

“Prerequisites for financial analysis: indicators and management ratios”

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Abstract

This paper deals with indicators and management ratios. Its presentation follows a sequential process starting from the blocks, headings and items of the accounting and financial statements. Like a baker, the quality of his bread depends on the nature of the raw material, the ingredients and the chosen manufacturing tools. It will be confirmed here that a financial diagnosis close to reality can only be realized if, the information is convincing and has previously been subject to cleaning and reprocessing. On the other hand, if it is based on a good selection of relevant ratios specific to the activity of each type of firm.

Key words: balance sheet, indicators, ratios, financial structure, solvency.

1- Introduction

It is clear that developing and shaping ratios is easy for any accountant and finance expert. The important thing is to select the relevant indicators and ratios to translate the reality of the company audited and to make the appropriate and timely decisions. It is well known that the preparation of the financial analysis consists in collecting and reprocessing accounting and extra-accounting information in order to give a true and fair view of the financial situation of the company and its activity. This work, in turn, requires that the information produced by the company be of quality, that is why the preliminary to the analysis is the grooming of the balance sheet.

This article discusses the topic after presenting what the cleaning of the balance sheet, namely, pruning non-values, fictitious and toxic elements through the reclassification and restatement of certain accounts.

Secondly, the analysis follows the sequences of the balance sheet from the global analysis, in blocks, to that, relatively more detailed.

Given the importance of the object, this first article will be devoted to the balance sheet (assets and liabilities). A next paper will complete the work by discussing the business and performance of the company.

2- Cleaning up the balance sheet

The balance sheet is the image, at a given moment, of the assets accumulated by the company. It is divided into two parts the: assets and liabilities (jobs and resources). The information sought must be reliableⁱ, obtained in a timely manner and adapted to the intended purpose. These are mainly the financial statementsⁱⁱ relating to several financial years (3 to 5), so as to be able to identify trends and developments.

To allow for the analysis, and given the fact that the accounting balance does not allow a functional reading, it must be revised in order to be adapted to the different approaches. Thus, it is necessary to reclassify and restate certain accounts.

Some figures are reclassified in order to obtain significant masses. Some information (off balance sheet, for example) is retrieved in order to better reflect economic realities. Thus, reclassification and reprocessing make it possible to obtain significant aggregates which lend themselves to analysis. The main reclassifications and restatements to be carried out consist of:

Restatements and reclassifications

Assets

- Intangible assetsⁱⁱⁱ are analyzed subjectively, so it is recommended to review and evaluate certain items such as customer or goodwill;
- Property, plant and equipment are appraised according to a variety of values and the choice is to be made according to the type of analysis (historical, gross, net, utility, market value, insurance expertise or liquidation). This raises the problem of determining the unrealized capital gain in comparison with the net book value used;
- Assets capitalized in gross values^{iv}, depreciation is not subtracted from the asset but added to the durable resources because they represent a saving due to their quality of self-financing capacity. In addition, reasoning in raw values allows the comparison between sectors / branches of companies;
- Marketable securities are reclassified as cash or non-operating jobs according to their nature;
- When assets are recognized at historical cost, they often do not reflect reality (at least in the last years of their tax or use life). That is why it is better to reassess them based on monetary depreciation indices or according to experts. On the other hand, shareholders' equity is increased by the amounts of the revaluation differences;

- The value of stocks and work in progress depends on their turnover. Thus, a good in inventory for a period much longer than the average rotation requires a particular restatement following the risk of depreciation, obsolescence, damage or expiration;
- Receivables and assimilated claims must be classified by age and nature after having been confirmed, in order to ensure their recoverability while taking into account legal provisions (prescriptions). Indeed, certain receivables may be depreciated due to their seniority or to the default of customers.

Liabilities

- Current bank overdrafts and credit balances of banks are transcribed into cash resources;
- The redemption premiums of the bonds are recorded in the accruals of the assets or are simply eliminated;
- Translation differences must be reduced to their original value by canceling them and subtracting them from the debts or claims concerned;
- Financing by leasing must be considered as borrowing since the company is not legally owned by it. Otherwise, the assets held for use are included in fixed assets for their gross value on the contract. On the liabilities side, the amount of their depreciation for the balance is recorded;
- Current accounts of unblocked partners are reclassified to non-operating resources;
- Regulated reserves, having a fiscal character, may contain a latent deferred tax; It is therefore necessary to determine the latent taxation in accordance with the rate of IBS over the remaining period;
- The investment subsidies (equipment) received in equity capital generate unrealized tax charges which must be taken into account.

It should be noted that the non-operating resources and resources that make up the non-operating funding need should be avoided since they can reduce or increase cash flow. In addition to the basic documents that are the summary statements, the financial analysis requires additional documentation on:

- The value of the human factor (quality of officers and directors),
- The rank and place of the company in its branch and sector,
- The company's commercial and financial rating,
- The geography of capital (identity of shareholders and their distribution in space).

3- Global and block analysis of the balance sheet

The financial diagnosis is an important part of the overall diagnosis. It has a role of information and communication. It helps to understand the past evolution of the

company and to judge its potential for development. It is most often confused with financial analysis when it is concerned with measuring the state of health of the company. Diagnosis is not specifically standardized or unique, it depends on the user and the use made of it.

3.1 Users of accounting and financial information

The first glance of the expert, when reading the balance sheet, is shown on the net asset because, when the company accumulates losses and the amount exceeds the limit of 75% of the share capital^v, That the extraordinary general meeting must meet to decide on the continuity of the operation or the liquidation. Thus, having satisfied this first condition, the analyst, by virtue of his quality, will favor certain approaches and will use the indicators and ratios that meet his objectives. Thus, the information used is mainly of an accounting nature and each one uses and translates them according to its interests and its position in relation to the company. One can distinguish among others:

- Shareholders who are interested in potential profits, remuneration for their contributed capital and capital gains;
- Lenders, especially banks, who make loans or advances, are more interested in the creditworthiness, liquidity and ability of the company to meet its maturities;
- Employees are the first to be interested in the situation of the company^{vi}, because any failure of the latter entails the loss of their employment;
- The manager, who wants his company's business to perform well, questions his management, his ability to generate profits, the coverage of costs by the added value and the efficiency of the structure and management of the company. 'business ;
- Other partners are also interested in the life of the company, it is the State, customers and suppliers.

3.2 Balance sheet analysis^{vii}

In his study, the analyst is concerned with the constituent blocks of the balance sheet, namely:

On the assets side:

- Fixed assets (intangible, tangible and financial),
- Inventories and work in progress,
- Receivables and similar,
- Availability and assimilated.

On the liabilities side:

- Shareholders' equity (share capital, reserves, earnings and retained earnings),
- Non-current liabilities (term loans),
- Current liabilities (suppliers and liabilities).

The analyst compares the changes in each of the blocks within the assets and liabilities in mass and as a percentage of the balance sheet total. The conclusions he draws from this mass balance study concern:

- a) The balance of the masses: The rule of minimum financial equilibrium stipulates that the enterprise must at least finance permanent needs by stable capital, ie the following equality:

Stable jobs = stable resources

- b) B) The relative importance of each mass: To do this, the analyst presents the balance in values. He then draws up a comparative table of the constituents of each mass as follows:

ASSETS	Gross value	Rate
NON CURRENT ASSETS		%
Good-will		%
Intangible assets		%
Property, plant and equipment		%
Assets in progress		%
Financial assets		%
TOTAL NON CURRENT ASSETS		100%

CURRENT ASSETS	Gross amount	Rate
Inventories ans outstandings		%
Receivable and related employment		
Other receivable and related employment		%
Customers		%
Other receivable		%
Availability and similar		
Treasury		%
TOTAL CURRENT ASSETS		100%

C) The causes of the variations of each block

The same table can be repeated by including several exercises and calculating their evolutions. This table can also be complemented by a histogram or a representative geometric figure. It is up to the analyst to comment on the results by comparing each heading in relation to its block (mass or class) and each item in relation to its heading in time, for example:

REAL ESTATE ASSETS

Accounts	Désignation	value (KDA)	relative importance
210100	Industrial technical installations	4 000	9%
210200	machinery and equipment	2 500	6%
210300	construction equipment and machinery	15 000	34%
210400	heavy transport equipment	10 000	23%
210500	light transport equipment	8 000	18%
210600	office equipment	1 500	3%
210700	computer hardware	1 500	3%
210800	layout and installations	800	2%
210900	Other equipment	600	1%
21	Total	43 900	100%

Ratios used:

Among the many ratios used, we note (according to the table above):

Equipment and gear / tangible fixed assets 34%

Heavy transport equipment / tangible assets 23%

Technical installations / tangible fixed assets 9%

Etc.

The same type of analysis presented supra can be used to:

- Financial fixed assets,]
- inventories and work in progress,]
- claims and the like,]
- availability and assimilated.]

This preliminary analysis of the balance sheet items allows for a pre-diagnosis to be followed by a more specific financial analysis (comparison of assets with liabilities and intermediate balances of management).

LIABILITIES:

The liabilities of the company may be compiled by mass or by headings as follows:

✓ Les blocs ou masses

blocs / masses	Amount	Rate
Equity		%

Non-current liabilities		%
Current liabilities		%
TOTAL		100%

✓ Topics

Topics	Amount	Rate
Issued capital		%
Capital not called		%
Premiums and reserves		%
Revaluation		%
Equity difference		%
Net income		%
Other shareholders' equity - Retained earnings		%
Consolidating Share		%
Minority interests		%
SHAREHOLDERS' EQUITY		100%

The same reasoning remains valid for the items of non-current liabilities and current liabilities. The same multiannual tables are used to diagnose the variations of each mass in relation to the total of the balance sheet, of each heading in relation to its mass and of each item in relation to its heading

3.3 The classical equilibria

We know that there is no reading of the balance sheet, but readings according to the objectives of the analysis; Therefore, three main approaches are generally proposed:

- The functional approach: this is a horizontal reading of the balance sheet and is analyzed in terms of employment - resources. It breaks down these according to cycles of investment and exploitation. Its central element is the need for working capital.
- The financial or liquid or patrimonial approach: it addresses the concerns of the banks. Its objective is to diagnose the risk of bankruptcy (short-term illiquidity and insolvency risk). Here, the balance sheet is presented, as in accounting, in terms of exigibility and increasing liquidity.

- c) The functional approach "pool of funds": it presents, in front of the economic capital of the company, a pool of funds distinguishing internal resources from external resources and financial debts.

In the balance sheet, jobs and resources are distinguished as follows:

- In stable or durable jobs, fixed assets or production equipment are recorded,
- Stable or permanent resources include equity and term loans to finance stable employment,
- The jobs and operating resources are the elements of the operating cycle linked to the activity of the company. These include inventories and work-in-progress, receivables and assimilated jobs, and trade and other payables,
- Non-operating jobs and resources are generally claims and debts not related to the operating cycle and of no particular economic significance,
- Cash and cash equivalents consist of cash and cash equivalents, and current bank overdrafts and bank credit balances.

This presentation of the balance sheet makes it possible to calculate four distinct elements:

- Total net working capital or working capital (own or foreign),
- The working capital requirement (inventories + receivables - suppliers),
- The non-operating working capital requirement that brings jobs closer to resources not related to the operating cycle,
- Net cash position.

The basic principle of finance is that stable jobs must finance stable resources. In accounting language, this means that equity and term borrowings must cover fixed assets. In other words, non-current permanent funds or liabilities must be greater than or at least equal to non-current assets. Any surplus of non-current liabilities on the stable assets generates a working capital that will be used to cover operating stocks. It remains clear that the economic means indispensable to the activity of the company, apart from the means of production (investment), is noted by the permanent need for financing of the operating cycle. This need arises from time-lags in management operations, namely, the time between payment and collection.

The aim of the study is to check the financial balance of a company's balance sheet by ensuring that:

- that durable goods are at least financed by long-term resources,
- that the operating cycle is balanced and, if not, financed by the surplus of long-term resources on durable goods,
- the cash position is positive.

a) Working capital

The three balances highlighted in financial indicators are referred to as net working capital, and net cash.

Their calculations at the top and at the bottom of the balance sheet are as follows:

Working Capital requirements = permanent capital - fixed assets (top of the balance sheet)

Working Capital = current assets - current liabilities (balance sheet)

Net cash = WCR - WC

Working capital is usually defined as the fraction of permanent capital left available to finance the operating cycle, and the following are often distinguished:

- a) Gross working capital, understood as all capital assets and circulating capital,
- b) Net working capital, which is the difference between permanent capital and net fixed assets,
- c) Foreign working capital, which is the portion of the working capital from external capital (term loans).

The next question is whether the working capital is commensurate with the needs arising from the operating cycle. The answer to this question sets out the concept of working capital requirements for operations.

So it's not just about whether the working capital is positive or negative, but whether it is relevant to the needs in funds and whether it is well managed. In general, a working capital deficiency always causes a situation of fragility when:

- Customers are failing,
- Receivables are recovered with delay,
- Suppliers are demanding on payment terms.

It should be emphasized that the amount of the receivables reflects:

- trade policy and customer follow-up,
- the strength of the supplier - customers,
- the effectiveness of billing,
- the time allowed and the recovery,
- the solvency of the contractors.

On the other hand, the amount of trade payables reflects the effectiveness of negotiations on payment terms.

In order to better understand the true situation of the company and the elements of the diagnosis, it is fundamental to carry out the analysis on a multi-annual (dynamic) perspective in order to judge its evolution and to understand its causes.

b) Working capital requirements

Given its composition, it becomes clear that the needs in funds varies with the level of activity, ie turnover. Indeed, if activity develops, the values of purchases and sales increase in parallel and vice versa. There is, therefore, a link between the needs in funds and the turnover, which is why their ratio is generally relatively constant.

The amount of inventory, that is a component of the needs in funds, reflects the efficiency, management and production method of the company. However, some items may experience exceptional distortions when stocks are speculative, settlement delays are abnormal, or when the increase in inventories of finished goods results from unexpected sales.

Moreover, in the case of supermarkets where sales are made in cash and the delivery time is very long (90 days), these large distribution companies recover a surplus financing resource they can use elsewhere (Financing of fixed assets or term deposits). This situation has prompted some analysts to distinguish the structural WCR from the current WCR. The first is a permanent need to be covered by stable resources. The second is a seasonal or sporadic need that can be financed by supplier credit.

It should be noted that there are at least two ways to judge a needs in funds, namely:

- Analyze its evolution and that of its elements over time using the ratios of settlement time and storage duration,
- Compare the needs in funds expressed in days of turnover with that of similar and competing companies.

Finally, since the needs in funds is expressed by the difference between the needs arising from the operating cycle (financing of inventories, work-in-progress, customers, etc.) and resources from operations (suppliers and creditors We can conclude that if the change in the needs in funds is positive there is an improvement in the financial position of the company.

c) Inventory turnover

Above all, the notion of stocks should be defined. We distinguish :

- a) Optimum inventory, the ideal stock to meet all production and distribution needs by minimizing maintenance and servicing,

b) The stock of the tool, which is defined as the stock below which it is not possible to descend under penalty of risk of rupture. It naturally depends on the timing and supply contingencies, the probability of stock breakdown and their costs.

Because of the heterogeneity of their elements, stocks are a rather complex operation. Indeed, their constitution in goods, materials and supplies, semi-finished and finished products, makes it possible to affirm that there are as many rotations of stocks as of categories constituting them. The assessment of these stocks results from a set of operations, including physical inventory, identification method and evaluation (Last In First Out, First In First Out, Next In First Out, Weighted Average Cost). However, the common rotation can be written:

$$R = \text{average inventory} / \text{cost of sales}$$

d) Receivables / work in progress:

The client loan represents the company's claim on the outside. In the analyzes, it is recommended to study its rotation by family of customers. In accounts, the provision for impairment of trade receivables is an improvement in the turnover of the asset by deduction from profit or loss. This is why the auditors (internal and legal) pay particular attention to the calculation of the provision. The latter is determined in relation to the recoverability of claims. To do this, the company draws up a detailed table by age and nature of the trade receivables (after confirmation of these) and proposes the necessary provisions, having regard to the principle of prudence, to the Board of Directors, which adopts them after Commissioned auditor.

The calculation of the client in-progress is calculated as follows:

In-progress client = (clients + notes receivable and discount / sales tax incl.

e) Treasury:

Given that the financing requirement (needs in funds + working capital) is to be covered by working capital, the surplus or difference of this hedge is the cash position. At the same time, whenever the volume of activity increases, there is a need for additional financing to be filled by permanent capital. Thus, in the functional balance sheet, cash flow appears to be the result of the balance between working capital and the need in funds. Otherwise, however, we must not hurry to conclude because we must bear in mind that a negative cash flow can be due to short-term bank financing (cash facility, overdraft, discount) and This is the case of a financial management studied according to credit conditions.

Conclusion

Management indicators and ratios are always based on accounting data that depends on rules and principles with significant limits. For illustrative purposes, certain accounting data are measured at historical cost that may differ from fair value. Financial instruments, investment property, and tangible and intangible assets can all be measured at fair value. It is therefore necessary to verify in the notes to the financial statements the accounting policies applied by the company. However, for an analysis to be relevant, it is essential to clean up balance sheet information (pruning of non-securities, toxic and fictitious assets) and to restate and reclassify certain accounts. At the same time, it should be pointed out that any analysis can only reflect the situation of the object studied if it is supplemented by extra-accounting data and external information taking into account the company's environment, in the broad sense, and the circumstances in which it operates.

ⁱ The existence of a margin of maneuver in accounting makes it possible to dress up the balance sheet by quasi-subjective assessments of the amounts of depreciation, valuation of stocks and provisions. Regarding reliability, it is reported that some companies earn profits according to their national standards but losses according to GAAP standards such as the German Daimler-Benz, or the American Enron and Worldcom.

ⁱⁱ Balance sheet, profit and loss statement, cash flow statement, capital movements table.

ⁱⁱⁱ Apart from licenses, patents, rights to lease.

^{iv} The OECCA (European Public Accountants' Association) recommends excluding from sustainable resources the provisions for depreciation of inventories and receivables as well as provisions for liabilities and similar liabilities

^v Article 715 bis 20 (commercial code)

^{vi} In some companies the employees are real partners and have the right to participate in the profits.

^{vii} The notion of block is being evaluated because of changes in accounting plans (Grandjean p.650).

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