Fundamentals and Theories of Financial Analysis

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Introduction – Financial Analysis

Financial analysis refers to an <u>assessment</u> of the viability, stability and profitability of a business, sub-business or project . It is performed by professionals who prepare reports using ratios that make use of information taken from <u>financial statements and other reports.</u> These reports are usually presented to top management as one of their bases in making business decisions.

(en.wikipedia.org/wiki/Financial_analysis)

Underscoring, ours

The Balance Sheet

Assets	Liabilities
Current assets	Current liabilities
Cash, short-term investments	Payables: accounts, wages, notes, dividends
Receivables – bad debt allowance	Current portion (<1 year) of long-term debt, income tax
Inventory	Long-term liabilities
Pre-paid accounts	Debts (bonds)
Marketable securities	Deferred charges including taxes
Stocks and bonds	Stockholders' equity
Long-term investments	Preferred and common stock
Land and properties	Retained earnings
Affiliates	Total liabilities and stockholders' equity
Intangible assets	
Total assets	

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Income Statement

			Cash Flow Account
	Revenue from sales		CFO
-	Cost of goods sold	Gross profit margin	CFO
-	Selling, administrative expenses		CFO
-	Environmental expenses	Net profit margin, EBIT	CFO
-	Interest expense	Earnings before taxes EBT	CFO
-	Taxes	Net income NI	CFO
+	Income from investment		CFI
+	Income from sales of assets		CFI
+	Income from sales of market securities		CFI
+	Income from discontinued operations		CFI
-	Outgo for purchasing properties		CFI
-	Outgo for restructuring		CFI
+	Sales of Company stocks or bonds		CFF
+	Income from acquiring ST/LT loans		CFF
-	Dividend paid		CFF
+/-	Income/expenses for accounting change		Misc
-	Depreciation		Misc
-	Good will expenses		Misc
=	Net Income (NI)		

<u>Cash Flow Statement</u>

- ***All items stated on cash basis***
- ***Amounts are not always equal to corresponding item in Income Statement***

Cash balance at beginning of year

+ Cash flow from operation (CFO)

+ Cash flow from investment (CFI)

+ <u>Cash flow from financing (CFF)</u>

= Cash balance at end of year

Cash Flow from Operation (CFO)

CFO = cash inflow and outgo from

Cash from sales

- ***Cost of goods sold***
- ***Sales and operational expenses***
- ***Interest expenses***
- ***Taxes***

Cash Flow from Investment (CFI)

CFI = Total cash inflow/outgo from

- ***Buy/sell of assets, properties, plants, equipments (PPE)***
- ***Buy/sell of business and affiliates***
- ***Buy/sell of marketable securities (of other companies)***

Cash Flow from Financing (CFF)

CFF = Total cash inflow/outgo from

- Short-term borrowing or repayment
- Long-term borrowing or repayment
- Buy/sell of own company stocks
- Dividend paid

DuPont Formula

Return on equity (RoE)

= Net income / Equity (NI/E)

= (Net income/sales)(sales/assets)(assets/equity)

= Net profit margin x asset turnover

x finance leverage multiplier

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Sustainable Growth Rate g

- ***One of the most important factor for a company***

  g = RR x RoE

- ***RR is the retention rate***

  RR = 1 – Dividend declared / NI, or

  RR = Retained Earnings/Net Income

- ***RoE is the return on equity***

  RoE = NI / E

Financial Analysis of a Company

- ***Ratios or indicators used in financial analysis consist of:***
  - ***Predictor ratios - indicate the potential for growth (success) or failure.***
  - ***Profitability ratios - use margin analysis to show the return on sales and capital employed.***
  - ***Asset Management ratios which use turnover measures to show how efficient a company uses its assets is in its operations.***
  - ***Liquidity ratios which reflect a picture of a company's short term financial situation or solvency.***
  - ***Debt Management ratios which show the extent that debt (external financing) is used in a company's capital structure.***

- ***Ratios are "flags" indicating areas of strength or weakness***
  - ***There is no single correct value for a ratio.***
  - ***Value of a ratio depends on the perspective of the analyst.***
  - ***Ratio becomes more meaningful when it is compared with some standard, such as industry ratios or trends or internal ratio trends***

Financial Analysis of a Company, continued

Four major areas of analysis

- ***Internal liquidity: company's ability to pay its short-term liabilities***
  - ***Current ratio = current assets/ current liabilities***
- ***Operating performance: management performance***
  - ***Equity turnover = Net sales / average equity***
  - ***Gross profit margin = gross profit / net sales***
  - ***Return on equity = net income / average total equity***

Financial Analysis of a Company (continued)

- ***Risk: uncertainty of company's income and profit***
  - ***Sales variability = Δ sales / average sales***
  - ***Business variability = Δ operating income / mean operating income***
  - ***Debt-equity ratio = long-term debt / total equity***
  - ***Operating leverage = % Δ operating earnings / %Δ sales***
- ***Growth analysis: sustainable growth***
  - ***G = RR x RoE, where RR is retention ratio and RoE is return on equity***

Accounting Principles & Standards

Most commonly considered and applied in Financial Analysis

- ***Conservatism***
- ***Consistency***
- ***Going-concern vs. Liquidation Approach***
  - ***Valuation of assets and liabilities***
- ***Materiality***
- ***Disclosure***
- ***Matching of cost and revenue***
  - ***Cash basis***
  - ***Accrual basis***

Quality Assurance in Conducting Financial Analysis, (Standards)

- *Adequate knowledge of the business both its internal and external environment is essential*
- *Holistic approach - the entire risk profile of the company both quantitative and qualitative must be taken into account*
- *Good and reliable data and information must be used – test reasonableness of data/information before using them*
- *Financial analysis is used to interpret assertions in financial reports. It is not a substitute for financial audit.*
- *Ratios and performance indicators do not provide conclusions. Use them as tools in arriving at reasonable interpretations*
- *Risk evaluation using ratios or indicators requires knowledge of the business, skills and good judgment*
- *Upon conclusion of financial analysis, adjust the risk profile of the company consistent with financial analysis findings and conclusions so that future analyses consider the updated profile as starting points of analysis – dynamism of financial analysis*
- *Quality of financial analysis depends on the integrity of the data and information used to arrive at the ratios and your competence to interpret them.*

Data and Information

- *Integrity of data and information used*
- *Sources:*
  - *Company Balance Sheet (B/S)*
  - *Statement of Profit and Loss (P & L)*
  - *Cash Flow Statements (CFS)*
  - *Schedules attached to the BS, P & L & CFS*
  - *Files and documents you have (at EISA)*
  - *Company records and reports, including Report to Shareholders*
- *Other external (industry related reports)*
  - *Best Insurance; Best Week; Best Review*
  - *National Underwriter*
  - *Bloomberg Financial*
  - *Insurance company's, other insurance companies', Web sites*
  - *Reports of capital market regulators*
  - *Other relevant literature, print and broadcast media reports*

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Valuation of Assets and Liabilities

- ***Valuation of assets and liabilities must conform to applicable valuation rules or regulations***
  - ***Market Value***
  - ***Exit Value***
  - ***Entry Value***
  - ***Historical Value (Cost)***
  - ***Lower of Cost or Market***
- ***Security, Safety and Soundness of Investment portfolio must be considered at least in the following characteristics:***
  - ***Quality***
  - ***Diversification***
  - ***Liquidity***
  - ***Valuation***

Peer to Peer Comparison

Basic Rule: compare "apple to apple"; "orange to orange"

- ***Accounting principles, standards and practices, must reasonably be similar between like companies***
- ***Uniformity of charts of accounts used by like companies results to better peer to peer data and information for comparison***
- ***Conformity to Standards in Financial Reporting (such as the IFRS (IAS) or the FASB (AICPA) further strengthens reliability of peer to peer comparison***
- ***Observed differences in the use and application of the above mentioned principles, standards and practices should be considered and proper adjustment of data be made before peer to peer comparison is performed.***

Using Industry Data

- ***The basic source for industry ratios are financial statements of entities within the industry commonly relating to:***
  - ***assets, liabilities, profits, and losses.***

  From these reports, most common industry ratios that are or may be calculated are:
  - ***Predictor ratio, profitability ratio, asset management ratio, liquidity ratio, and debt management ratio***
- ***When industry ratios are compared with similar ratios of an individual company the analyst will:***
  - ***Better understand the company's performance relative to that of its competitors***
  - ***Use the analytical information to track the company's performance over time***
  - ***Gain a better assessment of the company's strength and weaknesses, opportunities and threats (SWOT)***

(Example of industry repository of data (report): EDGAR database of the SEC, USA)

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Steps in Performing Financial Analysis

(Adopted from "Steps to a Basic Financial Analysis" by: Prof. Harvey Lermack, Philadelphia University, USA)

- ***Step 1. Obtain the company's financial statements for at least the last 3 to 5 years***
- ***Step 2. Scan the statements; look for large (significant) movements in specific items from one year to the next.***
- ***Step 3. Review the notes accompanying the financial statements for information of significance to your analysis.***
- ***Step 4. Examine the balance sheet. Look for large changes in the components of the company's assets, liabilities or equity.***
- ***Step 5. Examine the income statement. Look for trends over time particularly as to sales (revenue) and net profit (earnings)***
- ***Step 6. Examine the shareholder's equity statement (Growth? Deterioration?***
- ***Step 7. Examine the cash flow statement, (information about the cash inflows and outflows from operations, financing, and investing).***

Steps in Performing Financial Analysis, continued

(Adopted from "Steps to a Basic Financial Analysis" by: Prof. Harvey Lermack, Philadelphia University, USA)

- ***Step 8. Calculate financial ratios in each of the following categories, for each year***
- ***Liquidity ratios Leverage (or debt) ratios Profitability ratios Efficiency ratios Value ratios***
- ***Step 9. Obtain data for the company's key competitors, and industry data.***
- ***Step 10. Review the market data you have about the company's C & C and ROE ratio.***
- ***Step 11. Review the dividend payout history***
- ***Step 12. Review all of the data that you have generated. You will find mix of positive and negative results and answer this question:***

"Based on everything I know about this company and its strategies, the industry and the competitors, and the external factors that will influence the company in the future, do I think this company is viable for the short, medium and long term?"

Thank You

DISCUSSIONS

Appendix 3

Exit Report of Edgar P Balbin, TAPR II, Component B
Insurance Sector, May 29, 2008