ENTERPRISE RESTRUCTURING EVALUATION

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Abstract. *The paper analyses the evaluation model of enterprise restructuring programmes, specifying the techniques of its application in the context of the following proposed criteria: the market share; financial capacity; business development potential; product competitiveness; productivity.*

The benefit of application of this model in restructuring enterprises is revealed. The greater possibilities to rationalize the restructuring process as well as the use of human, material and financial potentials, to develop potentials of an enterprise and thus to increase its competitiveness are shown.

Keywords. *Enterprise restructuring, All-round evaluation, Product competitiveness; Enterprise productivity, Market share, Business development, Financial capacity.*

1. Introduction

Enterprise restructuring processes taking place in Lithuania are related to the transformation and integration processes of the economic system of the country with the economic space of Europe and the entire world. Increasing competition among business subjects in the domestic and foreign markets stipulates restructuring of enterprises. Enterprises strive to rationalize the usage of human, material, financial resources. The latter decade of the country economic system transformation has shown that restructuring is a complicated task for enterprises and is related to a great risk due to its essentiality and extent. To solve this task, it is necessary to improve the management of enterprise restructuring processes in a complex manner so as to rationalize the management of resources and increase competitiveness. One of the essential tasks thereof determining the purposeful management of the restructuring programmes is the objective evaluation of the restructuring solutions and the results of their implementation.

The topic of enterprise restructuring has been analyzed in various aspects by Ansoff H.I. (Ansoff, 1984), Rock M. L. (Rock, 1997), Greiner L. E. (Greiner, 1998), Bower J. L. (Bower, 2001), Bosas A. (Bosas, 2002), Bivainis

and others (Bivainis, 2002, 2003). Scientific research on the enterprise restructuring accomplished in the country is fragmentary. There was no research allowing to evaluate the restructuring solutions and their implementation results enabling to manage the process effectively in a comprehensive and complex manner.

In this context, *the Purpose of the Research* was – to create a model for the evaluation of the programmes of enterprise restructuring, which would allow the enterprises to determine the possibilities to rationalize the management of the restructuring process, the use of human, material and financial resources and to develop the possibilities of the better use of the enterprises potential and to increase its competitiveness.

The Object of the Research is management of restructuring programmes as a radical and rational way of reconstruction of enterprises in order to increase the competitiveness of the letter. We can state that in any enterprise the restructuring strategy is unique. First of all, it is one of the main requirements for each effective strategy (Rajan, Zingales, 2001). Second, it is determined by a variety of external political, economic, social, technological factors which create prerequisites for choosing a set of those possible ones from the plenitude with respect to any restructuring case (Andrews, 1999; Beer, Nohria, 2000; Bivainis, Tamošiūnas, 2003).

Methods of the investigations are comparative analysis of the problem, synthesis, modeling.

2. Model for the Evaluation of Enterprise Restructuring Benefit

No specific methods for the evaluation of the effectiveness of the enterprise restructuring programmes were found in the literature studied. It was observed that often ordinary methods for the analysis and evaluation of the effectiveness (the concept of competitiveness is often used thereof) of the enterprise activity are applied. In this respect, a vast system of indicators are presented in the literature (Crum, 1998; Altman, 1999; Bivainis, 2002, 2003). These indicators could be grouped as follows:

- market share indicators – enterprise market share, tempo of the sales growth in the market;
- financial indicators – coefficients of the enterprise liquidity and financial risk, turnover and profitability, profitability of the shares and dynamics of their market value variation, size of expenditures;
- development indicators – investments scope, expenditures for scientific exploratory works, expenditures for improvement of management and engineering qualifications in order to attract volumes of foreign investments;
- marketing indicators – qualitative characteristics of products and services, quality of the customer servicing activities, the use of the up-to-date technologies, sales network, advertisement, enterprise image, size of marketing expenditures;
- productivity indicators – expression of the size of annual sales in physical units and the value added per employee annually created, dynamics of the productivity indices, reflecting the variation of the competitiveness level for a certain period of time.

Having summarized the possible indicators for the evaluation of the effectiveness of the enterprise restructuring programmes, the following main criteria for the evaluation of the enterprise restructuring programmes are determined: market share; financial capacity; business development potential; product competitiveness; enterprise productivity.

Based on the criteria stated above, a respective model is proposed which generalized expression is the following:

$$E_R = f(E_1, E_2, E_3, E_4, E_5) \geq E^0 = \\ = f(E^0_1, E^0_2, E^0_3, E^0_4, E^0_5), \quad (1)$$

where E_R is the benefit of restructuring programme; E_1 is the product competitiveness, E_2 is enterprise productivity, E_3 is the market share, E_4 is the business development potential, E_5 is the financial capacity; E^0_1, E^0_2, E^0_3, E^0_4, E^0_5 are the indicators of product competitiveness, enterprise productivity, market share, business development potential, financial capacity of enterprise activity if no restructuring programme were applied; E^0 in the enterprise activity effectiveness if no restructuring programme were applied.

In the context of the model stated above, the calculated indicators for the restructured enterprise are compared with the respective ones determined for the enterprise, given that it is not restructured. Each component of the above model is detailed in the subsequent paragraphs to the level ensuring the practical application of the model.

3. Product competitiveness

Enterprise competitiveness is the enterprise's capability to adapt itself, based upon the enterprise product competitiveness to the changing competitiveness conditions in the market (Yi-Hsiu, 1996; Ashkenas, 1998; Хруцкий, 1999; Абрамов, 2000). In this respect, having analysed the results reported by various scientists, it is proposed to express product competitiveness in the following manner:

$$E_1 = f(\gamma_1, \gamma_2, \gamma_3). \quad (2)$$

Product competitiveness is a comparative indicator showing the level of a concrete demand satisfaction. This indicator is determined on comparing the competing products. The buyer will prefer a product only when the product will have an advantage over thewith other competitive products and better satisfy the demands of the customers.

The benefit of each product to the customer is determined by a complex of the qualitative parameters, which are often grouped in the following way:

- the "hard" parameters, which show how the product functions and the main characteristics related thereto corresponding to the national and international standards, normatives. Noncompliance with these legally determined parameters can cause a loss of market share;
- "soft" parameters characterising the esthetic features (design, color, pack).

The evaluation of "the hard" parameters is not sophisticated as each of them is determined by the concrete values. In order to evaluate[1] the conformance of "hard" parameters with the requirements of the standards and normatives, the following indicator of competitiveness on the conformity of product parameters with the requirements of standards and norms is used (Yi-Hsiu, 1996; Хруцкий, 1999):

$$\gamma_1 = \prod_{k=1}^{m} g_k; \quad (k = 1, ..., m), \quad (3)$$

where, g_k means evaluation of the „hard" parameter k conformity with the requirements of standards and norms; m is the number of "hard" parameters subject to analysis; γ_1 is the indicator of competitiveness on the conformity of product parameters with requirements of standards and norms.

The „soft" parameters have no physical measure, thus their appraisal is based on the subjective evaluation of the product characteristics. Due to this reason it is expedient to have experts, who are on the ball of the market, to evaluate "the soft" product parameters.

[1] It is evaluated using points: eg., 1 point for correspondence, 0 points for nonconcompliance.

The product competitiveness under the qualitative parameters cannot be expressed using absolute values, thus it is reasonable to use comparative values obtained on comparing analogous products. An analogous product must belong to the same group of products as the considered product. The analogue has to be well known in the market and its main parameters must have been investigated taking into account the changing environment of the market.

The comparative indicator of the competitiveness by each qualitative parameter of the product shall be the following (Yi-Hsiu, 1996; Хрущкий, 1999):

$$\gamma_i = \chi_i / \chi_{i0}; (i = 1, ..., n), \quad (4)$$

where: γ_i – the comparative indicator of competitiveness under qualitative parameter i; χ_{i0} – value of the qualitative parameter i of the product; χ_{i0} is the– value of the qualitative parameter i of the analogous product; n is the number of qualitative parameters subject to analysis.

Using the cumulative indicator of the competitiveness, the correspondence of the product price to the customers' requirements (which are set to the qualitative product parameters) can be evaluated. Calculating the cumulative indicator of the competitiveness, it is necessary to determine the value of the qualitative parameter. This is done by a group of experts who know well the product market. The cumulative indicator of competitiveness of the qualitative parameters (γ_2) can be determined as follows (Yi-Hsiu, 1996; Хрущкий 1999):

$$\gamma_2 = \sum_i \zeta_i \gamma_i \quad (5)$$

where: ξ_i is the weight of qualitative parameter i; γ_i is the comparative indicator of competitiveness under qualitative parameter i; n is the number of the qualitative parameters subject to analysis.

A product will be competitive under qualitative parameters if $\gamma_2 \geq 1$.

On evaluating, from the above indicators, the product qualitative competitiveness of a restructured light-scale industrial enterprise it has been determined that the qualitative competitiveness of the product of the restructured enterprise as compared to that of the unrestructured enterprise has a higher potential to increase in the future (Fig. 1).

When analyzing the product compe-

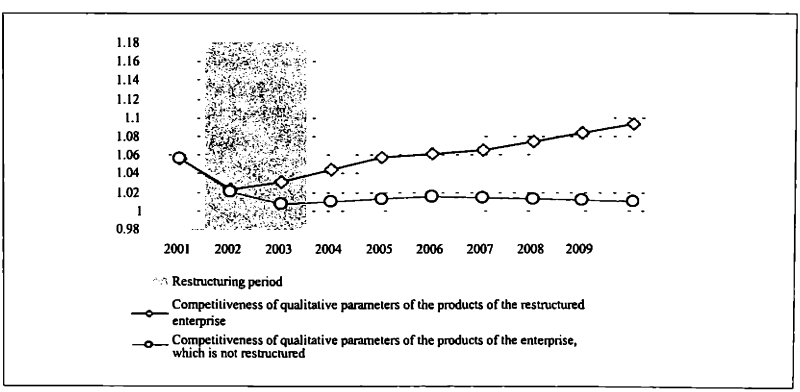

Fig. 1. Dynamics of the cumulative competitiveness index (γ_2) of product qualitative parameters

titiveness of a restructured enterprise, it is necessary to evaluate not only the qualitative parameters of the product but also the parameters of cost for the product development/production-sale activities. These parameters reflect the customers' expenditures of purchase and the use of the product within its lifetime. The values of the parameters of product development/production-sale cost are determined from the expenditures of the product purchase (C_1), shipment (C_2), installation (C_3), operation (C_4), repair (C_5), personnel training (C_6), insurance (C_7), etc. The following expression of the expenditures show the size of funds the customer needs to have the product in operation for the whole its lifetime period:

$$C_v = \sum_i C_i \qquad (6)$$

where: C_i is the price of consumption of parameter i; n is the number of parameters of product development/production-sale cost subject to analysis.

When calculating the comparative indicator of the competitiveness under each of the parameters of product development/production-sale cost, the expenditures of the consumption for the customer can be corrected on comparing the commercial conditions of the purchase/sale agreements of the product with the respective conditions of an analogous product. The comparative indicator of the competitiveness under each of the parameters of product development/production-sale cost shall be the following (Yi-Hsiu, 1996; Хруцкий, 1999; Абрамов, 2000):

$$\gamma_j = \chi_j / \chi_{j0}, \qquad (7)$$

where: γ_j – comparative indicator of competitiveness under parameter j of product development/production-sale cost; χ_j – value of parameter j of product development/production-sale cost; χ_{j0} – value of parameter j of product development/production-sale cost of analogical product.

Having calculated the indicators (with respect to each parameter) and evaluated the value of each parameter of the product development/production-sale cost, the cumulative indicator of competitiveness of product development/production-sale cost parameters can be calculated. The following expression is proposed for this purpose (Yi-Hsiu, 1996; Хруцкий, 1999; Абрамов, 2000):

$$\gamma_3 = \sum_j \zeta_j \gamma_j \qquad (8)$$

where: γ_3 is the cumulative indicator of competitiveness of product development/production-sale cost parameters; ζ_j is the weight of product development/production-sale cost parameter j; γ_j is the comparative indicator of competitiveness under parameter j of product development/production-sale cost.

The product will be competitive under parameters of product development/production-sale cost if $\gamma_3 \le 1$.

In the context of the parameters of product development/production-sale cost (on calculating the cumulative indicator of competitiveness of the product development/production-sale cost parameters) the product future competitiveness potential of the analysed restructured light scale industrial enterprise has greater possibilities to increase as compared to the analogous product competitiveness indicator of the unrestructured enterprise (Fig. 2).

Basing upon the competitiveness indicator on the compliance of the product parameters with the requirements of the standards and normatives as well as the cumulative competitiveness indicators of the qualitative and

product development/production-sale cost parameters, it is possible to determine the (aggregated) product competitiveness indicator in the following way (E_1; Хруцкий, 1999; Абрамов, 2000):

$$E_1 = \gamma_3 \gamma_1 / \gamma_2. \quad (9)$$

The product will be competitive when $E_1 \geq 1$.

Basing upon the indicators of enterprise product competitiveness and on evaluating the comparative effectiveness of the enterprise activity, the enterprise competitiveness indicator can be calculated in the following manner:

$$E_g = \gamma_g E_s, \quad (10)$$

where E_g is the indicator of the enterprise competitiveness based upon the competitiveness of the enterprise products g (g = 1, ..., n); γ_g – cumulative indicator of the enterprise products' competitiveness ($\gamma_g = \prod_{i=1}^{n} E_{gi}$); E_s is the cumulative indicator of the comparative enterprise activity effectiveness. This indicator can be calculated, e. g., $E_s = E_3 E_4$ (paragraph 6); n in the number of products under to analysis.

The cumulative indicator of the comparative effectiveness of the enterprise activity can be calculated applying various methods. To evaluate the comparative effectiveness of the enterprise activity, the enterprise product market position is often compared to the market position of its competitors' products. Respectively, market increase tempo, activity profit, expenditures, profitability, return of assets are compared.

On calculating by the technique specified above the competitiveness of the products of the restructured light-scale industrial enterprise and having compared the results with the respective ones of the unrestructured enterprise, it is determined that the possibilities of the restructured enterprise to reach a higher competitiveness of products are greater of the not restructured enterprise (Fig. 3).

In the context of practical application of the product competitiveness evaluation method specified above, it is expedient to analyse the results of the application of this method with respect to the following aspects subject to the product competitiveness:

- acceptability of the specialization of the

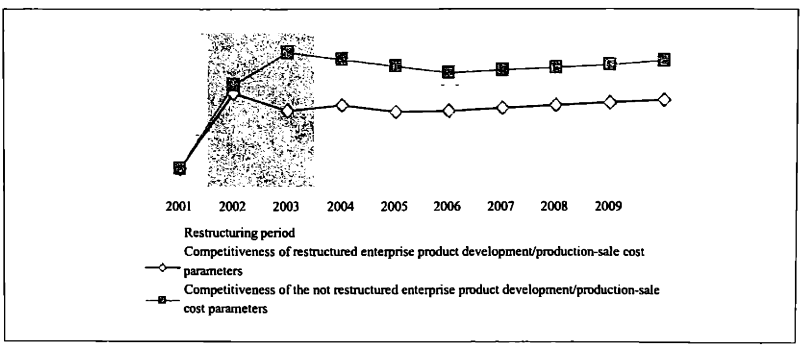

Fig. 2. Dynamics of cumulative competitiveness' index (γ_i) of enterprise product development/production-sale cost parameters

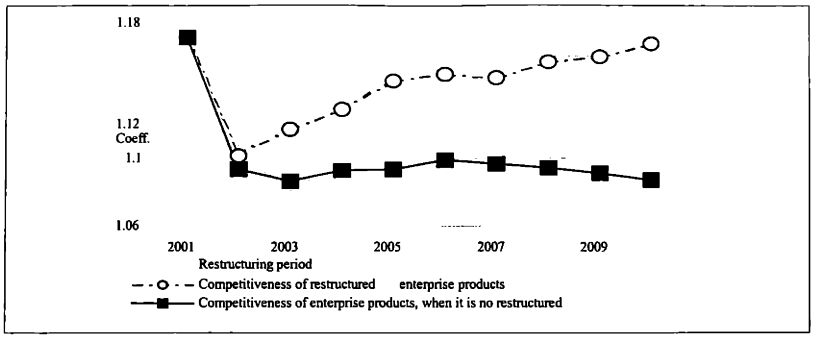

Fig. 3. Dynamics of enterprise competitiveness

restructured enterprise to develop, produce and sale the products whose volume and quality indicators are not worse than the ones for the products of the unrestructured enterprise;

- threat that the products of the restructured enterprise will compete with each other in the same markets;
- ability of the products of the restructured enterprise to supplement each other (this may reduce competition among the products;
- expedency to integrate production, sales, marketing systems/networks of the products of the restructured enterprise with the products, produced before the restructurization; likelihood of consistency problems among the products with respect to the integration may arise;
- reasonability to re-form production, sales systems of the products of the restructured enterprise in order to match the products produced before restructuring;
- necessity to re-form the management systems of the products produced before the restructurization in order to rationalize the systems of the production and sales of the restructured enterprise;
- the minimum volume of sales necessary to justify the re-formation of production, sales systems economically. Possibility to achieve sales volumes of the restructured enterprise which allow to justify the re-formation;
- segments of the customers to be served by the restructured enterprise;
- the biggest market segment and the share of the sales turnover of this segment in the context of the overall turnover of the restructured enterprise;
- availability of the products of the restructured enterprise, which are able to satisfy the demands of the customers of foreign and local markets with respect to the analogous segments;
- possibilities to have any state restrictions applied to production, sales and the usage of products of the restructured enterprise within the markets subject to the activity of the restructured enterprise, and their effect.

4. Enterprise productivity

Studies of the scientific literature on to the enterprise productivity allowed to conclude that with respect to the restructured enterprise

the productivity can be determined using the following expression:

$$E_2 = f(\lambda_1, \lambda_2, \lambda_3), \quad (11)$$

where $\lambda_1 = R / J$ is the labor productivity; R is the sales in monetary terms; J is the number of employees; $\lambda_2 = R / T_2^a$ is the return on assets; T_2^a is the value of active share of assets (production measures); $\lambda_3 = R / C_M$ is the coefficient of return of materials used for production; C_M is the cost of materials.

Despite the simplicity of the application of the technique stated above, in practice it is expedient to consider the restructured enterprise productivity evaluation results within the scope of the following factors:

- functionality, integrity and rationality of the components of the systems of production and technologies;
- matching the accounting methods of the business units of the restructured enterprise;
- rationality of the finance, information flows management systems (installation, modification of the software and matching their capacity);
- availability of service units for the products within the geographic area of the business of the restructured enterprise and the ability of the restructured enterprise to establish or develop such service units;
- reasonability of the organizational structure of the restructured enterprise units. The need for additional labour power;
- level of the turnover ensuring the rational use of the labour power of the restructured enterprise;
- reasonable level of remuneration of the workforce of the restructured enterprise;
- knowledge and proficiency of the team work of the staff of the restructured enterprise within the enterprise (its business units) and cooperation with other enterprises;
- availability of the staff promotion and motivation (incl. personnel training) schemes the restructured enterprise.

5. Enterprise market and business development potential

The effect of the enterprise restructuring on the enterprise competitiveness, its productivity, and financial capacity contributes to creating the enterprise market expansion possibilities as determines the potential of the enterprise activity development. In this respect, the restructured enterprise market share could be calculated as follows:

$$E_3 = R / R_K, \quad (12)$$

where R is the enterprise product sales (enterprise market share); R_K is the total product sales in the market.

The above expression applied in the context of the restructured light scale industrial enterprise allowed to concluded that the increased enterprise product competitiveness, productivity often restructurization of the enterprise contributed to the increase of the enterprise market share. In the case when the enterprise is not restructured, the possibilities of the enterprise to sustain and increase the market share are less attractive (Fig. 4).

Despite the evaluation of the dynamics of the enterprise market share indicator, the enterprise business development potential is not less important. It is proposed to calculate the enterprise business development potential using this expression:

$$E_4 = R_t / R_0, \quad (13)$$

where R_t is the product sales for the considered period ($t = 1,..., n$); R_0 is the product sales of a respective period in the past.

The enterprise business development potential as well as the dynamics of its market

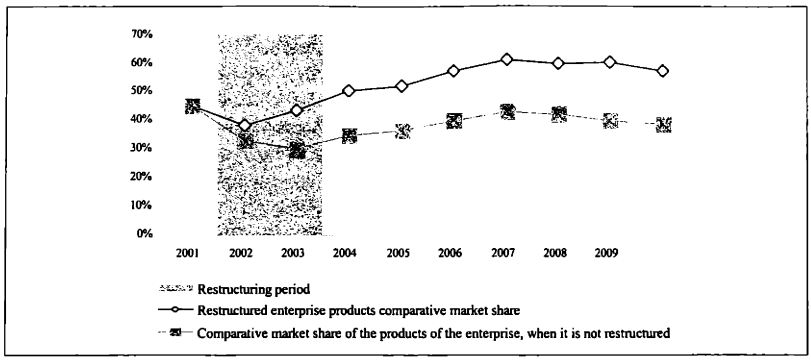

Fig. 4. Dynamics of enterprise products market share (E_y)

share, in sprite of to the aspects stated in the previous paragraphs of this paper, are determined to the significant extent by the following factors:

- the size of the territory, in which the restructured enterprise or its business system/network is acting;
- attractiveness of the business territory for the restructured enterprise versus the enterprise when it is not restructured;
- correspondence of the size of the territory and its supposed location to the enterprise restructuring programme (plans). Capability of the restructured enterprise to "expand" this territory;
- features of the structure of the restructured enterprise units within its business territory;
- rationality of the enterprise business units' location with respect to product demand;
- capacity and interest of the restructured enterprise to establish new business units (branches, subsidiaries).

Specified factors have to be taken into account when evaluating and justifying the results thereof.

6. Financial capacity of the enterprise

The of an financial capacity enterprise can be characterized by its financial stability and liquidity. In this context the enterprise financial capacity could be expressed in as follows:

$$E_5 = f(P, C, R, T_1, T_2, K, L), \quad (14)$$

where P is the net profit; C is the costs of sales; T_1 is the working capital ($T_1 = T_g+T_1+A$); T_2 is the long-term assets; K is the equity; L is the liabilities ($L = L_{2s}+L+L_2$).

Financial stability is the structure of the balance of the enterprise assets, equity and liabilities, which the solvency of the ensures enterprise. Financial stability is ensured when investments into long-term assets and inventory do not exceed the size of the long-term financing sources. It can be expressed as follows:

$$T_2 + A \leq K + L_1, \quad (15)$$

where T_2 is the long-term assets; A is the inventory; K is the equity; L_1 is the long-term liabilities.

In order to evaluate the liquidity and financial stability of the enterprise, the

indicators of the enterprise revenues preservation and financial leverage are often applied in practice (Altman, 1999; Jarrow, 2001; Rock, 1997; Абрамов, 2000). The cash flow indicators (in order to determine the correspondence with the financial leverage indicators) sometimes are also applied. These indicators play a supplementary role when applying the indicators of the enterprise revenues preservation and financial leverage. The indicators are widely analised by foreign and Lithuanian scientists, thus the methodology of their application with respect to the enterprise restructuring is not specified in this article.

In the context of the enterprise solvency, the financial capacity is ensured by rationally balancing the main short-term assets and short-term liabilities. It is done in the following way:

$$T_g + T_l \geq L_2, \quad (16)$$

where T_g is the cash in the bank account and shares, stocks and other measures of money or capital markets; T_l is the receivables; L_2 is the payables.

The payables are calculated in the following way:

$$L_2 = L_{2a} + L_{2b} + L_{2c}, \quad (17)$$

where: L_{2a}, is the obligations to the suppliers; L_{2b} is the other payables and short-term investments; L_{2c} is the obligations regarding short-term loans, annual obligations towards long-term loans repayment.

The capacity of the enterprise to cover, using short-term assets, all of the short-term liabilities is determined as enterprise liquidity. In order to execute the enterprise liquidity analysis and to ensure its precision, the following expression can be used (Altman, 1999; Jarrow, 2001; Rock, 1997; Абрамов, 2000):

$$W = \alpha T_g + \alpha T_l + \alpha A / \alpha L_{2s} + \alpha L_2 + \alpha L_1, \quad (18)$$

where A is the inventory; L_{2s} is the urgent liabilities; L_2 is the short-term liabilities; L_1 is the long-term liabilities; α is the coefficient for corrections (in order to determine the comparative weight of the enterprise liquidity values of the coefficients chosen taking into account the average statistical time periods for the execution of the obligations towards assets and liabilities).

In order to ensure the enterprise liquidity and reduce the risk, part of the enterprise equity has to be reserved for the short-term assets (working capital) financing.

It is difficult to answer unambiguously what share of the short-term assets should be financed by the enterprise from its own funds. According to the finance management theory, the enterprise liquidity can be explained as the optimization of the structure of assets. Theoretically, the bigger the size of the own working capital the lower the liquidity risk, however, the components of the short-term assets have the different liquidity level in practice (thus the coefficients? are used; 18th formula).

In the context of the above consideration the light scale industrial enterprise, due to the insufficient amount of short-term assets (in the case of a not restructured enterprise) the liquidity and possibilities to profit of the business decrease (Fig. 5). The revealed liquidity risk caused by the lack of the short-term assets is determined as follows:

- the decrease of the own credit sources – the increase of the receivables can be defined as possible increase of the revenues or the inevitability of the deficit of the short-term assets, which force the enterprise to increase its liabilities;
- an insufficient size of the inventory (in order to satisfy the customers' demands);
- a too large amount of the short-term assets. The volume of the assets is directly related to the expenditures, thus the unreasonably big share of the assets cause the reduction of the revenues.

Facing the enterprise liquidity problems, it is necessary to restore the solvency capacity to increase short-term assets using the enterprise's own funds, which can be generated from the profit. However, if there were no possibilities to increase the working capital faster than the amount of payables during a short-term period, the restructuring of the balance of the enterprise assets, equity and liabilities is inevitable.

For instance, in a restructured light scale industrial enterprise the share of the short-term assets exceeding the short-term liabilities is projected (Fig. 5) without decreasing the development scope of the enterprise activity, especially in the profitable market segments, thus the possibilities to reduce the risk of the enterprise liquidity and its business are higher than for the enterprise solven that it is not restructured.

When restructuring the light scale industrial enterprise iti s planned to increase the share of the short-term assets, taking into account the possible increase of the enterprise liquidity risk, which might be caused by the effect of the short-term assets surplus, thus the following is proposed:

- to not increase (or to reduce) payables. The payment (receivables) period for the supplied goods often exceeds the period of the enterprise payments for the supplied raw materials (payables). The shortage of funds can be caused by the reduced demand as well, thus the sales period may take a longer period than expected;
- to optimize the ratio of the short-term and long-term loans. The deficit of working capital is often covered while increasing the amount of payables and taking long-term loans;
- not to increase (or to reduce) the long-term liabilities. The profitability of the majority of the enterprises is relatively low in high by competitive markets.

In order to cover the current liabilities, the enterprise may be forced to apply for short-

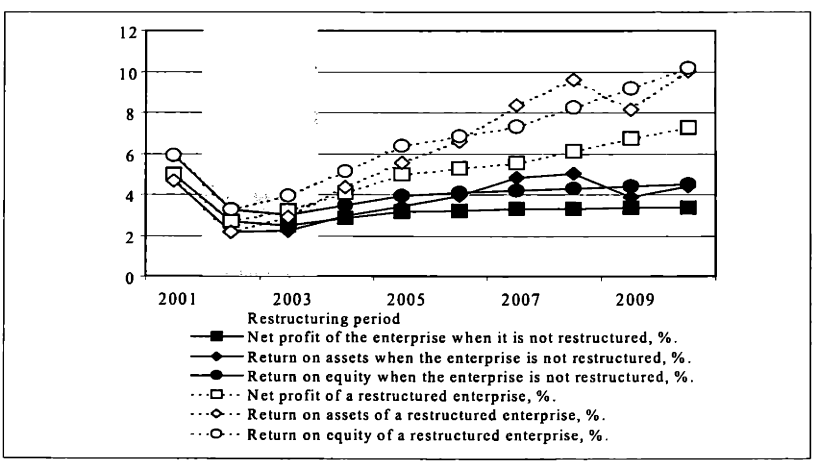

Fig. 5. Dynamics of indicators of enterprise revenues preservation

term loans, to increase its amount of payables or even to postpone the execution of the liabilities due. For the profit ambitions as well as a wish to minimize the risk and to ensure the high liquidity level, the enterprises are often forced to apply for loans to be used for the business development investments. The effectiveness of the use of the borrowed funds determines the share of the equity to be reserved for servicing liabilities.

In order to evaluate the effectiveness of investments (to compare the determined indicators of the effectiveness of the possible alternatives of the investments in order to select the reasonable one) as well as the use of the borrowed funds, the following financial analysis methods are often applied (Altman, 1999; Jarrow, 2001; Rock, 1997; Абрамов, 2000): net present value; investments payback period; internal rate of return; investments index.

Using the indicators stated in this paragraph, the following main indicators characterizing the financial capacity of a small light scale industrial enterprise are calculated:

- revenues preservation – net profitability (P / C), return on assets (P / T_2), return on equity (P / K);
- financial leverage indicators – golden balance rule ($T_2 / (K + L_1)$), net working capital ($((T_1 - (L_{2s} + L_2)) / (T_2 + T_1))$, current liquidity ratio (K / L), mobility (T_1 / K), assets turnover ($R /(T_2 + T_1)$).

On calculating the benefit of light-scale industrial enterprise restructuring programme in terms o, e. g., revenues preservation, it was determined that the possibilities of the restructured enterprise in attaining a higher level of financial capacity is greater than for the enterprise when it is not restructured (Fig. 5). Conclusions were also made as to the results of the financial leverage indicators of the enterprise when it is restructured and if the restructuring programme was not applied (Fig. 6, 7).

The application of the indicators of revenue preservation and financial leverage in practice for a small light scale industrial enterprise has revealed the effect of the following factors on the results of the evaluation of the financial capacity of the enterprise:

- tactical and strategic plans, the level of their comprehensiveness and clarity;
- forecasting and run-up to grow as much as the enterprise business system/network is able to grow in terms of manpower and business volume;
- the sufficiency and stability of the grow of the current enterprise business system/ network;

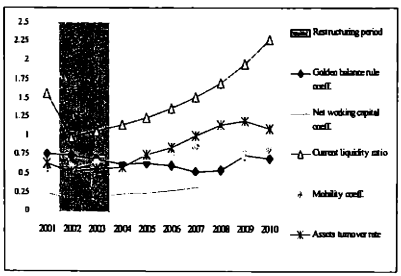

Fig. 6. Dynamics of financial leverage indicators of the restructured enterprise

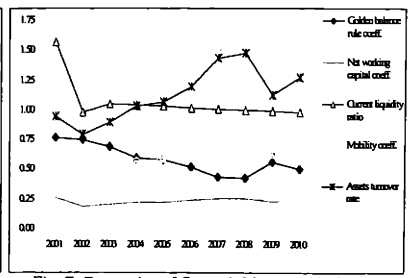

Fig. 7. Dynamics of financial leverage indicators of the enterprise if restructuring programme were not applied

- relationships with the institutions of financial services;
- possibilities of the integration of the new business units of the restructured enterprise and rationalization of its activities.

These factors are recommended to be taken into account while analysing the financial capacity of the restructured enterprise

7. Classification of evaluation results of enterprise restructuring

It is proposed to use the classification of evaluation results (Table 1) when evaluating the effectiveness of enterprise restructuring programmes according to the above described model.

The proposed classification of evaluation results (Table 1) offers the possibility to determine the minimal necessary level of the restructuring programme benefit and to evaluate the effectiveness of each of the enterprise management areas.

8. Conclusions

The proposed model of the evaluation of enterprise restructuring programmes offers the following possibilities to the enterprises intended for restructurization:

- to evaluate the benefit of the restructuring programme in the context of the following

Table 1. Classification of results of restructuring programmes of enterprises

Results	*Level of benefit*[1]
$E_1 > E^0_1; E_2 = E^0_2; E_3 = E^0_3; E_4 = E^0_4; E_5 < E^0_5$	Satisfactory
$E_1 = E^0_1; E_2 > E^0_2; E_3 = E^0_3; E_4 = E^0_4; E_5 < E^0_5$	Not satisfactory
$E_1 = E^0_1; E_2 = E^0_2; E_3 > E^0_3; E_4 = E^0_4; E_5 < E^0_5$	Satisfactory
$E_1 = E^0_1; E_2 = E^0_2; E_3 = E^0_3; E_4 > E^0_4; E_5 < E^0_5$	Not satisfactory
$E_1 = E^0_1; E_2 = E^0_2; E_3 = E^0_3; E_4 = E^0_4; E_5 < E^0_5$	Not satisfactory
$E_1 = E^0_1; E_2 = E^0_2; E_3 > E^0_3; E_4 < E^0_4; E_5 < E^0_5$	Not satisfactory
$E_1 = E^0_1; E_2 > E^0_2; E_3 > E^0_3; E_4 < E^0_4; E_5 < E^0_5$	Not satisfactory
$E_1 < E^0_1; E_2 > E^0_2; E_3 = E^0_3; E_4 > E^0_4; E_5 < E^0_5$	Not satisfactory
$E_1 > E^0_1; E_2 > E^0_2; E_3 > E^0_3; E_4 < E^0_4; E_5 < E^0_5$	Satisfactory
$E_1 > E^0_1; E_2 > E^0_2; E_3 > E^0_3; E_4 < E^0_4; E_5 < E^0_5$	Satisfactory
$E_1 = E^0_1; E_2 < E^0_2; E_3 > E^0_3; E_4 > E^0_4; E_5 < E^0_5$	Not satisfactory
$E_1 > E^0_1; E_2 < E^0_2; E_3 > E^0_3; E_4 > E^0_4; E_5 < E^0_5$	Satisfactory
$E_1 = E^0_1; E_2 = E^0_2; E_3 = E^0_3; E_4 = E^0_4; E_5 > E^0_5$	Satisfactory
$E_1 = E^0_1; E_2 > E^0_2; E_3 = E^0_3; E_4 < E^0_4; E_5 > E^0_5$	Satisfactory

[1] Only the acceptable levels of restructuring benefit are presented.

criteria: market share, financial capacity, business development potential, product competitiveness, enterprise productivity;

• to evaluate the enterprise effectiveness, its development possibilities as well as the viability of the corporate strategy and its functional strategies with respect to its strategic, tactical and operational management levels in terms of the main characteristics of the enterprise within the context of the competitive advantages of the enterprise.

The results of enterprise restructuring, derived with the aid of the proposed model, can be used also in the following respects:

• to improve the management of the enterprise increasing the effectiveness of itsindependent business units as well as of its functional departments;

• to rationalize the use of the human, material and financial resources determining the possibilities to attract the external resources and to increase the enterprise's effectiveness and thus its competitiveness.

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ĮMONIŲ RESTRUKTŪRIZAVIMO VERTINIMAS

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Santrauka

Įmonių restruktūrizavimo procesai, vykstantys Lietuvoje, sietini su šalies ekonominės sistemos transformacijos ir integracijos į Europos bei viso pasaulio ekonomines erdves procesais. Didėjanti verslo subjektų konkurencija šalies ir užsienio rinkose skatina įmonių pertvarką. Įmonės siekia racionalizuoti žmogiškųjų, materialių, finansinių išteklių naudojimą. Pastarasis šalies ekonominės sistemos transformacijos dešimtmetis parodė, kad tai sudėtingas uždavinys, o dėl jo esmės ir masto sietinas su didele rizika. Šiam uždaviniui spręsti būtina kompleksiškai tobulinti įmonių restruktūrizavimo procesų valdymą, siekiant racionalizuoti įmonės išteklių valdymą ir didinti jos konkurencingumą. Vienas iš esminių šio komplekso uždavinių, lemiančių restruktūrizavimo programų kryptingą valdymą, yra objektyvus restruktūrizavimo sprendimų ir jų įgyvendinimo rezultatų įvertinimas.

Apibendrinus restruktūrizavimo procesus tyrinėjančių mokslininkų darbų rezultatus bei atlikus analitinius ir empirinius tyrimus, pasiūlytas įmonių restruktūrizavimo programų efektyvumo vertinimo modelis:

$$E_R = f(E_1, E_2, E_3, E_4, E_5) \geq E^0 = f(E^0_1, E^0_2, E^0_3, E^0_4, E^0_5);$$

čia: E_R – restruktūrizavimo programos rezultatas (nauda); E_1 – produkto konkurencingumas; E_2 – įmonės produktyvumas; E_3 – turima rinkos dalis; E_4 – veiklos plėtros potencialas; E_5 – finansinis pajėgumas; E^0_1, E^0_2, E^0_3, E^0_4, E^0_5 – veikiančios įmonės, nevykdžius restruktūrizavimo programos, produkto konkurencingumo, įmonės produktyvumo, turimos rinkos dalies, veiklos plėtros potencialo, finansinio pajėgumo rodikliai; E^0 – nerestruktūrizuotos įmonės veiklos efektyvumas.

Atliktais tyrimais nustatytos tokios priklausomybės:

produkto konkurencingumo – $E_1 = f(\gamma_1, \gamma_2, \gamma_3)$ – čia γ_1 – suvestinis kokybės konkurencingumo rodiklis; γ_2 – suvestinis produkto kūrimo/gamybos–realizacijos išlaidų parametrų konkurencingumo rodiklis; γ_3 – produkto parametrų atitikimo standartų bei normatyvų reikalavimams rodiklis;

įmonės produktyvumo – $E_2 = f(\lambda_1, \lambda_2, \lambda_3)$ – čia: $\lambda_1 = R / J$ – darbo našumas (R – įmonės produkto pardavimo apimtis (vertine išraiška), J – darbuotojų skaičius); $\lambda_2 = R / T_2^a$ – fondogrąža (T_2^a – aktyviosios turto dalies (gamybos priemonių) vertė); $\lambda_3 = R / C_M$ – medžiagų grąžos kocficientas; C_M – medžiagų išlaidos;

įmonės finansinio pajėgumo – $E_5 = f(P, C, R, T_1, T_2, K, L)$ – čia: P – pardavimo pelnas (grynasis); C – pardavimo ir paslaugų išlaidos; T_1 – apyvartiniai aktyvai (trumpalaikis turtas); T_2 – ilgalaikis turtas; K – nuosavas kapitalas; L – įsipareigojimai.

Įmonės turimos rinkos dalis galėtų būti apskaičiuojama taip:

$$E_3 = R / R_K,$$

čia: R – įmonės produkto pardavimo apimtis (įmonės dalis rinkoje); R_K – produkto pardavimo apimtis visos rinkos požiūriu.

Įmonės veiklos plėtros potencialui apskaičiuoti siūloma tokia išraiška:

$$E_4 = R_t / R_0,$$

čia: R_t – analizuojamo laikotarpio produkto pardavimo apimtis ($t = 1, \ldots, n$); R_0 – praėjusio laikotarpio produkto pardavimo apimtis.

Tokiamu kontekstu detalizuojant iki formalizuoto aprašymo siūlomo modelio struktūros komponentus (produkto konkurencingumą, įmonės produktyvumą, turimos rinkos dalį, veiklos plėtros potencialą, finansinį pajėgumą), jų nustatymo būdus, atskleistas modelio tinkamumas atliekant įmonių restruktūrizavimą.

Modelio priimtinumas patikrintas praktikos pavyzdžiais. Pritaikius, pavyzdžiui, siūlomą modelį restruktūrizuoti lengvosios pramonės gamybos įmonei, nustatyta, kad restruktūrizuotos įmonės galimybės pasiekti aukštesnį veiklos efektyvumą yra didesnės nei įmonės jos nerestruktūrizavus.

Prieita prie išvados, kad parengtas įmonių restruktūrizavimo programų vertinimo modelis sudaro galimybes įvertinti:

- įmonės restruktūrizavimo programos naudą remiantis produkto konkurencingumo, įmonės produktyvumo, turimos rinkos dalies, veiklos plėtros potencialo, finansinio pajėgumo kriterijais;
- įmonės veiklos efektyvumą, plėtros galimybes bei įmonės ir jos funkcinės paskirties strategijų perspektyvumą konkurencinių pranašumų aspektu.

Gauti, pritaikius parengtą įmonių restruktūrizavimo programų vertinimo modelį, įmonės restruktūrizavimo vertinimo rezultatai gali būti naudojami:

- racionalizuoti įmonės žmogiškųjų, materialių ir finansinių išteklių naudojimą, sudaryti galimybes pritraukti išorinius išteklius įmonės veiklos efektyvumui didinti;
- tobulinti įmonės valdymą, efektyvinant ir savarankiškai veikiančių, ir funkcinių įmonės padalinių veiklos valdymą.

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