



CENTERIS - International Conference on ENTERprise Information Systems / ProjMAN - International Conference on Project MANagement / HCist - International Conference on Health and Social Care Information Systems and Technologies, CENTERIS / ProjMAN / HCist 2017, 8-10 November 2017, Barcelona, Spain

Simulation Of The Influence Of Different Ways Of Setting The Restraint On Value Of Construction Company

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Abstract

The main goal of the article is to describe the impact of the various retention adjustments to the construction orders/commissions, thus influencing the value of the construction company. The retention is one of the contract-based safety devices, used in the construction industry. Different ways of adjustments that affect the financing of the construction commission/contract and also the financial flows within the construction company are used. Financing within a construction company is reflected in its effectiveness and its value. In times of economic fluctuations, the value of the company is of considerable significance not solely for the owners. This article works with a standard simulation method. On the basis of real data, of one of the largest construction companies in the Czech Republic belonging to a multinational/supranational group, a simulation of the impact of various retention arrangements/adjustments on the company's financial statements (account reports) was carried out. Subsequently, the value of the company was calculated using the revenue method (yield method). For the greater informative value, the simulation was carried out in a time span of the economic crisis in the Czech Republic. The findings of the authors lead to recommendations on further researching the construction company's financing and the effectiveness of functioning of the national economy.

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Peer-review under responsibility of the scientific committee of the CENTERIS - International Conference on ENTERprise Information Systems / ProjMAN - International Conference on Project MANagement / HCist - International Conference on Health and Social Care Information Systems and Technologies.

Keywords: Company value; WACC; Yield method; Retention; Bank guarantee; Accounting; Financing

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1. Introduction

In the Czech Republic, the use of contractual security instruments is used to ensure the co-operation between the contractor and the investor. Retention is used especially to ensure the removal of defects and incompleteness during the warranty period. The retention is a part of the contractual price that the investor withholds until the end of the warranty period or the fulfillment of specific conditions.¹ Retaining the Czech Republic in terms of legislation dealt only generally, in the law No. 89/2012 Coll. Civil Code, §2029.²² Legislation does not deal with retaining percentage or type of retention. The percentage is recommended in the Czech Construction Standards, which are derived from practice. By default 5% of retained funds until handing over and taking over the work with removed defects and incompleteness, and 5% paid in incremental annual installments until the end of the warranty period is used. Legislation at the retaining percentage looks just as reasonably appropriate. The retention, its form, the percentage and the formal details have to be by contract-based. Retention therefore affects the capital structure and the economic result of the contractor. This information is included in financial statements (account reports) of the company. And based on the financial (accounting) statements that are reflected in the calculation, the revenue (yield) method determines the value of the construction company. Thus, the method and setting of the retention rate may - under certain circumstances - affect the final value of the company. Similarly, the economic situation of the company influences the impact of the retention. Determining the intensity of the retention influence on the company's management (economy) - in relation to the ongoing part of the economic cycle and thereby affecting the value of the company - may be essential information for the company's direction, as well as for choosing various approaches from the national economy's point of view.

2. Present state references

Finding the value of a company is to determine an estimate. Currently, three basic types of valuation methods are used (revenue method, cost (travel costs) method, and market method). Based on the specifics of the construction company, the life cycle phase and the reason for determining its value, the appropriate type of valuation is chosen. Mařík recommends the company shall be valued using all three basic methods, and determine the resulting value based on the synthesis of the results.² Determining the value of an enterprise is not an objective characteristic and therefore a unique algorithm for its calculation can't be compiled.³

Valuation respects International and European Valuation Standards, which define values and framework principles. These standards are not a mandatory regulation, but only a framework of internationally recognized recommendations, they focus on valuing real estate (business valuation is at a standstill).⁴

In the field of business valuation, A. Damodaran is an acknowledged mastermind, who dedicates himself in detail within the specificities and dangers of valuing companies at different stages of the life cycle and difficult economic times.⁵

In certain cases of valuation, it is important to take into account the time value of money by discounting. The Discounted Cash Flow Method (DCF), the most widely used and most practical of revenue methods, that distinguishes four ways of calculating DCF, ie how equity is achieved:

- FCFF = free cash flow to the firm – cashflow into the company as a whole (gross)
- FCFE = free cash flow to the equity
- DDM = dividend discount model – special occurrence of cash flow for shareholders
- EVA = economic value addend

The reporting capability of the result value depends on the selected DCF model. The FCFF and EVA models point to the total value of the company. FCFE models and dividends result in the value of equity. When focusing on company valuation based on FCFF, the weighted average cost of capital (WACC) is used in discounting.⁶ If the firm does not expect significant changes in market share and influence over time, then the usage of WACC method is most practical according to Inselbag and Kaufold (1997).⁷

The specifics of construction (in particular, the requirement for a long service life and the heftiness of the production process) require the introduction of quality management at the contractor, as well as the management of

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