

# Chapter 3

(Financial statements and Ratio analysis)

مدرج في سجل تجاري  
عن ال  
corporation

\* Corporations are asked by law to prepare annual report.

\* The annual report will present the corporation's performance annual report. (التقرير السنوي)

⇒ Letter to stockholders (past performance, future plans)

الجزء - مذكور في السجلات

- Basic financial statements:

a) Income statement.

b) Balance sheet.

c) Cash flow statement.

d) Statement of stockholders' equity.

## a) Income statement:

قائمة الدخل / قائمة الأرباح والخسائر

⇒ is a financial statement that shows revenues and expenses over a specific period of time

(Manufacturing) Company

تجارية \*

Income statement

for the year ended Dec 31, 2018

Sales revenue

- C.G.S

Gross Profit (الربح الإجمالي)

- operating exp.

Operating profit (EBIT)

- Rent exp.

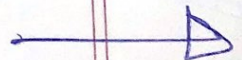
- Utilities exp.

- Selling & marketing exp.

- Depreciation

etc.

except tax and interest exp.



الدس

Operating profit (Earnings Before Interest and Tax)  
- Interest exp

Earning Before Tax (EBT)  
- Tax exp.

Net income / loss (ربح أو خسارة صافية) (EAT)  
- Preferred dividends (أرباح مفضلة)

Earning available for common stockholders

$$* EPS = \frac{\text{Net income} - \text{Preferred dividends}}{\text{\# of common stock outstanding}} = \frac{EACS}{\#C.S.O.}$$

Page 145-3 : Speed delivery company.

P3-3

\* Rev. = \$420,000

\* 20 drivers, 1 clerical assistant, David (مدير)



\$12,100 for each driver      \$10,000 per year      \$5,000 per month.

\* كل (الراتب الشهري) × 12 =

$$\Rightarrow \$5,000 \times 12 = \$60,000 \text{ per year}$$

$$\text{Salaries exp.} = (12,100 \times 20) + \$60,000 + \$10,000 = \$191,000$$

$$\text{Employment taxes and Benefits costs} = \$42,600 \text{ per year.}$$



\* Supplies  $\Rightarrow$  \$12,400 per year.

\* Travel & entertainment = \$22,000 per year.

\* Lease payment (جاري) = \$2,800  $\times$  12 = \$33,600 per year

\* Interest exp. = \$18,000

\* Borrowings loan = \$150,000 (جاري)

$\hookrightarrow$  Balance sheet  $\frac{جاري}{جاري}$ , Income stat.  $\frac{جاري}{جاري}$  sheet.

\* Tax rate = 40%

$\Rightarrow$  Solution: (a) Speed Delivery Company  
Income Statement

for the year ended Dec 31, 2014

Revenue \$420,000

- Salaries exp. \$191,000 (gross profit  $\frac{جاري}{جاري}$ )

- Employment taxes

and benefit cost \$42,600  $\Rightarrow$   $\frac{جاري}{جاري}$

- Supplies \$12,400

- Travel & env. exp. \$22,000

- Lease payment \$33,600

- Dep. exp. \$16,300

Operating profit (EBIT) \$102,100

- Interest exp. \$18,000

EBT \$84,100

- Tax exp. \$33,640

Net income (EAT)  $\boxed{\$50,460}$  #

(tax exp.)

$\$84,100 \times 0.4$

$= \$33,640$

(b) Evaluate performance: (تقييم)

⇒ The company covered all its expenses and earned \$50,460 profits

### b) Balance sheet Statement

قائمة الميزانية العمومية  
(الميزانية ≠ الموازنة)

↳ chapter 4

\* ما يتفرجنا الربح عبر الـ assets والى ذراها بالعلامة وسنستأجر

\* تراكمية (cumulative)

\* لا بالـ Income statement ← السنة انقبت ما يتجها بتقرير السنوي

(وترتبها ومحتوياتها بتتبعها)

⇒ Is a financial statement that shows the financial position at a specific point of time (لوقت محدد)

\* Balance sheet equation:

$$\text{Assets} = \text{Liabilities} + \text{Stockholder's equity}$$

الاستثمارات (Investments)      الديون      رأس المال

Sources of financing (مصادر التمويل)

\* Types of assets:

1- Current assets: (short-term debts / liquid assets)

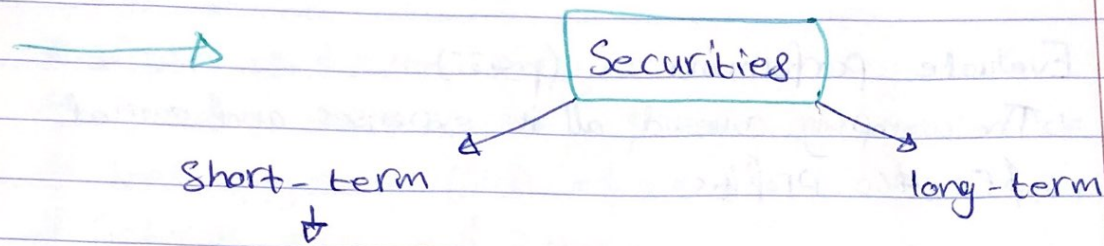
(التي يمكن تحويلها إلى cash بسهولة)

⇒ } - Cash / almost cash.

- Equipment.

- marketable securities

↳ تسحق بفترة أقل من سنة



تاريخ استحقاق الأوراق المالية لأقل من سنة  
 maturity: less than 1 year.

(تاريخ استحقاق)

⊗ short-term sec. (marketable securities): financial securities that can be converted into cash in less than 1 year

⊗ Marketable securities include:

أذونات الخزينة  
 ① Treasury bills: أوراق مالية يصورها الشركة/الشخص. يشتروها في السوق المالية الحكومية لفترة أقل من سنة. في أعلى فوائد (الإيراد) الصالح لشركة. في بصيرتي دين مع الحكومة. يستعملها بال assets تحت مسوق (فترة بين قصيرة) (Current. A.)

⊗ Marketable securities: safe, low risk but also: low return.

⊗ لا تشجع إنو تدين الحكومة + سوقها ماضي إذ ابني أبيعها عشائر issued by the government. T. bills تكون دين (liability) ع الحكومة مس عاينا.

⊗ لا تصير إلا من الحكومة ← لما يكون عندها عجز بين المصاريف والإيرادات

ببصر ال Treasury bills كيف؟ → بتدين

← بتشترها ال corporation ← so ← بتملكها

~~debt~~

- U.S
- ⇒ - Debt instruments issued by the ↑ government.
- Maturity: less than 1 year
  - Safe and liquid.
  - Can be converted into cash quickly and easily (liquid).
  - low risk and low return.
  - U.S government usually issues the treasury bills to cover the imbalances between the tax revenues & its expenditures.
- expenses = المصاريف ←  
 عجز الموازن →
- Debt instrument that must be repaid at maturity.

## ② Negotiable certificate of deposits (Negotiable CD's)

شهادة ايداع قابلة للتداول

\* (can be traded in the market)

\* (low risk, low return)

قرض: loan

من طرق الائحة التي يتقبلها البنوك التجارية

\* Def ⇒ Debt is instruments issued by commercial banks

(أكثر مما يصره هو البنوك التجارية) ← تاريخ استحقاق

\* البنك يحصل على التمويل من: ودائع الناس (Deposits)

القروض يتكون Assets

$$\text{Bank: Assets} = L + O.E$$

- (loans) - Deposits

ال Equity مال

تاريخ استحقاق لأنه

ملكية أموال

Liability في المال

لا تسمى ملكية

\* Commercial banks issue negotiable certificate deposits as financing (to finance its investments)

من تمويل استثمارها



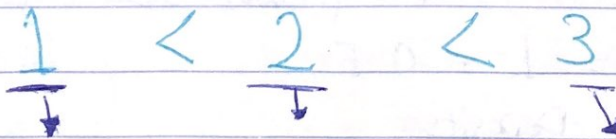
- ⇒ - Maturity: less than 1 year.
- Low risk and low return.
- Liquid → can be converted into cash quickly and easily. (يس: حسابات الناس من البيع والشراء)

⊕ ⇐ تصير عن البنك  $\frac{1}{2}$  بموئل حاله من خلال هاي ال securities من ال Deposits (مخاطرة قليلة) .  
⊕ الوديعه لأجل عليها فوائد .

### ③ Commercial papers: الأوراق التجارية .

- Debt instruments issued by corporations <sup>هاد النوع</sup>
- Corporations issue commercial paper as a sourced financing .
- Maturity: less than 1 year .
- Low risk , low return .
- Liquid

\* ترتيب ال marketable securities حسب الخطورة:



لأن الحكومة أضمن الرأسي

لأنها صادرة عن بنوك

آخر رأسي ال

← يشغلوا مصاريف الزبائن ، وعندهم  
قدرة على تسديد التزاماتهم لما تستحق

corporations

\* سي، الة، قيم [1] Current assets

- cash
- Marketable securities
- Account Receivables / Note receivable (مبيعات ائتمانية)
- Inventory
  - Low materials
  - work-in process.
  - Finished goods.

\* Account Receivables: are recorded in the balance sheet under current assets if inventory (goods) was sold to customers on credit

→ Total current assets = cash + marketable securities + Account receivable + Inventory.

[2]- Fixed assets ⇒ long-term assets, land, buildings, plant, equipment.

can't be depreciated (لا يمكن ائتمانه بزيادة سعرها - Asset ائتمانية)

less: Accumulated depreciation → حساب الاستهلاك المتراكم عبر السنوات  
Contra asset acc. ↙

Net fixed assets → القيمة بعد خصم الاستهلاك المتراكم خلال السنوات



3 - Intangible assets → أصول غير مادية  
patents, copy rights, good will

\* ⇒ Total assets = 1 + 2 + 3

Oct 10, 19  
Thursday

\* Types of liabilities

a) Current liabilities: Short-term liabilities (debts) that should be repaid within 1 year of current liabilities.

\* Current liab. include :-

1. Accounts Payable / Notes payable  
(مستحقات) (تجارة)

eg: When the corporation purchases raw materials from the supplier on credit.

Current liab. : أصول غير مادية

2. Wages payable (or salaries ...)

3. Taxes payable

4. Accrued liabilities (مستحقات)

5. Short-term debt.

6. Interest payable

⇒ Total current liabilities = Acc./p. + W./p. + taxes/p. + acc. liab. + Short-term debt



b) Long-term debts: (maturity: more than 1 year).

⇒ Debts that should be repaid within more than 1 year period.

⊕ long-term debts include:

1. Loans (القروض)

2. Bonds payable (السندات)

القروض = Loans

(على قوائم)

بمسألة القروض

(loans)

ما يقدر أبعدهم

وأشترهم، أما

ال Bonds

بباعتهم وبشرو.

**Bond**: long-term financial security that can be issued by corporations.

⊕: is a debt instrument.

⇒ Bond: is a debt instrument that has a par value (face value) of \$1000, pays fixed interest rate and has a specific maturity.

e.g: Bond X,  $n = 5$  years

par value = \$1000,  $i = 5\%$

Interest payment =  $5\% \times 1000 = \$50$

(where  $i$  = annual interest rate). Per year

Bond Y: par value = \$1000

$n = 10$  years,  $i = 7\%$

⇒ Interest payment =  $7\% \times 1000 = \$70/\text{year}$

Total liabilities = **a** + **b**

(current + long-term)

⊛ (3) Stockholders' equity : (Balance sheet بالقياس)

Stockholders' equity include :

a) Preferred stock @ par value =

# of preferred stock x par value (القيمة الاسمية)

~~القيمة الاسمية~~

eg P.S = 10,000 shares.

par value = \$1

⇒ Preferred stock =  $10000 \times 1 = \$10,000$

b) common stock @ par

c) Additional paid in excess of par (capital).

(APIC)

← القيمة الزائدة ←

⊛ APIC = (Market price - par value) . # of common Stock outstanding

eg: Common stocks = (20,000 shares ⇒ اوجبتناها)

par value = \$2

offering price = \$3

issued + sold = 10,000 shares

⇒ common stock @ par =  $2 \times 10,000 = 20,000$ .

⇒ APIC =  $(3 - 2) \cdot \underline{10,000} = \$10,000$

(# من السعر)

d) →

d) Retained earnings: الأرباح الغير موزعة (undivided profit)  
 Balance هي حصة الوكيل بين ال Sheet & Income Statement.

⇒ Total stockholders' equity = a + b + c + d.

\* P5 / 145 ⇒ (ماتت والأخرى) \*

	<u>Statement</u>	<u>type of account</u>
A/P	B.S	Current liab.
A/R	B.S	Current assets
Accruals	B.S	Current liab.
Acc. dep. ← لحالو: exp (في I.S)	B.S	Fixed assets ⇒ contra asset account
Adm. exp.	I.S	Expenses
Buildings	B.S	Fixed assets
Cash	B.S	Current assets
Common Stock @ par	B.S	Stockholders' equity
CGS	I.S	Expenses
Dep.	I.S	Expenses
Equipment	B.S	Fixed assets
General exp.	I.S	Expenses
Interest exp.	I.S	Expenses
Inventories	B.S	Current assets
Land	B.S	Fixed assets
Machinery	B.S	Fixed assets
Marketable sec.	B.S	Current assets & Current liab.
N/P	B.S	....etc

Oct 17, 19

## \* Basic financial statements :

1) Income statement . 4) Cash flow Stat.

2) Balance sheet Stat.

3) Stockholders' equity .  $\rightarrow$  includes:

$\downarrow$

Is a financial stat.

that shows changes

on stockholders' equity

$\downarrow$

- preferred stock @ par

- Common stock @ par

- Retained earnings

- Additional Paid In Excess of Par

( " " " Capital)

$\Rightarrow$  APIC

- New issuance of preferred stocks

- New issuance of common stocks

- Repurchase of stocks :  $\rightarrow$  لقا الشركة - ترجع تشتري أسهمها

من السوق ، عاد اسمها : Treasury stocks  $\leftrightarrow$  بتأثر على

stockholders' equity . ال

- Changes in retained earnings .

## \* Statement of Retained Earnings :-

$\Rightarrow$  shows the changes in retained earnings that affect the stockholders' equity .

ترتيبها (سكالم)

$\rightarrow$

## Statement of R.E 2018

Retained earnings beginnings balance (2017)	\$ <span style="border: 1px solid black; display: inline-block; width: 50px; height: 15px;"></span>
+ Net income (2018)	<span style="border: 1px solid black; display: inline-block; width: 50px; height: 15px;"></span>
- Preferred dividends (2018)	<span style="border: 1px solid black; display: inline-block; width: 50px; height: 15px;"></span>
- Common dividends (2018)	<span style="border: 1px solid black; display: inline-block; width: 50px; height: 15px;"></span>
Retained earning ending balance (2018)	
	\$ <span style="border: 1px solid black; display: inline-block; width: 50px; height: 15px;"></span>

P10 Page 148 :-

R.E beg. balance = \$1,151,000 200  
 Net income = net profit = EAT = \$528,000  
 Preferred dividends = \$98,000  
 R.E ending balance = \$1,324,000  
 # of common shares outstanding = 100,000 shares

① Prepare ----- Statement of R.E.

∴ + (الإيراد، - المصاريف)

R.E beg. bal.	\$1,151,000
+ Net income	528,000
- Preferred div.	98,000
- Common div.	X: <span style="border: 1px solid red; padding: 2px;">257,000</span>
R.E end. bal.	
	\$ <u>1,324,000</u>

~~257,000~~

$$X = 1,581,000 - 1,324,000 = \$257,000$$

②  $EPS = \frac{\text{Net income} - \text{Preferred div.}}{\text{\# of common stocks outstanding}}$   
 (مبلغ الربح) (مبلغ الأرباح) =  $\frac{528,000 - 98,000}{100,000} = \$4.3 \text{ / share.}$

Net income - Preferred dividends : مبلغ الأرباح  
 Earning Available for Common stockholders : مبلغ الأرباح المتاحة للمساهمين العاديين  
 (EACS)

③  $\text{Dividend / share} = \frac{257,000}{100,000}$  (Common div. / # of Common) =  $\$2.57 \text{ / share}$

في الأرباح 4.3 دولار و 2.57 دولار منهم، وباقى يتم استئجاره.

4 Cash Flow Statement :- قائمة التدفقات النقدية  
 ⇒ Is a financial statement that shows cash inflows and cash outflows from 3 business activities which are :- operating, investing and financing  
 (تداول ، استثمار ، تشغيل)

(نشرها بالتفصيل يكون بمثابة 4)

# \* Ratio Analysis : (مؤلف + مقياس)

⇒ A method used to analyze the financial statement in order to evaluate the business performance.

↓  
بهاى الغاية

Interested parties :-

- 1) Stockholders (owners).
- 2) management.
- 3) Creditors. (إي بيتوا البرنس)
- 4) Government.
- 5) Competitors. (المنافسين)

## Ratio Analysis

← cross-sectional analysis

↓  
comparison of performance against competitors (other businesses)

↓  
مقارن أدائي مع منافسي أو مع ال Industry ككل .

time-series analysis

↓  
comparison of performance between years.

↓  
مقارن أدائي الآن مع أدائي بالسنوات الماضية .

→ combined analysis

↓  
cross-sectional & time-series

↓  
مقارن أدائي عبر السنوات (time-series) أو مع منافسي (cross-sectional) ال Industry ككل .



# \* Categories of financial Ratios

1- Liquidity Ratios (2)

2- Activity Ratios (5)

3- Debt Ratios (3)

4- Profitability Ratios (6)

5- Market Ratios (2)

1- Liquidity Ratios :- These ratios help to evaluate the firm's ability to cover short-term debts as they come due.

Current ↙  
Quick ↘

لما نستحق  
بمستحقهم مشان أقدم إذا، ليزن عندها لفترة على تحقيق ديون  
لما نستحق (Current liabilities) / ديون قصيرة الأمد

a- Current Ratio =  $\frac{\text{Total Current Assets}}{\text{Total current liabilities}}$  →  
منحسبهم من ال Balance sheet

e.g : Current Ratio = 2 times →  
 كلما كانت أعلى ← أحسن

⇒ The higher the current ratio, the better the ability to cover short-term debts when they come due.  
 \* (فيس ما تكون كثير عالیه)  
 (بيجي فواتر)

I.S = Income Statement,  
B.S = Balance Sheet.

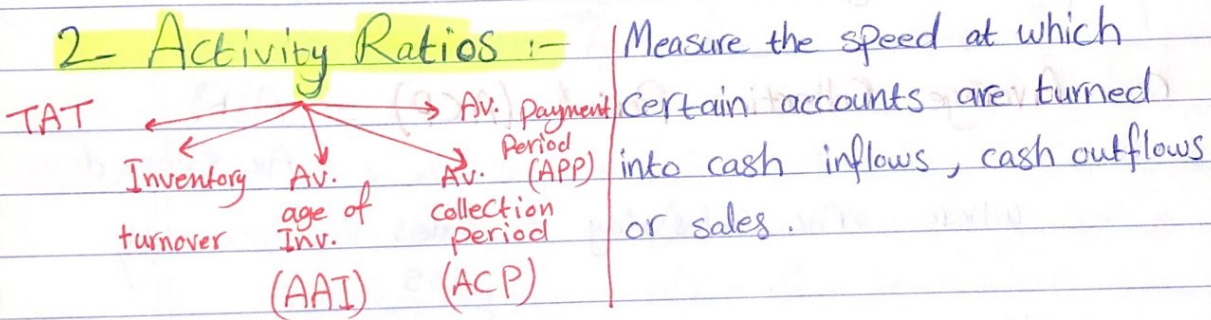
b- Quick (Acid-test) Ratio (أدق من @)

$$\frac{\text{Total current assets} - \text{Inventory}}{\text{Total current liab.}}$$

استثناء  
للأجزاء من الأصول (التي لا تتحول إلى كاش) ← من الأصول من a  
from the balance sheet.

\* ⇒ The higher the quick ratio, the better the firm's ability to cover short-term debts as they come due.

## 2 Activity Ratios :-



a- Inventory turnover =  $\frac{\text{Cost of Goods Sold} \rightarrow \text{I.S}}{\text{Inventory} \rightarrow \text{B.S}}$

دوران البضاعة  
(البضاعة تحوّل (x) مرة للبضائع)

⇒ The higher the inventory turnover, the better.

A/R  $\equiv$  Account Receivable

A/P  $\equiv$  Account Payable

$$b - \text{Average Age of Inventory (AAI)} = \frac{365}{\text{Inv. turnover (a)}}$$

$$\left( = \frac{365 \cdot \text{Inventory}}{\text{Cost of Goods sold}} \right)$$

$\Rightarrow$  It measures # of days needed to turn the inventory over.

e.g: AAI = 20 days :- یعنی کہ 20 دن قلم چلاب پہنچانے (بتخلص پہنچانے) و جب تک غیر ہوا۔

$\Rightarrow$  The higher the AAI, the better.

$$c - \text{Average Collection Period (ACP)} = \frac{\text{A/R}}{\text{Av. Sales/day}}$$

$$\text{where: Av. Sales/day} = \frac{\text{Sales}}{365}$$

A/R  $\Rightarrow$  B.S

Sales  $\equiv$  Rev.  $\Rightarrow$  I.S

$$\Rightarrow \text{ACP} = \frac{\text{A/R} \cdot 365}{\text{Sales}}$$

$\Rightarrow$  It measures on average the # of days needed to collect the account receivable.

$\Rightarrow$  \* The goal of any business is to collect the A/R(s) as quickly as possible.

$\Rightarrow$  The lower the ACP, the better.

$$d- \text{Average Payment Period (APP)} = \frac{\text{ANP}}{\text{Av. purchases/day}}$$

where:- Average purchases / day =  $\frac{\text{Annual Purchases}}{365}$

⇒ It measures on average the number of days needed to repay the A/P

$$\text{APP} = \frac{\text{A/P} \cdot 365}{\text{Purchases}}$$

⇒ The goal of the firm is to repay the accounts payable as slowly as possible.

⇒ The longer the APP, the better.

\* إذا صحتي أقر الدين وما أستدو يكون أحسن بعشان أستغل المصاريف  
إني صحتي بشرط صاحب الدين ما يخط فواتر (وما يخط ملاحظه لأنو A/P  
من N/P من مسجل بعقد) وما تخرب العلاقة ويبطل بي تينتي

$$e- \text{Total Asset Turnover (TAT)} = \frac{\text{Sales}}{\text{Total Assets}}$$

⇒ It measures how much every \$ invested in assets is generating sale.

⇒ The higher the TAT, the better.

← ليس تكون عالية من زيادة ال (Sales) من تقبل ال (Total assets) أحسن ✓

### 3- Debt Ratios :- high measure

1- The degree of indebtedness (درجة المديونية للبرنس)

2- Ability to service the debt

↓  
(القدرة على دفع الموائد التي جاءت بسبب الدين)

$$a- \text{Debt Ratio} = \frac{\text{Total liab.}}{\text{Total assets}}$$

↓  
It measures the degree of indebtedness.

$$\textcircled{1} \text{ Debt Ratio} < 1 \quad (< 100\%)$$

⇒ The higher the debt ratio, the higher the default risk.

↓  
The default risk :- inability to repay the debts (principal or interests) when they come due.

$$b- \text{Debt-to-equity Ratio} = \frac{\text{Total liabilities}}{\text{Total common equity}}$$

↓  
It measures the degree of indebtedness (too)  
(بسبب التي تختلف هو المقام (a) ع)

③ where :-

$$\begin{aligned} \text{Total common equity} = & \text{common stock @ par} \\ & + \text{APIC} \\ & + \text{Retained Earnings} \end{aligned}$$

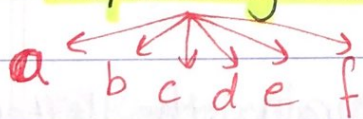
⇒ The higher the debt-to-equity ratio, the higher the degree of indebtedness, the higher the default risk.

C- Times Interest Earned Ratio =  $\frac{\text{EBIT}}{\text{Interest exp.}}$  → I.S

⇓  
It measures the firm's ability to service the debt.  
⇒ It measures the # of times the firm can cover its interest expense.

⇒ The higher the times interest earned, the better the firm's ability to service the debt.

4- Profitability Ratios := measure the firm's profitability (الربحية)



a- Gross profit margin =  $\frac{\text{Gross Profit}}{\text{Sales}} = \frac{\text{Sales} - \text{CGS}}{\text{Sales}}$

I.S

⇒ The higher the gross profit margin, the higher the profitability of the business.

margin :  $\frac{\text{Gross Profit}}{\text{Sales}}$

∴ Sales →

ال Gross profit margin أكثر دقة لأنها ليس بتأثير ال  
 Gross Profit وعلان تصير أكثر دقة ← من خط بيال Gross Profit  
 Operating profit (EBIT) ⇒ (b) ↘

$$b- \text{Operating profit margin} = \frac{\text{Operating Profit}}{\text{Sales}}$$

⇒ The higher the operating profit margin, the better the firm's profitability.

$$c- \text{Net Profit margin} = \frac{\text{EACS}}{\text{Sales}} \rightarrow \begin{matrix} \text{I.S} \\ \text{I.S} \end{matrix}$$

(EACS ≡ Earning Available for Common Stockholders)

$$\text{⊗ EACS} = \text{Net income} - \text{preferred dividends}$$

⇒ The higher the net profit margin, the better the firm's profitability.

⊗ ⇒ The most accurate ratio.

$$d- \text{Return On Assets (ROA)} = \frac{\text{EACS}}{\text{Total Assets}}$$

It measures how much every \$ invested in assets is generating net profit. →

كل دولار استثماري بال Assets ← كم يكون في مقابلة ربح صافي  
 بعد تغطية كل المصاريف بما فيها ال Preferred div. إذا في أعلى.

⇒ The higher the ROA, the higher the firm's Profitability.

e- Return On Equity (ROE) =  $\frac{EACS}{\text{Total common equity}}$

EACS ⇒ from: I.S

Total common equity ⇒ B.S

⇒ It measures how much every \$ invested by common Stockholders is generating net profit.

(الرتبة بين e و d : (أو d سلامة) بين e : من المساهمين)

⊗ Remember :- Total common equity = Retained earnings + Common stock @ par + APIC

⇒ The higher the ROE, the higher the firm's Prof. (∴ The better).

f- Earning Per Share (EPS) =  $\frac{EACS}{\# \text{ of common stocks outstanding}}$

↓  
 حصة كل سهم من الأرباح  
 Common