FINANCIAL ANALYSIS FUNDAMENT FOR ASSESSMENT THE VALUE OF THE COMPANY

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Abstract:
Lack of capital market development cause that calculating the value of companies in the small markets, such as the Croatian market, is carried out primarily from the analysis of financial statements. Lack of market development is evident from the unrealistic and unobjective corporate values, as result of too small volume of securities trading in financial markets. The primary financial analysis is the basic method for estimating company value, and represents the foundation for an objective determination of cash flow components that will be discounted. Through analysis investors are trying to answer the questions such as: status of the assets, liabilities and capital, the dynamics of business enterprises, the level of solvency and liquidity, utilization of fixed assets, contribution of fixed assets in total income, company profitability rates and investment in the company. Investors use financial analysis only as a basis and as a tool to predict the potential for creating new business value.

Key words: financial analysis, horizontal analysis, vertical analysis, financial ratios, evaluation of company.

INTRODUCTION

Financial analysis importance in process of investing in the ownership structure is irrefutable, before each investment investor must carry out financial analysis. The importance of financial analysis is particularly emphasized in small and underdeveloped markets. Objective assessment basis of company value comes from an objective and corrects financial analysis. By financial analysis, investors try to predict future cash flows and assess the profitability of investments in the company.

Financial analysis derived from financial statements that have qualitative character. Experienced analyst analyzing financial statements could evaluate

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production, financial and market potential of the company and can identify mistakes in business, manufacturing and financial company policies that directly affect the profitability, efficiency and financial stability of analysed company.

**EVALUATION METHODS USED FOR COMPANY VALUE DETERMINATION**

Basic problem that occurs during investment in purchase of already operating company is identification of company assets value and overall company value in terms of investing profitability. Problem faced during identification of company value origins from company assets valuation. “The result of valuation for owner of object of valuation is taking initial ground position during negotiation process related to trade of object for currency or currency equivalent.” During discussions about company value it is mandatory to be aware that “one single universal value”, indicated in financial reports, doesn’t exist. There are several perspective grounds how company value or company assets value could be evaluated. Valuation of company properties, respectively company value could be conducted according to: book value, liquidation value, market value or current business value.

Book value; during consideration of book value it is important to differentiate assets book value and company book value. Assets book value represents value of company properties deducted for depreciation value, whilst company book value is derived from book balance “assets = liability + capital” which represents own capital value or net value. Base for company assets book value valuation represents assets purchase value. During valuation of long term assets, assets progressive derogation, transfer of assets value to new products and/or services, must be taken into account, meaning that it is required to take into consideration depreciation and depreciation rate. In order to determine depreciation rate, depreciated asset duration and derogation of depreciated asset, should be foreseen. For occurrence of significant deviation between fair assets value and assets book value, revaluation should be conducted. Revaluation is process of assets value reassessment. Amount for which assets book value is increased during revaluation process is booked to account of revalorization reserves and consequently increases company incomes. When revaluation process decreases assets book value, determined difference value is booked to account of revalorization reserves and consequently accounted on company expenses. Revalorization value is calculated by using revalorization coefficient, identified by putting in correlation fair value and book value, multiplied by assets purchase value. There is significant difference between valorization of long term and short term assets. Value determination of short term assets is usually conducted using several valorization methods in order to achieve most objective financial result. Methods used for calculation of reserves costs, raw material and materials costs are: average pondered

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3 see Zoran, Ivanovic, Financijski menadzment, drugo izmijenjeno i dopunjeno izdanje, Sveučilište u Rijeci, Hotelijerski fakultet, 1996.

4 Prema Zakonu o racunovodstvu (NN 109/07.) Croatian standards od financial reporting regulating revalorization for small and middle companie, while MRS regulating revalorization for large companies.
purchase costs (average prices) method, FIFO method, LIFO method, HIFO method, NIFO method and fixed prices method.

When company is under liquidation process, commonly caused by permanent insolvency and illiquidity and creditors lack of interest for further company operations, value gained for company and company assets is referred as liquidation value. By assets liquidation several levels of liquidation value could be achieved, depending of time frame for assets sell-out. Liquidation manager, person appointed by Court of Law, responsible for liquidation process, could make decision to conduct regular liquidation process for which duration usually varies between six months up to one year and is conducted with goal to achieve maximum possible price in order to protect creditor’s interests. Liquidation manager could also decide to conduct accelerated liquidation process fully aware that achieved value will be significantly lower compared to value that can be achieved in regular liquidation process. Accelerated liquidation process is conducted when company is overdue and new debts are generated from existing liabilities, usually from interest rates and fees either governed by low either forthcoming from contract obligations, which additionally strain already weak company financial state. Assets liquidation value, besides process duration, depends on several key components such as; assets technical obsolescence, assets of specific use (assets for very specific and narrow market with low market interest) and market satiety by that kind of assets.

According International Valuation Standards Committee market value is defined as “the estimated amount for which a property should exchange on the date of valuation between a willing buyer and a willing seller in an arm’s-length transaction after proper marketing wherein the parties had each acted knowledgeably, prudently, and without compulsion.” Driven by direct bidding competition, financial market generates price as close as possible to substantial company economic value. Market achieved price could also deviate from real value, specifically caused, during purchase of company outside regulated markets, by level of interest from both parties involved in purchasing/selling, negotiation skills and payment terms. Deviations between market and economic assets value are especially expressed on small and insufficiently developed markets. During financial analysis most important is to determine value of going-concern value considering future values forthcoming from overall company endeavors. During company financial analysis according to value of going-concern value tangible and intangible company assets must be considered, as well as effects forthcoming from assets activity. Difference between current business value method and other methods is born from the fact that current business value method takes into account intangible assets, such as: labor, established business and business networks, licenses, specific knowledge (know-how), commonly expressed as “goodwill”. Values of individual assets and rights (i.e. liquidation value of assets) sum represents company value, when company is incapable to create new value from own operations, due to the fact that company incapable to create new values doesn’t have any current business value. In business practice financial analysis is conducted with purpose to determine company value based on real state of assets, obligations and own capital and based on future possibility of company business.

THE FINANCIAL STATEMENTS FUNDAMENT FOR FINANCIAL ANALYSIS

Potential investors conduct financial analysis to find out how the company operates, and based on the analysis of financial statements, trying to assess whether the company has the potential to achieve positive future cash flows. By financial analysis investors reduce investment risk. “The real value of financial statements lies in fact that they can be used to help predict future earnings, dividends, and free cash flow.” Investors conduct financial analysis for several reasons: to get more detailed insight into business operations, to determine the value of the company, to anticipate and identify strengths and opportunities of company's future business activities, and to determine their investment in the acquisition of ownership in a company. For high-quality, objective and successful financial analysis it’s necessary that financial accounting provides financial management with reports that have certain qualitative characteristics. "Qualitative characteristics of information from financial reports are: understandability, relevance, reliability and comparability."

The obligation of making the financial statements is governed by the Accounting Act and the Companies Act. The obligation of making the financial statements is for all the companies at 31 December to the current financial year. For internal purposes company reports could be prepared on monthly, quarterly and annually basis. The financial statements are balance sheet, income statement, statement of changes in shareholders' equity, statement of cash flows and notes to financial statements. The financial statements are business documents providing an overview of synthetic data, and showing the state of assets, capital, liabilities, at particular day, and expenditures and revenues specified period of time depending on what the financial report is analyzed (monthly, quarterly, semi). With financial analysis investor, considers the logical relationship and balance assets, liabilities and equity, and their relation to income and expenses, then the dynamic movement of parts in the financial statements, and the relationships between assets, liabilities, equity, expenses, income and gain or loss.

FINANCIAL ANALYSIS, THE MOST IMPORTANT PART OF THE VALUATION

In process of analyzing financial statements investors are usually using various analytical methods. There are numerous methods like; comparison, deviations, parsing, relative values (ratios), different statistical methods, etc. The process of financial analysis is conducted through vertical, horizontal and analyses of financial ratios.

With vertical analysis investors are analyzing the structure and proportion of parts in the financial statements and analyze the logical relations within and between parts. Vertical analyses primarily analyze balance sheet parts, profit and loss statement and statement of cash flows. In the vertical balance sheet analysis investors analyze the

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assets on the one hand, and the liabilities and equity on the other. By assets analysis, investors are primarily looking at the share of fixed and current assets, as well parts within the fixed and current assets, compared to total company assets, and estimates adequacy of total assets size, with regard companys business. Decomposing of the passive side of balance sheet on parts of equity and liabilities and showing structures in the percentage share, the investor gets a picture of company ownership structure, or sources of financing the property business. In the process of vertical analysis an investor must assess whether company management is complied with finance vertical rules. Vertical rule of financing represents optimal ratio between the parts of liabilities i.e. the source of property, i.e. the relationship between equity and liabilities. The vertical structure of liabilities in the literature often is referred as capital structure. The ratio of equity capital and liabilities is advantageous if in relation 50:50, whereby the proportion of reserves in private equity is moving up to at least 30%. Capital structure is of vital interest to the investor, interested in buying the company. By analysis of liability investor gets insight into the structure of financing sources of company assets. “Although in real life it can be said that there is an optimal capital structure, it is impossible to determine precisely which the level of optimal capital structure is in concrete condition, nor to measure its impact on the value company.”

Persuing the financial statements and the parts inside the statements in continuity i.e. in dynamic represents the horizontal analysis. All financial reports have more or less characteristic of a static display of company business. Balance sheet shows assets, liabilities and capital on a particular day, the income statement shows revenue and expenditures for the year, cash flow statement shows cash flows, or decrease or increase of the funds for the year, statement of changes in shareholders' equity displays the changes in shareholders' equity for the year, and notes that explain the parts within the financial statements for the year. From the foregoing the horizontal analysis is performed to eliminate the lack of static financial statements. Horizontal analysis determine the assets, liabilities, equity, revenues and expenditures in continuity, while simultaneously tries to establish the relationship between growth and decrease parts in the balance sheet items and profit and loss.

Horizontal analysisis analyse the relationship between growth of income and expenditure, i.e. increasing profits in one year, and possibly the growth of assets, liabilities and companys equity. The balance sheet and profit and loss account are analysed by diligent attention. Analysis of balance particularly cares about the source that increases the assets of the company. When investing in the company’s ownership structure investor is especially interested in the condition of assets, capital and liabilities, and that there is some logical connection between increase in assets, liabilities or equity. Investor is particularly interested if company management uses the horizontal policies of funding. The most popular horizontal rule of financing is the golden rule of banking. “Problems between assets and sources are high pronounced in...”

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7 for more information see, Ljiljana Viducic, „Teorijska i prakticna razmatranja strukture kapitala“, Ekonomski pregled, Ekonomski institut Zagreb,Vol. 52. No. 7-8, 2001, str. 784-800.
8 Golden bankar's rule fundament is on balance between short-time parts od active and passive in balance sheet. Golden bankar rule insists on financing short-time asset from short-time liabilities, and for financing long-term assets from long-time sources.
small companies. Small companies have small share long term assets (specially tangible assets), and high share of short assets.\textsuperscript{9} The analysis examines growth or reduction of property occurrences whether as a cause of increase or decrease the obligations of equity, or vice versa, or was created by simultaneous growth or decline, and that the growth or reduce assets affected the incomes and expenditures in the reference period. "The growth of total assets value is always a sign of the result and consequence of the development and expansion and successful use of that assets, reflecting the strengthening of economic power companies, whereas the value of current assets, reflecting the strengthening of the financial strength of companies. Decrease in assets value has the opposite meaning, unless it comes pre-managed change, release of surplus company assets which is not used."\textsuperscript{10} Every investor is interested in buying the company, with potential to create new effects, and thus for creating profit on invested in such investment.

The analysis, corelating certain parts from financial statements, is analysis of financial ratios. "The indicator is rational or the relevant number, which implies that one economic size, puts in the relationship (shared) with other economic size."\textsuperscript{11} Financial ratios represent logical combinations of financial statements individual parts. Using financial ratios investor can observe how company operates as whole. Observation of company ability to pay its current liabilities is carried out using the ratios of liquidity. Liquid assets are assets that market accepts and are traded with on the market and are capable for rapid conversion into money. Liquidity ratios show the possibility of payment company current liabilities within the coming year, given that current liabilities must be settled within one fiscal year. The two most popular ratios of liquidity are the liquidity ratio and quick ratio, known as the acid test. Current ratio is calculated by dividing current assets with current liabilities, shown by following expression.

\[
\text{Current ratio} = \frac{\text{Current assets}}{\text{Current liabilities}}
\]

Current ratio represents ability to pay obligations within the deadlines that company has. The standard rule is 2:1, but with the generalization of this rule should be very careful. Usually creditors and suppliers prefer a higher ratio because the larger the coefficient of current ratio is safer collecting of their debts is. The current ratio is the best indicator how effectively company pays short-term obligations, most often obligations to suppliers. Where the amount of current liabilities exceeds the value of current assets creditors will surely change their policy towards the company. Owners for sure are not propitious to too high current ratio. High coefficient current ratio can suggest two problems to the owner: \textit{first}, that the company has too much money in unproductive assets, such as financial assets or in the receivables, \textit{second}, that the company has too much money in stocks, and that money is ineffectively deployed.

\textsuperscript{9} Ivan Markovic, Nina Garic, „Usporedna analiza financijskog poslovanja malih, srednjih i velikih poduzeća u RH“, Racunovodstvo, revizija i financije, Sveučilišna tiskara, br. 8, 2006. godina, str. 107-115.
\textsuperscript{10} Nidzara Osmanagic Bedenik, „Analiza poslovanja temeljem godisnjih financijskih izvjesca“, Racunovodstvo, revizija i financije, Sveučilišna tiskara, br. 3, 2005. godina, str. 91-100.
\textsuperscript{11} Katarina Zager et.al., \textit{Analiza financijskih izvještaja 2. prošireno izdanje}, Masmedia, Zagreb, 2008, str. 243.
When analyzing and making decisions on investment based on current ratio, investors should know that the quick ratio has some limitations. The main disadvantage of the current ratio arises from the fact that the current ratio does not take into account the size of the current assets components as a whole, i.e., it doesn't take into account the relationship between certain components of current assets. For example, if a company has a current liquidity ratio of 2, and the asset within the current asset is 20% of cash and 80% of stock, conclusion is that the company has poor solvency. If the maturity of current liabilities due within a shorter period, less than a month, the company liquidity is satisfactory until the company reduces inventory in its production activities and turns them into cash receipts for a period less than a month. Possible problems that may arise from the relationship between stock and cash is in the case when production activities of the company stocks does not convert to cash or when receivables are not at a satisfactory rate, i.e., when company is forced to sell stocks in order gain to the money or thought set-off stocks pays obligation. To avoid the lack of current ratio, the coefficient of quick ratio is used.

Coefficient of quick ratio or acid test is calculated so that from the current asset subtract the stocks, and to be put in correlation to current liabilities, which mathematically is expressed

\[
\text{Quick ratio} = \frac{\text{Current assets} - \text{stocks}}{\text{Current liabilities}}
\]

Coefficient of quick ratio takes into account only most liquid assets (money in the account and treasury, receivables and financial assets). Inventory have lower liquidity compared to other current assets, and therefore are excluded. Indicators of financial activities and indicators of activities i.e. indicators of asset management, measures the ability to achieve financial resources pay future liabilities and they measure how effectively the company management uses the company asset. The asset management ratios measure whether the activities of existing property are too high or too low, relative to the current and projected production and sales. If the company management invested too much in capital assets, money that is tied to that assets directly reduces net cash flows, and generally reduces the profit which is manifested through a reduction in business rates on the market, and decrease the value of the company.

For calculating assets management ratios, are used more ratios, such as the inventory turnover ratio, days sales outstanding, receivables turnover ratio, and several activity coefficients of companies such as fixed asset turnover and total assets turnover. The coefficient of inventory turnover ratio is calculating that we divide the cost of soled products with an average inventory, expressed in the formula

\[
\text{Inventory turnover ratio} = \frac{\text{Costs of sold products}}{\text{average inventory}}
\]

The coefficient of inventory turnover ratio directly affects the enterprise profits. This ratio indicates how many times stocks reverses in one year. Slow inventory turnover ratio is an indicator of cash flow problems in an enterprise. If the ratio is low it means
that the company management has involved too much money in stocks, which represent assets that is not productive, and for which the company does not have a refund. Any potential investor that plans to buy a company prefers a higher inventory turnover ratio, because it indicates business productivity. For calculating inventory turnover ratio it is necessary to calculate average inventory. Average inventory is calculated by sum of monthly stock amount in one year and divided by number 12.

\[
\text{Average inventory} = \frac{\text{sum of monthly stock amount}}{12}
\]

The days sales outstanding is calculating the average number of days required for debt collection, dividing the average receivables multiply by the number of days per year with annual credit sales. What we can express with the formula

\[
\text{Days sales outstanding} = \frac{\text{average receivables} \times 365}{\text{annual credit sales}}
\]

A smaller ratio is optimal because it shows that companies do not need a long period of time for payment of receivables i.e. to convert receivables into cash. A smaller ratio of average receivables is usually a result of business policies to customers. That kind policy does not benefit for customers for payments, because it insists on a strong guarantee of payment, which generally results in lower sales volume. Sales on credit provide significantly better sales result of the goods. The company that does not sell on credit, or who rarely uses sales on credit is less competitive. It is common in business practice that the sale on the loan is 75% of total company sales.

The receivables turnover ratio is calculated by dividing the annual sale on credit with the average receivables. Higher coefficient indicates a shorter time from sales to settle claims. This is represented with following expression

\[
\text{Receivables Turnover ratio} = \frac{\text{annual sale on credit}}{\text{average receivables}}
\]

Fixed asset turnover measures how efficiently a company uses its fixed assets, plant and equipment. The resulting ratio indicates the intensity usage of fixed assets in relation to revenues generated from sales. A low ratio can be caused by excessive investment in fixed assets, and indicates the insufficient utilization of fixed assets. The fixed assets turnover calculated by dividing revenues from sales with fixed assets, which can be expressed through following expression

\[
\text{Fixed asset turnover} = \frac{\text{revenues from sales}}{\text{fixed assets}}
\]

Coefficient of total assets turnover measures how efficiently a company uses a total asset of companies in relation to total income. Low turnover quotient of total assets signifies the lack of total assets utilization in relation to sales revenue. The problem of low coefficient can be solved in several ways, a) by increasing sales volume by retaining the same price level, b) maintaining sales volume and increasing the price
level, c) increasing sales volume and increases the price, d) by sales of fixed assets, e) by sales of inventory, e) investing surplus funds in new businesses, new projects or the financial assets f) and with a combination of these steps. The coefficient is calculated by the dividing sales revenues and total assets of the company, expred by the following expression.

\[
\text{Total assets turnover} = \frac{\text{sales revenues}}{\text{total assets}}
\]

The ability of company to settle their long-term liabilities is analyzed with ratio of leverage. This coefficient investor primarily uses for evaluation of indebtedness and to determine the companies ability to settle the obligations of business enterprises. Leverage ratios we calculating by using different coefficients of which are most known debt ratio, debt and shareholder equity ratio, times-interest-earned (TIE) ratio. The debt ratio is calculated by dividing total liabilities with the total assets of the company. The coefficient of obligations shoes following mathematical expression

\[
\text{Debt ratio} = \frac{\text{total liabilities}}{\text{total assets}}
\]

Creditors prefer low debt ratios because lower ratio, the greater the cushion against creditors' losses in event of liquidation. On the other hand, stockholders of the companies prefer a higher coefficient of debt ratio, because a higher ratio usually indicates increased future income, only if management used optimal financial leverage. Too high debt ratio of company can signal a problem of significant allocation of funds for payment obligations or may represent a lack for further borrowing. In valuation and determining the optimal coefficient of debt ratio the investor must be very careful because the total company liabilities represent the sum of all obligations. Effect of existing liabilities through the company's future operations is determined by the source from which funds are borrowed, the price at which funds are obtained, the obligations plus interest, time of maturity, the level of risk at the time of obtained and possible tax breaks. It is important to emphasize that every industry and every company do not have the same structure of liabilities. The capital structure depends on the numerous factors, internal and external affecting the company's business. There is no formula for calculating the optimal capital structure, since every company is a specific and unique business entity. Debt and shareholder equity ratio puts in correlation long-term liabilities and total shareholders' equity

\[
\text{Debt and shareholder equity ratio} = \frac{\text{long - term liabilities}}{\text{total shareholders' equity}}
\]

Lower coefficient represents better position for shareholders, because it implies that with all shareholders' equity all liabilities that are emerged from business activity can be settled.
Times-interest-earned (TIE) ratio indicates possibility to settle obligations arisen from credit obligations, from earning before interest and taxation (EBIT). This ratio is expressed through the formula

\[
\text{Times-interest-earned ratio} = \frac{\text{EBIT}}{\text{Interest charges}}
\]

This ratio implies how much the interest payments are covered from EBIT. Higher ratio indicates lower indebtedness, and indicates higher possibility for settling interest and shows possibility for additional obligations.

Company operations efficiency is assessed through analyzing the indicators of profitability. The efficiency of an enterprise is the result of various business decisions and business policy. Profitability ratios are presented using gross profit margin, net operating margin, net margin on sales, return on equity (ROE), and return on assets (ROA). Gross profit margin represents correlation between sales reduced for costs of goods sold and sales. Ratio can be written through the formula

\[
\text{Gross profit margin} = \frac{\text{Sales} - \text{Cost of goods sold}}{\text{Sales}}
\]

Net operating margin is calculated by comparing earnings before interest and taxes to sales, it can be shown like

\[
\text{Net operating margin} = \frac{\text{EBIT}}{\text{Sales}}
\]

Net operating margin show how company management has been successful in generating income from operations of the business. Using this ratio investor can gain an insight how much interest burdens the profit. Net margin on sales is calculated that net profit is divided with sales. With this ratio investor gains insight into how management is successful in creating of business policy and to determine company profitability. Net profit margin we can write

\[
\text{Net margin on sales} = \frac{\text{Net profit}}{\text{Sales}}
\]

Return on equity measures profit of stockholders’ equity. This ratio is used by investors, owners and management to determine extends of profit of stockholder’s equity.

\[
\text{ROE} = \frac{\text{Net profit}}{\text{Common equity}}
\]

Return on total assets measures return in relation on total assets of the company, it can be written through mathematical formula
ROA = \frac{\text{Net profit}}{\text{total assets}}

Observation and analysis of each indicator separately analysts can lead to erroneous conclusions about the company stage. For this reason, the return on equity can be observed directly, because it depends on other indicators that can show as combination of the coefficients net operating margin, profit margin on sales, total assets turnover and 1 + ratio of liabilities and equity.

\text{Return on equity} = \frac{\text{net profit}}{\text{EBIT}} \cdot \frac{\text{EBIT}}{\text{sales}} \cdot \frac{\text{sales}}{\text{total assets}} \cdot \frac{\text{total assets}}{\text{common equity}}

These four coefficients have direct impact on return on equity ratio. Which one may be lower or even unsatisfactory, and return on equity ratio can be high enough.

On the ratio of profitability directly affects total assets turnover ratio and net operating margin. With detailed analysis we can determine the extent to which these two coefficients separately affect the profitability of the business. Impact on the profitability we can see from the following formula

\text{Profitability ratio} = \frac{\text{sales}}{\text{total assets}} \cdot \frac{\text{EBIT}}{\text{sales}}

CONCLUSION

Financial analysis is conducted with the aim of detailed and objective assessment and analysis of past financial companies results, and forecasts of the same in the future. Financial analysis is extremely important and should be implemented when investing and in equity of the company. With financial analysis, investors evaluate their investment in the company, and try to discover possible errors of existing company management. With financial analysis, investors try to identify undervalued companies, as opposed to the potential you have. Analysis of financial statements is used by investors to predict future cash flows of the company, or to reduce the unpredictability of movement of the future cash flows. With financial analysis, investors do not just analyse and do not just only predict future cash flows, but they are predicting the state of future liquidity, profitability, debt and company activities.

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