

SYSTEM OF INDICATORS USED FOR ANALYZING FINANCIAL BALANCE AT DOIJ COUNTY FORESTRY DEPARTMENT

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Abstract: The development of an economic entity is inextricably linked to ensuring the financial balance, which is a constituent part of the entity's economic equilibrium. The analysis of the economic entity's financial balance is based on terms, considering two approaches: the static approach and the semi-static approach. In this paper we presented, starting from the two approaches, a system of indicators used for analyzing the financial balance at the Dolj County Forestry Department, that is the indicators calculated on the basis of the financial balance-sheet, and the indicators calculated on the basis of the functional balance-sheet.

JEL classification: M41, M42

Key words: financial balance, working capital, working capital requirement, treasury, financial balance-sheet, functional balance-sheet

1. INTRODUCTION

Financial balance targets a set of correlations that are formed in the rotation of capital, assuming a system of proportionalities and dynamic relationships between the various needs and opportunities of the economic entity, involving the allocation and use of capital meant to allow the financial investors' remuneration at the established level and in due time, developing a fluent activity and providing estimated strategic increases.

The analysis of the financial balance of the entity's patrimony aims at reflecting the equality relationships between the funding resources and the uses of the financial resources, between the income and expenditure of the activity carried on by the the entity on long, medium and short-term. Economic and financial balance is achieved when consumed resources are fully recovered, i.e. when revenues equal costs. Maintaining the financial stability is an ongoing objective of the financial policy, which can be considered as achieved when the fiscal year ends with a positive cash flow. Ensuring the financial stability is a prerequisite for developing a profitable activity, and its performance can be achieved by adjusting imbalances that manifest in the entity's current activity¹.

Achieving the financial balance of an economic entity is influenced by the economic resources it controls, its financial structure, liquidity and solvency and its ability to adapt to changes in operating environment. In this regard, information about the economic resources controlled by the entity and the possibility to modify these resources are useful to predict the entity's ability to generate cash or cash equivalents in the

¹ L. Buşe, M. Siminică, N. Marcu, D. Cîrciumaru - Economic and Financial Analysis, Sitech Publishing House, Craiova, 2008

future. Regarding the financial structure of the economic entity, the information on this is needed to predict future credit needs and how profits and cash flows will be distributed. Information about liquidity (cash availabilities in the near future, after taking into account the financial obligations for this period) and solvency (cash availabilities for a longer period of time to meet outstanding financial commitments) are useful to predict the economic entity's ability to honor mature financial commitments.

2. OBJECTIVES

Financial balance analysis aims, on the one hand, the correlation of uses with financial sources in terms of duration, and, on the other hand, the ensurance of payments based on the receipts². Financial balance status does not practically exist, it is just a trend that is constantly in motion, in dynamics. That is, the harmony and stability of the relations between the structural elements is not given once and for all. There are a lot of statuses coming, resulting from others who have suffered the influence of imbalance factors.

It is necessary to know the imbalance factors, in order not to act spontaneously, subjectively, with undesirable effects, thus avoiding the generation of negative phenomena and disproportions. Exceeding the temporary imbalance values leads to the dynamic equilibrium of the system.

The financial balance analysis is carried out based on terms, aiming to obtain:

- Long-term balance - by comparing permanent capital to fixed assets (working capital);
- (Short-term) Current balance - by comparing current assets to short-term obligations (short-term non-debt), (working capital requirements);
- Overall Balance - by comparing working capital to working capital requirements (treasury).

The financial balance analysis can have two approaches:

-A static approach - when financial balance indicators are calculated based on the financial balance sheet and reflect a static picture of how to achieve financial balance.

-A semi-static approach - when the financial balance indicators are calculated based on the functional balance sheet and financial balance is seen in terms of business continuity.

3. METHODOLOGY

To analyze the long-term financial balance, we present as required by the economic theory, the concepts of net working capital based on the financial balance sheet and overall working capital determined by the functional balance sheet.

We, also, conducted a case study based on data on the financial balance of the annual financial statements for the last three years, 2007, 2008, 2009 at Dolj County Forestry Department .

4. ANALYSES

Net Working Capital (NWC) is an operand obtained by processing information from the financial statement, according to the following two ways:

The first method takes into account the elements on the higher levels of the financial balance sheet:

² I.Lala Popa, M. Miculeac - Economic and Financial Analysis, Mirton Publishing House, Timișoara, 2009

$$\text{NWC} = \text{Permanent capital} - \text{Fixed assets}$$

Or

$$\text{NWC} = \text{Permanent resources} - \text{Permanent uses}$$

Determined based on the top of the balance sheet, in the opinion of French theory and practice, net working capital expresses surplus of permanent sources on fixed assets (permanent uses).

The second method is considering the the items on the bottom of the financial balance sheet:

$$\text{NWC} = \text{Net fixed assets} - \text{Short-term debts}$$

or

$$\text{NWC} = \text{Cyclic uses} - \text{Cyclic sources}$$

According to these methods of calculation, working capital reveals the issue of entity's future solvency, by comparing the expected short-term liquidity with immediately payable commitments.

Overall working capital (OWC) or functional working capital is a classic indicator, commonly used in financial analysis and represents the surplus of sustainable resources on the stable needs, surplus aiming to finance operations specific to the operating cycle.

It is also defined as that part of acyclic resources (stable) allocated for funding cyclical assets.

Two methods of calculation can be used:

starting from the liabilities in the functional balance sheet:

$$\text{OWC} = \text{Stable resources} - \text{Stable needs}$$

or

$$\text{OWC} = \text{Permanent capital} - \text{Gross fixed assets}$$

Determined by this method, the overall working capital expresses the surplus of stable resources relative to fixed assets available to fund the operations specific to the operating cycle.

Starting from the assets in the functional balance sheet:

$$\text{OWC} = (\text{Cyclic assets} + \text{Treasury assets}) - (\text{Cyclic liabilities} + \text{Treasury liabilities})$$

or

$$\text{OWC} = (\text{Operating cyclic assets} + \text{Non-operating cyclic assets} + \text{Treasury assets}) - (\text{Operating cyclic liabilities} + \text{Non-operating cyclic liabilities} + \text{Treasury liabilities})$$

The analysis of the working capital based on the last three years financial balance sheet data at Dolj County Forestry Department is as follows:

Table no.1

	2007	2008	2009
Permanent capital	4.731.573	3.966.238	5.099.513
Equity	4.608.143	3.831.887	4.995.093
Fixed assets	24.872.285	25.670.793	25.314.969
Working capital	-20.140.712	-21.704.555	-20.215.456

It is noted that in all these three years, the working capital of the Dolj County Forestry Department registered negative values, which means that permanent sources fail to fully fund the permanent allocations, a situation which creates a relative financial imbalance. It is necessary to restore the permanent capital by increasing the rests allocated

from profits and by the right sizing of the investment program, registering a relative financial imbalance.

In economic theory it is appreciated that the negative value of this indicator shows that the Dolj County Forestry Department is experiencing difficulties in funding current operations.

Tangible current assets are a special feature in the balance sheet of the Dolj County Forestry Department since standing crop development and expansion of forest areas represent an obligation and a national priority to be completed by the National Afforestation Programme.

Data in the balance sheet of the Dolj County National Forestry Department show that the largest share in total fixed assets is represented by the current tangible assets, that is 81% in 2007, 82% in 2008 and 83% in 2009 and reflects the afforestation work carried out both from equities for the afforestation of standing stock areas as a consequence to timber exploitation and from budgetary funds and the improvement fund for afforestation of degraded lands.

We indicate that current tangible assets represent long-term investments to be recorded as forest lands when the final success of the plantation is achieved, reaching up to 10 years. So only after the reception, when plantations reach the solid state, the department's patrimony and hence equity will increase.

At Dolj County Forestry Department, the negative working capital is due to the fixed assets increase, as a result of achieving investments representing technology and equipment specific to the forestry sector, which in the coming period will lead to an improvement in the situation, by the results generated.

As outlined in Table no. 2, in the same way as the net working capital, overall net working capital has negative values throughout the period under analysis, and therefore we can speak of a shortage in working capital.

Table no.2

	2007	2008	2009
Cyclical assets	3.956.115	4.655.239	4.739.942
Treasury assets	2.261.900	2.254.178	2.284.702
Cyclic liabilities	24.625.717	26.881.235	27.633.358
Working capital	-18.407.702	-19.971.818	-20.608.714

The analysis of the financial balance can also be tracked on short-term, throughout the indicator named "working capital requirement".

Production financing requirements, or operating cycle financing requirements, are covered mostly from appropriate temporary sources, namely of operating debts: suppliers, employees, fiscal and social taxes. The difference between the operating cycle financing requirements is in fact the working capital requirements.

It is the expression of achieving short-term financial equilibrium of the balance between the (operating) floating capital requirement and resources³.

³ Miculeac Metania Elena - Analysis of correspondence between resources and temporary uses. International Economic Conference: "Binomial poverty - wealth and the accession of Romania into the European Union" organized by the Faculty of Economic Sciences, University Lucian Blaga in Sibiu, 20 - 23 May 2005;

Working capital requirement is "the cyclical financing needs surplus left after covering current assets (inventories + receivables) on account of current resources (operating debt) and that should be covered from permanent resources. It is the part (amount) of cyclic assets to be financed from the working capital"⁴.

We can say that the working capital requirement is that part of floating assets that should be financed from the working capital or floating assets unfunded from short-term debt, determined on the basis of the financial balance sheet.

Working capital requirement (WCR) is determined as the difference between the operating cycle financing requirements and operating debt.

$$\text{WCR} = (\text{Inventories} + \text{Receivables}) - \text{Short-term operating debt}$$

or

$$\text{WCR} = \text{Temporary requirement (exclusively availabilities and short-term financial investments)} - \text{Temporary resources (exclusively bank credits)}$$

or

$$\text{WCR} = (\text{Floating assets} - \text{Liquidities, bank accounts and short-term financial investments}) - (\text{Short-term obligations} - \text{Short-term credits})$$

Working capital requirement is determined on the basis of short-term assets and liabilities. Although each of these elements remain within the entity, they permanently renew.

It can be concluded that the working capital requirement allows tracking current equilibrium by comparing the current financing requirements with operating debts.

"Functional working capital requirement is the amount required for financing the gaps arising between actual flows and cash flows related to the operating activity"⁵.

The functional working capital requirement (WCR) is determined from the confrontation of the cyclic requirements with the cyclic resources:

$$\text{WCR} = \text{Cyclic assets} - \text{Cyclic liabilities}$$

or

$$\text{WCR} = \text{Financial requirements generated by cyclic operations} - \text{Resources generated by cyclic operations}$$

The NFR structure analysis is performed using the functional balance sheet.

The functional working capital requirement has two components: the operating working capital requirement (OWCR) and the non-operating working capital requirement (NOWCR).

Working capital requirement knows significant fluctuations during the operating cycle.

The working capital requirement, calculated on the basis of the financial statement data for the last three years, at the Dolj County Forestry Department registers the values calculated and presented in Table No.3.

⁴ Pantea Ioan Marius - Strategic Analysis - Support for Investment Decisions, Mirton, Timișoara, 2003, p. 175.

⁵ Niculescu Maria -Overall Strategic Diagnostic, Economică Publishing House, Bucharest, 1997, p. 386

Table No.3

	2007	2008	2009
Inventories	1.425.436	1.892.636	1.299.463
Receivables	1.969.573	2.221.350	2.687.165
Short-term operating debts	4.092.715	5.722.851	5.923.846
Working capital requirement	-697.706	-1.608.865	-1.937.218

The situation is assessed as favourable, the negative values recorded by the working capital requirement during the period under analysis 2007-2009 is due to an increase in the rotation speed of inventories and receivables, and short term debts to suppliers have also registered a significant growth, their payment deadlines being under contract to 30 days maturity. This situation does not present a working capital requirement, but a release in the attracted resources.

In Dolj County Forestry Department, working capital requirement is negative which means that resources exceed the requirement. This is explained by the policy of Dolj County Forestry Department for regarding the delivery to customers of wood, that is the payment of the timber upon delivery and the contraction of higher maturity debts.

To develop the country's forest resources almost to the potential offered by the existence of lands to be protected by forest vegetation that could be economically exploited in the future, it was decided to establish the Fund for the conservation and regeneration of forests.

Depending on the nature of the subunit (Forestry Department) and more specifically in relation to forested areas, the areas removed or brought into the forestry fund, this fund may present a deficit, when the fund is smaller than the fund consumed or a surplus when the fund established is greater than the fund consumed. the surplus in the fund dedicated to the conservation and regeneration of forests is stored in a separate account bearing interest, opened by the NFA Romsilva at a commercial bank. The Fund for the conservation and regeneration of forests has special destination and can not be used for other purposes.

Deficit of the fund for the conservation and regeneration of forests met at the Dolj County Forestry Department is covered by redeployment of funds from other subunits that have a surplus.

The redistribution of fund surpluses and the covering of deficits of the fund for the conservation and regeneration of forests found at the forestry departments is made by the NFA - Romsilva.

A specific feature of the Dolj County Forestry Department is that short-term operating debt represents liabilities to suppliers providers of afforestation works financed from the fund for the conservation and regeneration existing as availability at the National Forest Administration, and not on behalf of the forestry departments' resources.

The functional working capital requirement, calculated as the difference between the cyclical assets and liabilities, based on data from Table No. 2 also recorded negative values during the three years, i.e.:

WCR 2007 = - 20.669.602

WCR 2008 = - 22.225.996

WCR 2009 = - 22.893.416

The analysis of the global correspondence between resources and uses is made by a comparison between the working capital and the working capital requirement, the relevant indicator being the net treasury.

Net treasury is short-term investments and cash availabilities at the economic entity's disposal from the activity carried out during a financial year, i.e., the liquidity surplus after covering the cyclic requirement surplus (remaining uncovered from cyclic resources) by the permanent resources surplus. Net Treasury (NT) can be determined based on the financial balance sheet as the difference between cash availabilities (including short-term financial investments) and short-term loans (outstanding credits).

$$NT = \text{Cash availabilities} - \text{Short-term loans}$$

Net treasury is the most eloquent expression of how to conduct an efficient and balanced activity. It indicates the quality of the entity's current financial balance.

Recording a net treasury, over several successive fiscal years, highlights the economic entity's success in the economy and the opportunity of profitably placing the cash availabilities to strengthen the position on the market.

In the functional balance sheet, net treasury (NT) level is given by the (difference between) treasury assets and liabilities, respectively by the exceeding treasury requirements and current bank loans, which are not automatically renewed in each production cycle.

Net treasury (NT) is determined using two methods of calculation:

$$NT = \text{Treasury assets} - \text{Treasury liabilities}$$

or

$$NT = \text{Overall working capital} - (\text{Operating working capital requirement} + \text{Non-operating working capital requirement})$$

This last formula is the fundamental equation of the treasury that has been obtained from the equality of assets and liabilities in the functional balance sheet.

Treasury assets include cash availabilities in accounts and cash-flow and short-term financial investments, and treasury liabilities include current credits.

Based on the information in the financial balance sheet, necessary to determine the treasury, we appreciate that at the Dolj County Forestry Department there is a short-term financial autonomy.

Table No.4

	2007	2008	2009
Cash availabilities	2.261.900	2.254.178	2.284.702
Short-term loans	0	0	0
Treasury	2.261.900	2.254.178	2.284.702

Dolj County Forestry Department has a positive treasury during the three years 2007, 2008, 2009, because it does not record short-term financial liabilities. This is the result of the current financial balance. The expression of the positive treasury is found under the form of cash availabilities in bank accounts and cash-flow.

In the financial balance sheet, the net treasury is positive, as shown in Table No. 2:

$$NT\ 2007=2.261.900$$

$$NT\ 2008=2.254.178$$

$$NT\ 2009=2.284.702$$

4. CONCLUSIONS

Analyzing the values of the three indicators, the working capital, the working capital requirement and the treasury in 2009, several considerations on the financial balance of Dolj County Forestry Department can be made, as follows:

$$\begin{aligned} \mathbf{FR} < \mathbf{0} & \Rightarrow \mathbf{WCD}; \\ \mathbf{WCR} < \mathbf{0} & \Rightarrow \mathbf{WCR}; \\ \mathbf{WCD} < \mathbf{RFR} & \Rightarrow \mathbf{T} > \mathbf{0}. \end{aligned}$$

We can talk about a **risky financial balance**, situation to be analyzed differently depending on the entity's business profile.

To finance the overall assets, permanent resources are not enough. **Dolj County Forestry Department** should have in view other means of financing.

Working capital deficit has a high degree of risk to the extent in which certain assets were not stable and sustainable financed. Funding these assets is closely related to the entity's operating cycle, as it is provided by working capital resources which are generated by the operating cycle. Due to a good negotiating of the payment deadlines to the suppliers and the clients cashing, to a judicious management of inventories or carrying out any extraordinary transactions, the entity may release working capital resources. The smallest changes that occur in supplier payment deadlines, respectively clients cashing, can lead to a delicate situation, translated into cash difficulties.

The current situation of Dolj County Forestry Department is apparently balanced considering the above presented features relating to the specific of the forestry sector on the massive long-term investments which will generate future production increase, growth in sales and thereby the increase of the profit and loss and restoration of the working capital .

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