

State Technical University under the Ministry of Education and Science of Ukraine, Mariupol, Ukraine.

5. Dmytrychenko, L.Y., Dmytrychenko, L.A. and Chynykhyna, T.S. (2008), "Corporation in socio-economic development of the country: the history and theory of modernity", *Visnyk Donbaskoi derzhavnoi mashynobudivnoi akademii: Zbirnyk naukovykh prats*, no. 1, pp. 221-227.

6. Zahorodnii, A.H. and Vozniuk, H.L. (2007), *Finansovo-ekonomichnyi slovnyk* [Finance and economics dictionary], Znannia, Kyiv, Ukraine, 1072 p.

7. Ilchuk, P.H. (2007), "Approaches to the formation of the financial strategy of the corporation", *Ekonomika ta derzhava*, no. 8, pp. 40-46.

8. Levytska, I.V. (2010), "Mechanism of effective corporate governance", *Visnyk Chernivetskoho torhovelno-ekonomichnoho instytutu*, vol. 3 (39), pp. 148-153.

9. Marchenko, V.M. (2010), "Methodological nature effects the merger of corporations", *Visnyk Zhytomyrskoho derzhavnoho tekhnolohichnoho universytetu*, no. 1 (51), pp. 186-188.

10. Ryabovoy, T.F. (1996), *Bolshoy kommercheskiy slovar* [Large commercial dictionary], Institut novoy ekonomiki, Moscow, Russia, 400 p.

UDC 338.152

Skryl V.V.,
*cand.sc.(econ.), assistant professor of department economics
of enterprise and management of the personnel*
Lyba K.S.,
*department economics
of enterprise and management of the personnel*
Poltava National Technical Yuri Kondratyuk University

THE INVESTMENT ATTRACTIVENESS EVALUATION ENTERPRISES OF UKRAINE

Скриль В.В.,
*к.е.н., доцент кафедри економіки підприємства
та управління персоналом*
Либа К.С.,
*кафедра економіки підприємства та управління персоналом
Полтавський національний технічний
університет ім. Ю.Кондратюка*

ОЦІНКА ІНВЕСТИЦІЙНОЇ ПРИВАБЛИВОСТІ ПІДПРИЄМСТВ УКРАЇНИ

Statement of the problem. In the face of the deteriorating market competition between enterprises for new markets of finished products assessment of investment attractiveness of individual business, which is in charge, is an important issue when making investment decisions by potential investors.

Analysis of recent research and publications. A large number of scientific famous Ukrainian and foreign economists works devoted into subject of investing: M. Herasymchuk, I. Blank, A. Haidutskyi, V. Glazunov, S. Hutkevycha, N. Denysenko and others [1, p. 325]. According to analysed their research it is lack of a comprehensive approach to solving the questions of investment into companies, moreover, it is not enough to use only statistical and mathematical models. However, it is known that in international practice mathematical models are widely used to assess the financial situation of enterprises, by means of which one can form a generalized indicator of the financial condition of the company - its integrated assessment, which

can serve as an indicator of investment attractiveness. Therefore, it is practically better to use sum coefficients model and matrix model.

Statement of the task. The article aims to analyze the main methods for assessing the investment attractiveness and identify their imperfections.

The main material of research. Methodological research of investment appeal should be based on the logic of investment decisions, which implies investment where more favorable investment conditions are evident [2, p. 56]. Since the ideal conditions in actual practice do not take place, such decisions are made, usually by selecting a suitable option among a set of possible ones. Having this in mind a logical framework of search, selection and investment decisions is developed based on the comparison, using the algorithm selection – first of all investor chooses a country of investing on the basis of intergovernmental evaluation of investment attractiveness, then the branch based on intersectoral assessments, further the region - and so on to the level of a single project. This model of finding solutions to the group of investors with uncertain in advance objectives can be considered the most optimal, because it allows the investor with diverse interests and capabilities to assess the attractiveness of investment in each level: country, sector, region, company, project, etc.

Evaluation of investment attractiveness, which is the link between the analysis stage and the stage of decision-making about investment, is an integral characteristic of individual enterprises as the objects of a prospective investment from the standpoint of sustainability, efficient use of assets and their liquidity and a number of other indicators. A comprehensive evaluation of investment attractiveness must include all the components of this concept, namely, absolute and comparative methods for determining attractiveness of an enterprise as an investment object [3, p.146].

The legislation of Ukraine on the basis of the methodology for determining the investment attractiveness of the company uses the Regulation "On the procedure of analyzing the financial situation of enterprises that are to be privatized", and also the Methods of integrated assessment of investment attractiveness of enterprises and organizations, approved by the Agency for the Prevention of bankruptcy 23.02.97 [4, p.59].

However, existing methods for determining the level of investment attractiveness, not in all cases meet the needs of investors in an objective, impartial, effective and sufficient to make a decision information. Trying to fix certain flaws has led to the creation of various methods of relative evaluation of investment attractiveness.

Today, a large number of methods are formed both, for determination of investment attractiveness of individual companies and ranking them together as required by the investor [5, p.70].

However, it should be noted that all factors are equally important. Through evaluation of attractiveness, an integrated approach needs to be adopted, that provides an analysis of all the factors taking into account their interrelation and mutual bonds [6, p.124].

Describing the system of performance indicators of investment attractiveness, in our opinion, is possible when meeting the following conditions:

- 1) the number of indicative parameters that directly affect investment decisions should be limited;
- 2) for calculation of required data it is necessary to use public financial and statistical reports, and minimize the use of inside information;
- 3) implementing of rating of the company is possible both in relation to other businesses, and in time.

In accordance with the above principles the system of factors for investment attractiveness was formed, that includes [7, p.82]:

- 1) financial indicators (measurement of financial performance of the company, liquidity, solvency, business activity, profitability);
- 2) social security indicators (productivity, turnover, rate of the quality of the staff);
- 3) information factors (coefficient of the cultural level of the personnel, availability of quality certificates for goods (services), quality factor of debt).

All groups of indicators to measure the investment attractiveness of enterprises and organizations, as well as indicators placed in these groups are assigned, depending on their weight, the corresponding numerical values. As well as the boundary values of indicators, the validity can be adjusted. The specified validity is derived from the time of its political and social situation and other factors, so this characteristic has a probable origin.

Most similar to the proposed analysis method of investment attractiveness is a method of the sum of the coefficients. We believe that this method is one of the most promising among integrated models that determine investment attractiveness. Taking it as a basis and taking into account some of the features, let's consider the following method for determining the investment attractiveness of enterprises entitled the complex group factors.

On the basis of the financial and accounting reports of PJSC "Poltavakonditer" 5 sets of indicators of investment attractiveness were designed (indicators of performance of property evaluation, indicators of performance assessment of financial stability (solvency); indicators of performance evaluation of liquidity, indicators of profitability performance evaluation; indicators of performance evaluation of business), the calculations of which are summarized in Table 1.

Normally, when learning of the investor with the investee and determining the potential of return on investment group the following indicators to measure the economic status of the invested object are used. But a group of indicators for assessing financial stability (solvency) of the invested object is a priority during the financial justification for investment projects, as well as other matters relating to the availability, allocation and use of funds. In order to determine the level of financial viability parameters that are evaluated characterize the supply of reserves and expenses by related sources of their formation. The group of liquidity analysis helps enterprises identify the opportunity to meet the obligations of its assets, the term transformation in which into the funds corresponds to the period of repayment obligations [8, p.33].

Table 1

**Indicators of investment attractiveness PJSC "Poltavakonditer"
in 2009-2011 year ***

Name of indicators	Parameter value			Deviation 2011 y. to	
	2009 year	2010 year	2011 year	2009 year	
				Absolute	Relative%
Performance evaluation of property invested object					
Rate of depreciation	0,4227	0,4289	0,4801	0,06	13,58
Coefficient update	0,1098	0,1561	0,0457	-0,06	-58,38
Factor departure	0,0079	0,0016	0,0080	0,0001	1,27
Performance assessment of financial stability					
Coefficient of autonomy	0,74	0,78	0,81	0,07	10,13
Rate financing	0,36	0,29	0,23	-0,12	-36,11
Coefficient of financial dependence	1,25	1,77	2,11	0,87	69,43
Rate debt	0,19	0,19	0,24	0,05	9,28
Debt ratio	0,29	0,23	0,32	0,3	10,34
Coefficient of investments	2,14	2,38	2,10	-0,04	-1,87
Mobility rate of equity	0,45	0,50	0,49	0,04	9,28
Performance evaluation of liquidity					
Overall liquidity ratio	2,25	2,77	3,11	0,87	38,54
Quick Ratio	0,66	0,71	0,78	0,12	21,43
Absolute liquidity ratio	0,17	0,19	0,23	0,05	35,29
Performance evaluation of profitability					
Return on total capital	17,92	4,44	7,19	-10,73	-59,87
Return on equity	15,48	2,98	6,61	-8,87	-57,29
Return on economic resources	12,90	3,18	5,03	-7,87	-61,03
Product Profitability	10,22	3,10	4,63	-5,59	-54,67
Performance evaluation of business activity					
Productivity	548,50	666,13	787,07	238,57	43,50
Assets	3,43	3,19	3,13	-0,30	-8,81
Turnover of current assets	1,93	1,77	1,77	-0,15	-7,98
Turnover of stocks	3,24	2,97	2,81	-0,42	-13,05
Turnover of equity	1,93	1,77	1,77	-0,16	-8,29

Source: calculated by authors and based on financial or accounting statements

When investor is analyzing potential return from investments should be used the corresponding group of indicators to measure the economic status of the invested object. Note that the group of indicators to measure financial stability (solvency) in investing object is a priority during the financial justification for investment projects and is able to solve other tasks which

relates to the availability, allocation and use of funds. Determining the level of financial viability is evaluated indicators that characterize the suppleness of reserves and expenses related to sources of their formation. Analysis Group liquidity helps enterprises identify the opportunities cover the enterprise liabilities in its assets, where period of conversion into cash is equal to the period of repayment obligations.

Thus the data in Table 1 indicates that all of the group parameters are sufficient to determine the total integral index of investment attractiveness. If necessary, the number of parameters is adjusted. With the help of expert evaluation it is possible to determine the significance of group of indicators, and validity of indicators in groups. Summary measure of the rating of the company will have the following formula for calculation:

$$R_j = \frac{\sum_{i=1}^{n1} \left[\frac{e_{ij}}{\max_j e_{ij}} \right] \times K_1}{n1} + \frac{\sum_{i=1}^{n2} \left[\frac{b_{ij}}{\text{norm } b_i} \right] \times K_2}{n2} + \frac{\sum_{i=1}^{n3} \left[\frac{d_{ij}}{\max_j d_{ij}} \right] \times K_3}{n3} +$$

$$+ \frac{\sum_{i=1}^{n4} \left[\frac{l_{ij}}{\max_j l_{ij}} \right] \times K_4}{n4} + \frac{\sum_{i=1}^{n5} \left[\frac{p_{ij}}{\max_j p_{ij}} \right] \times K_5}{n5} + \frac{\sum_{i=1}^{n6} \left[\frac{w_{ij}}{\max_j w_{ij}} \right] \times K_6}{n6}$$

where:

- e_{ij} , b_{ij} , d_{ij} , l_{ij} , p_{ij} , w_{ij} - the value of the i -th rate of the group of indicators of financial performance, liquidity and solvency, business activity, business profitability, social security information on factors j -th enterprise;
- $\max_j e_{ij}$, $\max_j d_{ij}$, $\max_j l_{ij}$, $\max_j p_{ij}$, $\max_j w_{ij}$ - the maximum value and the second parameter in the corresponding group performance;
- $\text{norm } b_i$ - standard value and the second parameter in the group of indicators of financial stability and liquidity;
- $n1$, $n2$, $n3$, $n4$, $n5$, $n6$ - the number of parameters in the group of performance indicators;
- K_i – validity coefficient of indicators: $K1=0,1$; $K2=0,3$; $K3=0,2$; $K4=0,2$; $K5=0,1$; $K6=0,1$.

For PJSC "Poltavakonditer" general indicators of rating is 2,3. For this enterprise it is a satisfactory result, but its meaning is not the best compared to the possible outcomes of this method. It indicates the average level of investment attractiveness, which is supported by the financial condition at the time of analysis.

Given the large number of approaches and methods for determining the attractiveness of enterprises, it is necessary to resort to their comparative evaluation, which in practice will make the right choice of the methodological approach and form an objective description of the company.

To ensure the comparability of the financial attractiveness of different companies a matrix of prior justification of investment priorities can be used.

More time-consuming and difficult is the matrix modeling that involves the formation of a certain integral index, which will allow to assess the number of different indicators of economic activity.

At the first level of this model an objective investment task and content of its decision is determined.

At the second level, we performed complete information support that is needed to solve the investment problem. To do this, we used financial and statistical reporting.

At the third level it is necessary to analyze a set of indicators that we believe fully characterizes the investment attractiveness of the company. To display the investment attractiveness of PJSC "Poltavakonditer" we use matrix form which provides convenience and clarity in the interpretation of the relevant results.

Consideration of indicators is carried out by a the matrix $E01$, $E02$, $E03$, the number of lines is determined by a number of quantitative indicators that assess the financial position and the number of columns of the matrix - the number of components that provide the correct definition of the relevant quantitative indicators.

All elements of the matrix based on matching the actual values of the target range of enterprise values or desired changes in trends are emerging as 0 (no match) or 1 (match).

According to the results of the calculation parameters, which are elements of the matrix, the stability of the financial condition of PJSC "Poltavakonditer" is defined as the main characteristic of investment attractiveness in the long and short term. The maximum value of the integral evaluation of investment attractiveness equals to the total number of indicators that were taken into consideration in all groups.

For PJSC "Poltavakonditer" system of indicators of investment attractiveness can be used such a scale of qualitative interpretation of quantitative characteristics of the matrix: if the amount is less than the matrix elements $E \leq 2$, the company has a financial crisis situation; if the sum of the elements of the matrix E is in the range of 3 to 8, the company is not stable financial position, and if the sum of the elements of the matrix E is in the range of 9 to 12, the company has a stable financial position. Table 2 lists the specific values of PJSC "Poltavakonditer" and corresponding indicators as elements of a matrix evaluation of investment attractiveness.

Table 2

**Indicators matrix model assessment of investment attractiveness
PJSC "Poltavakonditer" in 2009-2011 year***

Name of indicators	Year					
	2009		2010		2011	
	Value	condition is satisfied yes (1) no (0)	Value	condition is satisfied yes (1) no (0)	Value	condition is satisfied yes (1) no (0)
Rate of depreciation	0,4227	1	0,4289	1	0,4801	1
Coefficient update	0,1098	1	0,1561	1	0,0457	1
Factor departure	0,0079	1	0,0016	0	0,0080	0
Coefficient of autonomy	0,74	0	0,78	1	0,81	0
Rate financing	0,36	0	0,29	0	0,23	0
Coefficient of financial dependence	1,25	1	1,77	1	2,11	0
Rate debt	0,19	1	0,19	1	0,24	1
Overall liquidity ratio	2,25	1	2,77	1	3,11	1
Absolute liquidity ratio	0,17	1	0,19	1	0,23	0
Return on total capital	17,92	0	4,44	0	7,19	1
Return on equity	15,48	0	2,98	0	6,61	1
Product Profitability	10,22	0	3,10	0	4,63	1
Assets	3,43	1	3,19	1	3,13	1
Turnover of current assets	1,93	1	1,77	0	1,77	1
Turnover of equity	3,24	0	2,97	0	2,81	0

Source: calculated by authors and based on financial or accounting statements

Given the data in Table 2 we obtain the matrix of investment attractiveness of PJSC "Poltavakonditer" for years:

$$E 01= \begin{vmatrix} 111 \\ 001 \\ 111 \\ 000 \end{vmatrix} \quad E02= \begin{vmatrix} 110 \\ 010 \\ 111 \\ 0 0 0 \end{vmatrix} \quad E03= \begin{vmatrix} 110 \\ 000 \\ 110 \\ 1 1 1 \end{vmatrix}$$

Thus, taking into account the scale of assessments that corresponds to the scorecard, on average during this period, the amount of matrix elements for the annual data was 7. So PJSC "Poltavakonditer" has a not stable financial position and the average level of investment attractiveness of the period that is analyzed. However, during the calculation using the same

following method it is not included that single calculation of financial indicators is not enough to show the company in terms of attracting investment.

Conclusion and further studies. Summing up the above it can be noted that the calculations using the methods of the sum of coefficients matrix method and evaluation of investment attractiveness suggest that at this stage of PJSC "Poltvakonditer" is not quite investment attractive. But, for the objectivity of the analysis we must take into account that:

- current measures of value creation (its capitalization) do not appear in the firm's tangible assets, and the records of intangible assets of domestic enterprises are at the beginning level;
- financial indicators provide a retrospective analysis of results, but cannot predict the prospects of the company;
- the financial statements have either very general or functional nature, which does not reflect the marginal processes that usually are the most important in the organization;
- focus on short-term profits by creating long-term value may lead to a critical resource optimization of firm;
- the financial statements by their nature are an abstraction.

Of course, the method of the sum of the coefficients and matrix methodology of evaluation of investment attractiveness does not fully determine the attractiveness of an investment company, it may only be used in addition to the methods of evaluation of investment attractiveness. However, we should not forget that its use may be a significant factor in management decisions of the lender or the investor during investment processes in the company.

Література

1. Стремська А. Покращення методики оцінювання інвестиційної привабливості підприємств / А. Стремська // Економіка та підприємництво. Держава та регіони. – 2007. – № 3. – С. 325–327.
2. Коюда В.О. Основи інвестиційного менеджменту: навч. посібник / В.О. Коюда, Т.І. Лепейко, О.П. Коюда. – К. : Кондор, 2008. – 340 с.
3. Хобта В.М. Активізація і підвищення ефективності інвестиційних процесів на підприємствах : монографія / В.М. Хобта, А.В. Мешков, О.Ю. Попова; НАН України, Ін-т економіки промисловості, ДНТУ. – Донецьк 2005. – 343 с.
4. Экономические и информационно-аналитические основы управления инвестиционными объектами : монография / под. ред. К.В. Балдина. – М. : Издательство Московского психолого-социального института, 2004. – 296 с.
5. Кунцевич В.О. Підходи до діагностики фінансового потенціалу підприємства / В.О. Кунцевич // Актуальні проблеми економіки. – 2005. – № 1. – С. 68-75.
6. Бланк И.А. Инвестиционный менеджмент / И.А. Бланк. – К. : МП «ИТЕМ» ЛТД, «Юнайтед Лондон Трейд Лимитед», 1995 – 448 с.
7. Гайдуцький А.П. Методологічні аспекти інвестиційної привабливості економіки / А.П. Гайдуцький // Регіональна економіка. – 2004 – № 4. – С. 81-86.
8. Задорожна Я.Є. Підвищення інвестиційної привабливості підприємництва як напрямок залучення інвестиційних ресурсів / Я.Є.Задорожна, Л.П. Дядечко // Інвестиції:практика та досвід. – 2007. – № 2. – С. 32–35.

References

1. Stremaska, A. (2007), "Improved methods of evaluating investment attractiveness of", *Ekonomika ta pidprijemnytstvo. Derzhava ta rehiony*, no. 3, pp. 325–327.
2. Koiuda, V.O., Lepeiko, T.I., Koiuda, O.P. (2008), *Osnovy investytsiinoho menedzhmentu* [Fundamentals of Investment Management], tutorial, Ukraine, 340 p.
3. Khobta, V.M., Meshkov, V.N. and Popov, O.Yu. (2005), *Aktyvizatsiia i pidvyshchennia efektyvnosti investytsiinykh protsesiv na pidprijemstvakh* [Activating and improving the efficiency of investment processes in enterprises], monograph, NAN Ukrainy, In-t ekonomiky promyslovosti, DNTU, Donetsk, Ukraine, 343 p.
4. Baldin, K.V. etc. (2004), *Ekonomicheskiye i informatsionno-analiticheskiye osnovy upravleniya investitsionnymi obyektami* [Economic and analytical bases of management of

investment properties], monograph, Izdatelstvo Moskovskogo psikhologo-sotsial'nogo institute, Moscow, Russia, 296 p.

5. Kuntsevych, V.A. (2005), "Approaches to the diagnosis of the financial potential of the company", *Actual problems of economy*, no 1, pp. 68–75.

6. Blank, I.A. (1995), *Investitsionnyy menedzhment* [Investment management], МР «ІТЕМ» LTD, «Yunayted London Treyd Limited», Kiev, Ukraine, 448 p.

7. Haidutskyi, A.P. (2004), "Methodological aspects of investment attractiveness of economy", *Rehionalna ekonomika*, no 4, pp.81–86.

8. Zadorozhna, I.E. and Diadechko, L.P. (2007), "Increasing the investment attractiveness of entrepreneurship as a way of attracting investment resources", *Investytsii: praktyka ta dosvid*, no. 2, pp. 32–35.

УДК 658:338.45

Рябикіна О.Г.,
к.е.н., асистент кафедри економіки, організації
та управління підприємствами
ДВНЗ «Криворізький національний університет»

ОЦІНЮВАННЯ ЕФЕКТИВНОСТІ ФОРМУВАННЯ Й РОЗВИТКУ ТЕХНІКО-ТЕХНОЛОГІЧНОЇ БАЗИ ТА ЇЇ ВПЛИВУ НА РЕЗУЛЬТАТИВНІСТЬ ДІЯЛЬНОСТІ ПІДПРИЄМСТВА

Riabykina O.H.,
cand.sc.(econ.), assistant of the department of economics,
organization and management of enterprises
SHEI "Kryvyi Rih National University"

EFFECTIVENESS EVALUATION OF FORMATION AND DEVELOPMENT OF TECHNICAL AND TECHNOLOGICAL BASE AND ITS IMPACT ON ENTERPRISE ACTIVITY EFFICIENCY

Постановка проблеми. Техніко-технологічна база (ТТБ) промислового підприємства органічно інтегрує в собі інтелектуальні, технологічні, інформаційні, технічні ресурси, комплексна взаємодія яких створює передумови для забезпечення позитивної траєкторії розвитку економічних систем різних рівнів. Вона розглядається як матеріальна основа забезпечення результативності діяльності підприємства [1]. Управління процесами формування та розвитку ТТБ в умовах переходу до інноваційної моделі економіки України, необхідності досягнення європейських стандартів у вітчизняній економіці повинне ґрунтуватися на нових підходах до оцінювання ефективності відтворювальних процесів, які не будуть носити фрагментарного характеру в контексті інноваційного розвитку, враховуватимуть галузеві особливості ТТБ підприємств.

Аналіз останніх досліджень і публікацій. Результати узагальнення літературних джерел та наукових праць з досліджуваної проблематики свідчать, що, незважаючи на зростаючий обсяг наукових досліджень, консенсусу серед вчених щодо методики дослідження ефективності формування й розвитку ТТБ підприємства не досягнуто, що зумовлено наступним:

– на сьогодні формування та розвиток ТТБ підприємства розглядається переважно через призму технічного розвитку, більшість методик базується на аналізі технічного рівня підприємства [2; 3; 4];