

Метод капитализации доходов при оценке стоимости бизнеса

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Аннотация

В статье представлены результаты проведенного анализа метода капитализации доходов при оценке стоимости бизнеса, а также осуществлен пример расчета стоимости компании ФосАгро данным методом. В современных условиях ведения бизнеса одна из основных целей, которую преследует компания — это максимизация рыночной стоимости или увеличение экономических выгод собственника от инвестиций в эту компанию. Но достижение этой цели становится невозможным без знания реальной рыночной стоимости компании, поэтому возникает необходимость в оценке бизнеса. Метод капитализации доходов является одним из основных способов оценки компаний. Его преимущество заключается в том, что он позволяет сравнить на основе доходов инвестиционную привлекательность бизнеса.

Ключевые слова: оценка стоимости бизнеса, метод капитализации доходов, доходный подход, коэффициент капитализации.

Income capitalization method for assessing business value

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Abstract

The article represents the results of the analysis of the income capitalization method when assessing the value of a business, as well as an example of calculating the value of PhosAgro by this method. In modern business conditions, one of the main goals pursued by a company is to maximize market value or increase the economic benefits of the owner from investing in this company. But achieving this goal becomes impossible without knowing the real market value of the company, so there is a need to evaluate the business. The income capitalization method is one of the main methods of evaluating a company. Its advantage is that it allows comparison of the investment attractiveness of a business on the basis of income.

Keywords: business valuation, income capitalization method, income approach, capitalization ratio.

The modern market economy is not effective without appraisal activity. It is important to use the services of appraisers for assess enterprise market value for purchase, sale, the transfer, invest, assessment of the effectiveness of management, business, different important and mandatory cases of evaluating of the business value.

Business value assessment allows to estimate the market value of the equity capital of enterprises, joint-stock companies. Market value of capital is assessed by independent appraisers according to Federal law. Business value is also helpful for investing. Business value is necessary for choosing way for enterprise management. The assessment of the business value identifies possible approaches to enterprise management.

For financial analysts the value of enterprise stocks is important. Because of underestimating of the value against the real market situation of supply and demand for stocks, they have to the factors, which affect the price of stocks.

The International Committee on Valuation Standards identifies 3 approaches for valuing any asset: direct market comparison approach, income approach and cost approach. These approaches of business valuation determine what methods will be used in assessment: each approach includes several different assessment methods. For example, income approach is based on 2 methods: the capitalization method and the discounted cash flow method. The comparative approach consists of 3

methods: the capital market method, the transaction method and the industry coefficient method. The cost approach is based on 2 methods: the net asset method and the residual value method.

In this article we are going to investigate the capitalization method of business valuation that is included in income approach.

In general, the income approach is a set of methods for assessing the value of an object that are based on determining the expected income from the object of valuation. The feasibility of this approach can be explained by the fact that the sum of the market values of the assets of some enterprise does not reflect the real value of the business, since the influence of external factors on the assets is not taken into account. The assessment results obtained by this approach can help management to identify problems that impede business development, as well as make decisions on how to increase the organization's income.

The income approach is most often used when an assessment is required for potential investors of the organization. The reason is that an investor is first of all interested not in the price of company's assets, but in the value of the future income stream that those assets could possibly bring.

In the income approach the estimation of future income of an enterprise is usually made taking into account the change of the value of money over time, meaning that income received today is greater value than the same income received in the future.

Capitalization of income is a process that determines the relationship between future income and the current value of the property being valued. This method can be used for organizations that at the time of the assessment have already accumulated a certain amount of assets that are capable of generating income.

To determine the value of an enterprise (V) using this method the following formula should be used:

$$V = I / R, \tag{1}$$

Where I - income of the business for the last year / average income for several years; R - the capitalization coefficient (1).

As the income indicator for this formula there could be used: net income, income before tax, cash flow or dividends paid.

The capitalization rate is most often calculated based on the discount rate, taking into account the long-term growth rate of cash flow. There are several models for constructing a capitalization rate based on a discount rate depending on various parameters: Gordon Model, Ring Model, Inwood model (2).

Determining the capitalization rate based on the discount rate is the most common method, however, there are other methods for calculating this capitalization rate, among which are:

1. The method of analysis of market data. The capitalization rate according to this method is determined on the basis of market information of the income and selling prices of comparable companies;

2. The method of return on investment. The method involves calculating the capitalization rate based on the payback period of the investment.

However, capitalization method can be used only if the income of the enterprise is a relatively stable and positive value, and if they will remain at the same level in the future that is extremely rare in conditions of economic instability.

Let us now overview the practical example of business valuation using this method. To do so, we have chosen «PhosAgro» - a vertically integrated Russian company and one of the world's leading phosphate-based fertilizer producers.

So, we will use the Capitalization ratio = discount rate - average growth rate.

To determine capitalization rate, it is necessary to know the discount rate and forecasted average revenue growth.

Let us calculate the discount rate using CAPM model. In this case discount rate will be the following

$$R_i = r_f + \beta \cdot (r_m - r_f) \quad (2)$$

r_i – expected return of a stock;

r_f – return on a risk-free asset;

r_m – market return

β - the beta coefficient. It reflects the sensitivity of changes in yield stocks to changes in the market yield.

First of all, current yield rate for government bonds for 1 year is 4,21%, we will use it as a risk-free rate.

Since shares of «PhosAgro» are traded at Moscow Stock Exchange, we will use the MOEX index (IMOEX) as the yield of the market. We have downloaded the data about price of the share of «PhosAgro» and IMOEX index for the recent year and based on those indicators calculated all the necessary information to receive expected return, that is equal to 2,35% per year.

To calculate the average growth rate, we will consider the revenue of the company for last several years.

Table 1. Calculation of expected return of «PhosAgro» shares

Covariance	0,00004416
Variance of the market	0,00023552
beta	0,187481496
r(market)	-0,0001
rf	0,000112461
expected return (day)	0,00006361
expected return (year)	0,02349038

Table 2. Calculation of income average growth rate of «PhosAgro»

Year	2015	2016	2017	2018	2019
Net Income	36436	59884	25333	22069	49349
Growth rate		0,39155701	-1,3638732	-0,147899769	0,5528
Average	-0,141854636				

The average growth rate is negative and equal to – 14,19%

Capitalization ratio = 2,35% - (- 14,19%) = 16,53%

So, the company's value is the following: $V = 49\,349\,000\,000 / 0,1653 = 298\,460\,764\,381$ rubles, or 298,460 bln rubles.

This was an example, how the value of a company could be determined using income capitalization method.

However, this method has several drawbacks. It is applicable only for a stable operating enterprise when it is possible to correctly predict future cash receipts and incomes, and not suitable for evaluating venture projects and start-ups that have no cash flows at all, have not yet created a stable sales network and uniform revenue streams. The other minus is that it cannot be implemented for a business with losses and for enterprises with active reinvestment policy.

So, even though in some situations this method cannot be used, for other stable and profitable enterprises income capitalization method is quite accurate and useful when it comes to the investors that are mostly interested in the profit of the business.

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