



Short-Term Financial Management In Mining Companies In A Frontier Department

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Abstract

The mining sector has become relevant in recent years due to the increase in the world demand for energy products such as oil and coal, as they are non-renewable resources, these products are becoming increasingly important, so the research proposed as an objective, to present strategic guidelines to support the management of the coal sector of the department, so it was necessary to inquire about the short-term financial management in the companies of the sector, it was found that it is recommended to follow up on the management of short-term variables. To deepen and internalize the concepts of Working Capital (FM), Operating Necessities of Funds (NOF), Spontaneous Resources and Negotiated Short Term Resources. To audit the factors that define the operation of the company, among them: Information systems, planning skills, management control, analyze the bargaining power with suppliers and customers, review production policies and supply policies, collection systems, and the management of the company.

Keywords: Working capital, financial management, mining sector

1. Introduction

1.1. Working capital management

Working capital consists of a company's current assets, i.e. cash, marketable securities, accounts receivable and inventory (de Galicia, 2010; Godoy & Morales, 2012). Net Working Capital is the difference between Current Assets and Current Liabilities (Hurtado et al., 2017). Consequently, the

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Working Capital Management is given by the efficiency with which the accounts of Current Assets and Current Liabilities are managed: this is done in order to maintain a satisfactory level of Working Capital so as not to reach a state of technical insolvency and more seriously to declare bankruptcy, and how these assets are being financed: current assets (Albornoz Silva et al., 2017; Guerra, 2016; Henry Orlando, Marvin Vladimir, et al., 2022; Henry Orlando, Wlamyr, et al., 2022; Hurtado & Morales, 2013). The management of the company's current assets and the funding it needs to sustain current assets (González Mendoza et al., 2022).

The author argues that many companies have devoted their efforts to long-term resource planning and investment in fixed assets, neglecting to raise money in the short term to meet investments in current assets, which is why many of them have gone bankrupt because they are unable to pay their suppliers (Macías Villalba et al., 2018; Olis Barreto et al., 2019).

Now then, Working Capital Management is necessary, due to:

- Most of a Financial Manager's time is dedicated to Working Capital.
- In some companies, current assets represent a higher percentage of the total assets of the company.
- Most small companies cannot make large investments in fixed assets, and it is difficult for them to tap the capital market.
- There is a very close relationship between sales growth and the need to finance assets.

He also believes that one way to continue growing market share is to offer longer credit terms, which will always be responded to in the same way by other competitors, thus causing a generalized increase in accounts receivable for all companies in the sector (Dávila Aragón & Ortiz Arango, 2019; Ronda, 2021). Likewise, increased rivalry puts pressure on inventory growth because, to avoid recording lost sales and to be able to provide customers with a timely supply of products according to their demands, companies are forced to maintain relatively high inventory levels (de La Hoz et al., 2018; Ibáñez-Carpena & Benito, 2019).

Operating working capital increases must be financed with the company's own cash flow, otherwise the partners or creditors would have to finance these investments, which would make the companies unattractive. (Moncada Rendón et al., 2020). This must be so because it is precisely the turnover of the portfolio and inventory that should produce sufficient cash flow to cover debt service and profit sharing.

Regarding the replacement of fixed assets, these correspond to the proportion of cash flow that must be used to guarantee sustained operation and installed capacity, which suggests that the financing of fixed assets must be guaranteed by the company's own cash flow; this is what depreciation is for (Díaz et al., 2021).

2. Method

In relation to the methodological framework, this chapter defines the level and type of research, the universe or population, the sample, the instruments and techniques for data collection and analysis. Al respect (Balestrini, 2002) states that "the methodological framework is intended to situate in the research

language, the methods and instruments that will be used in the proposed research, from the location about the type of study and the research design" (p.126).

2.1. *Research Level*

The level of research indicates the degree of depth with which the study will be carried out and indicates that it may be exploratory, descriptive or explanatory. For (Arias, 2006) "descriptive research consists of the characterization of a fact, phenomenon, individual or group, in order to establish its structure or behavior", the author also indicates that correlational research is to determine the degree of relationship or association (non-causal) existing between two or more variables.

For the reasons described above, the research was framed as a descriptive and correlational research, since it will relate the operational finances, solvency and profitability of the coal sector of the Norte de Santander Department in Norte de Santander.

2.2. *Research Design*

Research design is defined as the approach and strategy adopted by the researcher to develop the work and achieve the objectives set.

According to (Arias, 2006), the research design is classified as follows: Documentary Research, Field Research and Experimental Research (Documentary research refers to those investigations in which "it is a process based on the search, recovery, analysis, criticism and interpretation of secondary data, i.e., those obtained and recorded by other researchers in documentary sources: printed, audiovisual or electronic" (p.27).

He also explains that field research is (Hernández Sampieri et al., 2019) "that which consists of collecting data directly from the subjects under investigation, or from the reality where the facts occur (primary data), without manipulating or controlling any variable, i.e. the researcher obtains the information, but does not alter the existing conditions." (p.31).

According to the above, the research was proposed as a documentary research for the analysis of financial and field information, requesting the support of experts in the area to know their opinions regarding the analysis of the environment that impacts the coal sector of the Norte de Santander Department of Norte de Santander.

2.3. *Population*

For (Estupiñan Roa et al., 2022) "a population is determined by its defining characteristics, that is, it is the totality of the phenomenon to be studied in which the population units have a common characteristic, which is studied and gives rise to the research data" (p.92). (p.92). While for (Arias, 2006), "the population is a finite or infinite set of elements with common characteristics for which the conclusions of the research will be extensive. This is delimited by the problem and the objectives of the study" (p.81).

The population in this study was determined by the companies in the coal sector in the department of Norte de Santander, which report to the Superintendence of Companies attached to the Ministry of Industry and Commerce of the Republic of Colombia and which are related to the Association of Coal Entrepreneurs of Norte de Santander (ASOCARBON).

2.4. Sample

Since the population is small, a sample is not selected and we work with the entire population, i.e. a census will be applied. The census is by definition a procedure that allows obtaining primary information and covers all population units, it can be periodic, sporadic or one-time, it is used for different populations, both human, animals and objects.

3. Results

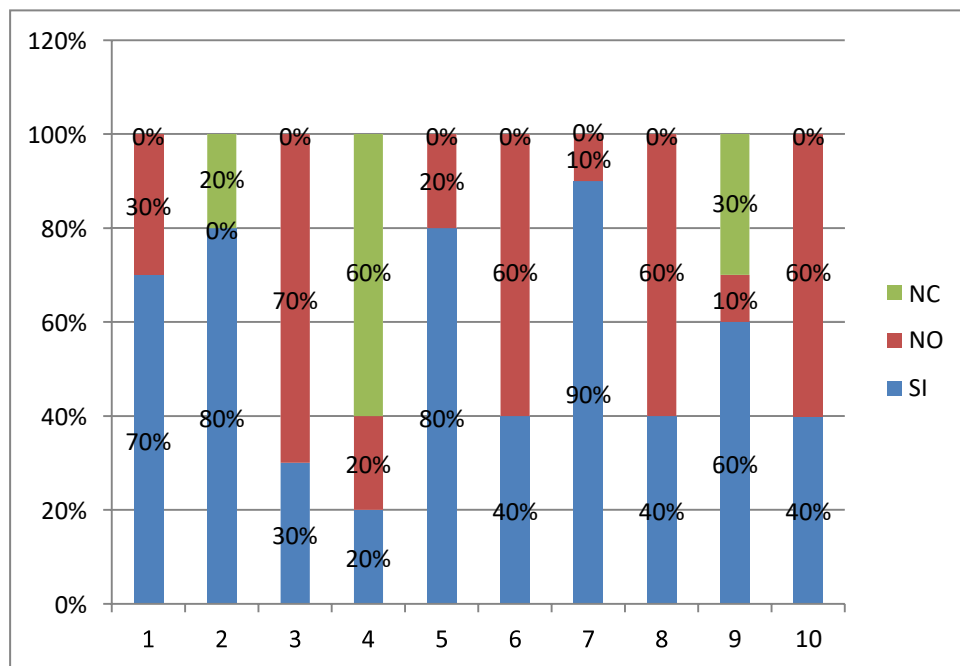
Supported by a survey using a questionnaire as an instrument, a ten-question questionnaire was applied to ten people linked to the mining industry in the Department of Norte de Santander in order to inquire about short-term financial management in the companies of the sector. The results of this field work are presented in Table 1.

Table 1. Results of the questionnaire

1	Do you manage your company's cash flow?	70%	30%	0%	30%
2	your company?	80%	0%	20%	20%
3	Do you know your economic and financial profitability?	30%	70%	0%	70%
4	Do you have a system that gives you a summary of your company's key variables?	20%	20%	60%	80%
5	Are your average terms of collections, payments, inventories, are they correct?	80%	20%	0%	20%
6	Is your company ready to apply for any type of credit?	40%	60%	0%	60%
7	credit?	90%	10%	0%	10%
8	Are you interested in taking on debt at this time?	40%	60%	0%	60%
9	Have you studied the evolution of your company in the last 2 years?	60%	10%	30%	40%
10	last 2 years?	40%	60%	0%	60%

In order to visualize the results, the following are shown in figure 1.

Figure 1. Results of the questionnaire applied to people in the coal sector.



The answers obtained from the sector's entrepreneurs indicate that according to the entrepreneurs: if they manage working capital, if they know the profitability of the business, they do not have a financial information system, they did not answer if the rotation times of current assets are correct, if they are prepared to request credits, they are not interested in getting into debt, they closely follow the evolution of the business, they are not aware of the necessary working capital, if they have sufficient stocks and they do not manage the collection and payment cycles.

Some questions were then cross-checked, the results were as follows:

Rows: 2. Do you know your economic and financial profitability? Columns: 1. Do you know your company's cash flow?

RENTECFI	TOTAL SAMPLE		FLUJCAJ					
			SI		NO		NS/NC	
	Frec	%	Frec	%	Frec	%	Frec	%
1 SI	8	80,00	6	85,71	2	66,67	0	0,00
3 NS/NC	2	20,00	1	14,29	1	33,33	0	0,00
TOTAL	10	(10)	7	(7)	3	(3)	0	(0)

Of eight people who stated that they know the company's profitability, six indicated that they know the company's cash flow and two that they do not, which shows consistency in the response.

Rows: 4. Are your average terms of collections, payments, inventories, etc. correct?

Columns: 1. Do you know your company's cash flow?

DEADLINES	FLUJCAJ							
	TOTAL SAMPLE		SI	NO		NS/NC		
	Frec	%	Frec	%	Frec	%	Frec	%
1 SI	2	20,00	2	28,57	0	0,00	0	0,00
2 NO	2	20,00	1	14,29	1	33,33	0	0,00
3 NS/NC	6	60,00	4	57,14	2	66,67	0	0,00
TOTAL	10	(10)	7	(7)	3	(3)	0	(0)

Of the six people who did not answer the question on average turnover periods, four of them indicated that they do know the company's cash flow, two that they do not. This response indicates that a medium level of attention is paid to operating finances.

Rows: 8. Do you know your working capital for short-term debt service?

Columns: 1. Do you know your company's cash flow?

FONDOMAN	FLUJCAJ							
	TOTAL SAMPLE		SI	NO		NS/NC		
	Frec	%	Frec	%	Frec	%	Frec	%
1 SI	4	40,00	4	57,14	0	0,00	0	0,00
2 NO	6	60,00	3	42,86	3	100,00	0	0,00
TOTAL	10	(10)	7	(7)	3	(3)	0	(0)

When crossing working capital and cash flow, it was found that of the six that responded that they did not know the working capital, three indicated that they did know the cash flow and three that they did not know it. While the four who indicated that they do know the working capital also indicated that they know the cash flow, this would indicate that they do not pay due attention to the working capital.

Rows: 9. Are your inventories sufficient to avoid stock-outs?

Columns: 1. Do you know your company's cash flow?

INVENTORIES	FLUJCAJ							
	TOTAL SAMPLE		SI	NO		NS/NC		
	Frec	%	Frec	%	Frec	%	Frec	%
1 SI	6	60,00	5	71,43	1	33,33	0	0,00
2 NO	1	10,00	0	0,00	1	33,33	0	0,00
3 NS/NC	3	30,00	2	28,57	1	33,33	0	0,00
TOTAL	10	(10)	7	(7)	3	(3)	0	(0)

It is observed that 60% stated that their inventories are the necessary ones and 70% responded that they know the company's cash flow, thus showing consistency in their response.

Filas: 10. ¿Tiene controlados los plazos medios de cobros a clientes y de pago a proveedores?

Columnas: 1. ¿Conoce el flujo de caja o cash-flow de su empresa?

CONTROL	TOTAL SAMPLE		SI	FLUJCAJ					
				NO		NS/NC			
	Frec	%		Frec	%	Frec	%	Frec	%
1 SI	4	40,00	3	42,86	1	33,33	0	0,00	
2 NO	6	60,00	4	57,14	2	66,67	0	0,00	
TOTAL	10	(10)	7	(7)	3	(3)	0	(0)	

It was determined that 60% responded that they do not have control over the average turnover periods, but of these, 57.14% indicated that they do know the cash flow, indicating that they do not pay due attention to operational finances.

Rows: 4. Are your average terms of collections, payments, inventories, etc. correct?

Columns: 3. Do you have a monthly scorecard with a summary of your company's key variables?

DEADLINES	TOTAL SAMPLE		SI	CUADROMA					
				NO		NS/NC			
	Frec	%		Frec	%	Frec	%	Frec	%
1 SI	2	20,00	2	66,67	0	0,00	0	0,00	
2 NO	2	20,00	0	0,00	2	28,57	0	0,00	
3 NS/NC	6	60,00	1	33,33	5	71,43	0	0,00	
TOTAL	10	(10)	3	(3)	7	(7)	0	(0)	

Sixty percent of the respondents did not answer the question whether the average turnover periods are correct and 71.43% stated that they do not have a monthly results table. This response is consistent and points to the need for an information system.

Rows: 9. Are your inventories sufficient to avoid stock-outs?

Columns: 3. Do you have a monthly scorecard with a summary of your company's key variables?

INVENTORIES	TOTAL SAMPLE		CUADROMA					
			SI		NO		NS/NC	
	Frec	%	Frec	%	Frec	%	Frec	%
1 SI	6	60,00	1	33,33	5	71,43	0	0,00
2 NO	1	10,00	0	0,00	1	14,29	0	0,00
3 NS/NC	3	30,00	2	66,67	1	14,29	0	0,00
TOTAL	10	(10)	3	(3)	7	(7)	0	(0)

In this response, it is noteworthy that 60% stated that inventories are necessary, but 70% indicated that they do not have a monthly information system, which indicates an informal management of this important element of current assets.

Rows: 10. Do you keep track of average customer collection and supplier payment terms?

Columns: 3. Do you have a monthly scorecard with a summary of your company's key variables?

CONTROL	TOTAL SAMPLE		CUADROMA					
			SI		NO		NS/NC	
	Frec	%	Frec	%	Frec	%	Frec	%
1 SI	4	40,00	2	66,67	2	28,57	0	0,00
2 NO	6	60,00	1	33,33	5	71,43	0	0,00
TOTAL	10	(10)	3	(3)	7	(7)	0	(0)

It was found that 60% stated that they do not control the average collection and payment terms and 70% also responded that they do not have a monthly control chart. It was determined that the necessary follow-up of operational finances is not done.

Rows: 8. Do you know your working capital to cover your short-term debts?

Columns: 4. Are your average terms of collections, payments, inventories, etc. correct?

FONDOMAN	TOTAL SAMPLE		PLAZOS					
			SI		NO		NS/NC	
	Frec	%	Frec	%	Frec	%	Frec	%
1 SI	4	40,00	2	100,00	0	0,00	2	33,33
2 NO	6	60,00	0	0,00	2	100,00	4	66,67
TOTAL	10	(10)	2	(2)	2	(2)	6	(6)

It is verified that they do not know about the working capital (60%) and did not answer about the average turnover time of current assets. This indicates that operational finances are not adequately monitored.

Rows: 10. Do you control the average terms of collections from customers and payments to suppliers?

Columns: 4. Are your average terms of collections, payments, stocks, etc. correct?

CONTROL	TOTAL SAMPLE		DEADLINES					
			SI	NO		NS/NC		
	Frec	%	Frec	%	Frec	%	Frec	%
1 SI	4	40,00	1	50,00	1	50,00	2	33,33
2 NO	6	60,00	1	50,00	1	50,00	4	66,67
TOTAL	10	(10)	2	(2)	2	(2)	6	(6)

When crossing these questions, it was determined that 60% stated that they had no control over accounts receivable and accounts payable and 60% did not answer whether their terms were correct. Once again, the lack of attention to current assets is evident.

4. Discussion and conclusions

Based on the field study through the application of the questionnaire, the results of the financial study and given that an inadequate management of operational finances directly affects liquidity, which is a warning signal to foresee illiquidity problems or a suspension of payments, it is recommended for the coal sector in the Department of Norte de Santander to

- To follow up the management of short term variables.
- Relate the daily evolution of the business and the volume of operations.
- To deepen and internalize the concepts of Working Capital (FM), Operating Necessities of Funds (NOF), Spontaneous Resources and Short Term Negotiated Resources.
- To audit the factors that define the operation of the company, among them:

Information Systems

Planning skills

Management control

Degree of integration in the value chain

Negotiating power with suppliers and customers

Production policies

Supply policies

Collection systems

Short-term debt capacity

Short-term interest rate

- Implement strategies for financing current assets, which can be flexible or restrictive depending on whether the working capital (WC) is higher or lower than the operating cash requirements (OCN).

The management of NOF should not be associated only with the operating cycle, as it has an important impact on the financial strategy. Unforeseen NOF can lead to the company having to resort to indebtedness, with the consequent associated financial costs, affecting the liquidity and profitability of the companies in the sector and the expectations of future growth..

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