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Analysis of the Feasibility of the Restructuring Plan: A Case Study of Poland

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ABSTRACT

Objective: The aim of the study is to assess the possibility of using the cost-benefit analysis (CBA) method as a practical tool for analysing the feasibility of restructuring plans prepared in accordance with Polish restructuring law regulations.
Research Design & Methods: Qualitative methods, i.e. analysis of documents and review of literature and legal acts, as well as quantitative methods, i.e. cost-benefit analysis, were used for the analyses. The article uses data obtained as part of pilot scientific research of court files of restructuring cases conducted in the District Court for the capital city of Warsaw in 2016–2021.
Findings: The article presents the principles of feasibility analysis using this method and then presents its advantages and limitations in the case of assessing restructuring plans. The main identified limitation is the lack of the need to present cash flow forecasts in the plan in accordance with the regulations of the Polish restructuring law. Information on projected revenues and expenses is necessary to assess the effectiveness and financial sustainability of the project.
Implications/Recommendations: The cost-benefit analysis method is a useful practical tool for clear assessment of restructuring plans submitted during restructuring proceedings and it allows us to objectively assess and make a rational decision whether a given project is worth implementing and whether it requires public funding.
Contribution: The research expands knowledge about methods of analysing restructuring plans.

Article type: original article.
Keywords: restructuring plan, feasibility analysis, cost-benefit analysis method, financial analysis.
JEL Classification: G34, K49.

1. Introduction

The restructuring process is an economic undertaking described in the restructuring plan. The restructuring plan is intended to provide sound footings to enable the court and creditors to assess the possibilities of implementing restructuring measures and composition proposals. An in-depth analysis of the information contained in the restructuring plan is required to make such an assessment possible. Due to the fact that the restructuring plan is a document similar to a business plan, we can apply the methods used for the assessment of investment projects to analyse it. Depending on when the assessment of the restructuring project takes place, such analysis can have different objectives. The basic questions to be answered in the case of the preliminary analysis of the restructuring plan, are the following:

1) is it possible to carry out the planned activities?

2) will their implementation ensure achievement of the forecasted economic benefits?

3) will the means thus implemented ensure the satisfaction of creditors at a higher level than in the case of insolvency proceedings?

The above analysis, therefore, constitutes the feasibility study of the project.

The second stage of the analysis of the restructuring process is the assessment during the implementation of the planned activities. It is applied to verify whether, and to what extent the plan is enacted. After the adoption and approval of the arrangement, the analysis of the entity's reports, especially by its creditors, is intended to monitor the implementation of the agreement. This is performed by comparing the results actually achieved by the entity with the forecasts included in the justification of the proposed measures.

Finally, the third stage is the *ex-post* analysis, i.e. after the completion of the restructuring plan. Its task is to evaluate the effectiveness of the procedure. This serves two objectives. The first is to determine the remuneration of the administrator and practitioner appointed by the court and should take into account the effort and quality of work performed by the court-appointed administrator or practitioner. The court determines the value of this remuneration mainly on the basis of the analysis of periodic and final reports on activities and accounting reports. The second objective is to analyse the effectiveness of the proceedings, which allows us to determine the desired changes in statutory regulations and create good practices.

This article focuses on the first type of analysis, i.e. on the assessment of the initial restructuring plan. The objective of the study is to assess the possibility of applying methods of assessing the feasibility of European projects as a practical tool for analysing the feasibility of restructuring plans drawn up in accordance with Polish regulations of restructuring law. The focus will be particularly on the identification of the advantages and limitations of applying the cost-benefit analysis (CBA) method as a basis for the bankruptcy court and creditors to decide on the implementation of the restructuring plan and the adoption of composition proposals.

2. Restructuring Plan

The restructuring plan is the crucial element of the restructuring procedure. Its task is to present the current economic situation of the debtor's enterprise, as well as the causes that led to the occurrence of the crisis, and to present the method of correcting erroneous decisions and limiting their negative impact. It is a complex document, similar to a business plan, however, there is no universal template. In accordance with article 8 of Directive (EU) 2019/1023 of the European Parliament and of the Council, the content of the restructuring plan should contain at least the following information:

1) the identity of the debtor,

2) the debtor's assets and liabilities at the time of submission of the restructuring plan,

3) the affected parties (creditors), whether named individually or described by categories of debt in accordance with national law, as well as their claims or interests,

4) where applicable, the classes into which the affected parties have been grouped, and the respective values of claims and interests in each class,

5) the parties, whether named individually or described by categories of debt, which are not affected by the restructuring plan, together with a description of the reasons why it is proposed not to affect them,

6) the identity of the practitioner (supervisor) in the field of restructuring,

7) the terms of the restructuring plan, including:

a) the proposed restructuring measures and their duration,

b) the arrangements with regard to informing and consulting the employees' representatives,

c) description of overall consequences as regards employment,

d) the estimated financial flows of the debtor in accordance with national law,

e) a description of any new financing anticipated as part of the restructuring plan, and the reasons why the new financing is necessary to implement that plan,

8) a statement of reasons, including:

a) an explanation of why the plan will prevent the debtor from insolvency and ensure the viability of its business,

b) the necessary pre-conditions for the success of the plan,

c) where national law also requires the justification/opinion of the expert or the restructuring practitioner.

In addition, Directive 2019/1023 introduced a comprehensive checklist of plans for the purposes of restructuring small and medium-sized enterprises. This should be prepared and made available by the Member States online in both the official language of the respective country and in at least one other language used in international trade. In addition, Directive 2019/1023 introduced the requirement to prepare the so-called "viability test," which is a condition for access to forms of preventive restructuring. It aims to eliminate debtors who have no chance of regaining profitability, and the test itself can be carried out without negatively affecting the debtors' assets.

In connection with the Directive 2019/1023, a Draft Act amending the Restructuring Law and Bankruptcy Law Acts was prepared in Poland. It assumes the introduction of an obligation for the practitioner or administrator to prepare a satisfaction test, which will serve as the "viability test." It shall contain:

1) valuation indicating the methods and assumptions adopted during its preparation for:

a) the value of the debtor's enterprise assuming the implementation of the restructuring plan and continuation of business by the debtor,

b) the value of the debtor's assets, assuming that the debtor is declared bankrupt and the enterprise is sold as a whole, and in cases in which the enterprise will not be sold as a whole and the sale of its individual assets will be performed instead,

2) information on the expected degree of satisfaction of creditors whose claims are covered by the arrangement in bankruptcy proceedings that would be conducted against the debtor, and containing the following data:

a) the value of the debtor's assets,

b) the expected duration of the insolvency proceedings and the expected cost of the insolvency proceedings and other liabilities of the insolvent estate,

c) the category in which creditors representing different interest classes would be satisfied in the insolvency proceedings,

3) assessment of whether the claims covered by the arrangement will be satisfied to a greater extent in the event of conclusion and implementation of the arrangement – or through bankruptcy proceedings.

The introduction of the satisfaction test will make it possible for the creditors to question the legitimacy of the arrangement. In addition, it will allow the debtor to apply to the court through the cramdown mechanism to enforce the arrangement

despite the objection of some groups of creditors. The introduction of the satisfaction test provided creditors with the information necessary to make an informed decision on how to vote or, possibly, to propose alternative solutions to those reported.

Polish regulations regarding restructuring plans are subject to evolution along with changes in the Polish bankruptcy model. In the original wording of the Act of 28 February 2003 – Bankruptcy and Rehabilitation Law contains minimum requirements for composition proposals agreed, concluded and approved as part of composition and insolvency procedures. The composition proposals had to include a description of one or more ways of restructuring the liabilities and a statement of reasons for which the implementation of the composition agreement will lead to the real satisfaction of the creditors.

Arrangement proposals could be submitted by the debtor, the creditor, the court supervisor and a practitioner within one month of the date of issue of the decision to declare bankruptcy. In addition, the debtor was also obliged to prepare a cash flow statement for the previous 12 months, attaching it to its arrangement proposal. This concerned only those entities which kept appropriate documentation, i.e. books of accounts (Witosz, 2010, p. 495).

Act of 15 May 2015 – Restructuring Law, which has been in force since 1 January 2016, introduced legal instruments in the form of restructuring proceedings, allowing for resolving a debtor's crisis situation resulting from their insolvency or threat of insolvency and the related conflict with creditors (Hrycaj, 2015). The overriding objective of restructuring proceedings is to avoid the debtor's bankruptcy by enabling them to restructure by concluding an arrangement with creditors, and, in the case of remedial proceedings, also by carrying out remedial actions while securing the legitimate interests of creditors. The basic tool for achieving this objective is the restructuring plan drawn up in the course of the proceedings and the actions taken based upon it. The preparation of a restructuring plan constitutes a mandatory element of all types of restructuring proceedings described in the said act.

The process of each of the four restructuring proceedings in accordance with Polish restructuring law is similar. It requires a restructuring petition to be filed with the court, cooperation between the debtor and the court supervisor or administrator, a restructuring plan, inventory of claims and arrangement proposals to be prepared, voting to accept the agreement, and then the arrangement to be approved by the court. The key activities carried out during restructuring proceedings are illustrated in Figure 1.

Depending on the type of restructuring proceedings, a restructuring plan is drawn up by the restructuring practitioner, court supervisor or administrator. In situations where it is particularly justified, unless it is a proceeding for approval of an arrangement, a third party may be commissioned to prepare a restructuring plan. Approval of the restructuring plan takes place only in remedial proceedings.

The judge-commissioner shall make such a decision after obtaining an opinion from the council of creditors. Article 10 of the Restructuring Law defines the minimum formal requirements of a restructuring plan, i.e.:

1) description of the enterprise,
2) market description,
3) analysis of the causes of the crisis,
4) characteristics of the future strategy and risk analysis,
5) review of restructuring measures and related costs,
6) capacity data,
7) description of methods and sources of financing,
8) profit and loss forecast for the next five years,
9) the names of the persons responsible for implementing the arrangement and of the authors of the restructuring plan,
10) the date of drawing up the plan.

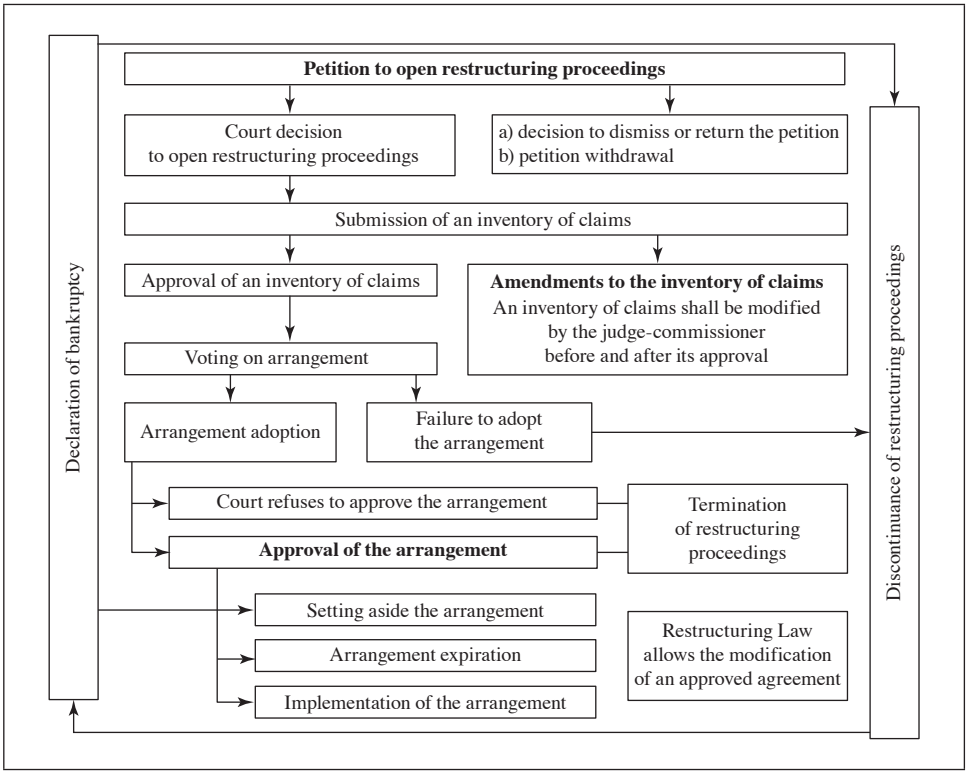

Fig. 1. Key Activities to Be Carried out during Restructuring Proceedings in Poland
Source: Zaremba (2022, p. 137).

Table 1. The Content of the Private Creditor Test and the Private Investor Test

Private Creditor Test	Private Investor Test
1) information about the expected degree of satisfying individual public law creditors under the proposed arrangement 2) information about expected degree of satisfying individual public law creditors in bankruptcy proceedings which would be conducted against the debtor 3) an assessment as to whether the public law creditor's claims will be met to a greater extent in case of either the conclusion and performance of the arrangement or in bankruptcy proceedings	1) the expected level of return on invested funds 2) the average return on funds employed in comparable investments 3) the expected level of risk associated with the investment 4) the average risk of comparable investments

Source: the author, based on Article 140 of the Act of 15 May 2015 – Restructuring Law.

Where public aid may be granted in restructuring proceedings, the restructuring plan must additionally contain a private creditor test or a private investor test (MEIP test) and a *de minimis* aid assessment. In justified cases, the court may agree to a limited form of the restructuring plan, omitting some of the formal requirements mentioned above (Hrycaj & Filipiak, 2017). The role of the private creditor test for public creditors will be fulfilled by the satisfaction test in the future. The content of both the private creditor test and the private investor test is presented in Table 1.

3. Research Methodology – CBA Method

The feasibility of the project is the possibility of its effective implementation under specific conditions and constraints. One of the most popular methods of determining the feasibility of projects is the TELOS method proposed by James A. Hall (2011, p. 579). The feasibility analysis usually results in the elaboration of a feasibility study. Detailed guidelines have been developed at the level of the European Union for the preparation and assessment of the feasibility of large European projects – Regulation (EU) No 1303/2013 of the European Parliament and of the Council of 17 December 2013. The cost-benefit analysis (CBA) is the basis for the feasibility analysis of EU projects. It is presented in detail in the European Commission's *Guide to Cost-Benefit Analysis of Investment Projects* (European Commission, 2015). The CBA is an analytical tool used to assess the economic advantages and disadvantages of an investment decision by evaluating the related costs and benefits. The analysis is used to evaluate projects, although it can also be applied for evaluation during and after the implementation of the project. Project evaluation by means of the cost-benefit analysis consists of seven stages.

The first stage of project evaluation is to present the context, i.e. the social, economic, political and institutional environment in which it will be implemented. The presentation of the context is important from the perspective of forecasting future trends, e.g. demand, revenues, costs, flows, etc. The subsequent step is to define the project objectives. In the case of EU projects, the objectives (targets) should be set on the basis of needs, which in turn should result from the context described in the previous stage. An objective of the project should be to meet specific needs, allowing verification of the suitability of the project. The objectives should also be carefully quantified using indicators to allow for their further evaluation as part of a cost-benefit analysis. The third step is project identification. According to the guidelines of the European Commission, the description of the project should make it possible to unambiguously identify the project as a stand--alone feasibility analysis unit. It should clearly indicate the entity responsible for the implementation of the project, the beneficiaries of the project, as well as activities and "physical elements" that will be implemented to achieve the planned objectives. The fourth stage requires the preparation of basic information about technical feasibility and environmental sustainability.

The fifth stage is financial analysis. Its objective is to examine whether the planned project is financially effective. Financial efficiency has been defined in the *Guide to Cost-Benefit Analysis* prepared by the European Commission as "profitability from an investor's perspective," i.e. whether the expected benefits of the project will exceed the investment outlays. It involves examining the financial flows related to the project and determining the financial efficiency indicators of the project. The use of the term "profitability" in this context may therefore be misleading, as profitability implies a positive difference between revenues and costs, rather than inflows and outflows. An entity may be profitable but simultaneously insolvent if it is unable to generate sufficient cash flows to meet its due obligations. Therefore, in the article, the concept of financial viability will be used instead of profitability when assessing financial efficiency of the restructuring plan. Financial analysis in the CBA method is carried out in order to:

– assess the financial viability of investments,
– verify the financial sustainability of the project,
– find the right source of additional funding.

The method of financial analysis is the discounted cash flow (DCF) method. Net present value (NPV) is the difference between discounted proceeds and expenses incurred for the investment in the respective periods. It is determined according to the following formula:

$$NPV = \sum_{i=1}^{N} \frac{CF_i}{(1+d)^i},$$

where:

CF_i – net cash flows in i-th period, i.e. the difference between inflows and outflows incurred in i-th period,

d – the discount rate,

N – payback period.

Two variants of the forecasts are analysed, i.e. the baseline scenario and the pessimistic scenario, with the pessimistic used predominantly for the purpose of risk and sensitivity analysis.

The second way to assess the economic efficiency of an investment is to determine and compare the internal rate of return (IRR). IRR is the discount rate at which the net present value of the cost-benefit stream equals 0. It can be ascertained by solving the following equation:

$$0 = \sum_{i=1}^{N} \frac{CF_i}{(1 + IRR)^i}.$$

At the same time, IRR is the discount rate at which the economic break-even point is reached, as well as the maximum acceptable cost of capital when financing an investment (Bogucki, 2016, p. 261). The advantage of using IRR is the ability to assess the effectiveness of the investment without assuming a discount rate.

According to the guide, the following indicators should be used to assess project viability:

1) the financial net present value – FNPV(C) and the financial rate of return – FRR(C) – on investments,

2) the financial net present value – FNPV(K) and the financial rate of return – FRR(K) – on domestic capital.

The first two indicators – FNPV(C) and FRR(C) – measure the extent to which an investment can be financed from the project's revenues regardless of its sources and methods of financing. Their calculation enables us to discern whether the project requires financial support, i.e. when the FNPV(C) is negative. For large projects, FNPV(K) and FRR(K) are also determined. All sources of funding are taken into account in their calculation, with the exception of the EU contribution. For an EU-funded project, the FNPV(K) should be negative or equal to zero and the FRR(K) should be lower or equal to the reference discount rate.

The financial sustainability analysis examines whether the available internal and external sources of financing will correspond, year to year, to the expenses incurred. The project is financially sustainable when the risk of running out of cash equals nil. This is the case when the cumulative cash flows generated in all analysed years are positive. Inflows include sources of funding and operating income, as well as transfers, subsidies and other financial benefits. Expenses are initial outlays, oper-

ating and replacement costs, repayment of loans and interest, and taxes – including income tax.

Economic analysis is the next stage after the analysis of the financial assessment of the costs and benefits of the project. This analysis provides an answer to the question of whether a given project deserves to be implemented from the point of view of social welfare. It is carried out by adjusting the results of the financial analysis by taking into account: fiscal adjustments, settlement prices (called "hidden prices") and external effects. Fiscal adjustments include the deduction of indirect taxes, subsidies and other contributions or expenses that have no equivalent in real resources, e.g. social security payments. Market price adjustments are necessary in the event of market distortions because the prices observed on the market do not reflect all social costs. An externalities adjustment is a valuation of those cost--benefit components that do not occur in conventional commodity markets and therefore occur without cash flows and were, hence, not recognised directly in the financial analysis.

After adjusting inflows and expenses for the above adjustments, the following indicators are calculated:

– economic net present value (ENPV), i.e. the difference between discounted total benefits and social costs,

– the economic rate of return (ERR), i.e. a rate giving zero value to the ENPV,

– B/C ratio, i.e. the ratio of discounted economic benefits to costs.

The calculations shall adopt a uniform economic discount rate, known as the social discount rate (SDR), according to the reference value indicated by the European Commission. By accounting for hidden prices and externalities, most projects with a low or negative NPV will have a positive ENPV. If the ENPV is still negative, the project should be rejected. If ENPV > 0, where ERR > SDR, this means that the public needs such a project and it should be co-financed. In this case, the B/C ratio takes a value greater than 1.

Pursuant to EU Regulation No 1303/2013, the CBA analysis should also contain risk assessment, which should include: sensitivity analysis, qualitative risk analysis, probabilistic assessment, as well as risk prevention and risk mitigation. Sensitivity analysis consists of determining the impact of critical single variables on the value of project performance indicators and its financial sustainability. As part of the qualitative risk analysis, a list of risks is prepared, followed by a risk matrix that assigns impact and probability to each adverse event. On this basis, the level of risk is determined, as well as measures to prevent or reduce the effects of risk.

In order to achieve the set objective, a pilot study consisting of the analysis of restructuring case files was carried out. The research was carried out in the District Court (Polish: Sąd Rejonowy) for the capital city of Warsaw. Files of restructuring cases whicht were submitted to the court after 1 January 2016 were analysed.

Table 2. Number of Restructuring Proceedings Initiated in 2016–2021 Covered by the Research

Type of Proceedings	2016	2017	2018	2019	2020	2021	Total
Accelerated arrangement proceedings	4	12	7	5	6	1	35
Arrangement proceedings	0	0	1	1	0	1	3
Remedial proceedings	0	0	2	3	0	0	5
Total	4	12	10	9	6	2	43

Source: the author.

Further research included only those cases where the agreement was adopted, the proceedings were completed with the implementation of the arrangement or its repeal, and the cases were archived. 43 companies were included in the research. As of the date of the audit, 6 approved plans were cancelled due to the cessation of their implementation. Information on the analysed entities is presented in Table 2.

4. Empirical Results

The analytical part of the feasibility assessment, i.e. the appropriate technical, financial and economic analysis of the restructuring plan, should be preceded by the preparation of the diagnostic and conceptual part of the feasibility study. The diagnostic part includes: presentation of the project's objective, description of its current state with an indication of the identified problems, and an analysis of the context and stakeholders. The objective of the project is clear and results directly from the provisions of the Restructuring Law. The target is, therefore, to avoid insolvency, thereby limiting the unnecessary liquidation of viable enterprises. In this way, restructuring prevents the loss of jobs, expertise and skills, while at the same time ensuring maximum returns to creditors, owners, and the economy as a whole.

The description of the current state in the restructuring plan was named in the restructuring law as a description of the debtor's enterprise and an analysis of the reasons for its difficult economic situation. The characteristics of the enterprise are sometimes very diverse and are most often adapted to the scale of the business unit. The elements of this description contained in the analysed plans are presented in Table 3.

The analysis of the underlying causes of the debtor's difficult economic situation is a descriptive element of the restructuring plan, the purpose of which is to present – to the court and creditors – that the debtor has correctly recognised the causes of the current difficult situation and knows how to avoid such a situation in the future. The analysis should indicate and describe the causes of the state of insolvency or threat of insolvency and rank them in terms of their impact on the functioning of the debtor's enterprise. Furthermore, the description should include an indication of the internal and external factors of the crisis. If the reason was of a macro-

economic nature, it should also be demonstrated how much this situation deviated from normal market changes and how it affected competition (Zimmerman, 2020, p. 1393).

Table 3. Elements of the Description of the Current State of the Enterprise in the Analysed Restructuring Plans

Enterprise Description Content	Number of Plans That Contain Data
Identification information	43
History of the economic entity	13
Core business	42
Organisational structure	12
Ownership structure	20
Liability structure	9
Employment	15
Initiated court proceedings	3
Description of assets	15
Description of the production capacity	25
Cost and revenue information	19

Source: the author.

The presentation of the context, or the analysis of the environment, is used to determine external factors, most often independent of the enterprise, of an economic, legal and social nature, that affect the functioning of the entity now and will affect it in the future. Its task is to identify opportunities and threats for further development and determine how they can be used as stimuli for this development (Dynus, Kołosowska & Prewysz-Kwinto, 2005). Thanks to this presentation, it is possible to assess the assumptions adopted for the preparation of financial forecasts, including the level of sales, assumed revenues and costs, and cash flows. This stage is required for subsequent feasibility analysis, and, in particular, for risk analysis. A full environmental analysis should include three elements (Sierpińska & Jachna, 2004, pp. 14–16):

– assessment of social and legal conditions,
– market analysis,
– analysis of competition.

Unfortunately, from the perspective of the requirements of the Restructuring Law, the scope of the context analysis was limited only to presenting information about the current and future state of supply and demand in the market sector in which the business operates. This item of the plan includes an indication of the

market in which the enterprise operates in both the territorial and industry sense, and if this market is narrower, an indication of the specialisation or market niche in which the company operates. As part of the market analysis, the main competitors should be identified and the market position of the debtor should be assessed against its competition. This is to demonstrate that in the future there are prospects for the disposal of products produced by the debtor, in particular, at assumed prices and in increased quantities as a result of the restructuring. After determining the current state of the market and the position of the debtor within it, a forecast for the future should be presented. This forecast should indicate how the market demand and supply will develop over the entire period of the plan's implementation and how the debtor's market share will change. This part of the examined restructuring plans was developed to a different extent, as shown in Table 4.

Table 4. Elements of the Environment Description in the Analysed Restructuring Plans

Environment Description Content	Number of Plans That Contain Data
Market characteristics	38
Description of the current demand level	29
Description of the future level of demand	12
Current market supply	27
Identification of main competitors	5
Current market share	4
Future market supply	11
Planned market share	0
Not including any data about the environment	5

Source: the author.

The conceptual part of the EU project feasibility study includes the presentation of the technical design, cost estimates and project implementation schedule. The role of this part in the restructuring plan is performed by the presentation of the future strategy, an overview of the restructuring measures and related costs, and a timetable for the implementation of the planned corrective actions, including the deadline for their implementation. The characterisation of the debtor's future business strategy includes a description of the target condition of the enterprise, taking into account the adopted business model. The description of corrective measures should cover the key areas of the company's operation, mainly those that are the source of issues, and, in particular, the restructuring of: finances, current assets, fixed assets and organisation. An obligatory element of this part of the plan is to provide a forecast of restructuring costs broken down into periods. In addition, the restructuring plan

should include a description of the level of production capacity, the level of capacity utilisation and the planned level of capacity reduction.

The relevant analytical part of the feasibility study in accordance with the CBA method includes technical feasibility analysis, financial analysis, economic analysis, and risk assessment. The strategy of restructuring activities described in the conceptual part should be based on the diagnostic part of the plan, i.e. analysis of the causes of the difficult situation and analysis of the environment. Technical analysis of the feasibility of the plan consists of verifying these assumptions and checking whether the planned activities actually result from them, and therefore their implementation is reliable and realistic. It is used to ascertain whether the entity has sufficient resources to meet the assumed level of production and whether the market situation will allow it to achieve the assumed sales levels. As part of the verification of the plan's assumptions, special attention should be paid to the possibility of adopting unrealistic production and sales growth rates, underestimating outlays and costs or partially ignoring them, overestimating prices or production capacity.

The financial feasibility analysis shall include an assessment of the financial viability of the project. It consists of:

– analysis of cash flows related to the implementation of the project,
– analysis of financing sources,
– assessment of financial viability,
– financial sustainability assessment.

In the case of the financial analysis of the restructuring plan we encounter significant limitations. Pursuant to the requirements of the restructuring law, the plan is obliged to present the projected profits and losses for the next five years in at least two variants, real and pessimistic. Both options should include a justification indicating the criteria for the selection of turnover and profitability parameters. However, the Act lacks a clear requirement to prepare cash flow forecasts, let alone entire *pro forma* financial reports. Indeed, only 11 of the researched entities included the forecasted values of inflows and outflows throughout the plan implementation period.

The sources of financing are presented in the restructuring plan in a much more detailed manner. It is obligatory to unambiguously indicate from what means the arrangement will be implemented. These may be revenues from running a business, revenues from liquidation of assets, financial obligations of shareholders and third parties, i.e. a loan or credit from shareholders, capital contributions, issue of bonds, new shares or stocks. In addition, the amount of and demand for the requested and granted State aid and *de minimis* aid or *de minimis* aid in agriculture or fisheries should be presented separately. Moreover, data on sources of financing should be provided with an indication of specific inflows from individual sources in subse-

quent periods. The costs and other conditions of obtaining the financing should also be presented.

The assessment of the financial viability of the restructuring plan is based on the discounted cash flow method and consists of determining the net present value of the project (NPV) and the internal rate of return (IRR). The rules for determining them are described in the previous section of the article. The restructuring plan is viable if the NPV is greater than 0 and the IRR is greater than the discount rate (DR). However, while the NPV can be determined in every case, i.e. for any flows in individual years, it is not always possible to determine the IRR. This is the case when the positive and negative net flows intertwine in subsequent years of the forecast. Such projects are called "atypical" (Brigham, 1996, p. 72). In these situations, either the IRR does not exist at all or it may take several different values for which NPV = 0. In turn, the financial sustainability analysis is based on cumulative net flows in all years of the forecast. The results of the analysis of financial viability and financial sustainability of the examined restructuring plans containing information on flows are presented in Table 5. The detailed source data are provided in Table A.1 in Appendix.

Table 5. The Results of the Analysis of Financial Viability and Financial Sustainability of the Examined Restructuring Plans

Case Number	DR (%)	NPV(1)	IRR(1)	NPV(2)	IRR(2)	cCF
4	4.04	NPV(1) > 0	IRR(1) > DR	NPV(2) > 0	IRR(2) > DR	cCF > 0
5	4.04	NPV(1) > 0	IRR(1) > DR	NPV(2) < 0	IRR(2) < 0	cCF > 0
6	4.04	NPV(1) < 0	IRR(1) < 0	N/A	N/A	cCF > 0
7	4.05	NPV(1) > 0	IRR(1) > DR	N/A	N/A	cCF > 0
25	4.03	NPV(1) > 0	x_1	N/A	N/A	cCF > 0
26	4.03	NPV(1) > 0	x_1	NPV(2) > 0	x_2	cCF > 0
27	4.03	NPV(1) > 0	IRR(1) > DR	NPV(2) > 0	IRR(2) > DR	cCF > 0
30	4.04	NPV(1) > 0	IRR(1) > DR	N/A	N/A	cCF > 0
31	4.04	NPV(1) > 0	IRR(1) > DR	NPV(2) > 0	x_2	cCF > 0
38	4.07	NPV(1) > 0	x_1	N/A	N/A	cCF > 0
42	4.07	NPV(1) > 0	x_1	N/A	N/A	cCF > 0

Notes: cCF – cumulated cash flow in each forecast year, NPV(1), IRR(1) – refer to the basic variant of the forecast, NPV(2), IRR(2) – relate to the pessimistic variant of the forecast (if it was included in the plan), DR – the adopted discount rate, x_1 – IRR not specified due to the presence of only positive flows in the forecast, x_2 – no IRR for which NPV = 0.

Source: the author.

The analysis applied discount rates determined at the level of the reference rate used to calculate the value of public aid.[1] Herein, a margin of 220 basis points was added to the base rate published by the European Commission according to the margin table for category B rating indicating the satisfactory economic and financial situation of the entrepreneur and the standard estimated level of collateral. The table reveals that, when analysing the baseline forecasts, one of the projects (no. 6) was not financially viable and should not have been adopted. In addition, the pessimistic variant of the cash flow forecast was presented only for 5 of the examined restructuring plans. Of these forecasts, one (no. 5) was not financially viable. This option should have been subjected to a thorough risk assessment before deciding on the implementation of the project. In terms of assessing financial sustainability, however, all the projects analysed, in both the basic and pessimistic variants, had positive cumulative net cash flows in each forecast period, and were therefore financially sustainable.

An additional element of the financial analysis of the project, i.e. the restructuring plan, is the assessment of to what extent the application of restructuring measures is the optimal option for satisfying creditors' claims. This necessitates comparing the level of satisfaction of creditors through the implementation of the arrangement to the expected level of satisfaction of creditors in the result of bankruptcy proceedings aimed at liquidating the debtor's assets. The satisfaction test will be the future tool for this end. At the moment, the restructuring plan does not contain such information in relation to all creditors. Currently, it is the private creditor test that plays the role of a satisfaction test in relation to public creditors. Such a test is carried out to check whether state support in the course of restructuring proceedings is granted on market terms. It is also used to assess the conditions under which the state demands reimbursement of funds provided in the past.

In order to ascertain whether creditors, both public and private, will be satisfied to a greater extent through restructuring procedures, it is necessary to determine and compare the reduced current value of payments to creditors in connection with the implementation of the arrangement with the reduced value of funds that would be paid following the liquidation of assets. While determining the first of the compared amounts is not troublesome, as we know the amounts and schedule of repayments under the arrangement, the second amount proves more difficult to estimate. First of all, the liquidation value of the assets included in the bankruptcy estate should be established. This is an amount lower than the market value, i.e. reduced by a liquidation discount to the level of the forced sale value. Subsequently, the costs of insolvency proceedings must be compiled. The amount to be distributed is the

[1] Reference rate used to calculate the value of state aid was retrieved from: https://uokik.gov.pl/stopa_referencyjna_i_archiwum.php (accessed: 18.10.2023).

liquidation value of the assets less the anticipated costs of the proceedings. In order to assess the degree of satisfaction, it is necessary to take into account not only the nominal amount of the repaid claim, but also the time of its receipt, so the duration of the proceedings is also important. Therefore, the discounted values of projected repayments of creditors' claims under restructuring and bankruptcy proceedings should be compared.

The follow-up stage of the project feasibility analysis in accordance with the CBA method is an economic analysis, the task of which is to answer the question of whether the restructuring deserves to be implemented from a public point of view. If, in the course of the financial viability analysis of the project, the determined NPV is lower than 0, it would mean that the project requires public support in the form of a recapitalisation of the debtor's enterprise, a loan or a guarantee. In this case, the MEIP test should be carried out. Its purpose is to determine whether, under normal conditions, the debtor would have obtained identical financing on the free market. Additionally, on 11 August 2020, the Act on granting public aid to rescue or restructure enterprises entered into force. It contains rules on the granting of restructuring aid, i.e. support for the implementation of a restructuring plan aimed at restoring long-term market competitiveness.

Table 6. Information about the Risk in the Analysed Restructuring Plans

Risk Analysis Components	Number of Plans That Contain Data
Indication of risk areas	36
Risk classification	3
Probability of risk	22
Description of the impact of risk on cash flows	2
Expected ways of reducing the risks	9
Sensitivity analysis	2
SWOT analysis	3
Not including any data about the risk	6

Source: the author.

The last element of the project feasibility assessment is the risk analysis. An obligatory element of the restructuring plan is to provide information about the level and type of risk that may cause the restructuring to fail. The risk shall be broken down into external and internal. Each risk should be assigned the probability of its occurrence, impact, including the indication of the expected ways of reducing the risks associated with individual risks. Table 6 presents information on risks included in the examined restructuring plans.

5. Conclusion

The cost-benefit analysis method is a complete and thoroughly described procedure for examining the feasibility of projects. It has been applied in practice for years to evaluate even very large and complex projects co-financed by the European Union. It has proven to constitute a useful practical tool for clear assessment of restructuring plans submitted during restructuring proceedings. Moreover, it allows the objective, rational assessment of whether a given project is worth implementing and whether it requires public funding. This is of particular significance in view of the objectives of the restructuring proceedings, which, in addition to ensuring the payment of creditors' claims, also take particular account of other social benefits.

The primary source of information for the feasibility study is the cash flow statement. Pursuant to the applicable regulations, a restructuring plan must contain only a forecast of revenues and costs, and there is no obligation to present revenues and expenses. Unfortunately, the information on the value of the generated financial result is not reflected in the entity's payment capabilities. This is due to the accrual principle that applies when determining the accounting result. It requires that the income generated and the costs related to the revenues of the respective reporting period be included in the profit and loss account, regardless of the date of their payment. The profits generated may also be largely non-monetary in nature. In contrast, the income statement does not include cash flows that significantly affect the current and future financial situation of the entity, e.g. capital expenditures incurred, revenues resulting from obtaining external sources of financing, repayment of liabilities due to loans and financial leasing, etc. The actual inflows and outflows are presented in the cash flow statement. A restructuring plan prepared taking into account only the required elements does not allow for a reliable feasibility analysis. It should be required to supplement it with forecasts of the cash flow statement prepared in the same manner as projections of the profit and loss account. This is in the best interest of both the debtor and its creditors, and has already been pointed out by some restructuring practitioners, who include this data in the plans they elaborate.

Conflict of Interest

The author declares no conflict of interest.

Appendix

Table A.1. The Source Data and Results of the Analysis of Financial Viability and Financial Sustainability of the Examined Restructuring Plans Containing Information on Flows

Case Number	4				5			
DR (%)	4.04		4.04		4.04		4.04	
NPV[a]	4,453		56		2,329		–1,380	
IRR (%)	183.06		5.54		34.18		–79.15	
Year	$CF_n(1)$[a]	$cCF_n(1)$[a]	$CF_n(2)$[a]	$cCF_n(2)$[a]	$CF_n(1)$[a]	$cCF_n(1)$[a]	$CF_n(2)$[a]	$cCF_n(2)$[a]
0[b]	–136	136	–747	747	–904	904	–904	904
1	–136	0	–136	611	–167	737	–281	623
2	285	285	–611	0	–685	52	–172	451
3	2,290	2,575	597	597	2,053	2,105	389	840
4	3,050	5,625	1,137	1,734	–1,225	880	–640	200
5	N/A	N/A	N/A	N/A	4,075	4,955	119	319
6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
11	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Case Number	6		7		25		30	
DR (%)	4.04		4.05		4.03		4.04	
NPV[a]	–2,226,007		4,924,871		388,828		2,022,749	
IRR (%)	–11.27		77.82		x_1		36.50	
Year	$CF_n(1)$[a]	$cCF_n(1)$[a]	$CF_n(1)$[a]	$cCF_n(1)$[a]	$CF_n(1)$[a]	$cCF_n(1)$[a]	$CF_n(1)$[a]	$cCF_n(1)$[a]
0[b]	–2,431,788	2,431,788	–692,963	692,963	0	0	–307,658	307,658
1	–142,076	2,289,712	–692,963	0	128,094	128,094	–271,862	35,796
2	–1,115,127	1,174,585	972,253	972,253	8,253	136,347	560,089	595,885
3	–1,008,386	166,199	1,631,666	2,603,919	12,476	148,823	161,544	757,429
4	–68,166	98,033	4,848,770	7,452,689	16,182	165,005	–545,835	211,594
5	793,023	891,056	N/A	N/A	303,191	468,196	208,735	420,329
6	2,010,996	2,902,052	N/A	N/A	N/A	N/A	1,040,992	1,461,321
7	N/A	N/A	N/A	N/A	N/A	N/A	54,847	1,516,168
8	N/A	N/A	N/A	N/A	N/A	N/A	197,643	1,713,811
9	N/A	N/A	N/A	N/A	N/A	N/A	195,906	1,909,717
10	N/A	N/A	N/A	N/A	N/A	N/A	170,553	2,080,270
11	N/A	N/A	N/A	N/A	N/A	N/A	1,621,550	3,701,820

Table A.1 cnt'd

Case Number	26				27			
DR (%)	4.03		4.03		4.03		4.03	
NPV[a]	168,192		790,740		14,624		64,912	
IRR (%)	x_1		x_2		29.51		103.27	
Year	$CF_n(1)$[a]	$cCF_n(1)$[a]	$CF_n(2)$[a]	$cCF_n(2)$[a]	$CF_n(1)$[a]	$cCF_n(1)$[a]	$CF_n(2)$[a]	$cCF_n(2)$[a]
0[b]	0	0	0	0	–15,924	15,924	–15,924	15,924
1	29,547	29,547	29,547	29,547	40,791	56,715	40,791	56,715
2	689	30,236	–25,812	3,736	–55,486	1,230	–42,986	13,730
3	53,545	83,780	41,306	45,041	11,682	12,912	27,132	40,862
4	57,011	140,791	458,004	503,046	16,522	29,434	32,437	73,299
5	60,549	201,340	475,561	978,607	22,800	52,234	39,191	112,490
Case Number	31				38		42	
DR (%)	4.04		4.04		4.07		4.07	
NPV[a]	3,493,440		272,787		94,113		5,140	
IRR (%)	2,066.55		x_2		x_1		x_1	
Year	$CF_n(2)$[a]	$cCF_n(2)$[a]	$CF_n(1)$[a]	$cCF_n(1)$[a]	$CF_n(1)$[a]	$cCF_n(1)$[a]	$CF_n(1)$[a]	$cCF_n(1)$[a]
0[b]	–96,686	96,686	–96,686	96,686	0	0	0	0
1	1,979,910	2,076,595	1,785,690	1,882,375	22,044	22,044	1,204	1,204
2	2,490,080	4,566,675	–127,390	1,754,986	22,044	44,088	1,204	2,408
3	–17,779	4,548,897	–688,140	1,066,846	22,044	66,132	1,204	3,612
4	–593,363	3,955,534	–711,338	355,508	22,044	88,176	1,204	4,816
5	N/A	N/A	N/A	N/A	22,044	110,220	1,204	6,020

[a] In PLN, [b] the initial outlay is equal to the cash available at the beginning of the implementation of the restructuring plan.

Notes: CF_n – period net cash flow, cCF_n – cumulated net cash flow for periods from 0 to n, DR – the adopted discount rate, x_1 – IRR not specified due to the presence of only positive flows in the forecast, x_2 – no IRR for which NPV = 0.

Source: the author.

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