

# Financial Statement analysis

## Financial Reporting & Analysis

↓  
Provide financial information  
↓  
Read - interpret the financial statement to make a reasonable Decision invest or not, assessment (credit rate)

Summary ← 1. income Statement for 1 year / Accrual Basis  
2. Balance Sheet  
3. Cash Flow Statement  
4. Statement of change in Stockholder equity

↓  
C.A ↓ CL  
A = L + O.E  
LTA ↓ LTD  
1. Operating  
2. invest, 3. finance

### auditor Report:

the best → Unqualified Report, → adverse, Worst  
V.G → Qualified, → disclaimer of opinion, عن الراي

Owner → Performance for a long  
investor → just Risk & Return

Stockholder → employee, ————  
Stockholder ربيرون

Bank & called Creditor

holding Company → شركة قابضة  
أكثر من 50% في شركة أخرى

Balance Sheet → from most liquid to least liquid.

\* C.A - CL = Working Capital

\* long-term Asset → investment for the long Run → "real asset, financial asset, intangible asset"

\* Retained earnings \*

|             |
|-------------|
| Beg. R.E    |
| + N.I       |
| - Dividends |
| End. R.E    |

# Reading 23 - Financial Reporting -

14/12/2019  
Thursday

## Groups Of Business

### Type of Business Transaction :-

- Operating Act → Normal day to day
- investing Act → Cash out flow to the long Run
- financial Act → firm capital structure / debt equity.

### 5 Accounting Elements :-

| Asset               | Liability   | O. E                  | Rev ex |
|---------------------|-------------|-----------------------|--------|
| cash amount account | amount Acct | (Contributed Capital) |        |
|                     |             | ↳ C.S at par          |        |
|                     |             | Paid in Capital       |        |
|                     |             | R. E                  |        |
|                     |             | Cummulative O.C.I     |        |

ex-49 -

| Asset                           | Liability   | O. E                | Rev |
|---------------------------------|-------------|---------------------|-----|
| Cash amount account             | amount Acct | contributed capital |     |
| 1. 31. Dec 2015                 |             |                     |     |
| 150,000                         |             | 150,000             |     |
| 2. Jan. 2                       |             |                     |     |
| (100,000) 100,000 (invest)      |             |                     |     |
| 3. Jan. 2                       |             |                     |     |
| (3000) 2000 (rent deposit)      |             |                     |     |
| *1000 (PrePaid exp)             |             |                     |     |
| 4. Jan. 3                       |             |                     |     |
| (6000) *6000 (office equipment) |             |                     |     |
| 5. Jan. 3                       |             |                     |     |
| 1200                            | *1200       | Unearned Rev        |     |
| 6. Jan. 10                      |             |                     |     |
| 10000 inventory 10000 A/P       |             |                     |     |

## income Statement

31.1

|                     |            |
|---------------------|------------|
| Revenue             | 475        |
| <u>C.G.S</u>        | <u>300</u> |
| Gross Profit        | 175        |
| Operating EXP       | (1690)     |
| <u>Depreciation</u> | <u>250</u> |
| Operating Profit    | 1765       |
| + Non. OP. Profit   | 2100       |
| - interest exp      | <u>50</u>  |
| Net income          | 285        |

## Balance Sheet

31.1

|                     |               |
|---------------------|---------------|
| Cash                | 53850         |
| A/R                 | 125           |
| inv                 | 9700          |
| rent deposit        | 2000          |
| <u>Pre Paid exp</u> | <u>0</u>      |
| Total Current Asset | 65675         |
| Equipment           | 6000          |
| Acc. Depreciation   | (250)         |
| <u>Investment</u>   | <u>102100</u> |
| Total L.T.A         | 107850        |
| Total Asset         | 173525        |

## Liability

|                       |              |
|-----------------------|--------------|
| A/P                   | 10000        |
| Unearned Rev          | 11000        |
| Accruals              | 140          |
| <u>Long term debt</u> | <u>12000</u> |
| Total liability       | 23240        |
| Owner's Equity        |              |
| O.C                   | 150000       |
| <u>R.E</u>            | <u>285</u>   |
| Total O.E             | 150285       |
| Total liability & O.E | 173525       |

|          |          |
|----------|----------|
| Beg. R.E | 0        |
| + NT     | 285      |
| - Divid  | <u>0</u> |
| End. R.E | 285      |

\* بعض الحسابات المهمة:

|                  |      |         |            |
|------------------|------|---------|------------|
| 1. Beg. AIR      | 0    |         |            |
| + Credit Sales   | 7800 | 150,000 |            |
| - Collection AIR | 0    | 7800    |            |
| End. AIR         | 7800 | 142200  | Cash Sales |

|             |       |  |
|-------------|-------|--|
| 2. Beg. inv | 0     |  |
| + Purchases | 25000 |  |
| - C.G. S    | 21000 |  |
| end. inv    |       |  |

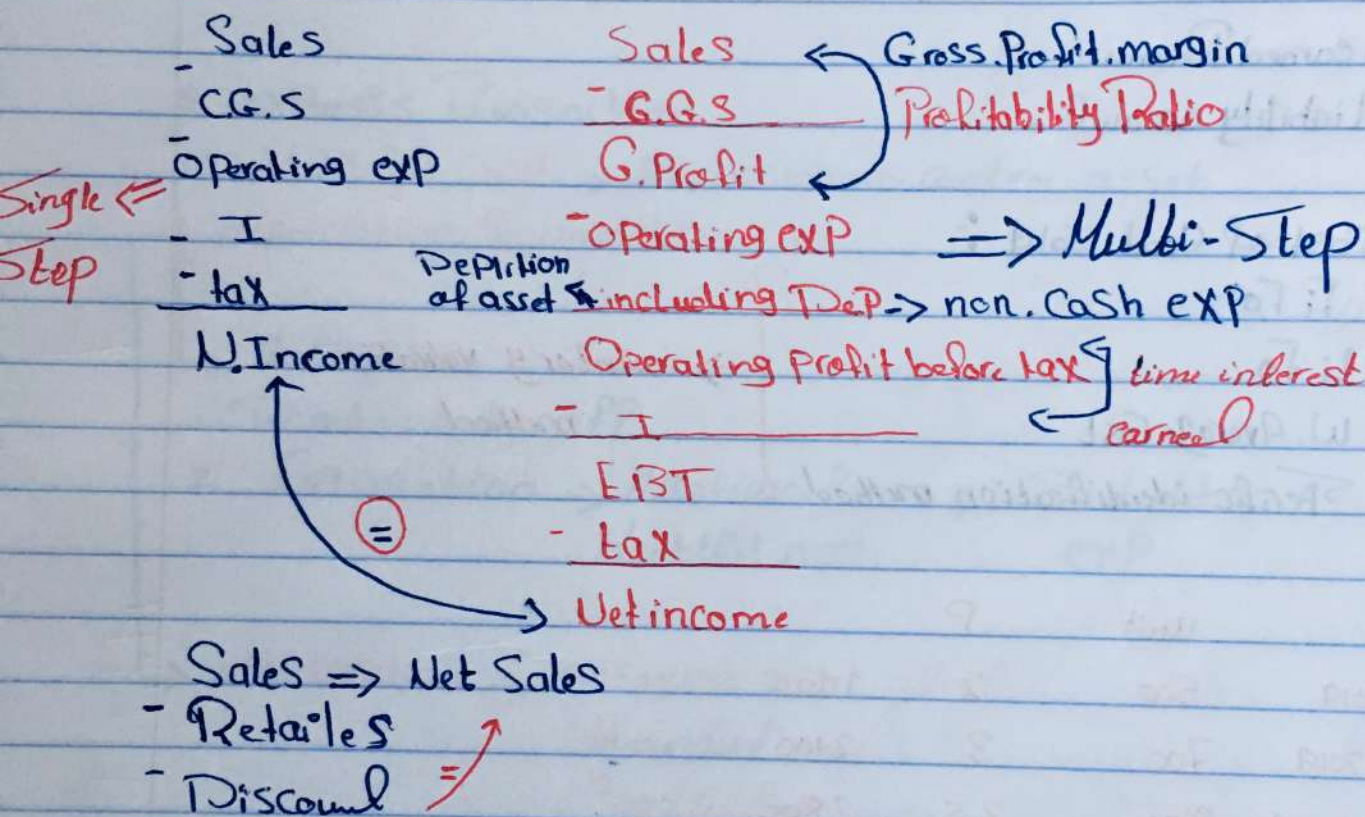
# Reading 25 - Understanding income Statements

Tuesday  
5/3/2019

$$EPS = \frac{NI - P.S. Divid}{\# \text{ of Outstanding}} \Rightarrow \text{Basic Eps}$$

W. Avg # of Shares Outstanding

Diluted < Eps



## \* Revenue Recognition

### \* issues on EXPENSES Recognition

#### ↳ Normal Cases

↳ immediate transfer of power ship

↳ Cash Sales

↳ Credit Sales.

Rev ₹ 10000

5000 cash

EXP 1000

5000 AIR

(1000) Allowance for doubtful account

Unearned Revenue  
Liability account

### \* Cost of Good Sold :-

1. Fi Fo
2. Li Fo
3. W. Average Cost
4. Specific identification method

⇒ inventory valuation  
method

|            | unit            | P   |             |
|------------|-----------------|-----|-------------|
| 01.2019    | 500             | 2   | 1000        |
| 20.3.2019  | 700             | 3   | 2100        |
| 30.9.2019  | 800             | 3.5 | 2800        |
| 10.11.2019 | 200             | 4   | 800         |
|            | <del>1000</del> |     | <u>6700</u> |

### Sales

| Q    | P  |         |
|------|----|---------|
| 1600 | 10 | = 16000 |

#### 1. C.G.S → Fi Fo

$$500 \times 2 = 1000$$

$$700 \times 3 = 2100$$

$$400 \times 3.5 = \underline{1400}$$

$$4500$$

level of ending inv

$$400 \times 3.5 = 1400$$

$$200 \times 4 = 800$$

2200

LiFo

$$200 \times 4 = 800$$

$$800 \times 3.5 = 2800$$

$$600 \times 3 = 1800$$

5400

### \*\_expenses Recognition

doubtful acct  $\rightarrow$  Provision  $\rightarrow$  Contra asset  
depreciation & amortization

$\rightarrow$  2 ways :

1. Direct-write-off

2. Estimation  $\rightarrow$  Allowance for doubtful acct, Bad debt exp

$\rightarrow$  amortization  $\rightarrow$  intangible asset all of them but not Good Will

depreciation  $\rightarrow$  Accumulated Depreciation  
Balance Sheet "Contra asset"  
Depreciation expense  
Income Statement "

50 \*  
12  
-----  
5

\* Non Recurring items -

1. Non Operating "Unusual or infrequent"  $\Rightarrow$  Gain income = 100,000
2. extra Ordinary items  $\rightarrow$  Both Unusual and infrequent.
3. discontinued Account  $\Rightarrow$  income = 100,000  $\Rightarrow$  60,000  
tax = 40% \*

\* Sales

- C.G.S

G. Profit

- Operating exp

Operating Profit

+/- Non Operating Gain/Loss 100,000

- Income before interest & tax

- int. exp

EBT

- Tax

income from Continuing Act

+/- income/loss from discontinued Act

+/- income/loss from extra Ordinary [Net of tax = 60,000]

\* Earning Per Share :-

Eps  $\Rightarrow$  Types of Firm Capital

Structure  $\rightarrow$  Debt or Equity

C.A

C.L

$A = L + OE$

Investment

Financing

100,000

50,000

50,000

Simple

Preferred Stock  
Common Stock  
Bond

Complex

Convertible Financial Securities  
- Stock Options  
- Convertible P.S  
- Convertible Bonds

Simple:

$$EPS = \frac{EACS}{W.Avg \# of}$$

Shares Outstanding

"Basic EPS"

Bonds

Lev Common Stock

Interest

NI

Complex:

$$Basic EPS = \frac{EACS}{W.Avg \#} \Rightarrow NI - P.S Divid$$

Diluted EPS =

ex - P-175

W.Avg # of Shares Outstanding

2009

Outstanding Jan.1

$$1,000,000 * \frac{12}{12} = 1,000,000$$

New issued April.1

$$200,000 * \frac{9}{12} = 150,000$$

T. Stock Oct.10

$$(100,000) * \frac{3}{12} = (25,000)$$

1,100,000

1,125,000

W.Avg # of Shares <

\* 2011

$$Jan.1 \quad 150,000 \text{ Outstanding} \quad * \frac{12}{12} = 150,000$$

$$Mar.30 \quad 50,000 \text{ New Issuance} \quad * \frac{9}{12} = 37,500$$

$$June 1 \quad 30,000 \text{ New Issuance} \quad * \frac{7}{12} = 17,500$$

$$Nov.30 \quad (10,000) \text{ T. Stock} \quad * \frac{1}{12} = (833)$$

220,000

204,167

2009

Out Standing Jan. 1  $1000000 \times \frac{12}{12} = 1000000$   
 New issuance April. 1  $200000 = \frac{9}{12} = 150000 = 1265000$   
 Stock dividends 10% July. 30  $1150000 \times 0.1 = 115000 + 115000$   
 T. Stock Oct. 1  $(10000) = 3112 = (2500)$   
 Stock Split 2:1 Nov. 1  $\rightarrow 1265000 - 2500$   
 $= 1262500 \times 2$   
 $= 2,525,000$

ex.

NI 1,750,000  
 W. Avg # Shares 500,000  
 20,000 Convertible P.S "P.S Div \$10" = 200,000  
 1 P.S  $\Rightarrow$  5 C.S  
 Simple Capital Structure  
 Basic Eps =  $\frac{EACS}{W. Avg} = \frac{NI - P.S Div}{W. Avg}$   
 $= \frac{1750000 - 200000}{500000} = \frac{1550000}{500000} = \$3.1$

Complex Capital Structure

Diluted Eps =

Convertible P.S  $\Rightarrow$  What if Converted

incremental earning  $\Rightarrow$  P.S Div  $\Rightarrow$  200,000

incremental # Shares  $\Rightarrow 20000 \times 5 = 100,000$

Eps =  $\frac{EACS + \text{incremental}}{W. Avg + \text{incremental Shares}} = \frac{1550000 + 200000}{500000 + 100000}$

$= \$2.92$

ex. 16

P. 177

N.I

750,000

W.AVG

690,000

50,000 Convertible Bond 6%  $\Rightarrow$  Convertible 10,000 C.S

Tax Rate 30%

$$\text{Basic EPS} = \frac{\text{ACS}}{\text{W.AVG}} = \frac{750,000}{690,000} = \$1.09$$

Diluted EPS

Convertible Bond  $\Rightarrow$  What if Converted

incremental Earning  $\Rightarrow 50,000 \times 0.06 (1 - 0.3) = 2100$

incremental Shares  $\Rightarrow 10,000$

$$\text{Diluted EPS} = \frac{\text{ACS} + \text{incremental Earning}}{\text{W.AVG} + \text{incremental Shares}}$$

$$= \frac{750,000 + 2100}{690,000 + 10,000}$$

$$= \frac{752,100}{700,000}$$

$$= \$1.07$$

ex. 17. P-179

NI \$2.3m

W.Avg #Shares 800,000

30,000 Options  $\rightarrow$  right to buy  $\rightarrow$  Dilution. انی سی ٹی

exercise Price \$35  $\rightarrow$  C.S. خرید

market Price \$55

E.Ps

نہو بد ال کیم عم طریقہ

Treasury Stock method:

$$30,000 \times \$35 = \$1,050,000$$

$$\frac{1,050,000}{55} = 19,090$$

SS

$$30,000 - 19,090 = 10,910 \text{ Stock} \rightarrow \text{incremental}$$

$$\text{Basic E.Ps} = \frac{\text{EACS}}{\text{W.Avg \#Shares}} = \frac{2,300,000}{800,000}$$

$$= \$2.88$$

$$\text{Diluted EPS} = \frac{\text{EACS} + \text{inc. Earning}}{\text{W.Avg \#Shares} + \text{inc. Shares}}$$

$$= \frac{2,300,000 + 0}{800,000 + 10,910}$$

$$= \$2.84$$

$$= \$2.84$$

## 8. Comprehensive Income

= NI + Other Comprehensive Income

Sales  
↓  
NI

O.C.I

+ Beg. R.E  
NI

Divid.  
End. R.E ②

← ①

O.E

C.S ✓

Paid in Capital

R.E ✓

Held available for sale  
Held trading  
Held until maturity

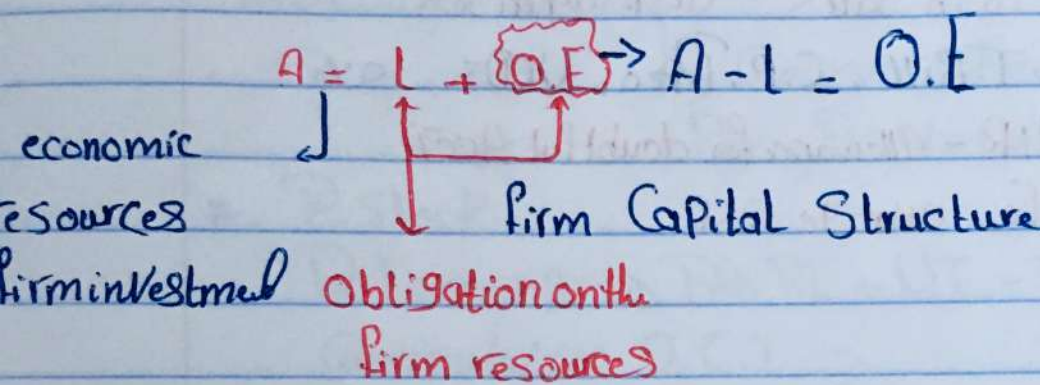
|       |     |       |
|-------|-----|-------|
| A     | ①   | ②     |
| Stock | \$1 | \$1.5 |

non. Operating  
Unrealized Gain  
available for Sale } O.C.I

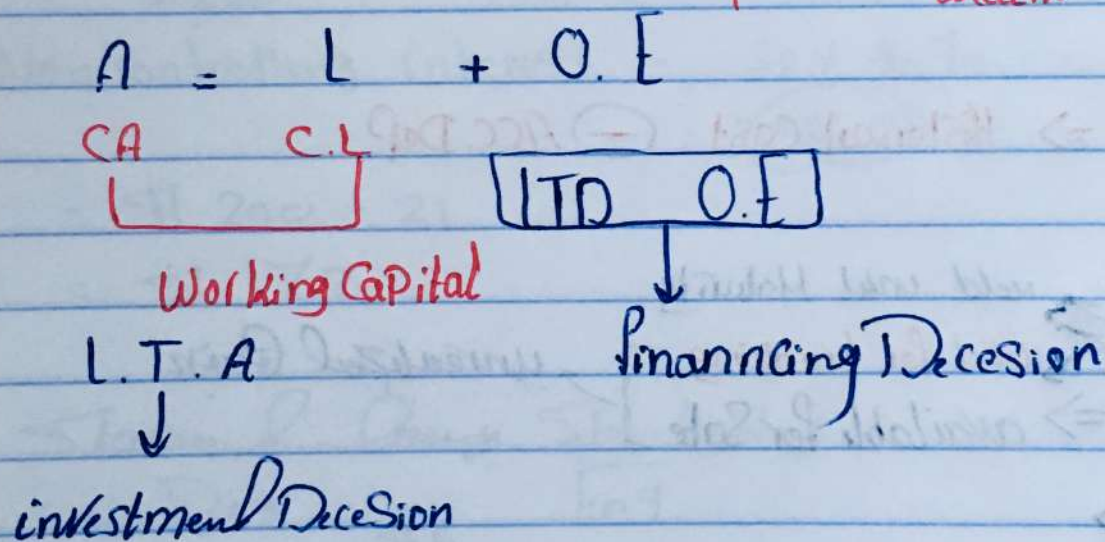
Gain / loss → Currency Translation

## Reading 26

### Understanding Balance Sheet



Profit  $\rightarrow$  Accounting number } goal of finance?  
maximize Shareholder wealth



Liquidity  $\rightarrow$  ~~Long~~ Short-run

Solvency  $\rightarrow$  ~~Short~~ Long-run

Asset Side

C.A

Cash & Cash equivalents  $\Rightarrow$  Cash Sales, Cash expensesShort term  $\leftarrow$  marketable Securities  $\rightarrow$  T. Bill, C.P, Rpo, NCDs 04Sales  $\leftarrow$  Net. A / Receivable  $\Rightarrow$  G.A/R - Allowance for doubtful AcctInventory  $\Rightarrow$  FIFO, LIFO, average cost

Other C.A

PrePaid expenses

Total Current asset

3116

Long-Term-Assets

Tangible  
asset

|           |
|-----------|
| Land      |
| P.P.E     |
| Buildings |

 $\Rightarrow$  Historical cost  $\ominus$  Acc. DepFinancial  
asset

|       |
|-------|
| C.S   |
| P.S   |
| Bonds |

held until Maturity

held for trading

 $\Rightarrow$  available for Sale

unrealized Gain

intangible  
asset

|             |
|-------------|
| Brand Names |
| Goodwill    |

identifiable

 $\Rightarrow$  Amortization / Depreciation $\rightarrow$  unidentifiable & Unlimited

AIR : Beg. AIR  
 + Credit Sales  
 - Collections  
 End. AIR

Cash = Beg. Cash  
 + Net cash flow  
 End. Cash

Dep = Beg Acc Dep  
 + Dep. exp  
 - Dep on Equipment sold  
 End. Acc Dep

## Owner's Equity

### Contributed Capital

↳ Common Stock at Par  $1000 \times 1$   
 ↳ Paid in Capital  $1000 \times 4$

\* P. Stock

- R. Earning  $\Rightarrow$  Beg. RE + NI - Divid = End RE

- Cumulative O.C.I  $\Rightarrow$  see 6 Q

- Non Controlling interest

$$\begin{array}{ccc} & A & \xrightarrow{70\%} B \\ \text{NI} & \$200 & 140 \end{array}$$

Non Controlling interest =  $30\% \times 70$   
 =  $\$21$

=  $\$200 - 21$

=  $\$179$

### Statement Change Shareholders

|                 | Beg    | new share | End |
|-----------------|--------|-----------|-----|
| CS              | $\$10$ | $\$5$     | 15  |
| Paid in capital | 7      | 7         | 14  |

## Reading 27 understanding Cash flow

- \* - Operating Activity  $\Rightarrow$  income statement
- investment Activity
- financing Activity

indirect  
CFO

C.F. invest

C.F.

NI

- (+) Non. Cash expense
- (-) Gain Non Operat
- (+) Loss Non Operat
- (+)  $\Delta$  A.R
- (+)  $\downarrow$  inventory

267.

Cash Flow indirect 2009

OCF

|                           |       |    |
|---------------------------|-------|----|
| NI                        | 2210  | ✓  |
| + Dep                     | 1052  | ✓  |
| - Gain                    | (205) |    |
| - $\Delta$ A/R            | (55)  |    |
| - inventory               | (707) |    |
| + P.P.eXP                 | 23    |    |
| + A/Payable               | 263   |    |
| + Salaries Payable        | 10    |    |
| - int. Payable            | (12)  |    |
| + inc. Tax. Payable       | 5     |    |
| + Accruals                | 22    | ↑↑ |
| Total operating Cash flow | 2606  |    |

Cash Flow from investment

|                               |        |          |
|-------------------------------|--------|----------|
| Sale of Asset                 | 762    | - C.T. T |
| Purchase of Asset             | (1300) |          |
| Net Cash flow from investment | (538)  |          |

|                |      |              |      |
|----------------|------|--------------|------|
| Beg. ACC       | 2891 | Beg. Equip   | 8555 |
| + Dep exp      | 1052 | + Purchases  | 1300 |
| - Dep on equip | 500  | - Sale Asset | 1057 |
| End            | 3443 | End          | 8798 |

H.S

Acc. Dep on Equip = 500

Asset Sold = 1057

$$\begin{aligned} \text{Gain} &= \text{S.P} - \text{B.V} \\ 205 &= \text{S.P} - 557 \end{aligned} \quad \left\{ \begin{aligned} \text{B.V} &= \text{H.S} - \text{Acc. Dep} \\ &= 1057 - 500 = 557 \end{aligned} \right.$$

## Cash flow from Financing

|                          |               |         |
|--------------------------|---------------|---------|
| Cash Paid to retire Debt | (500)         | (I.T.D) |
| Treasury Stock           | (600)         |         |
| <u>Dividends</u>         | <u>(1120)</u> |         |
| Net Cash flow from       | (2220)        |         |
| & Financing              |               |         |

|                |             |
|----------------|-------------|
| Beg. RE        | 2876        |
| + NI           | 2210        |
| <u>- Divid</u> | <u>1120</u> |
| End R.E        | 3966        |

$$\text{Net Cash flow} = 2606 - 558 - 2220 \\ = \$ - 152$$

$$\Delta \text{Cash} = 1011 - 1163 \\ = \$ - 152$$

## direct cash flow

C.F.O

Cash Received From ~~receiv~~ Customers

|                                  |             |
|----------------------------------|-------------|
| Rev                              | 23 598      |
| <u>- <math>\Delta</math> AIR</u> | <u>- 55</u> |
|                                  | 23543       |

~~Beg inv~~

Cash Paid From Financing

|                    |               |
|--------------------|---------------|
| Beg inv            | 3 277         |
| - CG.S             | 119 56        |
| <u>+ Purchases</u> | <u>121 63</u> |
| End                | 3984          |

Purchases 121 63

+ AIP (263)  
11900

Cash Paid For Employees

|                                                 |           |
|-------------------------------------------------|-----------|
| Salaries                                        | 4123      |
| <u>- <math>\uparrow</math> Salaries Payable</u> | <u>10</u> |
|                                                 | 4113      |

Cash Paid For other Operating exp

|                          |      |
|--------------------------|------|
| Op. exp                  | 3577 |
| - <del>Op</del> P.P. exp | (23) |
| Accruals                 | (22) |
|                          | 3532 |

Cash Paid For interest

246

+ 12

258

Taxes

1139

tax Payable (5)

1134

$$= 23543 - 11900 - 4113 - 3532 - 258 - 1134$$

$$= 2606$$

# 1. Cash flow indirect method

## a. Cash Flow From Operating Act

|                              |         |
|------------------------------|---------|
| NI                           | 14500   |
| + Dep                        | 11000   |
| + Loss                       | 4000    |
| - Gain                       | (20000) |
| + ΔAIR                       | 3500    |
| - inventory                  | (18000) |
| - P.P.EXP                    | (3000)  |
| + AIP                        | 8000    |
| + Salaries P                 | 7000    |
| - int. Payable               | (500)   |
| + inc. tax Payable           | 4000    |
| Cash Flow From Operating Act | 70500   |

## b. Cash Flow From investment Act

|                       |                     |
|-----------------------|---------------------|
| Sale of asset :       | 30000 + 4000 → loss |
| - Purchase of asset : | 48000               |

Cash Flow from invest 14000

Land + P.P. Equip

|            |        |
|------------|--------|
| Beg        | 215000 |
| + Purchase | 48000  |
| - Sale     | 27000  |
| End        | 236000 |

|               |        |
|---------------|--------|
| Beg. Acc      | 80000  |
| + Dep exp     | (3000) |
| - DePon Equip | 11000  |
| End           | 82000  |

$$4000 = S.P - 18000$$

$$S.P = 14000$$

$$80000$$

$$+ 11000$$

$$- 82000$$

$$9000$$

### c. Cash Flow from Financing Activity

|                              |             |
|------------------------------|-------------|
| Payment of Debt              | (10000)     |
| Common Stock                 | 45000       |
| - Dividends                  | (13000)     |
| + Dividends Payable          | <u>8000</u> |
| Cash Flow from Financing Act | 30000       |

### d. Net Cash Flow from Operating

$$= 10500 - 14000 + 30000$$
$$= \$ 26500$$

### 2. Cash Flow direct Method

#### C. Flow. Operating

##### a. Cash Received from Customers

|       |             |
|-------|-------------|
| Rev   | 93000       |
| + A/R | <u>3500</u> |
|       | 96500       |

##### b. Cash Paid from Financing

|             |                      |
|-------------|----------------------|
| Beg. inv    | 25000                |
| - C.G.S     | (35000)              |
| + Purchases | <u>(53000)</u> 17000 |
| End. inv    | 43000                |

|           |                                |
|-----------|--------------------------------|
| Purchaser | (53000) <del>17000</del> 53000 |
| A/P       | <u>(8000)</u>                  |
|           | <u>(25000)</u>                 |
|           | 45000                          |

c. Cash Paid for Employees

|                    |              |
|--------------------|--------------|
| Salaries           | 37000        |
| + Salaries Payable | 7000         |
|                    | <u>44000</u> |

44000

d. Cash Paid for other O.P. exp

|              |                |
|--------------|----------------|
| O.P          |                |
| Salaries exp | (37000)        |
| Bad debt exp | (2000)         |
|              | <u>(39000)</u> |
| O.P exp      | (39000)        |
| P.P. exp     | <u>(3000)</u>  |
|              | (42000)        |

e. Cash Paid for interest

|              |              |
|--------------|--------------|
| Int. exp     | (2500)       |
| Int. Payable | <u>(500)</u> |
|              | (3000)       |

f. Cash Paid for Taxes

|               |             |
|---------------|-------------|
| enc. tax. exp | (7000)      |
| tax Payable   | <u>4000</u> |
|               | (3000)      |

$$C.F.O = 96500 - 45000 - 30000 - 42000 + 9000$$

$$= \$ 11,500$$

Cash Flow From → indirect method

a. Cash Flow From Operating Act

|                    |         |
|--------------------|---------|
| NI                 | 51000   |
| - Dep              | (29000) |
| + Loss             | 8000    |
| - Gain             | (4000)  |
| + ΔAIR             | £ 6000  |
| - Inventory        | (13000) |
| + P.P. exp         | 4000    |
| - AIP              | (1000)  |
| + Inc. tax Payable | 2000    |
| Cash Flow From     |         |
| Operating Act      | 12000 ✓ |

b. Cash flow From investment Act

|                   |           |
|-------------------|-----------|
| Sale of Asset     | : (28000) |
| Purchase of Asset | : 0       |
| Cash Flow From    |           |
| investment        | (28000)   |

|             |        |
|-------------|--------|
| Beg         | 360000 |
| + Purchases | 0      |
| - Sale      | (3000) |
| End         | 357000 |

|                |         |
|----------------|---------|
| Beg            | 115000  |
| + Dep exp      | (36000) |
| + Dep on equip | 29000   |
| End            | 122000  |

### C - Cash Flow From Financing Act

|                              |                                             |
|------------------------------|---------------------------------------------|
| Long term Liability          | <sup>5000</sup><br><del>5000</del> (+14000) |
| Common Stock                 | (16000)                                     |
| <u>Dividends</u>             | <u>(13000)</u>                              |
| Cash Flow From Financing Act | (24000) ✓                                   |

|                |              |
|----------------|--------------|
| Beg R.E        | 248000       |
| + NI           | 51000        |
| <u>- Divid</u> | <u>13000</u> |
| End R.E        | 286000       |

Reading 28.  
Financial Analysis  
Techniques.

9/5/2019  
Thursday

\* Financial Analysis Process :-

- Ratio Analysis

↓  
indicators

1. Activity → efficiency of converting specific asset in cash
2. Liquidity
3. Solvency } Obligation ⇒ ability to meet obligation
4. Profitability → return
5. Market → valuation ratio

Activity Ratio :-

times ← AIR turn Over →  $\frac{\text{Sales}}{\text{beg + End} / 2 \leftarrow \text{Avg AIR}}$  , Average Collection =  $\frac{365}{\text{Period} \rightarrow \text{days}}$  AIR turn over

times ← inv. Turn Over →  $\frac{\text{CGS}}{\text{Avg inv}}$  , Averagageed =  $\frac{365}{\text{inv} \rightarrow \text{days}}$  inv. turn over ↓ is the best

times ← AIP turn Over →  $\frac{\text{Purchase / CGS}}{\text{Avg AIP}}$  , Average Payment =  $\frac{365}{\text{Period} \rightarrow \text{days}}$  AIP turnover ↓ is the best

total Asset turnover →  $\frac{\text{Sales}}{\text{Avg T.A.}}$  → Asset Utilization

Fixed Asset turnover →  $\frac{\text{Sales}}{\text{Avg F.A.}}$

\*  
CCC =  
AAI + ACP  
- APP

## Liquidity Ratio-

Current ratio  $\Rightarrow \frac{CA}{C.L} = 1$   $\uparrow$  is the best

Quick ratio  $\rightarrow \frac{CA - inv}{C.L}$   $\uparrow$  is the best

## Profitability Ratio:-

Gross profit margin =  $\frac{G. Profit}{Sales} = \frac{Sales - C.G.S}{Sales}$

Operating Profit margin =  $\frac{Operating Profit}{Sales}$

Net Profit margin =  $\frac{N.I}{Sales}$

ROA =  $\frac{N.I}{T.A}$

ROE =  $\frac{N.I}{Common Equity} = \frac{N.I}{O.E}$

## Dupont Formula

ROA = Net Profit margin \* total asset turnover

=  $\frac{N.I}{Sales} * \frac{Sales}{T.A}$

=  $\frac{N.I}{T.A}$

ROE = ROA \* Financial Leverage  
=  $\frac{N.I}{Sales} * \frac{Sales}{T.A} * \frac{T.A}{O.E}$

## Solvency Ratio

$$D/T.A = \frac{\text{Total Debt}}{T.A} = 0.5 \rightarrow \text{increase} \rightarrow \text{Financial leverage} \uparrow$$

$$D/E = \frac{\text{Debt}}{\text{Equity}} = 1$$

کے دو گار 1 Debt  
قبالہ دو گار 1 Equity

یعنی 1 نا مے 0.5 ہے  
کوئی نہ الی

insolvent ہوتا ہے

$$D + E = 2$$

$$1 + 1 = 2 = T.A$$

$$D + E = T.A$$

$$\frac{D}{T.A} = \frac{1}{2}$$

$$\frac{E}{T.A} = \frac{1}{2}$$

ability to Service Debt  
Valuation Ratio

$$P/E = \frac{\text{Price}}{Eps} \Rightarrow$$

کے دو گار 1 Earning قبالہ  
دو گار بالسر

$$10 = \frac{P}{50}$$

$$P = \$50$$

$$C. price = \$45$$

Under Valued  
Buy Stock

industry

|   | Price | Eps | P/E             |
|---|-------|-----|-----------------|
| 1 | \$10  | 2   | $10 \div 2 = 5$ |
| 2 | 20    | 4   | $20 \div 4 = 5$ |
| 3 | 15    | 3.5 | —               |
| 4 | 7     | 1.5 | —               |
| 5 | 8     | 1.6 | —               |

total  $\rightarrow$  Average

ability to Service Debt

EBIT  $\Rightarrow$  Time int earned  
interest

2. Discounted Cash Flow Valuation

$\Rightarrow$  Dividend Discount Model

$$P_t = \frac{\sum Div_t}{(1+k)^1} + \frac{Div_2}{(1+k)^2} + \dots$$

\* - Gordon Growth Model

$$P_t = \frac{Div_{t+1}}{k - g}$$

|          | 2014  | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 22  | 23  |
|----------|-------|------|------|------|------|------|------|------|-----|-----|
|          | NI    | NI   | NI   | NI   | NI   | NI   | NI   | NI   | NI  | NI  |
| Dividend | 20000 | -    | -    | -    | -    | -    | -    | -    | -   | -   |
|          |       |      |      |      |      | Div  | Div  | Div  | Div | Div |

$\frac{5}{T}$  ✓  $\alpha$  ✓  $\alpha$  ✓

$$20\% = \frac{Div}{NI} = \frac{20000}{10000} = \frac{Div_1}{N.I}$$

$\rightarrow$  Payout Ratio

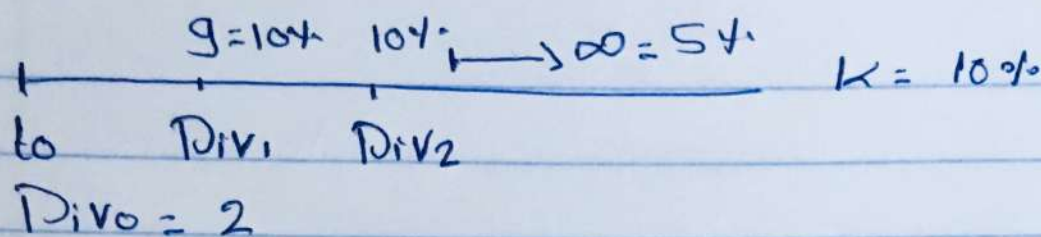
20% 0% 23% 0 24%

Avg Pay Out

$$\Rightarrow \frac{20 + 23 + 24}{3} = 22.3\%$$

3

$$P_{2018} = \frac{Div_{19}}{(1+k)^{19}} + \frac{Div_{20}}{(1+k)^{20}} + \dots$$



$$\text{Div}_1 = \text{Div}_0 (1+g)$$

$$= 2(1.1) = 2.2$$

$$\text{Div}_2 = \text{Div}_1 (1+g)$$

$$= 2.2(1.1) = 2.42$$

$$P_2 = \frac{\text{Div}_3}{K-g} = \frac{\text{Div}_2 (1+g)}{K-g}$$

$$= \frac{2.42(1.05)}{10 - 5\%}$$

$$P = \frac{2.2}{(1+K)^1} + \frac{2.42 + P_2}{(1+K)^2}$$

$\Rightarrow K \Rightarrow$  discount Rate

Cost of equity Capital

CAP M

$$K = R_f + B(R_m - R_f)$$

$$g = \text{Retention Ratio} * ROE$$

$$= \boxed{R.R} * ROE$$

$1 - \text{Payout}$

\* Free Cash Flow

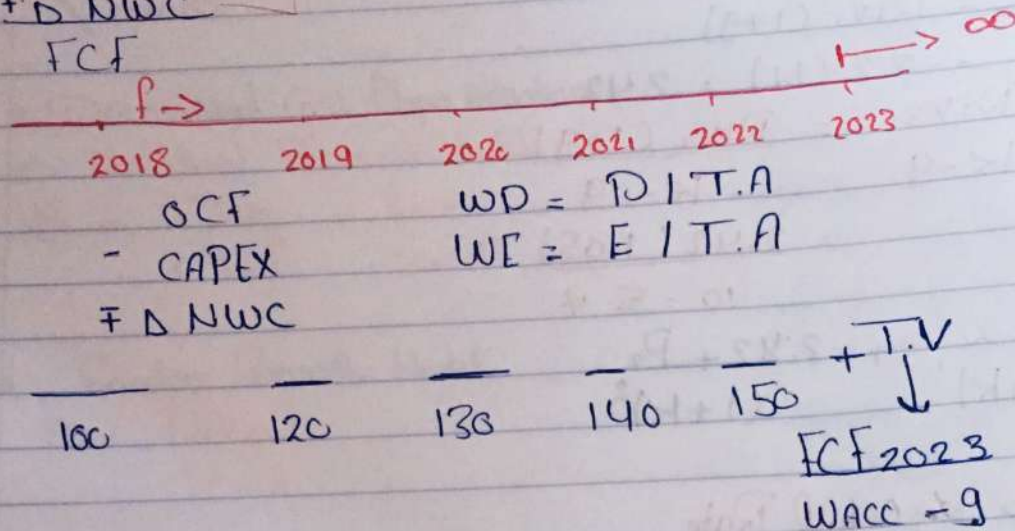
FCF

OCF

- CAPEX

$\pm \Delta NWC$

FCF



OCF

EBIT

- tax

$\pm \Delta P$

OCF

CAPEX

$\Delta G.F.A$

G.F.A 2019

- G.F.A 2018

CAPEX

$\pm NWC$

$\Delta NWC$

-  $\Delta C.A$

-  $\Delta C.L$

NWC

$$V_{Company\ 2018} = \frac{FCF_{19}}{(1+WACC)^1} + \frac{FCF_{20}}{(1+WACC)^2} + \dots + \frac{FCF_{23}}{(1+WACC)^5} + \frac{T.V}{(1+WACC)^5}$$

$$V_C = V_{common\ stock} + V_{Debt} + V_{P.S}$$

$$2000 = V.C.S + 500 + 0$$

$$V.C.S = 1500$$

$$Purchase = 1500$$

# Outstanding