

Financial Ratios as an Analysis Tool



Eduardo Sá e Silva¹, Adalmiro Pereira², Tânia Teixeira³

^{1,2,3}ISCAP – P Porto; Ceos Member

ABSTRACT: This work aims to make a practical application of an analysis with financial ratios and then draw several conclusions. Through these, we can highlight that the company obtains guidelines for its strategy in terms of implementation and control. The different ratios support different areas and should therefore be analyzed by type of ratio. This study is an academical example, and should be seen by this point of view

KEYWORDS: financial ratios, profitability, financial statements, ROE

1. FINANCIAL RATIOS

Financial ratio analysis is the technique of comparing or relating between two or more items of financial data in a company's financial statements. It is primarily used to make comparisons over time and across different companies or industries.

Determining individual financial ratios by period and tracking the change in their values over time is done to detect trends that may be developing in a company. For example, a rising debt-to-asset ratio may indicate that a company is overburdened with debt and may eventually face default risk.

Financial ratios are grouped into the following categories:

Liquidity ratios;

Leverage rates;

Efficiency indices;

Profitability indices;

Market value indices.

2. PRACTICAL EXAMPLE OF THE USE OF RATIOS

The following data of the company XYZ are known:

Swing

Value (thousands of euros)

Synthetic Balance Sheets			
headings	Year 1	year 2	Year 3
Active			
non-current asset			
tangible fixed assets	390	500	640
current assets			
inventories	26	76	100
Customers	97	85	144
Other accounts receivable	35	61	103
Box + Dept. banking	3	two	1
	161	224	348
Total Assets	551	724	988
Equity and Liabilities			
Equity			
capital	214	214	214
Transited results	-65	7	75
Net income for the period	72	133	193
Total equity	221	354	482

Financial Ratios as an Analysis Tool

Passive			
non-current liabilities			
Financing obtained	100	24	0
current liabilities			
Providers	73	108	174
Financing obtained	59	113	180
Other bills to pay	98	125	152
	230	346	506
Total liabilities	330	370	506
Total equity and liabilities	551	724	988

Income Statement

Value (thousands of euros)

Income Statement	Year 1	Year 2	Year 3
Sales and services	588	876	1214
Cost of the sales	80	182	264
External Services	230	290	402
Impairments	34	34	30
Other expenses and losses	48	66	109
Earnings before depreciation, fin. and taxes - (EBITDA)	196	304	409
Expenses/reversals of depreciation and amortization	62	90	125
Operating income (before fin. and taxes)-(EBIT)	134	214	284
Interest and similar earnings obtained	0	7	15
Interest and similar expenses incurred	19	13	12
Earnings before tax (EBT)	115	208	287
Income tax for the period (IRC)	43	75	94
Net income for the period	72	133	193

Other data:

Year 1 Initial Inventories: €8.000.

Suppliers Beginning of year 1: €35.000.

Customer debts at the beginning of year 1: €59.000.

The Other Receivables account only has short-term items.

VAT: 20%

	Year 1	Year 2	Year 3
Activity			
Rate of change in turnover	--	49%	39%
Profitability			
Yield oper. turnover (Oper Res/Sales)	22.8%	24.4%	23.4%
Yield net of turnover (Net Result/Sales)	12.2%	15.2%	15.9%
Yield gross assets (ROA) (EBITDA/Assets)	35.6%	55.2%	56.5%
Yield chap. own (ROE) (Net Res/Equity)	32.6%	46.3%	46.2%
Contribution margin of turnover = [(Sales-(Cost of Sales+External Serv))/Sales]	47.3%	46.1%	45.1%
Operation			
Receive average (days)	40	31	28
Payment average (days)	59	64	66

Financial Ratios as an Analysis Tool

Stock average (days)	77	101	120
Treasury Cycle (Rec + Stock – Paym)	58	68	82
Indebtedness and Liquidity			
<i>Debt to Equity Ratio</i>	1.49	1.05	1.05
Indebtedness	0.60	0.51	0.51
Debt structure	0.70	0.94	1.00
Total solvency ratio	0.67	0.96	0.95
Financial autonomy (Equity/Assets)	0.40	0.49	0.49
General Liquidity	0.70	0.65	0.69
Reduced Liquidity	0.59	0.43	0.49

3. Main conclusions to be drawn from the analysis

1. Although this is an isolated analysis of a company, it is not possible to make comparisons with standards that are not available, it is possible to assess a set of conclusions about its economic and financial evolution over the three-year period.

2. It should be noted, from the outset, the positive trend of business evolution, observed from the chosen activity indicator (change in sales), which shows very significant growth.

This evolution is accompanied by most of the magnitudes (indicators) associated with production and sales.

This strong expansion appears to have taken place without any deterioration in the company's operating conditions.

3. The company's economic profitability maintained, over the period, relatively high levels, and even showed a slight trend of improvement.

The company's good ability to generate results stems from the operating profitability of sales or its net profitability. The explanation for its evolution, in the period under review, lies fundamentally in the lower increase in operating expenses compared to sales and services rendered. There is thus a slight gain in efficiency or operating conditions.

If we go down to the level of net results, these follow the favorable evolution of operating results, and still benefit from the reduction of financial charges (the weight of which is not expressive).

The indicators referring to the return on investments confirm, in essence, that the company has the capacity to sufficiently remunerate the capital invested in the assets (the cost of borrowed capital implicit in the debt is low) and that it is even particularly generous towards shareholders. Indeed, the portion that remains to remunerate equity capital appears to be very positive.

An explanation for the favorable evolution of return on equity lies in the improvement in asset turnover and return on sales, despite the opposite evolution of the level of indebtedness (reduction in financial leverage).

4. Operating ratios reflect the notorious worsening of current capital management. It appears that, about receipts, there is a continued shortening of deadlines, while in payments it is verified, at first, a slight extension of the term that was strengthened in the last period. In this way, and with the increase in average inventory terms – possibly because of growth –, contrary to any effort to improve the cash flow cycle, this cycle deteriorated sharply from the first to the second year and slightly in the third year, setting the need to finance the treasury cycle in 82 days.

5. From the point of view of financial balances, the ratios that assess the equilibrium of the assets on the balance sheet indicate that the company has some insufficiency of permanent capital, confirmed, moreover, by the general liquidity ratio, although its evolution already reflects an improving financial trend.

As mentioned, the general liquidity ratio, while maintaining stability over the period, reflects a situation of financial imbalance that can be associated with a negative working capital and insufficient permanent capital. Reduced liquidity, on the other hand, shows a somewhat erratic behavior, presenting values possibly lower than desirable.

Indebtedness levels start from a slightly unfavorable situation but end up settling at satisfactory values (thanks to the company's self-financing capacity, which doubled in the period analysed), although this lower level of indebtedness is based on a structure that privileges the short term, the which, ultimately, may indicate greater cash pressure, given the supposed demandability of short-term financing.

Finally, it seems possible to infer, in view of what has just been mentioned, that the situation will evolve towards financial rebalancing through a continued increase in the weight of equity capital, better investment coverage (permanent capital / investments) and growing autonomy financial. These positive contributions derive from the company's ability to generate funds internally. In this way, the company has the capacity to finance its growth and, therefore, guarantee long-term balance.

CONCLUSION

The use of financial ratios allows to see a general picture of a company situation. All together must be analyze, but we should keep in mind that liquidity is very important because represent cash available. The main limitation of this work is the academic view and one suggestion is used this in a true company to analyze.

Financial Ratios as an Analysis Tool

REFERENCES

- 1) Menezes, João (1999) *Princípios de Gestão Financeira*, Editorial Presença
- 2) Moreira, José (1999) *Análise Financeira de Empresa*, Associação da Bolsa de Derivados do Porto
- 3) Neves, J. (2006) *Análise Financeira – Técnicas Fundamentais*, Texto Editora
- 4) Peyrard, Josette (1992) *Gestão Financeira com exercícios*, Áreas Editora
- 5) Silva, E. (2016) *Introdução às Finanças*, Vida Económica



There is an Open Access article, distributed under the term of the Creative Commons Attribution–Non Commercial 4.0 International (CC BY-NC 4.0) (<https://creativecommons.org/licenses/by-nc/4.0/>), which permits remixing, adapting and building upon the work for non-commercial use, provided the original work is properly cited.