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Integrated multicriteria assessment of the company's finance management

The study is dedicated to the principles and technique of integrated efficiency assessment of company's finance management based on a set of essential financial indices that developed on the basis of a multiple criteria evaluation methodology oriented to the *MCDM* system. This technique is focused on allowing the various weights of primary and partially criteria in the common evaluation system.

Keywords: entrepreneurship competitiveness, company finance management, financial indices, multiple criteria evaluation, *SAW* method.

Straipsnyje nagrinėjami įmonės finansų valdymo veiksmingumo integruoto vertinimo, taikant daugiakriterius metodus, principai; pateikiami vertinimo modeliai, parengti esminių (identifikuotų) santykinių finansinių rodiklių pagrindu. Vertinant atsižvelgiama į bendrosios vertinimo sistemos pirminių bei iš dalies integruotų kriterijų įtakos reikšmingumą.

Raktiniai žodžiai: verslo konkurencingumas, įmonės finansų valdymas, finansiniai rodikliai, daugiakriteris vertinimas, *SAW* metodas.

JEL Classifications: C82/L52/O20.

Introduction

The economic advancement in the newly EU countries must be oriented to the development of entrepreneurship and growth of entrepreneurship competitiveness based on national priorities. The significance of the investigation and examination of the indigenous entrepreneurship development level as well as future trends predicting are important for incorporating them into the macroeconomic strategy-making when validating the strategic decisions of economic development and its ex-post situation. It is also relevant for the business entities. As a result, it requires of quick reacting of developing management systems to the changing internal and external environment. When constructing the competitive strategy for the companies, the macro solutions for business (foremost economic and social environment, legal preconditions) must be taken into account, and internal resources must be effectively used for growth of the competitiveness. Simultaneously the investigation

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of interconnections of country's economic development priorities, entrepreneurship competitive advantages, on the one hand, and particular company's performance results, on the other hand, is relevant. The impact of the strategic management decisions is especially important for identifying and evaluating, also generalizing of the performance results. The approach to the processes above may be defined as an important object of scientific research.

However, there are still not enough of studies dedicated to the problem of the complex evaluation of company's activity as well as its finance management, and the adequate quantitative evaluation methodology is still not applied in this field. The **purpose** of the analytical research is:

• to compile a set of primary criteria describing the company's finance management efficiency dimension;

• to create main integrated assessment principles as well as multiple criteria evaluation models;

• to approve the promising technique for the case of Lithuania's milk manufacturing company and determine total index for this case.

The study is **dedicated** to the main principles and techniques of integrated efficiency assessment of company's finance management based on a set of essential financial indices developed on the basis of a multiple criteria evaluation methodology oriented to the *MCDM* system. The analytical *research results* consist in the constructing of the analytical backgrounds for determining the overall finance management efficiency dimension. When orienting to such *MCDM* methods as *SAW, COPRAS, TOPSIS*, the adequate pillars of primary evaluation criteria, reflecting the essential financial indicators of company's

performance, were compiled as a basis for integrated assessment.

There is a two-stage assessment system developed: at the first stage, primary evaluation criteria have been described and examined, the pillars of essential (identified) financial indices have been constructed. The performed analysis of mentioned above methods reveals that antecedence must be given for applying the *SAW* method when the case evaluation of the state of finance management for some specific enterprises was fulfilled. So, the integrated assessment technique for determining the pillar indices, also an overall efficiency index using the *SAW* method is proposed. The oneness of this technique lies in the applicability of different criteria significance parameters and weights of partially integrated criteria. The adequate computer-generated assessment process can be applied when simulating the different company's performance alternatives and when reasoning of company's strategic marketing decisions.

The research methods: a systemic review and generalization of scientific publications, multi-aspect analysis of compound criteria of company's finance management efficiency, multiple criteria evaluation by *SAW* method. The research *result* consists in the creating of main principles for determining overall company's financial management efficiency dimension, based on multicriteria assessment technique.

Literature review

The separate significant factors (such as *goods or services, competitiveness, marketing strategy, diversification,* innovations, *production and export of high-tech goods,* etc.*)* mostly influencing the firm's working

effectiveness are analyzed. Therefore, it is important to identify and evaluate the influence of clusterization level on the competitiveness in the modern service-based economies. It must be emphasized that clusters, depending on the phase of their growth and development, exercise the increasing influence over business organizations, as well as their competitive abilities. In recent years, the considerable debates on the role of marketing in competitive strategy were continuing. The researches contribute to the strategic marketing theory and practice by developing, refining and validating the measures of entrepreneurship, marketing capabilities, organizational innovation and sustainable competitive advantage (SCA) constructs. Some papers were oriented to a study of the marketing role in innovation-based competitive strategy, also to the establishment of capabilities and accumulation of dominant advantages, appliance of their totality (Fleisher, 2003; Zahra et al., 2006; Geoff et al., 2009).

K. Kriščiūnas and J. Greblikaitė (2007) analyzed the factors influencing the modernization of enterprises; they highlighted the *composite determinants*, such as progressiveness, knowledge generation and usage, innovativeness, competitiveness, dynamism and business benefits creating social value. So, the development of intellectual capital becomes especially important factor of the innovativeness of the contemporary SME's: such factors as applied innovations and investments into patents, new management solutions and similar have to be taken into account. SMEs in Lithuania with innovative activity and the results showing their innovative actions are about at medium level between the EU countries; sometimes their significances are above the average. Besides, the

corporate social responsibility (CSR) in the competitive strategy is revealed as a benefit of high priority. On the other hand, as noted by the authors, the SMEs are less innovative than big enterprises, and the general level of innovations in Lithuania is not enough high.

Recently, the development of self-concept of CSR, which includes all product development, production and delivery cycle processes and related environmental, social, financial management, and ethical aspects, was demonstrated. Thus social responsibility (sensitivity) of a conscious company voluntarily assume the additional responsibilities to improve business practices, marketing approaches, the introduction of modern human resource management technologies, the use of natural and financial resources. The developing of its strategic business plans must provide adequate harmonization and orientation of the essential financial flows (Iturrioz et al., 2009).

Z. Ventoura (2011) has found that capital structure and the rational use of funds may be considered as firms' strategic variables for their impact on firms' profitability but previous studies have used financial variables as explanatory, and their results have shown that the impact of these variables on firms' profitability is not always clear cut. In present investigation, a panel data method was applied for estimation of the impact of debt-to-equity ratio and investment on firms' profitability (the simple linear regression form expresses the estimated model). Return on equity was selected to measure the profitability because it is considered as the best profitability index when financial variables are taken into consideration as explanatory. The positive and statistically significant impact of both debt-to-equity ratio and investment level on firms' profitability leads to

the conclusion that the selection of a low debt-to-equity ratio, which is due to the fact that either capital increase and investment activity has a very short gestation period, or that capital accumulation of past profits used for self-financing, has a positive impact on return on equity. This result is related to the consideration of some investigated manufacturing firms.

J. Mackevičius (2009) has separated some groups of relative financial indicators, namely groups of profitability, liquidity, financial management efficiency and capital market indicators. He has proposed such groups of relative financial indicators to encompass the investigation of joint-stock companies as: profitability indicators; liquidity indicators; finance structure indicators; asset turnover indicators; market value indicators.

When analyzing in detail the methods for assessing the efficiency of a company's financial and operating performance, D. E. Logue (2009) has noted the measurement of long-term solvency used in assessing the firm's ability to meet interest and principal payments on long-term debt and similar obligations as they become due. If a firm is profitable (the best indicator of long-term solvency of a firm's ability to generate profits over a period of years) it will either generate sufficient funds from operations or obtain needed funds from creditors and owners. Such measures of profitability as debt ratios and the numbers of times that interest charges earned may be indicated. There are several variations of the debt ratio, but one most commonly used form is the long-term debt ratio. It reports the portion of a firm's long-term capital that is furnished by debt holders. By calculation of this ratio, total noncurrent liabilities are divided by the sum of total noncurrent liabilities, minority interest in consolidated subsidiaries and total shareholders' equity. To calculate another common indicator – the debt-to-equity ratio, total liabilities (current and noncurrent) are divided by total equities.

Well-known horizontal and vertical analysis is useful when investigating the financial statements of a company by simplest way. DuPont analysis is oriented to the extended investigation of a company's return on equity. It concludes that a company can earn a high return on equity if it earns a high net profit margin, uses effectively its assets to generate more sales and/or has a high financial leverage. A comprehensive set of financial indices was discussed also in scientific literature (Kotane, Kuzmina-Merlino, 2012). Other authors highlighted that both management control and performance efficiency evaluation (financial and non-financial results) issues must be integrated (Harrison et al., 2012).

R. Ginevičius et al. (2010) offer the company's integrated competitive strategy development principles for an oligopolistic market situation. Their essence – reasoning of partial competitive strategies that have significant influence over the company's strategic development and performance efficiency by focusing on the internal capabilities and allowing the external environmental factors. The parameters of a general competitive strategy can be established on the basis of multiple criteria evaluation principles. The application procedure of weighting of the partial competitive strategies is estimated. The effectiveness of the approach is proposed to evaluate according to the projected impact on essential indicators of the company's performance results. Thus, the simulation of the strategic alternative solutions is possible by the results of their impact on the financial performance indicators of a company.

The use of a multicriteria analysis

method is proposed to assess the condition of company (for example, insurance company) in two stages, i.e. for estimation and explaining the performance effectiveness. At first stage, the use of this method helps to assess the condition while considering simultaneously a set of financial criteria. At second stage, a regression analysis is used; also the influence of company-specific and country-specific attributes on the overall measure of performance was examined. As found the authors, macroeconomic conditions such as GDP growth, inflation and income inequality are the most robust predictors of performance. At the time, other country-specific characteristics that relate to the institutional environment and financial or economic freedom do not appear to matter (Doumpos et al., 2012).

As mentioned by I. T. Lopes (2013), monitoring of the sustainability performance indicators, associated with the existing financial management system, is an important step in making the effective decisions at a corporate level. By designing the system of sustainable development, some important guidelines have been drawn, such as follows: the indicators should be useful both for internal and external stakeholders; they should be built based on internal and external initiatives; and existing indicators should be widely used in strategic decision making. Nowadays, companies (as well as listed companies) usually monitor some key performance indicators in their management systems. A set of metrics (financial and non-financial) is required for measuring the performance in complex. A balanced scorecard approach has been followed in company that translates a company's competitive strategy into a coherent set of performance measures. The key performance indicators used to monitor the structural blocks of sustainability and directly tied to relevant internal initiatives also were presented.

However, up to date we do not have the acceptable technique for integrated evaluation of a whole of financial indices (ratios) of the investigated company.

Multicriteria assessment principles and technique

The main assessment principles may be based on a conceptual approach to complex evaluation of efficiency of socio-economic systems depending from many parameters and characteristics of development (Žvirblis, Buračas, 2012). Besides, it is necessary to constitute the sophisticated analytical and methodological tools to use adequate quantitative evaluation method for the particular purpose. The essence of developed principles foremost consists in the quantitative assessment of a whole of the indicated typical primary indices selected adequately to a situation of company performance. The developed assessment technique was backed-up on the consecutive procedures:

- identification of essential evaluation criteria (i.e., financial management efficiency indices) and allocation by appropriate pillars;

- establishment of the pillar indices (as partially integrated criteria) taking into account a relative impact significance of each primary financial management efficiency index;

- determination of the general measure – financial management efficiency index – taking into account the different weights of each pillar;

- modeling of alternative variants with account of examination tasks.

The effective decision making methods

that support multiple criteria decisions (so-called *MCDM* system) have appeared in the last decade. First of all, as the multiple criteria evaluation methods, *SAW* (Simple Additive Weighting), *COPRAS* (Complex Proportional Assessment) and *TOPSIS* (Technique for Order Preference by Similarity to Ideal Solution) methods can be mentioned (Peldschus, 2007; Ginevičius et al., 2008).

The choice of *SAW* method is grounded by the certitude that these methods are suitable in case whereas maximizing criteria are included. The normalization procedure of quantitative criteria values must be performed. Besides, the significance parameters of primary criteria are taken into account; also they may be differentiated according to their influence to generalized measure. The sum of significance parameters of the essential factors, determining generalized criterion, must be equal to 1 (or 100 %). So, this approach first of all requires the exclusion of criteria adequate to the present situation and having some level of significance out of their potential totality as a whole. This is due to the identification of significant factors, as well as with their initial qualitative analysis. Not detailing the identification procedure of methods used, we can only point out that this is an important step in evaluation. The outcome of procedure is the formation of complex of most important criteria grounding evaluation procedures in further (Ginevičius et al., 2010).

The essence underlying the method *COPRAS* (that is suitable when both maximizing and minimizing criteria are included) is as follow: the estimate value of the *j*-th alternative Z_j is directly proportional to the effect produced by maximizing criteria S_{+j} and inversely proportional to the sum of the weighted normalized values of minimizing criteria – the component S_{-j}

(Zavadskas, Turskis, 2011). The impact of maximized and minimized criteria on the final result is assessed individually by *COPRAS* method. This is a fundamental difference of this approach from the *SAW* method.

When applying the *TOPSIS* method (it determines a solution with the shortest distance to the ideal solution and the greatest distance from the negative-ideal solution), a vector normalization is applicable and several alternatives are compared and evaluated by rank ordering of alternatives (Antuchevičienė et al., 2011). The multiple criteria method *VIKOR* (Multicriteria Optimization and Compromise Solution) is based on selecting from a set of alternatives in the presence of conflicting criteria by linear normalization and measurement of distance to best hypothetic alternative. The extended *VIKOR* method's ranking is obtained through comparison of interval numbers and by doing the comparisons between intervals.

Looking further on the complex evaluation of the problem perspective, it is appropriate to focus on the *objective function* method, although adequate objective function setting is often problematic. The formation of utility functions of multiple attributes, of course, is a difficult task, so often the aggregation methods are applied, i.e., the utility function of multiple features is split into partial utility functions. After they are as a basis for further arrangement of common utility function with multiple attributes. This makes possible to simplify the solution algorithm (of course, only under certain specified conditions, evaluation).

The promising principles of an efficiency assessment of corporate finance management were developed by applying the *SAW* method and constructing two pillars of essential financial indices as a

The pillars of financial indices

A name of a pillar	The financial indices in a pillar
1. Pillar (*A*) of financial indices	1.1. Gross margin of profitability
	1.2. Net margin of profitability
	1.3 Return on assets (ROA)
	1.4. Return on investment (ROI)
	1.5. Sales growth rate
	1.6. Stock turnover ratio
	1.7. Receivable turnover ratio
	1.8. Stock dividend
	1.9. Other indices (for the case)
2. Pillar (*B*) of financial indices	2.1. Liquidity ratio (cash to asset ratio)
	2.2. Coverage ratio
	2.3. Solvency ratio
	2.4. Cash flows equilibrium
	2.5. Cash flow to price ratio
	2.6. Cash to asset ratio
	2.7. Price earnings ratio
	2.8. Capitalization ratio
	2.9. Debt ratio
	2.10. Other indices (for the case)

system of evaluation criteria. The *SAW* method, as shows initial analysis, has antecedence, whereas a state of financial management in any particular company was investigated (Žvirblis, Buračas, 2010). Together it should be noted that description of these pillars can draw attention to the 5-8 most important (identified) conflicting criteria. The expanded typical pillars of financial indices (i.e., evaluation criteria) are presented in Table 1.

Firstly, the *SAW* multiple criteria method may be applied to estimate the pillar index *A(I)* (as first partially integrated criterion in the complex evaluation process), by means when only maximizing criteria are included into a set, and the following background model may be employed:

$$A(I) = \sum_{i=1}^{i=r} a_i A_i ; \sum_{i=1}^{i=r} a_i = 1, \qquad (1)$$

where, A_i – normalized value of primary criterion (sales growth rate, margin of profitability, return on assets, return on investment, etc.); a_i – the significance parameter of a direct impact of primary criterion A_i on the pillar index $A(I)$; r – number of primary criteria, determining the pillar index $A(I)$.

Analogous way, the integral index *B(I)* of the pillar *B* (as second partially integrated criterion) may be defined on basis of a model:

$$B(I) = \sum_{i=1}^{i=n} b_i B_i ; \sum_{i=1}^{i=n} b_i = 1, \qquad (2)$$

where, B_i – the significance parameter of a direct impact of primary criterion B_i (coverage ratio, solvency ratio, etc.) on the index $B(I)$; n – number of primary criteria, determining the pillar index $B(I)$.

The primary criteria must be transformed into the dimensionless (comparable) expression when applying the indicated above normalization procedure using well-known formulas (Podvezko, 2011). On

purpose to include some minimizing criteria (debt ratio, etc.) their values must be transformed into maximizing (adequate formulas can see also in Podvezko, 2011). The suggested assessment technique supposes the expert evaluation of criteria significance and the weights of pillars with determining the concordance coefficient W and the Pearson's chi-square test – the concordance coefficient significance parameter χ^2 for the achievement of reliability of expert examination data (Kendall, 1979).

In the case when the pillars were compiled on basis not only financial indices having maximizing nature but also indices that are minimizing in nature (it is expedient to compile adequate one of pillars), the *COPRAS* method has a priority application. Besides, this method is suitable when alternative variants (in the case the target group of competitive companies) are investigated. The models may be adopted on the basis of background expression of model that would be the following (Podvezko, 2011):

$$K_j = S_{+j} + \frac{S_{-\min} \sum_{j=1}^{n} S_{-j}}{S_{-j} \sum_{j=1}^{n} \frac{S_{-\min}}{S_{-j}}}; \qquad (3)$$

where, K_j – the complex evaluated value of j-th alternative; S_{+j} and S_{-j} – the sums of normalized values of maximizing and minimizing primary evaluation criteria respectively.

The value of the overall index $F(I)$ (overall score) may be determined on the basis of the previously calculated indices $A(I)$ and $B(I)$ allowing of the weights of the partially integrated criteria:

$$F(I) = k_a A(I) + k_b B(I); \qquad (4)$$

where, k_a and k_b – weights (determined by expert ranking procedure) of the partially integrated criteria $A(I)$ and $B(I)$ respectively describing the degree of their impact on the overall index $F(I)$; the sum of weights must be equal to 100 %.
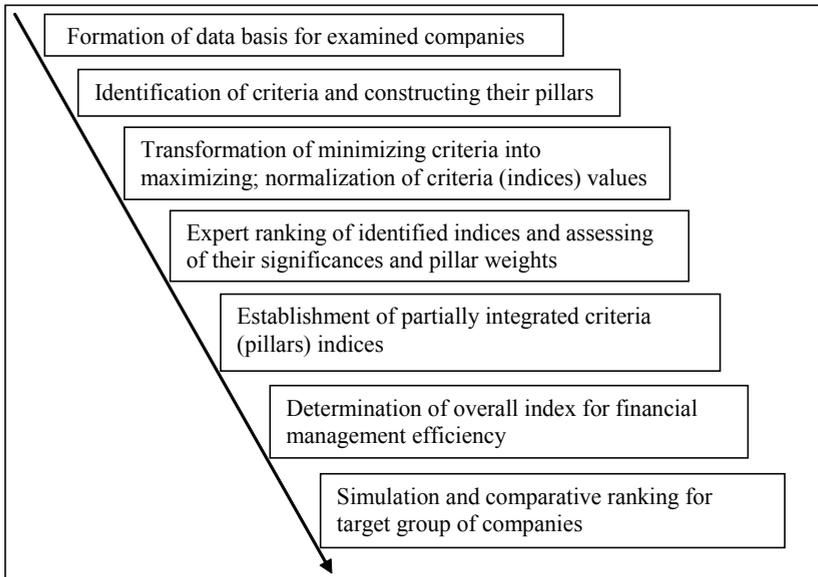
Formation of data basis for examined companies

Identification of criteria and constructing their pillars

Transformation of minimizing criteria into maximizing; normalization of criteria (indices) values

Expert ranking of identified indices and assessing of their significances and pillar weights

Establishment of partially integrated criteria (pillars) indices

Determination of overall index for financial management efficiency

Simulation and comparative ranking for target group of companies

Fig. 1. **Typical algorithm scheme of a multiple criteria assessment process**

The importance of the proposed models is in the using of different, not predetermined, significances of primary criteria and in the adequate differentiation of pillar weights.

As we can see, such approach supposes hierarchical assessment system to be developed (Figure 1). On the first stage, primary evaluation criteria have been examined, the pillars of essential (identified) financial indices have been configured. The initial investigation reveals that the priority is in applying of the *SAW* method when the aim is to evaluate the state of finance management (its efficiency) in a particular company. So, the integrated assessment technique for determining the pillar indices as well as overall financial management efficiency index (using the *SAW* method) is proposed. The normalization procedure of primary financial index values must be also fulfilled in the case.

Of course, if both quantitative criteria and composite (mostly qualitative) essential financial management efficiency indicators are expedient to encompass into pillars, the last-mentioned could be assessed quantifiable by expert way in the case (when 10 point system has been applied, 10 point is adequate to non-dimensional score 1). The proposed algorithm (as can be seen in Figure 1) allows the simulation and comparative ranking for target group of companies.

Case assessment for Lithuanian milk manufacturing company

The presented assessment technique was approved when assessing the financial management efficiency for specialized milk manufacturing companies. It was performed for *Vilkyskiu pienine* company (VLP) listed in OMX Vilnius Exchange on basis

Table 2

The estimation of overall financial management efficiency index by *SAW* method for company VLP in 2012

Pillars of identified financial indices	Symbol	Normalized value	Significance parameter	Pillar weight
Pillar A				40 %
Gross margin of profitability	A_1	0.77	a=0.26	
Return on assets (ROA)	A_2	0.71	a=0.22	
Return on investment	A_3	0.66	a= 0.19	
Sales growth ratio	A_4	0.64	a=0.18	
Stock dividend	A_5	0.81	a=0.15	
Pillar A index	A(I)	0.72		
Pillar B				60 %
Liquidity ratio (cash to asset ratio)	B_1	0.70	b=0.27	
Coverage ratio	B_2	0.71	b=0.24	
Solvency ratio	B_3	0.66	b=0.19	
Cash flows equilibrium	B_4	0.61	b=0.16	
Price earnings ratio	B_5	0.74	b=0.14	
Pillar B index	B(I)	0.69		
Overall index	***F(I)***	**0.70**		100 %

Note: composed by the authors with account of expert team evaluations of significance parameters.
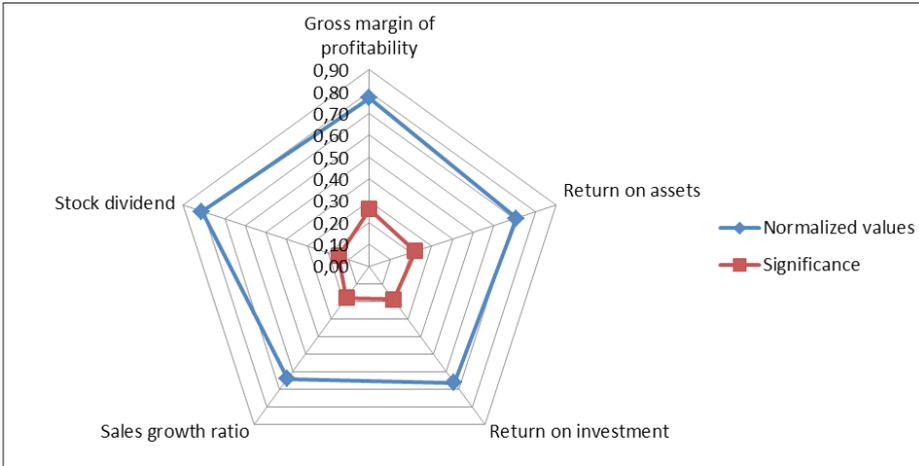
Fig. 2. **The distribution of normalized overall financial management efficiency parameters for pillar A of company VLP in 2012**

Note: composed by the authors with account of expert team evaluations of significance parameters.

current financial performance data as criteria of financial efficiency, thus covering the adequate two pillars of identified (by expert ranking method) financial indices (Table 2). The significance coefficients for all identified indices and weights of the pillars were assessed by expert way; weight of pillar *A* was evaluated as equal to 40 %, while the weight of the pillar *B* was determined as 60 %.

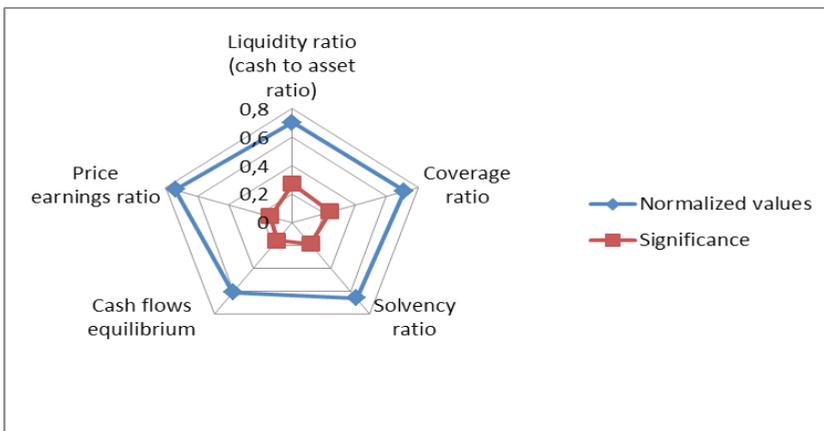The distribution of normalized overall financial management efficiency

Fig. 3. **The distribution of normalized overall financial management efficiency parameters for pillar B of company VLP in 2012**

Note: composed by the authors with account of expert team evaluations of significance parameters.

parameters for both pillars A and B of company VLP in 2012 is visible more expressively if to compare them on the Figure 2 and Figure 3. The charts look very similar but the levels of normalized values and the significance parameters are different in both cases.

It was noted that the pillar indices as some partially integrated criteria resulting from a number of identified financial indices may be also evaluated using the relevant (even different) methods (in the case, *SAW* and *COPRAS*) for determining each of them.

It was found that overall index *F(I)* for company VLP is equal to 0.70. The overall index determined by using promising technique may be the basis for comparative ranking of the target group of companies-competitors according to criteria of finance management efficiency.

An algorithm of computer-generated assessment process can be applied when modeling with account of different business conditions and investigating 2-3 last year's period. The application of such integrated assessment technique is significant also for making and reasoning the strategic decisions of manufacturing companies.

The outcome of our research is the main principles for determining overall financial management efficiency dimension, essentially based on multicriteria assessment technique.

Conclusions

The entrepreneurship development also its transformation problems as well as interconnections of country's macroeconomic situation with the particular company's performance results are widely discussed in scientific research works. However, it is not enough of studies dedicated to the complex assessment technique of company's finance management efficiency; the adequate quantitative evaluation methodology is still not applied in this field.

Multicriteria assessment methods are well suited to determine the complex dimension of finance management efficiency for increasing company's competitive strategy, perceived as an integral whole of financial indicators having different importance parameters for this dimension. The main principles and technique of integrated efficiency assessment may be also based on a set of identified financial indices selected into task pillars and developed on basis of a multiple criteria evaluation methodology oriented to the *MCDM* system.

The proposed technique is based on the *SAW* method (whereas a state of financial management in particular company is assessed) with forming the hierarchical assessment system. Foremost the indices of each pillar have been established and, in turn, the generalized measure – the overall relative efficiency index of finance management – has been determined, applying promising assessment models. The oneness of this technique lies in the applicability of different significance parameters of criteria and weights within task pillars.

We noted that the *COPRAS* method may be indicated as priority when the pillars of criteria must be compiled on basis not only of financial indices having maximizing nature but also with account of prevailing indices that are minimized (for one of the pillars). Besides, this method is recommended when of alternative variants (a discrete number) are investigated.

The performed investigation of Lithuania's milk manufacturers and assessment of financial management efficiency

for *Vilkyskiu pienine* company in accordance with measurement technique reasoned in this study for 2012 (analogous assessment may be purposeful for 2-3 last years period) shown that overall (relative) index was scored 0.70 (as theoretically max score may be equal to 1). The promising technique (an algorithm of computer-generated assessment process) may be recommended to apply when modeling the different finance management solutions. It is significant also for making and reasoning of company's strategic decisions and at the same time for a growth of the competitiveness.

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INTEGRUOTAS DAUGIAKRITERIS ĮMONĖS FINANSŲ VALDYMO VERTINIMAS

S a n t r a u k a

Straipsnyje pateikiami įmonės finansų valdymo integruoto vertinimo taikant daugiakriterius metodus principai bei modeliai, sukurti esminių (identifikuotų) santykinių finansinių rodiklių pagrindu. Problemos aktualumą lemia tai, kad, kaip rodo atlikta mokslinės literatūros analizė, daugiausia nagrinėjami atskirų finansinio valdymo rodiklių bei jų grupių vertinimo klausimai. Tuo tarpu itin trūksta darbų, skirtų nustatyti bendrąjį įmonės finansinio valdymo rezultatyvumą, orientuojantis į apibendrinančiąją šio rezultatyvumo dimensiją.

Analitinio tyrimo uždaviniai yra: suformuoti vertinimo kriterijų, apibrėžiančių apibendrinančiąją įmonės finansų valdymo rezultatyvumo dimensiją, visumą, sukurti integruoto vertinimo principus ir atitinkamus daugiakriterio vertinimo modelius, taip pat atlikti atvejo vertinimą, taip aprobuojant teorinį įdirbį. Taikomi metodai gali būti įvardyti: mokslinės literatūros šaltinių įmonės finansų valdymo rezultatyvumo kompleksinio vertinimo kriterijų klausimais susisteminimas, taikytinų daugiakriterių vertinimo metodų analizė, *SAW* metodas.

Darbo rezultatus sudaro parengti įmonės finansų valdymo efektyvumą lemiančių kriterijų integravimo į bendrąją dimensiją principai ir sukurti vertinimo modeliai, adaptuoti tokių plačiau žinomų metodų, kaip *SAW* ir *COPRAS* taikymui.

Darbe suformuota dviejų lygių vertinimo sistema: pirmajame etape išskiriami pirminiai vertinimo kriterijai ir jų pagrindu suformuojamos esminių (identifikuotų) finansinių rodiklių grupės (ramsčiai) bei pagal daugiakriterio vertinimo modelius nustatomi šių grupių, kaip iš dalies integruotų kriterijų, indeksai. Antrajame lygyje, remiantis šiais indeksais pagal sukurtą bendrojo įvertinimo modelį, nustatomas apibendrinantis įmonės finansų valdymo efektyvumo indeksas.

Atliktos *SAW, COPRAS* ir *TOPSIS* metodų analizės pagrindu parodytas *SAW* metodo pranašumas, jį taikant tam tikros įmonės finansų valdymo situacijai įvertinti, konkrečiai, minimų kriterijų grupių indeksų ir bendrojo efektyvumo indekso integruoto vertinimo metodikai plėtoti. Šio daugiakriterio metodo išskirtinumą sudaro galimybė taikyti skirtingus pirminių vertinimo kriterijų reikšmingumo parametrus, taip pat iš dalies integruotų kriterijų įtakos bendrajai dimensijai svorius.

Siekiant užsibrėžtų tikslų, apimti tiek pirminiai, tiek ir sudėtiniai esminiai finansinio valdymo efektyvumo kriterijai, kurių dauguma yra santykiniai finansiniai rodikliai. Kaip svarbiausieji gali būti nurodyti turto pelningumas, investicijų grąža, pardavimų augimo rodiklis, likvidumo rodiklis, padengimo koeficientas, pinigų srautų subalansuotumas. Pabrėžtina, kad, atliekant integruotą vertinimą, panaudojamos normalizuotos (bedimensinės) šių finansinių rodiklių reikšmės. Sudėtiniai rodikliai šiuo atveju galėtų būti įvertinami kiekybiškai ekspertiniu būdu. Taip pat pabrėžtina, kad identifikuotų kriterijų įtakos reikšmingumo parametrai gali būti nustatomi panaudojant ekspertinio reitingavimo metodą. Tokiu būdu, grupių A ir B indeksų pagrindu bei atsižvelgiant į jų svorį (pagal įtaką apibendrinančiam dydžiui) ir taikant *SAW* metodą nustatomas bendrasis santykinis įmonės finansų valdymo efektyvumo indeksas.

Taikant siūlomus integruoto vertinimo principus bei modelius, atliktas Vilkyškių pieno perdirbimo bendrovės finansinio valdymo efektyvumo tyrimas bei integruotas įvertinimas, taip aprobuojant teorinį įdirbį. Akcentuotina, kad šio metodo pranašumas yra galimybė adaptuoti vertinimo kriterijų visumą konkrečiai situacijai bei atitinkamų kriterijų svorius bendrojoje vertinimo sistemoje ir taip modeliuoti jų pokyčių poveikį. Atkreiptas dėmesys į kompiuterizuoto vertinimo proceso pritaikomumo galimybes imituojant įvairias įmonės veiklos alternatyvas bei pagrindžiant imonių strateginius vadybos sprendimus.