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Negative Cash Flow: Identifying Cash Shortage Reasons

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ABSTRACT

This article presents the results of a study whose goal was to identify the reasons for cash shortage based on the negative cash flow of a small furniture and decoration company. The research is characterized as descriptive, conducted through a case study, with predominantly qualitative approach. The data collection was done through in-depth interviews that were conducted in the employees' work environment, besides secondary data. Data were analyzed by using the descriptive analysis technique. The methodology of analysis by account started by the base indexes and ended with the ratios and analysis. Three years were analyzed through index numbers, i.e., average of each account, credits and debts, by year. Thus, it was possible to expose the monthly ratio by account, calculating the division between the real value of the account in a given month and the average in a given account in the year. The data presented showed that this type of analysis facilitates an understanding of the reasons for the event of negative result through the percentages of each month. The methodology presumes that the manager knew in which months the negative results occurred and then analyzes the reasons, since the simple investigation of the averages can disrupt the judgement, knowing that the average of credits and debts can be very far apart of each other.

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INTRODUCTION

It is not recent that representation in number of establishments of the Micro and Small Companies(MPE) is big in Brazil. In 2004, 10 years ago, the Ministry of Labour and Employment (MTE) already pointed out that 98% of the organizations in the country in the private sector were micro and small companies, while only 2% were represented by medium and large companies. According to the MTE (2012), this representation has grown over the years, reaching 99% in 2012. These data indicate that the MPEs are responsible for a significant portion of jobs and revenues, moving the economy of various sectors and regions.

It is known that the managers of these companies are not always endowed with essential characteristics for management and, therefore, end up not taking into account important factors that interfere in the results of the organizations. Due to some of these aspects, a part of the micro and small businesses went out of business even before reaching one year of activity. SEBRAE (2011) pointed out that, based on companies that were founded in 2006, approximately 30% of them went out of business in just two years.

According to SEBRAE (2007), 68% of the entrepreneurs of the extinct companies indicated that the main reason for going out of business was concentrated in the managerial failures. Among them is included the lack of knowledge on this area. It is known that is common in entrepreneurial class opening a business without the technical foundation supported by studies, such as the business plan. Likewise, entrepreneurs often lack knowledge on areas of management, such as financial control, so important to the survival of the business. Dornelas (2005) follows the same line, indicating two major causes for the failure of small businesses: lack of planning and inability to manage.

Currently, there are few studies related to the control of cash in micro and small companies (Kassai, 1997). One of these few studies discusses the projected cash flow and its importance in the management of micro and small companies, as pointed by Beuren *et al.*, (2003). This context leads to studies to develop propositions for

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financial instruments in order to base the decision making process of MPE's managers. Among the instruments, the cash flow is considered by many analysts a major analysis tools, allowing them to identify the process of money circulation by the variation in the cash (and equivalents)" (Silva, 2008, p.446). Even having its importance, the difficulty of small business owners to structure and, mainly, to analyze the cash flow due to the lack of knowledge in the area is known.

To this end, this article presents the results of a study whose goal was to identify the reasons for cash shortage based on the negative cash flow of a small furniture and decoration company. The structure of the article comprises five sections, beginning with this introduction. Next section presents the theoretical framework constructed to support the empirical object. The methodological procedures are explained in the third section. The fourth and fifth sections, respectively, discuss the results and conclusions arising from the study conducted.

Theoretical Foundations:

Before discussing the importance of the cash flow in the companies, particularly in the ones classified as micro and small, the relevance of the financial analyzes is highlighted. It is known that these analyzes have several purposes, for example: checking the return on investment, the business yield and profitability. All these points are elaborated through reliable information captured internally, such as the movement of the cash; or externally, such as the market growth rates in which the organization operates.

According to Silva (2008, p. 6), the financial analysis in a company involves six activities: collecting, checking, preparing, processing, analyzing and concluding. Hindering the achievement of these tasks is the fact already mentioned that a portion of micro and small business owners have no knowledge on the areas of management. This obstacle gets in the way of all the steps outlined above.

There are several aspects that may hinder the analysis of the financial data. The lack of financial control is one of these, because it ends up not subsidizing and nurturing the company with the necessary information. Furthermore, the lack of it ends up not identifying internal operational problems, such as a low contribution margin. "During the 20th century, most companies developed and used methods of financial control to monitor, evaluate and improve their operations" (Atkinson *et al*., 2000, p. 613). This attempt that began in the 20th century occurred mainly in large institutions, which got time and manpower for these activities, as opposed to the smaller companies, tangled with operational activities.

Particularly in relation to the Brazilian MPEs, Cezarino and Campomar (2006) point out some failure characteristics that contribute to high rates of mortality in this mode. They mention that the informal management assists in mixing personal and business assets hindering financial analysis. Low quality management, along with the absence of information about processes, control and resource scarcity contributes to the failure of these companies. In Brazil, another problem has emerged: the types of financing are hampered when compared to developed countries. This further highlights the importance of a sharp management, with planning, analysis, and controls to make the business independent of financed capital injection.

It is worth mentioning that there are mechanisms that facilitate the decision making of the business manager. Some of these instruments are the statements, from which several indicators and financial indexes can be calculated. "Accounting (or financial) statements are equivalent to a set of information calculated and disclosed by the companies, revealing the various results of their performance in a financial year" (Neto and Lima, 2009, p. 188). The statements are basic for the financial analysis as they allow full and detailed observation of the movement of resources in organizations. Marion (2006) points out that the objective of the accounting report "is to report to the accounting users the main facts recorded by accounting in a given period". The analysis become unfeasible if they are not made, making the data scattered and without functionality.

Having some statements and the information they contain, some indicators that enrich and facilitate the managers'analysis can be calculated. There are other types of analyzes drawn from the statements that do not relate indexes, such as horizontal and vertical analysis, also performed to check the business' performance. Neto and Lima (2009, p. 216) point out that "although there are some sophisticated criteria, the use of indexes constitutes is the most commonly used technique in this study".

Among these reports, there is the cash flow, considered as part of the research object of the study. The professional who analyzes it deals with various factors, such as checking the company's ability to pay off its debts in a timely manner. Zdanowicz (2004, p. 24) reports that the cash flow has goals such as: raising funds for the execution of business operations; employing the available resources in the best possible way; planning and controlling inflows and outflows and seek balance between these two accounts.

Achieving these goals is part of company's management and contributes to its development. The relevance of these goals is illustrated by the discussion of the last objective mentioned. It is known that, for instance, if a negative flow is noticed, instead of a balanced flow, the organization is not able to pay its debts in the short term, which may compromise the survival of the business in a short time, depending on the availability of the partners'investment. In the event of excessive cash overage, the company may not be making capital investments in sources that would bring higher returns than keeping it in cash.

Managers without the necessary knowledge to make complex financial statements may follow some methodologies and adapt them to their respective businesses. What actually matters, in this case, is whether the entrepreneur is able to analyze and make decisions according to the instrument constructed, after all, there are two main reasons for creating statements: first, for tax purposes, when it is due; and second, to serve as a basis for controlling and making decisions.

According to Zdanowicz (2004, p.145), "the cash flow is the set of financial incomes and outcomes projected by the manager for a certain period". This also highlights the importance of discriminating all amounts received and paid by the company, pointing out that the more specified and detailed the cash flow is, the easier it is to control it. As stated by Cunha, Martins and Assaf Neto (2014), the company shall have an understanding of financing according to its own assets, i.e., measuring the cash flow over the income and operational investment decisions. A more specific control of this flow facilitates this analysis. Table 1 presents a model of cash flow of this author that was modified.

Table 1: Cash flow model

Periods	Jan	Feb	Mar	...	Total
Items					
1. Incomes					
Cash sales					
Receivables					
Bank collections					
Trade notes receivable					
Sale of fixed asset items					
Rents received					
Increase in social capital					
Financial revenues					
Other					
Total					
2. Expenses					
Cash purchases					
Suppliers					
Salaries					
Purchases of fixed assets items					
Electric power					
Telephone					
Maintenance of machines					
Administrative expenses					
Selling expenses					
Tax expenses					
Financial expenses					
Other					
Total					
3. Difference of the period					
4. Opening balance of cash					
5. Cumulative Availability					
6. Desired level of cash					
7. Loans to capture					
8. Applications in financial market					
9. Amortization of loans					
10. Redemption of investments					
11. Closing balance of cash					

Source: Adapted from Zdanowicz (2004)

To fill out this flow, the manager usually makes auxiliary maps of sales and expenses, for example. Ending a period with the accounts of number 3 and 5 (Table 1) positive, is the primary goal of the management of these resources. If it does not happen, the entrepreneur will have to use some other options, such as the redemptions of investments or taking out loans.

Zdanowicz (2004, p.170) also shows that incomes and expenses may be divided as follows. The first ones may come from internal source, such as: cash sales, reinvested profits and sales of permanent asset sitems; or from external source: bank loans, shareholders and redemption of bonds. The expenses can be divided into regular, such as salary payment; fairly regular, such as partners'drawings; and irregular, such as the expansion of the company and new facilities.

As mentioned, a company that has negative flow is unable to pay its bills in the short term, denoting that their expenses are greater than their incomes. This event is called cash shortage. Obviously, cash shortage is not welcome to the businesses, given its negative feature. Following the model shown in Table 1, Table 2 demonstrates a situation of cash shortage by using of a practical model. In order to facilitate reading and understanding, only values for the months of January and February will be exposed.

Table 2: Cash shortage

Periods	Jan	Feb	Mar	...	Total
Items					
1. Incomes					
Cash sales	2.600	1.400			
Sales on credit	10.320	8.480			
Sale of vehicle	3.000	3.000			
Rents received	400	400			
Financial revenues	1.200	1.050			
Total	17.520	14.330			
2. Expenses					
Cash purchases	360	200			
Purchases on credit	2.700	3.510			
Salaries	3.000	3.000			
Administrative expenses	900	1.000			
Sales expenses	1.500	800			
Tax expenses	1.360	1.190			
Financial expenses	700	400			
Rent Payable	875	875			
Purchases of consumable goods	925	1.200			
Purchase of a computer	5.000	5.000			
Total	17.320	17.175			
3. Difference of the period	200	(2.845)			
4. Opening cash balance	1.000	1.200			
5. Cumulative Availability	1.200	(1.645)			
6. Desired level of cash	1.200	1.200			
7. Loans to capture		2.845			
8. Applications					
9. Amortization of loans					
10. Redemption of investments					
11. Closing cash balance	1.200	1.200			

Source: Adapted from Zdanowicz (2004).

It can be noticed in Table 2 that in January the income operations exceeded the operations of expenses. When added to the initial cash balance, the period ended with 1,200 currency units. In the next period, the opposite happened. Besides the expenses exceeding the incomes, the initial cash balance was not enough to pay off the debts. This is called cash shortage. In this scenario, the company had no choice but to take a loan of 2,845 units, as pointed out by account number 7.

To solve / mitigate the cash shortage many times it is necessary to appeal to several undesirable events, such as taking loans from financial institutions. "In general, the company is forced to take actions that wouldn't be necessary if it had enough cash flow" (Ross, Westerfield and Jaffe, 2011, p. 283). Prudent financial management can prevent these shortages from occurring. Still, many managers, besides not avoiding the negative flows, fail to understand the origins of such a situation.

It is worth to mention that this lack of control, particularly, can hide a possible need for working capital, i.e., those assets that are in constant circulation because of the operational activities of the company and its operating and financial cycles. According to SEBRAE (2007, p. 39), the fifth most frequent reason among extinct and active companies for closing and / or for the difficulty in managing the business, respectively, is the lack of working capital. Gitman (1987, p.279) states that the goal of the working capital management is to manage the assets and liabilities accounts so as to achieve an acceptable and desirable level of liquidity.

Marion (2009) indicates that "among the three main reasons of bankruptcies or failures of companies, one of them is the lack of financial planning or the total absence of cash flow and cash flow forecasting (projecting the incomes and expenses of the company)". Toledo Filho, Oliveira and Spessatto (2010) state that the strategic analysis of the cash flow does not occur in small businesses, taking into consideration that the implementation and maintenance of the projected cash flow is costly and difficult, especially for those who often are laymen in accounting and finance. It is possible to notice that some reasons for the closure of businesses and for the cash shortage are similar, given that in many cases the second may result in the first. Although the reasons for cash shortage are generally known, poor management and the managers'lack of knowledge ultimately hinder this diagnosis daily in their respective businesses. It is understood that knowledge of the reasons that led to the cash shortage is important for managers to seek possible solutions to reverse this situation and prevent such a situation from occurring again in the future.

Methodological Procedures:

The descriptive research was performed through a case study. According to Malhotra (2006), one of the features of the descriptive study is to describe the characteristics of the organizations. Among the features that

Mattar (2005) points out about the case study, it should be highlighted that the data can be obtained to a great level of depth allowing characterizing aspects in detail before the object of study.

Regarding the approach to the problem, the study has a predominantly qualitative approach. According to Kirk and Miller (1986 apud Mattar, 1996), the qualitative research identifies the presence of something, whereas the quantitative research seeks to measure certain variable.

The data collection was made possible through in-depth interviews that were conducted in the employees' work environment. McDaniel and Gates (2005) believe that in-depth interviews are personal and relatively unstructured, being directed and guided by the interviewee's answers. Interviews took place on and August 29th and30th, 2013, and on September 2nd, 3rd and 4thof the same year. Respondents were an employee of the financial area which had the function of gathering and controlling financial data of the store, and also two partners to collect experiences and data relevant to the financial procedures performed in the business.

Besides the in-depth interview, secondary data were used. These data were collected from two sources: employees, one of the financial area responsible for the collection and control of financial data, and another of the commercial area responsible for inputting information into the business’ system - second source. Malhotra (2005) indicates that the search for secondary data must meet six criteria: specifications, accuracy, timeliness, purpose, nature and reliability. These six points were observed as the collection was made. Thus, on September 9th, 10th and 11th, 2013, an intensive data collection of receipts of incomes and expenses of the company’s cash was conducted so as to obtain data for elaborating reports in historical range for the years of 2011, 2012 and 2013. For this collection, it was used the system of accounts control in which the store administrates its cash, paving the way for the next steps. Still, it was mentioned that three employees and two partners had participation in this step whenever the collectors of information had any doubt, especially regarding the system.

Data analysis was performed in two steps. First step, the data were analyzed based on the notes and recordings made during the interviews. Thus, the inputs, procedures and outputs of information in the processes of the financial area of the company were checked. In the case study, the system accessed to obtain data allowed a transfer of files to Microsoft Excel software that was used to tabulate and analyze the revenues and expenditures data. Thus, the analysis was done by means of a classification of the expenses with direct and indirect costs, fixed and variable expenses, and deductions so that level of detailing would be the largest possible within the cash flow that would be built.

Results:

As shown in the previous sections, it is known that the managers of MPEs usually lack the features and know-how to manage, resulting in mismanagement which consequently can come to discontinue the business. Therefore, the financial statements may assist the decision making of the institutions’managers. One of these statements is the cash flow, whose goal, among others, is to plan and control incomes and expenses, and can advise on the balance between them.

Companies with negative cash flows may not be liquidating their debts in a short term and they need to know the reasons of certain results. To this end, this section will demonstrate the construction of cash flows for the years 2011, 2012 and part of 2013 based on the company's history, beyond the projection made for the end of 2013. In addition, it will expose the methodology used to find the reasons for the cash shortage in the months that it happened.

The decoration store object of the study is located in the state of Santa Catarina. It is a family-managed, independent storethat has only three employees working in the company besides the partners, who are from the same family. It is a retail store, i.e., a reseller of home decoration products, such as: wine glasses, wall picture frames and furniture. Products are selected by one of the partners invisits to great fairs of this segment, where the products are ordered and then exposed in the store.

Established for over five years, the company has had several locations. Due to the lack of flow in some of these places, is now located in zone of great movement in the capital of Santa Catarina. There is seasonality in the company’s incomes and, therefore, the company has cash shortage in some months, and positive cash flow in others. Currently, the management has embraced this feature and seeks to work with specific items for holidays, such as Christmas and Easter.

Being considered a small business, considering its revenue and number of employees, its management is simple and consists of procedures for buying, selling and control of finances regarding payable and receivable. There are no marketing related activities, financial or strategic planning. Those related to logistics are outsourced and not the responsibility of the store, once the products are ordered and shipped by the manufacturer, and duties of the human resources area are performed informally whenever it is necessary the hire or fire an employee.

For the construction of the projected cash flow the ARIMA Seasonal method was used to forecast the sales of store in the next 12 periods from the last month of analysis. According to Gujarati (2006), this integrated autoregressive process, of moving average, is used considering that there are many non-stationary economic temporal series, i.e., integrated. This method considers not only the growth due to trend of the series, but also takes into consideration the monthly seasonality present in each month. According to Pindyck and Rubinfeld (2004), the ARIMA model can take into consideration any homogeneous non-stationary temporal series. For the projection, the history of series provided by the company covering the period between January 2011 and October 2013 was used.

The cash flow represents all the incomes and expenses resulting from the revenues and expenditures of the company within a certain period of time. It is an instrument that allows analyzing the best time to acquire a good and / or the possible forms of payment for the customers to ensure that the company has the necessary resources no to become indebted and, therefore, unbalance the financial control of the company. The amount reported in the cash flow represents whether the company is having overage or not the variation between the incomes and expenses of a period.

According to the analysis, Chart1 analyzes the results of the cash flow on cash advances per month, during the three years analyzed.

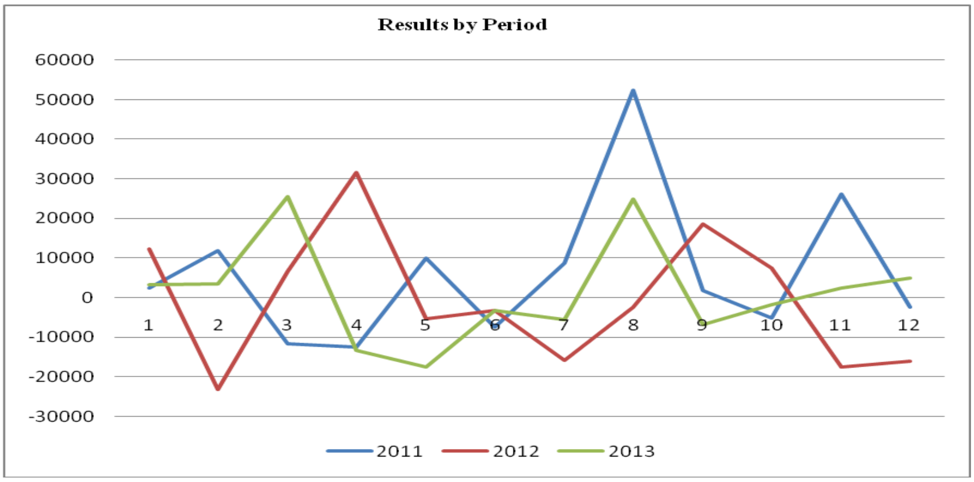

Chart 1: Cash result by month – from 2011 to 2014
Source: Research data (2013).

As seen in Graph 1, it is noticed that the flow result is negative in the months of March, April, June, October and December, 2011; February, May, June, July, August, November and December 2012; and April, May, June, July, September and October, 2013. It is also noticed that the most expressive results are in the months of August and November, 2011; April and September, 2012; and March and August, 2013. Making a pooled analysis of three years, it is possible to notice that the months of April, May, June, July and August, mainly June, have the most negative results. It is observed that the data for the months of November and December 2013 are information projected according to the commented methodology.

To facilitate pooled understanding of the three periods, chart 2 present the average of the cash flow results of the three years analyzed, according to historical and projections data.

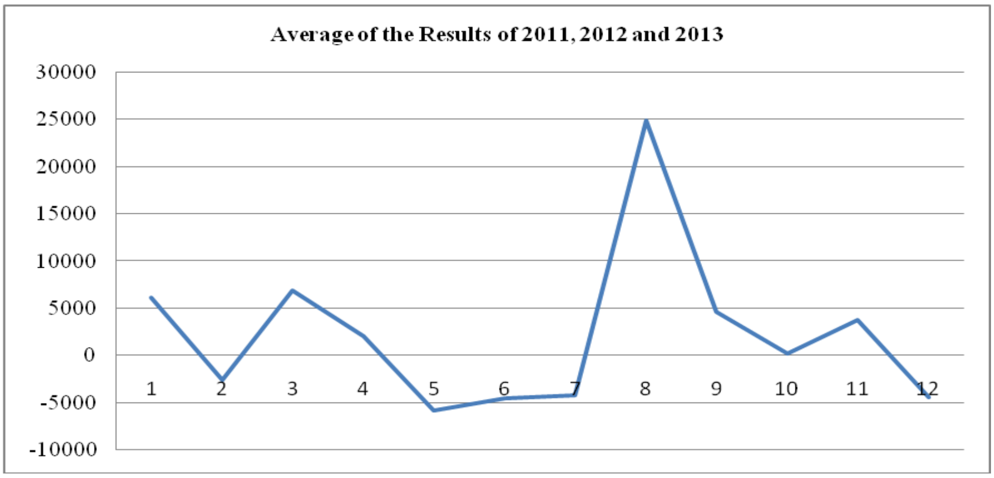

Chart 2: Average of cash results from 2011 to 2013
Source: Research data (2013).

Chart 2 above regards the averages of the results for the period, comprising the average of the incomes minus the expenses of each month of the years 2011, 2012 and 2013. Through the graph it is possible to notice the months of usual cash shortage: February, May, June, July, and December. Also, good results are noticed in the months of January, February, September and November, highlighting the month of August. A point to be emphasized in a graph with average is the loss of information in a crude analysis of it because it is perceived that January in average ended with a positive outcome, simply because in a year the same result in the same month was quite positive, increasing the average income in general.

Another interesting aspect for the analysis of the previous two graphs is the fact that the very positive results, such as in August 2011, April 2012 and August 2013, are much more representative in absolute terms than the negative results in other periods. It means that the management has to visualize the months of overage to relocate this very positive result to the months in which the results are not, so that it does not have so much need of some types of financing, such as cash advance.

However, it is not possible to perceive through these graphs a relationship between the reasons the results happen that way. Thus, an analysis relating each account, from the incomes to all the expenses of each year, with their averages, will be presented. The focus of the analysis was on creating index numbers or base, which were the annual averages for each account. This enables the comparison of the values of each month with the average of each account, and the perception of the reasons of the cash shortage of each month. It is important to emphasize that, since such base indexes are averages, they do not clearly point out the “cash shortage”, but the reasons for it. That is, the analysis has assumed that the analyzer already knows the periods of shortage In this case, they have already been highlighted in Chart 1. Therefore, Table 3 shows the monthly average of each account of the cash flow, along with its classification in numbers that will be used in subsequent analyzes.

Table 3: Monthly averages of the analysis per account in 2011

N.	Account	Monthly average
1	Credits	R$60.631,07
2	Debts	R$54.368,68
3	Suppliers	R$22.934,46
4	Employees	R$4.225,39
5	Fixed expenses	R$16.846,88
6	Variable expenses	R$1.880,19
7	Indirect costs	R$1.900,85
8	*SIMPLES*	R$2.959,57
9	Payment of cash advance	R$3.621,35

Source: Research data (2013).

It is possible to notice that in the monthly average for the year of 2011 the company had a positive result when comparing incomes and expenses. It is known that collecting actual results month by month, five of them had cash shortage. Table 4 details the proportions for each account in the year 2011.

Table 4: Proportion of each in the year 2011

N.	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
1	74%	59%	57%	59%	111%	102%	115%	168%	100%	98%	151%	105%
2	78%	44%	85%	89%	105%	127%	113%	91%	109%	118%	120%	121%
3	88%	26%	102%	68%	118%	158%	123%	125%	119%	109%	94%	69%
4	46%	42%	73%	81%	81%	142%	129%	124%	112%	111%	114%	145%
5	95%	86%	108%	109%	114%	122%	112%	57%	59%	116%	107%	114%
6	44%	20%	11%	2%	96%	152%	132%	53%	96%	149%	373%	73%
7	47%	16%	16%	164%	220%	118%	125%	113%	92%	119%	101%	68%
8	80%	31%	33%	256%	43%	47%	130%	88%	71%	35%	95%	290%
9	0%	0%	0%	0%	0%	0%	0%	6%	319%	246%	258%	371%

Source: Research data (2013).

Table 4 arises from the division of the real result presented in the month of the respective year with the base index of the account, i.e., its average. As an example, the first month of 2011 that had R$ 44,780.36 of income, when the average of this account in this year was R$ 60,631.07. Applying the division, it is noticed that the incomes had a score below average (74%). This same example is used to explain that even if the expenses are greater than the incomes, it does not justify the cash shortage since the averages or base indexes of expenses may be well below the incomes of this year. In January, for example, the incomes of R$ 44,780.36 that represent 74% of the average were greater than the expenses of R$ 42,177.75 that represent 78% of the average.

As the analysis has already presumed the knowledge of the negative result and not the reasons for this event, it is repeated that March, April, June, October and December are the in which there was cash shortage. From this, month to month, there is the analysis of the accounts, starting with March. In this month, the main point related to the cash shortage was the very low income, about 50% lower than the average of this year. In April, the small incomes, plus the high amount of the payment to *SIMPLES*, caused the cash to be negative. In a deep analysis, it can be noticed that the payment made to *SIMPLES* this month was of more than on installment, probably due to delays. In June it is possible to observe a general increase in almost all expenses, especially due to the amount of incomes being average. October, with high variable expenses, especially due to a high payment of cash advance, had negative cash. Finally, it is possible to notice that in December there was a great increase in the payment of *SIMPLE* and of the non-operational expenses with the payment of the cash advance. Table 5 shows the monthly average per account of 2012.

Table 5: Monthly averages of the analysis per account in the year of 2012

N.	Accounts/Months	Monthly average
1	Credits	R$ 68.573,04
2	Debts	R$ 69.089,93
3	Suppliers	R$ 34.466,10
4	Employees	R$ 4.028,30
5	Fixed expenses	R$ 17.228,78
6	Variable expenses	R$ 2.169,04
7	Indirect costs	R$ 2.294,84
8	*SIMPLES*	R$ 1.391,68
9	Payment of cash advance	R$ 7.511,20

Source: Research data (2013).

In this year, the averages of incomes were not higher than the expenses. Following the same line, Table 6 shows the possible reasons for cash shortage in the months of February, May, June, July, August, November and December, 2012.

Table 6: Proportion of each in the year 2012

N.	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
1	79%	58%	69%	115%	86%	85%	76%	116%	114%	139%	125%	137%
2	60%	91%	59%	68%	93%	89%	98%	119%	86%	127%	149%	159%
3	38%	36%	34%	74%	105%	98%	126%	153%	96%	147%	142%	152%
4	102%	152%	73%	49%	95%	92%	85%	93%	107%	105%	177%	70%
5	39%	163%	91%	83%	97%	106%	96%	94%	99%	100%	54%	180%
6	76%	201%	92%	30%	168%	41%	68%	76%	11%	43%	30%	364%
7	27%	20%	33%	198%	178%	80%	132%	58%	101%	118%	134%	123%
8	143%	0%	111%	35%	0%	238%	0%	120%	179%	156%	218%	0%
9	179%	155%	80%	0%	0%	0%	0%	67%	0%	136%	411%	172%

Source: Research data (2013).

In February, the first month analyzed, it can be noticed a small level of incomes related to the average aligned with a series of increases in the expenses accounts, such as employees, fixed and variable expenses, besides cash advance. In the second month, May, it is possible to notice a small income, along with a great level of, mainly, Indirect Costs and Variable Costs. In June, the negative cash balance was primarily due to a high amount in the payment of *SIMPLES*, in addition to small incomes. July was an unusual month for suppliers and indirect costs, having a large increase in the average. In August, the incomes were above the average but, on the other hand, the increase in payments to suppliers and *SIMPLES* also increased level of the expenses. November and December also had incomes higher than usual, even though in the first month there was an increase in the expenses, particularly in the payments for *SIMPLES* and cash advance; and, in second month, in the variable expenses, suppliers and cash advance, making the closing of the cash negative. The last year analyzed is 2013, as shown by Tables 7 and 8.

Table 7: Monthly averages of the analysis by account in the year of 2013

N	Accounts/Months	Média mensal
1	Credits	R$ 78.164,50
2	Debts	R$ 77.185,78
3	Suppliers	R$ 40.991,49
4	Employees	R$ 5.423,50
5	Fixed expenses	R$ 17.864,50
6	Variable expenses	R$ 4.110,01
7	Indirect costs	R$ 2.049,01
8	*SIMPLES*	R$ 2.598,35
9	Payment of cash advance	R$ 5.860,86

Source: Research data (2013).

Regarding the analysis by account, Table 8 shows detailed proportions regarding the averages already outlined.

Table 8: Proportion of each in 2013

N.	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
1	81%	55%	110%	52%	75%	97%	115%	173%	108%	104%	114%	116%
2	78%	52%	79%	70%	105%	103%	123%	143%	118%	108%	112%	111%
3	81%	38%	56%	56%	124%	126%	84%	141%	129%	135%	114%	116%
4	82%	68%	38%	75%	87%	78%	104%	124%	103%	114%	179%	148%
5	91%	84%	93%	95%	86%	122%	139%	116%	84%	85%	102%	103%
6	86%	62%	401%	127%	84%	20%	67%	38%	22%	23%	133%	135%
7	35%	32%	75%	150%	196%	87%	93%	94%	39%	150%	123%	125%
8	73%	81%	43%	65%	100%	103%	134%	102%	122%	100%	138%	140%
9	0%	0%	0%	0%	0%	286%	375%	328%	211%	0%	0%	0%

Source: Research data (2013).

In the year 2013, the months that ended with negative cash were April, May, June, July, September and October. The first two months had low income levels, along with high level of direct costs in the month of May, of the variable expenses in the month of April and of indirect costs in both. In June and July the main points of increase were in the payment of cash advance and fixed expenses, along with above the average levels of suppliers in June and the payment of *SIMPLES* in July. Finally, in September there were proportionately higher increases in expenses such as suppliers, payment of *SIMPLES* and cash; and in October there was also an increase in the amount of expenses, such as suppliers, employees and indirect costs.

Conclusions:

The article presented the results of a study whose objective was to identify the reasons for cash shortage resulting from negative cash flow in a small furniture and decoration business. To this end, recurring models of the company's cash flow were analyzed, following the standards outlined by Zdanowicz (2004). From this, the concept of cash shortage was discussed, i.e., the negative cash flow result, and then an analysis of business' data was conducted. The data were collected through a descriptive research, by conducting the study of a single case, based on in depth interviews applied to the employees of the company. A system containing the transactions performed by the company during the periods 2011, 2012 and part of 2013 was also used. In order to complete the year 2013 and make a more complete analysis, a projection was made based on the ARIMA model, integrated autoregressive and moving averages, using the historical basis from 2011 until October 2013.

The methodology of analysis per account was demonstrated starting with base indexes and ending with the proportions and analysis. The analysis of three years was conducted through index numbers, i.e., average of each account, such as incomes and expenses, annually. Thus, it was possible to expose the monthly proportions per account, calculating the division between the real value of the account in a given month and the average of certain account in the year. The data presented showed that this type of analysis facilitates an understanding of the reasons for the event negative result by the percentages of each month. Still, the methodology requires that the manager already knows in which months the negative results happen and then analyze the reasons, since the simple investigation of proportions can mislead the judgement, knowing that the averages of incomes and expenses can be far apart from each other.

It is important to mention that the analysis per account does not exclude any other form of financial planning and control; on the contrary, it should be used to complement them. It should also be mentioned that this methodology requires a good control of financial data so that the proportions and, therefore, the reasons for the cash shortage are spotted and the entrepreneur can take the necessary steps to fixany problems as fast as possible.

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