Funds Flow Statement
(As on 31-3-2014)**

Sources	IQD	Application	IQD
Issue of Share Capital	50,000	Purchase of Machinery	33,000
Bank Loan	65,200	Dividend Paid	23,000
Operational Profit	90,100	Tax	33,000
		Increase in Working Capital	116,300
	205,300		205,300

Questions

1. Explain the concept of Fund.
2. What is Fund Flow Statement ?
3. State the various Uses of Fund Flow Statement.
4. State the Advantages of Fund Flow Statement.
5. Write Short Notes about of the Utility of Funds Flow Statement.
6. State the Limitations of Fund Flow Statement.
7. Explain : Preparation of Fund Flow Statement.

4 4 4 4 4 4 4 4 4

CHAPTER (5)

Cash Flow Analysis

تحليل التدفق النقدي

LEARNING OBJECTIVES

الأهداف التعليمية:

After reading this chapter, you can certainly be able to understand the following subjects :

- ❖ **Statement of Cash Flows**
 - **Relevance of Cash**
 - **Reporting by Activities**
- ❖ **Constructing the Cash Flow Statement**
 - **Special Topics**
 - **Direct Method**
- ❖ **Analysis Implications of Cash Flows**

CHAPTER (5)

Cash Flow Analysis

تحليل التدفق النقدي

❖ Statement of Cash Flows (Meaning)

كشف التدفق النقدي (المعنى)

• Relevance of Cash صلة النقد

1. A Cash flow statement deals with the inflow and outflow of cash between two balance sheet dates.
2. Cash flow statement aims at listing the various items which brings about changes between two balance sheet dates and therefore any items which affects the business cash either by increasing or decreasing it is included in this statement.
3. Cash flow statement is more useful in short-term planning.
4. Cash flow statement indicates simply cash receipts and cash payments and does not take into consideration other current assets.
5. Cash flow statement highlights the changes in cash and cash equivalents during the course of the year due to various cash flows.

يشير بيان التدفقات النقدية ببساطة إلى المقبوضات النقدية والمدفوعات النقدية ولا يأخذ في الاعتبار الأصول المتداولة الأخرى. وكشف التدفق النقدي يسلط الضوء على التغيرات في النقد والنقد المعادل خلال العام بسبب مختلف التدفقات النقدية.

• Objectives of Cash Flow Statement أهداف كشف التدفق النقدي

1. Efficient Cash Management

كفاءة إدارة النقد

- i. To manage the cash resources in such a way that adequate cash is available for meeting the expenses.
- ii. To plan and co-ordinate the financial operations of the business.

2. Internal Financial Management الإدارة المالية الداخلية

To provide a clear picture of cash flows from operations.

3. Projected Cash Flow التدفق النقدي المتوقع

To help management to know the projected cash inflows and cash outflows.

4. Tool of Analysis أداة التحليل

To act as an effective analysis tool for short-term decisions.

5. Success or Failure of Cash Planning نجاح أو فشل التخطيط للنقد

To help management to know the success or failure in cash management by comparison of actual and budgeted cash flow statements.

❖ Constructing the Cash Flow Statement إنشاء كشف التدفق النقدي

1. The Cash Flow Statement can be prepared on the same pattern on which a Funds Flow Statement is prepared.
2. Sources, which generate cash are termed as "Inflows of cash" while the applications of the same are termed as "Outflows of cash".
3. The sources of cash inflows and cash outflows are described as follows :

(A) Sources of Cash مصادر النقد

- The following are the sources of cash :

a) internal Sources المصادر الداخلية

- Cash generated from operations is the internal source of generating cash inflows.
- The net profit as shown by the Profit and Loss Account is the starting point for the computation of the cash from operations.
- The net profit shown by the Profit and Loss Account is not equal to the cash from operations as several non- cash items are taken into consideration while computing the same. Therefore, the net profit will have to be adjusted for non-cash items to find out the cash from operations.
- Some of these items are as follows :

• Special Topics مواضيع خاصة

1. Depreciation الإندثار

Depreciation is a non- cash item, which reduces the net profit but does not result in any cash outflows. Hence, the amount of depreciation will have to be added back in the amount of profit.

2. Loss on Sale of Fixed Assets خسارة بيع الموجودات الثابتة

- a) Sometimes, fixed assets like land and building, plant and machinery, furniture etc. are sold out and the loss on their sale is debited to the Profit and Loss Account.
- b) The amount of loss does not result into cash outflows and therefore is added back in the amount of net profit.

3. Creation of Reserves تكوين احتياطات

If profits for the year have been arrived at after charging transfers to reserves, such transfers should be added back to the profits.

4. Writing off the Intangible Assets شطب الموجودات المعنوية

- a) Intangible assets like goodwill, preliminary expenses etc. are normally written-off against profits.
- b) Such writing off the assets reduces the net profits but do not result in cash outflows. Therefore, this item should be added back in the amount of net profits.

5. Gains on Sale of Fixed Assets مكاسب بيع الموجودات الثابتة

Fixed assets may have been sold at a gain. Such item should be deducted from the net profit, as it is a non- cash item.

(b) External Sources المصادر الخارجية

1. issue of New Shares إصدار اسهم جديدة

If new shares are issued for cash, the net proceeds i.e. after deducting the issue expenses will be treated as cash inflows.

2. Raising of Term Loans حصول قروض طويلة الأجل

If new term loans are raised through debentures or otherwise, such term loans are the sources of cash inflows.

3. Purchase of Fixed Assets شراء موجودات ثابتة

- a) If fixed assets are purchased, it will be an outflow of cash.
- b) However, if they are purchased on deferred payment System, it should be shown as a separate source of cash to the extent of deferred credit.
- c) However, the cost of machinery purchased will be shown as an application of cash.

4. Short-term Borrowings اقتراض قصير الأجل

Short-term borrowings etc. from banks increase cash available and they have to be shown separately under this head.

5. Sale of Fixed Assets, Investments etc.: بيع موجودات ثابتة، استثمارات

Such sale results in generation of cash and therefore is a source of cash generation.

(B) Application of Cash استخدام النقد

The following items result in applications of cash or cash outflows :

a) Purchase of Fixed Assets شراء موجودات ثابتة

The purchases of fixed assets will result in application of cash and will be shown as cash outflows.

b) Payment of Long-term Loans دفع قروض طويلة الأجل

The payments of term loans, debentures etc. will be treated as cash outflows as the available cash is reduced.

c) Redemption of Preference Shares and Buy Back of Equity Shares

التضحية باسهم ممتازة وشراء اسهم ملكية

Redemption of Preference Shares and Buy Back of Equity Shares result in reduction in availability of cash and hence it is an outflow.

d) Payment of Income Tax دفع ضريبة دخل

This is also an application of cash.

e) Payment of Dividend دفع توزيعات أرباح

This will also reduce the availability of cash and hence it is an outflow.

f) Decrease in Unsecured Loans, Deposits etc. نقص في القروض والودائع غير المضمونة

The decrease in these liabilities indicates the repayment of these liabilities and hence it is an outflow of cash.

g) Loss from Operations خسارة من العمليات

Cash generated from operations is a source of cash while, any loss from operations is an outflow of cash as the available cash is reduced.

Format of Cash Flow Statement:

Cash Flow Statement For The Year Ended on

Particulars	Amount(IQD)
Opening Balance : Cash Bank	
Add : Sources of Cash :	
▪ Issue of Shares	
▪ Raising of Long-term Loans	
▪ Sale of Fixed Assets	
▪ Short-term Borrowings	
▪ Cash from Operations	
Total Cash Available (1)	
Less : Applications of Cash :	
▪ Redemption of Preference Shares	
▪ Buy Back of Equity Shares	
▪ Redemption of Long-term Loans	
▪ Purchase of Fixed Assets	
▪ Decrease in Deferred Payment Liabilities	
▪ Loss from Operations	
▪ Income Tax Paid	
▪ Dividends Paid	
▪ Decrease in Unsecured Loans, Deposits etc.	
Total Applications (2)	
Closing Balance : Cash Bank	

• **Methods of Cash Flow Statement** طرائق كشف التدفق النقدي

(a) Direct Method الطريقة المباشرة

- 1) Under this method, major classes of gross cash receipts and gross cash payments are obtained from the records for determination of cash flow from operating activities.
- 2) Various items in the P & L Account are adjusted for changes in related items in current assets and current liabilities in order to decide P & L Account on cash basis.
- 3) The balancing figure in P & L Account reveals cash from operating activities.

بموجب هذه الطريقة ، يتم الحصول على البنود الرئيسية لإجمالي الإيرادات النقدية والمدفوعات النقدية الإجمالية من السجلات لتحديد التدفق النقدي من الأنشطة التشغيلية.

Format of Direct Method

Particulars	IQD
Cash Sales	
Add : Cash collection from Debtors	
Gross Cash Receipts from Operations	
Less : Cash Operating Expenses	
Net Cash Generated by Operations	

(b) Indirect Method الطريقة غير المباشرة

1) Under this method, cash from operating activities is calculated by adjusting net profit and loss instead of individual items, disclosed in the P & L Account.

بموجب هذه الطريقة ، يتم احتساب النقد من الأنشطة التشغيلية بتعديل صافي الربح والخسارة بدلاً من البنود الفردية ، ويتم الإفصاح عنها في حساب الأرباح والخسائر.

2) Net Profit and Loss is adjusted in the light of changes during the period.

3) After ascertaining Net Operating Profit, adjustments regarding changes in current assets and current liabilities are made as per the following table :

Adjustment of Changes in Current Assets and Liabilities :

Current Assets and Current Liabilities	Adjustments to be made to Net Profit	
	Add	Deduct
Trade Debtors	Decrease	Increase
Stock	Decrease	Increase
Prepaid Expenses	Decrease	Increase
Trade Creditors	Increase	Decrease
Expenses Payable	Increase	Decrease

❖ Analysis Implications of Cash Flows

- **Uses of Cash Flow Statement/importance of Cash Flow Statement**

استخدامات وأهمية كشف التدفق النقدي

- a) **Short-term Planning of Business** التخطيط قصير الأجل للأعمال

It is helpful in the short-term planning of the business unit by indicating in advance as to how much funds are needed in future, how much of these funds can be raised internally and how much should be arranged from outside etc.

- b) **Useful in Internal Financial Management** مفيدة في الإدارة المالية الداخلية

Since Cash-flow statement reveals the amount of cash inflow from operations (and not income from operations), it will be helpful in internal financial management either in liquidity of a plant or any other fixed asset or in devising the dividend policy of the business unit.

- c) **Useful in Capital Budgeting Decisions** مفيدة في قرارات الموازنة الرأسمالية

It is helpful in taking capital budgeting decisions by indicating the availability of funds or otherwise during the period under consideration.

- d) **Focusing on Trend of Movement** التركيز على اتجاه الحركة

- 1) The cash flow statement prepared for a particular accounting year when compared with the budget already prepared for that year would indicate to what extent the sources of business unit were raised and applied in consonance with the budget.
- 2) In short, this comparison would facilitate focusing on trend of movement that would have gone undetected otherwise.

- e) **Planning in Replacement of Outdated Assets** التخطيط لاستبدال الموجودات القديمة

It is helpful to management in planning replacement of outdated assets and in formulating dividend policies.

- f) **Useful to Financial Analyst** مفيدة للمحلل المالي

It explains to the financial analyst, the reason why the business unit has run out of money, despite the fact that the unit has made a profit, or it has surplus of cash despite the fact that the business has incurred a loss.

- g) **Movement of Cash** حركة النقدية

It discloses the movement of cash.

- **Limitations of Cash Flow Statement** محددات كشف التدفق النقدي

- 1) When the business unit extends sales on credit basis and takes into consideration all prepaid and accrued items, there would be an increase in the working capital. But all the same, equating the net income of the business unit to mere cash flow would not proper and accurate, since a large number of "non cash" items would affect the net income of the unit ultimately.
- 2) In all business concerns, fixed assets involve cash payments in the year of installation and depreciation thereon are charged against operating income every year. By this the net income moves away from net cash flow. Thus, to equate the net operating income with the net cash flow into the business is highly improper technique.
- 3) It can be very easily manipulated by the management by postponing purchases and other payment.

Exercise No. 1

Following are the summarized Balance Sheets of XYZ Co. Ltd. as on 31-3-2018 and 31-3-2019.

Liabilities	31-3-2018 IQD	31-3-2019 IQD	Assets	31-3-2018 IQD	31-3-2019 IQD
Share Capital	200,000	250,000	Land & Building	200,000	190,000
General Reserve	50,000	60,000	Machinery	150,000	169,000
Profit & Loss A/c	30,500	30,600	Stock	100,000	74,000
Bank Loan (Long-term)	70,000	-	Debtors	80,000	64,200
Sundry Creditors	150,000	135,200	Cash	500	800
Provision for Taxation	30,000	35,000	Bank	-	7,800
			Goodwill	-	5,000
	530,000	510,800		530,500	510,800

Addition information :

During the year ended 31 -3-2019.

1. Dividend of IQD 23,000 was paid
2. Assets of another company were purchased for a consideration of IQD 50,000 payable in shares. The following assets were purchased : Stock IQD 20,000; Machinery IQD 25,000; Goodwill IQD 5,000.
3. Machinery was further purchased for IQD 8,000
4. Depreciation written-off on machinery IQD 12,000 income-tax provided during the year IQD 33,000 loss on sale of machinery IQD 200 was written off to general reserve.

Requirement: Prepare a Cash Flow Statement.

Solution :

Cash Flow Statement

Particulars	IQD	IQD
Opening Cash and Bank Balance (1-4-2018)		500

Add : Sources of Cash		
• Funds from Operations	55,300	
• Decrease In Stock	26,000	
• Purchase of Stock	20,000	
• Realization From Debtors (IQD 80,000 - IQD 64,200)	15,800	
• Provision For Taxation	5,000	
• Sale of Machinery	1,800	123,900
		124,400
Less : Uses of Cash		
▪ Payment of Bank Loan	70,000	
▪ Payment of Dividend	23,000	
▪ Reduction in Sundry Creditor	14,800	
▪ Purchase of Machine For Cash	8,000	115,800
		8,600
Closing Cash and Bank Balance (31-3-2019)		8,600

Working Notes :

(1) Dr. **Machinery A/c** Cr.

Particulars	IQD	Particulars	IQD
To Balance b/d	150,000	By General Reserve(Loss on Sale)	200
To Share Capital (Purchase by Issue of Share)	25,000	By Cash (Sale) - (Balancing Figure)	1,800
To Bank - (Purchase)	8,000	By Depreciation	12,000
		By Balance c/d	169,000
	183,000		183,000

(2) Dr. **General Reserve A/c** Cr.

Particulars	IQD	Particulars	IQD
To Machinery A/c	200	By Balance b/d	50,000
To Balance c/d	60,000	By P & L A/c - (Balancing Figure)	10,200
	60,200		60,200

(3) Dr. **Adjusted P & L A/c** Cr.

Particulars	IQD	Particulars	IQD
To Dividend	23,000	By Balance b/d	30,500

To Transfer to General Reserve	10,200	By Funds from Operation	55,300
To Depreciation on Machinery	12,000	(Balancing Figure)	
To Depreciation on Land and Building	10,000		
To Balance c/d	30,600		
	85,800		85,800

Exercise No. 2

The following are the Summarized Balance Sheet of M/S Ltd. as on 31-12-2018 and 31-12-2019.

Liabilities	2018 IQD	2019 IQD	Assets	2018 IQD	2019 IQD
Share Capital	300,000	350,000	Land & Building	250,000	240,000
General Reserve	50,000	60,000	Machinery	200,000	209,000
Profit & Loss	40,000	32,000	Stock	100,000	74,000
Bank Loan (Long-term)	70,000	-	Debtors	80,000	60,000
Sundry Creditors	150,000	131,000	Cash	10,000	2,000
Provision for Taxation	30,000	35,000	Bank	-	8,000
			Goodwill	-	15,000
	640,000	608,000		640,000	608,000

Additional Information :

During the year ended 31-12-2019.

1. Dividend of IQD 30,000 was paid.
2. Assets of another company were purchased for a consideration of IQD 50,000 payable in shares. The following Assets were purchased Stock IQD 20,000; Goodwill IQD 15,000. Machinery 15,000.
3. Machinery was further purchased for IQD 10,000.
4. Depreciation written off of machinery IQD 2,000.
5. Income Tax provided during the year was IQD 33,000.
6. Loss on sale of Machinery IQD 1,000 was written-off to General Reserve.

Required :prepare the Cash Flow Statement.

Solution :Books of M/S Ltd.

Cash Flow Statement for Year Ending 31-12-2018

Particulars	IQD	IQD
-------------	-----	-----

Opening Cash Balance as on 2018		10,000
Add : Sources of Cash		
• Sale of Machinery		13,000
• Decrease In Stock		46,000
• Decrease In Debtors		20,000
• Funds from Operations		78,000
		167,000
Less : Uses of Cash		
Payment of Dividend	30,000	
Purchase of Machinery	10,000	
Tax Paid	28,000	
Bank - Loan Repaid	70,000	
Decrease In Creditors	19,000	157,000
Closing Cash and Bank Balances As on 31 -12-2019 (IQD 2,000 + IQD 8,000)		10,000
		167,000

Working Notes:

(1) Dr. **Machinery A/c** Cr.

Particulars	IQD	Particulars	IQD
To Balance b/d	200,000	By Depreciation	2,000
To Share Capital	15,000	By General Reserve	1,000
To Bank	10,000	By Bank	13,000
		By Balance c/d	209,000
	225,000		225,000

(2) Dr. **Adjusted Profit & Loss A/c** Cr.

Particulars	IQD	Particulars	IQD
To Dividend	30,000	By Balance b/d	40,000
To Depreciation on Building	10,000	By Funds from Operations	78,000
To Provision for Tax	33,000	(Balancing Figure)	
To Transfer to General Reserve	11,000		
To Depreciation on Machinery	2,000		
To Balance c/d	32,000		
	118,000		118,000

(3) Dr. **General Reserve A/c** Cr.

Particulars	IQD	Particulars	IQD
To Machinery A/c	1,000	By Balance b/d	50,000

To Balance c/d	60,000	By P & L A/c (Balancing Figure)	11,000
	61,000		61,000

(4) Dr. Provision for Taxation A/c Cr.

Particulars	IQD	Particulars	IQD
To Bank A/c (Balancing Figure)	28,000	By Balance b/d	30,000
To Balance c/d	35,000	By P & L A/c	33,000
	63,000		63,000

(5) Dr. Land and Building A/c Cr.

Particulars	IQD	Particulars	IQD
To Balance b/d	250,000	By Depreciation on Building (Balancing Figure)	10,000
		By Balance b/d	240,000
	250,000		250,000

Questions

1. State the meaning of Cash Flow Statement.
2. State the various Objectives of Cash Flow Statement.
3. State the various Uses of Cash Flow Statement.
4. Explain the importance of Cash Flow Statement.
5. State the various Limitations of Cash Flow Statement.
6. Explain : Preparation of Cash Flow Statement.
7. Explain : Preparation of Cash Flow Statement.



CHAPTER (6)

Analyzing the Activities

of

Cash Flows Statement

تحليل أنشطة كشف التدفقات النقدية

LEARNING OBJECTIVES

الأهداف التعليمية:

After reading this chapter, you can certainly be able to understand the following subjects :

- ❖ Analyzing Operating Activities**
- ❖ Analyzing Investing Activities**
- ❖ Analyzing Financing Activities**

CHAPTER (6)

Analyzing the Activities of Cash Flows Statement

تحليل أنشطة كشف التدفقات النقدية

A cash flow statement is a financial statement that provides aggregate data regarding all cash inflows a company receives from its ongoing operations and external investment sources, as well as all cash outflows that pay for business activities and investments during a given period.

❖ The various Cash Flow Activities

a) Cash Flow from Operating Activities التدفق النقدي من الأنشطة التشغيلية

1. The cash flows generated from major revenue producing activities of the entities are covered under this head.
2. Cash Flow from operating activities shows the extent to which the operations of the enterprise have generated sufficient cash to maintain the Operating Capability to pay dividend, repay loans and make new investments.

التدفقات النقدية من الأنشطة التشغيلية تبين المدى الذي يمكن أن تنشأ فيه عمليات المنشأة النقدية الكافية للحفاظ على القدرة التشغيلية على دفع الأرباح ، وتسديد القروض وإجراء استثمارات جديدة.

3. Examples of Cash Flow from Operating Activities

- (1) Cash receipts from sale of goods and services.
- (2) Cash receipts from royalties, fees, commission etc.
- (3) Cash payments to employees.
- (4) Cash payments or refunds of income tax.
- (5) Cash receipts and payments relating to future contracts, forward contract etc.

b) Cash Flow from Investing Activities التدفق النقدي من الأنشطة الاستثمارية

1. These are the acquisition and disposal of long-term assets and other investments not included in cash equivalents.

2. This represents the extent to which the expenditures have been made for resources intended to generate future incomes and cash flows.

3. Examples of Cash Flow from Investing Activities

- (1) Cash payments for purchase of fixed assets.
- (2) Cash receipts from sale of fixed assets.
- (3) Cash payments for purchase of shares/debentures in other entities.
- (4) Loans and advances given to third parties.
- (5) Repayment of loans given.

c) Cash Flow from Financing Activities التدفق النقدي من الأنشطة التمويلية

1. Financing activities are the activities that result in changes in the size and composition of the owner's capital and borrowings of the enterprise.
2. Separate disclosure is important because it is useful in predicting claims in future cash flows by providers of funds.

3. Examples of Cash Flow from Financing Activities :

- (1) Cash receipts from issue of share capital.
- (2) Cash receipts from issue of debentures, loans (short or long term).
- (3) Cash repayments of amounts borrowed.
- (4) Cash payment to redeem preference shares.

❖ **Distinguish between : Funds Flow Statement and Cash Flow Statement** الفرق بين كشف تدفق الأموال وكشف التدفق النقدي

Funds Flow Statement and Cash Flow Statement;

Points of Difference	Funds Flow Statement	Cash Flow Statement
(a) Meaning : المعنى	Funds flow statement shows the changes in the working capital.	Cash flow statement shows changes in the cash position between the two periods.
(b) Consideration of Assets and Liabilities: النظر في الأصول والخصوم	Funds flow statement considers changes in all current assets and current liabilities.	Cash flow statement indicates simply cash receipts and cash payments and does not consider other current assets which can be easily converted into cash and used to meet the current or short-term liabilities.
(c) improvement of Working Capital and Cash Position : تحسين راس المال العامل والمركز النقدي	Improvement in working capital does not mean improvement in cash position.	Cash is only one of the constituent of working capital. An improvement in cash position results in the improvement of working capital.
(d) Utility: المنفعة	Funds flow statement is one of the tools of managing working capital. It acts as an instrument for the allocation of resources.	Cash flow statement is more useful to the management as a tool of financial analysis in short period.

❖ **Analyse of Cash Flow Statement**

تحليل كشف التدفق النقدي

Cash flow is the movement of cash into or out of a business, project, or financial institution. It is usually measured during a specified, finite period of time.

Measurement of cash flow can be used:

- (1) To determine a project's rate of return or value.
- (2) To determine problems with a business's liquidity
- (3) As an alternate measure of a business's profits when it is believed that

accrual accounting concepts do not represent economic realities.

(4) Cash flow can be used to evaluate the "quality" of Income generated by accrual accounting.

(5) To evaluate the risks within a financial institution.

The total net cash flow is the sum of cash flows that are classified in three areas:

1. Operational cash flows (التدفق النقدي التشغيلي) : Cash received or expended as a result of the company's internal business activities. It includes cash earnings plus changes to working capital.
2. Financing cash flows (التدفق النقدي التمويلي): Cash received from the from the loans received and issuance of shares, or paid out as dividends, shares repurchases or debt repayments.
3. Investment cash flows (التدفق النقدي الاستثماري): Cash received from the sale of long-life assets, or spent on capital expenditures (investments, acquisitions and long-life assets).

◆ preparing the statement of cash flows إعداد كشف التدفق النقدي

Unlike the major financial statements, cash flow statement is not prepared from the adjusted trial balance. The information to prepare this statement usually comes from three sources:

- 1) Current income statement data help the reader determine the amount of cash provided or used by operations during the period.
- 2) Selected transactions data from the general ledger provide additional detailed information needed to determine how cash was provided or used during the period.
- 3) Comparative balance sheets provide the amount of the changes in assets, liabilities, and equities from the beginning to the end of the period.

(1) Direct Method الطريقة المباشرة

The direct method reports cash receipts and cash disbursements from operating activities. The difference between these two amounts in the net cash flow from operating activates. In other words, the direct method deducts from operating cash receipts the operating cash disbursements. The direct method results in the presentation of a condensed cash receipts and cash disbursements statement.

The statement of cash flow using direct method by adjusting each item in the income statement from the accrual basis to cash basis.

توضح الطريقة المباشرة المقبوضات النقدية والمدفوعات النقدية من الأنشطة التشغيلية. الفرق بين هذين المبلغين في صافي التدفق النقدي من عمليات التشغيل. وبعبارة أخرى ، تُطرح الطريقة المباشرة المدفوعات النقدية التشغيلية من المتحصلات النقدية التشغيلية. وينتج عن الطريقة المباشرة عرض كشف موجز بالمقبوضات والمدفوعات النقدية.

Exercise No. 1

The following are the income statement and Comparative Balance sheet for Tiger Company:

Income statement for the year ended December, 31, 2018

Particular	IQD	IQD
Sales		200000
Cost of goods sold	80000	
Operating expenses	30000	110000
Income before income tax		90000
Income tax		15000
Net income		75000

Tiger Company Comparative Balance sheet (Thousands IQD)
Dec., 31/12/2018

Assets	2017	2018	changes	increase/ decrease
Cash	100000	80000	-20000	Decrease
Accounts receivable	50000	90000	+40000	Increase
Furniture	20000	50000	+30000	Increase
Total	170000	220000	+50000	
Liabilities and stockholders' equity				
Accounts payable	40000	25000	-15000	Decrease
Income tax payable	5000	15000	+10000	Increase
Common stock	90000	100000	+10000	Increase
Retained Earnings	35000	80000	+ 45000	Increase
Total	170000	220000	+ 50000	

Additional information:

- 1) The company was declared and paid IQD 30000 as dividend in 2018.
- 2) Common stock of IQD 10000 was issued.

Required: Prepare the statement of cash flow by using **Direct Method**.

Solution:

Working Notes :

- Accounts receivable = 50000 – 90000 = - 40000 Decrease
- Cash receipts from costumers = Revenues - Accounts receivable
= 200000 – 40000 = 160000
- Accounts payable = 40000 – 25000 = 15000 Decrease
- Cash payments to suppliers = 80000 + 15000 = 95000
- Income taxes = 15000 – 10000 = 5000

Tiger Company
Statement of cash flows (Direct method) for the year ended Dec., 31, 2018

Particulars	IQD	IQD
1- Cash flows from operating activities:		
(1) Cash receipts from customers		160000
(2) Cash payments:		
To suppliers	95000	
For operating expenses	30000	
For income taxes	5000	(130000)
Net cash provided by operating activities		30000
2-Cash flows from investing activities:		
Purchase of furniture	(30000)	
Net cash used by investing activities		(30000)
3-Cash flows from financing activities:		
Issuance of common stock	10000	
Payment of cash dividends	(30000)	
Net cash used by financing activities		(20000)
Net increase in cash		(20000)
Cash at the beginning of the period		100000
Cash at the end of the period		80000

(2) Indirect Method الطريقة غير المباشرة

This method starts with net income and converts it to net cash flow from operating activities. In other words, the indirect method adjusts net income by the items that are affected on the net income but not affected on cash.

☞ **Rule:** قاعدة

Increase in current assets and decrease in current liabilities is deducted from net income, Decrease in current assets and increase in current liabilities is added to net income for the purpose of conversion net income to net cash from operating activities.

قاعدة: الزيادة في الموجودات المتداولة والنقص في المطلوبات المتداولة تطرح من صافي الدخل ، والانخفاض في الموجودات المتداولة والزيادة في المطلوبات المتداولة يضاف إلى صافي الدخل لغرض تحويل صافي دخل إلى صافي النقد من الأنشطة التشغيلية.

Exercise No.2

The following information's are abstracted from books Bassam Co. (Amounts in IQD thousands) :

- 1) Net Income was IQD 120000
- 2) Bonds payable increased IQD 50000
- 3) There was a gain on sale of equipment of IQD 20000 (the equipment had a book value of IQD 30000).
- 4) Accounts Receivable decreased IQD 50000
- 5) Accounts Payable decreased IQD 20000
- 6) Prepaid Rent increased IQD 10000
- 7) Dividends totaling IQD 20000 were paid.
- 8) Depreciation was IQD 20000
- 9) Common Stock increased IQD 50000
- 10) Land increased IQD 100000 (purchased land for IQD 100000)
- 11) Beginning cash IQD 10000
- 12) Ending Cash IQD 180000

Required: Prepare the statement of cash flows by using the indirect method.

Solution:

Cash Flow Statement of Bassam Corporation For Year Ending 31/12/2018

Cash from Operations:	(1) IQD	(2) IQD
Net Income	120000	
+ Depreciation	20000	
- Gain on Sale	(20000)	
+ Decrease A/R	50000	
- Decrease A/P	(20000)	
-Increase Prepaid Rent	(10000)	
Total Cash from Operations		140000
Cash from Financing:		
+ Bonds Issued	50000	
-Dividends paid	(20000)	
+Stock Issued	50000	
Total Cash from Financing		80000
Cash from Investing:		
Sale of Equipment	50000	
Purchase of Land	(100000)	
Total cash from Investing		(50000)
Net Increase in Cash Flow		170000

+Beginning Cash		10000
= Ending Cash		180000

Exercise No.3

The following are the income statement and the comparative balance sheets at the beginning and the end of 2018 for Anssam's Co.(Amount in IQD thousands):

Income statement for the year ended December, 31, 2018

Revenues	100000
Less/ operating expenses	(70000)
Income before income taxes	30000
Income tax expense	(10000)
Net income	20000

Assets	Jan 1.2018	Dec. 31.2018	change Increase /decrease
cash	10000	25000	+15000
accounts receivable	8000	13000	+5000
notes receivable	2000	1000	(1000)
computer equipment	5000	14000	+9000
Total	25000	53000	+28000
Liabilities and owner's equity			
accounts payable	6000	10000	+4000
notes payable	4000	3000	(1000)
long - term debt	6000	15000	+9000
owner's equity	9000	25000	16000
Total	25000	53000	28000

Additional information:

- 1) New computer equipment was purchased at the end of 2018, no depreciation.
- 2) The owner drew IQD 4000 during the year.
- 3) No additional investments by the owner.
- 4) The increase in long term debt is the issuance of bonds.

Required: Prepare the statement of cash flows for the year ended December, 31, 2018 by using Indirect Method.

Solution:

Anssam's Co.
Statement of cash flows (Indirect Method)

Particulars	IQD	IQD
Cash flows from operating activities:		
Net income		20000
Adjustment to reconcile net income to net cash provided by operating activities:		
Increase in accounts receivable	(5000)	
Decrease in notes receivable	1000	
Increase in accounts payable	4000	
Decrease in notes payable	(1000)	(1000)
Net cash provided by operating activities		19000
Cash flows from investing activities:		
Purchase of computer equipment	(9000)	
Net cash used by investing activities		(9000)
Cash flows from financing activities:		
Payments to the owner (Drawings)	(4000)	
Issuance of bonds	9000	
Net cash provided by financing activities		5000
Net increase in cash		15000
Cash at the beginning of the period		10000
Cash at the end of the period		25000

Questions and exercises

1. Describe the various Cash Flow Activities.
2. Give the Examples of Cash Flow from Operating Activities
3. Give the Examples of Cash Flow from Investing Activities
4. Give the Examples of Cash Flow from Financing Activities :
5. The total net cash flow is classified in three areas
6. what are the sources for preparing the cash flow statement?
7. How the measurement of cash flow can be used?
8. Describe the various Cash Flow Activities.
9. Distinguish between : Funds Flow Statement and Cash Flow Statement.

Exercise No.1

The following is the income statement and financial position of a corporation for the year ended 31/12/2019

Income statement (amounts in thousands IQD)

amount		particulars
total	partial	
8.000		Net sales
4.000		Less: The cost of the goods sold
4.000		Gross profit
		Less: Operating Expenses
	1.440	Administrative and general expenses
	680	Depreciation of fixed assets
2.280	160	Loan interest
1.720		Net profit before taxes
800		Taxes
920		Net profit after taxes
760		Dividend paid
160		Retained earnings

Balance Sheet (amounts in thousands IQD)

2019	2018	particulars
23.240	13.200	Fixed assets
4.040	4.400	less: provision of Depreciation
19.200	8.800	Net fixed assets
		current Assets :
640	1.000	Cash
1.800	1.000	Debtors
4.000	2.400	inventory
6.440	4.400	Total Current Assets
		less: Current liabilities :
2.960	240	Creditors
1.000	160	Administrative expenses due
2.960	400	Total current liabilities
2.480	4.000	Net Working Capital
21.680	12.800	Total invested funds
5.000	200	Long term loans
16.680	12.600	Equity
21.680	12.800	Total financing sources

Additional information's

1. Purchases of fixed assets during the year amounted to IQD (11,480,000).
2. The nominal value of the issuance of the new shares has been collected to increase the capital.

Required : Prepare the cash flow statement in any method accepted.

Exercise No.2

A comparative balance sheet for AL-Fourkan Company is presented below

Particulars	31/12/2018	31/12/2019
Assets	IQD	IQD
Cash	63000	122000
Accounts receivable	85000	76000
Inventories	180000	189000
Land	75000	100,000
Equipment	260000	200000
Accumulated depreciation	(66000)	(42000)
Total	597000	545000
Liabilities and Stockholders' equity		
Accounts payable	34000	47000
Bonds payable	150000	200000
Common stocks (10 par)	214000	164000
Retained earnings	199000	134000
Total	597000	545000

Additional information:

- 1) Net income for 2019 was IQD 105000.
- 2) Cash dividends of IQD 40000 were declared and paid.
- 3) Bonds payable amounting to IQD 50000 were redeemed for IQD50000.
- 4) Common stocks were issued for IQD 50000 cash.

Required: Prepare a statement of cash flows for 2019 by using the indirect method?

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CHAPTER (7)

Common Size Analysis

تحليل الحجم الكلي (المشترك)

LEARNING OBJECTIVES

الأهداف التعليمية:

After reading this chapter, you can certainly be able to understand the following subjects :

- ❖ **What is Common Size Analysis?**
- ❖ **Types of Common Size Analysis**
- ❖ **Importance of Common Size Analysis**
- ❖ **Vertical Common Size Analysis**
- ❖ **Horizontal Common Size Analysis**

CHAPTER (7)

Common Size Analysis

تحليل الحجم الكلي (المشترك)

❖ What is Common Size Analysis?

Common size analysis, also referred as vertical analysis, is a tool that financial managers use to analyze financial statements. It evaluates financial statements by expressing each line item as a percentage of the base amount for that period. The analysis helps to understand the impact of each item in the financial statement and its contribution to the resulting figure.

التحليل للحجم المشترك ، والذي يشار إليه أيضًا باسم التحليل الرأسي ، هو أداة يستخدمها المديرون الماليون لتحليل القوائم المالية. يقوم بتقييم الكشوفات المالية بالتعبير عن كل بند على هيئة نسبة مئوية من المبلغ الأساسي لتلك الفترة. يساعد التحليل على فهم تأثير كل بند في القائمة المالية ومساهمته في الرقم الناتج.

The technique can be used to analyze the three primary financial statements, i.e., balance sheet, income statement and cash flow statement. In the balance sheet, the common base item to which other line items are expressed is total assets, while in the income statement, it is total revenues.

يمكن استخدام هذه التقنية لتحليل القوائم المالية الرئيسية الثلاثة ، أي الميزانية العمومية وكشف الدخل وكشف التدفقات النقدية. في الميزانية العمومية ، يكون البند الأساسي المشترك الذي يتم التعبير عنه بالبند الأخرى هو إجمالي الأصول ، بينما في كشف الدخل ، يكون إجمالي الإيرادات.

There are many methods that a business can use to compare its financial results to that of its competitors to see how successful that business is. In this subject, we will explain the common size analysis.

هناك العديد من الطرائق التي يمكن أن تستخدمها الشركة لمقارنة نتائجها المالية مع منافسيها لمعرفة مدى نجاح تلك الأعمال. في هذا الموضوع ، سوف نشرح تحليل الحجم المشترك.

❖ Types of Common Size Analysis أنواع تحليل الحجم المشترك

Common size analysis can be conducted in two ways, i.e., vertical analysis and horizontal analysis.

Vertical analysis refers to the analysis of specific line items in relation to a base item within the same financial period. For example, in the balance sheet, we can assess the proportion of inventory by dividing inventory line using total assets as the base item.

Horizontal analysis refers to the analysis of specific line items and comparing it to a similar line item in the previous or subsequent financial period. Although common size analysis is not as detailed as trend analysis using ratios, it does provide a simple way for financial managers to analyze financial statements.

يمكن إجراء تحليل الحجم المشترك بطريقتين ، أي التحليل الرأسي والتحليل الأفقي. يشير التحليل الرأسي إلى تحليل بنود محددة بالعلاقة إلى البند الأساسي في نفس الفترة المالية. على سبيل المثال ، في الميزانية العمومية ، يمكننا تقييم نسبة المخزون بقسمة خط المخزون باستخدام إجمالي الأصول كبنود أساسي. يشير التحليل الأفقي إلى تحليل بنود محددة ومقارنتها ببند مماثل في الفترة المالية السابقة أو اللاحقة. على الرغم من أن التحليل المشترك للحجم ليس مفصلاً كتحليل الاتجاه باستخدام النسب ، إلا أنه يوفر طريقة بسيطة للمديرين الماليين لتحليل القوائم المالية.

❖ Importance of Common Size Analysis أهمية تحليل الحجم المشترك

One of the benefits of using common size analysis is that it allows investors to identify drastic changes in a company's financial statement. It mainly applies when the financials are compared over a period of two or three years. Any significant movements in the financials across several years can help investors decide whether to invest in the company. For example, large drops in the company's profits in two or more consecutive years may indicate that the company is going through financial distress. Similarly, considerable increases in the value of assets may mean that the company is implementing an expansion or acquisition strategy, making the company attractive to investors.

Common size analysis is also an excellent tool to compare companies of different sizes but in the same industry. Looking at their financial data can reveal their strategy and their largest expenses that give them a competitive edge over other comparable companies. For example, some companies may sacrifice margins to gain a large market share, which increases revenues at the expense of profit

margins. Such a strategy allows the company to grow faster than comparable companies because they are more preferred by investors.

• أهمية تحليل الحجم المشترك

تتمثل إحدى فوائد استخدام تحليل الحجم المشترك في أنه يسمح للمستثمرين بالتعرف على التغييرات الجذرية في القائمة المالية للشركة. يتم تطبيقه بشكل أساسي عند مقارنة القوائم المالية على مدى فترة سنتين أو ثلاث سنوات. يمكن لأي تحركات هامة في القوائم المالية عبر عدة سنوات أن تساعد المستثمرين على اتخاذ قرار بشأن الاستثمار في الشركة. على سبيل المثال ، قد تشير الانخفاضات الكبيرة في أرباح الشركة في عامين متتاليين أو أكثر إلى أن الشركة تمر بضائقة مالية. وبالمثل ، قد تعني الزيادات الكبيرة في قيمة الأصول أن الشركة تنفذ استراتيجية التوسع أو الشراء ، مما يجعل الشركة جذابة للمستثمرين.

تحليل الحجم المشترك يمثل كذلك أداة ممتازة لمقارنة الشركات ذات الأحجام المختلفة ولكن في نفس الصناعة. يمكن النظر إلى بياناتها المالية للكشف عن استراتيجيتها وأكبر نفقاتها التي تمنحها ميزة تنافسية على الشركات المماثلة الأخرى. على سبيل المثال ، قد تضحى بعض الشركات بهوامشها للحصول على حصة كبيرة من السوق ، مما يزيد من الإيرادات على حساب هوامش الربح. هذه الاستراتيجية تسمح للشركة بالنمو بشكل أسرع من الشركات المماثلة لأنها أكثر تفضيلاً من قبل المستثمرين.

❖ Vertical Common Size Analysis تحليل الحجم المشترك العمودي

Common size or, vertical analysis, is a method of evaluating financial information by expressing each item in a financial statement as a percentage of a base amount for the same time period. A company can use this analysis on its balance sheet or its income statement.

الحجم المشترك أو التحليل الرأسي هو طريقة لتقييم المعلومات المالية بالتعبير عن كل بند في الكشف أو القائمة المالية كنسبة مئوية من مبلغ أساسي لنفس الفترة الزمنية. يمكن للشركة استخدام هذا التحليل في ميزانيتها العمومية أو كشف الدخل الخاص بها.

A balance sheet summarizes the company's assets (things that it owns that have value), its liabilities (the amounts it owes to others), and its equity (an owner's investment in the business).

An income statement shows the company's revenues (amount of money it made by selling its goods and services) and its expenses (the amount of money it spent to earn its revenues).

The formula used in common size analysis is:

$$\text{Common Size Amount} = (\text{Analysis Amount} / \text{Base Amount}) \times 100\%$$

الصيغة المستخدمة في تحليل الحجم المشترك هي:

$$\text{مبلغ الحجم المشترك} = (\text{مبلغ التحليل} / \text{المبلغ الأساسي}) \times 100\%$$

The base amount will change depending on whether the company is completing its analysis on the balance sheet or the income statement. If the company completes its analysis on the balance sheet, then the base amount will be total assets or total liabilities and owner's (or shareholders') equity. If the income statement is used, the base amount will be net sales.

سوف يتغير المبلغ الأساسي بناءً على ما إذا كانت الشركة تستكمل تحليلها في الميزانية العمومية أو كشف الدخل. إذا انتهت الشركة من تحليلها في الميزانية العمومية ، فسيكون المبلغ الأساسي إجمالي الأصول أو إجمالي الخصوم وحقوق المالك (أو المساهمين). إذا تم استخدام بيان الدخل ، فسيكون المبلغ الأساسي صافي المبيعات.

- **Balance Sheet Common Size Analysis**

The balance sheet common size analysis mostly uses the total assets value as the base value. On the balance sheet, the total assets value equals the value of total liabilities and shareholders' equity. A financial manager or investor uses the common size analysis to see how a firm's capital structure compares to rivals. They can make important observations by analyzing specific line items in relation to the total assets.

For example, if the value of long-term debts in relation to the total assets value is too high, it shows that the company's debt levels are too high. Similarly, looking at the retained earnings in relation to the total assets as the base value can reveal how much of the annual profits are retained on the balance sheet.

Let's take the example of SALAM Company whose balance sheet for 2019.

- **تحليل الحجم المشترك للميزانية العمومية**

غالبًا ما يستخدم التحليل المشترك لحجم الميزانية العمومية قيمة إجمالي الأصول كقيمة أساسية. في الميزانية العمومية ، تساوي قيمة الأصول الإجمالية قيمة إجمالي الخصوم وحقوق المساهمين. يستخدم المدير المالي أو المستثمر تحليل الحجم المشترك لمعرفة كيف يقارن هيكل رأس مال الشركة مع المنافسين. يمكنهم إجراء ملاحظات مهمة عن طريق تحليل بنود محددة فيما يتعلق بمجموع الأصول.

على سبيل المثال ، إذا كانت قيمة الديون طويلة الأجل بالنسبة إلى إجمالي قيمة الأصول مرتفعة للغاية ، فإنها تُظهر أن مستويات الدين في الشركة مرتفعة للغاية. وبالمثل ، فإن النظر إلى الأرباح المحتجزة فيما يتعلق بمجموع الأصول حيث أن القيمة الأساسية يمكن أن تكشف عن مقدار الأرباح السنوية المحتفظ بها في الميزانية العمومية. ولنأخذ مثال شركة SALAM Co. التي تمثل ميزانيتها لعام 2019 لغرض حساب الحجم المشترك للميزانية العمومية.

- **Applying Common Size Analysis to the Balance Sheet**

Let's assume that Salam's cash balance is IQD75,000 and his total assets are IQD1,835,000. If we apply common size analysis, the common size amount would be:

= (analysis amount / base amount of total assets) x 100%

= (IQD75,000 / IQD1,835,000) x 100%

= 4.1%

Therefore, 4.1% of Salam's total assets are made up of cash.

Salam could also compare this common size amount to last year to determine changes that occurred. Let's assume that last year's cash balance was IQD85,000 and total assets were IQD1,595,000. At first glance, it appears that the cash balance has only decreased by IQD10,000 (IQD85,000 - IQD75,000). If we apply common size analysis to last year's cash balance, we can see that cash comprises 5.3% of Salam's total assets calculated as follows:

= (analysis amount / base amount of total assets) x 100%

= (IQD85,000 / IQD1,595,000) x 100%

= 5.3%

Common size analysis reveals that Salam's cash balance decreased by 1.2% (5.3% - 4.1%) of his total assets.

Here is Salam's common size analysis for his balance sheet:

Salam's Co.

Balance sheet

December 31, 2019

particular	Amount	%
Assets		
Cash	75,000	4.1%
Accounts receivable	295,000	16.1%
Inventory	650,000	35.4%
Capital assets (net)	815,000	44.4%
Total Assets	1,835,000	100%
Liabilities		
Accounts payable	269,500	15.8%
Salaries payable	55,000	3.0%
Long- term liabilities	487,500	26.5%
Total liabilities	832,000	45.3%
Shareholders' equity		
Common Shares	275,400	15.0%
Retained earnings	727,600	39.7%
Total Shareholders' equity	1,003,000	54.7%
Total liabilities & Shareholders' equity	1,835,000	100%

Common Size Balance sheet

- **Income Statement Common Size Analysis** تحليل الحجم المشترك لكشف الدخل

The base item in the income statement is usually the total sales or total revenues. Common size analysis is used to calculate net profit margin, as well as gross and operating margins. The ratios tell investors and finance managers how the company is doing in terms of revenues, and they can make predictions of the future revenues. Companies can also use this tool to analyze competitors to know the proportion of revenues that goes to advertising, research and development and other essential expenses.

We can compute common size income statement analysis for SALAM Company for 2019.

- **تحليل الحجم المشترك لكشف الدخل**

عادةً ما يكون العنصر الأساسي في كشف الدخل هو إجمالي المبيعات أو إجمالي الإيرادات. يستخدم تحليل الحجم المشترك لحساب هامش الربح الصافي ، وكذلك هوامش الربح الإجمالي والتشغيلي. توفر النسب المستثمرين ومديري التمويل معلومات عن كيفية تقييم الشركة من حيث الإيرادات ، والتنبؤ بتوقعات الإيرادات المستقبلية. يمكن للشركات كذلك استخدام هذه الأداة لتحليل المنافسين لمعرفة نسبة الإيرادات التي تذهب إلى الإعلان ، البحث والتطوير والمصروفات الأساسية الأخرى.

يمكننا حساب تحليل الحجم المشترك لكشف الدخل لشركة SALAM Co لعام 2019.

- **Applying Common Size Analysis to the Income Statement**

Let's assume that Salam's operating income is IQD52,000 and his net sales for the year are IQD760,000. If we apply common size analysis, we calculate that operating income represents 6.8% of Salam's net sales calculated as follows:

$$= (\text{analysis amount} / \text{base amount of net sales}) \times 100\%$$

$$= (\text{IQD}52,000 / \text{IQD}760,000) \times 100\%$$

Here is a figure of Salam's common size analysis for his income statement for the year:

Salam's Co.
Income Statement
For the year ended Dec. 31 , 2019

particular	Amount	%
Sales	760,000	101.3%
Sales returns and allowances	10,000	1.3%
Net sales	750,000	100.0%
Cost of goods sold	523,500	69.8%
Gross profit	226,500	30.2%
Operating expenses	174,500	23.3%
Operating income	52,000	6.8%

Common Size Income Statement.

❖ **Horizontal Common Size Analysis** تحليل الحجم المشترك الأفقي

(a) **Comparative Financial Statements** القوائم المالية المقارنة

Comparative (financial) statements are statements of the financial position of a business so designed to facilitate comparison of different accounting variables for drawing useful inferences (conclusions).

• **Importance of Comparative Financial Statement**

أهمية الكشف المالي المقارن

1. Financial statements indicate the direction of the movement of the financial position and performance over the years.
2. Financial statements present a review of the past activities and their cumulative effect on the financial position of the concern.
3. Comparative Financial statements enhance the usefulness of reports and bring out more precisely the nature and trends of current changes affecting the business enterprise.

(b) **Trend Analysis** تحليل الاتجاه

1. Trend Percentages as a tool of analysis, are employed when it is required to analyze the trend of data shown in a series of financial statements of several

successive years. The trend obtained by such an analysis is expressed as percentages.

2. Trend percentage analysis moves in one direction, either upward or downward - progression or regression. This method involves the calculation of percentage relationship that each statement bears to the same item in the base year.
3. Trend percentage analysis facilitates an efficient comparative study of the financial performance of a business enterprise over a period of time.

(c) Horizontal Analysis التحليل الأفقي

1. Horizontal analysis requires financial statements of two or more years for comparative analysis.
2. Horizontal analysis gives information in absolute as well as in percentage form.
3. Horizontal deals with same item of different years.
4. Horizontal analysis is used for time series analysis.

(d) Common Size Financial Statements القوائم المالية ذات الحجم المشترك

1. Common size statement analysis refers to the statement prepared to bring out the ratio of each asset or liability to the total balance sheet and the ratio of each item of expense or revenue to net sales.
2. These common size statements are often called "**Common measurement**" or "**Component percentage**" or "**100 percent statements**".
3. Since each statement is reduced to the total of 100 and each individual component of the statement is represented as a percentage of the total of 100, which invariably serves as the base.

Example : If the total assets of the firm amounts to 300,000 and plant and machinery amounts to 30,000, the common size representation would be as follows :

$$\text{Common Size} = \frac{\text{Plant and Machinery}}{\text{Total Assets}} \times 100$$

$$= \frac{30,000}{300,000} \times 100 = 10\%$$

A horizontal financial statement analysis compares current financial statements to a previous year's financial information. Companies often conduct this analysis by putting several years of financial statements in a side-by-side comparison format. This enables business owners and managers to review the same month over several years to determine if revenues, expenses, assets or liabilities have increased, decreased or stayed the same. Companies can also use a horizontal analysis to compare changes in Dinar amounts or a percentage change when comparing financial statements.

- **Vertical Analysis** التحليل العمودي

A vertical financial statement analysis is conducted using common size financial statements. A common size financial statement shows each item on a financial statement in a percentage figure for each statement line item.

A vertical analysis gives managers a different option for reviewing financial information; managers may be more comfortable looking at percentages rather than Dinar amounts. The percentage figure represents how individual line-item amounts compare to the aggregate total of the financial statements.

For example: business owners or managers may wish to know what percentage office supplies were out of the total expenses reported on Mayson's income statement. A common size statement would divide Mayson's total office supplies expense by the total expenses listed on Mayson's income statement. This percentage is then listed where the office supplies expense amount would be on the financial statement.

- **Trend Percentage Analysis** تحليل نسبة الاتجاه

A trend percentage analysis is an enhanced horizontal analysis technique. Trend percentage analyses help companies identify consistent revenues or expenses from past accounting periods. These trends can help managers make business decisions regarding future operations.

Companies will use a specific financial statement as a base year for comparing all future financial statements. Changes for each future time period are expressed as a percentage when compared to the base financial statement.

Companies can conduct a trend percentage analysis at various times of the year or use different financial statements as the base during this comparison process.

❖ **The concept of Ratio (Meaning)** مفهوم النسبة (المعنى)

1. Ratio can be defined as numerical or an arithmetical relationship between two figures.
2. Ratio is expressed when one figure is divided by the other..
3. A ratio is one figure expressed in terms of another figure.
4. For example, if 4,000 is divided by 10,000, the ratio can be expressed as 0.4 or 2:5 or 40%.
5. Absolute figures alone not convey any meaning unless they are compared with each other.
6. Accounting ratios show an inter-relationship which exists among various figures shown in the financial statements.

❖ **Ratio Analysis (Meaning)** تحليل النسبة (المعنى)

1. The financial analysts always need certain yardsticks to evaluate the efficiency and performance of any business unit. The one of the most frequently used yardstick is "Ratio Analysis".
2. Ratio analysis is an attempt to derive quantitative measures or guides concerning the financial health and profitability of a business enterprise.
3. Ratio analysis involves the use of various methods for calculating and interpreting financial ratios to assess the performance and status of the business unit.
4. Ratio analysis is a tool of financial analysis which studies the numerical or quantitative relationship between two variables or items.
5. Ratio analysis is the method or process by which the relationship of items or groups of items in the financial statements are computed, determined and presented.

❖ **Role of Ratio** دور النسبة

(a) The Ratio is Showing the Financial Position of a Business

النسبة تظهر الوضع المالي للشركة

1. Accounting ratios reveal the financial position of a business firm.
2. Accounting ratios helps banks, insurance companies as well as other financial institutions in assessing a firm before sanctioning any loan to them.
3. Similarly, the ratios are also helpful to investors for finding the profitability of a firm.

(b) The Ratio is Useful In Inter-firm and Intra-firm Comparison

النسبة مفيدة في المقارنة داخل الشركات وما بين الشركات

1. The ratios are very useful in inter-firm and intra-firm comparisons.
2. Inter-firm comparison is necessary to find out the exact position of a firm as compared to other firms in the same industry.
3. Intra-firm comparison is also necessary to compare the performance of a firm of current year with that of previous years.

(c) The Ratio is Calculated for a Number of Years

يتم حساب نسبة لعدد من السنوات

1. If accounting ratios are calculated for a number of years, a trend can be established.
2. This trend helps in setting future plans and forecasting. For example, Net Profit as expressed as a percentage of sales can be forecasted on the basis of the past percentage of the same.

(d) The Ratio is Locating the Weak Spots Points in the Business

النسبة تحدد نقاط الضعف في الأعمال التجارية

1. Accounting ratios are of great assistance in locating the weak spots in the business.

2. This weakness may exist in a business in spite of a satisfactory performance otherwise.
3. For example, if a firm finds that increase in selling and distribution expenses is more than proportionate to the results expected or achieved, remedial steps can be taken to overcome this situation.

❖ **Advantages of Ratio Analysis** مزايا تحليل النسبة

1. Ratio analysis reflects the working efficiency of a business concern.
2. Ratio analysis facilitates comparison between one firm and another firm in the same industry over a number of years to ascertain profitability.
3. Since ratio analysis reflect the financial health of a business concern, bank, insurance and other financial institutions rely on them while judging loan applications and in taking vital investment decisions.
4. Ratio analysis helps in establishing trend since the results are analyzed over a number of years.
5. Ratio analysis is helpful in forecasting likely events in future.

❖ **Limitations of Ratio Analysis** محددات تحليل النسبة

(a) Absence of an Explicit Theoretical Structure غياب بنية نظرية صريحة

1. The striking aspect of ratio analysis is the absence of an explicit theoretical structure.
2. Different methods of calculations are adopted by different concerns.

(b) Full Adjustments التعديلات الكاملة

1. For correct analysis, inside information must be known by the analyst since most concerns resort to portray a rosy picture of the financial attainments.
2. For example, a concern may draft its balance sheet when its inventory level is low to reflect better liquidity position etc.
3. Thus, to come to correct conclusions, ratios must be calculated after full adjustments are made.

(c) Changes in the Basis of Accounting التغييرات في أساس المحاسبة

Change in the basis of accounting may pose difficulty in analyzing ratios between one period and another period.

(d) Unable to Provide Complete Information عدم القدرة على توفير المعلومات كاملة

1. There may be some peculiar circumstances which may not be reflected in ratio analysis. For example, a concern's debentures may be due for redemption.
2. In such a situation, although Current Ratio = $\frac{\text{Current Assets}}{\text{Current Liabilities}}$ may appear to be favorable, there may be shortage of funds due to payment requirements.

• **Interpretation of Ratios** تفسير النسب

Ratios may be interpreted in different ways. They are as follows :

(a) Simple / Pure Ratios النسب البسيطة والصرافة

It is merely a quotient arrived by simple division of one number by another.

Example

When the current assets of a business organization are 40,000 and current liabilities are 10,000, then the ratio is derived as follows :

i.e.

$$\frac{40,000}{10,000} = 4 \text{ or as } 4 : 1$$

(b) Percentages النسب

Ratios are expressed as percentage relations when the simple or pure ratios are multiplied by 100.

Example

The current ratio in the (a) above can be expressed in percentage by multiplying 4 by 100. The ratio will be expressed as 400%.

i.e.

$$\frac{40,000}{10,000} \times 100 = 400\%$$

(c) Rate المعدل

Sometimes, ratios are expressed as rates which refer to ratios over a period of time.

Example : Stock has turned over '6 times a year'.

Questions

1. What is Common Size Analysis?
2. Describe the formula used in common size analysis.
3. What are the Types of Common Size Analysis?
4. Explain Importance of Common Size Analysis.
5. Describe the various Tools of financial analysis.
6. Explain the Importance of Comparative Financial Statement.
7. What is the meaning of Trend Analysis?
8. Comment the Horizontal Analysis.
9. Explain Common Size Financial Statements.
10. Comment the Trend Percentage Analysis.
11. Explain the concept of Ratio.
12. What is Ratio Analysis ?
13. Write a Note about Interpretation of Ratios.
14. Describe the Classification of Ratios.
15. State the Role of Ratio.
16. State the Advantages of Ratio Analysis.
17. State the Limitations of Ratio Analysis.
18. Discuss in detail the Merits and Limitations of Ratio Analysis



CHAPTER (8)

FINANCIAL RATIOS ANALYSIS

تحليل النسب المالية

LEARNING OBJECTIVES

الأهداف التعليمية:

After reading this chapter, you can certainly be able to understand the following subjects :

- ❖ Liquidity Ratio
- ❖ Activity Ratio
- ❖ Profitability Ratio
- ❖ Solvency Ratio
- ❖ Project Evaluation
- ❖ Investment Policies

CHAPTER (8)

FINANCIAL RATIOS ANALYSIS

تحليل النسب المالية

(Classification and Interpretation of Ratios)

A ratio analysis is a quantitative analysis of information contained in a company's financial statements. Ratio analysis is used to evaluate various aspects of a company's operating and financial performance such as its efficiency, liquidity, profitability and solvency.

❖ Classification/Types of Ratios تصنيف/ أنواع النسب

❖ Liquidity Ratios/Solvency Ratios نسب السيولة/ نسب الملاءة

- Liquidity ratios refers to the ability of a firm to meet its obligations in short-run, usually, one year.
- Liquidity ratios are generally based on relationship between current assets and current liabilities.
- The important liquidity ratios are :

(i) Current ratio, نسبة التداول

(ii) Acid Test Ratio, and نسبة السيولة السريعة

(iii) Fund Flow Ratio. نسبة التدفق النقدي

❖ Activity Ratios (Turnover Ratios) نسب النشاط (نسب الدوران)

- Turnover ratios measure how effectively the assets are employed by the firm.
- These ratios are based on the relationship between level of activity represented by sales or cost of goods sold and levels of various assets.
- The important turnover ratios are :

1. Inventory Turnover Ratio, نسبة دوران المخزون

2. Receivables Turnover Ratio, نسبة دوران الذمم المدينة

3. Fixed Assets Turnover Ratio, نسبة دوران الموجودات الثابتة

4. Average Collection Period Ratio, and معدل فترة التحصيل

5. Total Assets Turnover Ratio. نسبة دوران مجموع الموجودات

❖ **Profitability Ratios** نسب الربحية

- Profitability ratios reflects the final result of business operations.
- There are two types of profitability ratios, i.e.

(i) Profit Margin Ratios, and نسب هامش الربح

(ii) Rate of Return Ratios. معدل نسب العائد

- Profit margin ratios show the relationship between profit and sales.
- The two popular profit margin ratios are gross profit margin ratio, and net profit margin ratio.

❖ **Solvency Ratios** نسب الملاءة المالية

Solvency ratios are also known as "**Liquidity Ratios**".

❖ **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.

$$\text{Formula : current ratio} = \frac{\text{Current Assets (CA)}}{\text{Current Liabilities (CL)}}$$

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.

$$\text{Formula: Proprietary Ratio} = \frac{\text{Proprietor's Funds}}{\text{Total Assets}}$$

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.

$$\text{Formula: Debt Equity Ratio} = \frac{\text{Long-term Debts}}{\text{Shareholders Funds}}$$

- 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 والخسائر

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 :

$$\text{Net Profit Ratio} = \frac{\text{Net Profit}}{\text{Net sales}} \times 100$$

Example :

Net Profit : 600,000

Net Sales: 6,000,000

$$\text{Net Profit Ratio} = \frac{600,000}{6,000,000} = 10\%$$

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 :

$$\text{Operating Ratio} = \frac{\text{Operating cost}}{\text{Net sales}} \times 100$$

(3) Composite Ratios النسب المركبة

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

i. Return on Capital Employed Ratio : نسبة العائد على راس المال المستخدم

This ratio indicates the percentage of net profits before interest and tax to total capital employed.

The capital employed is calculated as follows :

Formula : Capital Employed = Equity Capital (+) Preference Capital (+) Reserves and Surplus (+) Long-term Borrowings (-) Fictitious Assets.

This ratio is calculated as follows :

Formula :

$$\text{Return on Capital Employed Ratio} = \frac{\text{Net Profit before Dividend interest and Finance Charges}}{\text{Capital Employed}} \times 100$$

- This ratio is considered to be a very important because it reflects the overall efficiency with which capital is used.
- This ratio of a particular business should be compared with other business firms in the same industry to find out the exact position of the business.

ii. Return on Equity Ratio نسبة العائد على حق الملكية

- This ratio is also known as Return on shareholders' funds or Return on proprietor's funds or Return on net worth.
- This ratio indicates the percentage of net profit available for equity shareholders. In other words, this ratio measures the return only on equity shareholders' funds and not on total capital employed.

Formula :

$$\text{Return of Equity} = \frac{\text{Net Profit after Interest Income Tax and Preference Dividend (if any)}}{\text{Equity Shareholders Funds}} \times 100$$

[Note : Equity Shareholders' Funds = Equity Capital (+) Reserves, retained earnings and Surplus].

This ratio indicates the productivity of the owned funds employed in the firm. However, in judging the profitability of a firm, it should not be overlooked that during inflationary periods, the ratio may show an upward trend because the numerator of the ratio represents current values whereas, the denominator represents historical values.

iii. Price Earnings Ratio نسبة عوائد (أرباح) السهم

This ratio is calculated with the help of the following formula :

$$\text{Formula : Price Earnings Ratio} = \frac{\text{Market Price Per Equity Share}}{\text{EPS}}$$

Example :

If the share price of a company is 240 and EPS is 40, the P/E ratio will be $\frac{240}{40} = 6$ times. It indicates that the market value of every Dinar of earnings is six times,

iv. Dividend Payout Ratio : نسبة توزيع الأرباح

Dividend payout ratio indicates the percentage of profit distributed as dividends to the shareholders.

- A higher ratio indicates that the organization is following a liberal policy regarding the dividend, while a lower ratio indicates a conservative approach of the management towards the dividend.
- The ratio is calculated as shown below :

Formula :

$$\text{Dividend Payout Ratio} = \frac{\text{Dividend Per Equity Share}}{\text{EPS}} \times 100$$

❖ Project Evaluation تقييم المشروع

The following points highlight the top four methods of project evaluation in a firm. The methods are:

1. Return of Investment (ROI) العائد على الاستثمار
2. Payback Period Method طريقة فترة الاسترداد
3. Net Present Value (NPV) صافي القيمة الحالية
4. The Internal Rate of Return (IRR). معدل العائد الداخلي

We will address the method of return on investment as one of the methods of financial analysis. Other methods are the study of financial management.

سوف نتطرق إلى طريقة العائد على الاستثمار باعتبارها من طرائق التحليل المالي أما الطرائق الأخرى فهي من اختصاص دراسة الإدارة المالية .

1. Return of Investment (ROI)

The ratio of profit expected from an investment project and the proposed investment for the project is called Return on Investment (ROI).

This ROI ratio is used as a criterion for the evaluation of an investment project. The greater the ROI of a project, the greater is its acceptability. There are three concepts about the amount of investment on a project. The amount of investment may mean the amount of assets, amount of capital invested, or the amount of equity capital. We may obtain three types of ROI on the basis of these three concepts.

These are:

(i) Return on Assets (ROA) العائد على الموجودات

By definition, ROA is the ratio between net profit and the assets. We may write, therefore,

$$\text{ROA} = \text{net profit excluding taxes} \div \text{total assets}$$

Here net profit does not include the interest to be paid to the lenders. But, since interest is included in the real return on total assets, an improved form of ROA is:

(ii) Return on Capital Employed (ROCE) العائد على راس المال المستخدم

$$\text{ROA} = (\text{net profit excluding taxes} + \text{interest paid}) \div \text{total assets}$$

ROCE is the second type of ROI. Here net profit, excluding tax, is expressed as a ratio of the total amount of invested capital. The total amount of capital provided by the owner of the firm and the lenders is the total invested capital in this case.

We may have this estimate of capital in two ways

- **First**, the total amount of invested capital is the sum total of long-term liabilities and equity of the shareholders.
- **Second**, invested capital is the summation of the net circulating capital and fixed assets. Therefore, we may write here:-

$$ROCE = \frac{\text{net profit minus tax}}{\text{total investment capital}}$$

Add the interest paid in net profit and write:

$$ROCE = \frac{\text{net profit minus tax} + \text{interest paid}}{\text{total invested capital}}$$

(iii) Return on Shareholders' Equity (ROSE) العائد على حقوق المساهمين

By definition, a general estimate of ROSE is:

$$ROSE = \frac{\text{net profit minus tax}}{\text{total equity of the shareholders}}$$

Now the shares of a company may be of two types: preference shares and ordinary shares. Here, if the shares are ordinary shares, then we may write:

$$ROSE = \frac{\text{net profit minus tax} - \text{dividend paid to preference shareholders}}{\text{equity of the ordinary shareholders}}$$

We may mention here two more measures of the rate at which the owners of ordinary shares may obtain return from their company. These two rates of return are "**earning per share**" (EPS) and "**dividend per share**" (DPS).

By definition, we have:-

$$EPS = \frac{\text{net profit minus tax} - \text{dividend paid to preference shareholders}}{\text{number of ordinary shares}}$$

$$DPS = \frac{\text{dividend paid to the owners of ordinary shares}}{\text{number of ordinary shares}}$$

It may be noted here that the share owners may earn at the rate of EPS only when the company actually distributes all the money equal to the numerator of the formula for EPS among the shareholders.

❖ **Investment Policy** سياسة الاستثمار

The investment decisions are to choose the assets on which the money is being spent. The assets are divided into two parts:

1. Long-term assets: which have an impact over many years.
2. Short-term assets: All assets that can be converted into cash or cash equivalents during the period and are highly liquid.

Accordingly, asset selection has two aspects:

- The first aspect relates to capital investments.
- The second aspect relates to the management of working capital.

For the capital investments, there are key elements that are involved in making capital decisions, including the group of assets in the entity and its composition, the risks related to the entity's business in general, as well as the theory of measuring the cost of capital.

Working capital management is one of the main tasks of financial management. It must create a an equilibrium between profitability and liquidity because of a conflict between the two.

Working capital means the difference between current assets and current liabilities as in the following equation:

$$\text{Working capital} = \text{Current assets} - \text{Current liabilities}$$

If this difference is significant, there is a large amount of money frozen in current assets that could have been invested in other areas effectively. If the difference is small or negative, it means that the company is suffering from financial difficulties, poor financial situation or financial failure. In this case, the entity must increase its working capital so that it can meet its outstanding obligations during the financial period. The company will resort to this in a number of ways, including the introduction of new shares in the market, the increase in current assets or the sale of part of the fixed assets.

❖ سياسة الاستثمار Investment Policy

تتمثل القرارات الاستثمارية في اختيار الموجودات التي يتم إنفاق الأموال عليها وتقسّم الموجودات إلى قسمين :
1. موجودات طويلة الأجل: والتي يكون تأثيرها على مدى سنوات طويلة .

2. موجودات قصيرة الأجل: هي كل الموجودات التي يمكن تحويلها إلى نقدية أو سيولة خلال السنة المالية وتتصف بدرجة عالية من السيولة .

وبناءً على ذلك فإن اختيار الموجودات يكون ذو جانبيين :

الجانب الأول : يتعلق بالاستثمارات الرأسمالية .

الجانب الثاني : يتعلق بإدارة رأس المال العامل .

فيما يتعلق بالاستثمارات الرأسمالية فإن هنالك عناصر أساسية تدخل في اتخاذ القرارات الرأسمالية ومنها مجموعة الموجودات في المنشأة وتكوينها والمخاطر المتعلقة بأعمال المنشأة بشكك عام، كذلك نظرية قياس كلفة رأس المال. أما إدارة رأس المال العامل فإنها من المهام الرئيسية للإدارة المالية، إذ يتعين عليها خلق حالة التوازن بين الربحية والسيولة بسبب وجود تعارض بين الاثنين.

يقصد برأس المال العامل الفرق بين الموجودات المتداولة والمطلوبات المتداولة وكما في المعادلة الآتية :

رأس المال العامل = الموجودات المتداولة - المطلوبات المتداولة

إذا كان هذا الفرق كبيراً يعني إن هنالك أموالاً كبيرة جمدت في الموجودات المتداولة كان يمكن أن تستثمر في مجالات أخرى بشكل فعال ، أما إذا كان الفرق قليلاً أو سالباً فإن ذلك يعني إن المنشأة تعاني من العسر المالي أو من رداءة الوضع المالي أو الفشل المالي . ويجب على المنشأة في هذه الحالة أن تزيد من رأس المال العامل لكي تستطيع تسديد التزاماتها المستحقة خلال الفترة المالية، وتلجأ المنشأة إلى ذلك باتباع أساليب متعددة ، من أبرزها طرح أسهم جديدة في السوق أو زيادة الموجودات المتداولة أو بيع جزء من الموجودات الثابتة وتحويلها إلى سيولة .

• Procedures of Investment Policy إجراءات سياسة الاستثمار

You can increase the value of your business and increase your income by investing the profits from your company. This policy will help you control how profits are invested.

• **Establishing an Investment Clearing Process**

إنشاء عملية توضيح الاستثمار

You can set up a procedure for reviewing and approving investments. This procedure should designate who can present investment ideas, who will approve them and who will monitor the profits and losses from investments.

• **Listing Prudent Investments** وضع قائمة بالاستثمارات الحكيمة

You can avoid making emotional investments by creating a list of the types of investments you will consider. The "prudent man rule," (قاعدة الرجل الحكيم) which comes from common law but is endorsed by the Federal Deposit Insurance Corporation, dictates that each investment must be considered on its own merits.

- **Setting Objectives** تحديد الأهداف

Your investment policy should include investment objectives. For example, you may seek to create income by investing in dividend-paying stocks or interest-paying bonds.

- **Choosing a Strategy** اختيار الاستراتيجية

Your investment policy should lay out a strategy for investing. That means explaining exactly how and when you will invest.

❖ **Exercises Solved**

Exercise No. 1

The following are the summarized Profit and Loss A/c and Balance Sheet of Zane Ltd. for

Dr.		Profit and Loss Account		Cr.	
Particulars	IQD	Particulars	IQD		
To Opening Stock	99,000	By Sales	950,000		
To Purchases	545,000	By Closing Stock	150,000		
To Freight Inward	16,000				
To Gross Profit	440,000				
	1,100,000				1,100,000
To Operating Expenses	200,000	By Gross Profit	440,000		
To Loss on Sale of Asset	40,000.	By Non-operating income	60,000		
To Net Profit	260,000				
	500,000				500,000

Balance Sheet

Liabilities	IQD	Assets	IQD
Share Capital	200,000	Land and Building	150,000
Reserve and Surplus	260,000	Plant and Machinery	180,000
Bill Payable	40,000	Stocks	150,000
Other Current Liabilities	90,000	Debtors	45,000
		Bills Receivable	5,000
		Cash & Bank	60,000
	590,000		590,000

Requirement: Calculate the following:

1. Gross Profit Ratio.
2. Operating Profit Ratio.
3. Return on Capital Employed.
4. Stock Turnover Ratio.
5. Debtors Turnover Ratio.
6. Current Ratio.
7. Sales to Fixed Assets Ratio.
8. Net Profit to Fixed Assets Ratio.

9. Sales to Capital Employed Ratio.
10. Turnover to Total Assets Ratio.

Solution :

$$(1) \text{ Gross Profit Ratio} = \frac{\text{G.P}}{\text{Sales}} \times 100$$

$$= \frac{440,000}{950,000} \times 100$$

$$= 46.32 \%$$

$$(2) \text{ Operating Profit Ratio} = \frac{\text{Operating Profit}}{\text{Sales}} \times 100$$

$$= \frac{240,000}{990,000} \times 100$$

$$= 24.24\%$$

$$(3) \text{ Return on Capital Employed} = \frac{\text{Net Profit}}{\text{Capital Employed}} \times 100$$

$$= \frac{260,000}{460,000 (200,000 + 260,000)} \times 100$$

$$= 56.52\%$$

$$(4) \text{ Stock Turnover Ratio} = \frac{\text{Cost of Goods Sold}}{\text{Average Stock}}$$

$$= \frac{510,000}{124,750}$$

$$= 4.088$$

$$(5) \text{ Debtors Turnover Ratio} = \frac{\text{Credit Sales}}{\text{Average Debtors (+) Average Bills Receivable}}$$

$$= \frac{950,000}{45,000 + 5,000}$$

$$= \frac{950,000}{50,000}$$

$$= 19$$

$$(6) \text{ Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

$$= \frac{260,000 (150,000 + 45,000 + 5,000 + 60,000)}{130,000 (40,000 + 90,000)}$$

$$= 2:1$$

$$(7) \text{ Sale to Fixed Assets Ratio} = \frac{\text{Sales}}{\text{Fixed Assets}}$$

$$= \frac{950,000}{330,000}$$

$$= 2.88 \text{ Times}$$

$$(8) \text{ Net Profit to Fixed Assets Ratio} = \frac{\text{N.P}}{\text{Fixed Assets}} \times 100$$

$$= \frac{260,000}{330,000} \times 100$$

$$= 78.79\%$$

$$(9) \text{ Sales to Capital Employed Ratio} = \frac{\text{Sales}}{\text{Capital Employed}} = \frac{950,000}{460,000} = 2.06$$

$$(10) \text{ Turnover to Total Assets Ratio} = \frac{\text{Sales}}{\text{Total Assets}} = \frac{950,000}{590,000} = 1.61 \text{ Times}$$



Exercise No.2

Betal Manufacturing company submits the following Profit and Loss Account for the year ended 31st March, 2019.

Dr.	Profit and Loss A/c		Cr.
Particulars	IQD	Particulars	IQD
To Opening Stock	52,000	By Sales	320,000
To Purchase	160,000	By Closing Stock	76,000
To Wages	48,000		
To Manufacturing Expenses	32,000		
To Gross Profit c/d	104,000		
	396,000		396,000
To Selling & Distribute Expenses	8,000	By Gross Profit b/d	104,000
To Administrative Expenses	45,600	By Profit on Sale of Shares	9,600
To Loss by Fire	2,400		
To Loss on Sale of Furniture	1,600		
To Net Profit	56,000		
	113,600		113,600

Calculate :

1. Gross profit ratio,
2. Net profit ratio,
3. Operating profit ratio,
4. Operating net profit ratio.

Solution :

$$(i) \text{ Gross Profit Ratio} = \frac{\text{Gross profit}}{\text{Sales}} \times 100 = \frac{104,000}{320,000} \times 100 = 32.5\%$$

$$\begin{aligned}
 \text{(ii) Net Profit Ratio} &= \frac{\text{Net Profit}}{\text{Sales}} \times 100 \\
 &= \frac{56,000}{320,000} \times 100 \\
 &= 17.5\%
 \end{aligned}$$

$$\begin{aligned}
 \text{(iii) Operating Ratio} &= \frac{\text{Cost of Goods Sold (+) Operating Expenses}}{\text{Sales}} \times 100 \\
 &= \frac{216,000 (+) 53,600}{320,000} \times 100 \\
 &= 84.25\%
 \end{aligned}$$

$$\begin{aligned}
 \text{(iv) Operating Profit Ratio} &= \frac{\text{Operating Net Profit}}{\text{Sales}} \times 100 \\
 &= \frac{56,000 (+) 1,600 (-) 9,600}{320,000} \times 100 \\
 &= \frac{48,000}{320,000} \times 100 \\
 &= 15\%
 \end{aligned}$$



Exercise No.3

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

Liabilities	IQD	Assets	IQD
Equity Capital	1,000,000	Goodwill (At cost)	500,000
6% Preference Capital	500,000	Plant and Machinery	600,000
General Reserve	100,000	Land and Building	700,000
Profit and Loss A/c	400,000	Furniture	100,000

Provision for Taxation	176,000	Inventories	600,000
Bills Payable	124,000	Bills Receivable	30,000
Bank Overdraft	20,000	Debtors	150,000
Creditors	80,000	Bank	200,000
12% Debentures	500,000	investments (Short-term)	20,000
	2,900,000		2,900,000

Solution :

I. Current Ratio

$$= \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

$$= \frac{1,000,000}{400,000}$$

$$= 2.5:1$$

Note : Current assets include inventories, debtors, bills receivable, bank balance and short-term investments.

Current liabilities include creditors, bills payable, bank overdraft, taxation provision.

II. Liquid Ratio

$$= \frac{\text{Current Assets}}{\text{Liquid Liabilities}}$$

$$= \frac{1,000,000 (-) 600,000}{400,000 (-) 20,000}$$

Liquid Assets = Current Assets (-) Stock

Liquid Liabilities = Current Liabilities (-) Bank Overdraft

$$\text{Overheads} = \frac{400,000}{380,000}$$

= 1.05:1

III. Absolute Liquidity Ratio

$$= \frac{\text{Cash at Bank (+) Short-term Investments}}{\text{Current Liabilities}}$$

$$= \frac{220,000}{400,000}$$

$$= 0.55:1$$

IV. Current assets to fixed assets = $\frac{\text{Current Assets}}{\text{Fixed Assets}}$

$$= \frac{1,000,000}{1,900,000}$$

$$= 0.526:1$$

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

V. Debt to Equity Ratio

$$\text{a. } \frac{\text{Long-term Debt}}{\text{Shareholders Funds}} = \frac{500,000}{1,000,000 + 500,000 + 100,000 + 400,000}$$

Equity Capital (+) Preference Capital (+) General Reserve (+) Profit and Loss A/c

$$= \frac{500,000}{2,000,000}$$

$$= 0.25:1$$

$$b. \frac{\text{Long-term Debt}}{\text{Long-term Debt} + \text{Shareholders Funds}} = \frac{500,000}{500,000+2,000,000}$$

$$a. = \frac{500,000}{2,500,000}$$

$$b. = 0.20:1$$

$$\text{VI. Proprietary Ratio} = \frac{\text{Shareholders Funds}}{\text{Total Assets}}$$

$$= \frac{2,000,000}{2,900,000}$$

$$= 0.69 : 1$$

$$\text{VII. Capital Gearing Ratio} = \frac{\text{Fixed Interest Bearing Securities}}{\text{Equity Capital+Reserves and Surplus}}$$

$$= \frac{1,000,000 \{500,000 \text{ Preference} + 500,000 \text{ Debt}\}}{1,000,000 + 500,000}$$

$$= \frac{1,000,000}{1,500,000}$$

$$= 0.66:1$$

$$\text{VIII. (viii) Fixed Assets Ratio} = \frac{\text{Fixed Assets}}{\text{Capital Employed}}$$

$$= \frac{1,900,000}{2,500,000}$$

(Shareholders' Funds + Long-term debt)

$$= 0.76:1$$



Exercise No. 4

From the following details prepare the balance sheet of ABC Ltd.

Stock Turnover	6
Capital Turnover Ratio	2
Fixed Assets Turnover Ratio	4
Gross Profit	2%
Debt Collection Period	2 months
Creditors Payment Period	73 days

The Gross Profit IQD 6,00,000. Closing Stock IQD 5,000 in excess of Opening Stock.

Solution :

Balance Sheet of ABC Ltd,

Liabilities	IQD	Assets	IQD
Capital	120,000	Closing Stock	42,500
Creditors	49,000	Debtors	50,000
		Fixed Assets	60,000
		Cash	16,500
	169,000		169,000

Working Notes:

1. Gross Profit Ratio $\frac{\text{Gross Profit}}{\text{Sales}} \times 100$
 $2\% = \frac{600,000}{\text{Sales}} \times 100$
 $2 = \frac{600,000}{\text{Sales}}$

Sales = 300,000 IQD

Cost of Goods Sold = Sales - Gross Profit
= 300,000 - 60,000
= 240,000 IQD

2. Stock Turnover = $\frac{\text{Cost of Goods Sold}}{\text{Average Stock}}$
 $6 = \frac{240,000}{\text{Average Stock}}$

Average Stock = 40,000 IQD

But. Average Stock = $\frac{\text{Opening Stock} + \text{Closing Stock}}{2}$

40,000 IQD = $\frac{\text{Opening Stock} + \text{Closing Stock}}{2}$ (1)

5,000 IQD = Opening Stock + Closing Stock(2)

Solving the above two equations.

- Closing Stock + Opening Stock = 80,000 IQD
- Closing Stock - Opening Stock = 5,000 IQD(3)

Subtracting equation (2) from equation(3) , we get

$2 (\text{Opening Stock}) = 75,000 \text{ IQD}$

Opening Stock =37,000 IQD

But, Closing Stock + Opening Stock = 80,000 IQD

Closing Stock + IQD 37,500 = 80,000 IQD

Closing Stock =42,500(80,000- 37,500)

3. Capital Turnover Ratio = $\frac{\text{Cost of Sales}}{\text{Capital}}$
 $2 = \frac{240,000}{\text{Capital}}$

Capital = 120,000 IQD

4. Fixed Assets Turnover Ratio = $\frac{\text{Cost of Sales}}{\text{Fixed Assets}}$
 $4 = \frac{240,000}{\text{Fixed Assets}}$

Fixed Assets = 60,000 IQD

5. Debt Collection Period = 2 Months

Debtor Turnover Ratio = $\frac{12 \text{ Months}}{\text{Debt Collection Period}}$

$$= \frac{12}{2}$$

$$= 6$$

OR Debtors Turnover Ratio = $\frac{\text{Credit Sales}}{\text{Average Debtors}}$

Assuming Sales as Credit Sales and Debtors Turnover Ratio is based on year-end figures, we have,

$$\text{Debtors} = \frac{300,000}{6}$$

$$= 50,000 \text{ IQD}$$

6. Creditors Payment Period = 73 Days

$$\text{Creditors Turnover Ratio} = \frac{365 \text{ Days}}{\text{Creditors Payment Period}}$$

$$= \frac{365 \text{ days}}{73 \text{ days}}$$

$$= 5 \text{ days}$$

Assuming all purchases to be credit purchases, the amount of purchase is determined as follows :

$$\begin{aligned} \text{Cost of Goods Sold} &= \text{Opening Stock (+) Purchases (-) Closing Stock} \\ 240,000 &= 37,500 (+) \text{ Purchases (-) } 42,500 \\ 240,000 (+) 42,500 (-) 37,500 &= \text{Purchases} \\ \text{Purchases} &= 245,000 \text{ IQD} \end{aligned}$$

Now. Creditors Turnover Ratio = $\frac{\text{Credit Purchases}}{\text{Closing Stock}}$

$$5 = \frac{245,000}{\text{Closing Stock}}$$

$$\text{Closing Stock} = 49,000 \text{ IQD}$$



Exercise No. 5

Following are the ratios relating to the trading activities of an organization.

- Debtors Velocity = 3 months
- Stock Velocity = 4 months
- Creditors Velocity = 2month
- G. P. Ratio = 25%
- Capital Turnover Ratio =3
- Fixed Assets Turnover Ratio =4

Gross Profit for 2018-19 IQD 750,000. Stock as on 31-3-2019 was 30,000 IQD more than it was on 1-4-2018. At the end of the year Bills Payable and Bills Receivable were 45,000 IQD and 50,000 IQD and Bank Overdraft was 110,000 IQD.

Requirement: Prepare a statement of Proprietary Fund for the year ended 31-3-2019.

Solution :

Statement Showing Proprietary Fund as on 31-3-2019

Particulars	IQD	IQD
Fixed Assets		750,000
Add : Current Assets (CA):		
Closing Stock	765,000	
Debtors	750,000	
Bills Receivable	50,000	1,565,000
Less : Current Liabilities (CL):		2,315,000
Creditors	380,000	
Bills Payable	45,000	
Overdraft	110,000	535,000
Proprietary Fund		1,780,000

Working Notes :

1- Debtors Velocity = $\frac{\text{Debtors}}{\text{Sales}} \times 12$

OR $3 = \frac{\text{Debtors}}{3,000,000} \times 12$

$$\text{Debtors} = \frac{3,000,000}{4}$$

$$= 750,000 \text{ IQD}$$

2- G.P. Ratio = $\frac{\text{G.P.}}{\text{Sales}} \times 100$

$$25 = \frac{\text{G.P.}}{\text{Sales}} \times 100$$

$$= \frac{750,000}{\text{Sales}} \times 100$$

$$\text{Sales} = 750,000 \times 4$$

$$= 3,000,000 \text{ IQD}$$

3- Stock Velocity = $\frac{\text{Cost of Goods Sold}}{\text{Average Stock}}$

Here, Stock Velocity = 4 months

$$= \frac{12}{4} \text{ months}$$

$$= 3 \text{ times}$$

Now, Cost of Goods Sold = Sales – G.P.

$$\text{Cost of Goods Sold} = 3,000,000 - 750,000$$

$$= 2,250,000 \text{ IQD}$$

Let the Opening Stock be y.

$$\text{Closing Stock} = y + 30,000$$

$$\begin{aligned} \text{Average Stock} &= \frac{y + y + 30,000}{2} \\ &= \frac{2y + 30,000}{2} \\ &= \frac{2(y + 15,000)}{2} \\ &= y + 15,000 \end{aligned}$$

Now. $\text{Stock Velocity} = \frac{\text{Cost of Goods Sold}}{\text{Average Stock}}$

i.e., $3 = \frac{2,250,000}{y+15,000}$

$$3y + 45,000 = 2,250,000$$

$$3y = 2,205,000$$

$$y = \frac{2,205,000}{3}$$

$$= 735,000 \text{ IQD}$$

$$\text{Opening Stock} = 735,000 (y)$$

Now. $\text{Closing Stock} = y + 30,000$

$$\text{Closing Stock} = 735,000 + 30,000$$

$$= 765,000 \text{ IQD}$$

4- $\text{Capital Turnover Ratio} = \frac{\text{Turnover}}{\text{Capital}}$

$$3 = \frac{3,000,000}{\text{Capital}}$$

$$\text{Capital} = 1,000,000 \text{ IQD}$$

5- $\text{Fixed Asset Turnover Ratio} = \frac{\text{Turnover}}{\text{Fixed Assets}}$

$$4 = \frac{3,000,000}{\text{Fixed Assets}}$$

$$\text{Fixed Assets} = 750,000 \text{ IQD}$$

6- $\text{Creditors Velocity} = \frac{\text{Creditors}}{\text{Purchase}} \times 12$

$$2 = \frac{\text{Creditors}}{2,280,000*} \times 12$$

$$\text{Creditors} = \frac{2,280,000}{6}$$

$$= 380,000 \text{ IQD}$$

(*)The Purchase figure of 2,280,000 IQD can be found by Opening Trading A/c.

Trading A/c (31-3-2019)

Particulars	IQD	Particulars	IQD
To Opening Stock	735,000	By Sales	3,000,000
To Purchase (Balancing Figure)	2,280,000	By Closing Stock	765,000
To Gross Profit	750,000		
	3,765,000		3,765,000



Exercise No. 6

With the help of the following ratios regarding Kachin Ltd. draw the balance sheet for the year ended 31 March, 2019.

- Current ratio 2.5 Liquid ratio 1.5
- Net working capital 300,000 IQD.
- Stock turnover ratio (cost of sales/closing stock) 6 times Gross profit ratio 20%
- Fixed assets turnover ratio (on cost of sales) 2 times Debt collection period 2 months Fixed assets to shareholders net worth 0.80
- Reserve and surplus to capital 0.50.

Solution :

Working Notes:

$$\begin{aligned}
 \text{(1) Working Capital} &= CA - CL \\
 &= \frac{CA}{CL} \\
 2.5 &= \frac{CA}{CL}
 \end{aligned}$$

$$CA = 2.5 CL$$

$$\text{Working Capital} = 2.5 CL - CL$$

$$300,000 = 1.5 CL$$

$$CL = 200,000$$

$$CA = 2.5 \times 200,000$$

$$CA = 500,000 \text{ IQD}$$

$$\begin{aligned}
 \text{(2) Liquid Ratio} &= \frac{\text{Quick Assets}}{\text{Quick Liabilities}} \\
 1.5 &= \frac{CA - \text{Stock}}{200,000}
 \end{aligned}$$

$$CA - \text{Stock} = 300,000$$

$$\text{Stock} = 500,000 - 300,000$$

$$\text{Stock} = 200,000 \text{ IQD}$$

(3) Stock Turnover Ratio $= \frac{\text{Cost of Sales}}{\text{Closing Stock}}$
 $6 = \frac{\text{Cost of Sales}}{200,000}$
Cost of Sales = 1,200,000 IQD

(4) Sales = Cost of Sales (+) Gross Profit
 = 1,200,000 (+) 300,000
 = **1,500,000 IQD**

<u>Sales</u>	<u>Cost of Sales</u>	<u>G.P.</u>
100	80	20
1,200,000		?

$1,200,000 \times \frac{20}{80}$
 = **300,000 - (Gross Profit)**

(5) Debtors $= \frac{1,500,000}{12} \times 2$
 = 250,000

(6) Fixed Assets = 2 x 12,00,000
 = **2,400,000 IQD**

(7) Fixed Assets to Net worth $= \frac{\text{Fixed Assets}}{\text{Net Worth}}$
 $0.80 = \frac{\text{Fixed Assets}}{2,400,000}$
Net Worth = 3,000,000 IQD

(8) Reserves and Surplus to Share Capital
 $= \frac{\text{Reserves and Surplus}}{\text{Equity Share Capital}}$
 = **0.50**

Reserves and Surplus = $\frac{1}{2}$ of Equity Share Capital

But, Net Worth = Capital (+) Reserve
 = **3,000,000 IQD**

$3,000,000 = [\text{Equity Share Capital} (+) \frac{1}{2} \text{Equity Share Capital}]$

Share Capital = $3,000,000 \times \frac{2}{3}$
 = 2,000,000

Reserves and Surplus = 0.50 of 2,000,000
 = **1,000,000 IQD**

Balance Sheet of Kachin Ltd. for the year ended 31-3-2019

Liabilities	IQD	Assets	IQD
Share Capital	2,000,000	Fixed Assets	2,400,000
Reserves and Surplus	1,000,000	Current Assets:	
Current Liabilities	200,000	Stock 200,000	
		Debtors 250,000	
		Cash 50,000	500,000
		Investment (Balancing	

		Figure)	300,000
	3,200,000		3,200,000



Exercise No. 7

Following information is given for two companies A Ltd. and B Ltd.

Particulars	A Ltd.	B Ltd.
Current Ratio	1.25	1.01
Liquid Ratio	0.96	0.69
Gross Profit Ratio	26.7%	33.3%
Debt Equity Ratio	0	0.33
Net Profit Ratio	15%	10%

Requirement: Analyze the financial position of the two companies.

Solution :

(a) Current Ratio of A. Ltd is 1.25 which is not favorable. Hence, the short-term financial position of the company is not strong.

Current Ratio of B. Ltd. is 1.01 which is not favorable. Hence, the short-term financial position of the company is not strong.

(b) Liquid Ratio of A. Ltd. is 0.96, which shows that the solvency position of A. Ltd. is not strong. satisfactory. ($0.96 < 1$)

Liquid Ratio of B. Ltd. is 0.69, which shows that the solvency position of B. Ltd. is not satisfactory. ($0.69 < 1$)

(c) Gross Profit Ratio of A. Ltd. is 26.7% and B. Ltd is 33.3% which shows that the profitability of both the companies seems to be satisfactory. However, whether there is an improvement in the profitability or not depends on the comparative study of figures of the previous accounting periods.

(d) Debt Equity Ratio of A. Ltd is 0 and B. Ltd is 0.33. Banking Companies consider debt equity ratio upto 2 : 1 as normal. Debt equity ratio in both our cases was lower than the normal debt equity ratio. This shows that there was a greater margin of safety available to loan creditors. Both the companies was eligible for long-term financial assistance.

(e) The Net Profit Ratio of A. Ltd is 15%, which shows that the profitability of the company seems to be quite satisfactory.

The Net Profit Ratio of B. Ltd. is 10% which is quite low. This shows that the profitability position of the company is quite unsatisfactory. The management is not efficient in controlling cost.



Exercise No. 8

The Current Ratio is twice than Quick Ratio. Calculate value of stock, if working capital is 40,000/- IQD , & bank overdraft is 10,000/- IQD .

Solution :

Here, Current Ratio = 2

Now, Current Ratio = $\frac{\text{Current Assets (CA)}}{\text{Current Liabilities (CL)}}$

$$2 = \frac{40,000 + CL}{CL}$$

$$2CL = 40,000 + CL$$

$$CL = 40,000 \text{ IQD}$$

and CA = 80,000 IQD

now Quick Ratio = 1

$$\text{Quick Ratio} = \frac{CA - \text{Stock}}{CL - \text{BOD}}$$

$$1 = \frac{80,000 - \text{Stock}}{40,000 - 10,000}$$

$$1 = \frac{80,000 - \text{Stock}}{30,000}$$

$$30,000 = 80,000 - \text{Stock}$$

$$\text{Stock} = 50,000 \text{ IQD}$$

CA-CL= Working Capital

$$Ca - cl = 40.000 \text{ IQD}$$

$$CA = 40.000 + CL$$



Questions and Exercises

• **Questions**

1. Describe the Classification and Types of Ratios.
2. What is the Liquidity Ratios and Solvency Ratios?
3. What are The important liquidity ratios?
4. What are The important turnover ratios ?

5. What are types of profitability ratios?
6. Indicate the Balance Sheet Ratios.
7. Indicate the Profit and Loss Account Ratios.
8. Explain the Composite Ratios.
9. Indicate the methods of project evaluation in a firm.
10. Explain the Investment Policy.
11. What is the meaning of Working capital?
12. Explain the Procedures of Investment Policies.

- **Exercises**

Exercise No.1:

The following is the balance sheet of Iraqi Rubber Industries Company for the financial year ended 31/12/2019:

Liabilities	IQD	Assets	IQD
capital	2,000,000	building	1,000,000
Net profit	302,000	equipment	1,200,000
long-term loans	320,000	inventory 31/12 at a sales price	480,000
creditors	440,000	Financial investments	98,000
Provision for depreciation of machinery	280,000	Bills receivable	120,000
Provision for doubtful debts	16,000	Debtors	336,000
Accrued Salaries	20,000	cash	120,000
		Rent prepaid	24,000
Total	3,378,000	Total	3,378,000

Additional Information:

1. The value of the beginning inventory at 1/1/2019 was 320,000 dinars at cost.

2. The selling price is determined in accordance with the company's policy plus 20% as the profit margin for the cost.
3. Total profit for the year amounted to 360,000 dinars.
4. Credit purchases represent two-thirds (2/3) of the cost of net sales.
5. The discount rate charged by the bank is 5%. The average maturity of the notes receivable is 4 months.
6. Payment period average planned by the company is 3 months.
7. Storage period average planned by the company is 80 days.
8. Cash ratio (monetary standard) accepted by the company is 50%.

Required:

1. Rebalancing the balance sheet in accordance with accounting standards and applying financial analysis.
2. Use the revised balance sheet data to extract the following ratios:
 - Cash ratio (cash standard).
 - Creditors Turnover.
 - Payment period average
 - Inventory turnover.
 - Storage period average .
 - Fixed asset turnover.

Exercise No.2

The net profit before interest and tax for an industrial company for the year 2019 is 520,000 dinars and the debit annual interest is 80,000 and the annual installments due for the same year are 120,000.

Required : Determine the company's ability to service its debt for the year 2019 and compare it with the year 2018 by 1.5 times.

Exercise No.3

The following is the financial data extracted from the records of a company for the years 2018 and 2019.

particular	2018	2019
------------	------	------

Net profit before interest and taxes	500,000	1,800,000
Net operating assets	2,000,000	5,000,000
Net sales	2,500,000	7,500,000

Required:

- A. Determine the profit margin, and turnover of operating assets.
- B. Determine The company's earning power during the two years and comment on it.

Exercise No.4

the following data abstracted from records of an industrial company for the years 2018 and 2019

particular	2018	2019
Total assets (fixed and current)	480,000	520,000
Total long and short term debt	360,000	240,000

Require : find the ratio of debt (financial leverage) of the company for 2018 and 2019.

Exercise No.5

The following is the data of a company for the period ended 31/12/2019:

particular	Amount	particular	Amount
Creditors	?	Cash	?
Accrued Expenses	875000	notes receivable	?
Total current liabilities	?	Debtors	?
Long-term liabilities	?	inventory	?
Total liabilities	?	Expenses paid in advance	?
Equity	?	Total Current Assets	?
	?	machinery and equipment	550000
Total Liabilities and Equity	?	Total assets	?

Additional Information:

1. Inventory turnover = 10 times
2. Quick Liquidity ratio = 2:1
3. Gross profit = 7,800,000
4. Net profit = 2,080,000

5. Total debt to the equity ratio = 1:4
6. Asset turnover rate = 2
7. Profit margin ratio = 8%
8. Debtors Turnover rate = 8 times
9. Balances of accounts receivable, inventory, equity and total assets as of 31/12/2019 are identical to their balances as at 31/12/2018.
10. Convertible quick assets to cash consist of the following:
 - cash 27%
 - notes receivable 8%
 - debtors 65%
11. All sales and procurement results.

Required:

- a. Find the values of the balances indicated by a question mark (?).
- b. Find a rate of return on assets.
- c. Find a rate of return on equity.

Exercise No.6

The balance sheet of an industrial corporation for the year ended 31 December 2019 is as follows:

Liabilities			Assets			
equity			fixed assets		770.000	
capital	500.000		(-)		150.000	
			Depreciation of Fixed assets			
net profit for the year	40.000		Current assets:			
Total equity		540.000	ending Goods		116.000	
long-term loans		50.000	notes receivable		20.000	
Short - term liabilities			Debtors	43.600		
creditors	123.000		provision of doubtful debts	8.600	35.000	
Notes payable	97.000		Current securities		10.000	
Other credit balances			Cash on hand		12.800	
due salaries		10.000	Other debit balances			
			Prepaid expenses			6.200
Total Current Liabilities		230.000	Total Current Assets			200.000
Total liabilities		820.000	Total assets			820.000

additional information

- Annual net sales of 1,260,000 dinars
- Annual net purchases of 600,000 dinars
- Cost of sales is 1,181,600 dinars

Required: Calculate the following financial ratios:

1. Current ratio
2. Quick liquidity ratio
3. Creditors turnover and notes payable
4. Creditors payment period average and notes payable
5. Inventory turnover
6. Storage period average
7. Fixed asset turnover

8. Debtors collection period average and notes receivable and their comparison with creditors payment period average and notes payable.

Exercise No. 7

The following elements of a balance sheet as on 31/12/2019:

- o Assets: Cash? Inventory? Total current assets? fixed assets ?
- o Liabilities : Loans? Current liabilities? Total liabilities? equity?

Information's additional:

1. Equity of stockholders = 500,000 IQD
2. Ratio of Current Liabilities to Total Debt = 40%
3. Total debt to equity = 60%
4. Ratio of fixed assets to equity = 60%
5. Asset turnover = 2 times
6. Inventory turnover = 8 times

Required: Complete the balance sheet using the information available above.



Chapter (9)

Financial Leverage

الرافعة (العتلة) المالية

LEARNING OBJECTIVES

الأهداف التعليمية:

After reading this chapter, you can certainly be able to understand the following subjects :

- ❖ **Concept of Leverage Ratios**
- ❖ **Leverage Ratios**
- ❖ **Degree of Financial Leverage**
- ❖ **Leverage Degree Analysis**

Chapter (9)

Financial Leverage

الرافعة (العتلة) المالية

Financial leverage refers to the use of debt to acquire additional assets. Financial leverage is also known as trading on equity. Financial leverage is the amount of debt that an entity uses to buy more assets. Leverage is employed to avoid using too much equity to fund operations. An excessive amount of financial leverage increases the risk of failure, since it becomes more difficult to repay debt.

❖ Concept of Leverage Ratios مفاهيم نسب الرافعة

Leverage ratios are used to determine the relative level of debt load that a business has incurred. These ratios compare the total debt obligation to either the assets or equity of a business. A high ratio indicates that a business may have incurred a higher level of debt than it can be reasonably expected to service with ongoing cash flows.

تُستخدم نسب الرافعة لتحديد المستوى النسبي لتحميل الديون الذي تكبته الشركة. تقارن هذه النسب بين إجمالي التزام الديون إما بموجودات أو حقوق ملكية الشركة. تشير النسبة المرتفعة إلى أن الشركة ربما تكون قد تكبدت مستوى عالي من الدين أكثر مما يمكن توقعه بشكل معقول للعمل مع التدفقات النقدية الجارية.

The two main leverage ratios are:

- **Debt ratio (نسبة المديونية)**. Compares assets to debt, and is calculated as total debt divided by total assets. A high ratio indicates that the bulk of asset purchases are being funded with debt.
- **Debt to equity ratio (نسبة الدين الى حق الملكية)**. Compares equity to debt, and is calculated as total debt divided by total equity. A high ratio indicates that the business owners may not be providing sufficient equity to fund a business.

Leverage ratios are essentially measures of risk, since a borrower that cannot pay back its debt obligations is at considerable risk of entering bankruptcy protection. However, a modest amount of leverage can be beneficial to shareholders, since it means that a business is minimizing its use of equity to fund operations, which increases the return on equity for existing shareholders.

A prospective lender may use leverage ratios as part of its analysis of whether to lend funds to a business. However, these ratios do not provide sufficient

information for a lending decision. A lender also needs to know if a business is generating sufficient cash flows to pay back debt, which involves a review of both the income statement and statement of cash flows. A lender will also review a company's budget, to see if projected cash flows can continue to support ongoing debt payments.

In addition, the nature of the industry in which a business is located plays a significant role in the lending decision. For example, if an industry has few competitors, there are high barriers to entry, and there is a long history of above-average profits, then an organization could probably maintain a high debt load over a long period of time. Conversely, in an industry where market share changes continually, product cycles are short, and capital investment requirements are high, it is quite difficult to have stable cash flows - and lenders will be less inclined to lend money.

In short, leverage ratios are used for a portion of the analysis when determining whether to lend money, but a great deal of additional information is needed before a lending decision can be made.

❖ **Leverage Ratios** نسب العتلة المالية

A leverage ratio is any one of several financial measurements that look at how much capital comes in the form of debt (loans), or assesses the ability of a company to meet its financial obligations.

The leverage ratio is important given that companies rely on a mixture of equity and debt to finance their operations, and knowing the amount of debt held by a company is useful in evaluating whether it can pay its debts off as they come due.

Leverage Ratios for Evaluating Solvency and Capital Structure. The most well-known financial leverage ratio is the debt-to-equity ratio. It is expressed as:

$\text{D/E Ratio} = \text{Total Debt} \div \text{Total Equity}$

The equity multiplier is similar, but replaces debt with assets in the numerator:

$\text{Equity Multiplier} = \text{Total Assets} \div \text{Total Equity}$

The equity multiplier is a component of the DuPont analysis for calculating return on equity (ROE):

$$\text{ROE} = \text{Net Profit Margin} \times \text{Asset Turnover} \times \text{Equity Multiplier}$$

An indicator that measures the amount of debt in a company's capital structure is the debt-to-capitalization ratio, which measures a company's financial leverage. It is calculated as:

$$\text{Long-term Debt to Capitalization Ratio} = \text{Long-term Debt} \div (\text{Long-Term Debt} + \text{minority interest} + \text{equity})$$

In this ratio, operating leases are capitalized and equity includes both common and preferred shares. Instead of using long-term debt, an analyst may decide to use total debt to measure the debt used in a firm's capital structure. The formula, in this case, is:

$$\text{Total Debt to Capitalization Ratio} = (\text{current liabilities} + \text{Long-Term Debt}) \div (\text{current liabilities} + \text{Long-Term Debt} + \text{minority interest} + \text{equity})$$

❖ Degree of Financial Leverage درجة الرافعة المالية

Degree of financial leverage (DFL) is a ratio that measures the sensitivity of a company's earnings per share (EPS) to fluctuations in its operating income, as a result of changes in its capital structure. It measures the percentage change in EPS for a unit change in earnings before interest and taxes (EBIT), and is represented as:

$$\text{DFL} = \frac{\% \text{ Change in EPS}}{\% \text{ Change in EBIT}}$$

DFL can also be represented by the equation below:

$$\text{DFL} = \frac{\text{EBIT}}{\text{EBIT} - \text{Interest}}$$

This ratio indicates that the higher the degree of financial leverage, the more volatile earnings will be. Since interest is usually a fixed expense, leverage magnifies returns and EPS. This is good when operating income is rising, but it can be a problem when operating income is under pressure.

❖ Leverage Degree Analysis تحليل درجة الرافعة

A lever is defined as the extent to which profits can be increased in an enterprise as a result of increased reliance on fixed costs or borrowed funds or together.

Thus, the concept of crane covers three main areas:

1. Operational leverage: It is linked to the cost structure.
2. Financial leverage: It is linked to the financing structure.
3. Common leverage: A combined result of the operational and financial leverage.

تعرف الرافعة بأنها عبارة عن المدى الذي يمكن به زيادة الأرباح في المنشأة نتيجة زيادة الاعتماد على التكاليف الثابتة أو الأموال المقترضة أو الاثنين معا . وبذلك فإن مفهوم الرافعة يغطي ثلاثة مجالات أساسية :

1. الرفع التشغيلي : يرتبط بهيكل التكاليف .
2. الرفع المالي : يرتبط بهيكل التمويل .
3. الرفع المشترك : محصلة مشتركة للرفعين التشغيلي والمالي .

- **Operating Leverage** الرافعة التشغيلية

The operating leverage is concerned mainly with fixed costs as the cost incurred by the firm in a continuous manner regardless of the volume of production and sales. Thus, the share of fixed unit costs will decrease when the production increases. This will result in additional net profits. The variable costs are directly related to the production. The share of an unit of variable costs remains constant as production levels change and the price is associated with the policy of the firm and often by factors beyond control.

- **الرفع التشغيلي operating leverage**

تهتم درجة الرفع التشغيلي بشكل أساس بالتكاليف الثابتة كونها تكلفة تتكبدها المنشأة بأسلوب ومستمر بغض النظر عن حجم الإنتاج والبيع وبذلك فإن النصيب الوحدة الواحدة من التكاليف الثابتة سينخفض عند زيادة الإنتاج وهو ما سيحقق صافي أرباح إضافية وبما ان التكاليف المتغيرة هي تكاليف مرتبطة ارتباطا مباشرا بالإنتاج وبالتالي فإن نصيب الوحدة الواحدة من التكاليف المتغيرة يبقى ثابتا مهما تغيرت مستويات الإنتاج كما أن السعر يرتبط بسياسة المنشأة وفي أغلب الأحيان بعوامل تخرج عن السيطرة .

Therefore, the efficiency of the operational leverage is related to the maximum utilization of available operational capacity to increase production and thus increase sales. Therefore, the operational leverage measures the degree to which the change in operating profit responds to the change in sales and accordingly: Operational

leverage is defined as the extent or percentage of increase in profits use fixed costs

..

Determine the operating leverage by the following equation:

$$\text{Operational leverage} = \frac{\text{Contribution Return}}{\text{Net operating Profit before Interests and taxes}}$$

This means that any change in the number of units sold will result in a positive (or negative) change in the net profit, so that the operational leverage is a key indicator of what is known as business risk or operational risks.

لذلك فقد ارتبطت فعالية درجة الرفع التشغيلي بمدى الاستفادة القصوى من الطاقة التشغيلية المتاحة لزيادة الإنتاج وبالتالي زيادة المبيعات، لذلك فإن درجة الرافعة التشغيلية تقيس درجة مدى استجابة التغير في الربح التشغيلي للتغير الحاصل في المبيعات وبناءا عليه يعرف الرفع التشغيلي بأنه مدى أو نسبة الزيادة في الأرباح نتيجة استخدام التكاليف الثابتة ..

تحديد درجة الرفع التشغيلي بالمعادلة التالية :

$$\text{درجة الرفع التشغيلي} = \frac{\text{عائد المساهمة (المساهمة الحدية)}}{\text{صافي الربح التشغيلي قبل الفوائد والضرائب}}$$

وهذا يعني ان اي تغير في عدد الوحدات المباعة سوف يؤدي الى تغير نسبي موجب (أو سالب) في صافي الأرباح وبذلك فإن درجة الرفع التشغيلي تعد مؤشرا رئيسيا لما يعرف بمخاطرة الأعمال أو بالمخاطر التشغيلية .

Another method to calculate the operating leverage by using profit as a percentage of sales is to what extent the change in the operating profit of the change in sales is accounted for by the following equation:

$$\frac{\text{Operating Profit Change Ratio}}{\text{Sales Change Ratio}}$$

If we assume that the change in sales is 10%, any that year's sales are more than 10% sales last year, leading to a 20% change in profits before interest and taxes, the operational leverage level is 2.

وهناك طريقة أخرى لاحتساب درجة الرفع التشغيلي باستخدام الربح كنسبة من المبيعات اي مدى استجابة التغير في الربح التشغيلي للتغير في المبيعات بوساطة المعادلة التالية :

$$\frac{\text{نسبة التغير في الربح التشغيلي}}{\text{نسبة التغير في المبيعات}}$$

فإذا افترضنا ان نسبة التغير في المبيعات 10% أي أن مبيعات هذه السنة تزيد عن مبيعات السنة الماضية بنسبة 10% فإن ذلك تؤدي الى نسبة تغير 20% في الأرباح قبل الفوائد والضرائب ، وان مستوى الرافعة التشغيلية يكون . 2

- **Financial leverage** الرافعة المالية

A financial leverage is defined as the extent or proportion of the increase in profits as a result of the use of the money of others in the business of the firm. The effect of the financial leverage is positive on the return if the management of the entity succeeds in investing the borrowed funds at a rate of return that exceeds the interest paid on them. In other words, a financial leverage is in favor of the company if the rate of return on investment is greater than the interest rate and vice versa, and thus the financial leverage is related to the financial risks.

$$\text{Financial leverage} = \frac{\text{Net Profit before Interests and taxes}}{\text{Net Profit before taxes}}$$

- الرفع المالي :

تعرف الرافعة المالية بأنها مدى أو نسبة الزيادة في الأرباح نتيجة استخدام أموال الغير في أعمال المنشأة . ويكون تأثير الرفع المالي إيجابا على العائد إذا نجحت إدارة المنشأة في استثمار الأموال المقترضة بمعدل عائد يزيد عن الفائدة المدفوعة عليها , أي أن الرفع المالي يكون لصالح الشركة اذا كان معدل العائد على الاستثمار أكبر من معدل الفائدة والعكس بالعكس، وبذلك يرتبط الرفع المالي بالمخاطر المالية .

$$\text{درجة الرفع المالي} = \frac{\text{صافي الربح قبل الفوائد والضرائب}}{\text{صافي الربح قبل الضرائب}}$$

- **Common leverage (Total)** الرافعة المشتركة (الكلية)

A common leverage is defined as the extent or proportion of the increase in profits due to the optimal use of fixed costs and the use of borrowed funds in operations. Therefore, the common leverage arises from the combined effect of both

the operational leverage and the leverage so that it reflects the combined effect of the business risk and the risk of borrowing. Accordingly, the common leverage is a measure of the overall risk of management and shareholders.

The common leverage is measured by the following equation:

common leverage = Operational Leverage Degree × Financial Leverage Degree

$$= \frac{\text{Contribution Return}}{\text{Net operating Profit before Interests and taxes}} \times \frac{\text{Net Profit before Interests and taxes}}{\text{Net Profit before taxes}}$$

• **الرفع المشترك (أو الكلي) : combined leverage**

تعرف الرافعة المشتركة بأنها مدى أو نسبة الزيادة في الأرباح نتيجة الاستخدام الأمثل للتكاليف الثابتة واستخدام الأموال المقترضة في العمليات . وبالتالي فإن الرافعة المشتركة تنشأ من التأثير المشترك لكل من الرافعة التشغيلية والرافعة المالية بحيث تعكس الأثر الموحد الذي يواجه المنشأة من مخاطر الأعمال ومخاطر الاقتراض، وبناءا عليه تعد درجة الرفع المشترك مقياسا للمخاطرة الكلية المحيطة بالإدارة والمساهمين .

ويقاس الرفع المشترك من خلال المعادلة التالية :

الرفع المشترك = درجة الرفع التشغيلي × درجة الرفع المالي .

$$\text{الرفع المشترك} = \frac{\text{المساهمة الحدية}}{\text{صافي ربح التشغيل قبل الفوائد والضرائب}} \times \frac{\text{صافي ربح التشغيل قبل الفوائد والضرائب}}{\text{صافي الربح قبل الضرائب}}$$

Example :

The sales of the Company (x) were (400,000) IQD. The variable costs of these sales amounted to (150,000) IQD. The fixed costs were (50,000) IQD and the interest was 10,000 IQD.

Required : Prepare an Interpretation and analysis of:

1. Operational Leverage Degree.
2. Financial leverage Degree.
3. Common leverage Degree .

solution :

$$1. \text{ Operational Leverage Degree} = \frac{\text{Contribution Return}}{\text{Net operating Profit before Interests and taxes}}$$

$$\text{DOL} = (400,000 - 150,000) \div 400,000 - (50,000 + 150,000)$$

$$\text{DOL} = (250,000) \div (200,000) = 1.25 \text{ times}$$

$$1.25 \text{ مرة} = \frac{250,000}{200,000} = \frac{150,000 - 400,000}{(50,000 + 150,000) - 400,000} = \text{DOL}$$

This means that each change in the number of units sold by one unit will result in a positive net change in net profits of 1.25 times.

$$2. \text{ Financial leverage (DFL)} = \frac{\text{Net Profit before Interests and taxes}}{\text{Net Profit before taxes}}$$

$$1.05 \text{ مرة} = \frac{200,000}{200,000} = \frac{(50,000 + 150,000) - 400,000}{(10,000 + 50,000 + 150,000) - 400,000} = \text{DFL}$$

Since the degree of leverage is positive and greater than the right one, it means that the decision of the firm to invest in borrowed money was a sound and feasible decision, it was able to achieve a profit that covers the interests of debts and achieve a net profit.

$$3. \text{ common leverage} = \text{Operational Leverage Degree} \times \text{Financial Leverage Degree} .$$

$$\text{DCL} = 1.25 \times 1.05 = 1.31 \text{ times}$$

In this case the company has achieved a degree of operational leverage positive as well as the degree of financial leverage positive, the degree of common leverage will be affected by both grades, which led to a positive degree of common leverage also.

مثال :

كانت المبيعات من الشركة (س) مبلغ (400,000) دينار التكاليف المتغيرة لتلك المبيعات بلغت (150,000) دينار , وكانت التكاليف الثابتة (50,000) دينار , والفوائد المدينة بمبلغ (10,000) دينار .

المطلوب :

أيجاد تفسير وتحليل كل من :

- 1- درجة الرفع التشغيلي .
- 2- درجة الرفع المالي .
- 3- درجة الرفع المشترك .

الحل :

$$1. \text{ درجة الرفع التشغيلي} = \frac{\text{المساهمة الحدية}}{\text{صافي الربح قبل الفوائد والضرائب}} = \text{DOL}$$
$$1.25 \text{ مرة} = \frac{250,000}{200,000} = \frac{150,000 - 400,000}{(50,000 + 150,000) - 400,000} = \text{DOL}$$

وهذا يعني أن كل تغير في عدد الوحدات المباعة بمقدار وحدة واحدة سيؤدي الى تغير نسبي موجب في صافي الأرباح بمقدار 1,25 مرة .

$$2. \text{ درجة الرفع المالي} = \frac{\text{صافي الربح قبل الفوائد والضرائب}}{\text{صافي الربح بعد الفوائد وقبل الضرائب}} = \text{DFL}$$
$$1.05 \text{ مرة} = \frac{200,000}{200,000} = \frac{(50,000 + 150,000) - 400,000}{(10,000 + 50,000 + 150,000) - 400,000} = \text{DFL}$$

وبما أن درجة الرفع المالي هي موجبة واكبر من الواحد الصحيح فهذا يعني ان قرار المنشأة في الاستثمار بالأموال المقترضة قد كان قرارا سليما ومجديا فقد تمكنت هذه المنشأة من تحقيق ربح يغطي الفوائد المدينة ويحقق ربحا صافيا .

$$3. \text{ درجة الرفع المشترك} = \text{درجة الرفع التشغيلي} \times \text{درجة الرفع المالي}$$
$$1,31 \text{ مرة} = 1,05 \times 1,25 = \text{DCL}$$

أن المنشأة استطاعت تحقيق درجة رفع تشغيلي موجبة وكذلك درجة رفع مالي موجبة ، فان درجة الرفع المشترك ستتأثر بكلا الدرجتين وهو ما أدى كذلك الى تحقيق درجة رفع مشترك موجبة .

Questions and Exercises

• Questions

1. What is the Concept of Leverage Ratios?
2. What are The main leverage ratios?
3. Define the leverage ratio.
4. Explain the Degree of financial leverage (DFL).
5. Define A lever?
6. Explain the concept of crane covers .

• Exercises

Exercise No.1:

The sales of a company amounted to 1,200,000 dinars, the variable costs 400,000 dinars, the fixed costs 400,000 dinars, and the interest of 40,000 dinars.

Required: Compute and interpret the following:

1. operational leverage degree
2. financial leverage degree
3. common leverage degree

Exercise No.2:

The sales of a company amounted to 1,000,000 dinars, the costs of sales 600,000 dinars, the fixed costs 140,000 dinars, and the interest of 16,000 dinars.

Required: Calculate and interpret the following:

1. Operational leverage degree
2. Financial leverage degree
3. Common leverage degree

Exercise No. 3:

The following data has been extracted from the books of a company:

Amount	particular	Amount	particular
240,000	discount allowed	160,000	Sales returns
160,000	Bank commissions	440,000	Depreciation of fixed assets
2,000,000	sales	100,000	Returns of purchases
%35	Tax rate	320,000	Salaries and wages
200,000	discount received	360,000	beginning goods
440,000	other revenues and miscellaneous	600,000	Purchases
40,000	Selling and distribution expenses	60,000	purchases transport expenses
300,000	Loans interests	20,000	Advertising publicity and expenses
40,000	bank commissions payable	6,000,000	Buildings
400,000	ending goods	12,000,000	Machinery and equipment
50,000	Dividends	20,000,000	Capital (20% of capital is preferred)

			shares)
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Required :

Calculate and analyze the following:

1. Operational leverage degree.
2. Financial leverage Degree.
3. Common leverage degree.

999999999999

Chapter (10)

Predict Financial Failure

التنبؤ بالفشل المالي

LEARNING OBJECTIVES

الأهداف التعليمية:

After reading this chapter, you can certainly be able to understand the following subjects :

- ❖ Predict of Financial Failure
- ❖ Predict Financial Failure Models
 - Altman and Mccovgh Model Z-Score (1974)
 - Kida Model Z-Score (1984)
 - Sherrod Model Z-Score (1987)

Chapter (10)

Predict Financial Failure

التنبؤ بالفشل المالي

❖ Predict of Financial Failure

Predicting the strength or weakness of an enterprise, and predicting its potential failure may require the use of certain financial ratios, these are representative of performance factors. The results of these ratios are then measured in the knowledge of the performance of the entity. The scientific literature presents the existence of many predictive models of the financial failure of the enterprises.

❖ التنبؤ بالفشل المالي

أن التنبؤ بقوة أو ضعف المنشأة ، والتنبؤ باحتمال فشلها يستلزم بالضرورة استخدام بعض النسب المالية . تمثل عوامل مميزة للأداء ، ليتم بعد ذلك قياس نتائج هذه النسب في معرفة أداء المنشأة ، وتعرض المراجع العلمية وجود العديد من النماذج التنبؤية للفشل المالي لمنشآت الأعمال .

The American Institute of Certified Public Accountants (AICPA) and the Securities and Exchange Commission (SEC) have been credited with finding and developing these models in the wake of major corporate and banking crises that swept through the United States after the Second World War and the accountability of accountants , the legal accountants were charged with taking responsibility for misinformation in the financial statements. Hence, the role of the legal accountant in conducting tests on the ability of the audited entity to audit the continuity of activity or giving early warning about its failure and bankruptcy.

يعود الفضل للباحثين الأمريكيين في إيجاد وتطوير هذه النماذج، بتشجيع من المعهد الأمريكي للمحاسبين القانونيين (AICPA) ، وهيئة البورصات المالية (SEC) وذلك على أعقاب أزمات الإفلاس الكبيرة للشركات والبنوك التي اجتاحت الولايات المتحدة الأمريكية بعد الحرب العالمية الثانية، وقد اتهم المحاسبون القانونيون بتحمل المسؤولية عن عمليات

التضليل في البيانات المالية ، من هنا جاء دور المحاسب القانوني في إجراء اختبارات لمدى قدرة المنشأة موضوع المراجعة والتدقيق على الاستمرارية بالنشاط أو إعطائها الإنذار المبكر حول فشلها وإفلاسها .

❖ Predict Financial Failure Models

There are many analytical models to predict the financial failure put forward by many researchers for the purpose of application in industrial and banking companies. Most of these analytical models are based on the compound financial ratios. They are based on quantitative indicators derived from published and sometimes unpublished financial statements, which are aggregated from different sources. The main difference between these models is the difference in the relative weight given to each financial ratio used, and in the number of ratios used as independent variables.

هنالك العديد من النماذج التحليلية للتنبؤ بالفشل المالي طرحها العديد من الباحثين لغرض تطبيقها في الشركات الصناعية والمصرفية. وتعتمد اغلب هذه النماذج التحليلية على النسبة المالية المركبة ، واعتمدت على مؤشرات كمية يتم اشتقاقها من القوائم المالية المنشورة و احيانا غير المنشورة ، يتم تجميعها من مصادر مختلفة ، ونقطة الاختلاف الجوهرية بين هذه النماذج هو الاختلاف في الوزن النسبي المعطى لكل نسبة مالية يتم استخدامها ، وفي عدد النسب المستخدمة باعتبارها متغيرات مستقلة .

The most common analytical models used to support the financial failure of a business is:

1. (Altman and Mccovgh) Model Z-Score (1974)
2. (Kida) Z-Score Model 1984
3. (Sherrod) Z-Score Model 1987

ومن أكثر النماذج التحليلية شيوعا واستخداما للتنبؤ بالفشل المالي لمنشآت الاعمال هي :

1. نموذج (Altman And Mccovgh) 1974
2. نموذج (Kida) 1984
3. نموذج (Sherrod) 1987

• Altman and Mccovgh Model (1974)

Altman is the first to use multivariate analysis to predict business failure problems. He has collected more than one variable to achieve this goal. In a comparison of 33 failed companies and 33 successful companies in the same activity, an equation known as z- score.

The Altman and Mccovgh model is one of the most common models of business failure forecasting. This model was developed in 1974 to complement a previous model by Altman in 1968.

• **نموذج (Altman And Mccovgh) 1974**

يعد **Altman** أول من استخدم التحليل متعدد المتغيرات، لأجل التنبؤ بمشكلات الفشل لمنشآت الأعمال، إذ قام بجمع أكثر من متغير لتحقيق هذه الغاية، ومن خلال الدراسة المقارنة بين 33 شركة فاشلة، و 33 شركة ناجحة من النشاط نفسه ، توصل الى معادلة تعرف باسم Z-score .

ويعد نموذج **(Altman And Mccovgh)** من اكثر النماذج شيوعا في التنبؤ بالفشل المالي لمنشآت الأعمال ، وقد وضع هذا النموذج سنة 1974 م استكمالاً لنموذج سابق وضعه التمان Altman عام 1968 م .

Variables	Financial Ratio	Nature Ratio	Relative Weight
X1	Ratio of net working capital to total assets	Activity ratio	0.012
X2	Ratio of reserves and retained earnings to total assets.	Profitability Ratio	0.014
X3	Ratio of net profit before interest and tax to total assets	Profitability Ratio	0.033
X4	Ratio of market value of capital to book value of debt (liabilities)	Financial Leverage	0.006
X5	ratio of net sales to total assets	Activity ratio	0.0999

نموذج التمان وماكوج على انتقاء وترجيح نسب مالية ، اعتبرت افضل النسب المميزة للإداء ، والتي يمكن أن تتنبأ بالفشل ، وهي :

المتغير	النسبة المالية	طبيعة النسبة	الوزن النسبي
X1	نسبة صافي رأس المال العامل الى مجموع الأصول (الموجودات).	نسبة نشاط	0.012
X2	نسبة الاحتياطات والأرباح المحتجزة إلى مجموع الأصول .	نسبة ربحية	0.014
X3	نسبة صافي الربح قبل الفائدة والضريبة إلى مجموع الأصول .	نسبة ربحية	0.033
X4	نسبة القيمة السوقية لرأس المال إلى القيمة الدفترية للديون (الخصوم) .	نسبة رفع مالي	0.006
X5	نسبة صافي المبيعات الى مجموع الأصول .	نسبة نشاط	0.0999

Altman and Mccovgh, using statistical analysis, have developed a quantitative model that gives the possibility of predicting failure in case of application according to the following equation:

$$Z = 0.012X1 + 0.014X2 + 0.033X3 + 0.006X4 + 0.0999X5$$

X1 to X5 = The variables, i.e. the financial ratios above, used in the model are any ratios that vary from a firm to another depending on their performance. In other words, this model is based on five financial ratios that study five independent variables and a dependent variable denoted by the z symbol. This model is expressed mathematically by the following formula:

$$Z = 0.012X1 + 0.014X2 + 0.033X3 + 0.006X4 + 0.010X5$$

The ratios used in the model are:

X1 = Net working capital / total assets.

X2 = Retained Earnings / Total Assets

X3 = EBITDA / total assets

X4 = Market value of equity / total liabilities

X5 = Sales / Total Assets

Z = Continuity Guide

وقد استطاع التمان وماكوج وباستخدام أسلوب التحليل التمييزي الإحصائي أن يضعان نموذجا كميا يعطي إمكانية التنبؤ بالفشل في حالة تطبيقه وفق المعادلة الآتية :

$$Z=0.012X1+0.014X2+0.033X3+0.006X4+0.0999X5$$

X1 إلى X5 = تمثل المتغيرات ، أي النسب المالية أعلاه ، المستخدمة في النموذج فهي أي النسب تختلف من منشأة إلى أخرى باختلاف أدائها . اي بتعبير اخر ، يعتمد هذا النموذج على خمسة نسب مالية تدرس خمسة متغيرات مستقلة ومتغير تابع يرمز له بالرمز (Z) ويعبر عن هذا النموذج رياضيا بالمعادلة الآتية:-

$$Z=0.012X1+0.014X2 +0.033X3+0.006X4+0.010X5$$

والنسب المستخدمة في النموذج هي :-

X1 = صافي راس المال العامل / مجموع الأصول .

$$X2 = \text{الأرباح المحتجزة} / \text{مجموع الأصول}$$

$$X3 = \text{الأرباح قبل الفوائد والضرائب} / \text{مجموع الأصول}$$

$$X4 = \text{القيمة السوقية لحقوق المساهمين} / \text{مجموع الالتزامات}$$

$$X5 = \text{المبيعات} / \text{مجموع الأصول}$$

$$Z = \text{دليل الاستمرارية}$$

According to this model, companies are classified into three categories in terms of failure or success in continuity of work and these categories are:

1. Successful companies should have a value of (Z) in them (2,99) and more.
2. Companies whose existence and probability of bankruptcy are doubtful are limited to (Z) between (1,81) and (2,99).
3. Failed Companies The value of (Z) is less than (1,81).

This model is a good example of a financial failure study, which proved its ability to predict the detection of financial failure two years earlier.

وبموجب هذا النموذج فإن الشركات تصنف إلى ثلاث فئات من حيث فشلها أو نجاحها في الاستمرارية بالعمل وهذه الفئات هي :-

1. الشركات الناجحة يتعين أن تكون قيمة (Z) فيها (2,99) فاكثراً.
2. الشركات المشكوك في إمكانية استمراريتها واحتمال إفلاسها تنحصر قيمة (Z) فيها بين (1,81) و (2,99).
3. الشركات الفاشلة تكون قيمة (Z) أقل من (1,81).

ويعد هذا النموذج من النماذج الجيدة لإجراء دراسة الفشل المالي، حيث أثبت قدرته على التنبؤ باكتشاف الفشل المالي بدرجة عالية قبل سنتين من وقوعه.

Example :

The following is the financial data extracted from the books of a business entity:

Total assets	1,600
Total Liabilities	600
Retained earnings	300
Net operating profit	350

Stock Market Value	700
Current assets	800
Current Liabilities	500
Sales	1,200

$$Z = 0.012 (300/1600) + 0.014 (300/1600) + 0.033 (350/1600) + 0.006 (700/600) + 0.010 (1200/1600)$$

$$0.027 = 0.002 + 0.003 + 0.007 + 0.007 + 0.008$$

Comparing the results of the example with the indicators of the three categories mentioned above, we find that the probability of failure of this company is certain since the value of Z is (0.027) much lower than (1.81).

مثال :

فيما يلي البيانات المالية المستخرجة من سجلات إحدى المنشآت التجارية :

1600	مجموع الأصول
600	مجموع الخصوم
300	الأرباح المحتجزة
350	صافي ربح التشغيل
700	القيمة السوقية للأسهم
800	أصول متداولة
500	خصوم متداولة
1200	المبيعات

$$Z = 0.012 \left(\frac{300}{1600}\right) + 0.014 \left(\frac{300}{1600}\right) + 0.033 \left(\frac{350}{1600}\right) + 0.006 \left(\frac{700}{600}\right) + 0.010 \left(\frac{1200}{1600}\right)$$

$$0.027 = 0.002 + 0.003 + 0.007 + 0.007 + 0.008$$

وبمقارنة نتائج المثال بمؤشرات الفئات الثلاث المشار إليها اعلاه نجد أن احتمال الفشل لهذه المنشأة مؤكد حيث أن قيمة Z هي (0.027) أقل بكثير من (1.81) .

- **Kida Model (1984):**

This model is also based on five main financial ratios:

Variables	Financial Ratio	Nature Ratio	Relative Weight
X1	Net Profit after Tax / Total Assets	Profitability Ratio	1.042
X2	Equity / total assets	Leverage rate	0.420
X3	Current Assets / Current Liabilities	Liquidity Ratio	0.461
X4	Sales / Total assets	activity ratio	0.463
X5	Assets Cash / Total Assets	Activity ratio	0.271

- **نموذج Kida 1984 :**

يعتمد هذا النموذج كذلك على خمس نسب مالية رئيسية تتمثل في الآتي :

المتغير	النسبة المالية	طبيعة النسبة	الوزن النسبي
X1	صافي الربح بعد الضريبة / مجموع الأصول	نسبة ربحية	1.042
X2	حقوق الملكية / مجموع الأصول	نسبة رفع	0.420
X3	الأصول المتداولة / الخصوم المتداولة	نسبة السيولة	0.461
X4	المبيعات / مجموع الأصول	تمثل نسبة النشاط	0.463
X5	الأصول النقدية / مجموع الأصول	نسبة نشاط	0.271

The equation of this mathematical model is as follows:

$$Z = 1.042X1 + 0.42X2 - 0.461X3 - 0.463X4 + 0.271X5$$

The probability of failure is high according to this model when the value of (Z) is negative, but if the value of Z is positive, the firm is safe. That is, according to this model, the probability of failure of the companies increases as the value of (Z) negative, but if the result is positive, the company's potential to continue to work without financial failure.

تكون المعادلة الرياضية لهذا النموذج كما يلي :

$$Z = 1.042X1+0.42X2-0.461X3-0.463X4+0.271X5$$

تعد احتمالات الفشل مرتفعة حسب هذا النموذج عندما تكون قيمة (Z) سالبة أما اذا كانت قيمة (Z) إيجابية فتكون المنشأة في أمان . أي أن وفق هذا النموذج فان احتمالات الفشل التي تتعرض لها الشركات تزداد كلما ظهرت قيمة (Z) سالبة، أما اذا ظهرت النتيجة موجبة فان إمكانيات الشركة جيدة في الاستمرار بالعمل دون تعرضها للفشل المالي .

Example :

The following balances appeared in the records of an industrial company:

Total Assets	3000
Total liabilities	1800
Sales	4000
Cash Assets	800
Current Liabilities	1200
Shareholders' Equity	2000
Net profit after tax	150

Required: prepare an analytical study of these data by using the KIDA model to determine the extent of the entity's ability to continue.

Solution:

$$Z = 1.042 (150/3000) + 0.42 (2000/1800) - 0.461 (800/1200) - 0.463 (4000/3000) + 0.271 (800/3000)$$

$$Z = 0.052 + 0.466 - 0.307 - 0.617 + 0.072$$

$$Z = (0.334)$$

According to this model, we find that the firm of subject of the study is under the probability of a high failure, this is because the value of (Z) was negative (0.334).

مثال :

ظهرت الأرصدة التالية في سجلات إحدى المنشآت الصناعية:

3000	مجموع الاصول
1800	مجموع الخصوم
4000	المبيعات
800	الاصول النقدية
1200	الخصوم المتداولة
2000	حقوق ملكية المساهمين
150	صافي الربح بعد الضريبة

المطلوب : إعداد دراسة التحليلية لهذه البيانات باستخدام نموذج كيدا (KIDA) لمعرفة مدى قدرة المنشأة على الاستمرار.

$$Z=1.042\left(\frac{150}{3000}\right)+0.42\left(\frac{2000}{1800}\right) - 0.461\left(\frac{800}{1200}\right) - 0.463\left(\frac{4000}{3000}\right) + 0.271\left(\frac{800}{3000}\right)$$

$$Z=0.052+0.466-0.307-0.617+0.072$$

$$Z= (0.334)$$

وبموجب هذا النموذج نجد أن المنشأة موضوع الدراسة تقع تحت احتمالات فشل مرتفعة وذلك لان قيمة (Z) ظهرت سالبة بمقدار (0.334).

❖ Sherrod Model (1987)

This model aims to achieve two main objectives:

- 1. Credit risk assessment:** - The model is used by banks to assess the credit risk when granting loans to economic projects, as the loans are divided into five categories according to the degree of risk as in the following table:

Categories	Risk Degree	The value of Z interval
First	excellent loans	$Z > 25$
Second	low-risk loans	$25 \geq Z > 5$
Third	Medium-risk loans	$20 \geq Z > 5$
Fourth	high-risk loans	$5 \geq Z > -5$
Fifth	very high risk loans	$Z \leq 5 -$

• نموذج Sherrord 1987

يهدف هذا النموذج إلى تحقيق فرضيتين رئيسيتين هما :

- 1- تقييم مخاطر الائتمان** :- يستخدم النموذج من قبل البنوك لتقييم المخاطر الائتمانية عند منح القروض للمشاريع الاقتصادية ، اذ يجري تقسيم القروض إلى خمس فئات حسب درجة المخاطرة وكما في الجدول الاتي :

الفئات	درجة المخاطرة	قيمة Z الفاصلة
--------	---------------	----------------

$Z > 25$	قروض ممتازة	الأولى
$25 \geq Z > 5$	قروض قليلة المخاطرة	الثانية
$20 \geq Z > 5$	قروض متوسطة المخاطرة	الثالثة
$5 \geq Z > -5$	قروض عالية المخاطرة	الرابعة
$Z \leq 5 -$	قروض عالية المخاطرة جدا	الخامسة

2. Financial failure: It is used to ascertain the principle of continuity of the project in economic life to identify the extent of the project's ability to carry out its activity in the future.

This model is prepared on the following regression equation:

$$Z = 17X_1 + 9X_2 + 3.5X_3 + 20X_4 + 1.2X_5 + 0.1X_6$$

whereas :

Z = Bankruptcy Index

X1 = Net Working Capital / Total Assets

X2 = Liquid Assets / Total Assets

X3 = Total Equity / Total Assets

X4 = Net profit before taxes / Total Assets

X5 = Total Assets / Total Liabilities

X6 = Total Equity / Fixed Assets

Weighing weights according to the importance of each

variables	The relative weight of the variable in points	Variable type
X1	17	Liquidity Index
X2	9	Liquidity Index
X3	3.5	leverage index
X4	20	Profitability Index
X5	1.2	Leverage index
X6	0.1	Leverage indicator

2- الفشل المالي : يستخدم للتأكد من مبدأ استمرار المشروع في الحياة الاقتصادية للتعرف على مدى قدرة المشروع على مواصلة نشاطه في المستقبل .
ويعد هذا النموذج بموجب معادلة الانحدار الآتية :

$$Z=17X_1+9X_2+3.5X_3+20X_4+1.2X_5+0.1X_6$$

حيث أن :

Z = مؤشر الإفلاس

$$X1 = \text{صافي رأس المال العامل} / \text{إجمالي الأصول}$$

$$X2 = \text{الأصول السائلة} / \text{إجمالي الأصول}$$

$$X3 = \text{إجمالي حقوق المساهمين} / \text{إجمالي الأصول}$$

$$X4 = \text{صافي الأرباح قبل الضرائب} / \text{إجمالي الأصول}$$

$$X5 = \text{إجمالي الأصول} / \text{إجمالي الالتزامات}$$

$$X6 = \text{إجمالي حقوق المساهمين} / \text{الأصول الثابتة}$$

الأوزان الترجيحية حسب أهمية كلا منها

نوع المتغير	الوزن النسبي للمتغير بالنقاط	المتغير
مؤشر سيولة	17	X1
مؤشر سيولة	9	X2
مؤشر رفع	3.5	X3
مؤشر الربحية	20	X4
مؤشر رفع	1.2	X5
مؤشر رفع	0.1	X6

This model serves the purposes of credit analysis in commercial banks from two angles. First, it can be used to assess the creditworthiness of companies applying for bank loans, as a tool to guide the credit manager and the loan committee in granting facilities or loans.

Second, the model can also be used by the bank's audit department or by the external auditor as a tool to assess the risk surrounding the loan portfolio and then to estimate the provision for non-performing loans to be made in respect of this portfolio. It also helps in determining the interest rate for loans as well as in the design of follow-up or review of loans, and notes from this above model the following:

1. The biggest weight of the financial ratios of its constituent is the share of those that test the customer's ability to repay a liquidity ratios, due largely to the use of the model to two key goals to determine the organization's ability to continue its economic effectiveness and then to meet its obligations on time.
2. The quality or quality index used in the classification established student loan or in the classification of portfolio loans is moving in the reverse direction to the direction of risk, in other word that the high value of this indicator shows the loan quality or the strength of the financial position of the current company student loan and then lower the degree of risk, and vice versa.

ان هذا النموذج يخدم أغراض تحليل الائتمان في المصارف التجارية من زاويتين . فمن جهة يمكن استخدامه في تقييم المركز الائتماني للشركات التي تتقدم بطلبات الحصول على قروض التسهيلات المصرفية ، اي كأداة يسترشد بها مدير الائتمان ولجنة القروض في اتخاذ منح تسهيلات أو القروض .

ومن جهة أخرى يمكن كذلك استخدام النموذج من قبل إدارة التدقيق بالمصرف أو من قبل المدقق الخارجي كأداة لتقييم المخاطرة المحيطة بمحفظة القروض ، ومن ثم تقدير مخصص القروض المتعثرة الواجب تكوينه بخصوص هذه المحفظة . كما يفيد في تحديد معدل الفائدة الخاص بالقروض وكذلك في تصميم جداول متابعة أو مراجعة القروض ، ويلاحظ من هذا النموذج أعلاه ما يأتي:

- (1) أن الوزن الأكبر للنسب المالية المكونة له هو من نصيب تلك التي تختبر قدرة الزبون على السداد وهي نسب السيولة، ويعود سبب ذلك إلى استخدام النموذج لهدفين رئيسيين هما لمعرفة قدرة الشركة على الاستمرار في فعاليتها الاقتصادية ومن ثم الوفاء بالتزاماتها في مواعيدها المحددة.
- (2) أن مؤشر الجودة أو النوعية المستخدم في تصنيف المنشأة طالبة القرض أو في تصنيف قروض المحفظة يسير في اتجاه عكسي لاتجاه المخاطرة، بمعنى آخر أن ارتفاع قيمة هذا المؤشر يدل على جودة القرض أو على قوة المركز المالي للشركة الحالية طالبة القرض ومن ثم انخفاض درجة المخاطرة والعكس بالعكس .

Example

The following balances appeared in the records of an industrial company:

Total assets	8000
Current assets	3500
Fixed assets	4500
Total liabilities (liabilities)	6000
Cash assets	1000
Current liabilities	1500
Total shareholders' equity	2000
Net profit after tax	500

Required: Prepare an analytical study of these data using the Sherrod model to determine the sustainability of the business.

Solution:

Working Capital Net = Current Assets - Current Liabilities

$$3500 - 1500 = 2000$$

$$Z = 17 (2000/8000) + 9 (1000/8000) + 3.5 (2000/8000) + 20 (500/8000) + 1.2 (8000/6000) + 0.1 (2000/4500)$$

$$Z = 4.25 + 1.125 + 0.875 + 1.25 + 1.600 + 0.044$$

$$Z = 9.144$$

From the application of the Sherrod model above, the value of (Z) is equal to (9.144). This value according to the degree of risk in granting loans to economic units is in third category, In other words the loans granted by the company to the economic units are medium risk loans.

مثال

ظهرت الأرصدة التالية في سجلات إحدى المنشآت الصناعية:

8000	مجموع الأصول
3500	الأصول المتداولة
4500	الأصول الثابتة
6000	مجموع الخصوم (الالتزامات)
1000	الأصول النقدية
1500	الخصوم المتداولة
2000	اجمالي حقوق المساهمين
500	صافي الربح بعد الضريبة

المطلوب: إعداد دراسة التحليلية لهذه البيانات باستخدام نموذج (Sherrod) لمعرفة مدى قدرة المنشأة على الاستمرار.

الحل

صافي راس المال العامل = الموجودات المتداولة – المطلوبات المتداولة

$$2000 = 1500 - 3500$$

$$Z = 17 \left(\frac{2000}{8000} \right) + 9 \left(\frac{1000}{8000} \right) + 3.5 \left(\frac{2000}{8000} \right) + 20 \left(\frac{500}{8000} \right) + 1.2 \left(\frac{8000}{6000} \right) + 0.1 \left(\frac{2000}{4500} \right)$$

$$Z = 4.25 + 1.125 + 0.875 + 1.25 + 1.600 + 0.044$$

$$Z = 9.144$$

يظهر من تطبيق نموذج (Sherrod) أعلاه أن قيمة (Z) تعادل (9.144) ، وهذه القيمة بحسب درجة المخاطرة في منح القروض للوحدات الاقتصادية ضمن الفئة الثالثة ، أي أن القروض التي تمنحها الشركة إلى الوحدات الاقتصادية هي قروض متوسطة المخاطرة .

At the end, it should be noted that the benefit of these models and others like them remain the focus of interest of researchers and related parties after they have proved useful, but the application of any of them as in its original form to study the possibilities of financial failure in all circumstances is subject to some difficulties, The study is different in the nature of its activity or in the environmental conditions surrounding it. This is normal, because the economic, political and social conditions surrounding the business companies vary from a country to another.

وتجدر الإشارة إلى أن الاستفادة من تلك النماذج والأخرى المشابهة لها تبقى محط اهتمام الباحثين والجهات ذات العلاقة بعد أن أثبتت جدواها، غير ان تطبيق اي منها كما هو في صيغته الأصلية لدراسة احتمالات الفشل المالي في كل الظروف تعترضه بعض الصعوبات، وذلك لاحتمال أن تكون المنشأة محل الدراسة مختلفة في طبيعة نشاطها أو في الظروف البيئية المحيطة بها وهذا شيء طبيعي أن تختلف الظروف الاقتصادية والسياسية والاجتماعية التي تحيط بمنشآت الأعمال من بلد لآخر.

The published financial literature on bankruptcy has identified many proportions that were important in predicting bankruptcy. There are no specific ratios used to predict the company's failure (Barnes, 1987; Altman, 1993; Mohamed, Li and Sanda, 2001).

Most researchers chose financial ratios based on their popularity and predictive ability in pre-bankruptcy studies (Beaver, 1966; Altman, 1968; Olson, 1980; Altman and Cau, 1985; Casey and Parshak, 1985; Nur Adiana et.al; 2008, Lifschuts and Jacobi, 2010; Y. Wu et.al 2010).

The most common financial ratios used by researchers were net income to total assets (Beaver, 1966; Deakin, 1972; Libby, 1975; Ohlen, 1980; Lennox, 1999), total liabilities to total assets (Beaver, 1966; Deakin, 1972; Ohlson, 1980; Zmijewski, 1984) and size (Ohlson, 1980; Lennox, 1999; Shumway, 2001; Halim et al., 2008). The net income rate was used by Ohlson (1980) to represent growth. To explain the bankruptcy in the UK, Lenox (1999) used cash to carry liabilities, turnover of debtors and total cash flow to cash flow.

To explain bankruptcy in Korea, the result of Nam and Jinn (2000) was that the financial expenses of sales, debt coverage and turnover were important. The Nam and Jane study (2001) was consistent with Lenox (1999). Zulkarnain et al. (2001) used the MDA model, which showed that total liabilities to total assets, sales to current assets, cash to current liabilities, and market value of debt were significant in explaining the financial failure of Malaysian companies between 1980 and 1996. Altman (1968) created a model (Altman Z Score) consisting of a set of financial ratios analyzed using multiple discrimination analysis (MDA), based on the assumption of a relationship between financial ratios in previous years and the time of bankruptcy for subsequent years.

لقد حددت الأدبيات المالية المنشورة عن الإفلاس العديد من النسب التي كانت مهمة في التنبؤ بالإفلاس. فليس هناك نسب معينة تستخدم للتنبؤ بفشل الشركة (Barnes، 1987، Altman، 1993، Mohamed، Li and Sanda، 2001).

وقد اختار معظم الباحثين نسبةً مالية استنادًا إلى شعبيتها وقدرتها التنبؤية في الدراسات السابقة على الإفلاس (بيفر، 1966؛ ألتمان، 1968؛ أولسون، 1980؛ ألتمان وكاو، 1985؛ كيسي وبارتشتاك، 1985؛ شومواي، 2001؛ بيفر إيه. al.، 2005؛ نور، Adiana et.al، 2008؛ Lifschuts و Jacobi، 2010؛ Y. Wu et.al 2010).

كانت النسب المالية الأكثر استخدامًا من قبل الباحثين هي صافي الدخل إلى إجمالي الأصول (Beaver، 1966؛ Deakin، 1972؛ Libby، 1975؛ Ohlson، 1980؛ Lennox، 1999)، مجموع الخصوم إلى إجمالي الأصول (Beaver، 1966؛ Deakin، 1972؛ Ohlson، 1980؛ Zmijewski، 1984) وحجم (Ohlson،

1980؛ Lennox، 1999؛ Shumway، 2001؛ Halim et al، 2008). تم استخدام صافي معدل الدخل من قبل (Ohlson 1980) لتمثيل النمو. ولشرح الإفلاس في المملكة المتحدة، استخدم لينوكس (1999) النقدية إلى الخصوم المتداولة، ونسبة دوران المدينين ونسبة التدفق النقدي الإجمالي إلى التدفق النقدي. لتفسير الإفلاس في كوريا، كانت نتيجة (Nam and Jinn 2000) هي أن المصروفات المالية للمبيعات وتغطية الديون ودوران المستحقات كانت مهمة. كانت دراسة نام وجين (2001) متسقة مع لينوكس (1999). Zulkarnain وآخرون. (2001) استخدمت نموذج MDA، الذي أظهر أن إجمالي الخصوم إلى إجمالي الأصول، والمبيعات إلى الأصول المتداولة، والنقدية إلى الخصوم المتداولة، والقيمة السوقية للديون كانت كبيرة في تفسير الفشل المالي في الشركات الماليزية بين عامي 1980 و 1996. Altman (1968) أنشأ نموذجًا (Altman Z Score) يتكون من مجموعة من النسب المالية التي يتم تحليلها باستخدام تحليل التمييز المتعدد (MDA)، استنادًا إلى افتراض وجود علاقة بين النسب المالية في السنوات السابقة ووقت الإفلاس للسنوات التالية.

Questions and Exercises

- **Questions**

1. Define the Predict of Financial Failure.
2. Explain the most common analytical models used to support the financial failure of a business.
3. Write the Altman and Mccovgh Model.
4. Write the (Kida) Model.
5. Write the Sherrod Model.

- **Exercises**

Exercise No.1

The following are the data extracted from the records of the Iraqi National Metallurgical Industries Company:

Total Current Assets	2500
Total Current Liabilities	1500
Total Assets	6000
Total Liabilities	2000
Retained earnings	500
Net operating profit	1200
Sales	5000
Market value of shares	4000

Required: Prepare an analytical study of these data by using the Altman and Mccovgh model to determine the sustainability of the business.

Exercise No. 2

The following balances appeared in the records of an industrial company:

Total Assets	6,000
Total liabilities	3,600
Sales	10,000
Cash Assets	1,600
Current Liabilities	2,400
Shareholders' Equity	4,000
Net profit after tax	500

Required: prepare an analytical study of these data by using the KIDA model to determine the extent of the entity's ability to continue.

Exercise No.3

The following balances were extracted from the statements of a company (in thousand dinars)

▪ Current assets	52,410
▪ Fixed assets	29,840
▪ Current liabilities	25,431
▪ Long term loans	2,315
▪ Cash	6,240
▪ Shareholders' equity	33,719
▪ Net profit before taxes	7,570

Required: Use the (Sherrod model) to classify the degree of risk surrounding the loan if the company makes a loan from a bank.

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Book in brief

Financial statements and reports are prepared from the output of the accounting function produced by the accounting and then communicated to the financial analysts as the users of the financial statements. The function of the financial analyst begins in terms of the termination of the accountant's post to complete a substantial financial function of the entity's functions related to the accounting function and not separate from it.

The function of the financial analyst is based on the analysis of the financial statements, which is one of the main tools used in the financial and economic decision-making by the various parties related to the entity such as management, employees, investors, shareholders, lenders, customers, the government and the public in general.

The analysis of the financial statements includes a set of basic and useful topics that the student can understand. The most prominent of these topics are the theoretical framework of financial analysis, the study of financial statements, the statement of funds flows, the cash flow statement and financial analysis by using financial ratios and prediction financial failures of companies and banks.

This book was prepared in a simplified methodology for the student and the reader to ensure the translation of terms and titles and some important texts into Arabic, as well as that the topics of the book were based on syllabus approved by the Sectoral Committee of the Faculty of Management and Economics in the Ministry of Higher Education and Scientific Research.

We hope that the modest scientific effort in this book will ensure the acceptance and satisfaction of students and readers to take advantage of practical and professional life.