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MAIN AND DECISIVE ECONOMIC AND FINANCIAL RATIOS – APPLIED IN CORTICEIRA AMORIM

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ABSTRACT

The purpose of this article is to analyze the main economic and financial ratios that hold enough information to be susceptible of a suitable interpretation, in order for it to be applied in the short-, medium- and long-term decisions and strategies.

The methodology used to elaborate this article was from an exploratory case study, following a qualitative and quantitative approach, a gathering, evaluation and analysis of the primary and secondary data was made. There was an emphasis on the use of books, master's dissertations and the consolidated statement of accounts of Corticeira Amorim to develop a theoretical/practical framework of the ratios. It was concluded that the ratios are crucial indicators to understand the performance and development of the company, therefore, they are an instrument used in the corporate decision making. It was confirmed that Corticeira Amorim is stable, in higher financial strength, in a strong growth period, profitable and efficient.

KEYWORDS: Companies, Corticeira Amorim, Ratios, Decision Making.

1. INTRODUCTION

The general objective of this article will be to analyze the most relevant economic-financial ratios, but with sufficient information content, capable of an adequate interpretation and taking into account potential bias factors, so that the decisions taken by analysts, managers, shareholders, investors or creditors are aware, thoughtful, credible and reliable.

The interest in the subject is due to a great personal interest, liking for the subject, in addition it is a current and relevant topic for the scientific community and for society in general.

The article will answer the main economic-financial ratios to be analyzed and their respective interpretations at the time of business decisions.

In order for analysts to make a judgment about the economic and financial situation of a company, it is essential to analyze a set of indicators. Despite the fact that these indicators can take different forms, the most used are certainly those that constitute the form of ratios(Flour, 1995).

Silva (2016) defends ratios as a methodology for analyzing and interpreting the company's economic and financial situation. Ratios express a relationship between two quantities and are obtained by dividing one value by the other. The objective of the ratios is to obtain useful information, different and complementary to the information included in the absolute values. The formulation of ratios obeys criteria of relationship and relevance between themselves and the quantified data of the balance sheet, income statement or vice versa. The analysis of the ratios can be dynamic when the time factor is considered and the analysis of the evolution of the ratios in different and successive periods, thus allowing to induce evolutions, or static, when comparing ratios with those of another company or with the average of the sector(Silva, 2016). In this regard, Queirós, Mota, Silva, Pereira and Resend (2020) argue that ratios provide entrepreneurs with information on the performance and evolution of business, enabling a detailed analysis of the company's accounts. Granting the elaboration of indicators related to several areas that will result in ratios of activity, operation, profitability, indebtedness, liquidity and stock exchange behavior(Queirós, Mota, Silva, Pereira, & Resende, 2020).

Based on the financial statements, namely, the balance sheets and income statements for the financial years 2020 and 2021, some of the most important dynamic economic-financial ratios are presented at the time of decision. In order to make the calculation and interpretation of the ratios more attractive, the consolidated accounts of the company Corticeira Amorim were used to apply the theory to a practical case.(Corticeira Amorim, 2022a)(Corticeira Amorim, 2022b).

$$\textbf{Sales and services turnover} = \frac{\textbf{Sales + Services n} - \textbf{Sales + Services n} - \textbf{1}}{\textbf{Sales + Services n} - \textbf{1}}$$

Table1. Corticeira Amorim's turnover rate

Year	Calculation	Rate
2019	781,060,000.00 - 763,117,000.00 / 763,117,000.00	2.35%
2020	740,113,000.00 - 781,060,000.00 / 781,060,000.00	-5.24%
2021	837,820,000.00 - 740,113,000.00 / 740,113,000.00	13.2%

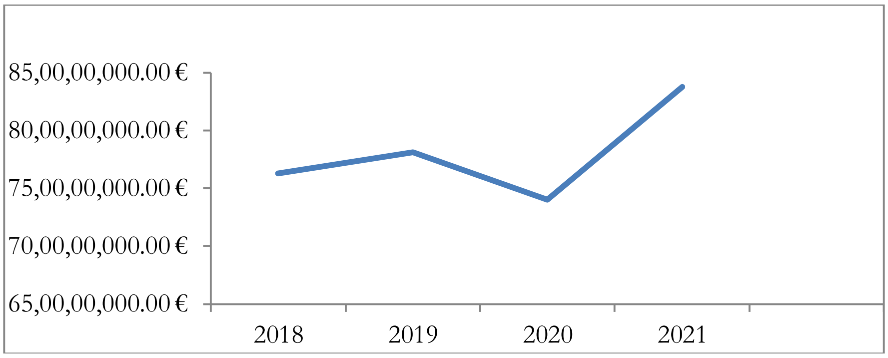

Fig. 1: Corticeira Amorim's activity ratios

According to table 1 and Figure 1, it appears that in the financial year 2020 there was a decrease in turnover of 7.59%, these values are due to the repercussions of the pandemic. The year 2021 registers a strong growth in turnover reaching 13.2%, a value much higher than that verified before the pandemic 2.35%, in 2019. This ratio allows knowing the evolution of the company's activity, therefore, it is concluded that the company Corticeira Amorim is in a period of strong growth.

$$\textbf{Return on sales} = \frac{\textbf{EBIT}}{\textbf{Sales + Services}}$$

Tabletwo. Operating profitability of Corticeira Amorim sales

Year	Calculation	Percentage
2019	89,547,000.00/781,060,000.00	11%
2020	85,965,000.00/740,113,000.00	12%
2021	93,664,000.00/837,820,000.00	11%

$$\textbf{Net Return on Sales} = \frac{\textbf{Earnings after tax}}{\textbf{Sales + Services}}$$

Table3. Net return on sales of Corticeira Amorim

Year	Calculation	Percentage
2019	79,461,000.00/781,060,000.00	10%
2020	68,611,000.00/740,113,000.00	9%
2021	83,036,000.00/837,820,000.00	10%

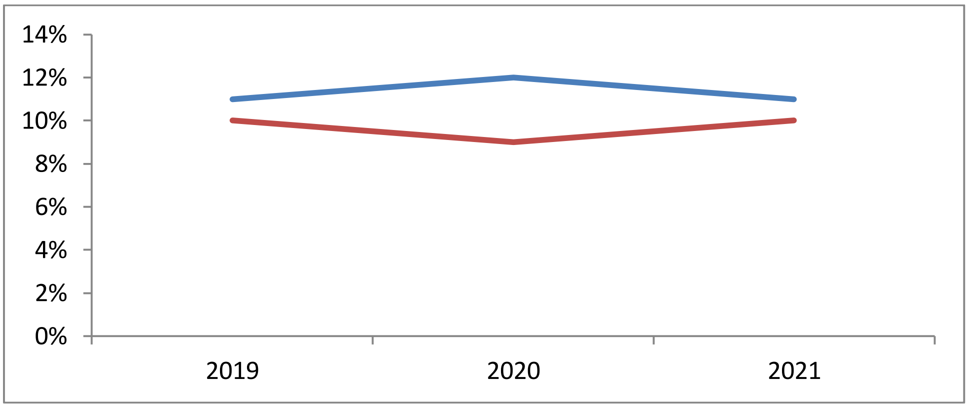

Fig. 2: Corticeira Amorim's operating and net sales return

Since the operating and net sales results have identical rates of change, it is presumable that there will be a similar behavior in the operating and net sales profitability. There was only an increase in operating profitability in 2020 as a result of the decrease in turnover due to the pandemic. In financial year 2021, the company reduced operating expenses by 1%, reflecting a 1% increase in net sales profitability, which proves that the company in financial year 2021 achieved a slight gain in efficiency both in the exploration sector and in the sales. It is verified that the net results match and accompany the evolution of the operating results.

$$\text{Return on Assets} = \frac{\text{EBIT}}{\text{Assets}}$$

Table4. Operating return on Corticeira Amorim's Assets

Year	Calculation	Percentage
2019	89,547,000.00/994,152,000.00	9%
2020	85,965,000.00/1,005,684,000.00	9%
2021	93,664,000.00/1,081,289,000.00	9%

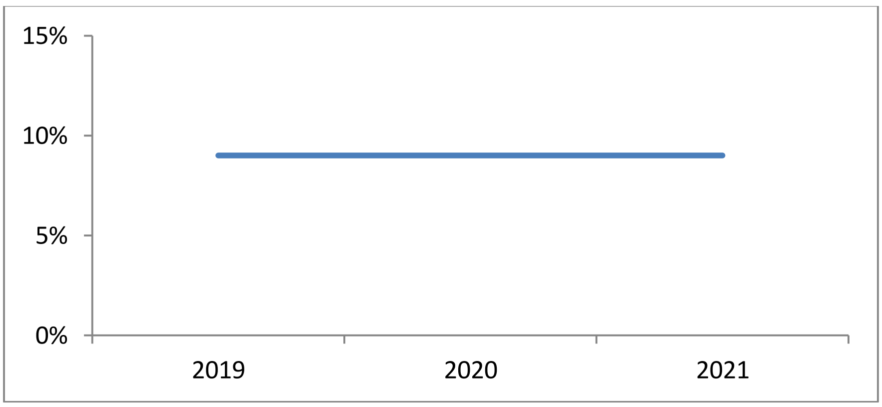

Fig. 3: Operating return on Corticeira Amorim assets

From the analysis of the results obtained in table 4, the operational profitability of the asset remained equal to 9% over these last three years. Despite the decrease in operating income in the financial year of 2020, there was an increase in assets, which came to balance the result of the operating return on assets of the company Corticeira Amorim.

$$\mathbf{ROE} = \frac{\mathbf{Earnings\ after\ tax}}{\mathbf{Equity\ Capital}}$$

Table5.Return on equity of Corticeira Amorim

Year	Calculation	Percentage
2019	79,461,000.00/539,543,000.00	15%
2020	68,611,000.00/576,656,000.00	12%
2021	83,036,000.00/623,283,000.00	13%

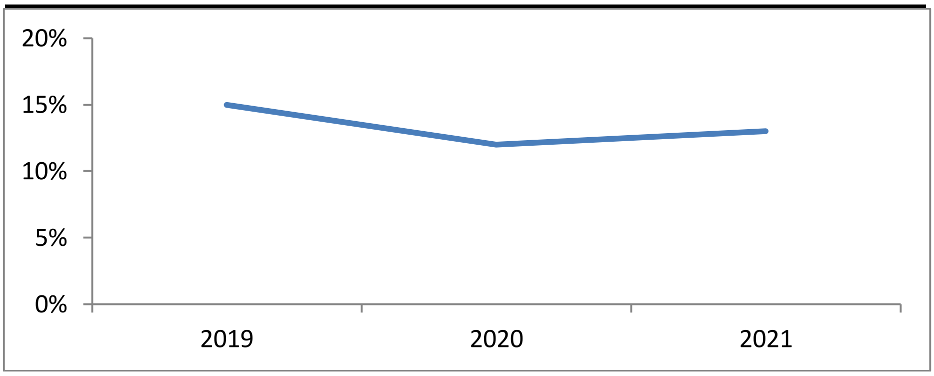

Fig. 4: Return on equity of Corticeira Amorim

The return on equity measures the company's ability to create results from the capital invested by shareholders, in addition to comparing the cost of debt and market profitability, that is, it measures the return delivered to shareholders. This ratio is considered the most important in accounting since it is the relationship between net income and shareholders' equity. It makes it possible to evaluate the efficiency of investment and financing policy, issuing warning signals when this value rises from the normal sector of activity. As we can see from table 5, in the economic year 2019 was the year in which the highest return on equity was observed, consequently, the year in which the shareholders of the Corticeira Amorim company had the highest return on invested capital.

$$\mathbf{Receive\ average\ time} = \frac{\mathbf{average\ clients}}{\mathbf{Sales + Services \times (1 + VAT)}} \times \mathbf{360\ days}$$

Table 6. Corticeira Amorim's average collection period

Year	Calculation	Days
2019	165,484,000.00×360/781,060,000.00 (1+23%)	62
2020	161,360,000.00×360/740,113,000.00 (1+23%)	64
2021	182,653,000.00×360/837,820,000.00 (1+23%)	64

$$\mathbf{Payment\ average\ time} = \frac{\mathbf{Suppliers\ average}}{\mathbf{Purchases \times (1 + VAT)}} \times \mathbf{360\ days}$$

Table 7. Corticeira Amorim's average payment term

Year	Calculation	Days
2019	132,086,000.00×360/523,087,000.00 (1+23%)	74
2020	110,402,000.00×360/473,410,000.00 (1+23%)	68
2021	160,825,000.00×360/552,908,000.00 (1+23%)	85

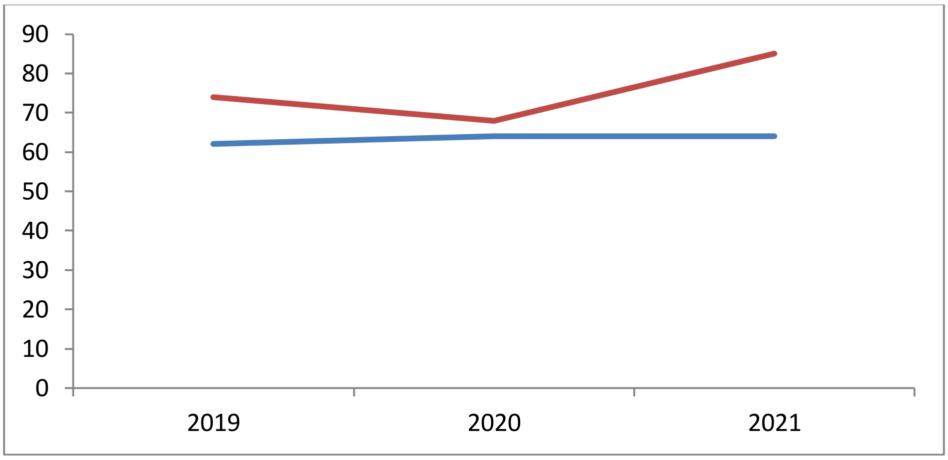

Fig. 5: Corticeira Amorim's average receipt and payment period

According to the analysis of tables 6 and 7, it appears that the average collection period is shorter than the average payment period, that is, the less time customers have to settle their debts, the better for the company, on the other hand, the more time the company has to settle its debts the better. Therefore, this situation can be seen as an increased ability to negotiate with its suppliers.

$$\textbf{Stock time average} = \frac{\textbf{Stock}}{\textbf{Production or Use}} \times \textbf{360 days}$$

Table 8. Corticeira Amorim's average inventory period

Year	Calculation	Days
2019	397,840,000.00×360/398,334,000.00	360
2020	364,109,000.00×360/350,210,000.00	374
2021	340,167,000.00×360/410,354,000.00	298

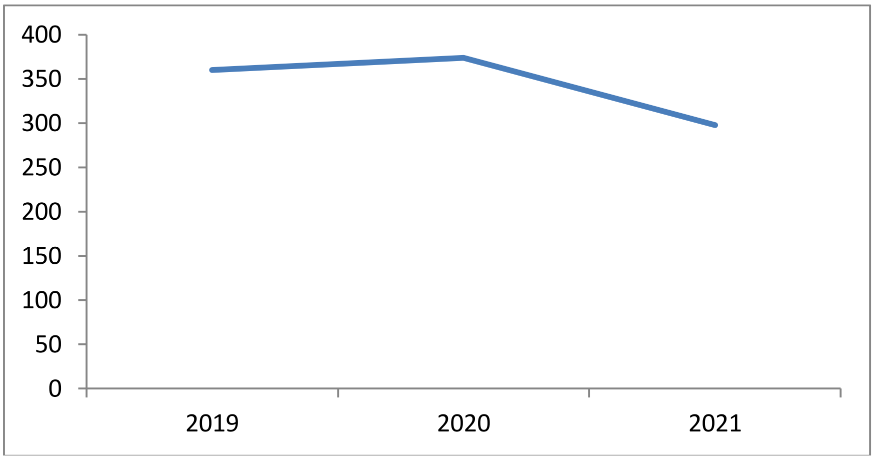

Fig. 6: Corticeira Amorim's average inventory period

The average inventory period refers to the average time inventories remain in the warehouse. It is an indicator of great importance in the supply and management of the exploration cycle. According to table 8, the average term in 2019 was 360 days, it had a slight increase in 2020 to 374 days, and in 2021 it decreased to 298 days. It is confirmed that the average term of inventories is close to 360 days, which causes an inventory rotation once a year.

$$\textbf{Financial Structure Ratio} = \frac{\textbf{Total Debt}}{\textbf{Equity Capital}}$$

Table 9. Corticeira Amorim's financial structure ratio

Year	Calculation	Value
2019	454,608,000.00/539,543,000.00	0.84
2020	429,029,000.00/576,656,000.00	0.74
2021	458,007,000.00/623,283,000.00	0.73

The financial structure ratio, also known as the Debt to Equity Ratio, over the last three years has had values very close to the value one, therefore, it is concluded that there is a balance between equity capital and borrowed capital.

$$\textbf{Global Debt} = \frac{\textbf{Total Debt}}{\textbf{Total Asset}}\ \textbf{x 100}$$

Table 10. Corticeira Amorim's overall debt ratio

Year	Calculation	Percentage
2019	454,608,000.00/994,152,000.00	46%
2020	429,029,000.00/1,005,684,000.00	43%
2021	458,007,000.00/1,081,289,000.00	42%

This indicator shows the extent to which the company applies borrowed capital to finance its activities. The values of this indicator range from 0% to 100%. Values close to 100% indicate that the company is heavily indebted. Taking into account the values presented in table 10, it can be concluded that the debt of the company Corticeira Amorim in the last three economic years has been decreasing, which shows that the company applied less borrowed capital to finance its activities, given that, the company is in a period of greater financial solidity.

$$\text{Financial Autonomy} = \frac{\text{Equity Capital}}{\text{Assets}} \times 100$$

Table11.Corticeira Amorim's financial autonomy ratio

Year	Calculation	Percentage
2019	539,543,000.00/994,152,000.00	54%
2020	576,656,000.00/1,005,684,000.00	57%
2021	623,283,000.00/1,081,289,000.00	58%

The financial autonomy ratio complements the debt ratio, that is, it indicates the proportion of assets financed by equity. This indicator is widely used by credit institutions to assess the inherent risk. The greater the share of equity in financing the company's assets, the greater its autonomy from third parties. In this regard, one of the objectives of managers is to find the proportion of indebtedness that does not jeopardize financial autonomy, in order to maximize profitability. With regard to the financial autonomy of the company Corticeira Amorim has been increasing, which means that the largest share that has financed the company is through equity, further demonstrating that its shareholders are more committed and the company is less exposed to dependence on the 3rd.

$$\text{Solvency Ratio} = \frac{\text{Equity Capital}}{\text{Debt}}$$

Table12.Corticeira Amorim's solvency ratio

Year	Calculation	Value
2019	539,543,000.00/454,608,000.00	1.19
2020	576,656,000.00/429,029,000.00	1.34
2021	623,283,000.00/458,007,000.00	1.36

Solvency compares equity with liabilities. This indicator is used by companies to measure their ability to honor their long-term commitments. Solvency with values greater than 1 indicates a guarantee offered by the company to borrowed capital or liabilities. Therefore, it appears that the risk of the creditors of the company Corticeira Amorim has been decreasing, that is, the company has enough equity to guarantee the totality of the liabilities. It is concluded that it is improving the financial viability of the company in the future.

$$\text{General liquidity} = \frac{\text{Short Term Asset}}{\text{Short Term Debt}}$$

Table13.General liquidity of Corticeira Amorim

Year	Calculation	Value
2019	637,316,000.00/316,380,000.00	2.01
2020	638,699,000.00/259,413,000.00	2.46
2021	699,008,000.00/298,866,000.00	2.34

Liquidity indicators determine the company's ability to settle its short-term commitments. The general liquidity indicator reveals the relationship between short-term assets and short-term liabilities. This indicator gives the company the possibility of predicting possible financial and solvency problems. If the value obtained through the calculation is greater than one, it indicates that the company has the financial capacity to honor its short-term commitments. Therefore, it is concluded that the company Corticeira Amorim is in short-term financial health since all the values of this ratio are greater than one, therefore, the company is able to fulfill its short-term commitments.

$$\text{Reduced Liquidity} = \frac{\text{Short Term Asset} - \text{Stocks}}{\text{Short Term Debt}}$$

Table14.Corticeira Amorim's reduced liquidity

Year	Calculation	Value
2019	637,316,000.00 - 397,840,000.00/316,380,000.00	0.76
2020	638,699,000.00 - 364,109,000.00/259,413,000.00	1.06
2021	699,008,000.00 - 340,167,000.00/298,866,000.00	1.20

Reduced liquidity also assesses the responsiveness of short-term commitments, but excludes inventories and biological assets from its calculation, since it is not easy to transform inventories into liquid financial means, and these may never be sold. Through table 14, it was found that in the economic year of 2019 the value of the reduced liquidity indicator is less than one, but in the last two years this value has already been reached, which demonstrates that the company is able to comply with the payment to its short and medium term suppliers and manages its treasury well.

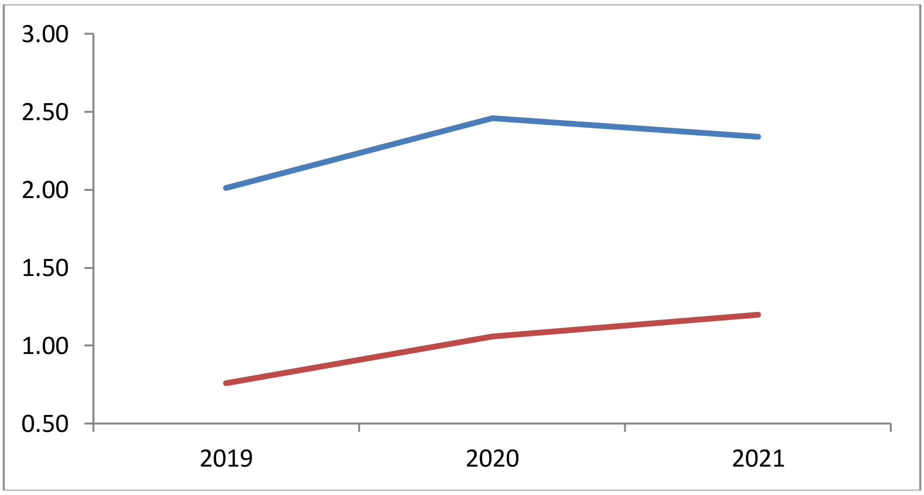

Fig. 7: General and reduced liquidity of Corticeira Amorim

From the analysis and interpretation of the ratios of the company Corticeira Amorim presented in this article, it was concluded that the company is located in a phase of strong growth.

Operating expenses are decreasing, thus reflecting an increase in net sales profitability, which causes an efficiency gain in the exploration sector and in the sales sector. The net sales results match and accompany the operating results.

The return on equity confirms that the company is efficient in creating results from shareholders' investments, thus increasing share values, which attracts new shareholders to the company.

The average payment period is shorter than the average receipt period, which demonstrates competence to negotiate with its suppliers.

The financial structure ratio reveals that the company achieves a balance between equity and borrowed capital.

Indebtedness has been decreasing, which demonstrates that the company is in a period of greater financial solidity.

The ratio of financial autonomy has been increasing, which confirms that equity has financed the company's assets, which proves a greater commitment from shareholders and less exposure to dependence on third parties.
Solvency has been increasing, which reveals a greater capacity for the company to settle its long-term commitments and reduces the risk of creditors, confirming that the company has better financial viability.
Liquidity ratios demonstrate that the company is able to honor its short-term commitments, and manages its cash well, preventing useless and expensive liquidity.

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