

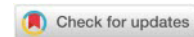
# DETERMINING THE PURCHASE AND SALE VALUE OF SHARES BY ESTIMATING THE VALUE OF THE CAPITAL

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**Abstract:** The aim of this paper is to point out the fact that without determining the value of shares, their sale cannot be done, because any investment brings certain risks and uncertainties, so it should be done based on financial analysis of the company and determined fair value of its capital. Realistic and adequate assessment of the value of the company's capital is of multiple importance for the potential investor when making an investment decision. Determining the fair value of shares also protects „small“ shareholders whose shares the investor wants to repurchase. In this paper, an assessment of the value of the capital of the company „X“ AD was performed and the fair price of one share was formed, which the bidder should offer to „small“ shareholders and buy them back. Therefore, the financial analysis of the company was used (determining the market position of the company, its return, property and financial position) as well as the usual methods of estimating its capital (adjusted book, property, return and liquidation value of the company).

Keywords: investment, fixed assets, capital value, shares.

Field: Social Sciences

## 1. INTRODUCTION

Investing is the process of inculcating capital with the aim of preserving and increasing its value and/or achieving a certain income. The investment activities of the company refer to the process of its investment in its own real assets as well as in the purchase of securities on the financial market. If the company buys shares as equity securities, it does so in order to achieve a return based on the achieved purchase-sale difference in price, but also targeted in the sense of purchasing the entire property of a particular company. Buying shares of a certain company for the purpose of acquiring ownership involves the process of assessing their value. Whether you're buying, selling or holding, valuation is essential in any investment decision (Damodaran, Moncada Garcia, 2021).

The assessment of the capital value of legal entities is carried out in order to determine the real, fair value of their capital. Such a determination is imputed by various reasons, the basis of which are legal procedures provided for by law, such as: purchase and sale, M&A transactions, i.e. merger (merger) or merger (acquisition), resignation of the company owner, separation of part of the company, etc. Regardless of the reason for which the capital assessment of a certain legal entity is carried out, it must be carried out in accordance with the law, using the financial analysis of the company (determining the market the company's position, its yield, property and financial position), as well as the usual methods of assessing its capital, such as: adjusted accounting (balance sheet), property, yield and liquidation value of the entire enterprise or part of the enterprise ("Official Gazette of the RS", 57/ 2001). The applied methods are implemented in accordance with international valuation standards (IAS 2, 17, 23, 36, 38, 39, 40, as well as 16 - Property, plant and equipment). Such an assessment can only be carried out as a team, headed by a team leader, because due to its complexity and comprehensiveness, experts of different expertise profiles must be represented, such as financial experts, experts who know market trends, technical and technological experts, construction experts, etc. . In addition to the estimated value of the shares, the investor company can always take into account the market value of the shares of a certain company that is the subject of purchase if there is a developed financial market and continuous trading of those shares on it. In that case, the market value of the shares of those companies varies depending on the supply and demand on the financial market and is the most reliable indicator of the value of its assets. (Stojmenović, 2019). The focus of this paper will be on the assessment of the capital of a joint-stock company whose

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majority owners want to determine the real cost of capital and, based on that, form their offer for the purchase of shares from registered “small” shareholders. Accordingly, different views of the authors on the valuation of the company were used (Damodaran, 2012; Taxmann, 2021; Freeman Publications 2021; Bogle, 2017; Mohanty, 2021; Hill, 2021; Sunnucks, 2021; Cruz, 2022).

## 2. CAPITAL STRUCTURE OF JOINT STOCK COMPANY “X”

The main goal of every manufacturing company is profit. A company must have a certain amount of capital to produce a product or provide a service (Yosco, 2021). Taking into account that there are two types of capital, in our example (based on the extract “Capital structure of the issuer a.d. “X” of the electronically managed shareholders’ book in the Central Registry for Securities, Depository and Clearing, Belgrade) it can be seen what the true relationship between them, and later how it affects the company’s operations, as well as its profit and value. Based on the Rulebook on the content and form of financial report forms and the content and form of the statistical report form for economic companies, cooperatives and entrepreneurs (“Official Gazette of RS”, No. 89/2020), the reports that are the subject of this work were prepared.

In accordance with the obtained data, we can conclude that the joint stock company “X” on 31.12.2022. 289,829 ordinary shares with a nominal value of one share in the amount of RSD 890.00 owned by 926 shareholders (a total of RSD 257,947,810.00) were registered in 2011 (before the valuation was carried out). One shareholder, a legal entity (“Y” d.o.o.) is the majority owner with a share of 254,557 shares of the company (87.83%), and the other 925 shareholders are natural persons who own 35,272 shares, thus participating with 12.17% of the total issued company actions. The maximum individual participation of shareholders in the total share capital of the company is the participation of one natural person of 0.11938%, while all other shareholders have a participation of less than 0.01%), Table 1.

Table 1. Capital owners on 31.12.2022.

	Share holders	Number of shareholders	Number of shares	% shares	Nominal value Shares in RSD
1.	Natural personas	925	35.272	12,17	31.392.080
2.	„Y“ doo, Beograd	1	254.557	87,83	226.555.730
	<b>Total (1 + 2)</b>	<b>926</b>	<b>289.829</b>	<b>100,00</b>	<b>257.947.810</b>

Source: Central Registry of HOV

### 2.1. Assessment of the capital value of the joint stock company „X”

An important component of every company is its assets (business, fixed, current) because these parameters practically tell us where the company invested its funds, that is, how it disposed of them. That is why the management of the company’s assets is extremely important from that point of view, as well as from the aspect of its distribution through the payment of dividends (Stojmenović, 2019). The main driver for shareholders according to the conducted microstudies (Davison, 2015; Koller, Goedhart & Vessels, 2015) is not the actual and paid dividend, but the company’s ability to provide it, and that ability is conditioned by the company’s financial indicators. Therefore, the valuation of the capital was carried out on December 31, 2022. First of all, the appraiser examines the existing balance sheet positions of the company with the aim of discovering irregularities in the valuation of any balance sheet position for the purpose of their correct presentation in the corrected balance sheet, based on the shown book value of the capital - Balance Sheet a.d. “X” on 31.12.2022.y

Table 2. Book value of capital–Balance sheet of joint stock company „X“ on the day 31.12.2022. in 000 RSD

POSITION	in 000 RSD
<b>A C T I V E</b>	
<b>A. FIXED ASSETS (I do III)</b>	<b>534.998</b>
I. INTANGIBLE ASSETS	-
II. REAL ESTATE, PLANT AND EQUIPMENT (1 to 7)	532.884
1. Land	13.382
2. Construction objects	233.686
3. Plants and Equipment	8.932
4. Investment real estate	242.902
5. Other real estate, plants and equipment	126
6. Real estate, plants and equipment under construction	33.223
7. Investments in other peoples real estate, plants and equipment	633
III. LONG-TERM FINANCIAL PLACEMENTS (I+II)	2.114
1. Participation in capital	1.089
2. Other long-term placements	1.025
<b>B. CURRENT ASSETS (I+II)</b>	<b>38.100</b>
I. SUPPLIES	163
II. SHORT-TERM CLAIMS AND PLACEMENTS	37.937
V. DEFERRED TAX FUNDS	-
<b>G. BUSINESS ASSETS (A+B+V)</b>	<b>573.098</b>
<b>D. LOSS IN EXCESS OF CAPITAL</b>	
<b>D. TOTAL ASSETS (G+D)</b>	<b>573.098</b>
<b>P A S S I V E</b>	
<b>A. CAPITAL (I+II+III-IV+V-VI-VII)</b>	<b>530.406</b>
I. BASIC AND OTHER CAPITAL (1+2)	258.027
1. Share capital	257.948
2. Other basic capital	79
II. RESERVES	18.755
III. REVALUATION RESERVES	195.088
IV. UNREALIZED LOSSES ON HOV BASIS	(8.324)
V. RETAINED PROFIT	66.860
VI. CAPITAL THATS DEPENDS ON THE LOSS	-
VII. OWNED SHARES THAT ARE REDEEMED	-
<b>B. LONG-TERM PROVISION AND LIABILITIES (I+II)</b>	<b>25.931</b>
I. LONG-TERM LIABILITIES	10.236
II. SHORT-TERM CLAIMS AND PLACEMENTS (1 do 5)	15.695
V. DEFERRED TAX LIABILITIES	17.637
<b>G. TOTAL LIABILITIES (A+B+V)</b>	<b>573.974</b>

Source: Authors, 2023.

From the Table. 2 it can be concluded that the company a.d. “X” records the value of the total capital as of December 31, 2022 in the amount of RSD 530,406,000.00.

When determining the value, several groups of methods can be used. The first large group is the one based on the balance sheet (balance-sheetbased methods). One of them is the book value or net value shown in the balance sheet (capital and reserves), which was previously presented, where the sum represents the value of the company, and in the traditional understanding it is the most realistic value. The problem with this method is that accounting criteria are often subjective, and this value is almost never identical to the market value (Baškarad, 2014). In order to overcome this shortcoming, the authors made a correction of the book value, which occurs when the value of assets and liabilities are adjusted to the market value. Consequently, the accounting balance within the active accruals shows 3,669 thousand dinars of negative exchange rate differences for overdue long-term loans. When the long-term loan is due for payment, the negative exchange rate differences related to that part of the loan are transferred from accruals to financial expenses (IAS 21 - Effects of changes in exchange rates). However, these negative exchange differences are not an asset, but a deferred (hidden) loss (Pereiro, 2002; Ball, 2016; Ashar, 2019). Since “X” is a.d. operated at a loss in 2021, in the corrected balance sheet negative exchange differences were excluded from assets and transferred to loss.

The balance sheet of the joint-stock company was adjusted by reducing undistributed profit, in the name of intangible investments and deferred tax assets. At the same time, there was an increase in retained earnings in the amount of deferred tax liabilities that are not shown in the adjusted balance sheet. The Ministry of Finance of the Republic of Serbia - Sector for the Financial System has recommended that negative exchange differences cannot be transferred from active accruals to financial expenses until the long-term loans, from which the negative exchange differences originate, are due. In accordance

with this recommendation, if there are negative exchange differences, there would still be a hidden loss within the assets, with which the balance must be corrected. Joint-stock company “X” does not have negative exchange rate differences in the balance sheet, because there are no long-term obligations with a currency clause, and therefore it can be concluded that the total capital is now RSD 547,167,000.00. The property value of the company is determined on the basis of the property balance drawn up on the day of the assessment. This balance does not contain latent reserves or hidden losses, and the positions in it are evaluated at fair value, that is, the value at which the property in question can be monetized (Bieg & Toland, 2021; Ittelson, 2020). At the same time, “appraisers determine the actual condition of assets, their value, check title deeds, prepare reports and propose a new value of business assets” (Mrvić, 2021). The property value of the capital (real assets) was determined by the fact that construction facilities, investment real estate and real estate under preparation were valued at fair value on 12/31/2022. year in accordance with IAS 16 - Real estate, plant and equipment. The assessment was carried out by an authorized court appraiser, where a detailed assessment with the total determined differences of the current book value and the estimated value expressed in dinars and EUR showed a net increase in the property value of buildings, equipment and revaluation value in the amount of RSD 814,720,630.50 ( 829,682,772.09 - 14,962,141.59), which is also included in the asset balance. According to the asset balance, the total capital is RSD 821,300,000.00, and since the basic capital is RSD 258,027,000.00, the property value of the capital is higher than the basic capital by RSD 563,273,000.00. In practice, a two-phase model is most often used, in which returns are projected for a period of 3 to 10 years, and then the terminal (residual) value is estimated at the end of the period. Generally, the moment for which the residual value is calculated is the moment after which it is expected that yields will be stable and that a stable growth rate will be established.

After the evaluation of fixed assets, an increase in their value by RSD 290,894,000.00 was determined. The yield approach to valuation determines the value of a company based on the future cash flows it will bring to the owner. The basic assumption of the approach is that the long-term business of the company is not threatened. The best-known method within this approach is the discounted cash flow method (DNT method). The value of a company according to this method is directly dependent on its ability to fertilize the capital employed and make a profit (Liakopoulou, 2020). The assessment of the yield value of capital can be carried out using static methods (e.g. capitalization of stabilized profit, capitalization of profit growth, the Stuttgart method and the method of extra profit) and dynamic methods (e.g. the yield value of the company after and the yield value of the company before debt servicing. Assessment of the yield value of capital “X” a.d. was carried out using the yield value method before servicing debts, which is shown in the sections related to the projection of the income statement and the yield value of capital.

## 2.2. Statment of income projection

In order to see the future results of certain business decisions that are made in the present, a projection of the Income Statement is made, which, in addition to income, also contains all the costs of the observation period and should show whether the company will operate positively in the defined observation period, with the given structure of income and expenses ( gain) or negative (loss). The task of projection is to point out possible mistakes in order to prevent them.

The majority owner of the company predicts that by implementing the new strategy, tactics and business policy, the company will operate more economically, more profitably, and therefore with better business results in the coming period. Based on the use of existing available sales capacities, their better use and innovation, as well as the market position of “X” a.d. , the company’s growth rate is projected with clearly expressed projected revenues and expenditures for a period of five years (2023–2027).

In order to meet the goals set in this way, the majority owner plans to invest in the company’s construction facilities and equipment in the amount of RSD 360,000,000.00 for the observed period, as well as increasing the number of employees in the company by 38.88% by the end of the observed period. , according to the larger volume of business. Managers and shareholders of non-networked companies should have their own estimates of the return value of the company, that is, estimates of the realization of returns in the following years (Trpeski et al., 2020). That procedure includes, e.g. five-year projection of cash inflows and outflows (revenues, direct costs, labor costs, general costs, investments in fixed assets, financial costs, taxes), determination of the residual value and their discounting to the present value. In accordance with the above, by determining the discount rate, a profit and loss account was designed, the content of which corresponds to the method of capital assessment before debt servicing.

The net working capital of the company shows how much of the working capital is financed from



long-term financing sources (Knežević, 2009). At the same time, it is an indicator of the liquidity perspective because it determines the company's ability to borrow in the short term. Planning and projecting a larger investment, with the aim of developing the company, certainly requires the engagement of additional funds, because of which the company has to use other people's funds, that is, it has to borrow during a certain period of intensive investments.

The projection of free cash flow was made, based on the projected income statement, projected net working capital and planned investments in construction facilities and equipment. Return value of capital

According to the method of capital value before debt servicing, the yield value of capital is the sum of the present value of the operating free cash flow and the residual value increased by the value of assets not included in the cash flow and reduced by interest-bearing liabilities. Accordingly, the yield value of capital amounts to RSD 18,901,000.00

Stock returns are generated by three sources (dividend yield, earnings growth, and changes in market value) to establish rational expectations for stock returns over the next decade. In the long run, business reality exceeds market expectations (Bogle, 2017).

The assessment of the value of shares is determined by assessing the value of the company, more precisely by assessing the value of its capital and dividing the obtained assessed value by the total number of issued shares (Mrvić, 2020). Based on the capital assessment of the company "X" a.d. the values of the estimated capital value and the value of one share were determined.

Table 3. Determined value of company shares

	<b>Book value</b>	<b>Fixed value of the bookkeeping</b>	<b>Property value</b>	<b>Yield value</b>
<b>Capital value in 000 RSD</b>	530.406	547.167	821.300	18.901
<b>Number of shares</b>	289.829	289.829	289.829	289.829
<b>The value of shares (1/2)</b>	1,830	1,888	2,834	

Source: Authors, 2023.

At the same time, the nominal value of one share is RSD 890.00, and the last market value per share a.d. "X" on the Belgrade Stock Exchange is RSD 1,500.00 (the total market value of capital is RSD 434,743,000.00). Based on the estimated values and the market value of the capital of the company a.d. "X", the "fair" value of capital is its asset value in the amount of RSD 821,375,386.00, where the price of one share is RSD 2,834.00. Based on the determined values, it is concluded that such estimated value of a share is higher than its nominal and market value. The buyer of the shares would have to set aside RSD 31,392,080.00 in order to purchase 35,272 shares from 925 "small" shareholders at "fair" value, and in that sense make an offer for their purchase. for those companies that are expected to continue their operations in the future. In that future period, it is understood that the company will invest in new assets as well as create new cash flows, as shown in this research.

### 3. CONCLUSION

A company valuation is essential when negotiating the purchase or sale of shares so that interested parties can get a "fair" market price, and the fact that they know what they will pay plays a large part in the success of buying a company. If they pay more than they should, they may not have enough money in the future to invest in the business and enable its growth. A wrong assessment can mean an unprofitable investment that will have bad feedback effects on the state, subcontractors, employees and other interest groups, and therefore inadequate allocation of resources in the long term damages the entire economic system. For buyers, sellers, and the economy as a whole, it is important to correctly value investment, especially in developing markets. The seller tries to get the highest possible value for the property he owns. On the other hand, the investor has his own calculations in terms of the ratio of invested capital and potential benefits. For shareholders, the value of shares is significant, because it is an indicator of the quality of their investment. Based on the movement of share values, investors can assess the financial "health" of the company, the degree of expected return on invested funds or estimate possible loss and accordingly diversify and minimize the risk of their investment, form their portfolio according to the level of risk that their company can bear. Considering that investors prefer the stability of dividends, the basic motto of their investment will be the minimum cost of capital investment while achieving the maximum share price as well as managing the risk of their investment. In conducting the research, the existing practical and theoretical knowledge from this field, as well as the usual scientific research methodology, were

used, which resulted in a conclusion about the importance of making an adequate financial management decision regarding the management of the company's assets. The obtained data were analyzed and presented in the paper without specifying the generalities of the company.

Based on the above, it can be concluded that the company "X" a.d. in the following period justify investments, increase profits and operate with profit (income). The data at our disposal, primarily from the balance sheet and the income statement, show that the company, if it continues with this business growth trend, aims to do business with increased profits. An investor will make a decision to buy shares, if he knows that the real value of the share is lower than its current market price. Otherwise, if the price is higher than the real value, he will most likely make a decision to sell them. This paper determined the purchase value of shares by estimating the value of capital and highlighted the importance of using the discounted cash flow method in practical reporting to top management. On the basis of usable information about the company's operations, the importance, usefulness and possibilities are indicated by means of financial indicators. Valuation must not only be done by authorized court appraisers, but also by company management. Also, the presented methodology can be used for the purpose of evaluating the success of the management when evaluating business results, as well as evaluating the way of implementing the strategy - whether it is the right and good way of development and prosperity.

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