ADAPTING THE PROFIT AND LOSS REPORT BY BUSINESS LINES IN ROMANIAN ACCOUNTING

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Abstract: *In this paper we will present the creation of indicators used in the economic and financial analysis of the company based on the existing data in the company's accounting. More precisely, we have proposed the possibility of analyzing the company's activity on business lines, and within each business line we will have expenses and revenues distributed so that the profitability of each business line will be calculated and not only of the company's activity as a whole. The use of such a mechanism allows us a more detailed analysis and the possibility of identifying problems more accurately when they arise. We set out to translate the Profit and Loose (P&L) report into business lines.*

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1. Introduction

"A profit and loss statement (P&L), or income statement or statement of operations, is a financial report that provides a summary of a company's revenues, expenses, and profits/losses over a given period of time. The P&L statement shows a company's ability to generate sales, manage expenses, and create profits." (Vipond, 2025)

"A profit and loss statement is a financial report that shows how much your business has spent and earned over a specified time." (-, 2025)

This type of report is a very useful report especially for people who do not have accounting experience and do not know or it is too difficult to interpret a balance. The report essentially does nothing more than collect the data from the balance sheet and reinterpret it on various predefined activities that the company may have. A P&L report contains several clearly defined chapters of income and expenses transposed so that they will be much easier for management to interpret. The main chapters are as follows: Revenue, Cost of Goods Sold, Selling, General & Administrative Expenses, Marketing and Advertising, Technology/Research & Development, Interest Expense, Taxes, Net Income. (Vipond, 2025)

2. Purpose of study and research

This paper will present a case study. During this research we analyzed different situations within company and employees and client's needs.

After a preliminary study, the following requirements are defined that a system must fulfill in order to make the entire activity more efficient.

Sales of goods must be divided by business lines and the Selling chapter.

Expenses for goods sold must be divided by business lines and the Cost of Goods Sold chapter.

Various expenses incurred at the management level must be recorded by business lines and expense chapters.

Depreciation of fixed assets must be divided by business lines and chapters.

Various expenses and revenues recorded at the accounting level must be divided by business lines.

Salaries must be divided by business lines.

All the operations performed at the inventory management system should be reflected in the accounting on business line and chapters.

P&L Statement	Business Line 1	....	Business Line n
Sales Revenue Sales Discounts Cost of goods Rents Insurance Marketing Job expenses Other Expenses ... Other Incomes			
Profit or Loss			

Fig. 1 P&L on business line

3. Requirements analysis and concept realization

Since all operations at the management level are reflected in accounting, it is necessary to start with the accounting part. One identified issue was the ability to operate accounting entries or to intervene on existing accounting entries and to try to minimize intervention. Accounting in Romania is organized on a double-entry basis, which means that an accounting entry has two accounts, one on the debit side and the other on the credit side, and a value that influences both accounts.

3.1. Accounting

We started from simulating several cases of organizing accounting data in order to measure the operator's adaptability to given situations such as:

- Placing a business line and an expense chapter next to an accounting note.
- Placing two lines of business and a finite number of chapters next to an accounting note.
- Placing next to an accounting entry any line of business or expense chapters

In the similarities that followed with the first method, in which a line of business or a chapter from the ones mentioned earlier can be selected next to an accounting entry, it was found that the operator's workload nearly doubles because each accounting entry would need to be turned into multiple accounting entries to allow for the correct distribution of values.

The existence of particular cases which occur in our simulations, in which the same expense can be allocated to multiple chapters demonstrated the limitations of the second approach.

We followed the third method (generalization), the one with the highest degree of adaptability, which has proven capable of modeling all the encountered cases. Since next to each accounting entry we have a value, this value had to be allocated across different business lines and chapters.

Value or percentage? What should we use in the context of a distribution? These are the questions we had to answer.

If a value had been chosen for a line of business, any change in the value of an accounting item would require intervention on each distribution to adjust the value there, which would be a disadvantage in the case of a large volume of changes. The second option, namely placing a percentage next to a distribution, allows for changes made to the value of the accounting item without needing to intervene on already made distributions. We chose the second option, namely to use a percentage.

Since the profit and loss statement should be represented in the form of a table as can be seen in Figure 1, through the intersection of business lines and various chapters, it is necessary to have two groups of allocations, namely:

- The group of business lines
- The group of chapters

Each group will be composed of distinct categories either from lines of business or from the chapters of the P&L report.

In order to have allocations related to the debit account or the credit account, or both, it was decided to introduce two columns with percentages, one for debit and one for credit. To increase the accuracy of the data, restrictions were imposed so that the sum of the percentages on the debit, respectively the sum of the percentages on the credit, should equal 1 within each allocation group, meaning that the value should be distributed in a proportion of 100%.

3.2. Fixed Assets

Part of the expenses that contribute to the creation of the P&L report is represented by fixed assets, specifically their depreciation. Therefore, the expenses generated by these will need to be allocated to business lines and to chapters in the P&L. Of course, these expenses are recorded in accounting, and there we can make allocations. In this case, we wanted to optimize the operation of depreciation by creating allocations at the level of each fixed asset, with these allocations being done only once. Moreover, it was desired that based on these allocations, accounting entries with the corresponding allocations can be generated. Exceptional cases where changes in allocations are desired can be resolved directly at the accounting level through the mechanisms already created. Since the expenses related to fixed assets belong to a single chapter in the P&L, it will only be necessary to allocate them to business lines.

3.3. Goods

Goods are analyzed in the P&L report from several perspectives, namely: the revenues we obtain from their sale, the expenses related to the sale of goods, and the discounts we have granted.

Through the revenues obtained, we will understand the operations at the management level that influence my income accounts. In Romanian accounting, the income accounts are influenced by the documents Invoice and Notice issued to the client. The invoice issued based on the notice does not affect our revenues. Since the revenues related to goods go directly into the Goods Revenue section, the distribution of these revenues will be realized only on the lines of business.

The expenses related to goods are calculated based on the management method used by carrying out the management discharge. Of course, there are expenses generated by the management discharge produced by their sales, but there are also other types of expenses that are recorded at the management level with the help of documents such as consumption receipts, inventory shortages, etc. Regardless of their type, for goods, there are specific chapters to which they must be allocated in the P&L such as Cost of Goods. Similarly to revenues, these can only be allocated by lines of business.

Just like the revenues from the sale of goods, discounts appear on the delivery documents and will need to be allocated only to business lines.

We observe that all three types of information need to be allocated only to business lines. Another observation is that all three types of values are allocated together to the same business line. The expense and the revenue generated by a product on a delivery document can be allocated to a business line. Of course, there may be practical situations where all products on a document are allocated to the same business line, but there may also be situations where different products influence different business lines. To achieve generality, we can allocate business lines to products in the product catalog for informational purposes, and these allocations will turn into actual allocations when the products appear on documents. The operation of the Invoice and Delivery Note documents is done at the management level.

3.4. Database modeling and modification of some processes

It was necessary to create entities for the registration of business lines and the corresponding P&L chapters. These entities can be used within distribution groups. Within a group, we must have entities of the same type. It was necessary to create allocation mechanisms for chapters and business lines at the level of fixed assets, at the level of the product catalog, at the level of the partner catalog. It was necessary to create distribution mechanisms at the level of accounting notes and to intervene in the process of interpreting the documents recorded at the management level.

As can be seen in fig.2, it was necessary to create a table called Entities used for recording the lines of business and the chapters from the P&L. Each line of business or chapter will be recorded in this table as a record, having a unique identifier.

Next to each accounting entry, because we need to make distributions as I explained, it was necessary to create another table called AccountDistribution. In this table, each distribution will be a record for which the accounting entry it belongs to, the line of business or chapter in the P&L, the group it belongs to, and the percentage associated with the value of the accounting entry will be specified.
The allocation of business lines for assets will be done through an adjacent table called Assets Distribution. For each asset, multiple business lines and a percentage can be specified.

The allocation of business lines for the products in the product catalog can be done directly on the product, as in the modeled situations a product belongs to a single business line. This allocation can be done directly in the Products table.
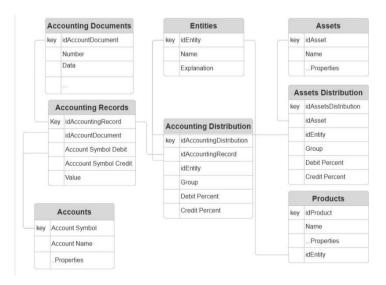

Fig. 2 A part of the database models
Source: Author

3.5. Report creation

Since the data is stored in a relational database maintained in Microsoft SQL Server, the idea was to create the report directly within it, through a stored procedure, as there is the possibility to interact with the data either through an SSRS Report or through a direct connection to the database from Excel.

In order to perform the calculations, we will take the following distribution of expenses as an example.

Debit	Credit	Value	601	=	301	Chapter	Percent	Group
		1000				BL1	0.51	
						BL2	0.21	
						BL3	0.31	
						Cost of Goods	1	2

Fig 3. Distribution of expenses by centers
Source: Author

P&L Statement	Business Line 1	Business Line 1	Business Line 3
Cost of goods	1000*0.5*1 = 500	1000*0.2* 1 = 200	1000*0.3*1 = 300

Source: Author

The calculation can be made for a rubric by multiplying the value of the accounting note by the percentage of the business line and the percentage of the chapter from the P&L. It can be observed how the total value of 1000 lei has been distributed over the three business lines.

A problem identified in creating this report is that there are situations where the distribution of some expenses across the P&L chapters is overlooked. There arose a need to signal expenses or revenues that had not been distributed or for which there were partial distributions. The result of this report must also be identical to the result obtained by closing the revenue and expense accounts. It was necessary to compare and signal the differences between the result of the report and the accounting result to identify any possible errors in the simplest way possible.

Also, in order to identify certain accounting or allocation errors, I created a section next to each item that signals all the accounts that have been taken into account for that respective item.

We had to take into account the type of accounts such that an active account located on the debit side will have a value with the same sign calculated in the report, however, if the same account appears on the credit side, its value will change sign. The same happened in the case of passive accounts, which if they appear on the credit side, the distributed value retains its sign, and when it appears on the debit side, the sign will change.

We create this report in Excel, and it has four sheets, one for defining the period on which the report has to be created, one sheet for the report itself, one sheet for

specifying which cell should be verified, and the last sheet which shows data taken into consideration for those values. The report looks like in the image bellow
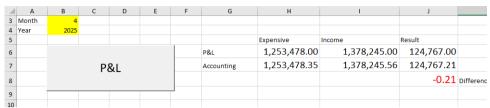

Fig. 3 Sheet for defining period
Source: Author

Fig.4 Chapters of P&L distributed on different business line
Source: Author

Fig 5. Verification data based on user selection
Source: Author

As can be seen from the previous figure, the user has the ability to check the expense component for any existing cell in the report. This feature exists in pivoted Excel reports, but in this case, due to the large volume of data involved in generating a report (over 100,000 records), the data arrives in the P&L report already generated, consisting of up to 100 or even 200 records. The report does not use pivoting. This way, we have reduced the data traffic between the server and the client, with the report being directly connected to the database. If there is a need to analyze a cell, we will only generate the data corresponding to that cell.

Through restrictions, checks, and flagging of unallocated accounts and accounting notes, the time required to correct the allocations made was reduced.

4. Conclusions

In order to have allocations related to the debit account or the credit account, or both, it was decided to introduce two columns with percentages, one for debit and one for credit.

To increase the accuracy of the data, restrictions were imposed so that the sum of the percentages on the debit, respectively the sum of the percentages on the credit, should equal 1 within each allocation group, meaning that the value should be distributed in a proportion of 100%.

It was necessary to create allocations for fixed assets or products, these allocations aimed to achieve automatic distributions at the time of creating the accounting entries related to them.

The report should contain a section signaling the accounts that participated under a specific heading.

The report should include a section signaling the accounts and amounts that have not been distributed for easy identification of distribution issues.

The report should contain a verification section through which all accounting entries and the calculation method for a cell within it will be displayed.

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