# Income Approach to Business Valuation: Russian Perspective

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*Abstract:* *In crisis times, making the choice of a company to invest becomes challenging for a potential investor due to the uncertainty of business environment and dim future prospects. As for industries, the decision is often made in favor of the companies satisfying consumers' basic needs. The value of a business is known to be the main indicator of the company's reliability and investment attractiveness.*

*The article provides substantiation of the reliability of income approach for business valuation in the time of economic crisis in Russia and presents an algorithm for implementing the cash flow discounting method within the framework of income approach using the case for a middle-sized construction company. The choice of the object for the research is due to the investment attractiveness of the construction industry in a big industrial city of Krasnoyarsk in the North East of Russia.*

*Keywords:* income approach, business value, investment

*JEL Classification:* G11, G17

**Introduction**

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Short-term and long-term business prospects largely determine the market value of a business. Three main approaches to business valuation are known worldwide: the cost, the income and sales comparison (Esipov, 2010). The mentioned approaches differ in their theoretical foundations, specific methods and limitations or restrictions of application. The data considered in this or that approach reflects either the company's current position (comparison), or its previous states (cost), or its potential future results (income).

The article argues that changing market situations can have an impact on the business valuator's choice of the methods to apply while recommending the company for the potential investment.


**Theoretical Framework**

Let us consider each approach to business valuation in terms of its benefits and shortcomings under crises in the country of emerging market economy.

The accuracy of valuation in the comparative approach depends on the reliability of the data collected, since the evaluator gathers the information on the recent sales of objects under comparison. The results are subject to the thorough market analysis, the reliability depending on the availability and range of analogue companies to compare. Thus, the sales comparison approach requires a developed stock market, and cannot meet the specifics of the Russian business environment with yet emerging market conditions (Grigoriev, 1994; Rutgaizer, 2008).

The cost approach is based on the identification of the cost items to reproduce or replace the subject under valuation to its physical and moral depreciation. In this case, the information on the sale of the company assets lies in the base of its evaluation, with considering the compensation of existing debts to creditors and the cost of specific types of assets and liabilities initially known before making the choice in favor of the cost approach. Thus, an

important element of the cost approach is the element-wise valuation. Namely, the valuated property complex is divided into component parts, each being evaluated, then the value of the total property complex is calculated by aggregating the values of its parts (Copeland, 2008).

Unlike the cost approach, which assesses the previous state of the company with the aggregate cost of the assets, the income approach considers the flow of future incomes. Corporate profit, revenue, paid or potential dividends, cash flow can be considered as income under this approach.

The income approach is based on the principles of substitution and expectation realized in a set of methods for cost assessment based on the calculating the expected revenues of the object under valuation (Gryaznova and Fedotova, 2009; Damodaran, 2017; Kolayko and Sevastyanov, 2007). It considers the specifics of the valuated business in terms of its potential to generate revenue in the future. Therefore, the income approach is popular and widely applicable for business valuation purposes (Gryaznova and Fedotova, 2009) in the countries and industries with high growth rates while doing business in uncertain conditions.

The modified CAPM (the capital asset pricing) model (Damodaran, 2017) for calculating the discount rate, as well as the cash flow calculation scheme for own and invested capital (Gryaznova and Fedotova, 2009), make the base of the developed methodology for companies' business valuation within the income approach. These models have proven valid and allow making accurate calculations, since they are substantiated by the results of the previous studies in the field, obtained with applying an appropriate mathematic apparatus, and were repeatedly tested on real life tasks.

**Methods and materials**

As was described above, under the income approach the value of the business is measured against the expected future revenues the company can bring to owners or investors with the

cash flow discounting method (CFDM) being one of the most frequently applied for calculation.

The CFDM method assumes the following step-by-step algorithm for the company valuation (e.g. Kozyr and Kozlova, 2018):

− choosing the duration of the forecast period;

− carrying out a detailed forecast of cash flows during the forecast period;

− calculation of the discount rate;

− calculation of the terminal value (reversion), i.e. the future value of business at the end of the forecast period;

− calculation of business value by summing discounted to the date of estimation of cash flows of the forecast period and discounted terminal value.

*Choosing the duration of the forecast period.* When using the CFDM method, all future activities of the company under valuation are conditionally divided into the forecast and post-forecast periods. The creation of a cash flow forecast (based on forecast cash flow statements) for any future period, beginning this year, is the main task of the appraiser. In fact, the forecast period for the company valuation can last 5 - 10 years depending on the purpose of the assessment and the specific situation.

*Carrying out a detailed forecast of cash flows during the forecast period.* Two models of cash flow (CF) are traditionally applied to business valuation: a CF for equity and a CF for the entire invested capital (Trugman, 2018). The main difference between them is the composition of the available corporate funds. Thus, the cash flow for the entire invested capital is determined on the assumption that all the funds available in the company, including borrowed capital, are considered as their own. Consequently, repayment of loans and interest payments are not a diversion of cash and not considered when calculating the cash flow for

the invested capital. CF for own capital includes the cash flow remained with business owners (e.g. Danilova, 2005; Tal, 2009).

To calculate the amount of the cash flow the CFDM method presupposes applying either indirect or direct technique (Evans and Mellen, 2010). When calculating the CF in the direct way, gross CFs are analyzed based on the accounting information. Turnovers to the relevant accounts (for example, short-term loans, settlements with suppliers, sales, etc.) are adjusted to changes in inventory balances, receivables and payables, and thus arrive at amounts that reflect only those transactions that are paid by "live money". Being more precise, the direct techniques are too time-consuming at the same time being not very informative, since it does not allow tracing the transformation of net profit into CF.

The indirect technique considers the movement of the cash under analysis and clearly demonstrates profit and the investment of disposable funds (e.g. Kolayko and Sevastyanov, 2007; Jalal, 2016). Table 1 presents the framework for CF calculating for the market value of the company's equity for each forecast year using indirect technique.

Table 1: The framework for calculating CF for own capital: indirect technique

| Inflow (+) / Outflow (-) | Indicator |
|---|---|
| + | Revenue from operating activities |
| − | Cost of main activity |
| − | The financial result from other operations |
| − | Taxes |
| = | Net profit |
| + | Depreciation |
| −/+ | Change in the value of own working capital |

| Inflow (+) / Outflow (−) | Indicator |
|---|---|
| +/− | Change in long-term debt |
| − | Capital investments |
| = | Net cash flow for equity |

The algorithm for calculating the CF for the invested capital is as follows (Table 2).

Table 2: The framework for calculating CF for the invested capital: indirect technique

| Inflow (+) / Outflow (-) | Indicator |
|---|---|
| + | Revenue from operating activities |
| − | Cost of main activity |
| − | The financial result from other operations |
| − | Taxes |
| = | Net profit |
| + | Interest on loans for which the net profit was reduced |
| + | Depreciation |
| −/+ | Change in the value of own working capital |
| − | Capital investments |
| = | Net cash flow for equity |

Discounting the value of CF for own capital allows determining the value of the company's own capital; if the CF is discounted for invested capital, the resulting data includes the value of the total capital invested in the company, including borrowed funds. Therefore, the cost of capital of business owners is found by deducting borrowed funds from the received value of the invested capital of the company (Bernstein, 2003; Wild, 2013).

Though being an essential point in business valuation, substantiation of the choice of the cash flow for calculation (for own or invested capital) is not considered in the framework of the valuation theory (e.g. Mirzoyan et al., 2017). In real life, the logic of the choice is in the conformity of the company's current capital structure with the industry's average financing trends. In general, the model of calculating CF for invested capital is more popular to assess the business value. However, if good reasons are available to consider the company being valued as unique in terms of attracting external borrowing from similar companies in the industry, or in case the company uses only its own funds, the calculation is carried out using the CF for equity.

*Calculation of the discount rate.* Turning the projected cash flows into the current value is made by using the discount rate. The discount rate is the rate of compound interest used when converting the cost of a CF at a certain point in time. From an economic point of view, the discount rate is the rate of return that the investor wants to receive when investing funds (e.g. Kosorukova, 2013).

The most common methods for calculating the discount rate are the following:

1) CF for equity:

– a model for estimating capital assets;

– method of cumulative construction;

2) CF for the whole invested capital:

– a model of the weighted average cost of capital.

The calculation of the discount rate depends on the type of CF used as a basis for valuation. For CF for own capital the applied discount rate is equal to the rate of return on capital invested by the owner; for the CF for the entire invested capital, a discount rate equals the sum of weighted return rates on equity and borrowed funds is applied. Such a discount

rate is called the Weighted Average Cost of Capital (WACC) (Bukhtiyarova, 1993; Rutgaizer, 2008).

The formula for determining the Weighted Average Cost of Capital is the following:

$$WACC = Y \times w_E + I \times w_D \times (1 - T),$$ (1)

where WACC – the discount rate for invested capital,% per annum; Y – discount rate for own capital,% per annum; I – rate of borrowing,% per annum; $w_E$ – share of equity (E – equity); $w_D$ – the share of borrowed capital (D – debt, borrowed funds); T – tax rate of profit,%.

Using the discount rate for equity, a transfer of CF is performed for equity in the value of the enterprise for its owners. WACC allows calculating the value of the business as a whole, considering both own and borrowed capital.

The cumulative construction method, the method of comparable projects, the CAPM method (a model for estimating financial assets) is among the main methods for calculating the discount rate for equity. The essence of calculating the discount rate by the method of cumulative construction  is in adding to the conditionally risk-free rate of return various premiums on the risk factors characteristic for investing in the valued business. The method of comparable projects uses the expert assessment of business risks and assumes setting the discount rate comparable to the required return on investment, venture funds that invest in comparable projects (Bogatin and Shvandar, 1999). The CAPM method is an equilibrium-pricing model, where the expected return on a financial asset is a linear function of the sensitivity of an asset to a change in the yield of a market portfolio.

The formula for the equilibrium relationship of risk and income is presented below:

$$Y = R_f + \beta \times \left(R_M - R_f\right) + \varepsilon,$$ (2)

where R – the yield of the security for the period; $R_f$ – risk-free rate of return; $R_M$ – profitability of the market portfolio; $\beta$ – coefficient of beta; $\varepsilon$ – random error (extra charge for non-systemic risks).

Below each component of the formula is explained in more details. A risk-free rate of return reflects the level of income that investors could receive without assuming the risks associated with investing capital. Bonds with the largest remaining maturity are considered as a risk-free rate with the yield assumed the same for all investors. A market portfolio is the set of all possible objects of investment. As a rule, the stock market is used as a market portfolio, and as a representative sample of assets – stock indexes and returns on them.

The beta coefficient assesses systematic risks. The basis for its calculation is the sensitivity of the value of shares of the company, which have quotes on the stock market, to the dynamics of the change in the stock index (the profitability of the market portfolio). With the increase in the amplitude of changes in the value of shares of companies, the beta coefficient increases, and investments in such a company become more risky (e.g. Copeland and Koller, 2008).

The formula for calculating the beta coefficient is as follows:

$$\beta_i = \frac{\sigma_{iI}}{\sigma_I^2}, \tag{3}$$

where $\beta_i$ – the beta coefficient; $\sigma_{iI}$ – covariance between yield considering risk factors of i-level and profitability without considering them; $\sigma_I^{\,2}$ – the variance of the yield of the base (i-th) level.

The CAPM method is the most marketable; therefore, it is popular in the developed stock markets. The challenge of using the CAPM method in Russian valuation practice lies in the peculiarities of the Russian stock market, as the stock market in Russia is underdeveloped.

Although reversion (calculation of terminal business value) is a step in business valuation in all three methods, it is considered differently. Within the revenue approach a reversion is often found based on the assumption that at the end of the forecast period the company will continuously generate a CF with a constant rate of change, both the comparative and the income approach treat reversion as the future value of business at the end of the forecast period.

CF post-forecast period is found, based on the indicator of the last forecast year increased by long-term growth rates with the CF of the first post-forecast year being capitalized. The capitalization rate used to calculate the reversion differs from it for the anticipated long-term growth rates and is based on the applied discount rate. The Gordon model below is used to find reversion:

$$V_{Term} = \frac{CF_{Term}}{Y-g} \approx \frac{CF_N \times (1+g)}{Y-g}, \tag{4}$$

where $V_{Term}$ − reversion (company value in the post-forecast period); $CF_n$ − CF of the last forecast period; $Y$ – the discount rate; $g$ – long-term growth rates of CF.

The CF of the post-forecast period is a "benchmark" indicator that reflects the future profitability of the business in the long-term (infinite) perspective at the end of the forecast period. Long-term growth rates in the post-forecast period are set considering the existing production capacities of the company. Consequently, long-term growth rates consider the inflation component to a greater extent. However, this indicator also considers revenue

growth, as the result of increasing production volumes until the maximum level of capacity utilization is achieved in Barrow (2006).

Consequently, the business value is the sum of the discounted rate to the date of the CF estimates for the forecast period and the discounted terminal value (reversion). The forecasted CF is translated into the current value by the following formula:

$$V = \sum_{i=1}^{n} \frac{CF_i}{(1+Y)^{i-0,5}} + \frac{V_{Term}}{(1+Y)^n}, \tag{5}$$

where $CF_i$ – the CF of the i-th forecast period; $V_{Term}$– reversion (company value in the post-forecast period); Y – the discount rate; $i$ – number of the forecast period; n – duration of the forecast period (number of periods).

Discounting the forecasted CF presumes that the enterprise receives revenues and makes spending evenly throughout the year, therefore, the best time to make the discounting of the flows is the middle of the period. For this reason, the classical indicator $i$ in the above formula is replaced by $(i - 0.5)$.

**Results**

In the scope of this article, a market value of a middle-sized construction company in the big industrial city of Krasnoyarsk in the north east of Russia is calculated by applying the proposed business valuation algorithm. The data is valid for the end of 2015, since the latest financial statements (balance sheet and the income statement) are available for 2015.

The choice of the duration of the forecast period is based on the following practical assumptions: while for developed market economies the forecast period for the valuation of

an enterprise can be from 5 to 10 years for Russia being a country with emerging market environment long-term forecasts are difficult to make, the shorter, 5-year range is chosen.

The main indicator of the revenue level is net cash flow, found as the difference between the inflow and outflow of funds for a certain time. The calculation of the CF is shown in Table 3.

Table 3: Algorithm for CF calculating

| Inflow (+) / Outflow (-) | Indicator |
|:---:|:---:|
| + | Sales revenue |
| − | Costs |
| − | Administrative costs |
| − | Income Taxes |
| = | Net profit |
| + | Depreciation |
| − | Growth of own working capital |
| = | Net cash flow for equity |

According to the above algorithm, the value of sales revenue is calculated both for the forecast and post-forecast period. To do this, we use the growth rates of sales in the construction industry for the period 2016-2020 (Table 4) (Gerasimov, 2016).

Table 4: Growth rates of sales in the construction industry, %

| Sales of products, | Basic 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | Post-forecast period |
|:---:|:---:|:---:|:---:|:---:|:---:|:---:|:---:|

| income from services | | | | | | | |
|---|---|---|---|---|---|---|---|
| Construction | 100 | +7 | +5 | +3 | +3 | +3 | +2 |

Table 4 presents a forecast of future income for a middle-sized construction company *Alexstroy* (Table 5).

Table 5: Forecast of future income, thousand rubles

| Type of products, services | Basic 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | Post-forecast period |
|---|---|---|---|---|---|---|---|
| Sales revenue | 246184 | 263416.9 | 276587.8 | 284885.4 | 293431.9 | 302234.9 | 308279.6 |
| Costs | 236482 | 252880.2 | 265524.3 | 273489.9 | 281694.6 | 290145.5 | 295948.4 |
| Total profit | 9702 | 10536.7 | 11063.5 | 11395.5 | 11737.3 | 12089.4 | 12331.2 |

The data from the table show that the share of costs in the forecast and post-forecast period is equal to the share of costs in the base year 2015. The difference between the value of sales revenue and costs equals the value of gross profit. Calculation of CF for the forecast and post-forecast period is given in Table 6.

Table 6: Calculation of CF, thousand rubles

| Indicator | 2016 | 2017 | 2018 | 2019 | 2020 | Post-forecast period |
|---|---|---|---|---|---|---|
| Total profit | 10 536.7 | 11 063.5 | 11 395.5 | 11 737.3 | 12 089.4 | 12 331.2 |
| Administrative costs | 1 053.7 | 1 106.4 | 1 139.6 | 1 173.7 | 1 208.9 | 1 233.1 |
| Taxable profit | 9 483 | 9 957.1 | 10 255.9 | 10 563.6 | 10 880.5 | 11 098.1 |
| Income Taxes(20%) | 1 896.6 | 1 991.4 | 2 051.2 | 2 112.7 | 2 176.1 | 2 219.6 |
| Net profit | 7 586.4 | 7 965.7 | 8 204.7 | 8 450.9 | 8 704.4 | 8 878.5 |
| Depreciation | 97.2 | 97.2 | 97.2 | 97.2 | 97.2 | 97.2 |
| Growth of own working capital | 3 963.6 | 3 029.3 | 1 908.5 | 1 965.7 | 2 024.7 | 1 390.3 |
| Cash flow | 3 720 | 5 033.6 | 6 393.4 | 6 582.4 | 6 776.9 | 7 585.4 |

Proceeding from indicators of previous years, administrative costs for each enterprise equal 10% of the gross profit. The difference between gross profit and administrative costs is equal to the value of taxable profit; having adjusted it to the amount of profit tax (20%) we get the net profit. The accrued depreciation was calculated against the balance sheet data for each enterprise. The analysis of the financial situation over the past few years shows that the required working capital is 23% of the revenue.

The increase in net working capital was calculated using the formula below:

$$\Delta NWC_i = (Vr_i - Vr_{i-1}) \cdot 0{,}23, \tag{6}$$

where $\Delta NWC_i$ – the increase in net working capital in the i-th year, Vr – the volume of revenue in the i-th year.

Net cash flow for equity is calculated in accordance with Table 3.The predicted CFs are translated into the current value based on formula (5).The value of the enterprise in the post-forecast period is calculated by the Gordon model (4).

The discount rate is calculated using a modified CAPM model proposed by A. Damodaran (2017):

$$Y = R_f + \beta \cdot \left(R_M - R_f\right) + C + S_1 + S_2, \tag{7}$$

where R – the yield of the security for the period; $R_f$ – risk-free rate,%; $R_M - R_f$ – premium for risk of investing in shares,%; $\beta$ – coefficient beta (considering the debt load); C – premium for country risk,%; $S_1$ – premium for small company size,%; $S_2$ – premium for specific risks of the company,%.

According to the calculations of the discount rate for the period 2015-2030 presented in Kartsev and Akanov (2012), the value of the discount rate is 18.11%.

To calculate the value of an enterprise in the post-forecast period, the long-term growth rates of the cash flow are to be found. In this case, long-term growth rates largely consider the inflationary component. Although, in some cases, revenue growth is also considered when increasing production volumes reach the average industry maximum of capacity utilization. If within the forecast period the enterprise's maximum load is already the achieved, then in the post-forecast period, the rates of long-term growth should not exceed inflation. Calculation of the long-term growth rates is given in Table 7 (Jamal and Hakobyan, 2016).

Table 7: Calculation of long-term growth rates

| Period | Inflation annual average (Ministry of Economic Development of Russia, 2011) | Discount rate, % | Period | Discount coefficient | Specific gravity[5] / Σ[5] | Contribution of the growth rate ([2]/100 – 1) *[6] |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2015 | 105.1 | 18.11% | 0.5 | 0.92015 | 16.4825% | 0.8406% |
| 2016 | 105.1 | 18.11% | 1.5 | 0.77906 | 13.9552% | 0.7117% |
| 2017 | 104.4 | 18.11% | 2.5 | 0.65960 | 11.8154% | 0.5199% |
| 2018 | 103.6 | 18.11% | 3.5 | 0.55847 | 10.0037% | 0.3601% |
| 2019 | 103.6 | 18.11% | 4.5 | 0.47284 | 8.4698% | 0.3049% |
| 2020 | 103.4 | 18.11% | 5.5 | 0.40033 | 7.1712% | 0.2438% |
| 2021 | 103.4 | 18.11% | 6.5 | 0.33895 | 6.0716% | 0.2064% |
| 2022 | 103.4 | 18.11% | 7.5 | 0.28698 | 5.1406% | 0.1748% |
| 2023 | 103.3 | 18.11% | 8.5 | 0.24298 | 4.3524% | 0.1436% |
| 2024 | 103.0 | 18.11% | 9,5 | 0.20572 | 3.6850% | 0.1106% |
| 2025 | 102.9 | 18.11% | 10.5 | 0.17418 | 3.1200% | 0.0905% |
| 2026 | 102.7 | 18.11% | 11.5 | 0.14747 | 2.6416% | 0.0713% |
| 2027 | 102.5 | 18.11% | 12.5 | 0.12486 | 2.2366% | 0.0559% |
| 2028 | 102.5 | 18.11% | 13.5 | 0.10571 | 1.8936% | 0.0473% |
| 2029 | 102.5 | 18.11% | 14.5 | 0.08950 | 1.6033% | 0.0401% |
| 2030 | 102.5 | 18.11% | 15.5 | 0.07578 | 1.3574% | 0.0339% |

| Weighted average long-term growth rates | 5.58257 | | ~4 % (3.955%) |
|---|---|---|---|

It follows from Table 7 that the long-term growth rate of the cash flow is 4%. Table 8 shows the calculation of the market value of the company's equity.

Table 8: Calculation of the market value of own capital, thousand rubles

| Indicator | 2016 | 2017 | 2018 | 2019 | 2020 | Post-forecast period |
|---|---|---|---|---|---|---|
| Cash flow | 3 720 | 5 033.6 | 6 393.4 | 6 582.4 | 6 776.9 | 7 585.4 |
| Coefficient of present value | 0.92 | 0.779 | 0.659 | 0.558 | 0.473 | 0.435 |
| The present value of cash flows | 3 422.4 | 3 921.2 | 4 213.3 | 3 672.9 | 3 205.5 | |
| The amount of current cash flows | 18 435.3 | | | | | |
| Revenue from the sale of the firm at the end of the last forecast year | 7 585.4 / (0.1811 – 0.04) = 7 585.4 / 0.1411 = 53 759 | | | | | |
| The current value of the proceeds from the sale of the firm | 53 759 * 0.435 = 23 385.1 | | | | | |
| The market value of a firm's equity | 18 435.3 + 23 385.1 = **41 820.4** | | | | | |

| capital | |
|---|---|
| | |

Coefficient of current value for each year of the forecast period is calculated by the formula:

$$K_{pr} = \frac{1}{(1+Y)^{i-0,5}},$$ (8)

where $i$ – the number of the forecast year.

The current price factor for the post-forecast period is calculated by the formula:

$$K_{ppr} = \frac{1}{(1+Y)^n},$$ (9)

where $n$ – the duration of the forecast period.

The present value of cash flows is calculated by the formula:

$$V_1 = \sum_{i=1}^{n} \frac{CF_i}{(1+Y)^{i-0,5}}.$$ (10)

Revenue from the sale of the company at the end of the last forecasted year is calculated by formula (4).

The current value of the proceeds from the sale of the firm is calculated by the formula:

$$V_2 = V_{Term} \cdot K_{ppr}.$$ (11)

In conclusion, the market value of the company's equity is calculated using formula (5).

As a business valuation is made for making the investment decision, for comparison, similar calculations of the cost of businesses were conducted for four more companies in the construction industry in the city of Krasnoyarsk. The data for all the considered companies are shown in Table 9.

Table 9: Cost of construction companies

| Company | The cost of business, thousand rubles |
|---|---|
| Alexstroy | 41 820.4 |
| Monolitholding | 153 877.9 |
| Restoration | 233 368.5 |
| Alfa | 353 045.3 |
| Economgilstroy | 193 579.3 |

According to the results presented in Table 9, two companies *Restoration* and *Alfa*, are most attractive for investors, while *Alexstroy* is the least.

**Conclusion**

A detailed algorithm of the implementation of the methodology for business valuation based on the income approach is presented. The choice of the income approach for measuring a business value is substantiated by the idea that this approach is the only one to consider the dynamics of the enterprise development, allowing comparison of current investor costs with expected future revenues, and considering the time of the income receipt and the risk factors typical for the analyzed business. Thus, the developed algorithm, adapted to the existing realities in the Russian market, allows informing potential investors of the real financial and

economic state of the companies where they intend to invest. Having detailed information on the market value of the company's own capital and observing changes in its value over a certain period, the investor can make the best choice of the company for investment.

The results of this work can also be useful to company management, since they can be helpful in identifying the problems that can hamper business development, and hence, the growth of the company's value  as well as making decisions that can lead to the increased value of the enterprise, both in the short and long-term periods. Thus, the valuation based on the income approach allows adjusting the structural transformations planned at the enterprise to the greatest extent, including the increase in the business attractiveness for potential investors.

The authors hope that the calculated data can present a clear picture helpful to make the decision in favor or against investing into a particular company. The proposed algorithm can also be used for a valuating of production companies of different sizes.

The future direction of the research is to develop an algorithm for joint use of business value and financial transparency with a view to increasing certainty in the decision-making process of the investor.

REFERENCES

Barrow, C. (2006). Financial Management for the Small Business. London: Kogan Page Ltd.

Bernstein, L.A. (2003). Analysis of financial statements: theory, practice and interpretation. Moscow: Finances and Statistics (in Russian).

Bogatin, Yu.V., & Shvandar, V. (1999). Evaluation of business and investment efficiency. Moscow: UNITY, Finance (in Russian).

Bukhtiyarova, T.I. (1993). Model of an estimation of a financial condition of the enterprise. Finances, 7, 7-13. (in Russian).

Copeland, T. (2008). Cost of the companies: an estimation and management. Moscow: Olimp-Business. (in Russian).

Copeland, T., & Koller, T. (2008). Cost of the companies: an estimation and management. New York: John Wiley & sons.

Damodaran, A. (2017). Investment valuation. Tools and techniques for assessing any assets. Stern, NYU: Alpina Pablisher.

Danilova, O.D. (2005). Financial activities of enterprises. K.: Computer Press(in Russian).

Esipov, V.E. (2010). Business Valuation. St. Petersburg: Peter. (in Russian).

Evans, F., & Mellen, C. (2010). Valuation for M&A: Building Value in Private Companies. New Jersey: Wiley.

Gerasimov, S. (2016, June). The state and prospects of the Russian construction industry in 2016-2020. Retrieved August 1, 2017, from http://www.indexbox.ru/news/sostojanie-i-Perspektivy-stroitelnoj-otrasli-rf/ (in Russian)

Grigoriev, V.P. (1994). How to determine the value of enterprises and real estate. Economics and Life, 33, 21-27. (in Russian).

Gryaznova, A.G., & Fedotova, M.A. (2009). Business Evaluation. Moscow: Finance and Statistics (in Russian).

Jalal, A.K. (2016). Financial and economic essence of income approach to business valuation. In Innovative technologies in science and education, 27 March 2016 (pp. 166-168). Cheboksary, Russia: CNS Interactive Plus. (in Russian).

Jamal, A.K., & Hakobyan, T.A. (2016). Financial and economic essence of the income approach to the valuation of business value. Innovative technologies in science and education, 1(5), 166-168. (in Russian).

Kartsev, P.V., & Akanov, A.A. (2012). A review of the practice of applying the income approach to business valuation. Journal of Valuation Questions, 2, 2-19. (in Russian).

Kolayko, N.A., & Sevastyanov, A.V. (2007). Cost of the enterprise: theoretical approaches and assessment practice. Moscow: Higher School of Privatization and Entrepreneurship (in Russian).

Kosorukova, I.V. (2013). Profit and cash flow in assessing the value of a business // Russian Journal of Entrepreneurship, 14(18), 53-60. (in Russian).

Kozyr, A. & Kozlova, T. (2018). Income approach in assessing the value of business. Scientific community of students of the XXI century. Economic sciences. 4(64), 181-186. (in Russian).

Ministry of Economic Development of Russia (2011, October). Temporarily defined indicators of the long-term forecast of the social and economic development of the Russian Federation until 2030. Retrieved June 12, 2017, from http://economy.gov.ru/minec/activity/sections/macro/prognoz/doc20111006_05 (in Russian)

Mirzoyan, N., Vandanimaeva, O. & Ivlieva, N. (2017). Valuation of property. Moscow: Publishing House of the University "Synergy". (in Russian).

Rutgaizer, V.M. (2008). Estimation of business value. Moscow: Maroseyka. (in Russian).

Rutgaizer, V.M. (2008). Integrated Theory of Business Valuation. Property Relations in the Russian Federation, 4(79), 17-30. (in Russian).

Tal, G.K. (2009). Evaluation of Enterprises: Income Approach. Moscow: Guild of Specialists in Crisis Management. (in Russian).

Trugman, G. (2018). Understanding Business Valuation: A Practical Guide to Valuing Small to Medium Sized Businesses. New Jersey: Wiley.

Wild, J.J., Bernstein, L.A. & Subramanyam K.R. (2013). Financial Statement Analysis. New York: McGraw-Hill Education.