THEORY OF FINANCIAL MANAGEMENT IN PRACTICE OF CZECH COMPANIES

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Abstract: *This article is focused on comparing of theoretical financial management approaches with financial management practice of Czech companies operating in sectors of manufacturing industry. Empirical research found big differences between basic theoretical recommandations and their fulfillment in practice. Discount rate in the form of weighted average cost of capital value plays a key role in many financial decisions above all in capital structure optimalisation and in dynamic assessment methods needed for investment decisions. Nevertheless it proved that only 20% of companies work with discount rate, the rest of them does not specify the discount rate value. It has been determinated the impact of the ownership links with larger companies on the use of discount rate in company. This proves the fact that discount rate users are parent companies (15%), daughter companies owned by Czech parent companies (27%) and daughter companies with foreign parent companies (54%).*

Keywords: *financial management, WACC, discount rate, capital structure, investment assessment, manufacturing industry*

JEL Classification: *G30, G32*

1. INTRODUCTION

Strategic financial plan is an essential pillar of the overall strategic plan [7]. Long-term planning imposes higher demands on the manager, because in the long term the financial manager meets with the time value of money, it is necessary to calculate the risks connected with long-term prediction, and these all with the aim to ensure long-term financial stability of a company. Financial planning is a formal decision on how to finance (capital structures), investing capital into profitable assets (evaluating investment options) and a funds management to maximize the market value of the company (economic profit, i.e. economic value added). According to [9] financial management integrates the system of corporate planning, according to the criteria of profitability and risk.

Strategic financial planning should include planning of capital structure and also investment planning. Hrdý [2] emphasizes that the funding of investments should follow three basic objectives:

− to ensure economically justified amount of capital for planned investment meeting the required rate of return,
− to achieve the lowest cost,
− not to undermine financial stability.

It is necessary to use appropriate methods in investments planning for assessment of the acceptability of the investments. There plays a role both time factor and cost of capital which enters into the calculations as the discount rate.

The main objective of financial management is to achieve economic profit, also called economic value added (EVA). Order to calculate the EVA value it is necessary to capture the WACC value, because together with NOPAT they are key determinants of positive or negative economic profit achievement.

The goal of financial planning is also to ensure the required amount of capital assuming average cost minimization and the capital structure optimalization. It follows that the discount rate as WACC appears in a number of economic calculations which are needed to fulfill the basic principles and goals of financial management and the existence of the company as a whole. Regards in particular to:

− the principle of capital structure optimization (with minimal WACC),
− the principle of taking into account the time factor (WACC as discount rate)
− the principle of net present value, resp. usage of this or other dynamic assessment methods in investment decisions (WACC as discount rate)
− the main objective of company is to achieve economic profit, i.e. EVA (with WACC as determinant).

From above it is obvious that we can fully implement the principles above only with knowledge of WACC. According to [8] 93% of Czech companies identify financial area as key area for the performance evaluation of company. Does it include also using of discount rate and WACC?

The goal of empirical investigation was to determine the attitude of financial managers to implementation of basic financial principles. Are these basic theoretical bases of economic growth and ensure financial stability fulfilled in the practice of Czech companies? It answered the questionnaire research in 133 companies operating in manufacturing industry.

2. METHODOLOGY OF WACC CALCULATION AND ITS USAGE

The most common method to derive the discount rate is using a weighted average cost of capital approach which represents a weighted average of the after-tax cost of debt and the cost of equity. Worldwide is the weighting based on a company's debt-equity ratio, measured at capital market, but generally in the Czech Republic is not possible to use market values of equity and debt, that is why the book value is commonly used (more than 99% of Czech companies are not listed on stock exchange).

The two basic methodologies used in the Czech Republic for the WACC calculation (formula (1) and (2)) would cause themselves the different results when applied on the specific company, regardless the fact that their partial components (implicit costs of the equity, explicit costs of debt capital, setting of their weights) can be calculated in many ways.

The calculation of WACC can be expressed according to [10] and [4] as follows:

$$WACC = \frac{E}{V} * Re + \frac{D}{V} * Rd * (1 - Tc) \qquad (1)$$

where Re is cost of equity, Rd is cost of debt, E is market value of the firm's equity, D is market value of the firm's debt, $V = E + D$ means total market value of the firm's financing (equity and debt), E/V is percentage of financing by equity, D/V is percentage of financing by debt, Tc is corporate tax rate.

Discount rate is used above all for optimization of capital structure (minimal WACC) and financial decisions about project acceptance. Many companies use their weighted average cost of capital (WACC) as discount rate if the project's risk profile is similar to that of the company and above all if it is not possible to clearly identify the source of funding (sources are usually combination of debt and equity). For company value assessment are used three basic types of methods. According to [1] is the trend in the Czech Republic from 90´s till now following:
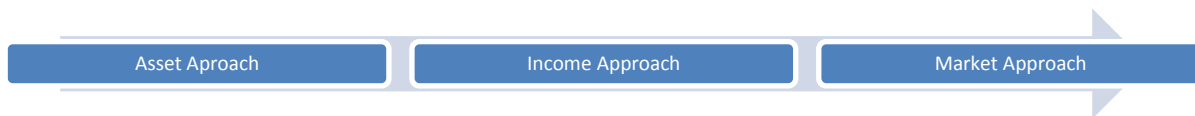

Asset Aproach | Income Approach | Market Approach

Figure 1 Trend of company value assessment
Source: [1]

There are less than 1% of companies listed on Stock Exchange in the Czech Republic. That is why the "Income Approach" is used much more than the "Market Approach". The essence of income approach is discounted cash flow working with discount rate stated as WACC. This is another reason, why discount rate should be calculated in companies. There are plenty of reasons why express company discount rate in the form of WACC. In figure 2 are some of them.

Where *NPV* is net present value, *PVCF* is cash flow present value, *IC* is total initial investment costs, CF_t is net cash flow during the period t, *t* is time period, *PI* is profitability index, *n* is number of time periods, *EVA* is economic value added, *NOPAT* is net operating profit after taxes, *C* is long-term capital, *DPP* is dynamic payment period.

The modular method, also called as the rating model, shows the total remuneration for the investment risk in form of risk surcharges similarly as the rating agencies. This model is applicable to all businesses in Czech Republic compared to the formula no. 1. That is the reason why formula no. 2 is used by Ministry of industry and trade for branch analyses and statistics. According to [6] it can be expressed as follows:

$$WACC = r_f + r_{POD} + r_{FINSTAB} + r_{LA} \qquad (2)$$

where r_f is risk-free rate, r_{POD} is risk surcharge for the business risk, $r_{FinStab}$ is risk surcharge for the financial stability, r_{LA} is risk surcharge for the size of company.

The risk-free rate r_f can be derived from the return on the long-term state bonds – it means the same value for all companies in all sectors. The risk surcharge for the size of company r_{LA} is quantified depending on the size of the priceable capital (PC) compound of the equity, loans and bonds. It can reach value from 0% to 5%. The risk surcharge for the business risk r_{POD} is derived from the return on asset ratio (EBIT/Assets) and sector. Usually it reaches values in interval (2%; 10%>. The risk surcharge for the financial stability $r_{FinStab}$ represents the risk of the financial instability and regards the level of the common liquidity of the company compared to the average common liquidity within the branch. It reaches values in interval <0%; 10%>. It follows that the companies can vary in WACC in the range from 0% to 23% ((5-0) + (10-2) + (10-0)).

Empirical research has been carried out in 2016. The aim of the questionnaire survey was to find usage of discount rate in practice of financial management of Czech companies. Equally important aim was to check the ways of discount rate calculation and frequency of WACC usage in Czech practice. Research sample covered 133 companies operating in manufacturing industry. All companies have more than 50 employees. Research was conducted in April and May 2016. That time existed about 3600 active companies (without distress symptoms) operating in manufacturing industry with more than 50 employees. Companies were selected through database of economic subject called MagnusWeb [3].

$$IC = \sum_{i=1}^{DPP} \frac{CF_t}{(1+wacc)^t}$$

Capital structure optimalization

$$EVA = NOPAT - WACC * C$$

WACC

$$NPV = PVCF - IC = \sum_{i=1}^{n} \frac{CF_t}{(1+wacc)^t} - IC$$

IRR – Internal Rate of Return

$$PI = \frac{\sum_{i=1}^{n} \frac{CF_t}{(1+wacc)^t}}{IC}$$

Figure 2 Utilization of corporate discount rate in the form of WACC
Source: own

Table 1 Sample characteristics

CHARACTERISTICS	TOTAL ASSETS	INVESTMENTS	TURNOVER
min	0.01997bn	0.00038bn	0.04950bn
Q10	0.07441bn	0.00204bn	0.09759bn
Q25	0.15053bn	0.05523bn	0.18888bn
median	0.39633bn	0.15085bn	0.52809bn
average	1.03300bn	0.46300bn	2.31800bn
Q75	1.17366bn	0.64658bn	1.69002bn
max	24.05669bn	5.09743bn	123.49327bn

Source: own

According to table 1, we can describe the sample as large companies which need to plan their investments (long-term assets) including dynamic assessment methods in investment decisions (NPV, IRR, DPP, PI, IC), also they should plan a capital structure (minimal WACC) and also they should take into account the time factor in financial decisions. Are the doing in this way?

3. FINDINGS AND DISCUSSION

There were 133 companies in sample. Only 26 respondents answered that they use a discount rate in their company in financial decisions. It is less than 20% of companies. It shows the gap between financial management theory and company practice in manufacturing industry. Answers structure is specified on figure 3.

Assumption about the impact of ownership (sole company, relation of daughter-parent company) on financial management was confirmed. Respondents were sorted in cathegory: a) We are parent company, b) We are daughter companies with Czech parent company, c) We are daughter company with foreign parent company, d) Stand-alone business without additional ownership relations. In table 2 is seen, that companies with parent companies (27% and 54% of sample), above all with foreign parent companies, pay more attention to basic theoretical financial management approaches.

The most used way of discount rate assessment is determination by parent company. Unfortunately in this case we do not have specification of used method. The second most widely used one is historical ØWACC in sector, where company operates. This approach can be criticized from many perspectives. Above all it is obsolotenes and also inaccuracy. Information about average sector financial

characteristics is usually more than 18 months delay. E.g. in the end of 2016 is possible to reach sector statistics from the end of year 2014.
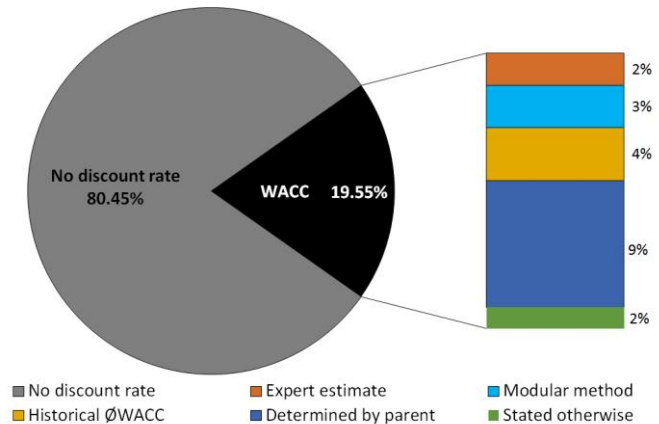

Figure 3 Do you use a discount rate in financial management of your company?
Source: own

If we compare first quarter 2013 with the end 2014 we can find changes if average WACC values in sectors of manufacturing industry. According to [5] the largest WACC decline was -5,12% in sector "Manufacturing of basic metals and fabricated metal products; foundry" from 10.45% to 5.32%. The largest increase was +1.84% in sector "Manufacture of coke and refined petroleum products" from 10.48 in 1Q 2013 to 12.32% in 4Q 2014. These WACC values were made by Ministry Industry and Trade by modular method. As has been demonstrated, using so outdated values, it loses meaning.

4. CONCLUSION

Financial management theory is usually based on the knowledge from advanced economies with advanced capital markets. Financial management theory is created above all for large listed companies. Nevertheless basic principles and recommendations are usefull also for smaller non-listed Czech companies. Several of them is connected with usage of company discount rate in the form of weighted average cost capital.

This includes the principle of capital structure optimization, principle of taking into account the time factor, principle of usage of dynamic assessment methods in investment decisions, etc.

Table 2 Calculation methods and ownership of discount rate users

Calculation methods	OWNERSHIP OF COMPANIES USING DISCOUNT RATE				SUM		
	a) Parent company	b) With Czech parent	c) With foreign parent	d) Stand- alone	YES (abs.)	YES (rel. from 26)	YES (rel. to 133)
Expert estimate	2	0	1	0	3	11.54%	2.26%
Modular method	0	1	3	0	4	15.38%	3.01%
Historical ØWACC in sector*	1	1	2	1	5	19.23%	3.76%
Determined by parent	0	4	8	0	12	46.15%	9.02%
Stated otherwise	1**	1***	0	0	2	7.69%	1.50%
SUM	4 (15%)	7 (27%)	14 (54%)	1 (4%)	26	100,00%	19.55%

* information with delay more than one and half year ** stated by auditors ***method not specified

Source: own

This research found that only 20% of companies work with company discount rate. It means they are not trying to fulfill the basic principles of management. Discount rate users are the daughter companies of Czech parent companies (27%) and above all daughters owned by foreign parent companies (54%). This demonstrates the influence of large foreign units on style of financial management of Czech companies.

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