equaliFi ACADEMY

CIIB

CERTIFICATE IN INVESTMENT BANKING

Session 2- Financial Statement Analysis - Overview

Financial Terminologies

Sales / Revenue:

Revenue, sales and turnover are several terms used to refer to the total value of products/service sold by the company

Companies may also add income earned from passive sources (example: royalty) to sales and may refer it as total 'income'

Overheads

Ongoing expenditure incurred for the purpose of running a business operation; overheads can be direct or indirect

Profit

Profit refers to the surplus of income over expenditure; if expenditure is greater, it is referred as loss

Profits are categorized at multiple levels to aid better analysis of financial performance

Value

It represents the profit a company is generating adjusted for the underlying risk it takes

Assets

Refers to properties, financial investment and other financial claims that a company has

Liabilities

Amount of money that a company owes to third party.

Debt

Liability that has interest obligation

Equity

Equity represents the amount of assets that belong to the shareholders after paying off third party debt.

Equity = Assets – Liability

Capital Expenditure

Expenditure such purchases of fixed asset etc that produces benefits for a period beyond the normal operating cycle of a company.

Financial Statements

Income Statement

Presents the financial performance and results (i.e. profit / loss) during an accounting period

Balance Sheet

Presents the financial position (assets, liabilities and equity) as at the end of an accounting period

Cash flow statement

Presents the sources and applications of cash and equivalents during the year

Notes to accounts

Provides the accounting policies followed by the company Provides

break-up of broader line items

Income Statement: Layout

In India, schedule III of Companies Act 2013 prescribes the layout

- Expenditure is presented based on nature of expenses
- International standards, however, support description based on cost centre (i.e. cost of production, SG&A etc.)

Previous period financials should be shown for comparison purpose

Extraordinary item should be shown separately

Particulars	Figures for current year	Figures for previous year
I. Revenue		
II. Other Income		
III. Total Income (I + II)		
IV. Expenses		
Cost of raw materials		
Employee benefit expenses		
Finance costs		
Depreciation and amortization expenses		
Other expenses		
Total expenses		
V. Profit before one-off expenses and taxes (III - IV)		
VI. One-off expenses/(income)		
VII. Profit before taxes (V - VI)		
VIII. Tax expenses		
Current tax		
Deferred tax		
IX. Profit for the period from continuing operations		
X. Profit before from discontinued operations		
XI. Tax on profit from discontinued operations		
XII. Net Profit (IX + X - X1)		
XIII. Minority Interest		
XIV. Net profit attributable to equity shareholders (XII - XIII)		

Consolidated Income Statement

(in $ millions)		20XX	20XX
Revenue	**…..(A)**	**xxx**	**xxx**
Cost of revenue		(xxx)	(xxx)
Sales and marketing expenses		(xxx)	(xxx)
Research and development expenses		(xxx)	(xxx)
General and administrative expenses		(xxx)	(xxx)
Total operating expenses	**…..(B)**	**(xxx)**	**(xxx)**
Operating profit	**…..(C)=(A)-(B)**	**xxx**	**xxx**
Financial expenses	…..(D1)	(xxx)	(xxx)
Financial income	…..(D2)	xxx	xxx
Profit before tax	**….(E)=(C)-(D1)+(D2)**	**xxx**	**xxx**
Current tax	…..(F1)	(xxx)	(xxx)
Deferred tax	…..(F2)	(xxx)	(xxx)
Net Income	**…..(G)=(E)-(F1)-(F2)**	**xxx**	**xxx**
Attributable to minority interest	…….(H)	xxx	xxx
Attributable to equity shareholders of parent	**…….(I) = (G)-(H)**	**xxx**	**xxx**
No. of shares outstanding	…….(J)	xxx	xxx
EPS	**…….(K) = (I)/(J)**	xxx	xxx

"Top line"

Operating costs

Non-operating items

Taxes

"Bottom line"

"Below the line" appropriations

Depreciation & Amortization:

Permanent reduction in value of fixed assets on account of wear and tear, obsolescence etc.

Deferred Tax

Deferred tax income represent future tax benefit expected to arise on account of transactions carried out during the year

Deferred tax expense represent future tax obligation expected to arise on account of transactions carried out during the year

Minority interest

Minority interest in the income statement refers to a share of profit/loss of a subsidiary company that belong to external shareholders

Particulars	Figures for current year	Figures for previous year
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IV. Expenses		
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Finance costs		
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Particulars	Figures for current year	Figures for previous year
I. Revenue		
II. Other Income		
III. Total Income (I + II)		
IV. Expenses		
Cost of raw materials		
Employee benefit expenses		
Other expenses		
V. EBITDA (III - IV)		
VI. Depreciation and amortization expenses		
VII. Operating profit (EBIT) (V - VI)		
VIII. Finance cost		
IX. Profit before one-off expenses and taxes VII - VIII)		
X. One-off expenses/(income)		
XI. Profit before taxes (IX - X)		
XII. Tax expenses		
Current tax		
Deferred tax		
XIII. Profit for the period from continuing operations		
XIV. Profit before from discontinued operations		
XV. Tax on profit from discontinued operations		
XVI. Net Profit (XIII + XIV - XV)		
XVII. Minority Interest		
XVIII. Net profit attributable to equity shareholders (XII - XIII)		

Multi-step financial statement shows several additional profit metrics

Gross Profit

Sales – Cost of production

EBITDA

Gross profit – Cash operating cost

EBIT

EBITDA – Depreciation & Amortization

Also referred as operating profit

Balance Sheet: Layout

In India, schedule III of Companies Act 2013 prescribes the layout

Particulars	Figures at end of current year	Figures at end of previous year
I. Shareholder's funds		
a) Share Capital		
b) Reserves & Surplus		
II. Non current liability		
a) Long term borrowings		
b) Deferred tax liabilities (Net of assets)		
c) Long term provision		
d) Other long term liabilities		
III. Current liability		
a) Short-term borrowings		
b) Trade payables		
c) Other current liabilities		
d) Short-term provision		
Total liability and equity		
IV. Fixed Assets		
a) Tangible asset		
b) Intangible asset		
V. Investments and other long term assets		
a) Long term investments		
b) Deferred tax asset (Net of liability)		
c) Other non-current assets		
VI. Current assets		
a) Short-term investments		
b) Inventory		
c) Debtors		
d) Cash and equivalent		
e) Other current assets		
Total Assets		

Shareholder’s equity

- Represent value of asset that is funded by the owner’s capital
- Equals Total Assets *minus* Third party liabilities
- Profit belong to shareholders; hence, increases the value of equity

Non-current liability

- Represents liability that needs to be paid beyond the normal operating cycle (one year in most cases) of a company

Current liability

- Liability that needs to be paid within a year

Fixed Assets

Represents assets that are used for producing goods and services Tangible assets: Represents assets such as property, plant and equipment

Intangible assets: Represent assets such as trademark, patent rights, goodwill etc.

Other long term assets

Represents other assets that produce cash inflow beyond the normal operating cycle of a company

Current Assets

Include cash and other assets that are likely to be converted into cash within the normal operating cycle of a company

Cash flow statement

Identifies the sources and applications of cash

Unlike profit, cash is not affected by accounting policies

Shows the amount of cash earned or burnt in operations, invested in or realized from investments and raised or repaid as capital

Accounting standard 3 prescribes format of cash flow statement in India

Company A, Inc.
Cash Flow Statement
For the Year Ended Dec 31, 2010

Cash Flows from Operating Activities:		
Operating Income (EBIT)	$489,000	
Depreciation Expense	112,400	
Loss on Sale of Equipment	7,300	
Gain on Sale of Land	−51,000	
Increase in Accounts Receivable	−84,664	
Decrease in Prepaid Expenses	8,000	
Decrease in Accounts Payable	−97,370	
Decrease in Accrued Expenses	−113,860	
Net Cash Flow from Operating Activities		$269,806
Cash Flows from Investing Activities:		
Sale of Equipment	$89,000	
Sale of Land	247,000	
Purchase of Equipment	−100,000	
Net Cash Flow from Investing Activities		136,000
Cash Flows from Financing Activities:		
Payment of Dividends	−$90,000	
Payment of Bond Payable	−200,000	
Net Cash Flow from Financing Activities		−290,000
Net Change in Cash		$115,806
Beginning Cash Balance		319,730
sEnding Cash Balance		$435,536

Cash flow from operating activities:

Operating activities are principal revenue-producing activities of the entity and other activities that are not investing or financing activities

The category include cash flow generated through sale of goods and services, amount paid towards procurement of raw materials, wages paid and other expenses incurred

Cash flow from Investing activities:

Investing activities represent acquisition and disposal of long term assets and other investments not included in cash equivalent

The category include cash invested in purchase of fixed assets, financial investments, and amount realized from sale of such assets

Cash flow from financing activities

Financing activities are activities that result in changes in the size and composition of the contributed equity and borrowings of the entity.

Represent borrowing/repayment of loan, and issue and buy back of equity shares

Cash flow statements may be prepared based on direct method or indirect method

Direct method:

Under this method, cash flow statement is a mere summarization of cash ledger

It picks the totals of cash received from customers, paid to vendors, paid to buy assets etc., directly from cash book and presents them in a structure way

Indirect method

Under this method, each component of cash flow statement is derived using balance sheet and income statement

For instance, if the company has charged depreciation of $1000 and fixed assets have increased by $1500 despite that, then the company must have invested $2,500 on fixed assets during the year

In reality, most companies calculate operating cash flow using indirect method and investing and financing cash flow using direct method

Since there will be fewer transactions pertaining to investing and financing activities, it would be easier to work them out under direct method

Huge corporations organize their business as several different companies

It is either for legal reasons or for ease of operations; for example, business in each country may be organized as a separate

Each of the individual company is controlled by a parent company

Companies held by parent company are referred as subsidiaries

Parent company present stand alone financial statements and consolidated financial statements

Standalone financial statement reflect only the transactions of parent company and ignore the transactions of subsidiaries

Subsidiaries are treated as financial investment

Does not provide complete picture of the group’s performance

Consolidated financial statement treat the entire group as one; thus reflects transactions of all the companies in the group

Cost Concepts

Explicit cost

Explicit cost represents cost that are actually paid out in cash or in kind

Example include purchase of raw material, salary expenses etc.

Captured in financial accounting statements

Implicit cost or Opportunity cost

Benefit lost on account of not choosing the next best opportunity

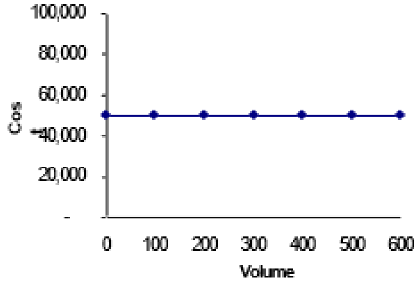
Example include lost rent on self occupied property

Does not get captured in financial accounting records as they do not involve monetary transaction

Taken into consideration for decision making

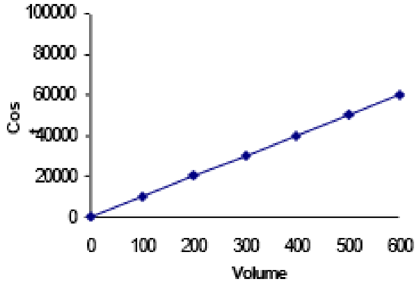
Types of Cost based on behavior

(i) Fixed Cost: Remains same irrespective of sales



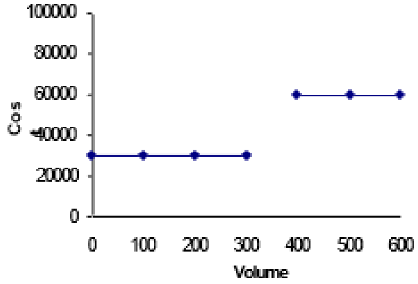
Example: Factory Rent

(ii) Variable cost: Increases as sales increases



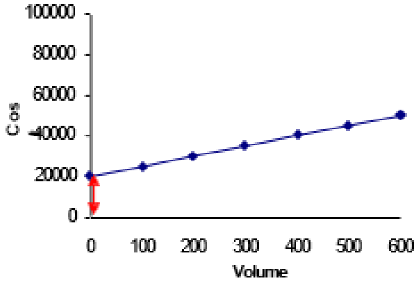
Example: Cost of raw materials

(iii) Step-fixed cost: Jumps if incr. in capacity reqd.



Example: Rent of an incremental production facility

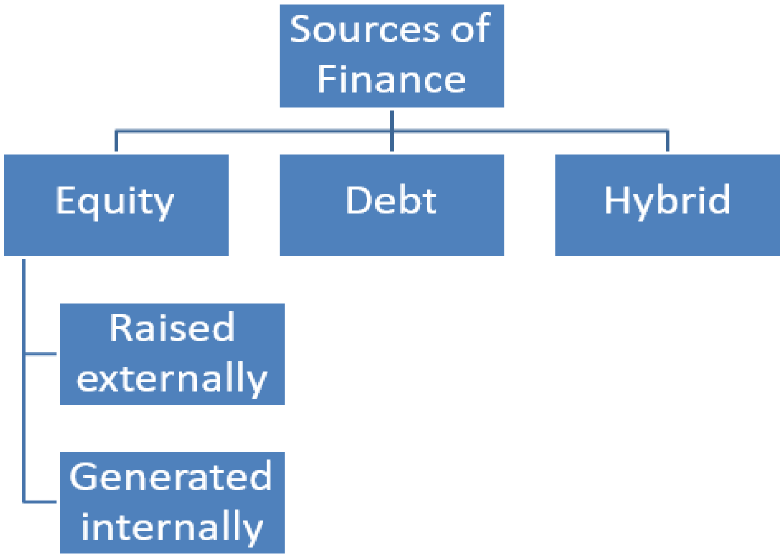
(iv) Semi-variable cost: Part-fixed; part-variable



Example: Sales men remuneration

- Refers to composition of cost
- Operating leverage would be high if company has higher proportion of fixed cost as compared to variable cost
  - Since fixed cost does not change with sales volume, profit would increase it faster rate when sales increases and *vice versa*
- Operating leverage is double edged sword
  - When business improves, small increase in sales would result in much higher increase in profit
  - If business declines, profit would decline at a much higher rate

Funding Decisions



Refers to amount that belongs to the owners of the company

Includes amount contributed by the owner and undistributed profits of the business

Equity has residual rights to income and assets

- Other contributors of capital (i.e. debt and preferred shares) are paid first and the remaining amount belongs to equity holders

Equity holders bear higher risks and hence require higher returns as compared to debt and other sources of capital

Represent borrowing of the company Sources include the following:

- Bank loans
- Bonds and debentures Inter corporate loans Public deposits

Require regular payment of interest and timely repayment of principal Cost of debt is cheaper than equity for two reasons:

- Debt is less riskier than equity
- Interest cost is deductible for tax purpose and thus has tax benefit

Cost of debt = Interest rate * (1-tax rate)

Represent instruments that bear certain features of debt and certain feature of equity

Examples include convertible debt and preferred shares

- Convertible debt are debt instruments that can be converted into equity at the option of investor
- Preferred share represent capital that has fixed dividends but is paid only if the company earns profit;

Works as a compromise formula when company and investors have different views on equity value

Optimizing capital structure

Debt is a double edged sword

- Increases equity returns at a faster rate if business improves; but if business deteriorates, returns decrease faster

Optimal capital structure balances between risk and returns

	Company A			Company B		
	Base Case	**Best Case**	**Worst Case**	**Base Case**	**Best Case**	**Worst Case**
Operating profit	**15,000**	**25,000**	**5,000**	**15,000**	**25,000**	**5,000**
Interest @ 12%	(6,000)	(6,000)	(6,000)	-	-	-
Profit before tax	**9,000**	**19,000**	**(1,000)**	**15,000**	**25,000**	**5,000**
Tax @ 30%	(2,700)	(5,700)	300	(4,500)	(7,500)	(1,500)
Net profit	**6,300**	**13,300**	**(700)**	**10,500**	**17,500**	**3,500**
ROE	**12.6%**	**26.6%**	**-1.4%**	**10.5%**	**17.5%**	**3.5%**
Total Capital	100,000	100,000	100,000	100,000	100,000	100,000
of which debt	50,000	50,000	50,000	-	-	-
of which equity	50,000	50,000	50,000	100,000	100,000	100,000

Ratio Analysis

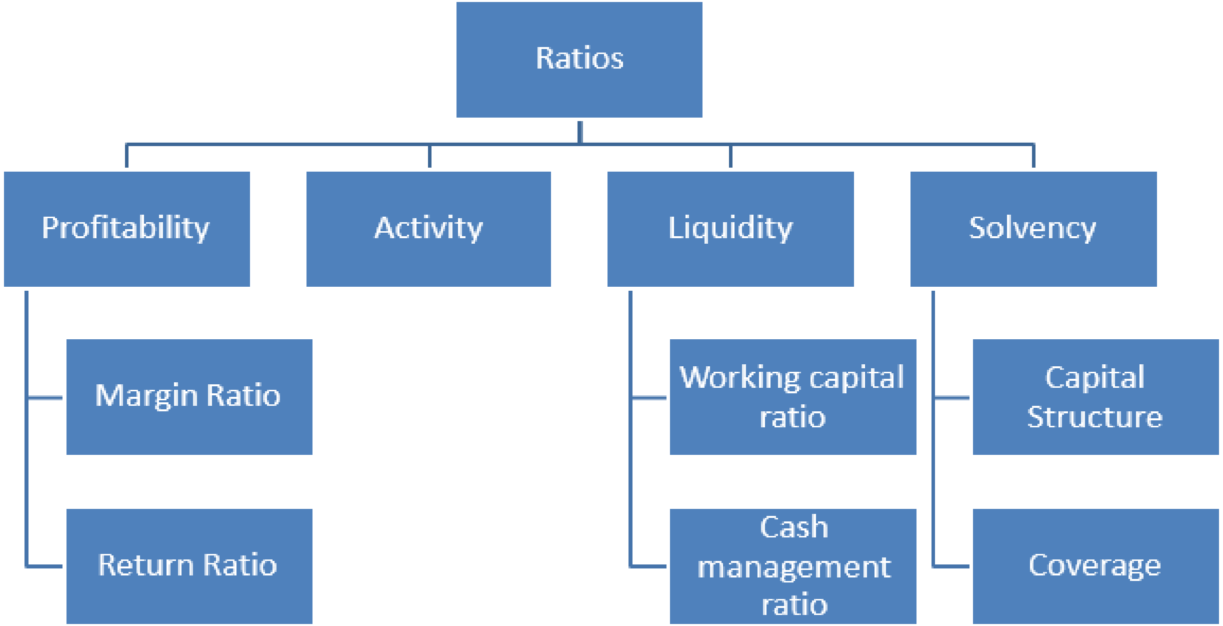
Absolute numbers are not good enough to understand performance

Example: $100 profit on sales of $200 is impressive; but $100 profit on sales of $10,000 is not.

Ratio analysis help put financial numbers in their context by expressing one number in relation to another

Financial ratio explains numerical relationship of financial variable with another variable with which it has a theoretical relationship

They enable readers to analyze the performance of a company, assess the financial stability and in decision making


Ratios
Profitability
Activity
Liquidity
Solvency
Margin Ratio
Return Ratio
Working capital ratio
Cash management ratio
Capital Structure
Coverage

Margin ratio relate profits to its sales

Reflects the amount of sales that is realized as profits

Name	Formula
Gross Margin	Gross Profit ÷ Sales
Operating Margin	Operating Profit ÷ Sales
Net Profit Margin	Net Profit ÷ Sales

Return ratios try to measure the annual return that an investor gets for every one unit of investment made in the business

can be computed either from the perspective of equity capital invested or from the perspective of total investment in the business

Name	Formula
ROE	Net Profit ÷ Equity Share Capital
ROCE	Op. profit * (1 – tax rate) ÷ (Equity Share Capital + Net Debt)

Used to evaluate the efficiency of company management

Name	Formula
Fixed Asset Turnover	Sales ÷ Fixed Assets
Debtor Turnover Ratio	Sales ÷ Average Debtors
Debtor Collection Period	365 ÷ Debtor Turnover Ratio
Inventory Turnover Ratio	Cost of Sales ÷ Average Inventory
Inventory conversion period	365 ÷ Inventory Turnover Ratio
Creditor Turnover Ratio	Cost of sales ÷ Average Creditors
Creditor payment period	365 ÷ Creditor Turnover Ratio
Cash Cycle	Inventory conversion period + Debtor collection period – Creditor payment period

Measures the company’s ability to meet its short-term obligations

Name	Formula
Current Ratio	Current Assets ÷ Current Liability
Quick Ratio (or) Acid Test Ratio	(Current Asset – Inventory) ÷ Current Liability
Cash adequacy ratio	Cash ÷ Fixed expense per day

Focuses on the funding structure of the company determine the long term stability

Name	Formula
Debt Equity Ratio	Total Debt ÷ Equity
Debt to Capital Employed Ratio	Total Debt ÷ (Equity + Net Debt)

- Calculation gets complicated when a company has hybrid instruments such as convertible debt and preferred shares
  - Treating hybrid instrument as debt or equity depends on the circumstances
    - If a convertible debt is more likely to be converted, then it can be treated as equity else as debt
    - If the preferred shares have a definite redemption date, then it can be treated as debt, else it can be treated as equity

Focuses on assessing the ability of a company to meet its debt related repayment obligations through internal accruals

Name	Formula
Interest Coverage Ratio	EBIT ÷ Interest Expense
Debt Service Coverage Ratio	(Net Profit + D&A + Interest) ÷ (Interest Expense + Principal repayment obligation)

Ratios themselves have to be placed in relevant context to arrive at conclusion

Ratio would have to be compared against benchmarks

Benchmarks are of three categories:

- Absolute benchmarks
- Cross-sectional benchmarks (based on peer group)
- Time-series benchmarks (based on historical data of the same company)

Based on rule of thumb

Used for elementary assessment

Ignores company specific and industry specific factors

Provides guidance for liquidity and solvency ratio

Ratio	Benchmark
Current Ratio	Optimal: 2 Minimum: 1
Quick Ratio	Optimal: 1
Debt/Equity	Maximum: 2
Interest Coverage Ratio	Preferred: 1.5 Minimum: 1
Debt Service Coverage Ratio	Minimum: 1

Cross-sectional analysis of ratio involves comparing the ratio with that of the peer group average

Caution must be taken to ensure that peer group selected is appropriate

It ensures that industry specific factors are considered before concluding based on the ratios

Company specific factors would have to considered for making qualitative adjustments

- For example, a company with high bargaining power may be able to sustain even with low liquidity ratio, which may not be possible for others in the peer group

Time series analysis involves comparing the ratio with that of the historical average of the same company

It ensures that company specific factors are considered before concluding based on the ratios

Changes in macro economic factors as well as the company's own strategy would have to be considered before concluding on the ratio

- For example, same level of liquidity ratio may become inadequate if the economic conditions turn bad casting doubts over collectability of receivables or realization of inventory

Thank You