

Analysis of the Structure Ratios of the Funding Sources

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Abstract: The funding sources of the assets and liabilities in the balance sheet include equity capitals and the debts of the entity. The analysis of the structure rates of the funding sources allows for making assessments related to the funding policy, highlighting the financial autonomy and how resources are provided. Using the literature specializing in economic and financial analysis, this paper aims at presenting these rates that focus, on the one hand, to reflect the degree of financial dependence (the rate of financial stability, the rate of global financial autonomy, the rate of on-term financial autonomy) and on the other hand the debt structure (the rate of short-term debts, the global indebtedness rate, the on-term indebtedness rate). Based on the financial statements of an entity in the Argeş County, I analysed these indicators, and I drew conclusions and made assessments related to the autonomy, indebtedness and financial stability of the studied entity.

Keywords: debts; capitals; financial autonomy; funding sources

JEL Classification: D22; G32

1 Introduction

The normal course of the activity of each company requires the provision of the financial sources for covering or constituting the economic means of the entity. Depending on their origin, these sources can be own, attracted or borrowed sources.

A comparative presentation of the own, attracted, and borrowed sources highlights the advantages of each and every funding source separately (Burja, 2006, p. 87). Own sources are safe funding sources, they determine the financial autonomy of companies and eliminate the risk of fortuitous withdrawal of capitals. The main advantage of the attracted sources is that they are non-onerous, but at the same time they are unsafe. Their size and chargeability depend on the characteristics of the operating cycle. The borrowed sources have the advantage of mobility for the harmonization of the requirement to be financed from own and attracted sources.

In the analysis of the financial position of the company, financial statements have a

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crucial role– as a highly important tool in the management process, and they are necessary both for substantiating decisions on the allocation and usage of funds, as well as for the organization of the control on the implementation of the decisions made.

Based on the information in the balance sheet, the rates of the structure of the funding rates can be determined, “allowing for the assessment of the financial policy of the company and providing specific information with a more complex significance than the asset structure rates” (Păvăloaia & Păvăloaia, 2009, p. 404).

The structure of the assets and liabilities is influenced by many factors including: the nature of the performed activity, technical and economic factors, legal factors, circumstantial factors, the nature of the relationship with the partners (suppliers and customers), the size of the company. (Buglea, 2005, p. 169-170)

2 Research Methodology

The research methodology involved using methods of collecting research data, comprising all the methods I used to collect data and information related to the funding sources of an entity listed at the stock exchange: methods of studying normative acts and accounting documents or other kinds of documents, involving examinations from various points of view, in relation to the purpose and objectives of the research; the case study method, which was used to research the evolution of the structure rates and its implications on the financial autonomy of the company. The paper also included the use of methods for quantifying the data from the performed research, in order to process and interpret the results, and also to structure the data, make comparisons, etc.

In order to illustrate the analysis of the rates of the structure of the funding sources, we used the financial statements as at 31 December 2012 of an entity in the Argeş County, namely S.C. Electroargeş S.A., whose NACE code is 2751 manufacture of electric domestic appliances¹ ().

3 Rates reflecting the Financial Stability and Autonomy

In order to determine the total liability (Pt) I summarized the required information, taken from the balance sheet of S.C. Electroargeş S.A. as at 31 December 2012, and the absolute change and the change index of each indicator in Table 1.

The total liability (Pt) is calculated by adding the following items:

¹ The financial statements were accessed online at http://www.bvb.ro/Bilanturi/ELGS/ELGS_A_2012.pdf.

- permanent capitals (Cp), comprising equity capitals (Cpr), medium- and long-term debts (Dtml) and provisions (Pv)
 $Cp = Cpr + Dtml + Pv$;
- the short-term debts (Dts), i.e. the amounts that must be paid within one year;
- deferred incomes (Vav).

Thus, the formula for the calculation of the total liability is:

$$Pt = Cp + Dts + Vav$$

Table 1 summarises the information required to determine the value of the total liability of the analysed entity, based on which the rates of the structure of the funding sources will be determined.

Table 1. Information required to determine the total liability

| It. no. | Indicators | Symbol | 2011 | 2012 | Δ (RON) | I (%) |
|---------|-----------------------------|--------|------------|------------|----------------|--------|
| 1. | Equity capitals | Cpr | 26,260,086 | 44,904,146 | 18,644,060 | 171.00 |
| 2. | Medium- and long-term debts | Dtml | 0 | 0 | - | - |
| 3. | Provisions | Pv | 0 | 99,588 | 99,588 | - |
| 4. | Permanent capital | Cp | 26,260,086 | 45,003,734 | 18,743,648 | 171.38 |
| 5. | Short-term debts | Dts | 19,975,509 | 22,559,118 | 2,583,609 | 112.93 |
| 6. | Deferred income | Vav | 160,613 | 81,202 | -79,411 | 50.56 |
| 7. | Total liability | Pt | 46,396,208 | 67,644,054 | 21,247,846 | 145.80 |

Source: Balance sheet of S.C. Electroargeş S.A. as at 31.12.2012

The rate reflecting the financial stability and autonomy are:

- the rate of financial stability;
- the rate of global financial autonomy;
- the rate of on-term financial autonomy.

a. The rate of financial stability (R_{sf}) reflects the relationship between the permanent capital steadily available for the company and the total liability of the company, and is determined as a percentage ratio between the permanent capital (Cp) and the total liability (Pt):

$$Rsf = \frac{Cp}{Pt} \cdot 100$$

If the rate of financial stability in the current period is higher than the one in the baseline period ($Rsf_1 > Rsf_0$), it shows an increase in the share of the permanent capital in the total funding sources, which highlights an increase in relative measures of the stable sources compared to the temporary sources. In the opposite situation, when the rate of financial stability in the current period is lower than the one in the baseline period ($Rsf_1 < Rsf_0$), it shows a decrease in the share of the permanent capital in the total liability, which reflects a decrease in relative measures of the stable or permanent sources compared to the short-term debts.

We believe that an increase in the rate of financial stability reflects a favourable situation if the increase in the permanent capital compared to the total liability is due to the increase in the equity capital in a higher pace than the long-term debts (Păvăloaia & Păvăloaia, 2009, p. 405).

This indicator reflects the share of the capital steadily available for the entity, for a period of at least one year. A ratio reaching more than 50 % is considered to be acceptable (Corduneanu & Miloş, 2009).

The indicators required to determine and analyse the rate of financial stability are presented in Table 2.

Table 2. Indicators required for the analysis of the rate of financial stability

| It. no. | Indicators | Symbol | 2011 | 2012 | Δ (RON) | I (%) |
|---------|---------------------------------|--------|------------|------------|----------------|--------|
| 1. | Permanent capital (RON) | Cp | 26,260,086 | 45,003,734 | 18,743,648 | 171.38 |
| 2. | Total liability (RON) | Pt | 46,396,208 | 67,644,054 | 21,247,846 | 145.80 |
| 3. | Rate of financial stability (%) | Rsf | 56.60 | 66.53 | 9.93 | 117.54 |

Source: Calculated based on the balance sheet of S.C. Electroargeş S.A. as at 31.12.2012

We can see that the rate of financial stability increased in the analysed period by 9.93%, which indicates an increase in the share of the permanent capital in the total funding sources, thus illustrating an increase in relative measures of the stable sources compared to the cyclical or temporary sources. This evolution is determined by the increase in the permanent capital by 71.38% in a higher pace than that of the increase in the total liability by 45.80%.

The predominance of the permanent capital in the finding sources (more than 50%

and increasing in the accounting period 2012 compared to 2011) provides the entity with safety through financing stability.

b. The rate of global financial autonomy (*Rafg*) reflects the share of the equity capital (*Cpr*) in the total funding sources, i.e. in the total liability (*Pt*):

$$Rafg = \frac{Cpr}{Pt} \cdot 100$$

If $Rafg_1 > Rafg_0$, this shows an increase in the global financial autonomy, due to the change in the equity capital in a higher pace than the total resources or liabilities of the company ($I_{Kpr} > I_{Pt}$).

If $Rafg_1 < Rafg_0$, there is a decrease in the global financial autonomy, as a result of the change in the equity capital in a lower pace than the total liabilities ($I_{Kpr} < I_{Pt}$).

The rate of global financial autonomy is influenced by the financial policy of the business entity and by the conditions under which it carries out its activity. We believe that a level of more than 30% of this rate would reflect financial balance, therefore at least one third of the total funding sources would be own sources.

In order to determine the global financial autonomy I summarised the required information in Table 3.

Table 3. Indicators required to analyse the rate of global financial autonomy

| It. no. | Indicators | Symbol | 2011 | 2012 | Δ (RON) | I (%) |
|---------|---------------------------------------|--------|------------|------------|----------------|--------|
| 1. | Equity capitals (RON) | Cpr | 26,260,086 | 44,904,146 | 18,644,060 | 171.00 |
| 2. | Total liability (RON) | Pt | 46,396,208 | 67,644,054 | 21,247,846 | 145.80 |
| 3. | Rate of global financial autonomy (%) | Rafg | 56.00 | 66.38 | 10.38 | 118.54 |

Source: Calculated based on the balance sheet of S.C. Electroargeş S.A. as at 31.12.2012

The rate of global financial autonomy increased in 2012 compared to 2011 by 10.38%, representing a percentage increase of 18.54%, which reflects financial balance (the rate has, in both accounting periods, levels higher than 30%). This evolution is due to the increase in the equity capital in a higher pace (by 71.00%) than the total liabilities (by 45.80%). If the company benefits from the leverage (the economic rate of return is higher than the interest rate), its financial autonomy enables it to resort to bank loans.

c. The rate of on-term financial autonomy (*Raft*) reflects the share of the equity capital in the permanent capital. It is calculated as a percentage ratio between the

equity capital (C_{pr}) and the permanent capital (C_p):

$$Raft = \frac{C_{pr}}{C_p} \cdot 100$$

We believe that a business entity has ensured its financial autonomy when its rate of on-term financial autonomy is at least 50 %. The evolution of the rate of on-term financial autonomy depends on the ratio between the growth rate of the equity capital, which shows an uptrend if the activity is profitable, and the growth rate of the medium- and long-term debts, which show a fluctuating trend depending on how loans are obtained and on the rescheduling of their repayment.

Table 4 shows the indicators required to analyse the rate of on-term financial autonomy.

Table 4. Indicators required analysing the rate of on-term financial autonomy

| It. no. | Indicators | Symbol | 2011 | 2012 | Δ (RON) | I (%) |
|---------|--|----------|------------|------------|----------------|--------|
| 1. | Equity capital (RON) | C_{pr} | 26,260,086 | 44,904,146 | 18,644,060 | 171.00 |
| 2. | Permanent capital (RON) | C_p | 26,260,086 | 45,003,734 | 18,743,648 | 171.38 |
| 3. | Rate of on-term financial autonomy (%) | $Raft$ | 100 | 99.78 | -0.22 | 99.78 |

Source: Calculated based on the balance sheet of S.C. Electroargeş S.A. as at 31.12.2012

The rate of on-term financial autonomy decreased in the analysed period by 0.22%, but its level remained significantly higher than 50%, which shows that S.C. Electroargeş S.A. has ensured its financial autonomy (even 100% in the accounting period 2011). Its slight decrease (by 0.22%) is determined by the more accelerated increase in the permanent capital (by 71.38) compared to the equity capital (increasing by 71.00%).

4 Rates Reflecting the Debt Structure

The debt structure highlights the shares of the various types of debts in the permanent capitals or in the balance-sheet liabilities.

For a detailed analysis, it is necessary to break down the categories of debts on analytical structure rates of short-term debts and long-term debts such as: the rate of the short-term, or long-term financial bank debts, the rate of the short-term, or long-term commercial debts, rate of the short-term or long-term debts to employees, etc. (Achim, 2010, pp. 279-280).

In order to reflect the structure of the debts (short-term, medium-term and long-term, and of the total debts) we will determine the following indicators at the studied entity:

- rate of short-term debts;
- rate of on-term indebtedness;
- rate of global indebtedness.

a. The rate of short-term debts (Rds) is calculated as percentage ratio between the short-term debts and the total liabilities:

$$Rds = \frac{Dts}{Pt} \cdot 100$$

Table 5. Indicators required to analyse the rate of short-term debts

| It. no. | Indicators | Symbol | 2011 | 2012 | Δ (RON) | I (%) |
|---------|------------------------------|--------|------------|------------|----------------|--------|
| 1. | Short-term debts (RON) | Dts | 19,975,509 | 22,559,118 | 2,583,609 | 112.93 |
| 2. | Total liabilities (RON) | Pt | 46,396,208 | 67,644,054 | 21,247,846 | 145.80 |
| 3. | Rate of short-term debts (%) | Rds | 43.05 | 33.35 | -9.70 | 77.47 |

Source: Calculated based on the balance sheet of S.C. Electroargeş S.A. as at 31.12.2012

The rate of short-term debts decreased in the analysed period by 9.70%, which indicates a percentage decrease by 22.53%, as a result of the fact that the short-term debts changed by a lower percentage than the total liabilities, and therefore the unfavourable influence of the increase in the debts by 12.93% is offset by the favourable effect of the increase in the total sources by 45.80%.

b. The rate of on-term indebtedness (Rdt) is determined as percentage ratio between the medium- and long-term debts ($Dtml$) and the permanent capitals of the business entity (Cp):

$$Rdt = \frac{Dtml}{Cp} \cdot 100$$

Based on the practical experience, the specialized literature recommends that the level of this rate should not exceed 50% in order to avoid jeopardizing the financial autonomy of the entity.

Given that S.C. Electroargeş S.A. does not record debts payable in a period exceeding one year ($Dtml=0$), its rate of the on-term debt was null in the analysed

period ($Rdt = 0$).

c. The rate of global indebtedness (Rig) is calculated as percentage ratio between the total debts (Dt) and the value of the total liabilities (Pt):

$$Rig = \frac{Dt}{Pt} \cdot 100 = \frac{Dts + Dtml}{Pt} \cdot 100$$

It is recommended that the global indebtedness should not exceed 70%, and the increase in the two rates shows an increase in the indebtedness, signifying a decrease in the financial autonomy.

Table 6. Items required calculating total debts

| It. no. | Indicators | Symbol | 2011 | 2012 | Δ (RON) | I (%) |
|---------|-----------------------------|--------|------------|------------|----------------|--------|
| 1. | Medium- and long-term debts | Dtml | 0 | 0 | - | - |
| 2. | Short-term debts | Dts | 19,975,509 | 22,559,118 | 2,583,609 | 112.93 |
| 3. | Total debts | Dt | 19,975,509 | 22,559,118 | 2,583,609 | 112.93 |

Source: Calculated based on the balance sheet of S.C. Electroargeş S.A. as at 31.12.2012

Given that the entity did not record debts payable in a period exceeding one year ($Dtml$), the rate of global indebtedness (Rig) is equal to the rate of short-term debts (Rds), being below the recommended level of 70%, which confirms a good financial autonomy, also reflected by other rates that were previously determined.

5 Conclusions

The rates of the structure of the funding sources analysed based on the balance sheet of S.C. Electroargeş S.A. Curtea de Argeş show a good financial autonomy of the entity because the global financial autonomy is increasing and reflects the high share of equity capitals in the financing sources, and the financial stability is ensured by the predominance of the permanent capitals in the total value of the liabilities. The indebtedness was reduced, and the entity did not resort to medium- and long-term loans in the analysed periods.

In the process of analysing the funding sources we can determine *the rate of bank loans* compared to the total debts or compared to the total capital, as well as *the rate of the operating debts* compared to the total debts or compared to the total liabilities of the company. The analysis of the debts or liabilities of the company

can also be detailed taking into account certain criteria used to group them (Radu, Cârciumaru, Bondoc, 2008, p. 232). Thus, depending on the nature of the liabilities, we can distinguish between liabilities related to the operating cycle and non-operating obligations, and depending on the maturity term of the liabilities, we can distinguish between short-term debts (less than one year), medium-term debts (between 1 and 5 years), and long-term debts (over 5 years).

These analytical rates may be a starting point for the further research in a future paper.

6. References

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