# APPLICATION OF THE FEASIBILITY STUDY IN PROJECT FINANCE ON THE BASIS OF A SELECTED INVESTMENT PROJECT

Teresa SZOT-GABRYŚ*

***Abstract.*** *The paper presents a selection of aspects of a practical application the feasibility study in the evaluation of investment projects for implementation based on the project finance structure. The feasibility study is an analysis on the basis of which owners make decisions whether to implement or abandon a given project. Feasibility studies are particularly important when they investigate investment projects that are totally new and which will be built up from scratch, which is quite typical for project finance method. One advantage of project finance is that it creates a new business entity in order to carry out an intended investment project. It facilitates the analysis of conditions of project performance and its financial effectiveness; whereas, legal and economic isolation from its owners limits project-related investor risk.*

*The paper includes a case study of a selected investment project for a better understanding of the project finance method and the role the feasibility study plays in the assessment of principles of a planned investment.*

***Keywords:*** *feasibility study, investment project, project finance.*

**JEL Classification:** M21 – Business Economics.

## 1. Introduction

Carrying out investment projects in an enterprise is a typical indication of corporate development strategy. In general, one may invest into real resources (tangible goods) or intangibles, or financial assets. Numerous corporate investors, amongst them private entities, undertake to set up project finance companies, i.e. new business entities established to build up a business idea from scratch. Performance of said business undertaking begins with drawing up an investment project as a newly

* Teresa Szot-Gabryś, Siedlce University of Natural Sciences and Humanities, Institute of Management and Marketing, ul. Żytnia 17/19, 08-110 Siedlce, Poland, t.szot-abrys@wp.pl

created business unit must be equipped with adequate fixed assets (buildings, constructions, machines, devices, equipment etc.). In economic practice, two methods of investment financing and completion have been developed: *project finance* and *corporate finance*[1]. *Corporate finance* involves taking investment decisions by enterprises that are already functioning on the market as the subsequent stage of their development. *Project finance* involves creating a *special purpose vehicle,* the only purpose of which is to manage the undertaken project on behalf of investors in the investment stage, then in the stage of exploitation of its current, operational activity. The *project finance method* is utilised mainly for the purpose of extensive, complex and capital-intensive investments. Typical examples of said investments are industrial plants or infrastructural investments (such as a construction of motorways, energy industry). However, *project finance* may also be employed when carrying out some smaller and relatively simple investments, such as building a hotel or a medium-sized production plant[2].

This study portrays the application of *project finance* to the development of a project finance idea involving the construction and maintenance of a spring water bottling plant. The second key issue depicted herein is the role of the *feasibility study* as a document containing a multifaceted feasibility analysis of an investment project that is to be implemented. One of the aspects of an investment project examined in the *feasibility study* is its financial effectiveness, sources of finance and financial liquidity of a project at the investment and operational activity stages formed as part of facility investment. Additionally, there is also an analysis of the structure of investor contributions and prospective benefits of project implementation from the point of view of said investors.

Particular emphasis was placed on demonstrating the practical applications of *project finance* and the range of *feasibility study* analyses included therein. Therefore, the study employs the *case study* method and presents a case of a new undertaking involving the construction of a spring water bottling plant.

---

[1] W. Rogowski, *Rachunek efektywności inwestycji [Investment effectiveness statement],* Wolters Kluwer business, Kraków 2008, pp. 32-37.

[2] K. Brzozowska, *Finansowanie inwestycji infrastrukturalnych przez kapitał prywatny na zasadach project finance [Infrastructural investment finance with private capital on the basis of project finance*], Cedewu, Warszawa 2005, pp. 78-79.

## 2. Principles of *project finance*

Carrying out lucrative business projects in practice requires adopting suitable organisational and legal forms for the planned project and seeking proper, externally supplied finance, as typically primary investor resources prove insufficient. A convenient method of financing new business projects involving building up a company from scratch is *project finance.* In order to implement a prospective investment project, a new business entity is established, referred to as a *special purpose vehicle,* which usually is largely financed with external investment loans. This way the project is separated from the up-to-date activities of its owners, which reduces liability risk of said investors for their prospective debts, if any such undertaking fails. The *project finance* method is often defined as the method of funding a self-contained business entity (isolated investment), in which a creditor is originally interested in monetary flow and profits generated by said entity as a source of loan and interest leverage and in entity's assets as a source of loan collateral[3].

*Project finance* is based on predictions regarding future outcomes of a newly created company. Such company is usually separated from an already existing institution or it is made from scratch. Hence, as a consequence there is no possibility to assess current financial standing of the entity. The sole object of analysis is the project itself and the size of risk associated with it. The underlying loan collateral is an asset, which is the outcome of project completion. The key moment for the project is the start-up and the early phase of project performance[4].

Therefore, an investment project is seen from the angle of cash flows related to the project and analyses focus on whether the undertaking maintains financial liquidity throughout its life-cycle. The project life-cycle is a complex and multidimensional process, which begins with expenditure associated with investment organisation and implementation, and ends with proceeds from the sale of a facility being closed down. We ought to examine the matter due to monetary resource movement related therewith. Generally speaking, the cycle consists of the following phases[5]:

---

[3] P. K. Nevitt, F. J. Fabozzi, *Project financing,* Euromoney Books, London 2000, p. 1.

[4] K. Czerkas, *Project Finance w polskiej praktyce. Zastosowanie w działalności deweloperskiej [Project finance in Polish practice – property development activities]*, Biblioteka Bankowca, Twigger, Warszawa 2001.

[5] A. Wojewnik-Filipkowska, *Project finanse inwestycjach infrastrukturalnych [Project finance in infrastructural investment]*, CeDeWu, Warszawa 2008, pp. 22-23.

1) Collecting financial resources (capital), i.e. the capital accumulation phase. In the case of new enterprises, the process is always of an external nature.

2) Spending monetary resources on indispensable economic means – the assets.

3) Returning the cash spent based on the sales of goods and services.

4) Reinvestment of retained profits, developing the next turnover of investment resources

Looking at an investment project from the point of view of cash flows is a practical approach because maintenance of financial liquidity, i.e. synchronisation of inflows and outflows at all times during the project life-cycle, along with generation of net cash in the exploitation period, are key for its success and survival.

All in all, we may enumerate the following main features of *project finance*[6]:

- the subject of financing is a legally and economically self-contained investment project in a form of a specially developed project company referred to as a *special purpose vehicle*, whose only business activity is managing said undertaking;
- capital is usually raised for a new investment rather than an already established activity;
- there is usually a high level of debt (loan liabilities) within the structure of the total capital engaged in project funding;
- creditors have no guarantees from primary investors – the so-called *non-recourse finance;*
- creditors' decision to finance an investment project is based on the analysis of future, anticipated profits, as a newly established project company has no history of activity and has no assets.
- the principal source of loan collaterals are assets created in the course of undertaking implementation (licenses, proprietary rights to land, buildings and constructions, machines and equipment);
- project finance debt should be repaid by the end the life-cycle of a given investment project.

Due to above determinants of *project finance*, this structure needs to be thoroughly and comprehensively analysed and assessed at the stage of

[6] E. R. Yescombe, *Principles of project finance,* Academic Press, San Diego 2002, s. 7-8, za: W. Rogowski, *Rachunek efektywności inwestycji,* Wolters Kluwer business, Kraków 2008, s. 33-34.

concept development for an investment project to be implemented. The examination and evaluation of feasibility and cost-effectiveness of a project is conducted in a form of the *feasibility study*.

## 3. The meaning of the *feasibility study* as a document encompassing an analysis of project idea

Pursuant to the adopted concept, which is in effect in the field of corporate finance management, the main long-term objective of an enterprise is to increase its owners' assets[7]. Establishment of a new company to conduct a business project is recognised as one of the available forms of investing said capital. It is obvious that investors expect that capital invested in the company will generate financial return. A decision to invest capital in setting up a new undertaking should be preceded by drafting of a *feasibility study* regarding such project.

When referring to investment projects, including but not limited to projects involving establishment of a new company for the purpose of a business undertaking, one may talk about the so-called *project-implementation cycle.* This approach is done according to the commonly adopted methodology of the project course- and resources-planning. *The project-implementation cycle* is a period which begins when research and analyses are undertaken, and which lasts until operation activities end. The structure of the *project-implementation cycle* may be presented as follows[8]:

*Pre-implementation stage:*

I. Research and analysis phase
II. Project scenario and resources planning phase
III. Underlying design phase
IV. Undertaking implementation process design phase

*Implementation stage*

V. Implementation phase
IV. Operational phase

[7] K. Jajuga, T. Jajuga, *Inwestycje,* Wydawnictwo Naukowe PWN, Warszawa 2008, s. 335.

[8] A. Stabryła, *Zarządzanie projektami ekonomicznymi i organizacyjnymi [Economic and organisational project management],* Wydawnictwo Naukowe PWN, Warszawa 2006, p. 100.

Investment projects that involve establishing a new company from 'zero' are highly complex. Any decisions related thereto must be preceded by a multisided analysis of feasibility of a given project, not only in terms of its financial profitability but also with reference to legal, organisational, technological, or market feasibility, etc. UNIDO provides a comprehensive methodology in the field. UNIDO is a specialist organisation, operating as part of the UN system, which supports industrialisation processes and helps developing countries and states in the period of economic transition[9].

According to UNIDO, the life-cycle of an investment project consists of the following stages:

- pre-investment stage,
- investment stage,
- operational stage.

Table 1 set out a detailed list of the phases of each individual stage of carrying out investment projects.

**Table 1.**
*Investment project cycle according to UNIDO methodology*

| | | |
|---|---|---|
| Investment project | Pre-investment stage | Identification, possibility study |
| | | Preliminary selection, pre-feasibility study |
| | | Ancillary studies |
| | | Feasibility study |
| | | Evaluation and performance report |
| | Investment stage | Negotiations and concluding agreements |
| | | Technical design |
| | | Formulation (construction) |
| | | Pre-production marketing |
| | | Training |
| | | Acceptance and start-up |
| | Operational stage | Exploitation |
| | | Extension |

**Source:** W. Behrens, P. M. Hawranek, *Poradnik przygotowania przemysłowych studiów feasibility [Manual for formulation of industrial feasibility studies],* UNIDO, Warszawa 1993, p. 10.

[9] http://www.unido.pl/

The pre-investment stage in particular is well developed in the presented methodology. The feasibility study plays an essential role here as it is a document composed of an analysis of legitimacy and viability of a project. The objective of the *feasibility study* is to conduct a multi-faceted analysis of conditions for carrying out a project; thus, to include the following: market and economic and financial feasibility analysis, within the context of adopted principles, environmental impact and local conditions analysis, and macro-surrounding conditions, i.e. formal and legal, political and social conditions analysis. Such comprehensive analysis leads either to project recommendation or project rejection. Therefore, it serves as the basis for decision-makers to implement a project.

UNIDO methodology is adequate for large industrial projects where companies are often built up from scratch. However, Polish economic reality typically demonstrates entities from the small and medium enterprises sector which carry out projects on a much smaller scale. Nevertheless, the general UNIDO methodology, in particular that of financial analysis involving discount methods of investment project evaluation, is also suitable for typical investment projects carried out in the Polish reality by small and medium-sized enterprises[10]. Said methodology is highly suitable for analysing investment projects intended to be implemented in an enterprise. This issue will be developed further on in the study in the form of a case study of a spring water bottling plant.

## 4. Principles and objectives of the construction of a spring water bottling plant project – a case study[11]

*Project background*

The feasibility study has been prepared on initiative of potential investors' group interested in the undertaking that consists in spring water

[10] T. Szot-Gabryś, *Projekty inwestycyjne infrastrukturalne i biznesowe. Aspekty teoretyczne i praktyczne [Investment, infrastructural and business projects. The methodological and practical aspects]*, Difin, Warsaw 2011, pp. 47-48.

[11] This case study was developed on the basis of: T. Szot-Gabryś, project dossier: *Feasibility study for spring water bottling plant,* unpublished materials. Due to limited space of this chapter the presented case study omits an analysis of macro-environment determinants and a marketing analysis and strategy, which are included in the feasibility study of the presented project. What is more, the financial analyse presented has also been limited.

plant start-up. The company's activity will be based on existing and documented water intake, located in K. locality, F. commune in Poland. The intake is on a plot owned by Ms. T.D. The spring water present in that location has undergone numerous expertises and analyses that proved its beneficial physical chemistry characteristics and high quality of the water. Assumptions made for this feasibility study foresee the operations of spring water bottling enterprise in the form of Limited Liability Company.

The feasibility study addresses the economic, financial and marketing assessment of undertaking that consists in setting and operating activity of mineral water bottling plant. The enterprise will operate in the legal form of Limited Liability Company.

Preparing the feasibility study following studies and analyses were used:

- „Hydrogeology documentation determining exploitation resources and the project of protected area of subterranean water intake localized on the plot owned by Ms. T. D., in K. locality, F. commune, Lubelskie Voivodeship, Poland";
- „Hydrogeology opinion concerning the presence possibility of terminal waters and waters suitable for bottling as spring water in K. locality";
- „Assessment of water holding capacity in K. locality, F. commune";
- Report on water tests;

The aforesaid studies and expertises unequivocally prove that:

- water present in the intake located on Ms. T. D.'s plot is characterised by high quality parameters in respect of physics chemical characteristics;
- water meets bacteriological standards of spring waters;
- resources of aquifer are large and present high ability to naturally renew, what in a prospect of long-time exploitation guarantees that no shortage in raw material for the plant will occur;

The confirmation of water high quality constituted a preliminary condition to undertake further studies concerning profitability of exploitation, bottling and distribution.

The feasibility study is aimed to analyse the economic and financial feasibility of investment undertaking represented by construction and

operation of spring water plant. 2 stages of enterprise operations have been planned:

- investment phase – building-up the enterprise;
- phase of operating activity.

Carried out analyses are aimed to indicate conditions for success of planned undertaking, on the assumptions made in relation to the value of capital employed by investors and indication of its profitability from the potential investor's point of view.

### *4.1. Phase of enterprise founding and organization*

The planned investment undertaking consists in construction and set-up of spring water plant's activity. In this connection the projection of the enterprise has been divided into two stages:

- investment phase – enterprise build-up – means carrying out organising activities and collecting fixed assets that constitute basis for company operations;
- phase of operating activity carried by the enterprise.

The investment phase consists of following activities:

**I. Registration of the Company**

From the moment of registration the Company will become a legal person that will start the process of enterprise organisation and collecting its tangible assets. Share capital of the Company contributed by the owners in cash by shares subscription will amount to PLN 100 000.

**Table 2.**
*The structure of share capital*

| Shareholders | Value of shares in PLN | Percentage in total capital value |
|---|---|---|
| Ms T.D. | 50 000 | 50.0% |
| H.N.V. B.V. | 48 000 | 48.0% |
| A.J. H. | 2 000 | 2.0% |
| **Total** | 100 000 | 100% |

**Source**: T. Szot-Gabryś, project dossier: *Feasibility study for spring water bottling plant,* unpublished materials.

Additionally, the shareholders will grant the Company following loans:

- H.N.V. B.V. – PLN 552 000, 9% annual interest rate;
- Ms. T.D. – PLN 500 000, 9% annual interest rate.

Totally, indicated financing means will allow collecting assets amounting to PLN 1 152 000, of which PLN 100 000 of share capital will be recognized in balance-sheet equity capital and liabilities as Equity Capital and total amount of loans, i.e. PLN 1 052 000 as Long-term Liabilities.

**II. Purchase of land with spring water intake**

The first step of investment process is purchase by the Company from Ms. T.D. of land where spring water intake is localized, against amount of PLN 600 000. Before starting the activity on the basis of the purchased land, the destined use of land needs to be reclassified in local development plan from the destination for agriculture use to the business activity. To avoid tax on that transaction, it is important that the Company buys the land classified as agricultural land.

**III. Construction design and permits:**

- Order to execute the construction design of bottling plant and its infrastructure;
- Obtaining a construction permit;
- Purchase of aquatic legal survey;
- Water qualification by the Spa Institute in Poznań.

Issuance of opinion on water by the Spa Institute in Poznań constitutes a condition to accept the water for production and distribution.

**IV. Construction of bottling plant's building (manufacturing shop, office and social rooms).**

**V. Purchase of machines and devices, equipment, means of transport**

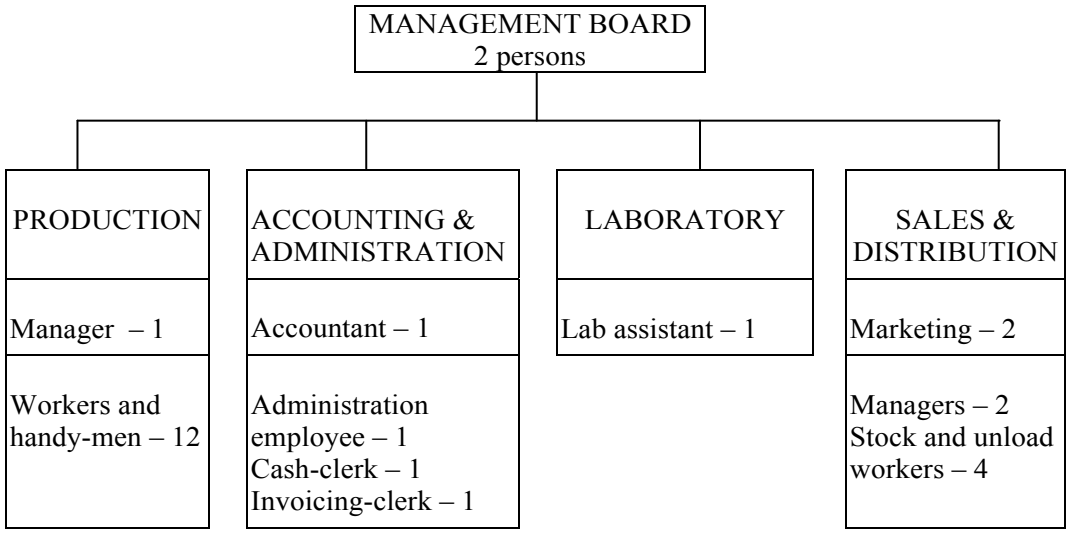
The key element of this phase is the acquisition of process line for bottled water's manufacturing. It is assumed that the cost of purchasing the process line will amount to PLN 300 000, line capacity 3 000 litres per hour, what means 2 000 pieces of 1.5 litre bottles per hour.

## VI. Enterprise organisation

Simultaneously to the investment process, the works connected with enterprise organisation in order to prepare the Company to conduct its operating activity should be carried out. They include employment planning. 4-5 persons per one shift should operate the process line of spring water production.

**Table 3.**

*Company organization structure*




**Source:** T. Szot-Gabryś, project dossier: *Feasibility study for spring water bottling plant,* unpublished materials.

Employment of 28 persons is the minimum employment at planned activity scale of spring water bottling plant.

### *VI.1. Investment costs*

Carrying out the operating activity requires the use of certain tangible assets. The shareholders, in the project assumptions have foreseen the collected capital value in amount of PLN 1 152 000.

**Table 4.**

*Investment needs*

| Assets component | Value in PLN | Notes |
|---|---|---|
| Purchase of land on which the water intake is localized | 600 000 | The land will by bought by the Company from Ms. T.D. |
| Purchase of process line for bottled water manufacturing | 300 000 | The purchase of line with 2 000 pieces of 1.5 litre bottles per hour capacity is planned. On the assumption of two shifts work, i.e. 15 h and 25 working days a month, manufacturing of 9 000 000 pieces of bottles a year will be possible. |
| Production shop with stock room, social facilities, offices and infrastructure (including design documentation). | 250 000 | Building's parameters should be defined in the way ensuring that indicated functions can be fulfilled. Necessary stock rooms need to be estimated so that in the winter season, when the demand for portable water decreases, inventories could be accumulated in the plant. To have available specified number of products in the high season, it is planned to maintain steady production level in course of the whole year. Such policy is recommended in connection with low capacity of the bottling line. |
| Forklift | 80 000 | Forklift is necessary to work in the store and to reload products in the pant and to load pallets on lorries. |
| Truck with trailer | 150 000<br>60 000 | Industry specificity is products' transportation to receivers by own means of transport. Hence means of transport need to be bought or transportation services need to be contracted. Transportation services costs amount to net PLN 1,35 per 1 km. |
| Equipment | 30 000 | The item includes purchasing of office furniture and equipment etc. |
| **Total** | 1 470 000 | |

**Source:** T. Szot-Gabryś, project dossier: *Feasibility study for spring water bottling plant,* unpublished materials.

From estimations made it results that in the relation to the capital defined by the investors for organising of the enterprise in amount of PLN 1 152 000, the minimum investment needs are still higher of at least PLN 318 000. Moreover, the Company should also have available additional capital securing correct level of operating capital and covering

expenditures to be incurred due to VAT tax on investment purchases. These needs are estimated in the following amounts:

- PLN 120 000 to finance the VAT tax;
- PLN 30 000 to finance purchase of enterprise equipment;
- PLN 1 200 000 to finance operating activity of the enterprise.

The company is starting its operating activity in February and initially will manufacture products designated for stocking in order to secure correct number of products to be sold in the high season.

From performed analysis it results that the capital in the amount of PLN 1 152 000 proposed by the investors is not sufficient to collect assets necessary for enterprise operations.

One of solutions is to use machines or transportation in leasing. It is because the Company has limited possibility to get investment credit in its initial phase of operations. There is a greater chance to get operating credit that would allow correct securing of operating capital. Leasing represents the financing form that is more available than a credit, especially to companies in their initial phase of operations. But the costs of leasing burden the financial result. It should be mentioned that the Company in connection with loans granted by its shareholders in amount of PLN 1 052 000 will be charged with monthly costs totalling PLN **7** 890 and from credit capacity viewpoint will have unfavourable capital structure.

**Table 5.**

*Capital structure*

| Equity capital and liabilities component | Value in PLN | % in total |
|---|---|---|
| Company share capital | 100 000 | 8.68 |
| Loans from shareholders | 1 052 000 | 91.32 |
| Total | 1 152 000 | 100 |

**Source:** T. Szot-Gabryś, project dossier: *Feasibility study for spring water bottling plant,* unpublished materials.

### *VI.2. Operating activity*

The operating activity planning concerns forecast of revenues, costs, inventory, receivables and liabilities management. Amount of operating expenses results from applied production technology.

Process technology of spring water bottling plant consists of several steps:

- water uptake from the intake;
- filtering, water tests;

- carbonation;
- bottles preparation and filling-up;
- labelling;
- distribution;

The feasibility study focuses on spring water manufacturing profitability and its distribution analysis. Thus the projection of revenues and costs must be carried out. One 1.5 litre bottle of water has been applied as a unit cost.

**Table 6.**

*Direct materials costs*

| No. | Material type | Net costs in PLN |
|---|---|---|
| 1. | Packaging – PET 1,5 l bottle | 0.3669 |
| 2. | Ring cap | 0.1085 |
| 3. | Bottle neck label | 0.0086 |
| 4. | Central label | 0.0180 |
| 5. | Adhesive | 0.0001 |
| 6. | Heat-shrinkable film | 0.0023 |
| 7. | Water – output fee | 0.0003 |
| | **Total** | **0.5047** |

**Source:** T. Szot-Gabryś, project dossier: *Feasibility study for spring water bottling plant,* unpublished materials.

### *VI.3. Financial analysis conclusions*

1. From the conducted analysis it results that the capital proposed by investors in the amount of PLN 1 152 000 is insufficient to collect assets potential necessary for enterprise operations.

2. The minimum level of operating credits on operating activity is following:

- PLN 120 000 to finance VAT tax;
- PLN 30 000 to finance purchase of enterprise equipment;
- PLN 1 200 000 to finance operating activity of the enterprise;

It should be also taken into account that due to its disadvantageous capital structure (share capital and loans granted to the company by its owners that are included in liabilities) and no credit history, the Company can have difficulties to be granted the operating credit.

3. From the finance projection it results that the enterprise can have temporary finance liquidity problems, especially in dead season months.

Then other operating credits will have to be incurred or another form of current activity financing will have to be sought.

4. At the production scale resulting from manufacturing capacity, the company will not be able to carry out the production strategy based on returns to scale. If the product is placed successfully on the market (i.e. on the assumption that the whole production will be sold), the undertaking will be profitable.

5. From the economic finance analysis carried out in the paper it results that:

- planned investment undertaking is profitable, provided that indicated assumptions as to enterprise financing are met and the company places the product on the market;
- IRR and NPV ratios are outstanding;
- return on investments calculated with application of simple rate of return method will be realised in the fifth year of investment's operations;
- the Company is able to earn profits to handle liabilities and to pay out dividends to shareholders (after 5 years);

The financial analysis proves that the investment project, on made assumptions as to revenues and costs, is profitable and maintains financial liquidity, i.e. shows capacity to pay back the credits incurred for its performance. Thus the investment planned by the Company is justified from market and economic financial point of view.

## 5. Conclusions

The task of the *feasibility study* is to provide a comprehensive analysis of an investment project, including analysis seen from the angle of its financial effectiveness and potential barriers and obstacles and risk of failure. One advantage of the *feasibility study* is that it is prepared within the idea stage of a project, before some concrete steps are undertaken in reality. Hence, the *feasibility study* is an analysis on the basis of which owners make decisions whether to implement or abandon a given project. It is a document used by owners and investors, who want to invest their capital in the analysed project, for the purpose of decision-making. On the other hand, analyses included in the *feasibility study* may be employed in the process of acquiring external funds.

The *feasibility study* plays a key role whenever it investigates investment projects that are completely new and that will be built up from scratch, which is quite typical for *project finance*. In such situation there

are no historical data which would serve as the grounds for planning future outcomes. Implementing *project finance* makes it possible to distinguish the legal and economic aspects of a given undertaking from its current activities. The above facilitates economic and financial evaluation and reduces investor financial risk, as it concerns capital entrusted to finance that project alone.

## REFERENCES


[1] Brzozowska K. (2005), *Finansowanie inwestycji infrastrukturalnych przez kapitał prywatny na zasadach project finance [Infrastructural investment finance with private capital on the basis of project finance*], Cedewu, Warszawa.

[2] Czerkas K. (2001), *Project Finance w polskiej praktyce. Zastosowanie w działalności deweloperskiej [Project finance in Polish practice – property development activities]*, Biblioteka Bankowca, Twigger, Warszawa.

[3] Jajuga K., Jajuga T. (2008), *Inwestycje,* Wydawnictwo Naukowe PWN, Warszawa.

[4] Nevitt P. K., Fabozzi F. J. (2000), *Project financing,* Euromoney Books, London.

[5] Stabryła A. (2006), *Zarządzanie projektami ekonomicznymi i organizacyjnymi [Economic and organisational project management],* Wydawnictwo Naukowe PWN, Warszawa.

[6] Szot-Gabryś T. (2011), *Projekty inwestycyjne infrastrukturalne i biznesowe. Aspekty teoretyczne i praktyczne, [Investment, infrastructural and business projects. The methodological and practical aspects]*, Difin, Warsaw.

[7] Szot-Gabryś T., project dossier: *Feasibility study for spring water bottling plant,* unpublished materials.

[8] Rogowski W. (2008), *Rachunek efektywności inwestycji [Investment effectiveness statement],* Wolters Kluwer business, Kraków.

[9] Wojewnik-Filipkowska A. (2008), *Project finanse inwestycjach infrastrukturalnych [Project finance in infrastructural investment]*, CeDeWu, Warszawa.

[10] Yescombe E. R., *Principles of project finance,* Academic Press, San Diego, 2002, s. 7-8, za: W. Rogowski, *Rachunek efektywności inwestycji [The bill of the investment efficiency],* Wolters Kluwer business, Kraków, 2008.

[11] http://www.unido.pl/