

Ing. LUCIE KUČEROVÁ, Ing. MICHAELA BARTOŠÍKOVÁ  
Jaromír Lazar doc. Dr. Ing.  
Institute of Economics and Control Systems,  
Faculty of Mining and Geology,  
VŠB – Technical University of Ostrava

## EVALUATION OF AN INDUSTRIAL ENTERPRISE BY THE SELECTED METHOD

*One of the possible solutions to the debtor's bankruptcy provided by the Insolvency Act is to use the institute of reorganization. According to the Insolvency Act the reorganization is defined as the gradual satisfaction of creditors' claims, while preserving the debtor's business. The permission of reorganization of the debtor's business is subject to the preparation of a reorganization plan describing all measures to be taken, in order to reorganize the debtor's business. The article deals with the processing and quantification of measures to reorganize the business operations. It analyses the data recorded on found out investment costs, operating costs and revenues, using net present value methods, the profitability index and payback period to assess the proposed project. It assesses, whether the revenues from the proposed investment are sufficient, and ensure adequate satisfaction of the creditors.*

**Key words:** *insolvency, net present value, profitability index*

**The timeliness.** The operation of industrial enterprises has its specifics, it concerns particularly their assets and capital structure. Industrial enterprises are an integral part of industrial chains. Demand for their products thus often depends on the size of demand for final products (e.g., decrease in housing construction will affect the demand for building materials and many other products) and has a low price elasticity (a reduction in the prices of construction materials does not imply a sharp rise in construction) [1].

The investigated company deals with the processing of recycled rubber. If a creditor submits the proposal for insolvency proceedings against the company by reasons of a long-term default, the court may decide after evaluating the evidences of its bankruptcy. Since the company is interested in continuing its activities, it seeks the permission to resolve the bankruptcy by reorganization. It is therefore necessary to submit at the creditors' meeting a proposal for a new project, which should help the company to repay its liabilities and ensure business operations for the next years. The company wants to push through the plan to produce from used tires, tiles used for leisure time. The products will be designed for sports grounds, recreation and reconditioning facilities, playgrounds, gyms, fitness centres, pedestrian zones, terrace facing, balconies and swimming pools. Furthermore, the products will find the use as a floor covering of public spaces with extreme loads in commercial and entertainment centres, recreational areas etc. In order this project was approved, the company will need a calculated project, presenting creditors the company's plans and grounding

them by factual calculations.

**Objective.** Create a proposal for a new project, which should help the company to repay its liabilities and ensure business operations for the next years.

Table 1

	Tab. 1 Calculation					
1.	<b>Year:</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
1	Capital contribution	6,499				
2	Revenues		36,837	40,520	44,573	49,030
3	- depreciation		552	1,126	1,127	1,127
4	- other costs		32,575	37,342	41,682	46,524
5	Gross profit (profit before tax) (line 2 - line 3 - line 4)		3,709	2,051	1,764	1,379
6	- Tax (line 5 * tax rate)		816	451	388	303
7	Net profit (profit after tax) (line 5 - line 6)		2,893	1,599	1,376	1,076
8	+ Depreciation (line 3)		552	1,127	1,127	1,127
9	Cash flow (line 7 + line 8)		3,446	2,727	2,503	2,202
10	Interest rate in %		12	12	12	12
11	Discount rate $(1 / ((1 + \text{interest rate}/100)^{\text{raised to a power of current year}}))$		0.89	0.79	0.71	0.63
12	Present value (discounted cash flow) (line 9 * line 11)		3,076	2,174	1,782	1,399
13	Net Present Value (ČSH, or NPV) (line 1 + line 12)		-3,423	-1,249	532	1,932
	Profitability Index (PI) $(\Sigma 1.12/-1.1)$	8,431	/	6,499	=	1.30

Source: inherent processing

**Analysis.** In the table (Tab. 1) only lists the resulting values, because the range of the article does not allow to state the input data.

As it is evident from the calculation, the **net present value** of the investment is a positive value (assuming a payback period of 3 years), thus according to the theoretical bases it is possible to accept the proposed project. The **profitability index** is greater than one, therefore according to this criterion the project can be approved. Under the given parameters, the **payback period** of the project should be 2-3 years, the project will earn in the third year over half a million crowns, and in the fourth year nearly two million. The **internal rate of return** of the project was calculated to 26.74 %. The calculation was performed using

the function "rate of return" in MS Excel. It is thus higher than the required rate of return. So it would be possible to accept the project according to this criterion, too.

**Conclusion.** According to all the investment assessment criteria, the proposed project could be accepted. However, it should be noted that the evaluation works with certain assumptions, which in reality need not necessarily occur. It concerns in particular the assumption of the volume of sales. The project assumes that all the production will be sold for fixed prices. Such ideal conditions do not occur at any time. It is necessary to take into account the market situation of particular product, product demand and market position of the product (whether it is new, luxury goods, goods subject to fluctuations in demand, and whether it is a classic product that customers will always buy). The major disadvantage of this concrete type of product (rubber tiles for leisure time) is its price, although it corresponds to the product quality, and the fact that the rubber tiles belong rather to top-quality products. It is therefore possible that customers take advantage of cheaper alternatives. Furthermore, the creditors themselves must approve, whether such rate of return of the project will be enough to cover their outstandings.

**Acknowledgement.** The authors of this paper would like to express their sincere thanks to the Ministry of Education for funding the project, MŠMT SP2012/22, 'Application of Mathematical Modelling of Economic Processes for Identification of the Best Method of Financing Extraction, Processing, and Exploitation of Minerals for Building Industries'.

### References

1. Machková H. Mezinárodní marketing. [International Marketing.] // Grada Publishing. – 2009.- P. 45–55.
2. Synek M. et al. Podniková ekonomika. [Business Economics.] //C.H. Beck. – 2007. - P. 126 – 131.
3. Act No. 182/2006 Coll., on Bankruptcy and Its Resolution (Insolvency Act), as amended.
4. Act No. 586/1992 Coll., on Income Tax, as amended.