

## **Economic and Financial Structure, for Decision-Making Through the Analysis of the Indicators of Liquidity, Solvency, Indebtedness, Profitability and the Dupont System. Cacprosa R.C. Case**

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**Abstract:** The objective of this research is to analyze the economic and financial structure of Centro Agrícola Cantonal para el Progreso de Sarapiquí (Cacprosa) through a quantitative approach and a descriptive scope, using the vertical analysis of the 2021 and 2022 financial statements and the evaluation of the main indicators of liquidity, solvency and profitability, in order to propose strategies to strengthen financial decision making. The results show that the organization faces serious deficiencies in financial management, reflected in liquidity problems and negative net margins in both years, which prevents the generation of after-tax profits. Although there is a slight improvement in gross and operating margins in 2021 compared to 2022, there is still a need to strengthen financial management. Therefore, we recommend the hiring of a financial analyst and the implementation of a short-term strategic plan focused on cost optimization, restructuring of liabilities and improvement of control processes, in order to ensure the sustainability and growth of Cacprosa in a competitive environment.

**Keywords:** Economic and financial structure, liquidity, solvency, indebtedness, profitability and Dupont system.

### 1. INTRODUCTION

In order to make informed decisions about the viability and future direction of a company, the analysis of the economic structure is required, which is related to the way in which assets are formed, considering the investments that are owned, which in turn allows the production of goods and/or services and contributes to the obtaining of business profits. In addition, it is essential to include in the analysis of the structure the perspective of the liabilities that support the company's operations, since, without this financial vision, decision-making becomes unfeasible. This is how the financial structure is part of this analysis of a company that refers to the way in which the company finances its operations and assets. It can vary significantly depending on the industry, the size of the company, and its financial strategy. (Valencia & Narváez, 2021) (Segundo & Perez, 2023) (Fundación Madrid por la excelencia, 2009)(Fundación Madrid por la excelencia, 2009) With the information on the economic and financial structure, the economic and financial analysis is carried out, which involves evaluating the financial health and economic performance of a company. Various tools and techniques are used to examine financial statements and other relevant data in order to make informed decisions about the viability and future direction of the company, based on the

analysis of the financial ratios of liquidity, solvency and profitability. Companies that do not carry out a proper analysis of their economic and financial structure to make strategic decisions related to liquidity, solvency and profitability may face a number of significant issues such as lack of visibility as the company may lack a clear understanding of its current and future financial situation, making it difficult to make informed decisions (Ochoa , Sánchez, Andocilla, Hidalgo , & Medina , 2018)(Segundo & Perez, 2023)(Ochoa , Sánchez, Andocilla, Hidalgo , & Medina , 2018)(Haro, 2021).

It may also be subject to the risk of insolvency, as a lack of analysis can lead to a lack of awareness of the company's ability to meet its short- and long-term financial obligations. This could result in liquidity issues and risk of insolvency. On the other hand, it could lose growth opportunities because without a solid financial analysis, a company could lose investment and growth opportunities that require additional financial resources (Marcillo, Aguilar, & Gutiérrez, 2021)(Haro, 2021).

Operational inefficiencies can also affect businesses from a lack of financial analysis, as it can lead to inefficient allocation of resources and the operation of unprofitable areas or projects, which can undermine the overall profitability of the company. In addition, difficulties in attracting investors or financing as investors and third-party lenders often require detailed financial information and analysis before committing their capital. The lack of this analysis can make it difficult to obtain external financing and (Sáenz & Sáenz, 2019)(Marcillo, Aguilar, & Gutiérrez, 2021)(Haro, 2021)

In the same way, inability to mitigate risks because without sound financial analysis companies will not be able to identify and manage financial risks and changes in interest rates, fluctuations in exchange rates or operational risks. In addition, there is a lack of strategic direction, because without a clear understanding of the financial situation and trends, the company may lack a solid and data-driven strategic direction for the future. At the same time, the loss of competitiveness since companies that do not perform a financial analysis may be less competitive in the market, since their competitors could make more informed strategic decisions. (Marcillo, Aguilar, & Gutiérrez, 2021)(Marcillo, Aguilar, & Gutiérrez, 2021)

In accordance with the above the Cantonal Agricultural Center for the progress of Sarapiquí (Cacprosa) requires an analysis of the economic and financial structure to make strategic decisions related to liquidity, solvency and profitability and identify areas for improvement, financial risks and growth opportunities, which allow it to maintain financial health and competitiveness in the market. (Garzozzi , Perero, Rangel , & Vera, 2017) (Ochoa , Sánchez, Andocilla, Hidalgo , & Medina , 2018)Cacprosa is a non-profit organization that offers various products from the agricultural sector, was born to meet the needs of the community and agricultural producers and has been the total response to the use of bananas. Cacprosa, is located in the province of Heredia, in the Canton of Sarapiquí and in the district of Puerto Viejo in Costa Rica; View **Figure 1**. Cacprosa has a total of 145 affiliates, of which 77 are active. It has generated employment for women, immigrants, mainly Nicaraguans, thus promoting employment in the area, improving the economic situation of producers from whom all their product is bought, thanks to the implementation of added value through peeling and good relations with companies in the industry such as Caminos del Sol and Alimentos Bermúdez. (Sapriisa & Thomas, 2020)

ACPROSA has an assembly and a board of directors that delegates to the President for the execution of the budget within the legal framework that governs agricultural centers, such as Law 7932 of October 28, 1999 and Decree No. 30629 MTSS-MAG of July 15, 2002, the

Political Constitution and Labor Code of Costa Rica. It is made up of a board of directors in which financial transparency is crucial to gain the trust of the 145 members and board members.

**Figure 1** Location Map of Cacprosa



Note. Location of Cacprosa in Puerto Viejo in the Province of Heredia, in Costa Rica. Own elaboration.

Taking into account the above, the Cantonal Agricultural Center for the Progress of Sarapiquí, (Cacprosa) lacks an analysis of its economic and financial structure for strategic decision-making that contributes to its good financial health and business success since the accounting professional prepares Cacprosa's financial statements and presents them to the Board of Directors of the same every year. but there is no evidence of an analysis of the economic and financial structure essential for the effective management of the company and the in-depth understanding of said structure, so it is necessary to find answers to the questions: ***How to perform the vertical analysis of the economic and financial structure of Cacprosa? What are the results of the liquidity ratios, solvency, indebtedness, profitability and Cacprosa's Dupont system? What strategic decisions can Cacprosa make in relation to the results of the vertical analysis of the economic and financial structure and the indicators of liquidity, solvency, indebtedness, profitability and the Dupont system?***

In this context, analyzing the financial situation of Cacprosa becomes an essential task, since Cacprosa, is a company with a significant role in the agricultural sector of Costa Rica, it is located in a dynamic and competitive business environment where the evaluation of its liquidity, solvency, profitability and growth capacity becomes a fundamental pillar for the formulation of strategies that allow the company not only to stay afloat, but also to remain afloat. but also thrive in an ever-changing market (Marcillo, Aguilar, & Gutiérrez, 2021).

This detailed analysis of Cacprosa's economic and financial structure will provide a clear view of its ability to meet its short- and long-term financial obligations, generate sustainable profits

to expand profitably. By exploring these key aspects, the foundation will be laid for making informed strategic decisions that maximize operational efficiency, minimize financial risks, and lead to sustainable organizational growth. (Marcillo, Aguilar, & Gutiérrez, 2021)

In this sequence of ideas, it is essential to carry out this research to provide Cacprosa with an in-depth analysis of its economic and financial structure that could be applied to make a strategic plan in financial matters that allows it to grow and sustain itself as a solid company that makes informed decisions, so it is necessary ***to carry out the vertical analysis of the economic and financial structure of Cacprosa. to find the results of the liquidity, solvency, indebtedness, profitability and Dupont system ratios, and to propose strategies that Cacprosa can apply in relation to the results of the vertical analysis of the economic and financial structure and the indicators of liquidity, solvency, indebtedness, profitability and the Dupont system.***

## 2. LITERATURE REVIEW

### 2.1 Economic and Financial Structure

The evolution of the concept of economic and financial structure has undergone changes over time, reflecting transformations in economic theory, business practices and the conditions of the economic environment. It began with the classical approach when attention was focused on the production and distribution of goods and services, then this economic structure was mainly linked to the organization of production and the role of the factors of production, such as land, labor and capital. (Fundación Madrid por la excelencia, 2009)

In the first half of the twentieth century it began with the Keynesian approach, with the arrival of Keynesian ideas the focus shifted to aggregate demand and the role of government in the economy, then the economic structure began to include considerations about public spending, investment and consumption. (Biosca , Bidaurratzaga , Campo, & Galaso , 2021)

With the theory of the firm, in the business field, attention was increasingly focused on the financial structure of companies; In the theory of the company, it began to consider the optimal mix of financing through debt and equity, giving rise to concepts such as capital structure. Then came globalization and technology, as globalization and technology have transformed economies, the economic structure has become more complex. International flows of goods, services, and capital have gained importance, and the financial structure of companies has had to adapt to more interconnected economic environments. (Biosca , Bidaurratzaga , Campo, & Galaso , 2021)

In recent decades, there has been an increased interest in economic and financial sustainability. The economic structure is now examined in terms of its ability to sustain itself over the long term, minimize environmental impacts, and meet the needs of future generations. With the technological revolution in the financial field have come significant changes in the financial structure. The emergence of financial technologies has altered the way transactions are conducted, financial services are accessed, and economic information is managed. (Biosca , Bidaurratzaga , Campo, & Galaso , 2021)

The 2008 financial crisis incorporated Risk Integration where the importance of integrating risk management into the financial structure was highlighted. Considerable attention is now being paid to the assessment and management of financial, credit and operational risks. The digital economy and blockchain technology have introduced new ways of exchanging value and recording transactions. These developments affect the economic and financial structure

by changing the way financial transactions are conducted and recorded. (Valencia & Narváez , 2021) (Biosca , Bidaurratzaga , Campo, & Galaso , 2021)

With the COVID-19 pandemic The economic and financial structure has also evolved in response to economic crises, such as the recent COVID-19 pandemic, which has highlighted the importance of financial resilience and the adaptability of economic structures. (Biosca , Bidaurratzaga , Campo, & Galaso , 2021)

The economic structure is made up of the assets, considering the investments that the company has, which in turn allows the production of goods and/or services and contributes to the obtaining of business profits. The Financial structure is made up of the liabilities and sources of financing that the company has to acquire the assets. Both aim to improve profitability and generate adequate costs, in addition to evaluating the performance and stability of a company to make informed business decisions. To review these structures it is necessary to study the financial statement balance sheet that shows the financial position of a company at a specific time, it is divided into assets (goods and rights), liabilities (obligations and debts) and equity (the difference between assets and liabilities), it represents the ownership of the shareholders.(Chagerben, 2019)(Coronado, 2022)

Another financial statement is the Income statement Also known as a profit and loss statement, it shows revenues, costs, and expenses during a specific period. By subtracting costs and expenses from revenues, the net profit or loss is obtained. Costs are the expenses directly associated with the production of goods or services that include raw material costs, labor, and general manufacturing costs. (Lucero, Luparia, Medina, & Pérez, 2017) (Lucero, Luparia, Medina, & Pérez, 2017)

The cost statement details the different types of costs incurred by a company during a specific period, such as variable costs and fixed costs, then expenses are the monetary outlays made to maintain and manage the business, but which are not directly related to production that include administrative salaries, advertising, and general and administrative expenses; But the difference between the two is that costs are directly related to the production of goods or services, while expenses are necessary to manage and maintain the business, but are not directly linked to production. It also shows mandatory payments such as government taxes on the income of individuals and businesses, to finance public expenditures. (Lopez, 2006) (Correa, 2023)

With the information on the economic and financial structure, the economic and financial analysis is carried out, which involves evaluating the financial health and economic performance of a company. Various tools and techniques are used to examine financial statements and other relevant data in order to make informed decisions about the viability and future direction of the company, by analyzing liquidity, solvency, and profitability ratios. (Segundo & Perez, 2023)

## **2.2 Indicators of liquidity, solvency, indebtedness, profitability and the Dupont system.**

**2.2.1 Liquidity.** It refers to a company's ability to meet its short-term obligations. It is defined as an organization's ability to pay its debts as they fall due, which involves efficient management of cash and other liquid assets. It is essential to avoid operational interruptions and maintain the confidence of creditors and suppliers. (Sáenz & Sáenz, 2019)

**2.2.3 Solvency.** It relates to the company's ability to meet its long-term obligations. It is evaluated by analyzing the ratio of total assets to total liabilities, providing a measure of the organization's financial stability. A solvent company is one that has enough resources to cover all its debts, even in adverse scenarios. (Coaquira-Jahuira, Chávex-Cuadros, & Jalk-Palma, 2021)

**Table 1 Liquidity or Solvency Indicators**

Class	Indicator	Formula	Interpretation
Liquidity or solvency	Working Capital	Current Assets – Current Liabilities	The safety margin that the company has to meet its obligations in the short term.
	Current Ratio	Current Assets / Current Liabilities	For every \$ it has in current debt, how much in current support it has.
	Inverse to the solvency ratio	$(1 - (1/Rc))*100$	Percentage by which the company can reduce current assets without affecting current obligations.
	Acid Test	Liquid Assets / Current Liabilities	The company's ability to cover short-term liabilities, immediately, without having to resort to the sale of inventories.
	Solidity	Total Assets / Total Liabilities	Ability of the company in the short and long term to demonstrate its financial consistency.

Note. Taken from the templates of the finance specialist Ricardo Vargas Saenz.

**2.2.4 Indebtedness.** It is the level or degree to which a company uses external resources, that is, debt financing to finance its operations, investments and assets. It refers to the proportion of total liabilities with respect to the total resources that the company has (assets), or in comparison with equity. This indicator allows you to assess how dependent the company is on external sources of financing, and is key to analyzing financial risk, since a high level of indebtedness can increase vulnerability to changes in market conditions or interest rates.(Huaraca-Arce, Maquera-Maquera, & Vega-Espilco, 2022)

**Table 2 Indebtedness or Coverage Indicators**

Class	Indicator	Formula	Interpretation
Indebtedness or Hedging	Total Indebtedness	Total Liabilities * 100 / Total Assets	Degree of leverage that corresponds to the participation of creditors in the company's assets. Higher, higher the company's financial leverage
	Total Liability Protection	Equity / Total Liabilities	For every \$ from the owners, how much \$ is there of investment from creditors
	Liability-Capital Ratio	Liabilities to LP/Equity	Relationship between the long-term funds provided by creditors and those provided by the owners of the company.
	Leverage or Cp Leverage	Current Liabilities/Equity	It measures the degree of commitment of the assets to service short-term debts.

	Ownership or financial independence index	Capital/Total Assets	For every \$ invested in the company, how much corresponds to the owners
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Note. Taken from the templates of the finance specialist Ricardo Vargas Sáenz.

**2.2.5 Profitability.** It measures how efficiently a company uses its resources to generate profits. They highlight that profitability is closely linked to investment and financing decisions, as improper capital allocation can significantly decrease profit margins. Indicators such as return on assets (ROA) and return on equity (ROE) are commonly used to evaluate this aspect. (Chagerben, 2019) (Zambrano-Farías, Sánchez-Pacheco, & Correa-Soto, 2021)

**Table 3** Profitability Indicators

Class	Indicator	Formula	Interpretation
Profitability indicators	Gross profit margin	Gross Profit * 100 /Sales	It shows the company's ability to manage its sales, to generate gross profits.
	Operating Profit Margin	Ut. Operational * 100 /Sales	Profitability of the company in the development of its corporate purpose. It represents how much each \$ of sales reports in the generation of operating profit.
	Net Profit Margin	Ut. Net * 100 /Sales	Percentage of sales that generate profit after tax in the company. for each \$ of sales, how many pesos are generated in profits.
	Return on equity (ROE)	Ut. Net * 100/Equity	Net profits, which % represent equity. What is the return on investment of the shareholder or partner.

Note. Taken from the templates of the finance specialist Ricardo Vargas Sáenz.

**2.2.6 Dupont System.** It is a method of financial analysis that breaks down Return on Equity (ROE) into several fundamental components to better understand the sources of profitability of a company. This system makes it possible to evaluate how operational, efficiency and financial decisions impact shareholder returns. Through DuPont analysis, ROE is divided into three key factors: net profit margin, asset turnover, and financial leverage. This breakdown helps identify whether profitability is due to high operational efficiency, good asset utilization, or a leveraged financial structure. It's called the DuPont System because it was developed by the DuPont de Nemours company, Inc., an American chemical company, in the 1920s.(Neira Altamirano, 2022)

**Table 4** Dupont System Indicators

Class	Indicator	Formula	Interpretation
Dupont System	Return on Investment (REI), Return on	(Ut. Net/ Sales) x (Sales/ Assets)	Correlates activity indicators with performance indicators. It represents the total effectiveness of

	Investment (ROI), Return on Total Assets (ROA)	Net Income/Total Assets	management to produce profits with the available assets. Capacity of the asset to produce profits.
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Note. Taken from the templates of the finance specialist Ricardo Vargas Sáenz.

### 2.3 Interrelationship between indicators and decision-making

The interdependence between liquidity, solvency and profitability is crucial in financial decision-making. A balanced approach allows companies to maintain smooth operations, meet their obligations, and generate sustainable profits. For example, a company with high profitability but low liquidity may face difficulties in financing its day-to-day operations, while a company with high liquidity but low profitability may not be using its resources efficiently. Empirical studies have shown that companies with balanced financial structures tend to have better profitability indicators, while those with severe imbalances between liquidity and indebtedness show a greater probability of facing financial difficulties. (Huaraca-Arce, Maquera-Maquera, & Vega-Espilco, 2022) (Coaquira-Jahuira, Chávex-Cuadros, & Jalk-Palma, 2021)

### 2.4 Financial analysis tools

Financial analysis is an essential tool for assessing a company's economic and financial situation. It allows you to identify strengths and weaknesses, facilitating informed decision-making. Among the most widely used methodologies are financial ratio analysis, trend analysis, and comparative analysis. Financial ratios, in particular, provide a detailed view of key aspects such as liquidity, solvency and profitability. Its correct interpretation is essential for strategic planning and efficient management of resources.(Ochoa , Sánchez, Andocilla, Hidalgo , & Medina , 2018) (Armijos, Narváz, Ormaza, & Erazo, 2020) (Marcillo, Aguilar, & Gutiérrez, 2021)

### 2.5 Implications for business management

Properly understanding and managing the economic and financial structure of a company is vital to its long-term success. Decisions related to investment, financing, and profit distribution should be based on a rigorous analysis of financial indicators. Proactive management in this area contributes to the sustainability and competitiveness of the organization in the market.(Fajardo & Soto, 2017) (Solis & Hidalgo, 2019) (Chamucero, 2021)

## 3. METHODOLOGY

The focus of this research is quantitative because it will use mathematical and statistical tools to describe, explain and predict the economic and financial situation of Cacprosa by means of financial ratios. The scope of the study is descriptive as it aims to establish important properties and characteristics of the economic and financial situation of Cacprosa and the results of the indicators of liquidity, solvency, profitability, etc. The design of this research is non-experimental, longitudinal, because it studies the variables in their natural state and aims to compare the results with previous or subsequent studies.(Hernández, 2014)(Hernández, 2014)(Hernández, 2014)

The sources of information are primary, secondary, the first have to do with the financial statements of Cacprosa to carry out the study on its economic and financial situation; the second have to do with books, dictionaries, scientific articles, degree theses, repositories,

scientific databases, among others. The population are the documents that facilitate the analysis and research that are the financial statements provided by the company Cacprosa for the years 2021 and 2022 such as the balance sheet and the income statement, it is the statement of cash flow and the statement of changes in stockholders' equity, as can be seen in **figures 2, 3, 4 and 5**; with a non-probabilistic sample, prepared by the accountant Licda Enervey Rivera Fernández whose telephone number is (506) 2764-1576 and whose address is: La Conquista, 1 k east of the main entrance, in Costa Rica.

The research instrument is an Excel template where the vertical analysis of the financial statements such as the balance sheet, for the years 2021 and 2022, and the profit and loss statement is carried out. After performing the vertical analysis of the economic and financial structure of the company, the ratios or indicators of liquidity, solvency and profitability are listed with the respective results to evaluate the results and determine the economic and financial analysis of CACPROSA.



**Figure 2** CACPROSA Balance Sheet between 2021 and 2022

<b>BALANCE GENERAL</b>			
Por el periodo terminado el 01 de enero al 31 de diciembre 2022			
Centro Agrícola Cantonal para el Progreso de Sarapiquí			
Cédula Jurídica: 3-007-496102			
<u>Activos</u>	<u>Nota</u>	<u>31/12/2021</u>	<u>31/12/2022</u>
<b>Activos Corrientes</b>			
Efectivo y Otros Medios Líquidos	Nota 4	239,503.00	155,327,806.74
Cuentas por cobrar	Nota 5	772,917.17	-
Inventarios	Nota 6	2,103,410.00	-
<b>Total Activo Corrientes</b>		<b>3,115,830.17</b>	<b>155,327,806.74</b>
<b>Activos No Corrientes</b>			
Terreno	Nota 7	2,300,000.00	2,300,000.00
Propiedad, Instalación y Equipo	Nota 7	5,018,404.00	5,018,404.00
Depreciación Acumulada	Nota 8	- 785,289.73	- 1,006,819.81
Vehículo	Nota 7	30,957,018.00	30,957,018.00
Depreciación Acumulada	Nota 8	- 11,667,763.80	- 13,890,195.00
Maquinaria y Herramientas	Nota 7	13,331,462.58	13,331,462.58
Depreciación Acumulada	Nota 8	- 14,447,043.31	- 17,414,542.51
Mobiliario y Equipo de Oficina	Nota 7	1,429,052.44	1,429,052.44
Depreciación Acumulada	Nota 8	- 339,766.44	- 557,976.84
Equipo de Cómputo	Nota 7	3,910,063.92	3,910,063.92
Depreciación Acumulada	Nota 8	- 1,881,196.35	- 2,392,362.03
<b>Total Activos no corrientes</b>		<b>27,824,941.31</b>	<b>21,684,104.75</b>
Activos Intangibles	Nota 7	12,500.00	12,500.00
<b>Total Activos Intangibles</b>		<b>12,500.00</b>	<b>12,500.00</b>
<b>Total Activos</b>		<b>30,953,271.48</b>	<b>177,024,411.49</b>
<b>Pasivo y Patrimonio</b>			
<b>Pasivo Circulantes</b>			
IVA neto por pagar	Nota 9	- 4,377,978.11	- 6,477,484.69
Impuesto sobre la renta	Nota 10	- 524,446.47	- 524,446.47
Cuentas por pagar	Nota 11	672,484.12	1,685,402.29
Documentos P/Pagar C.P.	Nota 12	285,000.01	285,000.01
Gastos acumulados	Nota 13	273,215.00	985,990.06
Retenciones por pagar	Nota 14	108,307.50	465,861.93
<b>Total Pasivo Corrientes</b>		<b>- 3,563,417.95</b>	<b>- 3,579,676.87</b>
<b>Pasivo no Corrientes</b>			
Documentos por pagar L.P.	Nota 15	10,000,000.00	9,999,445.33
<b>Total Pasivo No Corrientes</b>		<b>10,000,000.00</b>	<b>9,999,445.33</b>
<b>Total Pasivo</b>		<b>6,436,582.05</b>	<b>6,419,768.46</b>
<b>Patrimonio</b>			
Capital Social suscrito			
Otras cuentas patrimoniales	Nota 18	48,119,999.60	205,760,572.60
Utilidades (PdAs) Acumuladas	Nota 18	- 19,045,166.97	- 23,603,310.17
Utilidades (PdAs) Periodo	Nota 18	- 4,558,143.20	- 11,552,619.40
<b>Total Patrimonio</b>	Nota 18	<b>24,516,689.43</b>	<b>170,604,643.03</b>
<b>Total (Pasivo y Patrimonio)</b>		<b>30,953,271.48</b>	<b>177,024,411.49</b>

Luis Eduardo Jiménez Fernández  
Representante Legal

ENERVEY RIVERA FERNANDEZ (FIRMA)  
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Una vez emitido este informe, el contador responsable de la información contenida en el mismo es el Sr. ENERVEY RIVERA FERNANDEZ, quien declara haber revisado y verificado la información contenida en el mismo.  
TIBRE 300 ₡ COLONES

**Note.** Taken from the Financial Statements prepared by (Rivera, 2022)

**Figure 3** CACPROSA Income Statement - 2021-2022


<u>Centro Agrícola Cantonal para el Progreso de</u>			
Estado de Resultados			
Por el periodo terminado el 31 de diciembre 2022			
Expresado en colones			
	<u>Nota</u>	<u>31/12/2021</u>	<u>31/12/2022</u>
<b>INGRESOS</b>			
Ventas netas	Nota 16	171,094,939.17	172,759,899.59
Otros Ingresos	Nota 16	-	-
<b>TOTAL DE INGRESOS</b>		<u>171,094,939.17</u>	<u>172,759,899.59</u>
<b>COSTO DE VENTA</b>			
Inventario Inicial		1,860,000.00	2,103,410.00
Compras Netas		60,154,422.66	61,503,246.88
<b>COSTO DE VENTA</b>		<u>62,014,422.66</u>	<u>63,606,656.88</u>
Menos:			
Devoluciones y Desc. Sobre compras		0	0
Merc. Disp. Para la venta		62,014,422.66	63,606,656.88
Menos:			
Inventario Final		- 2,103,410.00	-
<b>TOTAL COSTO DE VENTA</b>		<u>59,911,012.66</u>	<u>63,606,656.88</u>
<b>UTILIDAD O PERDIDA BRUTA</b>		<u>111,183,926.51</u>	<u>109,153,242.71</u>
<b>GASTOS DE OPERACIÓN</b>			
Gastos de Administración	Nota 17	123,758,897.57	114,078,896.40
Gastos Financieros			378,333.33
Gastos de Depreciación	Nota 8	5,983,999.98	6,140,836.56
<b>Total Gastos</b>		<u>129,742,897.55</u>	<u>120,598,066.29</u>
<b>UTILIDAD O PERDIDA ANTES DE IMPUESTO S/RENTE</b>		<u>- 18,558,971.04</u>	<u>- 11,444,823.58</u>
<b>RENTE IMPONIBLE GRAVABLE</b>		<u>- 18,558,971.04</u>	<u>- 11,444,823.58</u>
Más:			
Otros resultados integrales		14,000,827.84	- 107,795.82
<b>PERDIDA DEL PERIODO</b>		<u>- 4,558,143.20</u>	<u>- 11,552,619.40</u>
Más:			
Ingresos no gravables		14,000,000.00	-
<b>IMPUESTO SOBRE LA RENTA</b>		<u>-</u>	<u>-</u>
<b>UTILIDAD NETA DESPUES DE IMPUESTO</b>		<u>- 4,558,143.20</u>	<u>- 11,552,619.40</u>
Mas Gasto No Deducibles		<u>18,154,310.50</u>	<u>1,151,597.46</u>
<b>UTILIDAD NETA DESPUES DE IMPUESTO</b>		<u>- 4,558,143.20</u>	<u>- 11,552,619.40</u>

\_\_\_\_\_  
Luis Eduardo Jiménez Fernández  
Representante Legal

ENERVEY RIVERA  
FERNANDEZ  
(FIRMA)

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**Note.** Taken from the Financial Statements prepared by (Rivera, 2022)

Figure 4 Cash Flow Statement

<b>CENTRO AGRICOLA CANTONAL PARA EL PROGRESO DE SARAPIQUI</b>	
<b>ESTADO DE FLUJO DE EFECTIVO</b>	
	<b>dic-22</b>
<b>ACTIVIDADES DE OPERACION</b>	
VENTAS DE BIENES Y SERVICIOS	158,704,210.23
OTROS RESULTADOS INTEGRALES	(107,795.82)
CUENTAS COMERCIALES POR COBRAR	14,845,324.17
IVA NETO POR PAGAR	27,787.26
IMPUESTO A LAS GANANCIAS POR PAGAR	
sub-total...	173,469,526.84
Menos:	
COMPRAS DE BIENES Y SERVICIOS	61,503,246.88
GASTOS DE ADMINISTRACION	97,169,529.53
GASTOS DE VENTA Y DISTRIBUCION	
COSTOS DE PRODUCCION	
PAGOS ANTICIPADOS	
GASTOS DIFERIDOS	
CUENTAS COMERCIALES POR PAGAR	14,053,616.14
GASTOS ACUMULADOS	2,299,461.27
IVA NETO POR PAGAR	974,607.71
IMPUESTO A LAS GANANCIAS POR PAGAR	
sub-total...	178,000,461.53
AUMENTO / DISMINUCION POR ACTIVIDADES DE OPERACION	(2,530,935.69)
<b>ACTIVIDADES DE INVERSION</b>	
VENTA DE CONTADO DE ACTIVOS FIJOS	
sub-total...	
Menos:	
COMPRA DE CONTADO DE ACTIVOS FIJOS	
sub-total...	
AUMENTO / DISMINUCION POR ACTIVIDADES DE INVERSION	
<b>ACTIVIDADES DE FINANCIAMIENTO</b>	
INVERSIONES A CORTO PLAZO	
RETENCIONES POR PAGAR	1,193,507.16
OTRAS CUENTAS DE PATRIMONIO	157,640,573.00
sub-total...	158,834,080.16
Menos:	
RETENCIONES POR PAGAR	835,952.73
DOCUMENTOS POR PAGAR CP	
DOCUMENTOS POR PAGAR LP	554.67
OTRAS CUENTAS DE PATRIMONIO	
GASTOS FINANCIEROS	378,333.33
CAPITAL PERSONA FISICA	
sub-total...	1,214,840.73
AUMENTO / DISMINUCION POR ACTIVIDADES DE FINANCIAMIENTO	157,619,239.43
AUMENTO / DISMINUCION TOTAL DEL EFECTIVO	155,088,303.74
SALDO DEL EFECTIVO AL INICIO ....	239,503.00
SALDO FINAL DEL EFECTIVO ...	155,327,806.74
SALDO DEL EFECTIVO SEGUN BALANCE DE SITUACION...	155,327,806.74
DIFERENCIA...	(0.00)

**Luis Eduardo Jiménez Fernández**  
Representante Legal



TIMBRE 306.0 DOLARES

VERIFICACION: <https://www.tiempo.com.ec>

**ENERVEY RIVERA FERNANDEZ (FIRMA)**

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Contadora

Note. Taken from the Financial Statements prepared by (Rivera, 2022)

Figure 5 Statement of Changes in Stockholders' Equity

Estado de Cambios en el Capital Contable Por el Periodo terminado al 31 de diciembre 2022 Centro Agrícola Cantonal para el Progreso de Sarapiquí					
Nombre de cuenta	Capital social	Aportes de capital	Utilidades Acumuladas	Retiros de Capital	Total Capital contable
Acciones suscritas					
Aportes de Capital extraordinario					
Otras cuentas patrimoniales			48,113,999.60		48,113,999.60
Saldo al 30 setiembre del 2018			- 164,320.13		- 164,320.13
Aumento de capital					
Utilidad al 30 de setiembre 2019			47,593.03		47,593.03
Saldo al 30 setiembre del 2019					
Utilidad al 31 de diciembre 2020			- 18,928,433.87		- 18,928,433.87
Saldo al 31 diciembre del 2020					29,074,832.63
Utilidad al 31 de diciembre 2021			- 4,558,143.20		- 4,558,143.20
Saldo al 31 diciembre del 2021					24,516,689.43
Otras cuentas patrimoniales			157,640,573.00		157,640,573.00
Utilidad al 31 de diciembre 2022			- 11,552,619.40		- 11,552,619.40
Saldo al 31 diciembre del 2022					170,604,643.03

**Enervey Rivera Fernández**  
Contadora Autorizada  
Carnet N. 33155

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Representante Legal





Note. Taken from the Financial Statements prepared by (Rivera, 2022)

#### 4. RESULTS

To present the results of this study, first, the vertical analysis of the company's Balance Sheet is presented, as well as the vertical analysis of the income statement. Next, the results of the financial indicators are presented with their respective analysis and finally the proposal of financial strategies that can be suggested to Cacprosa.

The vertical analysis of the economic and financial structure of Cacprosa is presented in **tables 5 and 6**, in Costa Rican colones. It begins with the vertical analysis of the General Balance of the Cantonal Agricultural Center for Progress of Sarapiquí as of December 31, 2022. This reflects a significant growth in its total assets, which increased from ₡30,953 million to ₡177,024 million, mainly driven by an extraordinary increase in cash and other liquid means, which went from ₡239 thousand to ₡155,327 million, evidencing a substantial improvement in the entity's liquidity; Meanwhile, non-current assets decreased by 22% due to higher accumulated depreciation, and total liabilities remained stable with a slight reduction, indicating prudent management of financial obligations; On the other hand, equity showed robust growth, increasing from ₡24,516 million to ₡170,604 million, mainly due to the increase in other equity accounts and accumulated profits, which strengthens the financial position and the Organization's ability to face future challenges, thus highlighting sound financial management and a notable improvement in the financial structure during the period.

**Table 5** Vertical analysis of Cacprosa's Balance Sheet assets

<b>Balance General</b>						
<b>For the period ended January 01 to December 31, 2022</b>						
<b>Cantonal Agricultural Center for the Progress of Sarapiquí</b>						
<b>Legal ID: 3-007-496102</b>						
<b>Assets</b>	<b>44.561,00</b>	<b>% Vertica l</b>	<b>44.926,00</b>	<b>% Vertica l</b>	<b>Variation</b>	
					<b>Absolute</b>	<b>Relativ e %</b>
<b><u>Current Assets</u></b>						
<b>Cash and other liquid media</b>	239.503,00	0,01	155.327.806,74	0,88	155.088.303,74	647,54
<b>Accounts Receivable</b>	772.917,17	0,02	0,00	0,00		
<b>Inventories</b>	2.103.410,00	0,07	0,00	0,00		
<b><u>Total Current Assets</u></b>	<b>3.115.830,17</b>	<b>0,10</b>	<b>155.327.806,74</b>	<b>0,88</b>	<b>152.211.976,57</b>	<b>48,85</b>
<b><u>Non-Current Assets</u></b>						
<b>Land</b>	2.300.000,00	0,07	2.300.000,00	0,01	0,00	0,00
<b>Property, Installation, and Equipment</b>	5.018.404,00	0,16	5.018.404,00	0,03	0,00	0,00
<b>Accumulated Depreciation</b>	-785.289,73	-0,03	-1.006.819,81	-0,01	-221.530,08	0,28
<b>Vehicle</b>	30.957.018,00	1,00	30.957.018,00	0,17	0,00	0,00
<b>Accumulated Depreciation</b>	-11.667.763,80	-0,38	-13.890.195,00	-0,08	-2.222.431,20	0,19
<b>Machinery &amp; Tools</b>	13.331.462,58	0,43	13.331.462,58	0,08	0,00	0,00
<b>Accumulated Depreciation</b>	-14.447.043,31	-0,47	-17.414.542,51	-0,10	-2.967.499,20	0,21
<b>Office furniture and equipment</b>	1.429.052,44	0,05	1.429.052,44	0,01	0,00	0,00
<b>Accumulated Depreciation</b>	-339.766,44	-0,01	-557.976,84	0,00	-218.210,40	0,64

<b>Computer Equipment</b>	3.910.063,92	0,13	3.910.063,92	0,02	0,00	0,00
<b>Accumulated Depreciation</b>	-1.881.196,35	-0,06	-2.392.362,03	-0,01	-511.165,68	0,27
<b>Total Non-Current Assets</b>	<b>27.824.941,31</b>	<b>0,90</b>	<b>21.684.104,75</b>	<b>0,12</b>	<b>-6.140.836,56</b>	<b>-0,22</b>
<b>Intangible Assets</b>	12.500,00	0,00	12.500,00	0,00	0,00	0,00
<b>Total Intangible Assets</b>	<b>12.500,00</b>	<b>0,00</b>	<b>12.500,00</b>	<b>0,00</b>	<b>0,00</b>	<b>0,00</b>
<b>Total Assets</b>	<b>30.953.271,48</b>	<b>1,00</b>	<b>177.024.411,49</b>	<b>1,00</b>	<b>146.071.140,01</b>	<b>4,72</b>
<b>Liabilities and Equity</b>	<b>44.561,00</b>	<b>% Vertical</b>	<b>44.926,00</b>	<b>% Vertical</b>	<b>Variation</b>	
		<b>1</b>		<b>1</b>	<b>Absolute</b>	<b>Relative</b>
<b>Current Liabilities</b>						
<b>Iva Neto unpaid</b>	-4.377.978,11	-0,68	-6.477.484,69	-1,01	-2.099.506,58	0,48
<b>Income Tax</b>	-524.446,47	-0,08	-524.446,47	-0,08	0,00	0,00
<b>Accounts Payable</b>	672.484,12	0,10	1.685.402,29	0,26	1.012.918,17	1,51
<b>Documents for Payment C.P.</b>	285.000,01	0,04	285.000,01	0,04	0,00	0,00
<b>Accrued Expenses</b>	273.215,00	0,04	985.990,06	0,15	712.775,06	2,61
<b>Withholdings payable</b>	108.307,50	0,02	465.861,93	0,07	357.554,43	3,30
<b>Total Current Liabilities</b>	<b>-3.563.417,95</b>	<b>-0,55</b>	<b>-3.579.676,87</b>	<b>-0,56</b>	<b>-16.258,92</b>	<b>0,00</b>
<b>Non-Current Liabilities</b>						
<b>Documents Payable L.P.</b>	10.000.000,00	1,55	9.999.445,33	1,56	-554,67	0,00
<b>Total Non-Current Liabilities</b>	<b>10.000.000,00</b>	<b>1,55</b>	<b>9.999.445,33</b>	<b>1,56</b>	<b>-554,67</b>	<b>0,00</b>
<b>Total Liabilities</b>	<b>6.436.582,05</b>	<b>0,21</b>	<b>6.419.768,46</b>	<b>0,04</b>	<b>-16.813,59</b>	<b>0,00</b>

<b>Heritage</b>						
<b>Subscribed Share Capital</b>						
<b>Other Equity Accounts</b>	48.119.999,60	1,96	205.760.572,60	1,21	157.640.573,00	3,28
<b>Accumulated Utilities (PDAs)</b>	-19.045.166,97	-0,78	-23.603.310,17	-0,14	-4.558.143,20	0,24
<b>Utilities (PdAs) Period</b>	-4.558.143,20	-0,19	-11.552.619,40	-0,07	-6.994.476,20	1,53
<b>Total Equity</b>	<b>24.516.689,43</b>	<b>0,79</b>	<b>170.604.643,03</b>	<b>0,96</b>	<b>146.087.953,60</b>	<b>5,96</b>
<b>Total (liabilities and equity)</b>	<b>30.953.271,48</b>	<b>1,00</b>	<b>177.024.411,49</b>	<b>1,00</b>	<b>146.071.140,01</b>	<b>4,72</b>

Note: Own elaboration based on the templates of Ricardo Vargas Saenz.

Next, it was carried out in vertical analysis of the income statement where the Cantonal Agricultural Center for the Progress of Sarapiquí presented in 2022 a slight increase in net sales of 0.97%, reaching ₡172.76 million, although the cost of sales grew by 6.17%, which reduced gross profit by 1.83%. Despite a 7.05% decrease in operating expenses, the entity recorded a higher net loss, going from ₡4.56 million in 2021 to ₡11.55 million in 2022, mainly influenced by the disappearance of non-taxable income and other negative comprehensive results, which shows the need to strengthen cost control and diversify sources of income to improve profitability. See **Table 6**.

**Table 6** Vertical Analysis of the Income Statement

<b>Cantonal Agricultural Center for the Progress of Sarapiquí</b>						
<b>Income Statement</b>						
<b>For the period ended December 31, 2022</b>						
<b>Expressed In Colones</b>						
<b>Accounts</b>	<b>31/12/2021</b>	<b>% Vertical</b>	<b>31/12/2022</b>	<b>% Vertical</b>	<b>Variation</b>	
					<b>Absolute</b>	<b>Relative %</b>
<b>Income</b>						
<b>Net Sales</b>	171.094.939,17	100,00 %	172.759.899,59	100,00 %	1.664.960,42	0,97%
<b>Other Income</b>	-		-			
<b>Total, Revenue</b>	<b>171.094.939,17</b>	<b>100,00 %</b>	<b>172.759.899,59</b>	<b>100,00 %</b>	<b>1.664.960,42</b>	<b>0,97%</b>

<b>Cost of Sale</b>					-	
<b>Initial Inventory</b>	1.860.000,00	1,09%	2.103.410,00	1,22%	243.410,00	13,09%
<b>Net Purchases</b>	60.154.422,66	35,16%	61.503.246,88	35,60%	1.348.824,22	2,24%
<b>Cost of Sale</b>	<b>62.014.422,66</b>	<b>36,25%</b>	<b>63.606.656,88</b>	<b>36,82%</b>	<b>1.592.234,22</b>	<b>2,57%</b>
<b>Less:</b>					-	
<b>Returns and Desc. About Shopping</b>	-		-		-	
<b>Merc. Disp. For Sale</b>	<b>62.014.422,66</b>	<b>36,25%</b>	<b>63.606.656,88</b>	<b>36,82%</b>	<b>1.592.234,22</b>	<b>2,57%</b>
<b>Less:</b>					-	
<b>Final Inventory</b>	-2.103.410,00	-1,23%		0,00%	2.103.410,00	-100,00%
<b>Total, Cost of Sale</b>	<b>59.911.012,66</b>	<b>35,02%</b>	<b>63.606.656,88</b>	<b>36,82%</b>	<b>3.695.644,22</b>	<b>6,17%</b>
<b>Gross profit or loss</b>	<b>111.183.926,51</b>	<b>64,98%</b>	<b>109.153.242,71</b>	<b>63,18%</b>	<b>-2.030.683,80</b>	<b>-1,83%</b>
<b>Operating expenses</b>						
<b>Administratio n Fees</b>	123.758.897,57	72,33%	114.078.896,40	66,03%	-9.680.001,17	-7,82%
<b>Financial Expenses</b>			378.333,33	0,22%	378.333,33	
<b>Depreciation Expenses</b>	5.983.999,98	3,50%	6.140.836,56	3,55%	156.836,58	2,62%
<b>Total, Operating Expenses</b>	<b>129.742.897,55</b>	<b>75,83%</b>	<b>120.598.066,29</b>	<b>69,81%</b>	<b>-9.144.831,26</b>	<b>-7,05%</b>
<b>Profit or loss before tax S/Income</b>	<b>-18.558.971,04</b>	<b>-10,85%</b>	<b>-11.444.823,58</b>	<b>-6,62%</b>	<b>7.114.147,46</b>	<b>-38,33%</b>

<b>Taxable Income</b>	- 18.558.971,0 4	- 10,85%	- 11.444.823,5 8	-6,62%	7.114.147,4 6	- 38,33%
<b>More:</b>					-	
<b>Other Comprehensive Results</b>	14.000.827,8 4	8,18%	-107.795,82	-0,06%	- 14.108.623, 66	- 100,77 %
<b>Missed period</b>	- 4.558.143,20	-2,66%	- 11.552.619,4 0	-6,69%	- 6.994.476,2 0	153,45 %
<b>More:</b>						
<b>Nontaxable Income</b>	14.000.000,0 0	8,18%	-		- 14.000.000, 00	- 100,00 %
<b>Income Tax</b>	-		-			
<b>Net income after tax</b>	- 4.558.143,20	-2,66%	- 11.552.619,4 0	-6,69%	- 6.994.476,2 0	153,45 %
<b>More Non-Deductible Expenses</b>	18.154.310,5 0	10,61%	1.151.597,46	0,67%	- 17.002.713, 04	- 93,66%
<b>Net income after tax</b>	- 4.558.143,20	-2,66%	- 11.552.619,4 0	-6,69%	- 6.994.476,2 0	153,45 %

Note. Prepared by the author based on the templates of Ricardo Vargas Saenz.

To respond to the second objective, the results of the ratios of Liquidity, Indebtedness, Profitability and Dupont System were found in **Tables 3, 4, 5 and 6**. Regarding liquidity ratios The company shows a significant improvement in its working capital and financial strength between 2021 and 2022, reflecting a greater ability to cover its obligations in the short and long term; however, negative values in the current ratio and acid test are worrying signs that could indicate serious financial problems or errors in the data, since these indicators must be positive to reflect adequate immediate liquidity, see **Table 3**.

**Table 3** Liquidity and Solvency Ratios of Cacprosa

Class	Indicator	Formula	Interpretation	2.021	2.022
Liquidity or Solvency	Working Capital	Current Assets – Current Liabilities	Safety margin that the company has to meet its obligations in the short term.	6.679.248,12	158.907.483,61
	Current Ratio	Current Assets / Current Liabilities	For every \$ it has in current debt, how much in	-0,87	-43,39

			current support it has.		
	Inverse to the solvency ratio	$(1 - (1/Rc)*100)$	Percentage In Which The Company Can Reduce Current Assets Without Affecting Current Obligations.	115,36	3,30
	Acid Test	Liquid Assets / Current Liabilities	Ability of the company to cover short-term liabilities, immediately, without having to resort to the sale of inventories.	-0,28	-43,39
	Solidity	Total Assets / Total Liabilities	Ability of the company in the short and long term to demonstrate its financial consistency.	4,81	27,57

Source: Authors' elaboration based on Ricardo Vargas Saenz's templates.

**Table 4** shows that the company's total debt level decreased markedly from 20.79% in 2021 to 3.63% in 2022, indicating a lower share of creditors in its assets and lower financial leverage. Total liability protection, which measures the ratio of equity to liabilities, improved significantly from 3.81 to 26.57, reflecting higher investment by owners compared to debt. The liability-to-equity ratio, which compares long-term debt to equity, also declined, from 0.41 to 0.06, suggesting a lower commitment to long-term external financing. Short-term leverage (current liabilities/equity) is negative in both years, which may indicate problems in the financial structure or errors in the data. Finally, the index of financial ownership or independence increased from 0.79 to 0.96, showing that almost all the capital invested in the company corresponds to the owners, which implies a more solid financial structure and less dependence on third parties. Together, these indicators reflect a significant reduction in indebtedness and a strengthening of equity, improving the financial autonomy of the company.

**Table 4** Reasons for Cacprosa's indebtedness or coverage

Class	Indicator	Formula	Interpretation	2.021	2.022
Indebtedness or Hedging	Total Indebtedness	Total Liabilities * 100 / Total Assets	Degree A Leverage That Corresponds To The Participation Of Creditors In The Company's Assets.	20,79	3,63

			Higher, higher the company's financial leverage		
	Total Liability Protection	Equity / Total Liabilities	For every \$ of the owners, how much \$ is there of investment from creditors	3,81	26,57
	Liability-Capital Ratio	Liabilities A Lp / Equity	Relationship Between Long-Term Funds Provided By Creditors And Those Provided By The Owners Of The Enterprise.	0,41	0,06
	Leverage or Cp Leverage	Current Liabilities/Equity	It measures the degree of commitment of the assets to service short-term debts.	-0,15	-0,02
	Ownership or financial independence index	Capital/Total Assets	For Every \$ Invested In The Business, How Much Corresponds To The Owners	0,79	0,96

Source: Authors' elaboration based on Ricardo Vargas Saenz's templates.

Regarding the company's profitability indicators, they maintain a high and relatively stable gross margin (64.98% in 2021 and 63.18% in 2022), which indicates good efficiency in the management of direct sales costs; however, the operating margin decreases from 75.83% to 69.81%, reflecting lower profitability in its main operations. More worrying is the net margin, which is negative and worsens from -2.66% to -6.69%, showing that after all expenses, including taxes and financial, the company does not generate net profits. This is also reflected in the return on equity (ROE), which although improving from -18.59% to -6.77%, is still negative, indicating that shareholder investment is not generating a positive return. Overall, the company has a good capacity to cover direct costs, but faces difficulties in converting sales into net profits, affecting its overall profitability, as shown in **Table 5**.

**Table 5** Cacprosa Profitability Indicators

Class	Indicator	Formula	Interpretation	2.021	2.022
Profitability indicators	Gross profit margin	Gross Profit * 100 /Sales	It shows the company's ability to manage its sales, to generate gross profits.	64,98%	63,18%
	Operating margin of profitability	Ut. Operational * 100 /Sales	Profitability of the company in the development of its	75,83%	69,81%

			corporate purpose. It represents how much each \$ of sales reports in the generation of operating profit.		
	Net profit margin	Ut. Net * 100 /Sales	Percentage of sales that generate profit after tax in the company. For each \$ of sales, how many pesos are generated in profits.	-2,66%	-6,69%
	Return on Equity (ROE)	Ut. net * 100/Equity	Net profits, which % represent equity. What is the return on investment of the shareholder or partner.	- 18,59%	-6,77%

Source: Authors' elaboration based on Ricardo Vargas Saenz's templates.

For its part, the Dupont analysis, **in table 6** for the company, shows a negative return on investment (ROI or ROA), going from -0.48% in 2021 to -6.85% in 2022, which indicates that the company is generating losses in relation to its total assets. This reflects low efficiency in utilizing its assets to produce profits, resulting from negative net margin combined with insufficient asset turnover. Net income to total assets is also negative, although it improves slightly from -14.73% to -6.53%, confirming that the company is not achieving a return on its assets. Taken together, these indicators show that management has failed to effectively use available resources to generate profits, and that the company faces increasing financial difficulties in the period under review

**Table 6** Indicators of the Dupont system of Cacprosa

Class	Indicator	Formula	Interpretation	2.021	2.022
Dupont System	Return on Investment (REI), Return on Investment (Roi), Return on Total Assets (ROA)	(Ut. Net/ Sales) X (Sales/ Assets)	Correlates activity indicators with performance indicators. It represents the total effectiveness of management to produce profits with the available assets. Capacity of the asset to produce profits.	-0,48%	-6,85%
		Net Income/Total Assets		-14,73%	-6,53%

Source: Authors' elaboration based on Ricardo Vargas Saenz's templates.

After carrying out the vertical analysis of the economic and financial structure and the liquidity, solvency and profitability indicators, the strategies proposed to Cacprosa are listed below in table 8, with the strategic category and the respective justification for it.

**Table 7** List of Strategies to propose to Cacprosa

<b>N°</b>	<b>Strategic Category</b>	<b>Strategy</b>	<b>Justification or Coherence</b>
1	Financial Management	Present the financial analysis to the Board of Directors	It improves transparency and allows for informed strategic decisions, which are not currently being made.
2	Financial Management	Hire an External Financial Analyst	Currently, the accountant prepares financial statements, but they are not interpreted or socialized for decision-making.
3	Financial Management	Conduct financial analysis every six (6) months	It is performed only once a year. Doing it every six months allows you to react in time to deviations.
4	Financial Management	Plan for short-term and long-term investments	Lack of planning can lead to compromising liquidity or acquiring unnecessary assets.
5	Financial Management	Consolidate the 10 bank accounts	Too many accounts make it difficult to control cash and treasury. Traceability is lost.
6	Liquidity	Recover overdue accounts receivable	There are overdue accounts of more than a year that directly affect liquidity.
7	Liquidity	Enforce stricter credit policies	Preventing new bad accounts improves future liquidity.
8	Liquidity	Create Reserve Fund for Taxes	It is evident that tax obligations are not being paid or provisions are being created.
9	Cost-effectiveness	Reduce administrative expenses (66–72%)	This item is disproportionate compared to income. Generates constant net losses.
10	Cost-effectiveness	Taking advantage of tax exemptions	Cacprosa does not pay income taxes: this savings should be used for reinvestment or strengthening.
11	Cost-effectiveness	Include income from bioinputs	This line of business is not recorded in the financial statements, which understates revenues.
12	Cost-effectiveness	Correct miscalculated depreciation	There are accounting errors: depreciation exceeds the cost of assets, which is neither valid nor realistic.
13	Cost-effectiveness	Reduce waste in the packing plant	Avoiding pulp loss during processing would raise the gross margin.
14	Cost-effectiveness	Cost control by site or project	It helps identify which processes or areas are most costly and allows for specific actions.
15	Internal Control	Establish clear purchasing policies	There is currently no clarity or traceability, resulting in inefficiencies or lack of control.

16	Internal Control	Publish visible sales prices	It increases the transparency and trust of affiliates and customers, avoiding bad practices.
17	Internal Control	Implement quarterly budget control	It allows you to compare what is actual versus what is planned and take corrective actions in a timely manner.
18	Internal Control	Hire an external tax auditor	There is no external audit. It is essential to ensure trust and legal compliance.
19	Commercial / Operational	Define costs and price ranges	The lack of clarity in prices affects profitability and can lead to losses or undervaluation.
20	Commercial / Operational	Plan sales according to seasonality	Harvests have defined seasons. Without planning, you lose your ability to respond.
21	Commercial / Operational	Sell the vehicle and outsource transportation	The vehicle generates constant costs. Outsourcing saves on taxes, maintenance, and personnel.
22	Commercial / Operational	Establish agreements with new buyers	Diversifying customers mitigates risk and can lead to higher revenues.
23	Commercial / Operational	Activate more affiliates (only 77 out of 145)	Including more producers would increase the volume of production and community participation.

Note. According to the analysis, 23 strategies are proposed, with the respective justification of them. Prepared by the authors

## 5. DISCUSSION

The vertical analysis of CACPROSA's balance sheet and income statement revealed relevant structural changes between 2021 and 2022. A significant increase in current assets, especially cash, was highlighted, which could suggest an improvement in the organization's liquidity. However, this increase did not translate into an improvement in the final financial results, as net losses increased significantly in the same period. As for equity, a significant increase was observed, but this occurred in a context of deeper accumulated losses, which suggests that the growth in equity could be due to accounting adjustments or contributions from partners, rather than to the generation of real profits. Therefore, the vertical analysis exposed a growing economic structure, but with significant weaknesses in profitability and operational efficiency. (Fajardo & Soto, 2017) (Fundación Madrid por la excelencia, 2009)

**The calculated financial indicators show a delicate situation for CACPROSA as follows:**

In liquidity and solvency, despite the increase in working capital, indicators such as the current ratio and the acid test showed negative values in both years. This could be related to accounting errors or an incorrect classification of assets and liabilities, which prevents a clear and reliable interpretation of the company's true ability to pay. (Sáenz & Sáenz, 2019)

In terms of indebtedness, CACPROSA significantly reduced its dependence on external resources, improving its financial independence index. However, the negative indicators in

short-term leverage reflect possible structural inconsistencies or lack of control in the management of liabilities. (Coaquira-Jahuira, Chávex-Cuadros, & Jalk-Palma, 2021)

Profitability indicators were the most concerning. Although gross margin remained high, net margin was negative and worsened in 2022. Return on equity (ROE) was also negative in both years, indicating that partners are not getting favorable returns on their investment. (Zambrano-Farías, Sánchez-Pacheco, & Correa-Soto, 2021)

The analysis of the Dupont system confirmed that CACPROSA is not generating value from its assets, since both ROI and ROA were negative, which shows a low efficiency in the management of resources. (Neira Altamirano, 2022)

Based on the results obtained, 23 strategies were proposed in key areas such as financial management, liquidity, profitability, internal and operational control. Among the most relevant are: hiring an external financial analyst, presenting financial analyses periodically to the Board of Directors, optimizing the control of administrative expenses, consolidating bank accounts, recovering overdue accounts receivable, and properly recording all lines of income. These strategies seek to correct the weaknesses detected and establish a more efficient, transparent management model oriented towards data-based decision-making. The effective implementation of these recommendations must be framed within a strategic plan that includes six-monthly monitoring, measurement of results and continuous adjustments. (Solis & Hidalgo, 2019)(Solis & Hidalgo, 2019) (Valencia & Narváez , 2021)

## 6. CONCLUSIONS

The study carried out concluded that CACPROSA presents a growing economic structure, evidenced by the increase in current assets and equity; However, this growth has not translated into sustainable improvements in terms of liquidity or profitability. The accumulated net losses, the low return on equity and the zero generation of profits reflect limited financial management and an inefficient operating structure.

Liquidity and profitability indicators are especially worrying, as they reveal an inability to transform sales into net profits. Despite the fact that the level of indebtedness has been reduced, the organization remains vulnerable to management that is not focused on efficiency and cost control. The inconsistencies in some indicators also show the need to improve accounting and financial analysis processes.

The proposed strategies respond directly to these weaknesses and aim to make CACPROSA a more solid, transparent and self-sufficient entity. It is concluded that the financial sustainability of CACPROSA will depend on its ability to institutionalize financial analysis as a permanent management tool, make decisions based on reliable indicators, and adjust its cost structure to achieve long-term profitability.

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