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OVERDOSED? FINANCIAL LEVERAGE ANALYSIS OF CSN

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ABSTRACT

Purpose: This teaching case illustrate the use of concepts and implications associated with capital structure, cost of third-party capital, financial leverage, and bankruptcy costs to support strategic decision-making by the management of a publicly-held company (Companhia Siderúrgica Nacional- CSN) listed on Brazil Stock Exchange and Over-the-Counter Market ([B]³ Stock Exchange) and on the New York Stock Exchange. **Method:** Data were obtained through financial reports, such as the Income Statement, Balance Sheet, Explanatory Notes, and also from consultations with Management Reports, material facts disclosed, and also media facts. **Main Results:** The case guides a decision by the company in the short term, such as investing in operational performance, renegotiating terms, selling assets, and carrying out an Initial Public Offering of a subsidiary. **Relevance / Originality:** This teaching case innovates by illustrating the economic and financial situation of a company, involving issues such as operational performance, cash generation and capital structure for the decision-making process. Such analysis is important both for the academic and organizational contexts because it is a theoretical application in a real company. **Theoretical / Methodological Contributions:** The case contributes to a more in-depth analysis of the consequences of excessive indebtedness linked to low cash generation by an entity, the impact of debt costs on the company's results and management attitudes towards the excess of indebtedness.

INTRODUCTION

This teaching case deals with the situation of Companhia Siderúrgica Nacional (CSN) from the use of concepts and implications associated with capital structure, cost of third-party capital, financial leverage and bankruptcy costs. The case brings up the dilemma of strategic decision-making by management from the company's high level of debt. The analysis of economic-financial data takes place from 2010 to 2019.

CSN was founded on April 9, 1941, through President Getúlio Vargas' decree. Currently, it is part of the mining, steel, energy, logistics and cement business. Since its founding, CSN has been considered a milestone in the Brazilian industrialization process

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and, as a result, has contributed to the country's economic development.

Over the years, the steelmaker has expanded its operations to a multinational level. In addition to being present in 18 Brazilian states, it also operates in Germany and Portugal. CSN has an integrated steel plant; five industrial units, two of them abroad; iron ore, limestone, dolomite and tin mines; a strong flat steel distributor; port terminals; interests in railroads; and participation in two hydroelectric plants. Thus, the company has been betting on the entrepreneurial strength of national capital and on the enormous Brazilian potential for competitiveness in the steel sector.

CSN operates throughout the steel production chain, from extracting iron to producing and marketing a diversified line of high-value-added steel products, which includes steel, galvanized coated flats and metallic sheets. These products permeate the transformation industry, being present in several sectors, such as, for example, automotive, civil construction, packaging, white goods, among others. The company has a workforce of more than 20,000 employees to carry out its integrated business model (steel, mining, electricity, logistics and cement), achieving one of the lowest costs in the world steel industry, whose sales of steel are concentrated in the domestic market.

Over the years, CSN contracted debts to invest in its own business, such as the purchase of machinery and equipment, given that the steel industry demands this type of investment. However, the company showed a reduction in operating performance and cash generation, having to resort to external financing. The company's debt decision was taken by the executives.

Faced with the new scenario of financial leverage, executives need to outline strategies to be implemented so that CSN can reach its organizational objectives and, at the same time, have a well-defined capital structure. In order to develop viable strategic planning, Chief Financial Officer (CFO) Marcos Mendonça, during a meeting among executives, suggested hiring a financial consultancy specialized in capital structure and investment decisions, which was a suggestion accepted by the managers present.

With the suggestion accepted, the executives began to contact renowned financial consultancies in the capital of São Paulo, where one of CSN's headquarters is located. The company's managers set a deadline of one week to define the contracted consultancy. On the day that expired, Alfa Money (AM) company was unanimously chosen. AM was responsible for making the finances of companies with a high risk of insolvency and a consequent probability of bankruptcy.

When the service provision contract was signed with AM, a consultant named Gustavo Belmort, with more than 15 years of experience, went to CSN's headquarters to talk to the executives and investigate the decisions that CSN has taken. Based on this first contact, Gustavo would be able to suggest possible future scenarios for the company. Until then, Gustavo had never investigated CSN's financial leverage case in depth. He gathered information to prepare reports and support his analyses, supported by media reports, theoretical concepts and his experience as a consultant.

As a result of the high financial exposure experienced by CSN, Gustavo quickly identified that its capital structure needed to be aligned with its current economic situation. So, considering operational problems, low cash generation and high financial exposure, CSN executives and Gustavo (on behalf of AM) face the following dilemma: how can the company adjust financial leverage in order to reduce risk finance and continue its operations? Starting from this main question, what could they do? Invest in operational performance? Renegotiate deadlines? Sell assets?

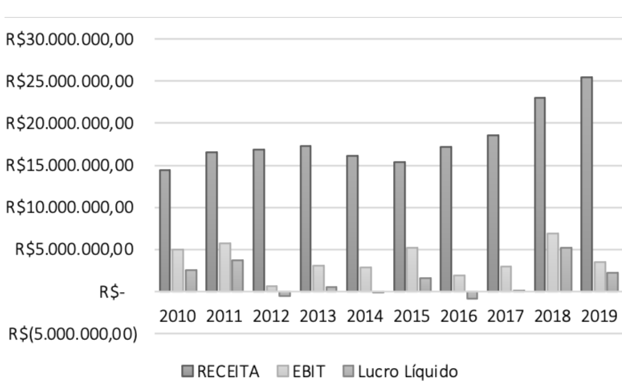
Betting on increasing operational performance can be relevant if the objective is to generate cash, providing greater financial leeway to pay debts. Selling assets can generate funds to pay creditors. The renegotiation of deadlines with creditors could also be carried out, aiming at a longer deadline for fulfilling obligations. In fact, the management team, with Gustavo's support, needs to evaluate the available information to make an assertive decision about CSN's future.

1. EXECUTIVES OF COMPANHIA SIDERÚRGICA NACIONAL, WHAT ARE YOU DOING? IT'S TIME TO ANALYZE THE INFORMATION AVAILABLE

Gustavo, using information provided by the investor portal of CSN, [B]³ Stock Exchange and media sources, gathered the main information regarding the company and its indebtedness. Initially, information on its shareholding composition and company management was verified. Regarding the company's shareholding structure, its main parent company is Vicunha Aços S.A. (48.97%), with Rio Iaco Participações S.A. (4.19%). NYSE holds 18.90% of the shares and 25% is held by shareholders in Brazil, and a further 0.53% of the shares are held in treasury. CSN's management is carried out by the Executive Board and the Board of Directors, chaired by Benjamin Steinbruch.

It is worth mentioning that CSN holds 10.07% of Usiminas' preferred shares, and that, historically, Steinbruch family controls CSN through a series of holding companies, such as National Steel (sold in 2018), Rio IACO Participações S.A., and Vicunha Aços S.A., being closely held companies. This structure was designed over the last decade so that Steinbruch family could buy the stake in CSN from Rabinovich family, whose stake was dissolved in 2005, and also from CSN's own pension fund.

Considering the ten-year period, based on its accounting figures, CSN's average revenue growth was approximately 9%. As can be seen in Figure 1, in general, it is noted that there has been growth in revenue over the years, but the variation is not so significant. Earnings before interest and taxes (EBIT) shows the operating result, which, by the way, also shows a lot



*Amounts in thousands (BRL).
Source: Own elaboration based on data from B3 (2020).
Figure 1. Financial results*.

of variation over the years. It is worth mentioning that the steel company's sales are driven by steel, CSN's main business, followed by mining, logistics, cement and energy.

From the economic-financial information, it is possible to observe that the company presented negative results in some years of the period analyzed and, therefore, researched in its own financial statements the justifications reported by the firm. The years with negative net income were 2012, 2014 and 2016. The different explanations provided by the company can be identified in Table 1.

Regarding CSN's participation in other companies, it should be noted that the company owned common and preferred shares of Usiminas, its competitor. To that end, the steelmaker's president, Benjamin Steinbruch, announced in the media in 2019 that he would be eager to sell them, but was waiting for the "right" price. The justification given was that Usiminas was not part of CSN's competitive strategy, and selling the shares was more advantageous for CSN.

In possession of information about the indebtedness and the fact that CSN disposed of its shares in Usiminas, Gustavo at that moment was curious about the reliability of the reason that, only in 2019, the company's management realized that Usiminas would not be interesting for the organization. Soon after, he discovered that disposing of Usiminas shares was a deliberate decision by the Administrative Council for Economic Defense (Cade), in 2014. The company started selling the shares in May 2021, with an increase of about 57% in the price of the action, due to the rise in steel prices.

It is worth noting that despite CSN's sale of shares in Usiminas having already been approved by Cade in 2014, iron ore went through a period of devaluation, which led CSN to wait for a more opportune moment. So, after five years of waiting, CSN sold its Usiminas shares at the highest value in the company's history.

Table 1. Justifications given by the company for negative net income.

Year	Justification for negative net income
2012	There was a reclassification of accumulated losses on its investments in Usiminas common and preferred shares.
2014	Specifically this year, there was a lower operating result.
2016	Despite the low operating result, the main cause was financial leverage, whereby the cost of debt was three times higher than the operating result before taxes.

Source: *Companhia Siderúrgica Nacional*'s financial statements.

1.1. Companhia Siderúrgica Nacional and international business

CSN operates both in the domestic and foreign markets. The mining and steel segments are exposed to the foreign market. Detailing a little about its business, iron ore is the basic input for steel production, with CSN Mineração being the sixth largest exporter of iron ore in the world, serving customers in Asia, Europe, North America and Brazil.

Regarding this global market, in relation to demand, China is the main importer, corresponding to 70% of transoceanic iron ore trade. On the side of the holders of significant steelmaking capacity, there is Japan, South Korea and Europe. Considered important and complementary markets, mining and steel are essential activities for the economic development of the world.

Regarding its revenues, in 2019, in the steel industry, the foreign market accounted for approximately 30%. In mining, the foreign market share was 90%. Breaking the Brazilian frontier in search of exploring other markets is CSN's objective, and from the annual results it is possible to observe that this expansion has been increasing.

In its reports, the company always highlighted that most debts (around 60%) are in foreign currency, given the contracting of loans and financing outside Brazil. CSN has used third-party capital over the years to invest in the company's property, where most of these investments were in machinery, equipment and installations, also varying in terms of land, buildings, furniture and fixtures and works in progress.

CSN highlights its ability to expand, especially in other markets, given that it operates in important segments such as mining and steel, as well as having businesses in others that also have this potential, such as energy, logistics and cement. A point to be considered in this business expansion is its economic and financial situation, especially cash generation from operating activities and the level of leverage, as these are conditions for investment decisions.

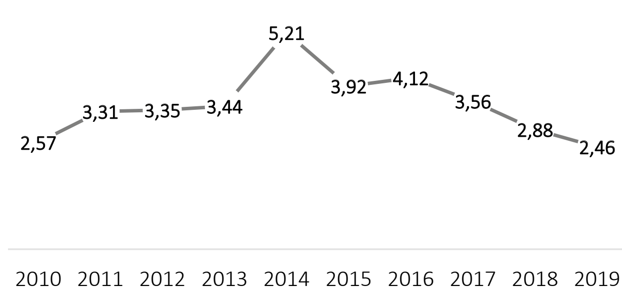
1.2. Companhia Siderúrgica Nacional and financial performance

Regarding the capital structure, the consultant collected data on the relationship among debt and shareholders' equity (NE) of CSN (Figure 2). Gustavo noted that CSN used its control structure to contract debt, which in this case was through National Steel (company sold in 2018), Rio IACO Participações S.A. and Vicunha Aços S.A.

About debt, in 2015, CSN extended the payment period for part of its debts with Caixa Econômica Federal and Banco do Brasil S.A. Maturities scheduled for 2016 and 2017 were reallocated to 2018 and 2022 with equally distributed installments. In 2016, CSN continued with the debt extension policy, but this time, with the Export Credit Note (NCE) contracts for Prepayment with Bradesco, shifting the maturity from 2016 to 2019. Finally, in 2018 it concluded with Banco do Brasil the postponement of maturities from 2018 to 2022 for maturities until 2024. This debt extension policy allowed CSN to honor its commitments and obtain time to improve its financial health.

Regarding debt costs, there is the gross or apparent cost (rate of interest on debt) and the net or effective cost (ratio of interest on debt after deduction of the Income Tax — IR tax benefit). From 2010 to 2019, the average apparent and effective costs were 10.08 and 6.65%, respectively. It is worth noting that in 2016, for example, when it posted a loss, the cost of debt was higher than the operating result before taxes. In general, the cost of debt has not shown significant variation from one year to the next, and financial expenses keep proportions very close to the operating result.

Based on the media, Gustavo realized that, to reduce debt, Benjamin Steinbruch considered selling the 8% stake in his iron ore division in 2019. However, the director reinforced that the transaction would only happen if the company's debt situation showed the need for deleveraging.



Source: Own elaboration based on data from B3 (2020).

Figure 2. Capital structure (Financial debt/PL) of *Companhia Siderúrgica Nacional.*

In order to understand the implications of high debt, it is important to analyze some of the company's financial information, as shown in Table 2. The debt history and level of financial expenses must be identified, as well as cash and income from CSN that have contributed to the better performance of its numbers.

Thus, like any publicly traded company, CSN disclosed its forecasts to the market, as investors need this information. So, in 2019 the company committed to maintaining its deleveraging plan started in 2015, and through a material fact, on October 23, 2019, it informed its shareholders of the projection of reaching the value of 3.0 in the indicator of Net Debt/Earnings Before Interest, Taxes, Depreciation and Amortization —EBITDA at the close of the 2019 annual balance sheet. However, in 2019 this ratio reached 5.31, as can be seen in Table 2. Based on these projections, Gustavo wondered what could be happening for the company to intensify efforts to reduce its indebtedness.

Faced with so many questions on his mind, the consultant prepared four questions about CSN's history to be answered jointly with the company's executives, since they are the main stakeholders in improving the business. The answers will serve as a basis for the production of a strategic report, which will serve as a basis for decision-making by the company's executives. The questions are in the next section of this case.

It is worth noting that all questions are related to the main dilemma, in this case, how the analysis of capital structure needs to be aligned with the current economic situation. Situations such as operational problems, low cash generation and high financial exposure are factors to be considered. To this end, it is understood as necessary to discuss strategic decision-making by management in the company's high level of indebtedness.

2. DISCUSSION QUESTIONS

For the development of the case, questions are proposed for resolution in order to achieve the objective of the proposition of the present case. In the bibliography suggestions section, some studies are presented that can be consulted by the students, and that, therefore, will provide the necessary theoretical support for the resolution of the questions, leaving the use of additional materials to the professor and the students. The students must answer the questions imagining themselves to be CSN executives, having the responsibility of defining the strategic directions for the scenario experienced by the company:

- Question 1: How can debt adversely affect CSN's business considering current financial conditions and operating results?
- Question 2: Financial difficulties arising from excess debt tend to offset the benefits of using third-party capital, as such difficulties contribute to an increase in the probability that the reduction in profits will promote the company's bankruptcy. The relationship is clear because, as the debt/eq-

Table 2. *Companhia Siderúrgica Nacional*'s Financial Information.

YEAR	Financial expenses*	Financial Debt (A)*	Box/ eq. box (B)*	EBTIDA (C)	(A-B) /(C)
2010	2,55	20,09	10,24	5,8	1,7
2011	2,72	27,89	15,42	6,71	1,86
2012	2,41	30,15	14,44	1,95	8,06
2013	2,68	27,75	10	4,28	4,15
2014	3,25	29,88	8,69	4,1	5,17
2015	3,87	34,28	7,86	6,23	4,24
2016	3,17	30,44	4,87	3,27	7,82
2017	2,76	29,51	3,41	4,44	5,88
2018	2,81	28,83	2,25	8,22	3,23
2019	2,51	27,97	1,09	5,06	5,31

*Values in thousands (R$).
Source: Own elaboration based on data from B3 (2020).

uity ratio increases, the probability that the company will not be able to pay what was promised to its creditors also increases, and, therefore, the greater the probability of incurring bankruptcy costs that accelerate this process. Given CSN's financial situation, would the company be subject to bankruptcy costs? If so, discuss them.

- Question 3: CSN's problem situation highlights the importance associated with the analysis of the cost of third-party capital. Discuss the implications of debt costs for the company, as well as the concern to always keep them as low as possible.
- Question 4: The text describes some important characteristics linked to CSN's debt, such as the fact that most of it is in foreign currency and the term for payment. Considering its financial situation and operating performance, what is the position to be used by CSN's executives to control or reverse its scenario in the short term?
- Question 5: Discuss CSN's economic and financial situation, which may impact the degree of investment by international agents.

3. TEACHING NOTES

In this section, directions are presented for the professor to proceed with the conduction of the case in the classroom, in which, first, there is a brief exposition of the literature on financial leverage. Subsequently, the educational objectives are defined, followed by clarification of the source of the data used here, and finally, the proposals for referral to the general and specific questions for the case.

CSN, over the years, contracted external financing to invest in its own business, such as the purchase of machinery and equipment, given that the steel industry demands this type of investment. At the same time, the company presented a reduction in operating performance and cash generation. As a result, CSN is surrounded by high financial exposure and operational problems. The company's executives experience the dilemma of deciding which actions will be taken to adjust the financial leverage, with the aim of reducing the financial risk and ensuring the continuity of operations.

For the execution of this case, there is a need for the professor to know the literature on financial leverage. To this end, a subsection responsible for exposing the literature was allocated, which discusses the concepts and benefits of adapting the level of financial leverage of companies.

3.1. Literature presentation: financial leverage

This session aims to address important points in the literature related to the main theme of the case, financial leverage. To this end, important points will be discussed for understanding the capital structure and its possible impacts on the company's performance. It is recommended that the teacher and students read this session, and the students use the bibliography suggestions for better understanding and deepening of the theme. Reading recommendation is justified by the need to contextualize the theory about the case, as well as to understand the discussions about financial leverage.

Financial decisions are of vital importance to organizations, due to the resulting effect on the company's survival and performance. Faced with technological development and the financial market, financial managers have been concerned with financing and investment decisions, so that they are assertive and stimulate the result of positive future profits and the increase in the price of shares on the stock exchange. The discussion about financial leverage becomes important for decisions, as it deals with the total debt in an organization's capital structure, which can influence the earnings and risks of its owners (Al-slehat, 2019). Thus, the ideal level of financial leverage has been discussed since the assumptions addressed by Modigliani and Miller (1958) on capital structure.

Based on assumptions and formulations, Modigliani and Miller (1958) showed that the average cost of capital for any company is completely independent of its capital structure. That is, the percentage of debt and equity is indifferent to obtain the lowest cost of capital, which is considered optimal by traditional theory. Despite having achieved great contributions with the 1958 work, Modigliani and Miller (1963) made corrections to the previously stipulated assumptions. One of the main corrections was to consider the existence of tax benefits on the use of third-party capital. Thus, an organization with debt is equal to the value of a company without debt plus the current value of tax benefits. In this way, due to the presence of tax benefits, the weighted average cost of capital will decrease, opposing the propositions presented by Modigliani and Miller in 1958.

The ways in which the capital structure can impact the ability to promote tax relief are: (a) debt is able to minimize taxable income and can decrease the incentive to be tax aggressive; (b) there is the non-cumulative factor of tax shelter benefits, in case of bankruptcy; and (c) there is monitoring of business activities by creditors, which will reduce the organization's ability to harbor income (Jalan, Kale & Meneghetti, 2013).

The value of any organization is influenced by the capital structure. Knowing this, managers must understand all the components of the capital structure (internal and external) to reach the optimal point, which maximizes the share price. Excessive or reduced funding can distance potential shareholders, when they perceive mismanagement of resources by their administrators (Al-slehat, 2019).

Decisions to increase financial leverage for business improvement can be seen by the market as a sign that the company expects better cash flows and earnings with an overall improvement in financial performance. On the contrary, issuing shares in the market to raise money can be seen negatively by shareholders, based on the assumption that share prices will become overvalued and the organization could expand its sources of financing, given the low use of opportunities for business growth (Ahmed, Awais, & Kashif, 2018).

Despite the statement by Ahmed et al. (2018), the authors Abu-Abbas, Alhmoud and Algazo (2019) suggest that financial leverage has a negative relationship with company performance. Furthermore, the relationship between financial leverage and performance is more negative for: organizations that use a product differentiation strategy, rather than low cost; and companies with a high degree of competitiveness, rather than a low degree of competitiveness. Thus, finding the capital structure that best adheres to the characteristics of the business is a notable mission for managers.

In order to adequately deal with financial leverage, management needs to define the companies' debt policy. All actions formulated for this policy must be defined with a view to fulfilling the two main objectives: to reduce the amount of taxes collected; and to increase the company's profitability (Nguyen et al., 2019). A point that must be taken into account when constructing the debt policy is the fact that the greater the risk experienced by the business, the greater the financial leverage will tend to be (Elkhal, 2019).

3.2. Educational objectives

This manuscript is an intrinsic case study, as CSN's situation allows a better understanding of the capital structure, and more specifically of its level of indebtedness; thus, a specific case of excess debt to be discussed in classroom. Therefore, through the case it is possible to investigate and better understand the implications associated with indebtedness, relating to concepts of capital structure, cost of third-party capital, leverage and bankruptcy costs.

3.3. Data sources

The company under study is CSN, therefore, this is a real case, despite using two fictional characters: a consultant and a CFO, called Gustavo and Marcos, respectively. The characters were created to make it easier for students to read. Therefore, all information used here is in the public domain, since it was extracted from Bolsa, Brasil, Balcão (B3) and CSN's Institutional and Investor Relations (IR) website (Investing, 2020). To this end, data were obtained through financial reports, such as the Income Statement, Balance Sheet, Explanatory Notes, and also queries to Management Reports, material facts disclosed, and also media facts. Therefore, both professors and students will be able to consult the information shown here, as well as search for additional data.

3.4. Relationship with the objectives of undergraduate and postgraduate courses

The case presents the evolution of the entity's indebtedness, highlighting specific issues such as the use of third-party capital, terms, interest, and the respective costs, as well as the management's attitudes towards the situation of excess debt. To this end, the case was proposed for discussion in Business Administration, Accounting and Economics courses, when applying knowledge related to corporate finance, leaving it up to the professor to adapt it to carry out triangulation with other content, such as firm value, for example. With these elements in hand, students will be in a position to understand the consequences of excessive indebtedness linked to low cash generation by an entity; the impact of debt costs on the company's results; the management's attitudes towards the situation of excessive indebtedness.

3.5. Suggested disciplines for case use

The subjects suggested for use in this case are: Corporate Finance, Financial Management, Strategic and Financial Planning and Business Valuation.

3.6. Possible organization of the class for case use

The analysis and resolution of the proposed questions can be carried out by the students within two hours of class, in person or synchronously. For the application in person, it is suggested that the professor send the case one week before the class, for the students to carry out an individual reading. In the classroom, there will be a discussion in groups of three to five students. After group discussions, group members can appoint representatives to discuss points that relate to the subject being taught and that are important for learning in the classroom. Thus, it is suggested to follow four stages in the application of the case, one prior and three in the classroom, as shown in Table 3.

For application in the synchronous context, in the same way as in the classroom, the teacher must send the case one week in advance to the students. In groups, each member will read and take notes, and as a team they must form a single document so that it can be discussed on the day of the remote meeting. Depending on the number of students, the teacher may determine 50 minutes for the groups to explain their case notes to the whole class, and, consequently, the proposed solutions that the case requires.

3.7. Proposals for addressing issues

Below are the proposals for referral to the resolution of the issues, that is, a direction, not dealing with standard issues. Therefore, the teacher will be able to readapt the questions and even the answers if he deems it necessary. It should be noted that the answers are directed from knowledge of the financial market and capital structure, and, in particular, third-party capital and its costs, financial leverage and analysis of financial statements. For a better understanding and expansion of the discussions, students can use the Reading Suggestions section.

3.7.1. Question 1

As stated by CSN's management, high indebtedness may imply the following considerations:

- dedication of a substantial part of the cash generated from operations to pay loans and financing, when it could be dedicated to the company's expansion;
- exposure to fluctuations in interest rates, due to the renegotiation of debts and possible new borrowings and financing, as well as the exchange rate, since a significant part of loans and financing is denominated in foreign currency;
- increased economic and financial vulnerability due to possible adverse conditions in the industry and segment, due to limited resources available

Table 3. Steps for application and discussion of the teaching case.

Phases	Execution suggestion
Previous reading	For a better understanding of the case by the students, it is suggested that the report and the questions for discussion be made available in advance.
Discussion and resolution of questions in groups – 60 minutes	The case can be discussed in groups of three to five students, to deepen the participants' understanding and to resolve the proposed questions.
Question analysis – 50 minutes	The groups must present the answers to the questions, based on coherent positions, and the teacher must, simultaneously, redirect the answers to a debate.
Discussion Closing – 10 minutes	The professor should list the similar and divergent answers given by the students and, as far as possible, compare them with the theory.

Source: Own elaboration (2020).

in the short term, considering the high financial leverage and expected cash disbursements;

- limitation of the company's ability to carry out new business (acquisitions) until the financial leverage is reduced;
- limitation of the company's ability to obtain new lines of credit at more favorable interest rates due to risks related to current financial leverage.

The fact is that CSN's excessive debt has left it in complicated situations. And one of these situations was related to the remuneration of shareholders, when in August 2018 the company informed through a material fact that the Board of Directors approved the distribution of extraordinary dividends. However, on August 28, it went public to inform that the Judge of the 10th Tax Execution Court of the Federal Court of São Paulo blocked the distribution of declared dividends, thus being prevented at that time from making the payment of dividends. The reason for the suspension was that the company is extremely indebted, having to sell assets and extend its debt, so it does not present conditions for cash distribution. Another negative implication derived from its excessive indebtedness is the current classification of its credit risk by the three main agencies, two of which classified CSN as negative (Moody's and Standard & Poor's), and only one as positive (Fitch Ratings).

3.7.2. Question 2

As excessive financial leverage provides greater exposure for the company, such a relationship would be related to a higher probability of bankruptcy, which, in turn, may cause some costs. Thus, from the consequences of high debt, some facts may occur and thus accelerate the generation of so-called direct and indirect costs of bankruptcy.

Direct costs are related to legal and administrative expenses, such as lawyers, experts and court costs, as well as costs with running a company under these conditions. If it is the case of opening a court-supervised reorganization process, this is a costly procedure for CSN. And so, a company faces the big dilemma about its decisions regarding the composition of the capital structure, because on the one hand borrowing saves money in taxes; on the other, the more the company borrows, the more likely the risk of bankruptcy that it will have to bear.

Indirect bankruptcy costs are those incurred by a financially distressed firm to avoid filing for bankruptcy. In the face of financial distress, the company's assets lose value because management is busy trying to avoid bankruptcy rather than running the business. Normal operations are disrupted, sales are lost, valuable employees leave, and potentially profitable programs are abandoned to preserve cash and other profitable investments go unfulfilled.

3.7.3. Question 3

Regarding the fact that most of the debt is in foreign currency, the case has already been made. The company highlights in its explanatory notes that it uses hedging operations as a form of protection. However, the company needs to analyze the effectiveness of these operations. As for terms, the company must analyze whether there are still conditions to extend the terms of debts with financial institutions, seeking to make financially sound agreements that do not result in greater financial costs.

As a financially leveraged company with difficulties in generating cash flow, the cost of doubt becomes a very significant variable, whose elevation implies more financial insufficiency. If the company is having operational difficulties, it is not a viable option to renegotiate the debts if it is to increase costs, since the financial expenses keep proportions very close to the operating result. This analysis is important so that the entity does not view debt renegotiation as an alternative without first analyzing the costs.

Choosing to use third-party capital that is linked to high costs implies financial inefficiency for the company, as the operating result, which in this case is already well committed, will be consumed by financial expenses. Given the conditions, the ideal is to seek alternative ways of generating cash, as well as minimizing financial costs.

As a way of corroborating that CSN should not look for ways to improve its operating result, the company's goal was to close 2019 with a ratio of less than 3, but it did not reach it (5.31 of Net Debt/EBITDA), that is, the ratio was well above what had been projected. Thus, even though the financial debt has only remained at a high level, the company's operations did not contribute to improving the situation.

3.7.4. Question 4

Faced with the scenario of CSN, a company that is in the maturity cycle of its business, and considering that it has already renegotiated terms with some financial institutions, the moment is for internal restructuring of the company, such as reduction of production costs, since it is not a suitable moment for new investments; renegotiation of some contracts so that CSN receives the prepayment and supplies its products considering a longer term — an action which would reinforce cash with cheap money and improve liquidity; sale of assets, such as participations, since over the years it has acquired and invested in a disorderly manner, and during all this time this has never been an option selected by the company; carrying out an IPO of its main subsidiary, that is, the IPO of CSN Mineração S.A, as it would raise funds by issuing new securities and would be able to speed up the deleveraging plan, given that cash generation has been slow in the past last years. It should be noted that, with the IPO transaction, it would not be necessary for CSN to reduce its stake to less than 50%, as it is important for it to continue consolidating 100% of the subsidiary's results, selling only a portion of it, given the emergency situation to raise financial resources.

3.7.5. Question 5

CSN already has a significant part of its revenue linked to the foreign market, in this case, the mining and steel industries. Due to the relevance of the business, and also due to the increase in this exposure, it is observed that the company seeks to expand its operations to other markets. However, given CSN's current conditions, especially in relation to operating cash flow generation and debt level, these are factors that weigh on international investment decisions, both from CNS and from other agents.

On the one hand, investments outside the country of origin demand resources, and as a company already heavily indebted and with high debt costs, it becomes difficult to get more resources to carry out this expansion. In the same way, the cash flow has not been helping either, signaling that, at the moment, the return of activities has also hampered this growth.

Likewise, when an international agent decides to invest resources in a company, as can be the case with CNS, investors must analyze the company's leverage level, current debt costs, as well as how the company is generating cash with its activities. So, these factors may alienate potential foreign investors, because, despite Brazil being an emerging economy, with investment potential, it becomes more interesting to invest in companies that are more solid in terms of numbers, without significant debt and cash problems.

3.7.6. Reading suggestions

Machado, M. A. V., de Medeiros, O. R., & Júnior, W. E. (2010). Problemas na mensuração da estrutura de capital: evidências empíricas no Brasil. *BBR-Brazilian Business Review*, *7*(1), 24-47. https://doi.org/10.15728/bbr.2010.7.1.2

Marschner, P. F., Dutra, V. R., & Ceretta, P. S. (2019). Alavancagem financeira e rentabilidade nas empresas brasileiras listadas na B3. *Revista Universo Contábil*, *15*(2), 44-58. https://doi.org/10.4270/ruc.2019211

Sanvicente, A. Z. (2012). Problemas de estimação de custo de capital de empresas concessionárias no Brasil: uma aplicação à regulamentação de concessões rodoviárias. *Revista de Administração*, *47*(1), 81-95. https://doi.org/10.5700/rausp1027

REFERENCES

Abu-Abbas, B., Alhmoud, T., & Algazo, F. (2019). Financial leverage and firm performance evidence from Amman stock exchange. *European Journal of Comparative Economics*, *16*(2), 207-237.

Ahmed, F., Awais, I., & Kashif, M. (2018). Financial leverage and firms' performance: empirical investigation of KSE-100 index. *Etikonomi*, 17(1), 45-56. https://doi.org/10.15408/etk.v17i1.6102

Al-Slehat, Z. A. F. (2019). Impact of financial leverage, size and assets structure on firm value: evidence from industrial sector, Jordan. *International Business Research*, *13*(1), 109. https://doi.org/10.5539/ibr.v13n1p109

Bolsa, Brasil, Balcão. *A Bolsa do Brasil – B*[3]. Retrieved from http://www.b3.com.br/pt_br/

Companhia Siderúrgica Nacional (CSN). Institucional. *CSN*. Retrieved from https://www.csn.com.br/default_pti.asp?idioma=0&conta=45

Elkhal, K. (2019). Business uncertainty and financial leverage: should the firm double up on risk? *Managerial Finance*, *45*(4), 536-544. https://doi.org/10.1108/mf-10-2018-0491

Investing (2020). Com endividamento alto, dividendo gordo da CSN levanta suspeita dos analistas. *BR Investing.* Retrieved from https://br.investing.com/news/stock-market-news/com-endividamento-alto-dividendo-gordo-da-csn-levanta-suspeita-dos-analistas-601891

Jalan, A., Kale, J. R., & Meneghetti, C. (2013). *Corporate tax aggressiveness and the role of debt*.

Modigliani, F., & Miller, M. H. (1958). The cost of capital, corporation finance and the theory of investment. *The American Economic Review*, *48*(3), 261-297.

Modigliani, F., & Miller, M. H. (1963). Corporate income taxes and the cost of capital: a correction. *The American Economic Review*, *53*(3), 433-443.

Nguyen, V. C., Nguyen, T. N. L., Tran, T. T. P., & Nghiem, T. T. (2019). The impact of financial leverage on the profitability of real estate companies: a study from Vietnam stock exchange. *Management Science Letters*, *9*, 2315-2326. https://doi.org/10.5267/j.msl.2019.7.023

EXAGEROU NA DOSE? ANÁLISE DA ALAVANCAGEM FINANCEIRA DA COMPANHIA SIDERÚRGICA NACIONAL

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DETALHES DO ARTIGO

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RESUMO

Objetivo: Este caso de ensino Ilustra o uso de conceitos e implicações associados a estrutura de capital, custo de capital de terceiros, alavancagem financeira e custos de falência para fundamentar a tomada de decisões estratégicas pela administração de uma empresa de capital aberto (Companhia Siderúrgica Nacional - CSN) listada na Bolsa de Valores Brasileira [B]³ e na New York Stock Exchange. **Método:** Os dados foram obtidos por meio de relatórios financeiros, como demonstração do resultado, balanço patrimonial, notas explicativas, e também de consultas aos relatórios de administração, fatos relevantes divulgados e, ainda, fatos midiáticos. **Principais Resultados:** o caso orienta uma decisão pela companhia a curto prazo, como investir em desempenho operacional, renegociar prazos, vender ativos e realizar *initial public offering* de subsidiária. **Relevância / Originalidade:** o presente caso de ensino inova ao ilustrar a situação econômico-financeira de uma empresa, envolvendo questões como desempenho operacional, geração de caixa e estrutura de capital para o processo de tomada de decisão. Tal análise é importante tanto para o contexto acadêmico quanto para o organizacional por se tratar de uma aplicação teórica em uma empresa real. **Contribuições Teóricas / Metodológicas:** O caso contribui para uma análise mais aprofundada das consequências de um excessivo endividamento atrelado à baixa geração de caixa por uma entidade, do impacto dos custos da dívida no resultado da companhia e das atitudes da administração diante da situação do excesso de endividamento.

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