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MEASURING THE IMPACT OF AN ADMINISTRATIVE FINE ON A COMPANY AND ITS FUTURE SURVIVAL: A CASE STUDY FROM THE CZECH REPUBLIC

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Abstract

An administrative fine is a monetary penalty that may be imposed by a supervisory authoritity as an administrative punishment. Such a fine adversely interferes in the cash flow generation of the company in question. The fine can be described as an investment carrying opportunity costs with no economic returns. However, according to the judgment of the Constitutional Court of the Czech Republic Pl. ÚS 3/02 of 13 August 2002 it is submitted that the fine cannot be imposed in such an amount that would ultimately be liquidating for the sanctioned entrepreneur. The assessment of whether the specific amount of the fine imposed represents such an intensive interference with the entrepreneur's property that his business activity becomes pointless (i.e., in the long run only for the payment of a fine) is elaborated in this article. Based on a case study from the Czech Republic, this article deals with an example of a suitable methodological procedure, on the basis of which it is possible to evaluate the impact of a specific amount of fine imposed on the property of a sanctioned entrepreneur and assess ex ante whether (i) continuity of his business will be interrupted in the future, i.e., when, as a result of the payment of the fine, he eventually goes bankrupt in the form of insolvency or over-indebtedness and / or (ii) his business activity will only serve to pay the fine and thus become "pointless". The presented economic narrative and methodology are relevant for policy makers and, particularly, for supervisory authorities imposing the fines or assessing the requests for remission.

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Introduction

In business activities, in certain cases, administrative fines are imposed on entrepreneurs as part of administrative punishment. In this context, the judgment of the Constitutional Court of the Czech Republic Pl. ÚS 3/02 of 13 August 2002, on the basis of which it is submitted is that the fine cannot be imposed in such an amount that would ultimately be liquidating for the sanctioned entrepreneur.

However, the assessment is whether the specific amount of the fine imposed represents such an intensive interference with the entrepreneur's property relations (for the content of this concept see below) that his business activity becomes pointless (i.e., in the long run only for the payment of the fine). Based on a case study, this article deals with an example of a suitable methodological procedure, on the basis of which it is possible to evaluate the impact of a specific amount of fine imposed on the property of a sanctioned entrepreneur and assesses ex ante whether (i) continuity will be interrupted due to the suffocating effect of the fine in his business in the future, i.e., when, as a result of the payment of the fine, he eventually goes bankrupt in the form of insolvency or over-indebtedness and / or (ii) his business activity will only serve to pay the fine and thus become "pointless" afterwards. Both of these grievous effects of the fine imposed on the entrepreneur's financial situation may act in parallel, where insufficient cash flow may gradually lead to a loss of assets at the expense of future development and thus make it impossible to maintain sales and profits, which in turn will affect the amount of available cash flows and would lead to a gradual bankruptcy in the form of insolvency or over-indebtedness.

Theoretical and methodological framework of the case study

The legal term "property relations of the company" is not clearly (or even at all) defined either by professional literature or by relevant Czech laws (see, inter alia, Act No. 182/2006 Coll., On Bankruptcy and Ways of Resolution, as amended (hereinafter the "Insolvency Act")). However, the way in which property relations are referred to in the Insolvency Act suggests that in the case of a company, it should in principle be synonymous with the terms "financial situation", "financial health" or "financial performance".

Financial analysis is used to assess the financial situation (or financial health or financial performance) of the company. The purpose of the financial analysis is (or should be) to assess whether and how the company meets its basic financial objective. The basic building block of a meaningful financial analysis is an understanding of what the financial goal of a business is (Aryasri, 2020; Krabec, 2009; Magni, 2020).

An enterprise (or business establishment) operated by a company fulfills its financial objective if it brings to its owners (i) as much money as possible, which is paid to them (ii) in the shortest possible time (as soon as possible), their payment is linked (iii) with the lowest possible risk and this company (iv) exists for as long as possible for an indefinite period of time (it is a so-called going concern entity). In this way, it is possible to simply summarize the basic idea of the concept of creating value for the company for owners (shareholder value), which has dominated the theoretical literature since the 1980s and finds application both in public companies (i.e., shares listed on a public organized market) and private companies (for details see Čižinská, 2018). It is of course not possible to create value for the owner without satisfied stakeholders (employees, suppliers, customers, creditors, the government, etc.) and without reflecting their wishes, needs and requirements. The owner must identify with this fact both for logical reasons (without satisfied customers, suppliers and employees it is not possible to succeed in the long run) and for legislative reasons (stakeholders' interests are protected by a number of legal measures, such as Act No. 634/1992 Coll., on consumer protection or Act No. 262 / 2006 Coll., Labor Code). It can therefore be summarized that the basic financial goal of business is the permanent creation of business value for the owner while reflecting the interests of all relevant stakeholders.

The creation of the company's value for the owner is associated with the creation of profit, i.e., the positive difference between the company's generated revenues and costs. However, the relationship between profit making and value creation cannot be seen in a simplified way. An enterprise can create value for the owner even if the profit or loss generated now and in the past is negative. This is because future results that the company achieves are crucial for value creation, and these can differ significantly from past results. The opposite is also true – if a company has been profitable so far, it does not necessarily mean that it also creates value. It is crucial whether past profitability is also a guarantee of future profitability. In addition, the amount of the economic result, which is shown in the financial accounting statements, is not significant for the creation of value. In order to be able to talk about the economic result, which has an obvious relation to the creation of the value of the company for the owner, it is necessary to adjust this economic result in a relevant way. The reason for the correction of the accounting result is primarily the shortcomings of the financial accounting itself, which is not in itself intended for the evaluation of financial performance.

We can now proceed to the very description of financial analysis as a tool for assessing financial health and financial performance of the company. From the point of view of the method of implementation, the following two types of analytical approaches are distinguished in practice and in the professional literature:

1) Elementary financial analysis in the classically presented concept, which is based on the calculations of indicators that are the result of simple mathematical operations and which are quantified from data in financial statements (which are adjusted in some way) and the subsequent interpretation of results. This approach is presented in greater or lesser detail by a number of authors under the title "financial analysis" or "evaluation of financial performance" - from Czech authors such as Knápková et al., (2017), Růčková (2019) or Špička (2017).

2) Value creation analysis (value analysis), the essence of which is the analysis of value-creating parameters (so-called value generators, value drivers) and assessment of the company's ability to create value for the owner – i.e., permanently fulfill the basic financial goal of business. Only value creation analysis can be considered a real tool to measure the real financial performance of the company and assess whether the company meets its basic financial objective. Such a financial analysis from the logic of things requires that the value of the company be determined - see from Czech authors Mařík et al., (2011a, 2011b, 2018).

Let us now discuss both approaches in more detail, as they can be used together to assess the financial impact of a fine on an entrepreneur's financial situation.

Application of the Elementary Financial Analysis

The basic information source for performing an elementary financial analysis is represented by financial statements of financial accounting. If the company is an accounting entity (see for the case of the Czech Republic the Act No. 563/1991 Coll., On accounting), the financial accounting statements are compiled anyway, and the preparation of information documents does not represent an additional burden for the company. This is the great advantage of this information input. However, financial accounting is only a model representation of economic reality – on the one hand it has an established structure and financial accounting statements are therefore understandable and easy to read, but on the other hand this "modeling" is also a source of difficulties. The purpose of financial accounting is not to show the economic reality of the company so that it is possible to assess its financial performance or even success in meeting the basic financial goal of the business. The primary purpose is to meet the requirements of the relevant legislation of accounting and also to provide documents enabling the quantification of income tax.

The essence of elementary financial analysis are simple mathematical operations (addition, subtraction, multiplication, division), the result of which are numerical values that must be interpreted in a suitable and correct way. Elementary financial analysis should be performed using a certain sequence of steps, which are already relatively stable in financial theory and practice. Data from financial statements (stock and flow), which have been adjusted in an appropriate manner (supplemented, regrouped, etc.), should first be subjected to horizontal and vertical analysis, whereby:

1) Horizontal analysis is used for analysis of trends in the development of stock or flow indicators. Thus, in the balance sheet it is an analysis of the time development of the property and financial structure, in the profit and loss statement it is an analysis of the time development of items of income and expenses over time.

2) Vertical analysis is an analysis of the internal structure of financial statements. Its essence is the quantification of the ratios between individual items of financial statements to a certain common basis (in the balance sheet, this basis is usually total assets, in the profit and loss statement then total sales).

The next step is the analysis of difference indicators, which is most often focused on the quantification and interpretation of the difference between selected items of assets and liabilities. Often a quantified indicator is net working capital (the amount of current assets adjusted for the value of short-term non-interest-bearing liabilities).

It is also very appropriate to compile and interpret a detailed overview of the difference between the company's income and expenses (i.e., cash flow) and the activities (items) that positively and negatively affected the cash flow. A direct or indirect method can be used to prepare a statement of cash flows (if it is not directly part of the financial statements of the analyzed company), while to apply the method and quantify cash flow for a certain period, it is sufficient to have a balance sheet and profit and loss statement for that period and for the period immediately preceding. In the statement of cash flows, cash flows are divided into:

1) Cash flows from operating activities (income and expenses generated from the basic gainful activity of the entity and from other activities that cannot be included among investment or financial activities)

2) Cash flows from investing activities (income and expenses related to the acquisition and sale of fixed assets, or activities related to the provision of loans, borrowings and assistance that are not considered operating activities).

3) Cash flows from financing activities (income and expenses from such activities that result in changes in the size and composition of equity and long-term or short-term liabilities).

For the purposes of assessing assets, it is appropriate to interpret the structure of cash flows for the period with respect to the life cycle of the company. In the early stages of the life cycle, it is common for cash flows from operating and investing activities to be negative and for the company's activities to be financed primarily by external investors. Gradually, cash flows from operating activities will begin to increase and cover both investments and later the payment of capital costs (interest, dividends and profit shares).

The third step of the standard procedure of financial analysis is the calculation of ratios, which are usually quantified in such a structure so that they can assess the method of management and / or its success in various areas of financial health – i.e., solvency (liquidity and cash flow), activity, indebtedness and profitability. The company's liquidity expresses the company's overall ability to convert short-term liquid assets (i.e., current assets) into cash. This is a necessary precondition for the company's solvency, i.e., its ability to pay liabilities due on time. Lack of liquidity can result in insolvency and the opening of insolvency proceedings. On the other hand, excess liquidity represents an inefficient commitment of invested resources – funds, inventories and receivables are assets that are necessary to ensure the operability of the company, but do not generate any profit per se (perhaps with the exception of possible interest income on deposits, which as a rule are not high). Liquidity therefore represents a trade-off between the sacrificed return on investment and the risk of insolvency. Activity indicators measure the ability of a company to use the resources invested in individual asset items to generate revenue. In the area of evaluation of the company's activity, two types of indicators are constructed – either the number of turnovers of the asset item (i.e., how many times the asset "returns" in sales) or turnover time, which is the inverse of the turnover and expresses how many days the asset is converted into other assets. Analysis of indebtedness focuses on the degree of involvement of external sources in the financing of assets. If the return on assets is higher than the cost of debt, the involvement of debt in the financing of assets has a positive effect on the return on equity (the so-called positive leverage effect). The analysis of profitability or rentability is aimed at examining the company's ability to generate profit. The numerator of profitability indicators includes a selected category of profit ("profit", which can be, for example, profit after tax, profit before tax, profit before interest and tax, operating profit, EBIT, NOPAT and so on), which, of course, must necessarily have an impact on the way the calculated values of individual indicators are interpreted. In the event that the company's shares are publicly listed, additional information may also be provided by capital market indicators.

In addition to the calculations themselves, each of the above-mentioned steps of the elementary financial analysis also contains an interpretation of the results obtained. In other words, if the analyst has information about what was happening in the company in a given period, what problems the company faced and what specific steps in various areas of management and decision-making were implemented, he can meaningfully interpret the quantitative (numerical) results of individual analytical methods. However, even an external analyst can do useful work, especially if he does not miss the basic context of the economic operation of the company. With each step of the procedure described, the interpretation improves. For example, if we find in the ratio analysis that the profitability of sales is decreasing year-on-year, we can also say why this decrease occurred with the knowledge of the results of horizontal and vertical analysis. An important part of the elementary financial analysis is also the assessment of the financial success of the company in the context of the economic reality of the industry in which the company operates. The essence is to compare the results with similar, so-called comparable companies, thanks to which the interpretation can take into account the specifics of the period, and not just hypothetical general assumptions of financial success (so-called competitive benchmarking).

Elementary financial analysis provides some idea of how the company operates economically (or how its economic operation is reflected in the financial accounting data), how this operation develops and changes over time and in what respects the company's operation differs from other companies operating in the same sector. The advantage of elementary financial analysis is its simplicity, which however results in a limited informative value (especially when its information inputs are based on data in financial statements prepared in accordance with the local Czech Accounting Standards). The above-mentioned simplicity is unfortunately only apparent. It is very easy to substitute numbers from financial statements into specified formulas, so that the calculations can be performed with a brief instruction even by an analyst without a more detailed knowledge of financial issues. However, to reduce the elementary financial analysis into a simple numerical machinery without assessing the quality of the input information and without their proper adjustment and, of course, also without reasonable interpretation of the calculated results, the procedure is completely meaningless and without any analytical value.

One of the fundamental problems that makes it impossible to perform a meaningful financial analysis on the basis of past financial statements is the reporting of assets and their value, and the problems occur mainly for the following reasons:

1) Individual assets are not valued correctly for the purpose of the analysis. The value of the asset is always valid only for a specific object, subject and purpose of valuation. The carrying amount of assets in the financial statements prepared in accordance with Czech Accounting Standards (i.e., at the historical valuation level) generally does not reflect the current fair value of these assets in any respect. A typical example might be the "fair value" of property, plant and equipment. Imagine a production facility with a book value of CZK 7 million. This is the residual value determined as the difference between the acquisition price and the value of depreciation (sum of depreciation). If this production facility is used in the course of an operating activity, for example, products will be produced in it and these will be sold at a profit. The production facility is therefore a generator of future cash flows, and its value can be perceived at the level of the sum of these future net cash flows (adjusted for the effect of time) - the value can be significantly more than CZK 7 million. If the company did not use the production equipment and instead tried to sell it as quickly as possible, then it could happen that it collects far less than its book value for its sale.

2) Not all assets are recorded in the accounts, even though the company uses them for business activities and has control over the benefits that flow from these assets. In order to report an asset in the balance sheet according to Czech Accounting Standards, the ownership right of the company (accounting unit) to this asset is required. For example, assets that a company has leased in the form of financial leasing are not reported in the financial statements prepared in accordance with the Czech Accounting Standards, although they obviously serve to operate the company and to generate sales, profit or loss and cash flows. Intangible assets that have not been purchased can also be a significant problem – for example, a brand may have a million of value but will not be recognized in the company's assets in the balance sheet (unless it has been purchased from another entity).

3) The value of some intangible assets is demonstrated only at the level of the value of the company as a whole. In general, we are talking about goodwill, the value of which can be attributed to some extent to spe-

cific (not always reported) assets, such as brand, know-how or customer databases.

Assessing a company's financial health only on the basis of accounting items and documents can therefore be misleading, as such an optic provides only a limited view of the company's financial situation and may not, in fact, properly reflect its financial health. The analysis of accounting documents within the elementary financial analysis should thus be a much needed first initial step rather than a final output in examining the property relations of the company and especially in assessing the impact of the imposed fine (or the effect of its payment) on these conditions. An elementary financial analysis can be relevant for the assessment of such an impact only by supplementing the necessary additional interpretative considerations and extrapolating the development of the company's financial health towards the future (precisely by including the imposed fine in such predictions).

In order to assess the possible suffocating effect of the repayment of the fine or the possible futility of the entrepreneur's activities in the future period, it is necessary to have financial statements for the future period in question for the application of this procedure. The initial step in the process must therefore be to prepare pro forma (planned) financial statements that are based on meaningful and reasonable assumptions. Subsequently, it is possible to proceed to the analysis of pro forma financial statements covering the future period in question and to submit these statements again to an elementary financial analysis. The obtained results can be considered only indicative with regard to the generally problematic informative value of financial statements for the given purpose (see above). In any case, such an analysis without the above-mentioned consideration of future predictions and an assessment of the form of prepared financial statements de facto cannot fulfill its purpose if it is to answer the question of what effect the repayment of the imposed fine will have on the financial health (assets) of the company. This impact will logically manifest itself in the future, and thus an elementary financial analysis of only past financial statements cannot even provide an answer to the question, when in general the maximum is that for any company with the best initial financial conditions, a certain amount of fine will always have a suffocation (liquidation) effect, and for such an assessment it is not possible, on the basis of plausible assumptions, to extrapolate to the future. The most meaningful result in relation to the fulfillment of the basic financial goal of the business can be generated only by value analysis, which takes into account not only past results, but also the future revenue potential of the company.

The importance of value analysis

As summarized above, the basic financial goal of the company is to maximize the value of the company for the owners while respecting the interests of all relevant stakeholders. The real financial performance of a company can therefore only be measured at the level of value added that has been created for a given period.

A necessary prerequisite for assessing the possible suffocating effect of the payment of a fine or the possible pointlessness of the entrepreneur's activities in the future is knowledge of the value of the company. Therefore, the value of the company is not determined by the values of individual assets and debts, but by the interaction of all values (for the methodology, see IVS (2020), or the relevant referenced literature Mařík et al., (2018) and others).

In order to assess the possible suffocating effect of the fine or the possible futility of the entrepreneur's activities in the future, it is necessary to compile a forecast of value generators to quantify the free deductible cash flow that will be generated in the future. The detrimental effect of the fine or possible pointlessness of the entrepreneur's business will be reflected in the fact that the company will not generate value for owners and possibly in the value of the company quantified as the sum of future generated cash flows converted to present value at the relevant valuation date from the hypothetical liquidation and sale of assets. Then the further operation of the company would lose its economic meaning.

Methodological procedure for assessing the risk of imminent bankruptcy

The Insolvency Act distinguishes between two basic forms of bankruptcy – insolvency and over-indebtedness and also defines the concept of the so-called imminent bankruptcy.

Pursuant to Section 3 (1), a debtor is insolvent if he has:

1) multiple creditors; and

2) monetary liabilities for more than 30 days past due; and

3) is unable to meet these obligations.

A bankruptcy is imminent if, in view of all the circumstances, it can be reasonably assumed that the debtor will not be able to meet a substantial part of his financial obligations properly and in a timely manner (see Section 3 (5) of the Insolvency Act).

Pursuant to Section 3 (4) of the Insolvency Act, a debtor who is a legal entity or a natural person – an entrepreneur – is in bankruptcy even if he is over-indebted. An over-indebtedness is when the debtor has more than one creditor and the aggregate of his liabilities exceeds the value of his assets. In determining the value of the debtor's assets, further management of his assets or further operation of his business is also taken into account, if in all circumstances it can be reasonably assumed that the debtor will be able to continue managing or operating the business (going concern assumption – see also below).

Therefore, for the purposes of assessing bankruptcy in the form of over-indebtedness, in addition to the existence of several creditors, it is essential whether or not the value of the entrepreneur's assets is higher than the sum of his liabilities. Pursuant to Section 495 of Act No. 89/2012 Coll., The Civil Code, a person's assets form the sum of his property and his debts.

The key is how the value of the property will be determined and how the assumption of going concern will be reflected in this analysis. Pursuant to Act No. 563/1991 Coll., On Accounting, the presumption of continuous duration is defined in accordance with Section 7, Paragraph 3, where an entity is obliged to use accounting methods in a manner that is based on the assumption that it will continuously continue in its activities and that it does not have any fact which would limit it or prevent it from continuing its activities for the foreseeable future. If the entity has information that such a fact occurs, it is required to apply accounting methods in a manner appropriate, and information on the method used must be disclosed in the notes to the financial statements. Pursuant to Section 3 (4) of the Insolvency Act, going concern states that in determining the value of a debtor's assets, further management of his assets or further operation of his business is also taken into account, as are all circumstances of asset management or business operations.

In summary, it can be stated that, regardless of the existing dichotomy of economic and legal terminology, there are still two ways to determine the value of the company's assets and how to assess whether the entrepreneur is over-indebted:

1) based on the sum of individual asset items reduced by a set of liabilities (the so-called asset approach). If the sum of individual asset items is lower than the value of liabilities, the company is over-indebted. This procedure is only possible in two cases:

a) when it is a company that does not have a clear perspective from a business point of view (i.e., does not meet the going concern assumption – see below) and as a result is valued at liquidation value

b) if we were indeed able to value all assets individually, including all intangible assets (e.g. know-how, brand (s), goodwill), which would be the case.

2) by valuing the company as a whole, especially by income-based methods or market comparison methods. If the value of the company as a whole is lower than the value of liabilities, the company is over-indebted.

In fact, this provision entails the need to include in the valuation of the debtor's assets, or to add to the values only expected to the extent to which his assets are likely to increase. The professional commentary literature shows that the assumption of going concern cannot be predicted on the basis of hypothetical assumptions and expectations but should be sufficiently well (contractually or otherwise legally) documented (substantiated).

It must be stated that significant differences can be identified between the concept of the going concern presumption pursuant to Act No. 563/1991 Coll., On Accounting, and its economic interpretation in the Insolvency Act. The economic reality is obviously usually much more complex than the financial statements are able to capture, and this fact is further supported by the conservative nature of the accounting legislation in the Czech Republic in comparison with accounting prepared in accordance with international accounting standards IFRS. In particular, the emphasis on the precautionary principle in Czech accounting does not allow a realistic identification of the debtor's assets, and therefore a professional examination of the assets and liabilities with the need for revaluation is desirable. In no case can financial statements be relied on alone. It is also impossible to rely on one's own considerations or expectations regarding the future development of the company, which are not contractually or otherwise substantiated, so that it is clear how and thanks to which the value of the company will increase due to continued business activities.

The choice of the value basis is directly dependent on the fulfillment of the going concern assumption. The chosen value basis has consequences for the valuation of the company as the "sum of the parts" with the identification of individual intangible assets and primary goodwill / bad will, as it predetermines the very process of determining the value of the company. Thus, it is not only a matter of appropriately and correctly choosing a value basis in relation to the purpose and subject of valuation, but also correctly applying appropriate valuation methods and techniques that allow the selected value basis with a given definition to be actually quantified.

Case study: The effects of administrative fine on a company

In the context of the methodological framework presented above, the hypothetical example of XYZ, a.s., demonstrates how in the future the imposition and at the same time immediate payment of an administrative fine would have an impact on the key business parameters of this company and on its value as a top indicator of financial performance and financial health. For this purpose, primarily financial planning (preparation of pro-forma financial statements) is used, and in connection with this, the very determination of the company's value.

For model purposes, we assume that a fine of 10 percent of its total annual turnover was imposed on XYZ, a.s., i.e., in the total amount of 17,500,000 CZK. CZK (hereinafter referred to as the "Fine"). The impact of the Fine on the property of XYZ, a.s. is assessed as of 31.12.2020 (hereinafter referred to as the "Decisive Date").

The total balance sheet amount as of the Decisive Date is 122,108 thous. CZK, of which equity amounts to 48,650 thous. CZK. The company's assets consist mainly of inventories, receivables and fixed assets. If these assets were to be monetized immediately, their (liquidation) value would be significantly lower than their balance sheet valuation. At the same time, the majority of liabilities as of the Decisive Date are liabilities (together with the Fine). The liquidation value of the assets of XYZ, a.s. after the payment of liabilities, is negative as of the Decisive Date and amounts to minus 3,000 thous. CZK.

The balance of funds as of the Decisive Date amounts to 2,108,000 CZK. CZK and the company XYZ., a.s. therefore does not have the funds to pay the Fine. The local investigation showed that XYZ, a.s. as of the Decisive Date has no certainty or guarantee that credit financing of the payment of the Fine will be provided by any bank. Therefore, the effects of the Fine on the economy of the assessed company can in principle be examined in the two most likely variants, i.e., (i) the option without secured financing and (ii) the option with financing of the Fine by credit. With regard to the amount of the Fine in the context of the current situation of XYZ, a.s. therefore, we abstract from other options, such as (iii) direct payment from available free funds or (iv) external increase in equity by owners or other investors. It should be borne in mind that a fine for entrepreneurs de facto means an analogy with an investment, which entails opportunity costs but does not bring any return.

Scenario 1: Option without secured funding

The financial plan in the option without secured financing is based on the assumptions described below. The Fine is included in the financial statements of XYZ, a.s. as it will be reflected as of 31.12.2020, when it is recorded as deferred expense (liability item) and other operating expenses (profit and loss statement item). In 2021, the Fine will be repaid – the amount is deducted from deferred expenses against a decrease in the balance of cash and cash equivalents.

Gross investments will gradually decrease in the years following the Decisive Date. In 2020, gross investments in fixed assets amounted to CZK 19 million, but with regard to the significant intervention of the Fine in property relations, the amount of capital expenditures will have to be significantly reduced. Only the necessary investments at the level of restoration of used assets are assumed. Such a low level of gross investment is severely undersized in terms of maintaining value creation in the future and will necessarily result in a decline in sales and trade margins. However, the low level of gross investments was set as a conservative assumption of the financial plan, the aim of which was to show the development of cash flows under the assumptions of the most economical operating mode of XYZ, a.s.

Investment restrictions will affect sales. In 2021, however, they will increase by another 3% due to the inertia of the current marketing activities of XYZ, a.s. In the following year 2022, the growth rate is expected to slow to 1% and then to decline by 2%. Compared to 2020, the turnover time of inventories and receivables will gradually increase. The company XYZ, a.s. will not be able to sell stocks with the same intensity as before due to the dampening of investments in fixed assets and sales support (see the reduction in marketing costs commented below). In the industry in which XYZ, a.s. acts, frontloading is crucial. Delivery times for individual inventory items from manufacturers are very long and customers require flexibility and immediate response. In order for XYZ, a.s. with limited investment, the stock availability of stocks must be even greater. The extension of the inventory turnover time and the effort to succeed even under difficult conditions will therefore necessarily be reflected in a significant increase in the volume of inventories in the planned period. Lower sales support will also negatively affect customers' payment morale. For the company XYZ, a.s. it will therefore be difficult to sell, and even more difficult to collect (the adverse impact of the Fine on the turnover cycle of money).

In terms of financing, in addition to the retained earnings (no profit sharing is expected), the financial plan assumes that 40% of inventories will always be financed by a short-term loan as before. As before, the turnaround time of trade payables will be approximately 18 days. Payables to employees amount to 1/12 of personnel costs.

As a result of the weakening of investments in fixed assets, trade margins will fall to the lower end of the sector's quartile (in the longer term, a decline of up to 18% is expected). The company XYZ, a.s. will be forced to look for cost savings with regard to difficult property conditions and the most influential item in this direction will be personnel costs (a number of employee benefits will be gradually reduced, which will reduce the share of personnel costs in sales to 8% from the current 10%) and costs items which will be reduced due to a significant reduction in marketing costs. Other items are evolving basically consistently with the past. The interest rate on long-term loans is 5%, while the interest rate on short-term loans for inventories is 2.5%. The financial plan of the balance sheet and profit and loss statement for the next three years is presented in the following tables.

Table 1: Pro-forma balance sheet (assets) in the Option of redemption of the Fine without secured financing

(inthous. CZK)	2020	2021	2022	2023
TOTAL ASSETS	**122 108**	**112 643**	**117 851**	**117 279**
Fixed assets	**35 000**	**35 550**	**35 235**	**34 862**
Gross investment in fixed assets	**19 000**	**4 500**	**3 600**	**3 500**
Depreciation rate	10.00%	10.00%	10.00%	10.00%
Current assets	**87 108**	**77 093**	**82 616**	**82 417**
Inventory	**55 000**	**59 260**	**62 347**	**61 100**
Inventory turn over time	115	120	125	125
Short-term receivables	**30 000**	**32 099**	**33 418**	**34 216**
Trade receivables	30 000	32 099	33 418	34 216
Turnover time of trade receivables	63	65	67	70
Short-term financial assets	**2 108**	**-14 266**	**-13 148**	**-12 899**
Cash and cash equivalents	2 108	-14 266	-13 148	-12 899

Source: Own elaboration.

Table 2: Pro-forma balance sheet (liabilities) in the Option of redemption of the Fine without secured financing

(inthous. CZK)	2020	2021	2022	2023
TOTAL LIABILITIES	**122 108**	**112 643**	**117 851**	**117 279**
Equity	**48 650**	**54 698**	**58 645**	**58 851**
Basic capital	**5 000**	**5 000**	**5 000**	**5 000**
Profit funds	**500**	**500**	**500**	**500**
Profit from previous years	**49 000**	**43 150**	**49 198**	**53 145**
Profit	**-5 850**	**6 048**	**3 947**	**206**
Liabilities	**55 958**	**57 945**	**59 206**	**58 428**
Short-term Liabilities	**9 958**	**10 241**	**10 267**	**9 988**
Trade receivables	8 500	8 889	8 978	8 798
Turnover time of trade payables	18	18	18	18
Payables to employees	1 458	1 352	1 290	1 189
Share of liabilities to employees in personnel costs	8.30%	8.30%	8.30%	8.30%
Bank loans and assistance	**46 000**	**47 704**	**48 939**	**48 440**
Long-term bank loans	24 000	24 000	24 000	24 000
Short-term bank loans	22 000	23 704	24 939	24 440
Share of short-term bank loans in inventories	40.00%	40.00%	40.00%	40.00%
Accruals	**17 500**	**0**	**0**	**0**
Accrued expenses	17 500	0	0	0

Source: Own elaboration.

Table 3: Pro-forma profit and loss statement in the Option of redemption of the Fine without secured financing

(inthous. CZK)	2020	2021	2022	2023
Revenues from sales of own products and services	**175 000**	**180 250**	**182 053**	**178 411**
Total sales growth rate		3.00%	1.00%	-2.00%
Cost	**145 300**	**155 015**	**160 206**	**162 354**
Cost of goods sold	125 000	135 188	142 001	146 297
Trade margin	50 000	45 063	40 052	32 114
Trade margin in %	28.57%	25.00%	22.00%	18.00%
The share of costs of goods sold in sales of goods	71.00%	75.00%	78,00%	82.00%
Material and energy consumption	3 300	5 408	5 462	5 352
Share of material and energy consumption in sales	3.00%	3.00%	3.00%	3.00%
Services	17 000	14 420	12 744	10 705
Share of services in sales	9.70%	8.00%	7.00%	6.00%
Personal expenses	**17 500**	**16 223**	**15 474**	**14 273**

Share of personnel costs in sales	10.00%	9.00%	8.50%	8.00%
Growth rate of personnel costs		-7.30%	-4.60%	-7.80%
Depreciation	**4 000**	**3 950**	**3 915**	**3 874**
Depreciation and amortization	4 000	3 950	3 915	3 874
Other operating income	**6 000**	**6 180**	**6 242**	**6 117**
Share of other operating income in sales	3.40%	3.40%	3.40%	3.40%
Other operating expenses	**19 500**	**1 983**	**2 003**	**1 963**
Fine	17 500			
Other operating expenseswithout Fine	2 000	1 983	2 003	1 963
Share of other operating expenses without Finein sales	1.10%	1.10%	1.10%	1.10%
Operating income	**-5 300**	**9 260**	**6 696**	**2 065**
Operating profit margin	-3.00%	5.10%	3.70%	1.20%
Interest expense and similar expenses	550	1 793	1 823	1 811
Interest rate on short-term inventories loans	2.50%	2.50%	2.50%	2.50%
Interest rate on long-term loans		5.00%	5.00%	5.00%
Interest rate on Fine loans		5.00%	5.00%	5.00%
Financial income	**-550**	**-1 793**	**-1 823**	**-1 811**
Profit before taxes	**-5 850**	**7 467**	**4 873**	**254**
Income tax - current and deferred	0	1 419	926	48
Income tax rate	0.00%	19.00%	19.00%	19.00%
Profit after tax	**-5 850**	**6 048**	**3 947**	**206**
Profit or loss for the accounting period	**-5 850**	**6 048**	**3 947**	**206**

Source: Own elaboration.

With regard to the development of the reported values of the items in the financial statements, the three-year period is quite sufficient to show how the repayment of the Fine causes XYZ, a.s. threat of bankruptcy. Further operation of the company is de facto impossible immediately in 2021, because the company is not able to pay its liabilities – as shown by the red fields in the table, short-term financial assets are negative, which is meaningless in economic reality – in the current account (and in the treasury at all). It is not possible to draw funds to the minus without additional credit financing being agreed upon with the bank. The volume of total assets is increasing over time (as of 31 December 2020 it amounts to CZK 122,308 thousand and in 2023 CZK 138,562 thousand), the company XYZ, a.s. has no money for further operation. More than half of the assets are tied up in inventories, which will become increasingly difficult to sell due to reduced investments in fixed assets and reduction of marketing costs (reduction of sales support). At the same time, however, XYZ, a.s. will be pushed by the pursuit of availability and the ability to respond to customer requirements.

It can therefore be concluded that the balance sheet plan calculating the repayment of the Fine without securing credit financing implies that XYZ, a.s. most likely shows a risk of de facto bankruptcy as early as 2021, because even if almost all investments in further business development are stopped and most of the cash flows are redirected to the payment of the Fine, the company XYZ, a.s. moves to insolvency, when it will not be able to fulfill its obligations to its creditors (suppliers, employees, the bank).

From the above-presented expected development of the cash balance, it is evident that XYZ, a.s. will be able to generate only negative cash flows and further operation of the company XYZ, a.s. lacks economic sense. The presumption of going concern cannot therefore be considered to be fulfilled.

Scenario 2: Financing of the Fine by loan

The second scenario of the future development of value generators of the company XYZ, a.s. is a variant of repayment of the Fine with loan financing. The financial plan assumes that a bank loan with an interest rate of 6% will be used to finance the Fine, with a loan maturity of five years. This is an extremely conservative optimistic assumption – in real terms the interest rate would be significantly higher and perhaps in view of the zero return on investment in the Fine and the absence of sufficient guarantees in the amount of the Fine for financing, a loan from a non-bank provider would have to be used.

The financial plan in the option of redemption of the Fine with loan financing is based on the same assumptions as the option of redemption of the Fine without secured financing. The difference is that XYZ, a.s. will use a bank loan with an interest rate of 6%. An above-standard optimistic forecast regarding the financing of the Fine will result in the bankruptcy of XYZ, a.s. in 2022, when the balance of short-term financial assets will fall to negative values. The financial plan of the balance sheet and the profit and loss statement for the period 2020–2023 are shown in the following tables.

Table 4: Pro-forma balance sheet (assets) in the Option of redemption of Fine with loan financing

(inthous. CZK)	2020	2021	2022	2023
TOTAL ASSETS	**122 108**	**129 293**	**130 320**	**125 666**
Fixed assets	**35 000**	**35 550**	**35 235**	**34 862**
Gross investment in fixed assets	**19 000**	**4 500**	**3 600**	**3 500**
Depreciation rate	10.00%	10.00%	10.00%	10.00%
Current assets	**87 108**	**93 743**	**95 085**	**90 805**
Inventory	**55 000**	**59 260**	**62 347**	**61 100**
Inventory turn over time	115	120	125	125
Short-term receivables	**30 000**	**32 099**	**33 418**	**34 216**
Trade receivables	30 000	32 099	33 418	34 216
Turnover time of trade receivables	63	65	67	70
Short-term financial assets	**2 108**	**2 383**	**-679**	**-4 511**
Cash and cash equivalents	2 108	2 383	-679	-4 511

Source: Own elaboration.

Table 5: Pro-forma balance sheet (assets) in the Option of redemption of Fine with loan financing

(inthous. CZK)	2020	2021	2022	2023
TOTAL LIABILITIES	**122 108**	**129 293**	**130 320**	**125 666**
Equity	**48 650**	**53 848**	**57 114**	**56 738**
Basic capital	**5 000**	**5 000**	**5 000**	**5 000**
Profit funds	**500**	**500**	**500**	**500**
Profit from previous years	**49 000**	**43 150**	**48 348**	**51 614**
Profit	**-5 850**	**5 198**	**3 266**	**-376**
Liabilities	**55 958**	**75 445**	**73 206**	**68 928**
Short-term Liabilities	**9 958**	**10 241**	**10 267**	**9 988**
Trade payables	8 500	8 889	8 978	8 798
Turnover time of trade payables	18	18	18	18
Payables to employees	1 458	1 352	1 290	1 189

Share of liabilities to employees in personnel costs	8.30%	8.30%	8.30%	8.30%
Bank loans and assistance	**46 000**	**65 204**	**62 939**	**58 940**
Long-term bank loans	24 000	24 000	24 000	24 000
Bank loan for a Fine		17 500	14 000	10 500
Short-term bank loans	22 000	23 704	24 939	24 440
Share of short-term bank loans in inventories	40.00%	40.00%	40.00%	40.00%
Accruals	**17 500**	**0**	**0**	**0**
Accrued expenses	17 500	0	0	0

Source: Own elaboration.

Table 6: Pro-forma profit and loss statement in the Option of redemption of Fine with loan financing

(inthous. CZK)	2020	2021	2022	2023
Revenues from sales of own products and services	**175 000**	**180 250**	**182 053**	**178 411**
Total sales growth rate		3.00%	1.00%	-2.00%
Cost	**145 300**	**155 015**	**160 206**	**162 354**
Cost of goods sold	125 000	135 188	142 001	146 297
Trade margin	50 000	45 063	40 052	32 114
Trade margin in %	28.57%	25.00%	22.00%	18.00%
The share of costs of goods sold in sales of goods	71.00%	75.00%	78.00%	82.00%
Material and energy consumption	3 300	5 408	5 462	5 352
Share of material and energy consumption in sales	3.00%	3.00%	3.00%	3.00%
Services	17 000	14 420	12 744	10 705
Share of services in sales	9.70%	8.00%	7.00%	6.00%
Personal expenses	**17 500**	**16 223**	**15 474**	**14 273**
Share of personnel costs in sales	10.00%	9.00%	8.50%	8.00%
Growth rate of personnel costs		-7.30%	-4.60%	-7.80%
Depreciation	**4 000**	**3 950**	**3 915**	**3 874**
Depreciation and amortization	4 000	3 950	3 915	3 874
Other operating income	**6 000**	**6 180**	**6 242**	**6 117**
Share of other operating income in sales	3.40%	3.40%	3.40%	3.40%
Other operating expenses	**19 500**	**1 983**	**2 003**	**1 963**
Fine	17 500			
Other operating expenses without Fine	2 000	1 983	2 003	1 963
Share of other operating expenses without Fine in sales	1.10%	1.10%	1.10%	1.10%

Operating income	**-5 300**	**9 260**	**6 696**	**2 065**
Operating profit margin	-3.00%	5.10%	3.70%	1.20%
Interest expense and similar expenses	550	2 843	2 663	2 441
Interest rate on short-term inventories loans	2.50%	2.50%	2.50%	2.50%
Interest rate on long-term loans		5.00%	5.00%	5.00%
Interest rate on Fine loans		6.00%	6.00%	6.00%
Financial income	**-550**	**-2 843**	**-2 663**	**-2 441**
Profit before taxes	**-5 850**	**6 417**	**4 033**	**-376**
Income tax – current and deferred	0	1 219	766	0
Income tax rate	0.00%	19.00%	19.00%	0.00%
Profit after tax	**-5 850**	**5 198**	**3 266**	**-376**
Profit or loss for the accounting period	**-5 850**	**5 198**	**3 266**	**-376**

Source: Own elaboration.

With regard to the expected development of the cash balance, and thus also with regard to the development of cash flows, which the company XYZ, a.s. will generate in the option where the Fine is paid for with loan financing, the assumption of going concern cannot be considered as fulfilled. Further operation of the company XYZ, a.s. lacks economic sense.

Discussion and conclusions

The existing literature lacks attention to the possible suffocating effect of administrative fines. However, some researchers have examined the effects of these fines on credibility and value of a company. For example, Hass et al. (2019), Johnson et al. (2014) and Song and Han (2017) found that punishment announcements negatively affected a firm's ability to source financing, increased credit risk and therefore harmed the stock market valuation and firm's cash flow. Ding and Shahzad (2021) focused on the effect of environmental penalties on expected operating cash flow and infer that environmental administrative penalty harms operating activities. Ding and Shahzad (ibid.) concluded that negative effects of administrative fines on company operations will force firms to protect the environment and control pollution and that administrative penalty can effectively control environmental pollution. This conclusion does not contradict our interpretations and our results. The administrative fine must be harmful enough to punish the company in question, but also must comply with the applicable lawon the basis of which it is submitted that the fine cannot be imposed in such an amount that would have grievous effects on the entrepreneur's financial situation. An administrative fine apparently can be inappropriate in two aspects, either it may be insufficient or excessive (see Hu and Zhu, 2021). Economic perspective and methodology presented in our paper is focused on possible “excessive” punishment and therefore can be important for policy makers and supervisory authorities when imposing fines or assessing the requests for remission.

Our case study of XYZ, a.s. from the Czech Republic demonstrates how the imposition and at the same time immediate payment of an (administrative) fine would affect the key business parameters of this company. For this purpose, two different options of future development were modeled, namely the option without secured financing and the option with financing of the Fine by loan. It was found that the value of XYZ, a.s. in both scenarios corresponds to the liquidation value of its assets. The value of equity of XYZ, a.s. then corresponds to the liquidation value of the assets after the payment of liabilities – this amount is with regard to the liquidation value of the assets and a significant volume of negative liabilities and amounts to minus 3,000 thous. CZK. As in the option of redemption of the Fine without secured financing, it can also be stated in the option of redemption of the Fine with loan financing that the company XYZ, a.s. as of the Decisive Date, may either terminate the activities of the company and sell individual items of assets (then, after the payment of liabilities, the value of minus CZK 3,000 thousand falls on equity) or the company XYZ, a.s. may continue the operation of the its activities, thereby generating the current value of equity even lower than minus 3,000 thous. CZK and, moreover, in 2022 at the latest, it will enter a state of imminent bankruptcy.

In order to assess the possible suffocating effect of the fine or the possible futility of the company's activities in the future, it is always necessary to compile a forecast of value generators allowing quantification of free deductible cash flow, which will be generated in the future. Subsequently, it is necessary to evaluate whether or not the analyzed company will generate value for owners. If, as a result of the imposition of a fine, the validity of the going concern presumption is infringed, the undertaking's activities are pointless and the fine has a detrimental effect on its activities. If the going concern assumption is not met, the value of the enterprise quantified as the sum of future cash flows transferred to the present value at the effective date is lower than the proceeds from the hypothetical liquidation and sale of assets. Then, from the logic of things, further running of this business makes no sense.

Our case study also has some limitations in its assumptions. In order to assess the possible suffocating effect of the payment of the fine or the possible futility of the entrepreneur's activities in the future, the expected economic results (future cash flows) of the business in question must be estimated. The underlying assumptions of cash flow forecasts depend upon the purpose of the valuation and cannot be affected by any information that would not be known with sufficient reliability at the valuation date (Decisive Date). Apparently, according to the law, company XYZ, a.s. has an option to request a postponement of the fine, as well as payment in installments or even there might be a possibility of the cancelation of the fine. However, none of these options could be anticipated with a certain level of probability and therefore such assumptions cannot be taken into consideration as one of the scenarios (from the Decisive Date perspective). The analyst cannot presume the legal issues and create his or her own scenarios for economic analysis and/or valuation and must follow the expert assignment and the realities valid for the company under study at a certain decisive date.

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