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COMPANY MANAGEMENT BY USING INFA METHOD

Abstract:

A company is a living unit which should act to survive. The survival must not be kept in the influence of random elements. Every single process should be managed systematically to minimalize the risk of bankruptcy. The fruitfulness of the process managing is mostly determined by setting its primary objective. The objective is the source of consequent planning, leading and controlling of partial activities which influence the final strategy. The article considers the determination of the top objective of the company based on the method of the pyramidal system of indices INFA. The INFA indicator cannot be managed as a complex unit and this is the reason the objective of this article is the setting up partial indicators to minimize the risk of bankruptcy. During the process of determination of those supporting indicators their priority will be set up to company is able to solve conflict situations when the partial goals are contradictory. The company evaluates the results of partial objectives and indicators compared with the market and the best companies in the surroundings. The evaluation will be provided by bechmarking of a company applied on partial objectives.

Keywords:

INFA, Bechmarking, company objectives, Strategy, Manegment.

Introduction

The enterprise is defined as complex of the material and immaterial property, persons and information systems being in mutual interaction and appearing externally as one whole. It is an artificially created, i.e. purposefully created entity which was founded with a certain target or vision. In the most cases, the main target is supplying finances to owners. This target may be achieved by enterprises only by maximizing profit or maximizing the value with the following sale. It is defined in the law that the enterprise is established to achieve profit; however, some authors Ballow, Burgman, Molnar (2004) state that because of the tax optimization and long-term enterprise development, the primary target of the enterprise is not achieving profit any more, but bringing the value to the owners.

Being aware of this seemingly completely clear basic target is very essential for all the processes in the company as all the strategy, operative plans and everyday tasks should be focused on this target. This is self-evident, but in spite of this we often see in practice the situations in which the enterprise executes activities not contributing to the basic target, on the contrary, burdening employees with useless paperwork or processes; the results of these processes are subsequently not utilized by anybody. The fact that the employees of the given enterprise do not know the superior targets of the enterprise or do not understand the hierarchy of targets or partial targets contributes often to useless processes or administration. If there are too many such non-systematic measures and the high-quality verification is missing, it is possible that the enterprise goes bankrupt or has to undergo restructuring.

If the processes and activities in the enterprise shall lead to achieving the basic superior target in every stage, it is necessary to formulate the targets clearly and in a well-arranged way together with the tasks following from them and forms of verification shall be set in advance. Thanks to targets and tasks defined in this way, the interference in communication and the corrections in executing individual activities are minimized. From a certain point of view the subsequent activities could be defined as effective, i.e. focused on achieving the primary target of the enterprise. Effectiveness is understood as proportion of inputs (from the view of corporate economy the control and executive work, long-term assets and material) and outputs (revenues, products and services).

The postulated target having the form of maximization of profit or value for shareholders is valid in almost all the cases when the owner is undisputed or there is a smaller group of owners having common interests. If this is not completely defined or the interests are different, the top managers having different interests than the owners start to play an important role. Their interests may be beneficial for the enterprise if their main target is to survive in crisis or on the contrary very harmful as e.g. maximizing the book short term profit regardless to the risk.

In spite of the fact that the superior target of the enterprise postulated by managers may be in some exceptional cases negative for the company from the long-term viewpoint, the target of the owner should be defined in co-operation with top management. The reason of this statement is the fact that the owners do not have complete information about the enterprise and market and they can influence the company negatively by erroneous setting the target. This situation may occur during a crisis or drop of partial markets or creation of new substitutes by the competition.

The article aims at setting the superior target based on the principle of maximization of value for owners applying INFA method with the split to partial targets.

Background research

One of the basic methods used by companies to announce the primary target to their employees is formulation of the vision and mission. Subsequently the superior target is specified in partial targets and assigned to individual departments within the management process.

Specification of superior target in partial targets

As mentioned above, the targets of lower levels must contribute to achieving the main target each time. Besides this characteristic, however, they must meet a number of other prerequisites enabling to achieve the target (to fulfil the task) and to check or to evaluate the deviations. One of the most frequently used methods for these purposes is the SMART method; the first letters express the attributes of a good task. These attributes are:

- Specific – Specific and clear formulation of target. In practice, various disturbances appear in the communication, causing subsequently a wrong or only partial understanding of target. If the entity postulating the target does not find out this problem during the assignment, useless work is done very often and the executed activity must be corrected which often leads to the decrease of work effectiveness.
- Measurable – the target shall be measurable, to be able to determine unambiguously when it is met and when not. The measurability is important for controlling, treating the deviations of the implemented performances in comparison with the plan and hereby preventing the failure to achieve the target (Havlíček, 2011). In some cases, it is very difficult to define the measurability, e.g. in intellectual activities, where the quantity is not a relevant indicator. Such activities are e.g. design, scientific work etc.. Professional association may provide general instructions for determining the criteria in these cases.
- Acceptable – Achievability taking into consideration production factors enables to accept a given target. If it is impossible to achieve the target at all or only with a very high risk of failure, a possible change of strategy should be considered.
- Relevant – This parameter expresses, that the target should be relevant and hereby meaningful not only for the target postulating subject but also for the employee who shall achieve it. If the employee does not understand the target, he will be possibly not able to treat unexpected situation not included in the original plan. Moreover achieving meaningful targets motivates employees longing for self-realization to work.
- Time Specific – Without clear agreement, when the task shall be ready, it is impossible to evaluate the effectiveness of work and to follow the performance in long-term view. For these reasons, this parameter is very important for planning.

Maximization of the value for the owner – goal in usual operation of enterprise

As already mentioned above, the enterprise should maximize the value for the owner. This fact is included in EVA indicator (Economic value added). EVA expresses achieving economic profit, i.e. the difference between the revenues and economic expenses. This indicator enables us moreover to compare the performance (rate of

return) of enterprise with functioning of markets and last but not least it includes also the risk component. In the literature, the calculation of this indicator is implemented in several ways. According to Brealey, Myers and Allen (2013)

$$EVA = EBIT * (1 - t) - C * WACC$$

Where: *EVA*   is economic added value,

  EBIT   – profit before interest and tax,

  T   – income tax rate,

  C   – capital provided against payment, (registered capital + long-term bank credits),

  WACC   – weighted average cost of capital.

WACC (weighted average cost of capital) represent the cost of totally invested capital. The cost amount depends on the way of financing the assets and cost of individual sources; the cost of equity are alternative costs (lost profit) and for foreign funds the interest charged by creditors. WACC indicator is calculated as follows:

$$WACC = \frac{E}{C} * r_e + \frac{D}{C} * r_d * (1 - t)$$

where *E*   is registered capital,

  D   – long-term bank credits,

  r_e – alternative cost of registered capital, $(\bar{R}_\iota = r_e)$,

  r_d – foreign funds interests.

Determination of r_e value representing the alternative cost of the equity is very difficult often, as it is lost profit on pre-condition of the same risk rate. Therefore, it is impossible to say simply that if the owner does not invest the registered capital in the company he could acquire several per cent of interest credited to his bank account and for this reason this interest is the value r_e. CAPM model calculated as follows is used for the calculation of alternative cost of the equity:

$$\bar{R}_\iota = r_f + B * E(R_m - r_f)$$

where $\bar{R}_\iota$ is the expected rate of return of share, it is the value r_e for calculation
  WACC,

r_f – risk-free revenue (fixed on the level of interest rate of state bonds),

β – systematic risk (risk following from economic development),

$E(R_m - r_f)$ – bonus for risk,

Unlike this calculation, the Neumaers (2006) take into consideration first of all the equity during the calculation; the resulting value is valid and provides a more reliable evidence to enterprises. The procedure of calculation is as follows:

$$EVA = (ROE - r_e) * E$$

where ROE is rate of return of equity,

      r_e – alternative cost of registered capital,

      E – equity

Unlike the preceding case, alternative costs of the equity are not calculated by means of CAPM module, but in a composed way. Calculation of indicators is as follows:

$$r_e = \frac{WACC * \frac{C}{A} - (1 - t) * \frac{r_d}{D} * \left(\frac{C}{A} * \frac{E}{A}\right)}{\frac{E}{A}}$$

where A are assets,

      E - equity ,

      D - foreign funds,

      r_d - foreign funds interest,

      $WACC$ - weighted average cost of capital

Weighted average cost of capital are set as sum of several interests expressing certain risks associated with entrepreneurial activity – unlike the preceding way where the cost of the equity and foreign funds were averaged based on the amount of individual components. This indicator is calculated as:

$$WACC = r_f + r_{LA} + r_{entreneurial} + r_{FinStab}$$

Where r_f is the risk-free rate,

      r_{LA} function of indicators characterizing the size of enterprise,

$r_{entrepreneurial}$ function of indicators characterizing the creation of ROA (return-on-assets),

$r_{FinStab}$ function of indicators characterizing the relationships between the assets and liabilities.

If we use *EVA* indicator as per Brealey, Myers a Allen (2013) as supreme target, we postulate as the main priority the maximization of value for the shareholders and creditors, as unlike the Neumaiers, also the foreign funds are included by Brealey, Myers and Allen (2013).

The access of the Neumaiers to concept of *EVA* indicator may be expressed by their INFA model. This model is based on the pyramid split of indicators and represents a map of company productivity. Thanks to mutual relationships of individual indicators, a manager may analyse better individual impacts on other components and deduce the total performance of the enterprise. If we compare this model e.g. with the financial analysis, the significant advantage consist in the fact that we do not have to determine the importance of individual groups of indicators but we have results which may be interpreted unambiguously.

According to the Neumaiers (2006), the economic added value may be connected with the internal enterprise bookkeeping and the net current value of the equity (Vochozka 2011). The analysis of the economic added value by means of INFA system is shown on the fig. 1.

Fig. 1 Analysis of economic added value by means of INFA system.
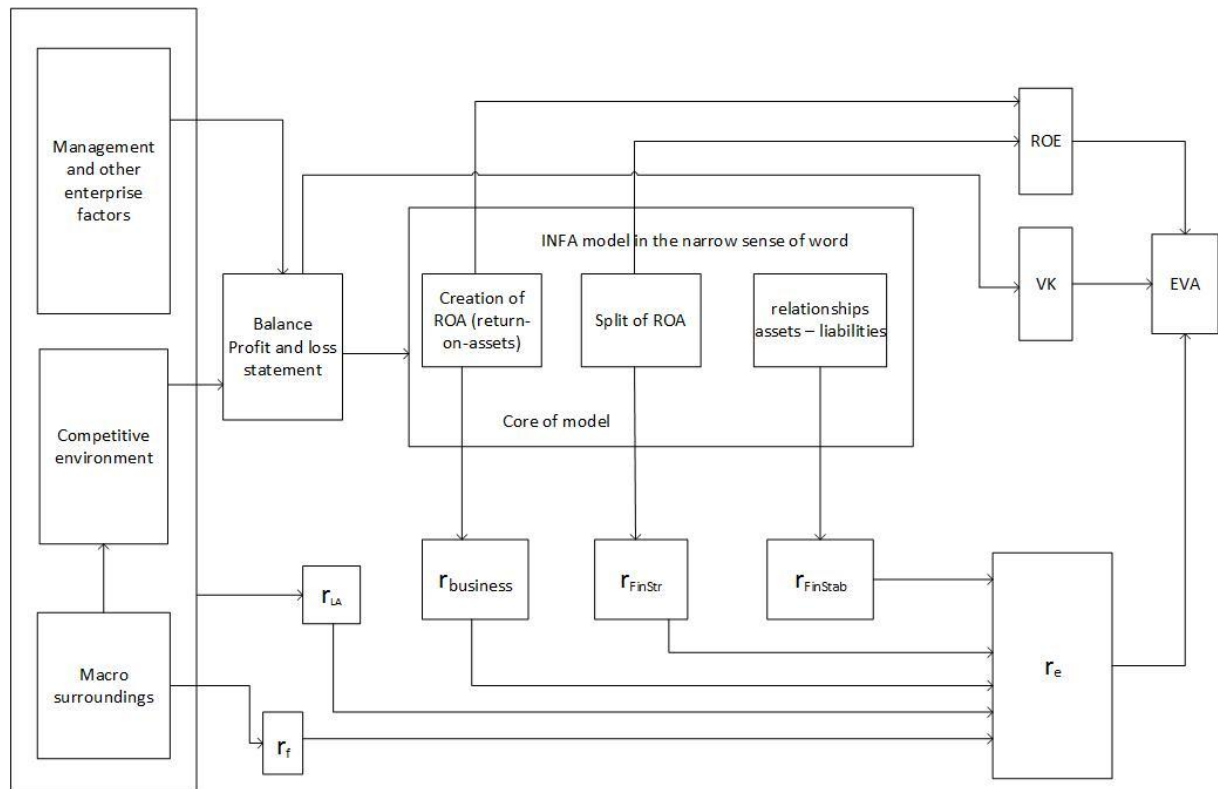
Source: Mrs. Neumaier, I. (2003).

It follows from the picture 1 that the INFA is based on three factors which are return-on-assets (ROA), split of return-on-assets between the owners, provider of foreign funds and the state and the relationship between the assets and liabilities. This core is subsequently enriched by additional indicators from the balance and profit and loss statement and data from the macro and micro surroundings of the enterprise. All these parts are subsequently transferred into the calculation of indicators of economic added value in the form of EVA.

Fig. 2 represents a well-arranged map after the split of formulas. It is visible in this figure how the individual indicators influence the resulting economic added value. The significance of individual influences, i.e. with what priority the given indicator shall be influenced also follows from the map.

Fig 2 Split of ROE indicator
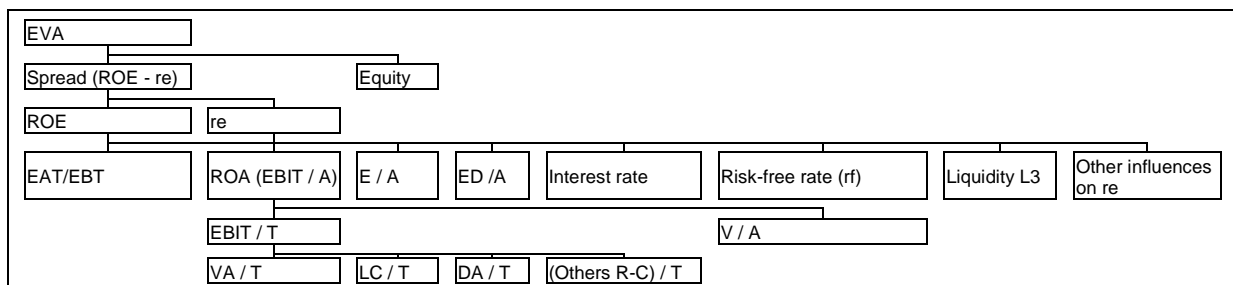
Source: Ministry of Industry and Trade (2012), available at http://www.mpo.cz/cz/infa-cznace-metodika.pdf

Empirical Result

In this part, the practical analysis of the particular company doing business in the building industry (CZNACE F classification as well as the preceding split of OKEČ F) will be carried out. The enterprise achieves profit in the long term view and does business also by means of foreign funds. Company′s data were acquired from financial statements published at www.justice.cz. The year 2009 was selected for the calculation of benchmarking, to be able to state with certainty that the enterprise did not approach to bankruptcy in the certain time. The data to building companies market and risk-free constructions were taken over from the data of the Ministry of Industry and Trade (MPO) and its homepage www.mpo.cz. These data are used by MPO for the calculation of benchmarking model at its homepage www.mpo.cz/cz/infa.html.

As mentioned above, manager′s work is not finished by determination of the supreme target. It is necessary to postulate partial targets to be implemented by particular departments. Hereby we move from strategic to operating targets. Thanks to pyramid split, it is possible to implement quite well this shift.

When analysing the Fig. 2, showing the pyramid split of EVA indicator, we come to the opinion that the enterprise should maximize the value of ROE spread - r_{e}; we cannot, however, influence directly none of these indicators, as these indicators are calculated based on other indicators. These other indicators can be controlled directly by us and for this reason it is easy to transform them into the form of targets and plans following from them.

Focusing on the fig. 2 we can conclude that the enterprise should control first of all the capital structure (proportion of equity and foreign funds), profit (difference between the revenues and expenses), short term liabilities (first of all short term trade liabilities), short-term bank credits, assets (as a whole), inventory, receivables, short-term financial assets, business margin (difference between the revenues from the sold goods and the expenses of sold goods), products and services (revenues from own products and services, change of the state of internal enterprise inventory and activation), consumed purchases (consumed material and services, utilities expenses), wages and salaries, remuneration of board members and cooperative members, social security expenses, depreciations and interest rate. These particular items may be included already into the tactical targets and plans and operative targets following from them. This principle is shows on the picture No. 3.

Fig 3: Principle of levels of individual plans
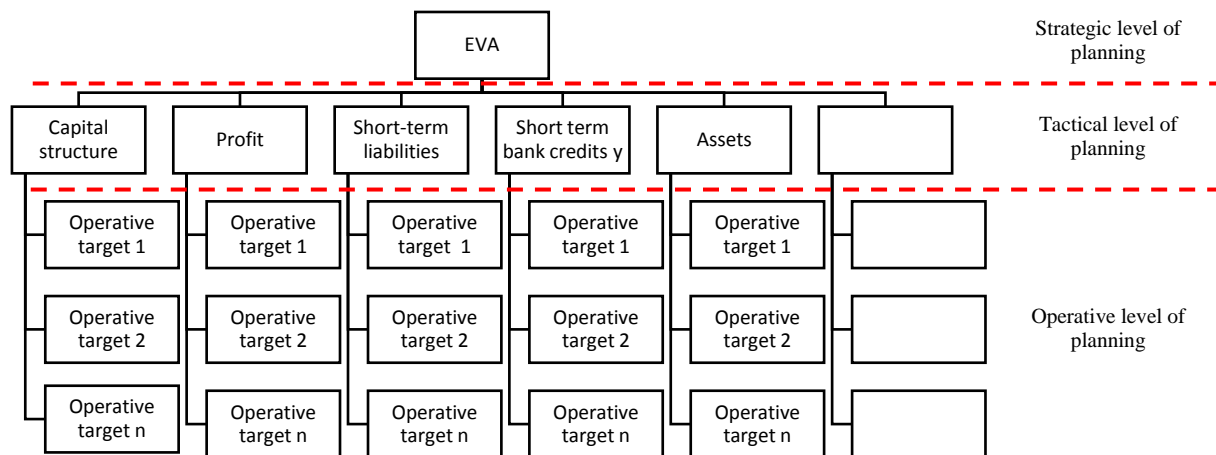
Source: Author's diagram.

As example, we fill in the indicators into the benchmarking system at homepage of MPO www.mpo.cz/cz/infa.html and subsequently the web server will calculate the pyramid split and offers a detailed analysis of the company and the market. In the first stage it is possible to analyse the total split of EVA indicator by means of INFA methods. This analysis is shown in the fig. 4.

Fig. 4 EVA analysis by means of INFA methods.
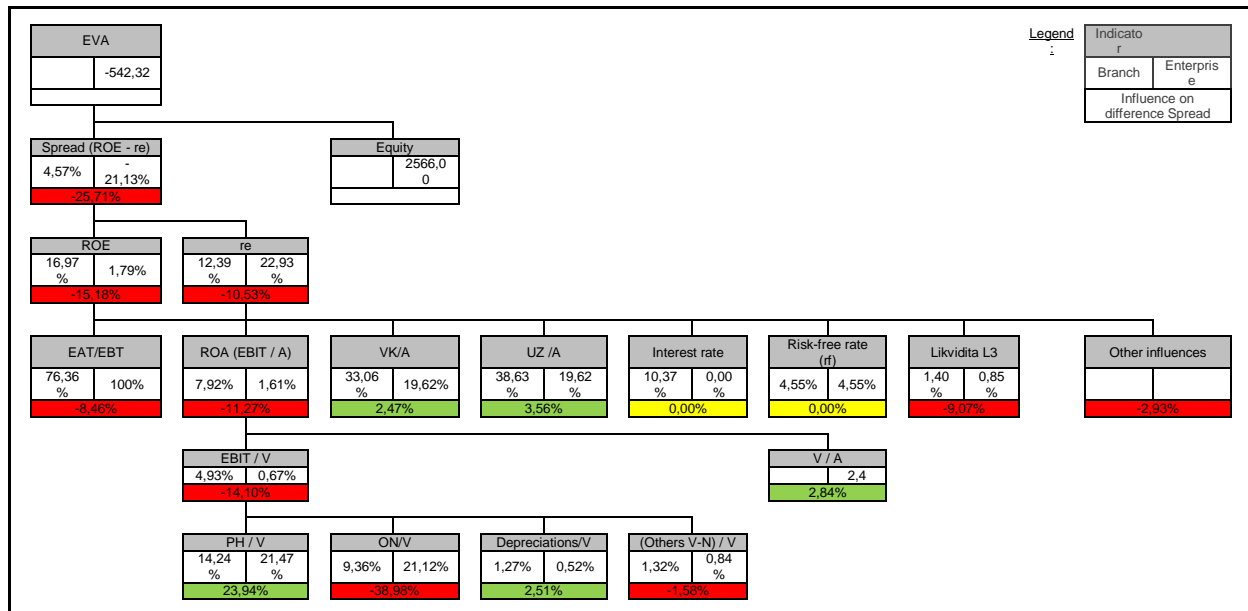
Sources: Author's diagram, based on: http://www.mpo.cz/cz/infa-okec.html

Individual parts of the pyramid in the fig. No. 4 are split to: name of the indicator (e.g. r_e), result of the branch (12,39%), result of the enterprise (22,93%) and influence on the following indicator (-10,53%). The positive values for the enterprise are designated in green colour and negative in the red colour for an easier orientation. It follows from the fig. 4 that the enterprise achieves negative economic added value. The cause is the negative spread amounting 4,57% in the branch and -21,13% in the enterprise. The cause of the negative result consists in the bad value of return of equity *ROE* (16,97% in the branch, 1,79 % in the enterprise). The negative influence of *ROE* participates in the bad spread value with approx. 15 %. Also bad values of r_e (alternative cost of capital) have impact on spread result. In this case, the influence amounts 10% (12,93% in the branch, 22,93% in the company).

As some indicators have impact on *ROE,* as well as on r_e (e.g. *VK/A*), it is possible to perform independent analyses shown on fig. 5 (*ROE*) and 6 (r_e).

Fig. 5 Analysis of return on equity (*ROE*)

Source: Author′s diagram, based on: http://www.mpo.cz/cz/infa-okec.html
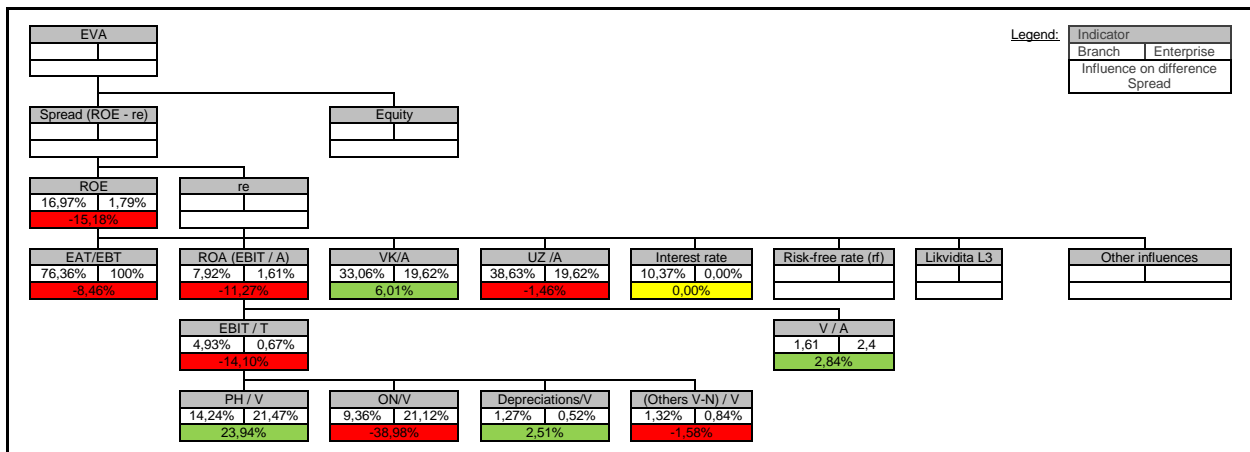
It follows from the fig. 5 that in total 6 indicators participate in the negative value of *ROE*. The highest share represent the personnel expenses in comparison with turnover (*ON/V*). The second indicator participating negatively in the bad value of *ROE* is the profit before tax and interests in ratio to turnover (*EBIT/V*). The third negative indicator is the return-on-assets ROA (*EBIT/A*). Influence of other indicators is as follows: the trading income after tax divided by the trading income before tax (*CZ/profit*) 8,46 %, other revenues minus expenses (*Others V – N)/V*) 1,58 %, sources against payment divided by assets (*UZ/A*) 1,46 %. The following indicators have a positive influence on *ROE*: added value divided by the turnover (*PH/V*) - share of 23,94 %, moreover equity divided by assets (*VK/A*) 6,01 %, revenues divided by assets (*V/A*) 2,84 % and depreciations divided by turnover (*Depreciations/V*).

An independent analysis of the influence of individual components on alternative cost of equity r_e is shown in the fig. 7. This negative influence is most visible in Liquidity L3 with share of 9,07 %, the ratio of equity and assets (*VK/A*) follows with 3,55 %, other influences with 2,93 %. On the contrary, the ratio of sources against payment and assets (*UZ/A*) influences the value positively.
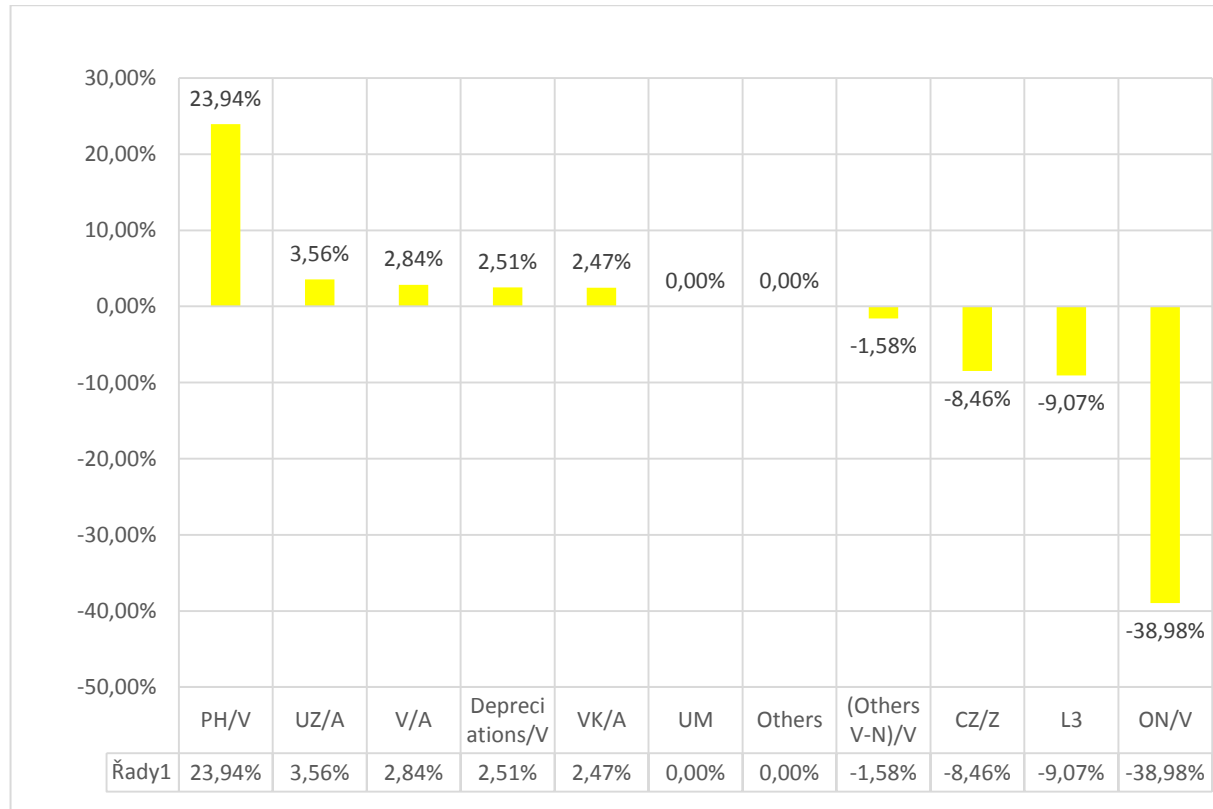
Fig 7: Analysis of alternative cost of capital (*r_e*)

Source: Author′s diagram, based on: http://www.mpo.cz/cz/infa-okec.html
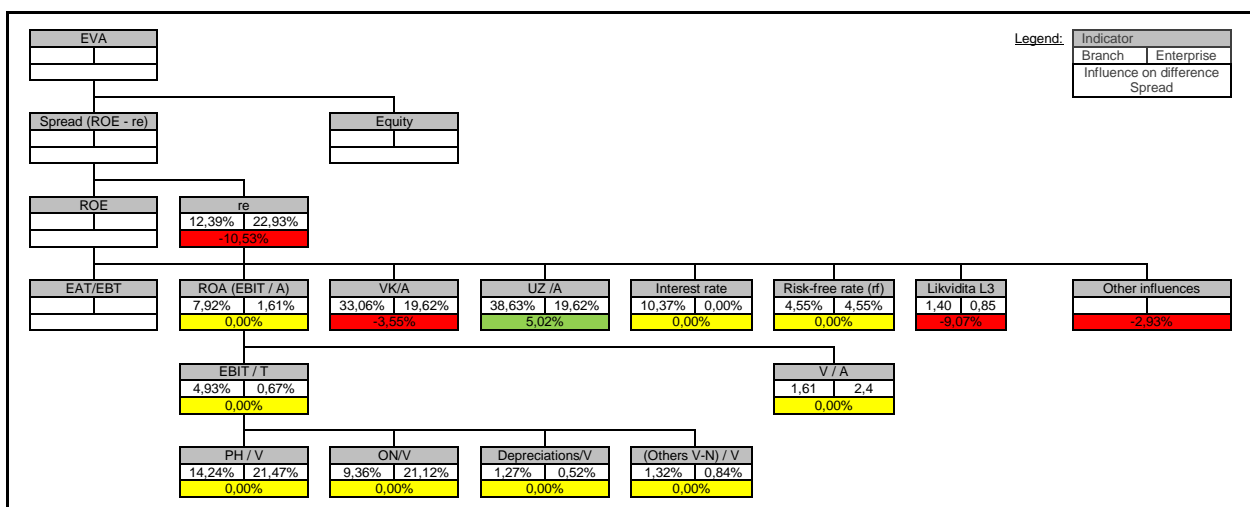
Fig. 8 summarises the impacts of individual components on the negative influence of spread *ROE – re*. This figure may become the base for determining the weaknesses of the company and hereby also operative targets which should be improved as soon as possible.
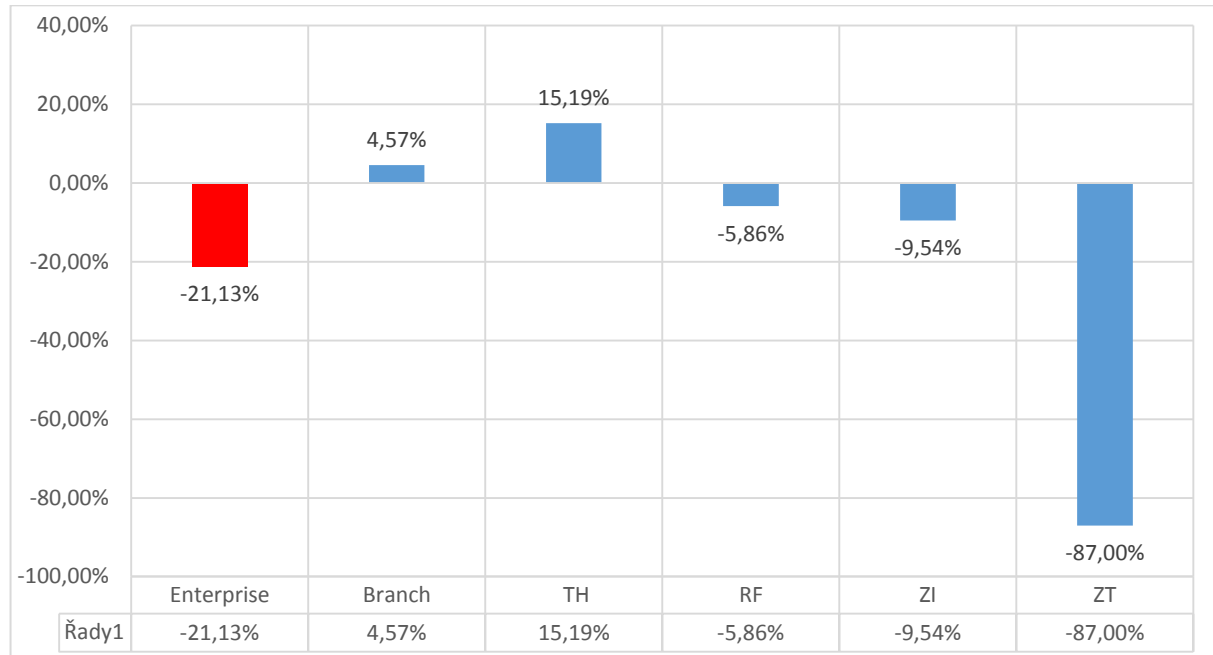
Fig 8: Influences on spread ($ROE – r_e$)

	PH/V	UZ/A	V/A	Depreci ations/V	VK/A	UM	Others	(Others V-N)/V	CZ/Z	L3	ON/V
Řady1	23,94%	3,56%	2,84%	2,51%	2,47%	0,00%	0,00%	-1,58%	-8,46%	-9,07%	-38,98%

Source: Author's diagram, based on: http://www.mpo.cz/cz/infa-okec.html

It follows from the analyses that the company must focus first of all on the decrease of the personnel cost in correlation with revenues. This should have subsequently a positive impact on *EBIT* value which will influence positively the ratio *EBIT/V*. Moreover, a better tax optimization should be achieved as similar companies achieve a better proportion of the gross and net profit. Last but not least the liquidity *L3* should be improved as its value increases considerably the risk which has subsequently the influence on the alternative cost of capital. These measures may be considered as tactical targets because the improvement may be achieved probably within several months.

As for strategic targets (long-term targets), it is suitable to focus on setting the long-term trends and to compare its own activity with the market as well as with the best enterprises achieving the added value for owners. A benchmarking model may serve for this comparison. It is shown in the fig. 9 for the selected enterprise. This comparison was made with enterprises creating the value (positive spread), i.e. *TH*, moreover with enterprises having a negative spread, however, with *ROE* achieving higher values than the risk-free rate r_f, i.e. *RF*, and with enterprises having the positive *ROE* value, which is, however, lower than the risk-free rate r_f, i.e. *ZI*, and with unprofitable enterprises *ZT*.

Fig. 9: Comparison of spread ROE – r_e with the market and individual types of enterprises (*TH, RF, ZI, ZT*)

	Enterprise	Branch	TH	RF	ZI	ZT
Řady1	-21,13%	4,57%	15,19%	-5,86%	-9,54%	-87,00%

Source: Author′s diagram, based on: http://www.mpo.cz/cz/infa-okec.html

The long-term company′s target should be the amount with which the company achieves the positive spread *ROE - r_e*, and spread value around 15 %.

Conclusion

Setting a primary target is the key factor for success of enterprise. This simple target setting is, however, not sufficient. It is necessary that other partial targets follow, the character of which will be maximally beneficially for achieving the primary target. It is also necessary to set the target depending on the situation of the enterprise.

If setting the targets is performed with necessary quality respecting SMART method, the misunderstanding or conflicts is minimized and employees are motivated. This results in the higher company′s performance. If we understand the effectiveness as the proportion of inputs and outputs, then we can state that such company is more effective.

Setting the target in the normal operation is often very intuitive and a number of facts, of which the risk is the most important one, are neglected. It is very difficult for ordinary managers to calculate complicated formulas and to find out necessary data, as e.g. risk-free rates. For these reasons it is recommended to use the tools of the Ministry of Industry and Trade enabling to managers to acquire knowledge about competitors, as well as other important data, to reveal the weaknesses and to compare the own enterprise with the best ones. Also following long-term targets of the enterprise should be based on such comparing analysis.

Literature

BALLOW, J. J., R. BURGMAN a M. J. MOLNAR, 2004. Managing for shareholder value: intangibles, future value and investment decisions. *He Journal of Business Strategy*. 2004, roč. 25, č. 3, s. 26-34. ISSN 02756668.

BREALEY, R. A, S. C MYERS a F. ALLEN. *Principles of corporate finance*. 11th ed. New York: McGraw-Hill Irwin, 2013, p. cm. ISBN 00-780-3476-0.

WALTERS, D. The implications of shareholder value planning and management for logistics decision making. *International Journal of Physical Distribution & Logistics Management*. 1999, roč. 29, č. 4, s. 240-258. ISSN 09600035.

KISLINGEROVÁ, E. *Manažerské finance*. 3. vyd. Praha: C. H. Beck, 2010, xxxviii, 811 s. Beckova edice ekonomie. ISBN 978-80-7400-194-9.

Ministerstvo průmyslu a obchodu (2012). *Metodika výpočtu* [online]. [Cit. 13. 9. 2014]. Dostupné z WWW: <http://www.mpo.cz/cz/infa-cznace-metodika.pdf>.

Ministerstvo spravedlnosti (2014). *Veřejný rejstřík* [online]. [Cit. 13. 9. 2014]. Dostupné z WWW: < http://portal.justice.cz/Justice2/Uvod/uvod.aspx>.

NEUMAIEROVÁ, I. (1998). *Řízení hodnoty*. Praha : Vysoká škola ekonomická v Praze. Fakulta podnikohospodářská, 1998. 137 s. ISBN 80-7079-921-8.

NEUMAIEROVÁ, I. (2003). *Aplikace řízení hodnoty.* Praha : Vysoká škola ekonomická v Praze. Fakulta podnikohospodářská, 2003. 95 s. ISBN 80-245-0536-3.

NEUMAIEROVÁ, I., NEUMAIER, I. (2006). *Proč se ujal index IN a nikoli pyramidový systém ukazatelů INFA* [online]. [Cit. 3. 1. 2010]. Dostupné z WWW: <http://www.ekonomikaamanagement.cz/getFile.php?fileKey=CEJVB0NUCAdV CEZIU1VHB0MIUUMEBAVDVFVWQ1VUBAVGQ1VCXgQFBERIREJLYg==(=cz >.

VOCHOZKA, M. *Metody komplexního hodnocení podniku*. 1. vyd. Praha: Grada Publishing, 2011, 246 s. Finance (Grada). ISBN 978-80-247-3647-1.

VOCHOZKA, M.; MULAČ, P. Bankrotní modely v podmínkách České republiky. Littera Scripta, 2011, roc. 4, č. 1, s. 1-10. ISSN 1802-503X.