USE OF FINANCIAL AND NON-FINANCIAL INDICATORS IN EVALUATION OF COMPANY'S PERFORMANCE

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Abstract: Dimensions for the measurement of the company's performance include financial and non-financial indicators. Many authors have carried out researches on financial and non-financial indicators, though the problems of their practical application exist, since there is no single united approach for measurement and assessment of both financial and non-financial indicators. This research is based on the former theoretical and practical researches by the author on the application of the financial and non-financial indicators to measure the company's performance.

The aim of this research was to develop a model for the small companies' performance evaluation, based on the opinions of the owners, managers, and top executives of the small companies in Latvia. The Internet survey was used as a research method, applying a simple random sampling. The results of the research indicated that there are 17 indicators, including 10 financial and 7 non-financial indicators, which could be used for the evaluation of the small companies' performance and for modelling the company's net turnover.

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Introduction

To characterize the results of the company's operations, the term "performance" is used in foreign research and study literature. Lebas (1995) considers that the performance is never objective; it is only a way of defining where one wants to go.

''Performance'' is an interesting concept (Berger & Luckmann, 1966). ''Performance'' is not an objective reality out there somewhere waiting to be measured and evaluated. ''Performance'' is a socially constructed reality. Laitinen (2002) defines the performance as an ability of an object to produce results in a dimension determined a priori, in relation to a target. Thus, it is necessary to have, first, an object whose performance is to be considered; second, a dimension in which one is interested; and, third, a set target for the result. Folan, Browne, & Jagdev (2007) supposes that the performance is governed by the following three priorities: (1) it is always made as per the deemed relevance of an entity to a particular environment (thus, we commonly assess a company on its impact, for example, in a particular market…); (2) it is always made with a relevant objective in mind (thus, we commonly assess a company as per some set future vision on what the company wants to achieve…); (3) it is always reduced to relevant, recognizable characteristics (thus, we commonly assess a company on competitive parameters, such as cost, quality, time, etc., and more harder-to-measure competitive priorities, such as flexibility, or sustainability, because they are relevant and recognizable, etc.).

It could be concluded that the company's performance can be described as an ability of the company to represent itself to the outside, using the performance indicators that characterize activities and achievements of the company in relation to its goals, thus creating an overall opinion about the company.

Interest on the issues of the performance measurement and management has increased during the last twenty years (Taticchi, Tonelli, & Cagnazzo, 2010; Yadav & Sagar, 2013).

The analysis of the researches on the frameworks of the performance measurement (Neely, Gregory, & Platts, 2005; Folan & Browne, 2005; Folan et al., 2007; Taticchi et al., 2010; Watts & McNair–Connolly, 2012; Susilawati, Tan, Bell, & Sarwar, 2013) indicates that the dimensions of the company's performance measurement include financial and non-financial indicators. Uyar (2010) believes that the

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performance measurement tools could be classified as *traditional* including financial measures and *new approaches* including non-financial measures along with financial ones. The financial and non-financial indicators used in the researches on the evaluation of the company's performance reveal their diversity. In the evaluation of the companies' non-financial and/or financial performance, various number of the indicators have been used: 3 non-financial and 3 financial indicators (Zeng, Meng, Yin, Tam, & Sun, 2010), 11 non-financial and 5 financial indicators (Fernandes, Raja, & Whalley, 2006), 6 non-financial and 2 financial indicators (Krumwiede, Swain, Thornock, & Eggett, 2013), 9 non-financial indicators (Coram, Mock, & Monroe, 2011), 12 non-financial and 4 financial indicators (Cardinaels & Van Veen-Dirks, 2010), 5 non-financial and 5 financial indicators (Prieto & Revilla, 2006), 14 non-financial indicators (Hoque, 2005), 23 non-financial and 8 financial indicators (Phillips & Louvieris, 2005), 10 non-financial and 2 financial indicators (Craig & Moores, 2005), 12 financial indicators (Wen, Chen, & Chen, 2008), etc. Lack of a united approach to the use of financial and non-financial indicators for evaluation of the company's financial and/or non-financial performance leads to the problem of their practical application. The author has carried out an assessment of the financial and non-financial indicators that are used in the evaluation of financial and non-financial performance of the companies, and as a result has established the sets of financial and non-financial indicators that are used in the practical research.

The performance measurements include not only assessment of the individual impact of the financial and non-financial indicators on the company's performance, but also determination of the joint impact of the financial and non-financial indicators. The small and medium-sized companies' performance evaluation model in a form of mathematical expression is developed (Sousa, Aspinwall, & Rodrigues, 2006), based on the replies provided by 48 respondents regarding various aspects of the company's performance evaluation system using Likert scale, where "1" represents "Strongly agree" and "5" – "Strongly disagree." Performance measurement model for the agriculture companies is developed (Harif, Hoe, & Ahmad, 2013), based on the interviews with 27 respondents. Main and supplementing financial and non-financial indicators are defined without integrating them in one combined model in a form of mathematical relationship.

The researches on the companies' performance measurement using financial and non-financial indicators have not been carried out in Latvia; that defines the timely character of the research topic.

Within the framework of the current research, considering the limited scope of the research, the use of financial and non-financial indicators for evaluation of the company's performance was carried out on the base of the companies' survey on the significance of the financial and non-financial indicators in the evaluation of the companies' performance and impact of the financial and non-financial indicators on changes of the company's net turnover.

The aim of the research: to develop the small companies' performance evaluation model based on the opinions of the owners, managers, and top executives of the Latvian small companies.

In order to accomplish the aim of the research the following objectives were established:

- to evaluate an impact of the assessment of the significance of financial and non-financial indicators on the company's net turnover;
- to describe the developed small companies' performance evaluation model and to provide its interpretation.

Research subject: financial and non-financial indicators.

The research methods used in the research: information analysis and synthesis, logically constructive method, methods of data classification, comparative method.

Materials and methods

The current practical research is based on the theoretical studies by the author on the use of the financial and non-financial indicators in the evaluation of the business performance (Kotane & Kuzmina-Merlino, 2011; 2012a). To approbate the theoretical statements, the author has used the Internet survey applying the random sampling method and has surveyed 208 Latvian companies in August and September 2012. The Latvian business persons and top-level employees of the Latvian companies, who are the users of the internal information making various operational and financial decisions, were surveyed: owners and top managers of the companies, heads of the structural units, heads, and employees of financial departments. The aim of the survey was to establish the system of indicators for the evaluation of the business performance, which could be used by the managers to evaluate in an integrated way and to control efficiently the financial position of the company in the circumstances of the growing competition. The system of indicators would include both the set of specific financial indicators and non-financial indicators that would demonstrate the internal potential and future development possibilities of the company.

The results of the former researches by the author (Kotane, 2012b; 2013) have indicated the differences in the assessment of the significance of financial and non-financial indicators by small enterprises (10-49 employees) and micro enterprises (1-9 employees); therefore, the performance evaluation model was developed for small enterprises, based on the replies provided by 60 respondents representing small companies.

Table 1 shows that, among the respondents of the survey, 47.1% are business owners (35.0% - among the respondents representing the small companies).

Table 1: Characteristics of the respondents and the companies surveyed, %
("All" – all companies, "Small" –small companies)

Position of the respondent in the company	all	small	Main business sector	all	small
Company owners	47.1	35.0	(A) Agriculture, forestry and fishing	10.1	15.0
Company managers	24.5	30.0	(B) Mining and quarrying	5.8	5.0
Company unit manager	4.3	10.0	(C) Manufacturing	15.9	30.0
Company financial department staff	12.5	10.0	(F) Construction	8.7	10.0
Company financial department managers	11.5	15.0	(G) Wholesale and retail trade; repair of motor vehicles and motorcycles	24.5	20.0
Average number of employees	all	small	(S) Other services activities	14.9	-
1 - 9 employees	55.3	-	(M) Professional, research and technical activities	5.8	5.0
10 - 49 employees	28.8	100.0			
50 - 249 employees	14.4	-	Others	14.4	15.0
More than 250 employees	1.4	-	Year of foundation	all	small
Turnover in the last accounting year	all	small	Before 1991	10.1	10.0
Less than 10,000 LVL	13.9	-	1991 - 1993	21.6	25.0

10,001 - 70,000 LVL	30.3	10.0		1994 - 2000	23.1	30.0
70,001 - 200,000 LVL	18.3	15.0		2001 - 2007	18.8	30.0
200,001 - 500,000 LVL	8.7	10.0		2007 - 2010	16.8	5.0
More than 500,000 LVL	28.8	65.0		After 2010	9.6	-

Source: Author

To define the category of the enterprise (micro, small, medium-sized or large), the criteria of average number of employees in the company were used. In accordance with the average number of employees, the largest share of the surveyed companies were those with the average number of employees from 1 to 9 (55.3%). In accordance with the profile of the main business sector, the most of all surveyed companies and the most of the small companies, in particular, represented wholesale and retail trade, repairs of cars and motorcycles, and manufacturing. By the year of establishment, most of the companies in general and most of small companies, in particular, were those established between 1994 and 2000. By turnover in the last accounting year, the largest number of companies were those with net turnover from 10 001 to 70 000 LVL (until 01.01.2014. 1 EUR = 0.702804 LVL) (30.3%).

In general, the respondents of the surveyed companies have various statuses, enterprises of various basic sectors of industry and foundation years, different number of employees and volume of net turnover are represented.

The five point Likert scale with a range from 1 (“not important”) to 5 (“highly important”) was used in the questionnaire to evaluate the importance of the financial and non-financial indicators for the evaluation of the business performance.

The companies’ net turnover in the last accounting year was used as a final value and assessments of the significance of financial and non-financial indicators were used as factorial values in development of the small companies’ performance measurement model, based on the multiple variable model. The model is created using the assessment, or, the significance of a financial or non-financial indicator and the company’s net turnover in the accounting year. The categorised values were assigned to the net turnover; the data was analysed by the groups of the net turnover.

The author has carried out the linear and multiple regression analysis between the company’s net turnover in the accounting year and financial and/or non-financial indicators. The regression coefficients obtained were used to create an equation. In the case of the linear regression, the inverse regression equation was formulated, where the value to be calculated is a value of financial and/or non-financial indicators. In the case of multiple regression, the multiple regression equation was formulated, which could be used to measure performance of small companies. The result was considered to be statistically significant if $p < 0.05$ or $p < 5.00 \times 10^{-2}$ (Liepa, 1974). If $p<0.05$ or 5.00×10^{-2}, the statistically valid regression model is obtained. Evaluation ($^{\#}$) of the prognoses in the Tables 1-3 are provided in the case the regression model is statistically valid: ↑ - increase of the significance of financial/ non-financial indicators increases the company’s net turnover; ↓ - decrease of the significance of financial/ non-financial indicators increases the company’s net turnover. Designations in the regression equations are the following: y – the company’s net turnover in the accounting year, x – a particular financial/ non-financial indicator.

Designations of financial indicators used further in the text: net turnover (F1), cash-flow report (F2), current ratio (F3), asset turnover, times (F4), accounts receivable turnover (days/ times) (F5), inventory turnover (days/ times) (F6), payables turnover (days/ times) (F7), total debt ratio in the balance (F8), debt-to-equity ratio (F9), gross profitability (F10), return on assets (ROA) (F11), return

on equity (ROE) (F12), return on sales (ROS) (F13), return on investments (ROI) (F14), EBITDA profitability (F15), DSCR (debt service coverage ratio) (F16).

Designations of non-financial indicators used further in the text: level of consumers satisfaction (NF1), increase of number of consumers (NF2), consumers loyalty (NF3), quality of the products / services (NF4), motivated employees (NF5), loyal employees (NF6), the level of employees satisfaction (NF7), development of new products/ services (NF8), training of employees (NF9), company reputation (NF10), market share (NF11).

Designations of factor groups used further in the text: solvency and profitability (F-SP), efficiency of assets use and financial stability (F-ES), evaluation of investment possibilities (F-I), role and influence of consumers (NF-C), role and influence of employees (NF-E).

The results of the survey were processed and analysed using SPSS and Excel software.

Impact of individual indicators of financial and non-financial groups on the company's net turnover

The author has performed the evaluation of the particular impact of each financial and non-financial indicator on the company's net turnover in the accounting year (Table 2).

Obtained results indicate that both financial (*F8, F11, F12, F13, F14,* and *F15)* and non-financial (*NF5, NG8,* and *NF9)*indicators have impact on the company's net turnover in the accounting year. To increase the company's net turnover, it is necessary to increase the significance of the particular indicator (*F11, F12, F13, F14, NF5,* and *NF9)* in the company. In the case of indicators *F8 and NF8,* it is necessary to reduce their significance in order to increase the company's net turnover in the accounting year.

On the basis of the results of the regression analysis, it could be concluded that six financial indicators *F8*, *F11*, *F12*, *F13*, *F14*, *F15* and three non-financial indicators *NF5*, *NF8*, *NF9* could be used separately to analyse the company's net turnover in the accounting year and its future planning.

Table 2: The results of analysis of impact of the individual indicators of statistically related factor groups of the small companies on the company's net turnover in the accounting year

Regression indicators / **Indicator and factor group**		**R^2**	**R^2 P***	**Constant**	**B**	**β**	**Inversed regression equation**	**Description of prognoses#**
Financial indicators								
F1	F-ES	0.00	0.66	4.06	0.07	0.06	-	-
F2	F-SP	0.00	0.83	4.16	0.04	0.03	-	-
F3	F-SP	0,03	0.20	3.48	0.24	0.17	-	-
F4	F-SP	0.00	0.93	4.25	0.02	0.01	-	-
F5	F-ES	0.00	0.71	4.12	0.05	0.05	-	-
F6	F-ES	0.02	0.27	4.77	-0.14	-0.14	-	-
F7	F-ES	0.01	0.36	3.88	0.13	0.12	-	-
F8	**F-ES**	0.07	3.67×10^{-2}	5.42	-0.34	-0.27	x = (y-5.42)/-0.34	↓
F9	F-SP	0.01	0.53	4.03	0.08	0.08	-	-
F10	F-SP	0.07	0.05	2.57	0.47	0.26	-	-
F11	**F-SP**	0.23	9.76×10^{-5}	2.63	0.50	0.48	x = (y-2.63)/0.50	↑

F12	**F-SP**	0.45	3.78×10^{-9}	1.68	0.83	0.67	x = (y-1.68)/0.83	↑
F13	**F-SP**	0.07	4.62×10^{-2}	3.34	0.28	0.26	x = (y-3.34)/0.28	↑
F14	**F-I**	0.07	4.13×10^{-2}	3.47	0.27	0.26	x = (y-3.47)/0.27	↑
F15	**F-I**	0.15	2.36×10^{-3}	3.14	0.38	0.39	x = (y-3.14)/0.38	↑
F16	F-I	0.04	0.11	3.54	0.26	0.21	-	-
Non-financial indicators								
NF1	NF-C	0.04	0.15	5.00	-0.19	-0.19	-	-
NF2	NF-C	0.00	0.83	4.16	0.04	0.03	-	-
NF3	NF-C	0.00	0.64	4.03	0.07	0.06	-	-
NF4	NF-C	0.00	1.00	4.30	0.00	0.00	-	-
NF5	**NF-E**	0.12	6.19×10^{-3}	2.00	0.59	0.35	x = (y-2.00)/0.59	↑
NF6	NF-E	0.01	0.54	4.70	-0.10	-0.08	-	-
NF7	NF-E	0.06	0.05	2.92	0.37	0.25	-	-
NF8	**NF-E**	0.12	7.29×10^{-3}	6.48	-0.58	-0.34	x = (y-6.48)/-0.58	↓
NF9	**NF-E**	0.16	1.43×10^{-3}	2.50	0.55	0.40	x = (y-2.50)/0.55	↑
NF10	NF-C	0.05	0.08	5.44	-0.29	-0.23	-	-
NF11	NF-C	0.00	0.72	4.50	-0.05	-0.05	-	-

Source: Author

Impact of the evaluation of significance of the financial and non-financial indicators on the company's net turnover

Multiple regression is used to link all the statistically significant indicators in one equation (Table 3) hence it could be observed that all of them jointly explain 85.0% of formation of the net turnover. If separate impact of each indicator is considered, it is possible to see that, in the case of financial indicators *F8* and *F15*, their impact on the increase of the company's net turnover changes in comparison with individual impact (Table 2).

Table 3: Multiple regression analysis between the evaluation of the significance of financial and non-financial indicators and the company's net turnover in the accounting year.

Indicator	**Regression indicators**					**Description of prognoses[#]**
	R^2	**R^2 P***	**B**	**β**	**P**	
Constant	0.85	8.53×10^{-18}	2.51		9.58×10^{-4}	
F8			0.10	0.08	0.52	↑
F11			0.80	0.76	4.27×10^{-6}	↑
F12			0.55	0.45	7.07×10^{-6}	↑
F13			-0.76	-0.70	9.82×10^{-7}	↓
F14			0.14	0.14	0.26	↑
F15			-0.09	-0.09	0.37	↓
NF5			0.45	0.26	4.82×10^{-2}	↑
NF8			-0.91	-0.54	3.00×10^{-6}	↓
NF9			0.37	0.27	4.28×10^{-3}	↑

Source: Author

If an individual or particular impact of the financial indicator *F8* on the company's net turnover is assessed without changing impact of other indicators, the significance of *F8* should be reduced to increase the company's net turnover in the accounting year. In the multiple regression equation, the impact of the financial indicator *F8* on the company's net turnover is considerably lower (3.4 times); moreover, the impact is direct: increasing of *F8* significance will lead to increase of the company's net turnover.

If individual or particular impact of the financial indicator *F15* on the company's net turnover is assessed without changing impact of other indicators, the significance of the financial indicator *F15* should be increased to increase the company's net turnover in the accounting year. In the multiple regression equation, the significance of the financial indicators *F15* should be reduced to enhance increase of the company's net turnover.

Taking into account that, in accordance with the results of the concordance analysis, only 2 (*F13* and *NF5*) out of 9 financial and non-financial indicators depicted in the Table 3 have received the highest evaluation by the respondents, the author has added indicators of the financial and non-financial groups, ranged by the respondents to the top five places in the financial or non-financial range, in the Table 4. In the result of calculations (Table 4), the author concludes that these financial and non-financial indicators in general explain 100% of the company's net turnover in the accounting year.

Table 4: Multiple regression analysis between the evaluation of the significance of financial and non-financial indicators and the company's net turnover in the accounting year.

Indicator (range by concordance)	**Regression indicators**					**Description of prognoses[#]**
	R^2	**R^2 P***	**B**	**β**	**P**	
Constant	1,00	$1{,}30 \times 10^{-43}$	-2.23		7.82×10^{-9}	
F1 (2-4)			0.43	0.37	1.36×10^{-20}	↑
F2 (1)			-0.47	-0.37	1.36×10^{-19}	↓
F5 (2-4)			-0.07	-0.07	3.21×10^{-2}	↓
F8			0.91	0.73	1.67×10^{-22}	↑
F10 (2-4)			-0,90	-0.49	6.78×10^{-18}	↓
F11			1.51	1.44	2.20×10^{-21}	↑
F12			-0.22	-0.18	1.08×10^{-5}	↓
F13 (5)			-0.13	-0.12	2.35×10^{-3}	↓
F14			0.05	0.05	0.11	↑
F15			0.01	0.01	0.69	↑
NF3 (5)			-0.17	-0.15	9.93×10^{-7}	↓
NF4 (1–2)			-0.24	-0.19	5.19×10^{-5}	↓
NF5 (3–4)			3.36	1.99	3.93×10^{-27}	↑
NF6 (3–4)			-2.86	-2.25	6.21×10^{-26}	↓
NF8			0.10	0.06	0.09	↑
NF9			0.05	0.04	0.34	↑
NF10 (1–2)			0.59	0.47	4.88×10^{-21}	↑

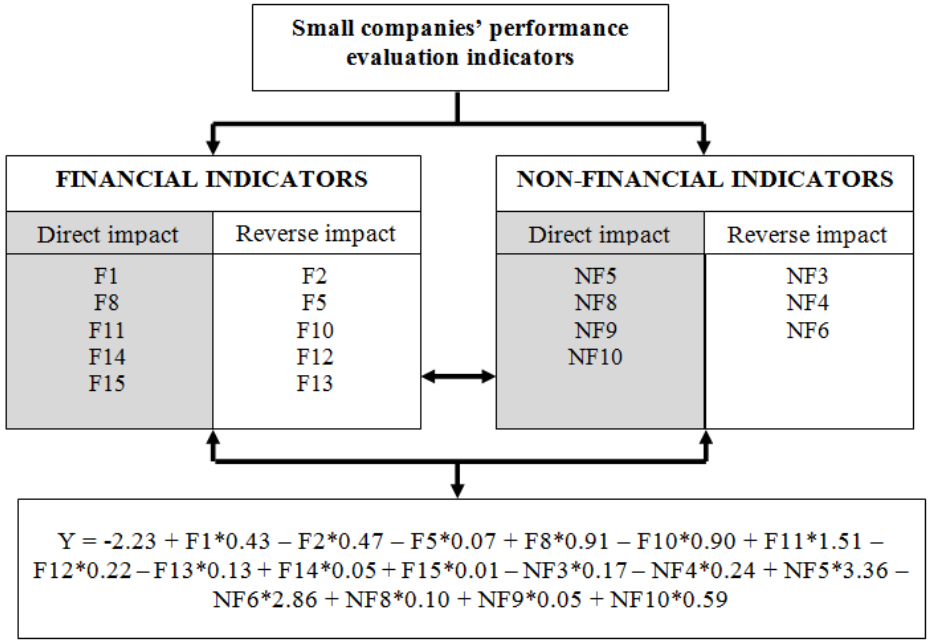
Source: Author

Interpretation of the small companies' business efficiency evaluation model

If the final value is the company's net turnover in the accounting year, the small companies' performance evaluation could be carried out using ten financial indicators and seven non-financial indicators (See Figure 1). The direct impact of the company's indicators supposes to increase the significance of these indicators, and the reverse impact assumes to reduce the significance of these indicators in order to increase the company's net turnover.

On the basis of the description of the coefficient B and prognoses provided in Table 4 and Figure 1, it could be observed that the direct impact exists, therefore, the significance of the following indicators - financial indicators *F1, F8, F11, F14,* and *F15* and non-financial indicators *NF5, NF8, NF9,* and *NF10* - should be increased in order to increase the company's net turnover. The reverse impact of the indicators on the company's net turnover exists and, therefore, the significance of the following indicators - financial indicators *F2, F5, F10, F12,* and *F13* and non-financial indicators *NF3, NF4,* and *NF6* – should be reduced to increase the company's net turnover.

Figure 1: The small companies' performance evaluation model using the evaluation of the significance of the financial and non-financial indicators



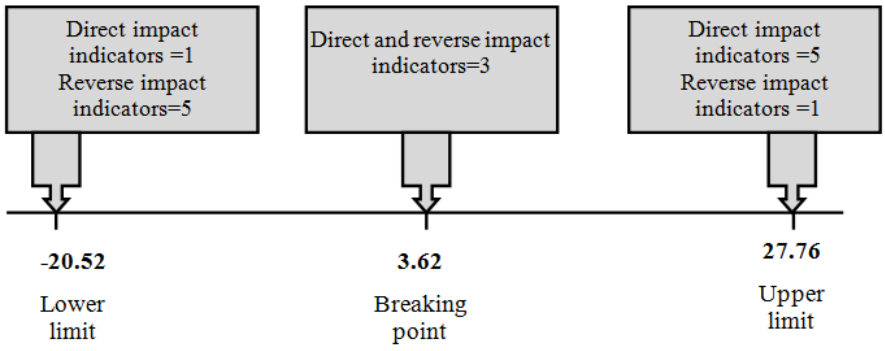
Source: Author

The author, using Table 4, has created a regression equation and tested it practically obtaining Y lower and upper theoretically possible value that could be described as the lower and the upper limits (See: Figure 2).

Y = 27.6 indicates that all the indicators of the direct impact are evaluated as extremely significant (5) and all indicators of the reverse impact are evaluated as insignificant (1). In the particular case, the evaluation of the significance of indicators creates preconditions for the increase of the company's net turnover. If, otherwise, Y = -20.52, it shows that all the indicators of the direct impact are evaluated as insignificant (1) and all the indicators of the reverse impact—as extremely significant (5). The particular situation demonstrates that evaluation of the indicators' significance does not enhance increase of the company's net turnover; therefore, it would be necessary to review the evaluation of the indicators' significance. If Y = 3.62, all indicators are evaluated as having average significance,

there is no special attention paid to the particular indicator, hence, the company's net turnover will not change.

Figure 2: Theoretical limits of the small companies' performance evaluation model



Source: Author

Conclusion

The author proposes to use seventeen indicators for the small companies' performance evaluation and the company's net turnover modelling. These include ten financial indicators: (F1), cash-flow report (F2), accounts receivable turnover (days/times) (F5), total debt ratio in the balance (F8), gross profitability (F10), return on assets (ROA) (F11), return on equity (ROE) (F12), return on sales (ROS) (F13), return on investments (ROI) (F14), EBITDA profitability (F15), and seven non-financial indicators: consumers loyalty (NF3), quality of the products/services (NF4), motivated employees (NF5), loyal employees (NF6), development of new products/services (NF8), training of employees (NF9), and company's reputation (NF10).

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