



Department of Economics and Business
Chair of Introduction to Business Economics

**The analysis of company performance:
a comparison between Trenitalia's and NTV's
performance for the period 2010-2013**

Supervisor

Prof. Riccardo Tiscini

Candidate

Giacomo Bergamo

178151

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1) INTRODUCTION

The documents that make up the financial statement aim to synthesis the financial and economic operations that have characterized the life of a company during the period of concern. Financial statements are a highly precious tool, both for those whose interests lie within the company and those outside it, as a source of information on past performance and future perspectives. In this way, a financial statement becomes a fundamental synthesis through which to understand the causes that have, during a given period, determined specific situations related to assets and liabilities, and income and expenditure, as well as changes to the structure of a company.

It is for these reasons that it is necessary to review the way balance sheets and income statements are drawn up both in terms of form and structure, as they do not currently allow us to reach the aforementioned objectives. This problem can easily be solved through the application of a series of techniques for 'financial statement analysis' by means of which we can rework the data provided in such a way as to make them better suited for the purpose of analysis by indices. Through such a procedure accounts can be reclassified in such a way as to highlight certain aggregates that are considered to be more significant and that, following those points of reference dictated by accounting principles (both national and international), would not be identifiable in accounts as generally published. The analysis of a financial statement by means of economic and financial indicators makes it possible to consider and evaluate with care the history of a company and its current state, then to draw up credible projections for its future.

This work aims to explain the importance, the use and the functions of balance sheet and income statement analysis based on indices, which for a company represents the best set of tools for a better control of how it is managed, so as to then be able to evaluate its future.

This is a type of analysis that is made up of a range of techniques for the way data are read, elaborated and interpreted, so making it possible to single out a series of indices for the measurement of the economic and financial equilibrium of a company. Any attempt to measure a company's future prospects must take into consideration its past and needs to be based on an evaluation of changes that may have taken place at a

macroeconomic level and the evolution of the competitive arena.

The work that follows has been developed in the following way: the initial part gives a general overview of the procedures available for the purpose of analyzing financial statement; in the main part the focus shifts more towards those specific techniques that have been chosen for application for this specific piece of research, in other words the study of company indices.

The second chapter is entirely devoted to the analysis of the performance of the only two companies that work in the high-speed sector of the Italian railway market, namely Trenitalia and NTV, for the period 2010-2013. Following a brief presentation of the companies and how they are organized, we move on to an actual application of those tools for technical and quantitative analysis first treated from a theoretical point of view.

In conclusion, having in the preceding chapter illustrated the performance of the two companies in 2010-2013, we will attempt to hypothesis their future performance and hence their respective share of the high-speed railway market.

2) THE ANALYSIS OF COMPANY PERFORMANCE

2.1 Company performance

Analyzing performance is one of the most important tasks for a company, as it aims to assess how well the company is able to reach its goals. This requires a study of the processes which act as indicators of the economic and financial equilibrium of the company, starting with an analysis of the balance sheet with particular focus on profitability, liquidity and solvency of the company.

When talking about company performance we need to define the objectives to be achieved, as this will allow us to identify the right mechanism with which to measure that performance.

The main aim of a company is no longer identified in terms of maximization of profit based on classical economic theory, but is now based on the theory of creation and diffusion of value. In other words, the concept of profit has been replaced by that of economic value¹.

A company creates value when its return on investments is systematically greater than the cost of raising capital.

In order to be able to assess company performance, it becomes crucial to accurately measure these two parameters: return on company investment and the cost for financing the company.

Yet the data contained in balance sheets are not entirely suitable as tools with which to measure company investment, without first being elaborated.

2.2 The conditions of economic and financial equilibrium for value creation

For shareholders, the creation of value is based on the company's ability to generate a return on the capital that they have invested that is greater than the cost of that same investment. This is essentially a function of the future returns the company manages to generate and the measure of risk posed by the company.

¹ De Sarno M, "*Misurazione e comunicazione dei valori aziendali*", ed. Giappichelli, 2005, e Di Lazzaro F., "*La performance del valore per l'analisi aziendale*", ed. Giappichelli, 2003.

However, the profit generated by the company is an incomplete indicator of company performance, which can only be of use if we also consider the amount of capital invested to achieve that return and the measure of risk involved.

Companies must however respect the conditions for economic and financial equilibrium if they are to generate economic value.

Economic equilibrium is the capability to generate satisfactory profit: for this reason, it attains to the income/costs dynamic. In terms of economic formula it can be expressed as the difference between revenue and costs in a year ($R-C$) that must at least be equal to the profit the shareholders (Π) consider satisfactory, which in turn depends on the product between shareholders' capital and an equitable rate of return (that is the opportunity cost of risk capital), which corresponds to the rate of return that shareholders could gain from having investments with the same degree of risk.

An analysis of economic equilibrium needs to be referred to the medium-long term and is what we could define as a profitability analysis.

Financial equilibrium is the capability to address the obligations in terms of payments the company has committed to, and is influenced by revenue/costs dynamics.

Financial equilibrium exists when cash outgoings (O) can be satisfied in terms of liquidity extant (L) and cash income (I). Such conditions needs to be satisfied both in the short term (liquidity), and in relation to medium-long term (solvency), in other words at any time in a given financial year².

2.3 The presentation of the balance sheet, and income statement for the analysis of performance

The end of year financial statement³ is the main source of information for the economic-financial analysis of a company's performance. However, the way the document is structured and the amount of information it contains may not always be in line with the aims of the analysis of the performance of that company, but at the same time these

² Fiori, Tiscini, *"Economia Aziendale"*, Egea, 2014.

³ *"Financial Statement is a declaration of what is believed to be true about an enterprise, communicated in terms of monetary units"*. Williams, Haka, Bettner, Carcello, *"Financial and Managerial Accounting"*, 17th Edition Mc Graw Hill, 2014.

aspects represent the point of departure and the most important source of data and information.

Any company performance analysis must therefore begin with a reclassification of the balance sheet⁴ and then of the income statement⁵.

2.3.1 Financial reclassification of the balance sheet

In order to analyze the financial equilibrium, the financial implications of the sources of the company's capital have to be considered.

From this perspective, the use of capital generates cash income as, thanks to the way it is managed, it will return in the form of liquidity either directly, in the form of inventories and receivables, or indirectly through its use in the production process (such as residue raw materials), or production plants (assets). In the same way, the sources generate cash outgoings, because within the ambit of management cycles there will be debits in the form of payments (such as financial and commercial debts), or in an indirect form, such as covering the costs for services to be rendered (such as in the case of unearned revenue). In synthesis, the analysis needs to focus on the time money is locked down before it returns in the form of liquidity or until such time as liabilities are extinguished.

For the purpose of financial equilibrium it is thus fundamental for the return of liquidity to be inline with the timing of the extinction of the related sources.

Such assets are based on the time needed to achieve a return in terms of liquidity⁶ as compared to the average time of a operating cycle⁷ and/or the duration of conventional

⁴ “Balance sheet is a financial statement that describes a company's financial position (types and amount of assets, liabilities, and equity) at a point in time”. John Wild, “Financial Accounting Fundamentals”, McGraw-Hill, 2009.

⁵ “Income statement is a financial statement that describes a company's revenues and expenses along with the resulting net income or loss over a period of time due to earnings activities”. John Wild, “Financial Accounting Fundamentals”, McGraw-Hill, 2009.

⁶ Terzani S, “Le comparazioni di bilancio”, CEDAM ed, Padova, 1996.

⁷ Operating cycle: Series of transactions through which a business generates its revenue and its cash receipts from customers. Williams, Haka, Bettner, Carcello, “Financial and Managerial Accounting”, 17th Edition Mc Graw Hill, 2014.

criteria (12 months), for those not strictly linked to a operating cycle such as financial activities.

We can so define these assets as:

- non current assets, those for which the time it takes for them to return in form of liquidity is greater than the average duration of a management cycle and for those assets that become liquid in a period longer than 12 months;
- current assets, those for which the time it takes for them to return in form of liquidity falls within the average period of a management cycle and for those assets that become liquid in under 12 months.

The liabilities can equally be defined as:

- equity, which has no expiry date because there is no obligation to return it;
- non current liabilities, the repayment terms for which extend beyond an average management cycle or more than 12 months;
- current liabilities, which are extinguished within an average management cycle or less than 12 months.

Figure 1: Financial reclassification of the balance sheet

| Assets | | Liabilities | |
|---------------------------------|---|--------------------------------|--|
| | | Equity | Shareholders' Equity |
| Fixed non current assets | Tangible, Intangible, Financial | Non Current Liabilities | Long-term financial debt, Long term trade payables |
| | | Current Liabilities | Short-term financial debt, Short-term trade payables |
| Current Assets | Inventory, Trade receivables, Liquidity | | |

Source: Tiscini, Introduction to Business Economics, Teaching Materials, 2012.

2.3.2 The economic classification of a balance sheet

The way a balance sheet needs to be reclassified for the purpose of analyzing profitability is based on the concept of a balance of economic aspects and profitability.

Profitability expresses the way capital produces income and is expressed as the ratio between income and the capital utilized to produce that income:

$$P = \frac{\text{Profit}}{\text{Capital}}$$

For an accurate measurement of profitability it is necessary for both numerator and denominator to be “coherent”, in the sense that the profit at the numerator is the result of the capital invested at the denominator⁹.

The analysis of profitability is thus conducted comparing the data contained in the balance sheet with that in the income statement once both have been reclassified on the basis of some principles that refer to the economic aspect of management.

In synthesis this is a matter of looking where capital is invested and how much it earns, and what and the sources of finance for investment purposes and in what measure they are remunerated.

We will first look at the criteria for the reclassification of balance sheet and then at the criteria for the income statement.

Asset capital produces earnings, but it is divided into two distinct categories on the basis of the relation they have with production:

- Overall (operating) profitability, if it generates profit only if combined with a system for the management of activities linked to production (tangibles and intangibles, residual stock, receivables);
- Specific profitability, if it generates profit that can also be considered singularly (financial fixed assets, liquidity, financial assets).

The sources of capital that constitute liabilities have the common characteristic of generating costs and therefore they are subdivided into two categories depending on the type of cost they generate:

- explicit costs, if they derive from financing and need to be explicitly remunerated as indicated in the income statement (shareholders' capital and borrowings);

⁸ Caramiello, Di Lazzaro, Fiori, “*Indici di bilancio*”, Giuffrè, Ed. 2003.

⁹ *ibidem*.

- implicit costs, if they derive from purchases or sales (i.e. operational) and do not entail an explicit remuneration recorded in the income statement (trade payables and unearned revenues).

Figure 2: The economic reclassification of a balance sheet

| Resources | | Sources | |
|------------------------------|-----------|--------------------------|-----------------|
| - Operating assets: | tangible | - Equity | |
| assets, intangible | assets, | - Financial liabilities: | financial |
| inventory, trade receivables | | debts | |
| - Financial assets: | financial | - Trade liabilities: | trade payables, |
| assets, liquidity | | unearned revenues | |

Source: Tiscini, Introduction to Business Economics, Teaching Materials, 2012.

The reclassification model is also known as functional, in other words pertinent to management, as it distinguishes uses and sources in terms of the management area they pertain to.

However, this reclassification model should be considered as an intermediate representation as it does not show final aggregates for the analysis of profitability.

As said, in terms of usage it is a matter of seeing where capital is invested, and how much it earns; when looking at sources, what are the sources of investment capital and how much do they cost.

Reclassified balance sheet must therefore show an aggregate of values that indicates the operating capital it was necessary to invest so as to manage production.

Capital invested for the running of a company will thus be given by the following algebraic formula:

$$\text{Net Operating Invested Capital (NOIC)} = \text{Fixed assets} + \text{Inventory} + \text{trade receivables} - (\text{Trade payables} + \text{Unearned revenues})^{10}$$

¹⁰ Dallochio, Salvi, "Finanza D'azienda", Egea, 2006.

In the same way, as regards financial management, in reclassifying the balance sheet for an analysis of profitability it is preferable to consider a company's net financial position as financial debts less financial fixed assets and liquidity:

$$\text{Net Financial Position (NFP)} = \text{Financial debts} - (\text{Financial Fixed Assets} + \text{Liquidity})^{11}$$

The purpose of this aggregation is to show the net effect of financial decisions, or in other words the effect of the taking on of such debt on profitability.

The following table shows the economic reclassification of the balance sheet.

Figure 2.1: The economic reclassification of a balance sheet

| INVESTMENTS | | SOURCES | |
|--|---|---|--|
| NET OPERATING INVESTED CAPITAL (NOIC) | Fixed Assets + Inventory + Trade receivables - Trade payables - Unearned revenues | EQUITY(E) | Shareholders' Equity |
| | | NET FINANCIAL POSITION (NFP) | Financial Debts - Liquidity (& Financial Current Assets) - Financial Fixed Assets |

Source: Tiscini, Introduction to Business Economics, Teaching Materials, 2012.

2.3.3 The reclassification of the income statement for the analysis of profitability

The reclassification of the income statement is tabulated so as to show how income is generated, highlighting intermediate margins.

In synthesis, we have the following aggregates in terms of income and costs:

- Income and operative costs that are those generated by net operative invested capital (in other words the productive activities that have determined it);
- Income and financial costs, which are those generated by financial investment and financial debt, in other words the net financial position;

¹¹ ibidem.

- Income and extraordinary costs, in other words those that are not part of routine management, and are thus neither linked to operative management nor financial management;
- Costs and occasional tax earnings, related to taxes on earnings.

The table below shows a reclassified Income Statement¹².

Figure 3: Reclassified Income statement

| |
|--|
| Sales |
| - variable costs (raw mat. & other) |
| =contribution margin |
| - fixed services & employee costs |
| =EBITDA |
| - Depreciation and Amortization |
| =EBIT |
| - Net interests expense (revenue) |
| =EBT |
| - Income Taxes |
| =Net Profit/ Loss |

Source: Tiscini, Introduction to Business Economics, Teaching Materials, 2012.

Having reclassified the financial statement for the purpose of analyzing a company's performance, we will go into greater detail, focusing on profitability, liquidity and solvency.

2.4 Profitability

The analysis of a company's profitability is the major indicator of the equilibrium in terms of its economics and indicates its ability to generate wealth and remunerate invested capital.

¹² Bandettini, *"Il Bilancio di esercizio"*, CEDAM ed, Padova, 2004.

Firstly we will verify the final result in terms of residual profitability for shareholders, then to analyze the causes that determine this, that can pertain to uncharacteristic, operative or financial management.

Only a complete analysis of the various profit factors of a company will allow us to judge its economic equilibrium, which would otherwise be quite incomprehensible.

2.4.1 Profitability for shareholders and the cost of risk capital

Let's consider return on risk capital injected into a company by the owner or partners. To express such profitability we need an index that can compare income earned in a given tax year with the amount of risk capital invested.

For shareholders, profitability is given by the ratio between profit for shareholders and the amount of capital invested in the company by those shareholders, in other words equity.

$$\textbf{Return on Equity (ROE)} = \frac{\textit{Profit}_{13}}{\textit{Equity}}$$

As said the profitability index (r), the EBIT and the denominator have to be “coherent”, in the sense that profit needs to be compared with the factor that produced it and hence the ratio of Equity to Profit. And so a better version of the formula would be the following:

$$\textbf{ROE}^{14} = \frac{\textit{Profit}}{(\textit{Equity}-\textit{Profit})}.$$

At times, instead of net profit, it is necessary to make reference to gross profit or EBT.

¹³ Williams, Haka, Bettner, Carcello, Financial and Managerial Accounting, 17th Edition Mc Graw Hill, 2014. Or Cacciafesta F., “*Matematica Finanziaria (classica e moderna) per i corsi triennali*”, Giappichelli ed, Torino, 2006.

¹⁴ Fiori, Tiscini, “*Economia Aziendale*”, Egea, 2014.

$$\text{Gross ROE} = \frac{EBT^{15}}{Equity^{16}}$$

The utility of this gross profitability index becomes manifest every time that we want to exclude the effect of tax that weighs upon a given year. This for example happens when we analyze the balance sheets of two or more years of one company or more companies when we want to isolate the effects due to the tax rates for the market they work in.

Furthermore, the ROE can be calculated gross of those components that are unexpected and non recurring that, because they will not happen again, need to be neutralized for the purpose of estimating the normal profitability of a company.

$$ROE \text{ norm.}^{17} = \frac{\text{Profit norm.}}{Equity}$$

Lastly, for it to be satisfactory, ROE should at least be equal to the profitability that the shareholders can obtain investing their capital in other activities that carry an equal risk, making of a fair ROE the index that best represents the opportunity cost of risk capital.¹⁸

The FAIR ROE is given by the sum of the following aggregates:

- risk free rate investments, such as medium- to long-term government bonds of a state that has good rating (4%).
- the average risk premium that shareholder investment gives over risk free investments. The market risk premium is calculated on the basis of statistical studies conducted over very long periods (30/40 years) that compare returns on shares against government bonds (5%-6% in Italy).
- a reward for commercial risk that takes into consideration the investment risk related to the specific sector and company. There are some sectors that are less risky for which

¹⁵ *EBT is the Earnings Before Taxes.*

¹⁶ *Ibidem.*

¹⁷ Fiori, Tiscini, “*Economia Aziendale*”, Egea, 2014.

¹⁸ Beretta S., “*Valutazione dei rischi e controllo interno*”, Università Bocconi ed., Milano, 2004.

the risk premium is negative (banks, real-estate, insurance), and others that are more at risk (biotechnology, commerce).

The FAIR ROE is thus the capital opportunity cost for shareholders, and so:

- If the figure is less than a fair ROE, company performance is unsatisfactory: it does not generate value for share holders and does not attract other investors;
- Above a fair ROE, a company creates value for its shareholders, guaranteeing them a profit that is greater than that for other investments with equal risk.

The cost of one's own capital can be estimated using a method known as the "build up approach", for which the cost of one's own sources can be estimated as:

$$K_e = r_f + s^{19}$$

- K_e is the cost of one's own capital;
- r_f is the risk free rate
- s is the risk premium calculated with what is known as the CAPM (capital asset pricing model). According to the CAPM: $s = \beta(R_m - r_f)$, where β is the degree of operational and financial risk for the company as a whole and $(R_m - r_f)$ is the market premium given by the difference between expected median profitability of the stock exchange e that of risk free investments (R_f).

2.4.1.1 Indexes derivable from the ROE

Annual profit, in general, is composed of two fundamental parts:

- a share put to reserve fund;
- a share distributed as dividend.

From the profitability of risk capital can thus be derived two further indexes: one based on the share of profit to be set aside as reserve and the other on the share of profit to be distributed as dividend.

The first index indicates how the company builds reserves, and thus to what extent it is able to self-finance itself, known as:

¹⁹ Brealey, R.A., S.C. Myers and F. Allen, "Principles of Corporate Finance", Global Edition, 11/e, McGraw-Hill, Europe, Middle East and Africa, 2013.

$$Taf^{20} = \frac{\textit{Profit}(\textit{ris})}{\textit{Equity}}$$

The second index measures tendency towards remuneration, and hence dividend distribution, and is known as:

$$Td^{21} = \frac{\textit{Profit}(\textit{d})}{\textit{Equity}}$$

The two indexes derived from the ROE are complementary; hence their sum will give us the ROE.

2.4.2 The profitability of investments and the weighted average cost of capital

Often, in management analysis, we need to know another factor: what is the capacity of attraction of capital in general, be it risk capital or credit.

In other words, we will want to know how much the capital invested for the running of the company pays: the whole of capital invested, both that invested by shareholders and that loaned by third parties.

The index we derive from this is known as the ROI (Return on Investment), and indicates the return on invested capital.

Profitability is thus given by the ratio between the EBIT(Earnings Before Interest and Taxes) and Net Operating Investment Capital:

$$ROI^{22} = \frac{\textit{EBIT}}{\textit{NOIC}}$$

In any case, with this formula we express profitability as a percentage of invested capital for the areas that are typical of company management by all those who have made investments (risk and credit).

The reclassified income statement gives the amount of operating profit, while capital investment can be deduced with the economic criterion from the reclassified balance sheet.

²⁰ Caramiello, Di Lazzaro, Fiori, “*Indici di bilancio*”, Giuffrè, ed. 2003.

²¹ Ibidem.

²² Bozzolan S, “*Introduction to business economics*”, McGraw-Hill, 2014.

This means that operating profits must relate to typical management conditions, in other words free of all values that may pertain to complementary areas.

Likewise, invested capital must be freed of that part for which profits fall within complementary areas.

ROI will be satisfactory if, given the absence of any effects related to anything extraordinary, it is capable of, once taxes have been deducted, giving an equitable ROE.

$$FAIR ROI^{23} = \frac{FAIR ROE}{(1 - t)}$$

Once we have identified a company's ability to create value, in order to be able to establish if this return on investment is acceptable we need to compare it to the reference standards that are coherent and have significance. In the case of invested profits this parameter is based on the weighted average cost of capital (WACC), assuming that a company's operational profit must at least cover the cost of the sources of finance, both in terms of debit and of capital risk, which have made it possible for the company to produce such profit.

The WACC is definable as the weighted average of the costs of each source of finance used (own capital and third party capital). It is expressed by the following formula:

$$WACC^{24} = Ke * \left[\frac{E}{(D + E)} \right] + Kd * (1 - t) * \left[\frac{D}{(D + E)} \right]$$

where:

- Ke is the cost of equity, as calculated before;
- E/(E+D) represents the share of equity in the capital structure;
- Kd*(1-t) represents the after tax cost of long-term debt, ie the return required by debt holders to compensate them for the company's assessed credit risk to be determined using as a reference parameter the cost of financial debt to be

²³ Caramiello, Di Lazzaro, Fiori, “*Indici di bilancio*”, Giuffrè, ed. 2003.

²⁴ Brealey, R.A., S.C. Myers and F. Allen, “*Principles of Corporate Finance*”, Global Edition, 11/e, McGraw-Hill, Europe, Middle East and Africa, 2013.

estimated; in other words using as proxy the cost of company finance with similar risks;

- $D/(E+D)$ represents the share of debt in the capital structure.

Operational management is the most important, as a company is healthy only when its profitability derives mainly from operative investments. It thus becomes necessary to examine in detail the factors that determine operational management.

The components of ROI can be expressed as follows:

$$ROI = \frac{(Sales - Operating costs)}{(Fixed assets + Net Working Capital Cycle)}$$

where:

$$\begin{aligned} Net Working Capital Cycle = \\ = Inventory + Trade receivables - Trade payables \\ - Unearned revenues \end{aligned}$$

In synthesis, the ROI depends on the following factors:

- Relation between sales revenue and operating income (operating leverage degree(OLD) effect);
- Operating costs (efficiency);
- Fixed investment (rotation of fixed assets);
- Working capital cycle.

These four elements, and how they relate to profitability, will be illustrated below.

2.4.2.1 How to calculate operating profit: operating leverage degree (OLD) and capital turnover

As said, one of the determining factors is operating leverage degree's (OLD) effect on EBIT which indicates how sensitive operating income (EBIT) is to variations in amount of sales.

The level of operating leverage degree (OLD) is measured with the ratio of variations in percentage of operating income (EBIT) and fluctuation of percentage of sales.

$$OLD = \frac{\Delta\% \text{ operating income}}{\Delta\% \text{ sales}} \quad \text{or} \quad OLD = \frac{\text{contribution margin}}{\text{operating income}}$$

Operating leverage degree depends on how costs are structured and hence their differentiation between above and below the line costs, in other words between fixed and variable.

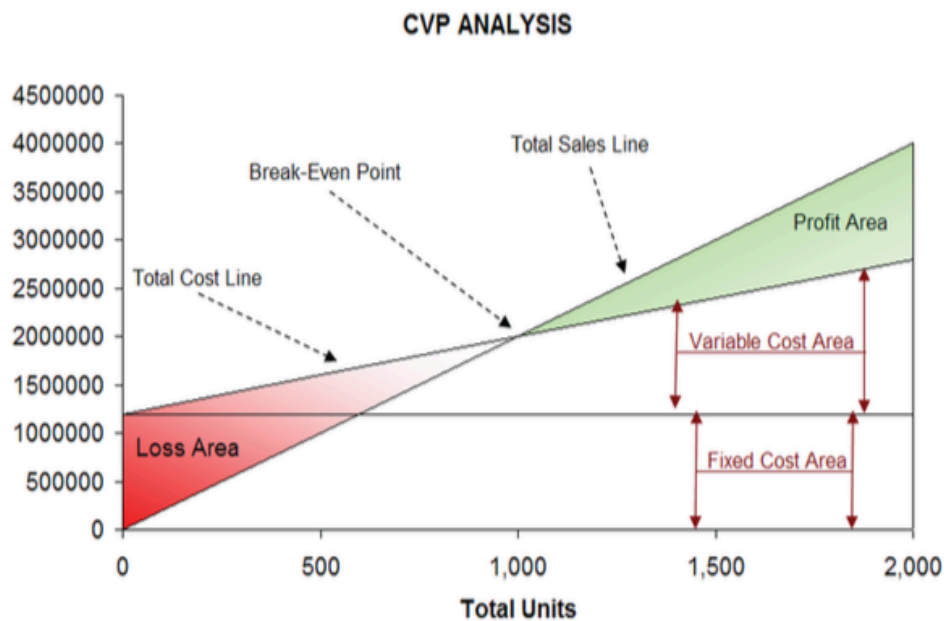
The variable costs are those that fluctuate at the level of sales and production ($Y=bx$).

Fixed costs are instead those that do not vary in relation to sales and production costs, but will change step by step, going up when it becomes necessary to increase production capacity and down when it is possible to cut production capacity $Y=A$.

Total costs are thus equal to fixed costs, independent of production and sales volumes (q), and variable costs, tied to quantity in relation to variable cost (v). $Y=a+bx$.

Revenue is related to quantity as a function of unit price (p). $Y=p*q$

Figure 4: Representation of costs and revenues and the break-even point.



Source: Larry M. Walter, Christopher J. Skousen, Cost analysis: Managerial and Cost Accounting, 2010.

The relation between revenue and costs evidences that when volume of production and sales are low a company will make a loss, because the contribution to margin (the difference between revenues and variable costs) will not be enough to cover fixed costs. As production and sales rise, what is known as the breakeven point will be reached, when revenues and total costs will be equal. Beyond this point a company will start

making profits, which will grow exponentially as production and sales increase, by reason of additional units sold ($p-v$), which give additional profit (or reduced loss) for each unit produced and sold²⁵.

Posing income to be equal to costs, the quantity which will give us a break-even point is: $TR = TC$

$$p * q = CF + CV$$

$$p * q = CF + v * q$$

$$q * (p - v) = CF$$

$$q = CF / (p - v)^{26},$$

where ($p-v$) is contribution margin.

After having analyzed cost dynamics and how these affect profitability, we come back to the definition of operating leverage and analyze its relation to fixed and variable costs.

Operating leverage is an operative risk indicator, as it expresses the volatility of the EBIT as to variations in the volume of sales.

A company with higher fixed costs has a greater operating leverage and hence operating risk but higher contribution margin, which will be higher with respect to those with a low OLD since variable costs are lower.

Consequently, in companies where operating leverage is high the principle critical variable on which profit depends, but also the risk of loss, is sales volume.

On the other hand, companies with low operating leverage are those with low fixed and high variable costs, so their critical variable is margin rather than volume of sales.

The operating leverage index can be considered valid only if the two following conditions are verified:

- There are no variations in production capacity such that could cause jumps in fixed costs;
- There are no variations in terms of efficiency, in other words variations in fixed costs or the incidence of variable costs.

²⁵ E.Monti, “*Manuale di finanza per le imprese*”, ISEDI 2009.

²⁶ Fiori, Tiscini, “*Economia Aziendale*”, Egea, 2014.

Such variations would not affect the result of our reasoning but would simply introduce further variables to the model under examination.

2.4.2.2 Efficiency, turnover of fixed assets and working capital cycle

As already said, the other variables that affect operating profit are:

- Efficiency, with reference to fixed costs and to what extent variable costs have an impact; lack of efficiency determines a drop in profitability;
- Fixed assets turnover, which refers to the amount of fixed operating investment as compared to volume of sales.

Fixed assets turnover is given by the ratio of sales revenue to fixed assets ($FAT = \text{Sales} / \text{Fixed assets}$) and the result needs to be compared with the sector's median index.

Overinvestment will determine lower profits.

- Working capital cycle, the amount of operating capital in circulation as compared to the volume of sales is linked to the average amount of time stock lies idle, when customers pay and when suppliers need to be paid; the longer the cash cycle the less profitable will a company be.

2.4.2.3 The division of ROI into ROS and Capital Turnover

Operating profit is composed of three logical steps, in part simultaneous, starting with the need to employ operating capital, then to develop a suitable amount of revenue and finally producing profit by opportunely controlling production costs.

Introducing the variable that is sales revenue, we can split the ROI into two indices that link the three steps indicated above:

- The first of these logical steps relates sales revenue to net operating investment capital (NOIC) and indicates the ability to obtain revenue based on investment. The index that derives from this is **Capital Turnover**, considered main indicator of cost control;
- The second logical step relates operating income to sales revenue and indicates the capability to generate profit in terms of volume of revenue. The index we derive from this is the Return On Sales (**ROS**), considered the main indicator of sales development;

$$ROI = \frac{EBIT}{NOIC} = \left(\frac{EBIT}{SALES} \right) * \left(\frac{SALES}{NOIC} \right)$$

Where

$$ROS = \frac{EBIT}{SALES}^{27} \text{ and } CT = \frac{SALES}{NOIC}^{28}$$

Capital turnover will thus depend on sales, operating fixed assets and net working capital cycle. It should be remembered that the NOIC is given by the sum of fixed assets and net working capital cycle.

The ROS will instead depend on sales revenue and operating costs.

Thus, analyzing the performance of the two indices we can understand what generates profitability.

In particular:

- If ROI varies on the basis of a variation of the synchronicity of both the CT and ROS, very probably this effect will be due to a variation of sales, that affects both indices;
- If ROI varies above all due to ROS, this variation will be due to either an increase or a reduction in operating costs, which only affect ROS;
- If ROI varies mainly due to variations in CT, it is probable that this will be due to an increase or decrease operating assets and operating circulating capital.

To conclude therefore, the ROI is affected by:

- The effect of the operating leverage degree induced by variation in sales (OLD= $\Delta\%$ operating income/ $\Delta\%$ sales), by means of return on sales (ROS) and capital turnover (CT);
- Efficiency in terms of ROS, in that it affects net operating margins against sales;
- Fixed assets turnover is instead affected by capital turnover (CT);
- Working capital cycle is affected by the capital turnover (CT).

²⁷ Cavalieri E., “*Economia aziendale*”, Vol. I, Roma, Giappichelli, 2010.

²⁸ Ibidem.

2.4.3 The effect of the financial structure on the creation of value and financial leverage

The effect of financial leverage is linked to the effect that financial choices in terms of indebtedness or financial investment in general will have on profitability created for shareholders, and thus on the ROE.

Such effects mainly depend on the relationship between the net financial position of a company and net equity, the so-called DEBT/EQUITY ratio and the cost of the net financial position (*i*).

It is easy enough to demonstrate the following relationship that subsists between: ROE, ROI, *i*, D/E.

Assumption: We will consider absence of financial Investment, so that Financial Position is equal to Financial Debt: (NFD=D)

$$\begin{aligned} ROE \text{ (before taxes)} &= \\ EBT/E &= (EBIT - NFE)/E = \{(ROI * NOIC) - (i * NFP)\}/E \\ &= \{ROI * (E + NFP) - (i * NFP)\}/E = \\ &= ROI + \{(ROI * (NFP/E) - (i * (NFP/E))\} = \mathbf{ROI} + \{(\mathbf{ROI} - i) * (NFP/E)\}^{29} \end{aligned}$$

With taxation the effect changes as follows:

$$ROE = ROE(bt) * (1 - t) = \{\mathbf{ROI} + (\mathbf{ROI} - i) * NFP/E\} * (1 - t)$$

When the ROI is greater than (*i*), the shareholders earn on the spread (ROI-*i*) for every euro of indebtedness. Financial leverage will be equal to spread (ROI-*i*), multiplied by the debt/equity quotient: the shareholders earn (or lose) the spread (ROI-*i*) on the euros worth of debt that exist as compared to each euro of net equity.

Financial leverage is thus given by: (ROI-*i*)*D/E.

All conditions being equal we will get the following effects on the ROE:

- An increase in ROI will have a positive effect on ROE;
- An increase in *i* will have a negative effect on ROE;
- An increase in the quotient D/E will have positive effects on ROE, if ROI>*i*; will have negative effects on ROE if ROI<*i*:

We can thus say that if the ROI is greater than the cost of debt, shareholders will find advantage in financing a company's development with borrowed capital (D).

²⁹ Fiori, Tiscini, "Economia Aziendale", Egea, 2014.

Should the situation be the contrary, in other words if the ROI is less than the cost of debt, it is best to do the opposite, in other words finance the company through capital risk.

Financial leverage is an indicator that shows a company's measure of financial risk.

Indebtedness can be a powerful lever for simultaneously obtaining elevated growth rates and high returns for shareholders, but with considerable financial risk.

At times, excessive debt can be the root cause of an inversion in terms of financial leverage ($ROI < i$), whereby shareholders' margins will tend to be eroded rapidly to the point that the situation generates serious losses, also in the presence of positive results for the company.³⁰

Furthermore, even in cases where the ROI is greater than i , an excessive exploitation of financial leverage could compromise a company's solvency.

Having completed the analysis of a company's profitability and hence the analysis of a company's economic equilibrium, we will now consider the aspect of financial equilibrium of a company from the point of view of solvency and liquidity.

2.5 Solvency analysis

Financial equilibrium, based on a referenced period of time, can be evaluated as a function of the solvency or liquidity of a company.

An analysis of solvency concerns medium to long-term financial equilibrium, in other words a company's ability to manage correctly revenue and costs.

Therefore, a company is considered solid if it is capable of preserving financial equilibrium in the medium-long term, overcoming short-term setbacks.

The elements that need to be analyzed and constantly monitored during the financial year are:

- How fixed assets have been financed;
- The extent of financial autonomy, or indebtedness.

³⁰ E.Monti, *"Manuale di finanza per le imprese"*, ISEDI 2009.

2.5.1 How fixed assets are financed

For the first aspect, it is necessary to ascertain that fixed assets (funds that return to liquidity in the medium to long term) are not financed short-term³¹.

An analysis of correlations between the way funds are used and sources of finance is based on the structure of a company's assets and liabilities that derives from a financial reclassification of the balance sheet.

The various methods of financing this include equity, non-current liabilities and current liabilities. These need to be analyzed from the point of view of autonomy of choice in terms of reinvestment and risk of insolvency.

Equity is the source of finance that confers the greatest solvency to a company, in that flow derives from the return in the form of liquidity of investment and doesn't have to be paid back to lenders; this allows a company to be fully autonomous in choosing how to reinvest. Furthermore, the effect on the risk of insolvency is null, as equity is not a source that entails predetermined paybacks.

Non-current liabilities are however in practice a normal and physiological complement of equity for the purpose of financing medium to long-term projects, as, even if it reduces the measure of solvency, it allows the company to grow more, whilst still remaining reasonably solvent. This happens only when the expiry dates for reimbursement match the return to liquidity of the investment. In such case, cash flow based on the return to a state of liquidity of the investment must go to repay loans.

The company is thus not autonomous in its decision as to how to reinvest, for which it needs to set up new loans. Furthermore, the risk of insolvency increases by effect of the obligations taken on, even if the synchronization of timing between sources and uses should avoid any serious risk of insolvency.

Lastly, what must be absolutely avoided is financing a company's needs through current liabilities, as in such a case a company would have to extinguish loans before the investments return to liquidity³².

Some balance sheet indicators allow verifying easily how fixed assets are financed.

³¹ Caramiello, Di Lazzaro, Fiori, *"Indici di bilancio"*, Giuffrè, ed. 2003.

³² Cavalieri E., *"Economia aziendale"*, Vol. I, Roma, Giappichelli, 2010.

To verify how much of the fixed assets are financed by equity, one can calculate the ratio between net equity (E) and fixed assets (FA), known as fixed assets financing ratios 1: E/FA ³³.

If E/FA is greater than 1, then finance is done integrally through fixed assets.

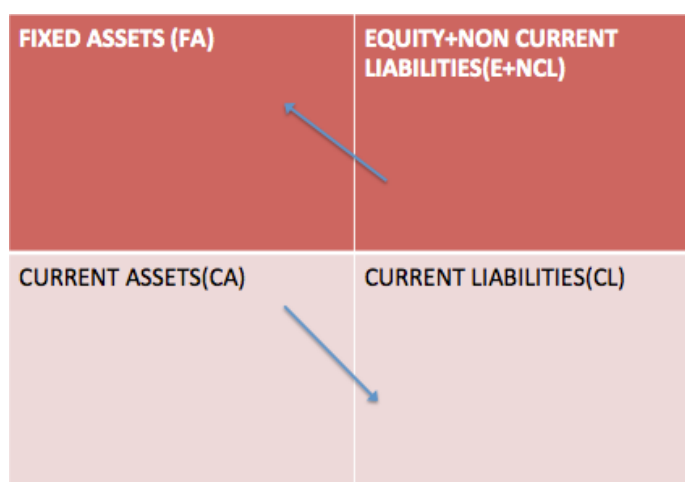
However, a satisfactory value for this ratio is 0.6-0.7, a situation whereby nets assets finance fixed assets for 60-70%.³⁴

It is more important to verify the residual part of fixed assets is financed through non-current liabilities, by means of the fixed assets financing ratio 2:

$$(E + NCL)/FA.^{35}$$

The index should be greater than 1, and in such case the financing of fixed assets is entirely covered by medium to long-term sources and excludes the possibility of assets needing to be covered by short-term loans.

Figure 5: How fixed assets are financed



Source: Tiscini, Introduction to Business Economics, Teaching Materials, 2012.

³³ Williams, Haka, Bettner, Carcello, "Financial and Managerial Accounting", 17th Edition Mc Graw Hill, 2014.

³⁴ Caramiello, Di Lazzaro, Fiori, "Indici di bilancio", Giuffrè, ed. 2003.

³⁵ Ibidem.

2.5.2 The measure of financial autonomy

Another significant aspect for the analysis of solvency is financial autonomy of a company, which depends on the relationship between lenders, or external sources of cash (i.e. financial debts, commercial debts, and unearned revenues), and equity.

However, the existence of commercial debts and advance revenue do not constitute a danger for a company's financial autonomy, but is instead a sign of strong leverage with suppliers.

Should debts towards lenders be high, the parties (chiefly banks) gain considerable negotiating power vis-à-vis the company. In other words the survival of the company will depend on the banks. In this sense, a heavily indebted company lacks solvency.

The index that expresses the degree of autonomy must therefore compare equity with financial debt, the so-called **debt/equity** ratio.

However, often, analysts calculate the index on the basis of financial debt net of funds available (L), because if a company has liquidity, it can be considered less indebted, as it can immediately extinguish a part of its debt.

In such case the resulting quotient will be: NFD/E^{36} where $NFD = FD - L$.

Indebtedness is to be considered physiological up to a value of 1-1.5; high for values of 1.5-2; problematic for a company's solvency if over 2.³⁷

These indicators, based only on balance sheet values, do not show a company's ability to service its debts, another indicator of a company's solvency. It is however possible to use other ratios that, considering also economic factors can act as proxy for a company's ability to meet its obligations.

An example of such an indicator is the ratio between net financial position and EBITDA, which measures a company's ability to repay debt thanks to its activity (**$NFP/EBITDA$**).

Another indicator is the so-called interest coverage ratio³⁸, based on the ratio between EBIT and related interest, which indicates the number of times profit covers net interest.

³⁶ Fiori, Tiscini, *"Economia Aziendale"*, Egea, 2014.

³⁷ Ibidem.

³⁸ Bozzolan S, *"Introduction to business economics"*, McGraw-Hill, 2014.

2.6 Analysis of financial risk: company liquidity

The analysis of liquidity, as said, concerns financial equilibrium in the short term.

A company has liquidity if in the short term it has financial equilibrium:

$$L + CI - CO \geq 0$$

Where:

CI=cash in CO=Cash out

The balance sheet includes the figures with which to investigate such imbalances, albeit with some important limitations that we will examine.

Current assets include, over and above liquidity, short-term income. Current liabilities instead include short-term outgoings.

The ratio between the two is known as current ratio, and gives the ability of the company to maintain short-term financial equilibrium:

CA/CL. With equilibrium with values above 1.³⁹

However, the liquidity quotient is unable to indicate certain aspects that are necessary for a detailed analysis of short-term liquidity.

In particular this index will not show, from a company's ongoing point of view, two aspects that are decisive for financial equilibrium in the short-term:

- If income comes before expenditure;
- If in the new financial year it will be in equilibrium or not.

This said, working capital cycle indices can complete the picture in terms of the liquidity indicated in the balance sheet, giving a partial answer to the first of the problems posed.

If we then project forward a company's working capital cycle and the effects it has on its financial condition, we will see that:

- From time of purchase, the production components purchased (in particular raw materials and parts) will be stocked in warehouses or will be tied down in production for a certain period, what is known as average inventory period, until such time as they are sold:

$$(\text{Inventory/Sales}) * 365^{40}$$

³⁹ AVI M.S., "Bilancio riclassificato e Analisi per Indici e Flussi", Il Sole 24 Ore ed., Milano, 2007.

- From time of sale, the client will not pay the purchase price for a certain period, known as average client collection period, until such time as payment is received:

$$(\textit{Trade receivables/Sales}) * 365^{41};$$

- From time of purchase, the debt towards the supplier will remain extant for a certain period, the so called average suppliers payment period, until such time as payment is effectively made:

$$(\textit{Trade payables/Sales}) * 365^{42}.$$

In terms of liquidity, information regarding timing between payment of suppliers and when customers pay, is vital. The longer the period the more critical will a company's financial condition be, because there will be a considerable amount to finance caused by the time gap between purchase and sales.

The shorter this period is the greater will the financial resilience of a company be in the short-term. Should the situation invert, there will be an increase in liquidity.

The duration of the working capital cycle, which gives the average time it takes between when suppliers are paid and when clients pay, is given by the following formula:

$$\begin{aligned} & \{(\textit{Inventory/Sales}) * 365\} + \{(\textit{Trade receivables/Sales}) \\ & * 365\} - \{(\textit{Trade payables/Sales}) * 365\} \\ & = \textit{Duration of the working capital cycle}^{43} \end{aligned}$$

⁴⁰ Ferrero G., Dezzani F., Pisoni P., Puddu L., “*Analisi di bilancio e rendiconti finanziari*”, Giuffrè ed., Milano, 2006.

⁴¹ Ibidem.

⁴² Ibidem.

⁴³ Caramiello, Di Lazzaro, Fiori, “*Indici di bilancio*”, Giuffrè, ed. 2003.

The values of said indices essentially depend on the sector and the company's contractual power⁴⁴.

Furthermore, the way cash flow is managed will influence a company's operating and financial performance.

⁴⁴ Ibidem.

3) CASE STUDY: PERFORMANCES ANALYSIS – TRENITALIA AND NTV 2010-2013

In this chapter we will apply all the concepts presented in the previous chapter to a real case, presenting the balance sheets of Trenitalia and Nuovo Trasporto Viaggiatori (NTV) for the period 2010-2013, both companies in the high-speed passenger railway sector.

3.1 Reference market: history of the sector

In recent decades, the transport sector has typically undergone a series of major structural changes that have had a significant influence on the organization of passenger transport services.

The most significant technological event of the second half of the 20th century was without doubt high-speed rail services. High-speed railway networks are growing in importance not just in Europe but worldwide.

Applying EU directives, since 2004, Italy has formally opened the rail market to on-track competition and a new company, Nuovo Trasporto Viaggiatori (NTV), has recently entered the high-speed market. NTV started out with a Rome-Milan service in April 2012, in direct competition with the incumbent, Trenitalia. Later, NTV extended its services, connecting Rome with the two northern cities of Venice and Turin. This is so far the only case in Europe where two companies are in direct competition on the same routes. The Italian passenger railway service is indeed composed of two competing companies, one entirely state owned and managed, which until recently held a monopoly, owned by the same holding company that owns the infrastructure manager, and the other a prevalently privately owned company⁴⁵.

The appearance of the new operator was not entirely painless. In March 2011 NTV denounced presumed obstructionism on the part of the managers of the infrastructure, Rete Ferroviaria Italiana (RFI), accused of having put in place some last-minute

⁴⁵ NTV is, de facto, partly publically owned as one of the shareholders in the French national railway company SNCF.

variations to the operating schemes presented, so delaying for a full year when NTV could become operational. The holding company "Ferrovie dello Stato Italiane" S.p.A. and some of the companies it controls (in particular RFI and GrandiStazioni, Cento Stazioni and FS Sistemi Urbani, who manage the stations) were further accused of abuses linked to their dominant position, with particular reference to the concession of slots to NTV for Rome-Milan, and station management services. Furthermore, on 28 May 2013 the Autorità Garante della Concorrenza e del Mercato (AGCM) – the Italian market competition authority – opened an investigation linked to the pricing strategy adopted by Trenitalia on the route from Rome Termini Station to Milan Central Station, following a complaint presented by NTV against Trenitalia for dumping⁴⁶ and cross-subsidization. For its part, when NTV received authorization to operate, Trenitalia accused the new operator of cream skimming and cherry picking⁴⁷ the Italian railway market. Within this context, the fact that the Autorità di Regolazione dei Trasporti⁴⁸

⁴⁶ Dumping is, in general, a situation of international price discrimination, where the price of a product when sold in the importing country is less than the price of that product in the market of the exporting country. Thus, in the simplest of cases, one identifies dumping simply by comparing prices in two markets. However, the situation is rarely, if ever, that simple, and in most cases it is necessary to undertake a series of complex analytical steps in order to determine the appropriate price in the market of the exporting country (known as the “normal value”) and the appropriate price in the market of the importing country (known as the “export price”) so as to be able to undertake an appropriate comparison. (<https://www.wto.org>).

⁴⁷ The terms *cream-skimming* and *cherry picking* refer to the practice of serving only those markets or providing only those services that can be considered profitable, selecting them specifically. These are often services that have a high value for consumers, who will thus be happy to pay higher prices for them. At the same time, the company that does this kind of “skimming” (the analogy is with skimming cream away from milk) leaves its competitors with the task of servicing the less profitable sectors of the market and providing services that are harder to make money out of. On this compare (Alderighi and Bergantino, 2011 and 2013).

⁴⁸ The Autorità di Regolazione dei Trasporti was incorporated as per art. 37 of the decree in law dated 6 December 2011, n. 201 (converted into law, with modifications, by law n. 214 of 22 December 2011) as part of a move to set up authorities for the regulation of services of public utility. The authority is an independent entity and is responsible for regulating the transport sector and access to related infrastructure and services. It is a collegial entity, which includes a President and two Members named by decree issued by the President of the Republic, following deliberation by the Council of Ministers based

(authority for the regulation of transport- an independent agency set up in July 2013 to regulate the transport sector) is fully operational should be an important step forward in the way the railway market works.

Even if official data on the two competitors' market share are not available, Trenitalia has gone on record as stating that the arrival of NTV on the market has had no impact on its market share. In the absence of concrete facts, it is indeed difficult to contest this declaration, even if it can be seen that there is no sign of a decrease in the incumbent's offer. Indeed and to the contrary, Trenitalia are running more trains and have so expanded their offer.⁴⁹

3.2 Trenitalia

Trenitalia is company in that handles passenger and freight transport by rail, and is 100% controlled by Ferrovie dello Stato Italiane SpA.

Born as Italiana Trasporti Ferroviari Spa, as a part of Gruppo Ferrovie dello Stato Spa, it became Trenitalia Spa on 7 June 2000, with the demerger of Divisione Passeggeri, Divisione Trasporto Regionale, Divisione Cargo and Unità Tecnologia e Materiale Rotabile of the old company FS Spa, following EU Directive n. 440/91 that requires the separation in accounting terms of entities that operate as carriers and those that manage infrastructure (in Italy RFI SpA) so as to open the market to free competition between companies that engage in this line of business.

on a proposal by the competent Minister and with the favourable opinion of at least two thirds of the members of the competent Parliamentary Commissions. Its President and members hold office for seven years, and may not be appointed for a second term. The first such body was nominated with Presidential Decree dated 9 August 2013, an extract of which was published in the Gazzetta Ufficiale della Repubblica Italiana (SG n. 217 of 16 September 2013). The Authority took office in Turin on 17 September 2013 and has its offices at the "Lingotto" palace (Source: the Authority's website <http://www.autorita-trasporti.it>).

⁴⁹ Bergantino, Capozza, Capurso, *"L'effetto della liberalizzazione ferroviaria sulle politiche di prezzo delle compagnie aeree e ferroviarie. Evidenze preliminari sui principali collegamenti ad Alta Velocità in Italia"*, EUT Edizioni Università di Trieste, 2013. And Bergantino, Capozza, Capurso, *"The impact of open access on intra- and inter-modal rail competition. A national level analysis in Italy."*

Trenitalia is one of the first rail operators in Europe, manages daily some 9,000 trains, and every year carries over half a billion passengers and around 80 million tons of goods.

Thanks also to its international vocation it also has numerous international commercial agreements with other European operators, some of which it also has shareholdings in.

3.2.1 Company data⁵⁰

Sole Shareholder Company subject to management and coordination by Ferrovie dello Stato Italiane S.p.A.

Capital: euro 1,654,464,000.00 fully paid up

Registered offices: Piazza della Croce Rossa n. 1, 00161 Rome, Italy

Tax Code and Company Registration: 05403151003 R.E.A.: 0883047

VAT: 05403151003

3.2.2 Company mission⁵¹

At the heart of its mission, Trenitalia puts as essential conditions the safety of its services, quality, the health of its workers and the protection of the environment, and considers putting the customer first the way to gain a competitive edge and create value for its shareholder.

The whole of the Trenitalia organisation, committed to satisfying the needs of its customers and market requirements, always ensures the highest of safety standards and works on development and modernization plans, always considering sustainability and the environment.

So as to fulfil its mission the company has set up a management structure based on divisions, each of which, depending on its particular market sector, has a specific mission.

⁵⁰<http://www.fsitaliane.it/fsi/Il-Gruppo/Società-del-Gruppo/Trenitalia/Dati-e-Bilancio>

⁵¹ Ibidem.

3.2.3 Company structure⁵²

Trenitalia comprises three major business divisions:

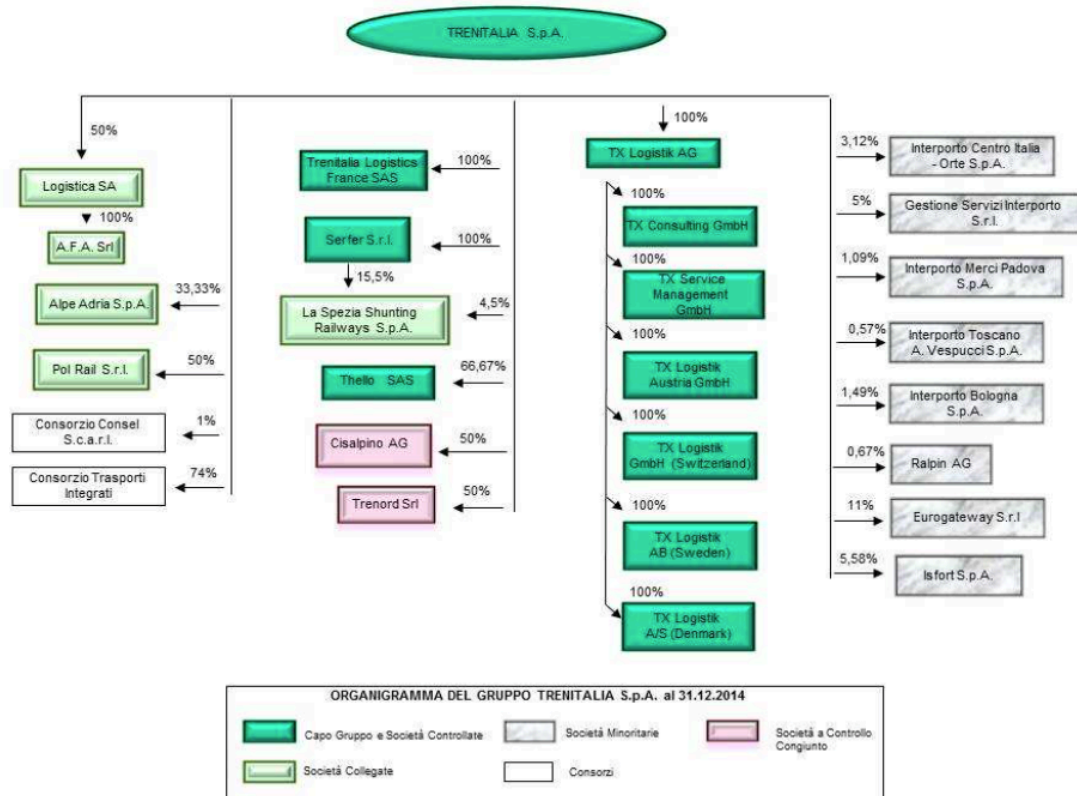
- The first division is called Passegeri Long Haul and carries passengers both nationally and internationally, high-speed trains included, offering around 80 million train/km a year. Annually the travellers per kilometre in this division are 26,000 million, with a load factor of 55% and an average load of 300;
- The second division is called Divisione Passeggeri Regionale, it services metropolitan areas and runs regional and inter-regional trains, supplying on the basis of Regional Service Contracts (Contratti di Servizio Regionali), giving coverage based on local needs. Currently the Division does about 190 million train-km/year, making available to its customers around 7,800 trains a day. So as to ensure ever increasing capillary capacity the Divisione Passeggeri Regionale promotes, together with local bodies and other transport companies, jointly managed services based on joint tariffs so as to facilitate the movement of citizens. The Division has 20 Regional Directorates (Direzioni Regionali);
- The third is the Divisione Cargo which ensures the development, the planning, the production, the management and sale of transport services for goods, both in Italy and abroad, through conventional transport and combined transport, and offering its clients a range of ever more efficient and well priced services.
It handles around 800 trains a day and carries 24 billion ton-km of goods, equal to 77 million tons, for revenues of 700 million euro.
Cargo Trains – the fleet, aside locomotives, includes 40,000 rail cars of which 11,000 designed for combined transport.

⁵² Ibidem.

3.2.4 The Trenitalia Group

How the Trenitalia group is structured is best understood with its organogram:

Figure 6: Structure of the group



Source: Trenitalia Financial Statement 2014

During 2014, Trenitalia's portfolio of shares showed no major changes on 1 January 2014 the company exercised its right of withdrawal from the Consorzio Unico Campania and that on 28 October 2014 the company Verona Cargo Center S.p.A was cancelled from the Register of Companies.

3.2.4.1 Economic performance of controlled companies

The fully controlled companies are:

- **SERFER S.r.l.** a railway service company that handles shunting and traction services, and maintenance for engines and railcars, as well as the design, construction and maintenance of crossings.

Figure 7: Reclassified Income statement SERFER

| | 2014 | 2013 |
|--------------------------------|--------------|--------------|
| Operating revenues | 71.392 | 60.643 |
| costs | (66.629) | (56.806) |
| EBITDA | 4.763 | 3.837 |
| Amortisation and depreciation | (1.107) | (1.106) |
| Write-downs, impairment losses | 0 | 180 |
| EBIT | 3.656 | 2.551 |
| Finance income and costs | (215) | (192) |
| Pre tax result | 3.441 | 2.359 |
| Income taxes | (2.451) | (2.007) |
| Net profit for the year | 990 | 352 |

(Amounts in €/000)

Source: Trenitalia Financial Statement 2014

The 2014 balance sheet showed an increase in income of about 17,72% due to an increase in business in the company's key sectors: shunting (+24,46%) and traction (+6,48%). The increase in income from shunting is directly correlated to the synergies developed with the other companies in the Group, which have led to increased business with Trenord's Trasporto Regionale, and, as a result of the fact that in 2013 RFI stopped offering shunting services, the fact that it took over as sole operator for shunting in all plants previously managed by RFI.

Operating costs went up overall by 17,29%. The EBITDA grew by 926 thousand euro, with an increased EBITDA Margin of 6,7% as compared to 6,3% in 2013. Operating Profit rose to 3,656 thousand euro as against 2,551 thousand euro in 2013, improving its EBIT Margin from 4,2% in 2013 to 5,1% in 2014. Net profit also rose by 638 thousand euro, despite increased tax due to the increased taxable profit.

- **TX Logistik AG** is a rail logistics company that operates on a European scale and specialises in integrated transport, and is one of the sector's market leaders. The TX group is licenced to operate in Germany, Austria, Switzerland, Holland, Sweden, Norway, Denmark and Italy, where it places itself on the market with a range of high quality long-distance integrated logistics services. The company has aimed at increasing revenue, having recorded an overall increase of 13.5% even if at the expense of profit margin, due to a significant increase in infrastructure and energy costs. A net positive result of 3.9 million euro for the period further consolidated the company's growth, laying a base for further development.

Figure 8: Reclassified Income statement Logistik AG

| | 2014 | 2013 |
|--------------------------------|--------------|--------------|
| Operating revenues | 231.609 | 204.009 |
| costs | (221.918) | (199.198) |
| EBITDA | 9.691 | 4.811 |
| Amortisation and depreciation | (1.958) | (1.091) |
| Write-downs, impairment losses | (842) | (405) |
| EBIT | 6.891 | 3.316 |
| Finance income and costs | (598) | (73) |
| Pre tax result | 6.293 | 3.243 |
| Income taxes | (2.315) | (1.6679) |
| Net profit for the year | 3.978 | 1.576 |

(Amounts in €/000)

Source: Trenitalia Financial Statement 2014

- **Trenord S.r.l.** the Company provides mainly regional passenger railway services operating principally in the Region of Lombardy, as defined in its contract with the Region that expired on 31 December 2014.

Figure 9: Reclassified Income statement Trenord

| | 2014 | 2013 |
|--------------------------------|---------------|---------------|
| Operating revenues | 747,477 | 759,770 |
| costs | (688,655) | (705,237) |
| EBITDA | 58,821 | 54,533 |
| Amortisation and depreciation | (42,961) | (35,246) |
| EBIT | 15,861 | 19,287 |
| Finance income and costs | (3,459) | (5,113) |
| Pre tax result | 12,365 | 14,174 |
| Income taxes | (10,152) | (14,074) |
| Net profit for the year | 2,213 | 100 |

(Amounts in €/000)

Source: Trenitalia Financial Statement 2014

In 2014 Trenord made a net profit of 2.2 million euro with a gross margin of 59 million euro, up on 2013 (+7,9%), whilst the operating result stood at around 16 million euro, down on the previous year (-17,8%). By the end of 2014, the Company had grown to have 4,223 employees.

- **Thello S.a.s.** is a company that organises and manages night-time long-distance rail services between Italy and France.

In 2014 Thello consolidated the market for the night-time Venice –Paris route, focusing on the regularity and quality of the service provided to its clients, whilst at the same time working hard on brand awareness.

The company closed with a negative result of 1.4 million euro for the year, but which was a considerably improved result when compared to the previous year.

At the end of 2014, it set up a further two daytime runs between Milan and Nice.

Figure 10: Reclassified Income statement for Thello

| | 2014 | 2013 |
|--------------------------------|----------------|-----------------|
| Operating revenues | 30,293 | 38,218 |
| costs | (30,990) | (47,752) |
| EBITDA | (697) | (9,534) |
| Amortisation and depreciation | (252) | (259) |
| EBIT | (949) | (9,793) |
| Finance income and costs | (64) | 6 |
| Pre tax result | (1,013) | (9,788) |
| Income taxes | (353) | (596) |
| Net profit for the year | (1,366) | (10,384) |

(Amounts in €/000) Source: Trenitalia Financial Statement 2014

3.3 Nuovo Trasporto Viaggiatori (NTV)

Nuovo Trasporto Viaggiatori Spa is a public liability railway company that runs high-speed passenger railway services.

NTV holds a number of records, among them:

- The first Italian private company in the high-speed railway sector;
- The first railway company in the world to use the new Alstom AGV train, the world's fastest train.

NTV was incorporated on 11 December 2006 by Italian businessmen Luca di Montezemolo, Diego Della Valle, Gianni Punzo and Giuseppe Sciarrone. The possibility that a private company could pose itself as a competitor of Gruppo Ferrovie dello Stato in the passenger railway transport sector came in 2000, with Law n. 388 (2001 Finance Bill).

The train Italo broke with all standard schemes and became a significant worldwide benchmark elevating Italy to the status of best practice, as the first country in the world where an entirely private company is in the business of high-speed railway passenger

services. The context within which this service was offered was for sure full of obstacles.

Nuovo Trasporto Viaggiatori Spa, better known as Italo, has a fleet of 25 trains, built by Alstom Ferroviaria Spa, which also handles the maintenance. The AGV575 train is a project that is entirely managed by Alstom, which has created a new generation prototype entirely at its own risk, and which has also been homologated to travel in the rest of Europe, as it meets EU standards.

3.3.1 Company data⁵³

Registered Offices: Viale del Policlinico n. 149/b, 00161 Rome (RM), Italy

Capital: Euro 263,6 m.ni di €.fully paid up

Rome Register of Companies n. 09247981005

R.E.A (economic and administrative repertoire), Rome n. 1150652

Tax Code: 09247981005

VAT number: 09247981005

Figure 11: NTV Shareholders

| Soci NTV | Quote NTV | Azionisti di riferimento del socio NTV |
|--|-----------|--|
| Totale MDP Holding Somma di: MDP Holding uno s.r.l., MDP Holding due s.r.l., MDP Holding tre s.r.l. | 33,5% | Diego Della Valle - Luca di Montezemolo - Gianni Punzo (quote paritetiche) |
| IMI Investimenti S.p.A. | 20,0% | Intesa SanPaolo S.p.A. |
| SNCF Voyages Développement S.a.S. | 20,0% | Société Nationale des Chemins de fer Français |
| Winged Lion Fund | 15,0% | Assicurazioni Generali S.p.A. |
| Nuova Fourb s.r.l. | 5,0% | Alberto Bombassei |
| Mais S.p.A. | 5,0% | Isabella Seragnoli |
| Reset 2000 s.r.l. | 1,5% | Giuseppe Sciarrone |
| Totale | 100,00% | |

Source: NTV website

⁵³ <http://www.ntvspa.it/it/rassegna/0/0/113/3/nuovo-trasporto-viaggiatori-documenti-finanziari>

3.3.2 Company mission⁵⁴

NTV's mission is to carry passengers on high-speed trains, providing a novel service and enhancing travel with a range of facilities such as:

- A full and personalised service;
- A comfortable high-tech environment;
- High quality at competitive prices.

3.4 A comparison between the performances of Trenitalia and NTV

3.4.1 Financial Statements

In the pages that follow, by means of a practical application of the process of an analysis of the financial statements of Trenitalia and NTV, we will be able to ascertain the value in terms of the information they give of reclassified accounts as per the models illustrated above and the system of financial and economic indicators that are preferred for this type of task.

The data referred to are those regarding the financial statements as at 31 December for the years 2010-2013. To be more precise, when proceeding with the reclassification we will examine the Balance Sheet, Income Statement and Notes.

As always when analysing accounts, the starting point has been the analysis of the financial statements, in that only a careful integrated reading of the whole of the financial data can aid us in understanding to what extent the accounts of a company are reliable and will furthermore guarantee good results.

The following are two examples of financial statements drawn up by Trenitalia for 2010-2013 and NTV for 2010-2013.

Trenitalia financial statements have been drawn up inline with the International Financial Reporting Standards, as published by the International Accounting Standards Board, adopted by the EU ("EU-IFRS"). The Company opted for exemption from the

⁵⁴ <http://www.ntvspa.it/it/nuovo-trasporto-viaggiatori-mobile/285/2/->

need to produce a consolidated balance sheet, despite the existence of controlling shareholders, based on paragraph 4(a) of IFRS 10 and drew up this balance sheet separately. The consolidated balance sheet for public use is drawn up by Ferrovie dello Stato Italiane S.p.A., who directly controls Trenitalia S.p.A..

Instead, the NTV balance sheets were drawn up in conformity with the law on annual financial statements (articles 2423 and subsequent of the Civil Code).

Figure 12: Statement of financial position of Trenitalia for the years 2010-2013

| (Euro) | 2010 | 2011 | 2012 | 2013 |
|--|----------------------|----------------------|----------------------|----------------------|
| Assets | | | | |
| Property, plant and equipment | 8.931.572.244 | 8.810.719.419 | 8.964.110.287 | 8.885.478.183 |
| Intangible assets | 104.670.535 | 82.269.556 | 89.562.341 | 106.130.521 |
| Deferred tax assets | 54.479.805 | 65.754.793 | 152.135.321 | 116.434.403 |
| Equity investments | 161.057.990 | 195.599.602 | 195.670.815 | 144.201.722 |
| Non-current financial assets (including derivatives) | 452.578 | 23.202.578 | 23.922.569 | 23.329.135 |
| Other non current assets | 83.482.728 | 107.768.880 | 28.933.006 | 26.482.383 |
| Total non-current assets | 9.335.715.880 | 9.285.314.827 | 9.454.334.339 | 9.302.056.347 |
| Inventories | 660.320.189 | 654.657.540 | 660.905.867 | 686.857.910 |
| Current trade receivables | 2.272.773.143 | 1.683.656.476 | 2.098.490.405 | 1.880.905.804 |
| Current financial assets (including derivatives) | 42.660.559 | 703.072 | 2.352.173 | 16.609.354 |
| Cash and cash equivalents | 32.547.308 | 607.842.314 | 61.511.053 | 123.760.033 |
| Tax receivables | 2.437.825 | 177.477 | 2.746.133 | 625.247 |
| Other current assets | 152.834.238 | 48.582.446 | 194.100.362 | 62.657.890 |
| Total current assets | 3.163.573.262 | 2.995.619.325 | 3.020.105.993 | 2.771.416.239 |

| | | | | |
|--|-----------------------|-----------------------|-----------------------|-----------------------|
| Total assets | 12.499.289.142 | 12.280.934.152 | 12.474.440.332 | 12.073.472.586 |
| Equity | | | | |
| Share capital | 1.654.464.000 | 1.654.464.000 | 1.654.464.000 | 1.654.464.000 |
| Reserves | 43.287.442 | (177.863.830) | (343.416.330) | (225.465.493) |
| Other reserves | 0 | 181.719.463 | 189.537.922 | 199.859.139 |
| Profit (losses) carried forward | (307.588.731) | (238.180.293) | (89.629.556) | 106.473.559 |
| Profit (loss) for the year | 73.061.513 | 156.369.196 | 206.424.332 | 181.488.615 |
| Total Equity | 1.463.224.224 | 1.576.508.537 | 1.617.380.368 | 1.916.819.820 |
| Liabilities | | | | |
| Medium/ long terms loans | 5.534.066.667 | 5.450.733.334 | 4.884.697.416 | 5.195.528.297 |
| Severance payment and other employee benefits | 1.087.421.218 | 987.527.469 | 1.094.217.685 | 952.227.122 |
| Provisions for risks and charges | 441.605.126 | 392.362.145 | 278.448.713 | 144.605.997 |
| Deferred tax liabilities | 164.410.945 | 156.921.578 | 107.361.364 | 118.544.242 |
| Non-current financial liabilities(including derivatives) | 194.034.117 | 242.070.198 | 248.874.260 | 174.634.972 |
| Other non-current liabilities | 0 | 69.798.818 | 25.916.808 | 80.598.396 |
| Total non-current liabilities | 7.421.538.073 | 7.299.413.542 | 6.639.516.246 | 6.666.139.026 |
| Short-term loans and current portion of medium-long term loans | 221.023.192 | 146.612.969 | 740.870.121 | 423.594.686 |

| | | | | |
|--|-----------------------|-----------------------|-----------------------|-----------------------|
| Short-term portion of provisions for risks and charges | 7.103.442 | 6.584.024 | 1.549.147 | 3.963.453 |
| Current trade payables | 1.812.497.184 | 1.782.477.063 | 1.989.329.908 | 1.622.122.560 |
| Income Taxes payable | 198.457 | 17.681.203 | 0 | 0 |
| Current financial liabilities (including derivatives) | 684.606.344 | 916.667.020 | 870.755.565 | 804.339.208 |
| Other current liabilities | 889.098.226 | 534.989.795 | 615.038.977 | 636.493.832 |
| Total current liabilities | 3.614.526.845 | 3.405.012.074 | 4.217.543.718 | 3.490.513.740 |
| Total liabilities | 11.036.064.918 | 10.704.425.616 | 10.857.059.964 | 10.156.652.766 |
| Total equity and liabilities | 12.499.289.142 | 12.280.934.152 | 12.474.440.332 | 12.073.472.586 |

Source: Trenitalia 2010-2013 Financial Statements

Figure 13: Income Statement of Trenitalia for the years 2010-2013

| (Euro) | 2010 | 2011 | 2012 | 2013 |
|----------------------------------|----------------------|----------------------|----------------------|----------------------|
| Revenue and income | | | | |
| Revenues from sales and services | 5.318.874.100 | 5.406.383.291 | 5.279.323.113 | 5.272.761.352 |
| Other Income | 404.870.717 | 301.665.081 | 218.665.431 | 225.014.274 |
| Total Revenues | 5.723.744.816 | 5.708.048.372 | 5.497.988.544 | 5.497.775.626 |
| Operating Costs | | | | |

| | | | | |
|---|----------------------|----------------------|----------------------|----------------------|
| Personnel costs | 2.184.217.100 | 2.086.392.881 | 1.979.140.642 | 1.919.715.554 |
| Raw and secondary materials, consumables and goods for resale | 420.735.084 | 410.490.899 | 382.770.989 | 385.907.241 |
| Costs for services | 2.006.610.445 | 2.000.241.843 | 2.010.685.170 | 2.063.270.032 |
| Leases and rentals | 164.796.507 | 161.141.671 | 151.468.450 | 129.521.162 |
| Other operating costs | 30.678.722 | 31.345.730 | 33.910.555 | 45.453.396 |
| Capitalization of internal construction costs | (354.154.582) | (372.661.801) | (410.185.222) | (431.367.920) |
| Total costs | 4.452.883.276 | 4.316.951.222 | 4.147.790.584 | 4.112.499.464 |
| Amortization and depreciation | 847.725.267 | 859.556.972 | 924.642.671 | 932.740.417 |
| Write-downs, impairment losses (reversal) | 60.165.797 | 35.294.282 | 7.324.533 | 20.833.449 |
| Write downs of fixed assets plants, | 55.694.967 | 33.063.829 | 6.674.434 | 20.545.341 |

| | | | | |
|----------------------------------|--------------------|--------------------|--------------------|--------------------|
| machinery | | | | |
| Value write backs | 4.470.829 | 2.230.453 | 650.099 | 288.107 |
| Provisions for risks and charges | 21.036.872 | 19.381.102 | 0 | 0 |
| Operating result | 341.933.605 | 496.245.896 | 418.230.756 | 431.702.297 |
| Finance income and costs | | | | |
| Finance income | 36.760.129 | 13.538.463 | 14.548.962 | 26.324.883 |
| Finance costs | 226.794.498 | 247.153.387 | 216.781.574 | 195.605.715 |
| Pre-tax result | 151.899.236 | 262.630.971 | 215.998.144 | 262.421.464 |

| | | | | |
|---|-------------------|--------------------|--------------------|--------------------|
| Income taxes | 78.837.723 | 106.261.775 | 9.573.812 | 80.932.849 |
| Profit for the year from continuing operations | 73.061.513 | 156.369.196 | 206.424.332 | 181.488.615 |
| Net profit for the year | 73.061.513 | 156.369.196 | 206.424.332 | 181.488.615 |

Source: Trenitalia 2010-2013 Financial Statement

Figure 14: Financial statement of NTV for the years 2010-2013

| | 2010 | 2011 | 2012 | 2013 |
|---|------------|------------|------------|------------|
| FIXED ASSETS | | | | |
| Intangible Fixed Assets | | | | |
| Start-up and expansion costs | 24.916.742 | 32.739.822 | 25.753.764 | 21.150.423 |
| Research, development and advertising costs | 1.519.601 | 1.956.431 | 2.258.052 | 1.726.226 |
| Patents and intellectual property rights | 3.187.991 | 6.444.355 | 13.969.406 | 10.560.539 |
| Concessions, licenses, trademarks and | 351.209 | 403.520 | 413.715 | 410.847 |

| | | | | |
|---|--------------------|--------------------|--------------------|--------------------|
| similar rights | | | | |
| Fixed Assets under construction and advances | 5.701.610 | 12.599.897 | 480.592 | 649.144 |
| Other | 2.585.784 | 2.671.072 | 5.838.884 | 6.095.030 |
| Total Intangible Fixed assets | 38.262.937 | 56.815.097 | 48.714.413 | 40.592.209 |
| Tangible fixed assets | | | | |
| Land and buildings | | 72.673.606 | 11.685 | 10.455 |
| Plant and machinery | 392.696 | 387.673 | 557.451.960 | 614.314.681 |
| Industrial and commercial equipment | | 901.583 | 5.593 | 31.048 |
| Other assets | 766.321 | 2.136.404 | 17.799.723 | 17.622.724 |
| Fixed assets under construction and advances | 76.307.666 | 14.175.687 | 19.453.199 | 344.767 |
| Total tangible fixed assets | 77.466.683 | 90.274.953 | 594.722.160 | 632.323.675 |
| | | | | |
| Financial assets | | | | |
| Due from others (beyond 12 months) | | | 66.877 | 66.877 |
| Total financial fixed assets | | | 66.887 | 66.877 |
| TOTAL FIXED ASSETS | 115.729.620 | 147.090.050 | 643.503.460 | 672.982.771 |

| | | | | |
|---|------------|------------|------------------|------------------|
| CURRENT ASSETS | | | | |
| Inventories | | | | |
| Raw and subsidiary materials and consumables | | | 1.885.707 | 2.317.012 |
| Finished products and goods | | | 447.193 | 445.460 |
| Total inventories | | | 2.332.900 | 2.762.472 |
| Receivables | | | | |
| Due from customers (within 12 months) | 786.572 | 14.586.429 | 2.727.787 | 4.755.599 |
| Beyond 12 months | | | | |
| Due from tax authorities (within 12 months) | 516.457 | 11.338.566 | 14.387.459 | 16.087.868 |
| Beyond 12 months | 33.965.005 | 29.975.742 | 23.838.283 | 16.087.868 |
| Deferred tax assets (within 12 months) | | | | |
| Beyond 12 months | 14.569.053 | 29.269.913 | 57.956.043 | 86.178.424 |
| Due from others (within 12 | 434.111 | 2.251.172 | 64.810.563 | 25.730.286 |

| | | | | |
|--------------------------------------|--------------------|--------------------|--------------------|--------------------|
| months) | | | | |
| Beyond 12 months | 12.000.000 | 11.700.000 | 11.625.745 | 11.102.634 |
| Total Receivables | 62.271.198 | 99.121.822 | 175.345.880 | 174.848.738 |
| Liquid assets | | | | |
| Deposits in bank and postal accounts | 18.391.556 | 12.304.767 | 50.184.814 | 50.912.562 |
| Cheques | | | | |
| Cheques and valuables on hand | 7.446 | 6.130 | 559.058 | 722.311 |
| Total Liquid assets | 18.399.002 | 12.310.897 | 50.743.872 | 51.634.873 |
| TOTAL CURRENT ASSETS | 80.670.200 | 111.432.719 | 228.422.652 | 229.246.652 |
| Accruals and deferrals | 133.624.690 | 142.000.543 | 2.448.414 | 2.947.133 |
| TOTAL ASSETS | 330.024.510 | 400.523.312 | 874.374.526 | 905.175.987 |
| | | | | |
| EQUITY | | | | |
| Share capital | 148.953.918 | 148.953.918 | 148.953.918 | 148.953.918 |
| Share premium reserve | 114.646.082 | 114.646.082 | 114.646.082 | 114.646.082 |
| Other reserves | | | | 78.001.120 |
| Retained Profit(loss) | (18.880.674) | (39.616.902) | (78.935.889) | (156.072.060) |
| Net income | (20.736.228) | (39.318.987) | (77.136.171) | (77.619.500) |

| | | | | |
|---|--------------------|--------------------|--------------------|--------------------|
| (loss) for the period | | | | |
| TOTAL NET EQUITY | 223.664.112 | 184.664.112 | 107.527.940 | 107.909.560 |
| Total Provisions for risks and charges | 5.195 | 11.396.315 | 1.261.281 | 1.419.766 |
| Employee severance indemnities | 357.170 | 850.410 | 2.323.336 | 4.074.128 |
| | | | | |
| PAYABLES | | | | |
| Bank Debt (within 12 months) | 781.257 | 5.311.837 | 26.625.249 | 895.895 |
| Beyond 12 months | 91.348.429 | 157.789.617 | 193.743.915 | 203.336.902 |
| Due to other lenders (within 12 months) | | | 23.308.393 | 13.690.729 |
| Beyond 12 months | | | 399.492.121 | 448.365.058 |
| Advances (within 12 months) | | | 89.668 | 129.391 |
| Due to suppliers (within 12 months) | 9.879.514 | 28.491.985 | 103.760.464 | 106.583.989 |
| Beyond 12 months | | | | |
| Taxes payable (within 12 months) | 314.038 | 577.341 | 831.909 | 933.395 |

| | | | | |
|--|--------------------|--------------------|--------------------|--------------------|
| months) | | | | |
| Beyond 12 months | | | | |
| Due to social security institutions (within 12 months) | 893.424 | 1.584.216 | 2.963.676 | 2.949.203 |
| Beyond 12 months | | | | |
| Other Payables (within 12 months) | 1.055.467 | 2.332.935 | 3.730.456 | 4.642.668 |
| Beyond 12 months | | | | |
| TOTAL PAYABLES | 104.272.129 | 196.087.931 | 754.545.851 | 781.527.230 |
| Accruals and deferrals | 1.406.919 | 7.524.544 | 8.716.118 | 10.245.303 |
| TOTAL LIABILITIES | 330.024.510 | 400.523.312 | 874.374.526 | 10.245.303 |

Figure 15: Income statement of NTV for the years 2010-2013

| | 2010 | 2011 | 2012 | 2013 |
|--------------------------------------|-----------|-----------|------------|-------------|
| Value of Production | | | | |
| Revenues from sales and services | 1.924.021 | 5.269.967 | 81.904.462 | 239.473.484 |
| Increases in self-constructed assets | 2.495.186 | 7.949.766 | 6.901.277 | 1.664.700 |

| | | | | |
|---|------------------|-------------------|--------------------|--------------------|
| Other revenues and Income | | | | |
| Sundry | 113.983 | 11.482.335 | 13.910.410 | 7.945.439 |
| Operating grants | | | | 30.000 |
| Capital grants (instalments for the year) | | | 184.487 | 497.343 |
| Total value of production | 4.533.190 | 24.702.068 | 102.900.636 | 249.610.966 |
| Production costs | | | | |
| Raw and subsidiary materials, consumables and goods | 145.719 | 673.087 | 5.789.525 | 4.730.383 |
| Services | 12.322.717 | 20.892.297 | 115.643.006 | 216.435.445 |
| Lease expense | 2.354.520 | 5.258.105 | 9.031.416 | 9.996.784 |
| Labour costs | | | | |
| Salaries and wages | 7.344.978 | 13.572.092 | 30.383.017 | 36.581.156 |
| Social security contributions | 2.423.409 | 4.068.876 | 8.847.760 | 10.314.197 |
| Employee severance indemnities | 429.336 | 750.590 | 1.812.241 | 2.363.157 |
| Other costs | 4.400 | 20.039 | 102.640 | 1.466.643 |
| Depreciation and write downs | | | | |
| Amortisation of intangible fixed assets | 907.696 | 1.991.016 | 12.215.773 | 16.193.190 |

| | | | | |
|--|---------------------|---------------------|----------------------|---------------------|
| Depreciation of tangible fixed assets | 229.459 | 1.071.516 | 12.816.348 | 25.827.576 |
| Changes in Inventories and raw and subsidiary materials, consumables and goods | | | (2.332.900) | (429.572) |
| Risk Provisions | | | | 90.000 |
| Other Provisions | | 11.391.120 | 952.126 | 962.725 |
| Sundry operating expenses | 67.109 | 6.550.678 | 44.879.227 | 2.613.553 |
| Total production costs | 26.229.343 | 66.239.416 | 240.140.179 | 327.145.237 |
| Difference between value and production costs | (21.696.153) | (41.537.348) | (137.239.543) | (77.534.271) |
| | | | | |
| Income and financial costs | | | | |
| Income from shareholdings | | | | |
| From subsidiaries | | | 19.515.000 | |
| Income other than above | 240.481 | 71.626 | 1.083.053 | 1.604.439 |
| Interest and other financial expenses | 6.827.903 | 12.480.968 | 21.213.148 | 29.613.688 |

| | | | | |
|--|---------------------|---------------------|----------------------|----------------------|
| Foreign exchange gains and losses | (1.737) | 315 | (4.933) | (1.493) |
| Total financial income and expenses | (6.589.159) | (12.409.027) | (620.028) | (28.010.742) |
| Extraordinary income and expenses | | | | |
| Capital gains from sales | | | 32.289.077 | |
| Sundry | 18.717 | 61.655 | 787.618 | 1.750.384 |
| Sundry | 28.375 | 135.128 | 1.039.425 | 2.047.252 |
| Total extraordinary items | (9.658) | (73.473) | 32.037.270 | (296.868) |
| | | | | |
| Pre Tax result | (28.294.970) | (54.019.848) | (105.822.301) | (105.841.881) |
| Deferred taxes | 7.558.742 | 14.700.861 | 28.686.130 | 28.222.381 |
| Profit (loss) for the year | (20.736.228) | (39.318.987) | (77.136.171) | (77.619.500) |

Source: NTV Financial Statements 2010-2013

We can proceed with the Reclassification of the balance sheet and income statement. This is the necessary first step from which then to continue with the calculation of a balance sheet's main indices as illustrated in Chapter 1.

3.4.2 The reclassification of Trenitalia's balance sheet and income statement

Trenitalia's balance sheet was drawn up on the basis of the principles of the IAS and IFRS, and so does not need to be reclassified on the basis of 'financial' criteria as there

is already a clear distinction between current/non current Assets and Liabilities (see figure 12). Herewith follows a synthesis of the more significant data contained in figure 12.

Figure 16: Most significant data

| (Euro) | 2010 | 2011 | 2012 | 2013 |
|-------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Total non-current assets | 9.335.715.880 | 9.285.314.827 | 9.454.334.339 | 9.302.056.347 |
| Total current assets | 3.163.573.262 | 2.995.619.325 | 3.020.105.993 | 2.771.416.239 |
| Total assets | 12.499.289.142 | 12.280.934.152 | 12.474.440.332 | 12.073.472.586 |
| Total Equity | 1.463.224.224 | 1.576.508.537 | 1.617.380.368 | 1.916.819.820 |
| Total non-current liabilities | 7.421.538.073 | 7.299.413.542 | 6.639.516.246 | 6.666.139.026 |
| Total current liabilities | 3.614.526.845 | 3.405.012.074 | 4.217.543.718 | 3.490.513.740 |
| Total liabilities | 11.036.064.918 | 10.704.425.616 | 10.857.059.964 | 10.156.652.766 |
| Total equity and liabilities | 12.499.289.142 | 12.280.934.152 | 12.474.440.332 | 12.073.472.586 |

Figure 17: Reclassification of the balance sheet based on the ‘functional’ criterion

| Amounts in millions of Euro | 2010 | 2011 | 2012 | 2013 |
|------------------------------|-------|---------|---------|---------|
| Assets | | | | |
| Net current operating assets | 1.123 | 557,4 | 781,2 | 952,4 |
| Other net assets | (626) | (430,0) | (297,0) | (536,4) |

| | | | | |
|---|----------------|------------------|------------------|------------------|
| Current assets | 498 | 127,4 | 484,3 | 416,0 |
| Property, plant and equipment | 9.036 | 8.893,0 | 9.053,7 | 8.991,6 |
| Equity investments under non-current financial assets | 161 | 195,6 | 195,7 | 144,2 |
| Net capital assets | 9.197 | 9.088,6 | 9.249,3 | 9.135,8 |
| Severance pay | (1.087) | (987,5) | (1.094,2) | (952,2) |
| Other provisions | (614) | (555,9) | (387,4) | (267,1) |
| Severance pay and other provisions | (1.701) | (1.543,4) | (1.481,6) | (1.219,3) |
| Total Net Invested Capital | 7.994 | 7.672,6 | 8.252,1 | 8.332,5 |
| | | | | |
| Short-term net financial position | 803 | 426,5 | 1.068,8 | 1.068,8 |
| Medium/long term net financial position | 5.534 | 5.427,5 | 5.172,2 | 5.172,2 |
| Net Financial Position | 6.337 | 5.854,0 | 6.241,0 | 6.241,0 |
| Equity Capital | 1.657 | 1.818,6 | 2.091,5 | 2.091,5 |
| Coverage | 7.994 | 7.672,6 | 8.252,1 | 8.332,5 |

Figure 18: Reclassification of Income statement

| Amounts in millions of Euro | 2010 | 2011 | 2012 | 2013 |
|---|---------|-----------|-----------|-----------|
| Operating Revenues | 5.723,8 | 5.708,0 | 5.498,0 | 5.497,5 |
| Revenues from sales and services | 5.318,9 | 5.406,4 | 5.279,3 | 5.272,8 |
| Other revenues | 404,9 | 301,7 | 218,7 | 225,0 |
| Operating Costs | 4.452,9 | (4.137,0) | (4.147,8) | (4.112,5) |
| EBITDA | 1.270,9 | 1.391,0 | 1.350,2 | 1.385,3 |
| Amortization and depreciation | (847,7) | (859,6) | (924,6) | (932,7) |
| Write-downs, impairment losses (value writebacks) | (60,2) | (35,3) | (7,3) | (20,8) |
| Provisions for risks and charges | 21,1 | 0 | 0 | 0 |
| EBIT | 341,9 | 496,2 | 418,3 | 431,7 |
| Finance income and costs | (190,0) | (233,6) | (202,3) | (169,3) |
| EBT | 151,9 | 262,6 | 216,0 | 262,4 |
| Income taxes | (78,8) | (106,3) | (9,5) | (80,9) |

| | | | | |
|-------------------------|------|-------|-------|-------|
| Net profit for the year | 73,1 | 156,4 | 206,5 | 181,5 |
|-------------------------|------|-------|-------|-------|

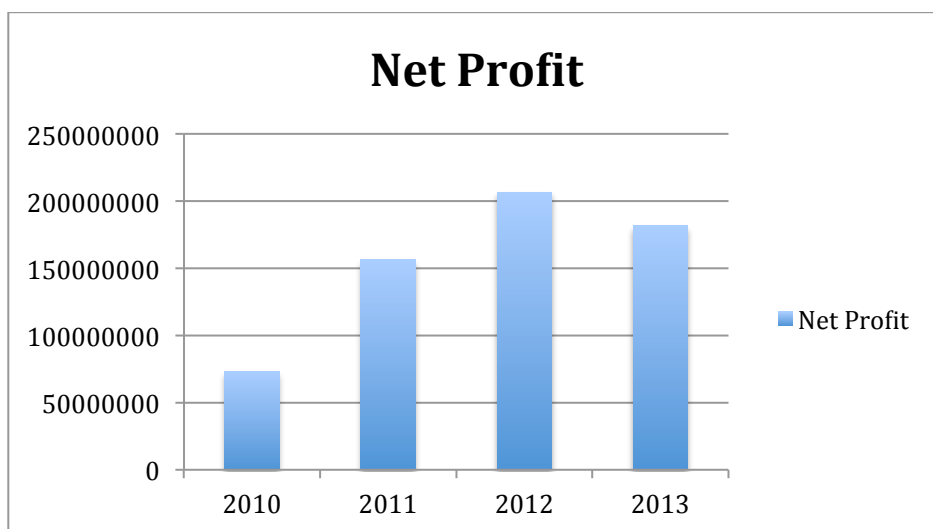
Description of income statement:

Net Profit for the years 2010-2013: As compared to 2010, 2011 shows a substantial improvement of the net profit of 83.2 million euro. In effect, net profit for the 2011 financial year was 156.4 million euro as compared to 73.1 million euro for the preceding year.

2012 also shows an improvement of net profit of 50.1 million euro on 2011 (+32%) with a net profit of 206.5 million euro.

In 2013, net profit dropped to 181.5 million euro. However, we need to point out that the 2012 net profit benefitted from 72 million euro of deferred tax benefits. Consequently, net of this effect, net profit would be up considerably.

Figure 19: Net Profit Trends for 2010-2013 (Trenitalia)

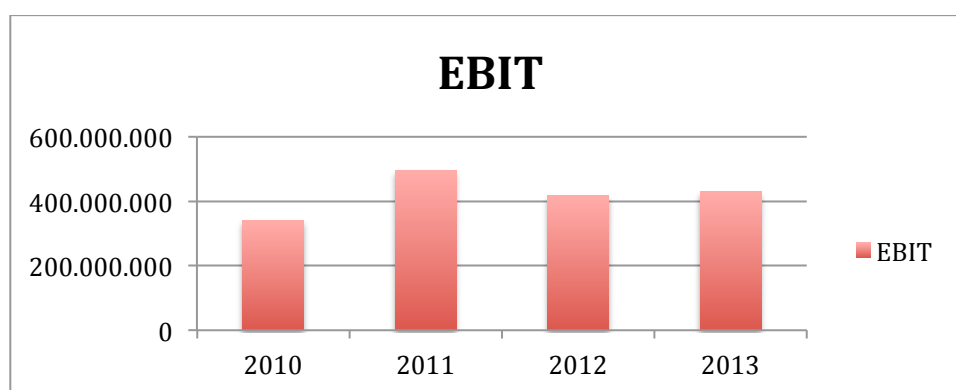


EBIT for the years 2010-2013: net profit for 2011 went up by 45.1% for a total of 496.2 million euro, as compared to 341.9 million euro for the previous financial year giving a profit margin of 8.7% for 2011 (6,0% in 2010).

Net profit for 2012 fell by 15,7% to 418.3 million euro, as compared to 496.2 million euro in the preceding year, 7,6% of income for 2012 (8,7% for 2011). The result is however influenced by two non recurring factors that affect 2012; the first is an increase in labour costs of 33 million euro as a result of increased needs that arose out of a redefinition of plans for 2013 and subsequent so as to complete, inside a tighter time frame, the process of reorganisation and rationalisation begun in previous years. The second factor instead had a positive effect and was the addition to profit of deferred taxes for an amount of about 72 million euro.

Net profit for 2013 went up by 3.2% with a net profit of 431.7 million euro, equal to 7.9% of income for 2013 (7,6% in 2012).

Figure 20: EBIT Trends for 2010-2013 (Trenitalia)

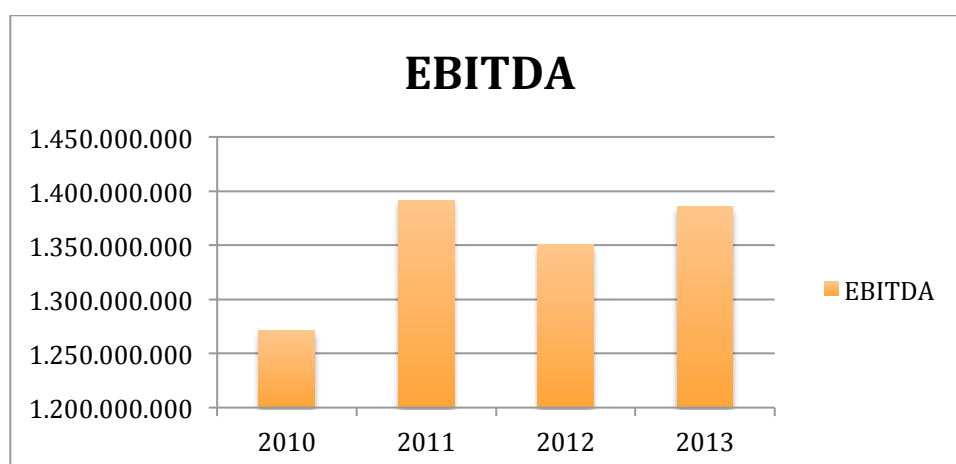


EBITDA for the years 2010-2013: EBITDA went from 1,270.4 million euro (2010) to 1,391.0 million euro (2011) for a profit margin for 2011 of 23.7% (24.4% in 2010).

Instead, in 2012 it dropped to 1,350.2 million euro, down 2.9%, however with a profit margin of 24.6%.

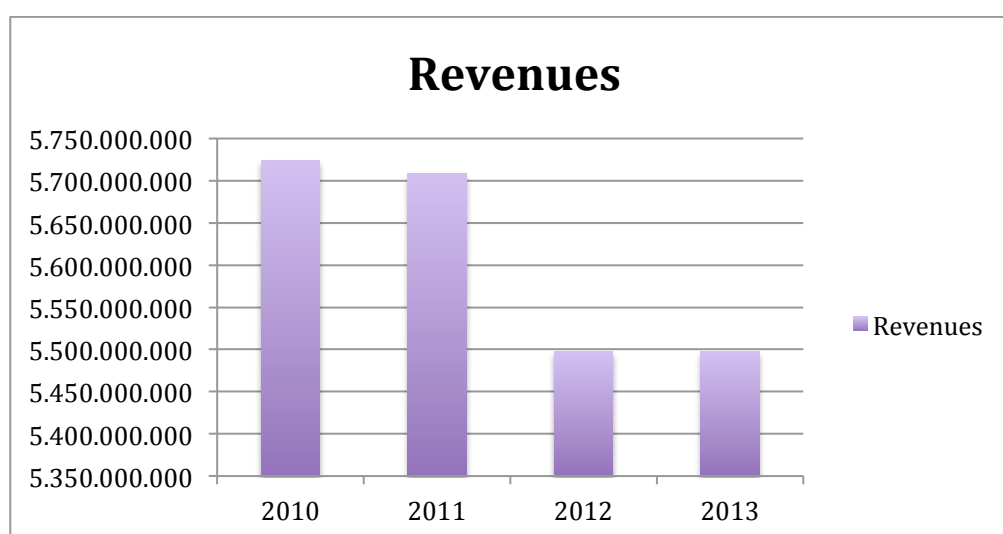
EBITDA for 2013 was 1,385.3 million euro, up 2.6%, for a profit margin of 25.2%, up on the 24.6% margin for 2012.

Figure 21: EBITDA - Trend for 2010-2013 (Trenitalia)



Revenues for the years 2010-2013: in 2011 the company witnessed a slight drop in revenue (-0,27%), from 5,723.80 million euro to 5,708.00. Whilst in the following year (2012) the drop was far more significant, down to 5,498.00 million euro, contracting by 3.82%. The drop can be justified by the fact that the new company NTV entered the high-speed market. However, Trenitalia did adapt its strategy, addressing the market with determination to defend its leadership in the high-speed passenger market. 2013 remains comparable to the preceding year even if its competitor is by then fully integrated into the high-speed market.

Figure 22: Revenues - Trend for 2010-2013 (Trenitalia)



3.4.3 The reclassification of NTV's balance sheet and income statement

Figure 23: reclassification of NTV's balance sheet according to the financial criterion

| | 2010 | 2011 | 2012 | 2013 |
|---------------------------------------|--------------------|--------------------|--------------------|--------------------|
| Non current assets | | | | |
| Intangible fixed assets | 38.262.937 | 56.815.097 | 48.714.413 | 40.592.209 |
| Tangible fixed assets | 77.466.683 | 90.274.953 | 594.722.160 | 632.323.675 |
| Financial assets | 0 | 0 | 66.887 | 66.887 |
| Total Fixed non current assets | 115.729.620 | 147.090.050 | 643.503.460 | 672.982.771 |
| Current assets | | | | |
| Inventories | 0 | 0 | 2.332.900 | 2.762.472 |
| Receivables | 1.737.140 | 57.466.080 | 81.925.809 | 46.573.753 |
| Receiv.(beyond 12 months) | 60.534.058 | 41.675.742 | 93.420.071 | 128.274.985 |
| Liquid assets | 18.399.002 | 12.310.897 | 50.743.872 | 51.634.873 |
| Total Current assets | 80.670.200 | 111.432.719 | 228.422.652 | 229.246.083 |
| Accruals and deferrals | 133.624.690 | 142.000.543 | 2.448.414 | 2.947.133 |
| | | | | |
| Total Net Equity | 223.983.097 | 184.664.112 | 107.527.940 | 107.909.560 |
| | | | | |
| Non Current liabilities | | | | |
| Provisions for risks and charges | 5.195 | 11.396.315 | 1.261.281 | 1.419.766 |

| | | | | |
|--------------------------------------|-------------------|--------------------|--------------------|--------------------|
| Employee severance indemnities | 357.170 | 850.410 | 2.323.336 | 4.074.128 |
| Long term trade payables | 0 | 0 | 0 | 0 |
| Long term financial debt | 91.348.429 | 157.789.617 | 193.743.915 | 203.336.902 |
| Taxes payable (beyond 12 months) | 0 | 0 | 0 | 0 |
| Other payables(beyond 12 months | 0 | 0 | 399.492.121 | 448.365.058 |
| Total Non current liabilities | 91.710.794 | 170.036.342 | 596.820.653 | 657.195.854 |
| Current liabilities | | | | |
| Short term trade payables | 9.879.514 | 28.491.985 | 103.760.464 | 106.583.989 |
| Short term financial debt | 781.257 | 5.311.837 | 26.625.249 | 895.895 |
| Short term taxes payable | 314.038 | 577.341 | 831.909 | 933.395 |
| Other payables in 12 months | 1.948.891 | 3.917.151 | 30.092.193 | 21.411.991 |
| Total current liabilities | 12.923.700 | 38.298.314 | 161.309.815 | 129.825.270 |

| | | | | |
|------------------------|-----------|-----------|-----------|------------|
| Accruals and deferrals | 1.406.919 | 7.524.544 | 8.716.118 | 10.245.303 |
|------------------------|-----------|-----------|-----------|------------|

Figure 24: reclassification of NTV's balance sheet according to the functional economic criterion

| (Euro) | 2010 | 2011 | 2012 | 2013 |
|-------------------------------------|--------------------|--------------------|--------------------|--------------------|
| Fixed capital | 115.729.620 | 147.090.050 | 643.503.460 | 672.982.771 |
| Short term working assets | 195.895.888 | 241.122.365 | 180.127.194 | 180.558.343 |
| Short term working liabilities | (13.549.362) | (40.511.021) | (120.092.291) | (125.483.949) |
| Net working capital | 182.346.526 | 200.611.344 | 60.034.903 | 55.074.394 |
| Medium/long term liabilities | (362.365) | (12.246.725) | (3.584.617) | (5.493.894) |
| Total net invested capital | 297.713.781 | 335.454.669 | 699.953.746 | 722.563.271 |
| | | | | |
| Equity capital | 223.983.097 | 184.664.112 | 107.527.940 | 107.909.560 |
| Short-term financial position | 17.617.745 | 6.999.060 | 810.230 | 37.048.349 |
| Medium long/term financial position | (91.348.429) | (157.789.617) | (593.236.036) | (651.701.960) |

| | | | | |
|------------------------|-------------|-------------|-------------|-------------|
| Net financial position | 73.730.684 | 150.790.557 | 592.425.806 | 614.653.711 |
| Coverage | 297.713.781 | 335.454.669 | 699.953.746 | 722.563.271 |

Figure 25: Reclassification of NTV's income statement

| (Euro) | 2010 | 2011 | 2012 | 2013 |
|---|--------------|--------------|---------------|---------------|
| Operating Revenues | 4.533.190 | 24.702.068 | 102.900.636 | 249.610.966 |
| External costs | (14.890.065) | (33.374.167) | (173.010.274) | (233.346.593) |
| Contribution margin | (10.356.875) | (8.672.099) | (70.109.638) | 16.264.373 |
| Cost of labor | (10.202.123) | (18.411.597) | (41.145.658) | (50.725.153) |
| EBITDA | (20.558.998) | (27.083.696) | (111.255.296) | (34.460.780) |
| Amortizations, depreciation, write downs and other provisions | (1.137.155) | (14.453.652) | (25.984.247) | (43.073.491) |
| EBIT | (21.696.153) | (41.537.348) | (137.239.543) | (77.534.271) |
| Financial income and expenses | (6.589.159) | (12.409.027) | (620.028) | (28.010.742) |
| extraordinary components | (9.658) | (73.473) | 32.037.270 | (296.868) |

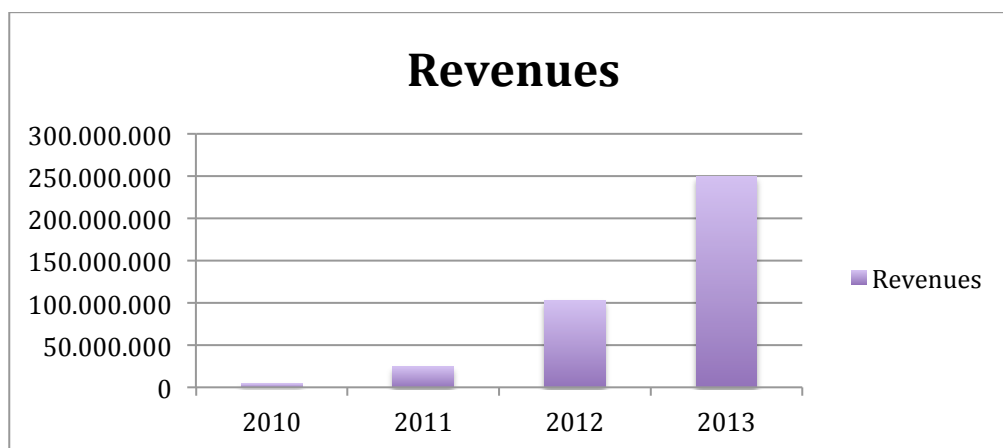
| | | | | |
|-------------------------|--------------|--------------|---------------|---------------|
| EBT | (28.294.970) | (54.019.848) | (105.822.301) | (105.841.881) |
| Income tax | 7.558.742 | 14.700.861 | 28.686.130 | 28.222.381 |
| Net Profit for the year | (20.736.228) | (39.318.987) | (77.136.171) | (77.619.500) |

Description of income statement:

In the period 2010-2013 NTV's revenues grew but so did costs, with the result that in this period profits fell.

As the years went by NTV's income rose progressively as it progressively penetrated the market. NTV entered the railway market with its high-speed network in 2012 and saw its turnover leap up by 316.6% to 102,900,636 million euro. The following year, NTV settled into its market and adopted a highly aggressive strategy against the incumbent Trenitalia, which earned it additional revenue of 142.6%, for 249,610,966 million euro.

Figure 26: Revenues for 2010-2013 (NTV)



We can thus divide the 2010-2013 period into two biennia marked by the entrance of NTV into the market.

In the 2010-2011 biennium, there was an increase in revenue, but an equivalent increase in costs, which led to a drop in profit.

Figure 27: EBITDA for 2010-2013 (NTV)

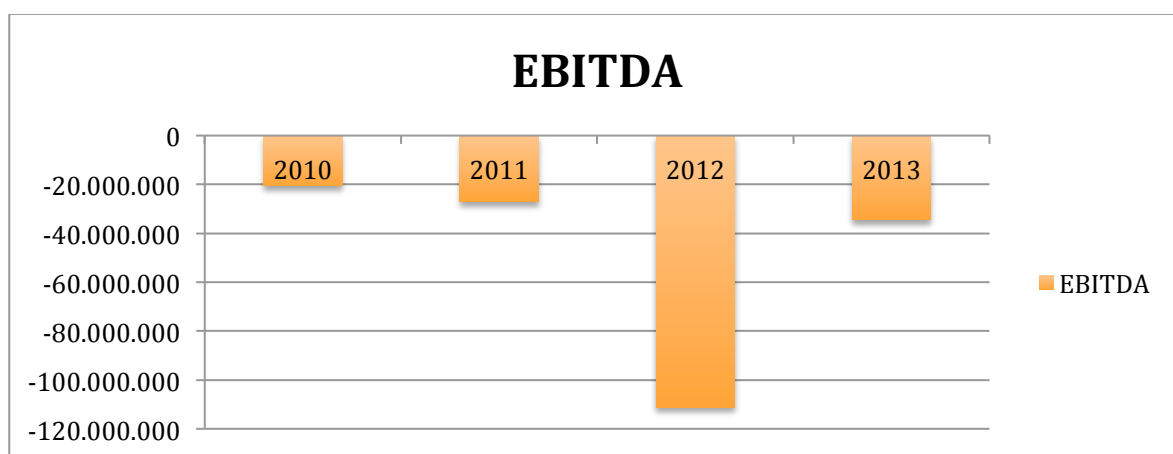
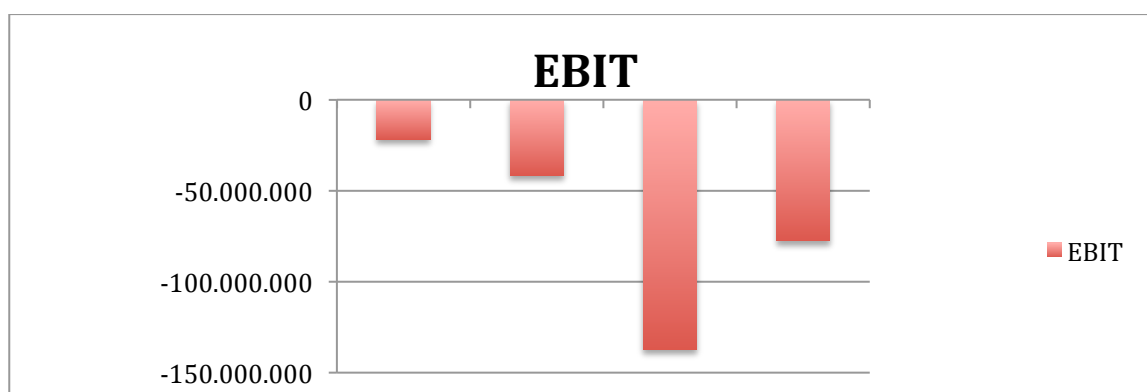


Figure 28: EBIT for 2010-2013 (NTV)

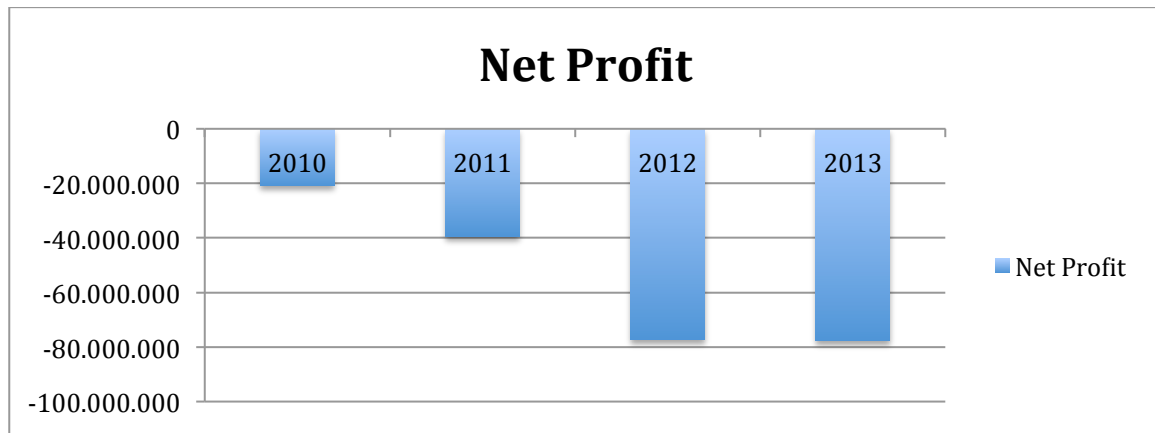


In the 2012-2013 biennium, although the income statements differ in some ways the net result is almost the same in both years:

- 2012 shows a negative EBITDA of 111.6 million euro and an EBIT of 137.24 million euro. The loss of 0.62 million euro led to a final loss of 137.86 million euro. Thanks to the effect of some positive extraordinary financial manoeuvres, mainly the closing of the maintenance plant at Nola, loss before tax fell to 105.82 million euro for a net loss of 77.14 million euro after tax;
- 2013 shows a negative EBITDA of 34.5 million euro and an operating loss of 77.5 million euro. The loss of 28.0 million euro was determined by an ordinary negative result of 105.5 million euro. Profit before tax further worsened, generating a loss of 105.8 million euro, for a

net loss of 77.6 million euro after tax.

Figure 29: Net Profit Trends for 2010-2013 (NTV)



3.5 Performance indicators

As we saw in the preceding chapter, the techniques used for analysing balance sheets, the main theme of this document, require us to construct and interpret quotients that permit us, in general terms, to relate to each other certain aspects of a balance sheet with the aim of understanding a company's current condition and in which direction it is moving. In this paragraph we will continue with the application of the performance indicators chosen in the second chapter and applied to the actual cases of Trenitalia and NTV, so working out a series of indices that will allow us to complete the analysis of the balance sheet and the economic, and financial condition of the two companies.

3.5.1 Analysis of profitability

3.5.1.1 Analysis of the profitability of Trenitalia

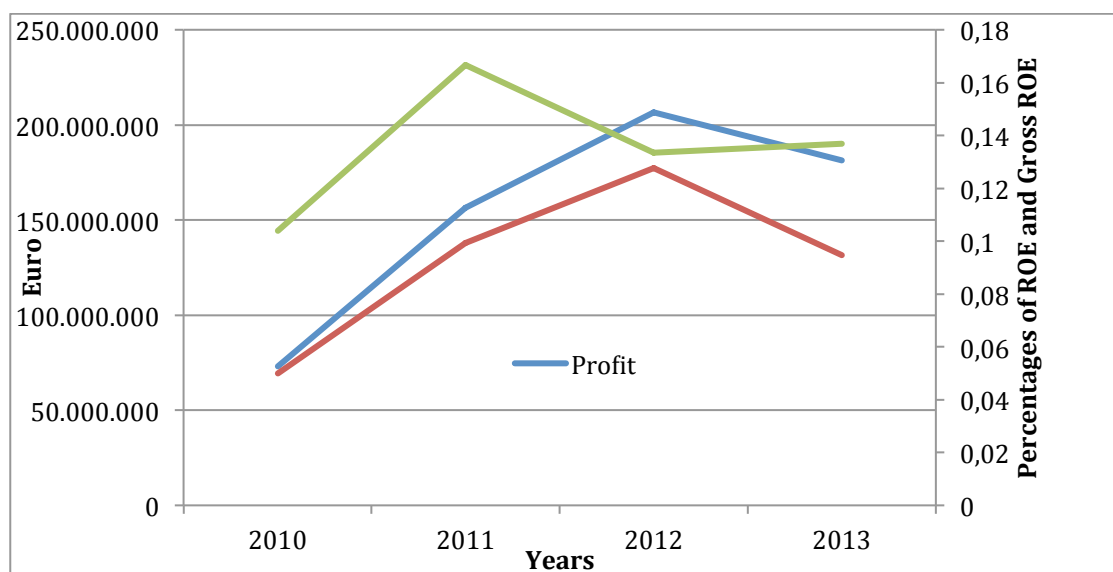
The following table shows the performance indicators that look at the degree of profitability of the company.

Figure 30: Indexes of Profitability (Trenitalia)

| | 2010 | 2011 | 2012 | 2013 |
|------------|---------|---------|---------|---------|
| ROE | 0,04993 | 0,09918 | 0,12762 | 0,09468 |

| | | | | |
|-----------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| | 4,99% | 9,92% | 12,76% | 9,47% |
| Gross ROE | 0,10381 10,38% | 0,16659 16,66% | 0,13354 13,35% | 0,13690 13,69% |
| ROI | 0,04277 4,28% | 0,06467 6,47% | 0,05068 5,07% | 0,05180 5,18% |
| ROS | 0,05973 5,97% | 0,08693 8,69% | 0,07606 7,61% | 0,07852 7,85% |
| CT | 0,71601 | 0,74395 | 0,66625 | 0,65980 |
| D/E | 3,82438 | 3,21896 | 2,98398 | 2,98398 |
| i⁵⁵ | 0,01762 | 0,02511 | 0,01923 | 0,01960 |

Figure 31: Profit, ROE and Gross ROE Trends for Trenitalia



⁵⁵ $I = ROI - [(Gross\ ROE - ROI) * D/E]$

Trends for ROE and Gross ROE 2010-2011: in 2011 profits and Equity increased. However, profit rose more than Equity causing the ROE to rise. The graph above shows how Gross ROE reached a peak in 2011, when profit before taxes (262.4 million euro) is highest in the period 2010-2013.

Trends for ROE and Gross ROE 2011-2012: In 2012 ROE reached its highest level at 12.76% against a considerable drop in taxes of 96,688 million euro, of which 72.2 million euro were derived mainly from the recognition of deferred tax assets in the specific asset item. Gross ROE fell in 2012 due to a fall in profits before taxes.

Trends for ROE and Gross ROE 2012-2013: In 2013 profit before taxes went up with the result that Gross ROE rose as well. However, against an increase in taxes of 71,359 million euro, net profits fell and consequently so did ROE.

Figure 32: Trends for ROI, ROS and CT for Trenitalia (graph)

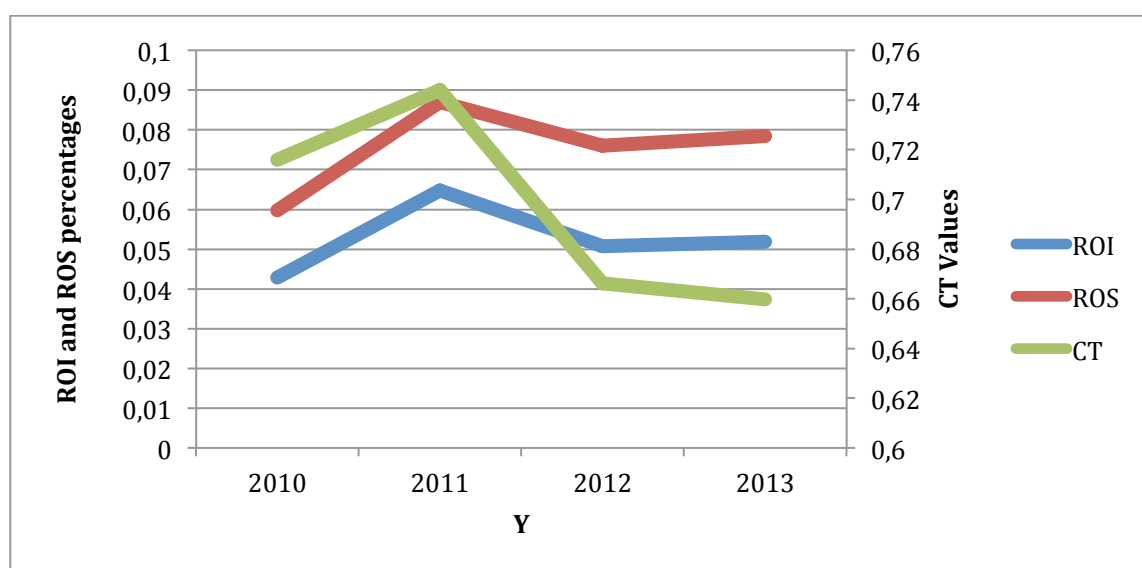














Figure 33: Trends for ROI, ROS and CT for Trenitalia (Table)

| | 2010/2011 | 2011/2012 | 2012/2013 |
|-----|-----------|-----------|-----------|
| ROI | ↑ | ↓ | ↑ |
| ROS | ↑ | ↓ | ↑ |

| | | | |
|--------------|---|---|--|
| CT |  |  |  |
| EBIT |  |  |  |
| NOIC |  |  |  |
| SALES |  |  |  |

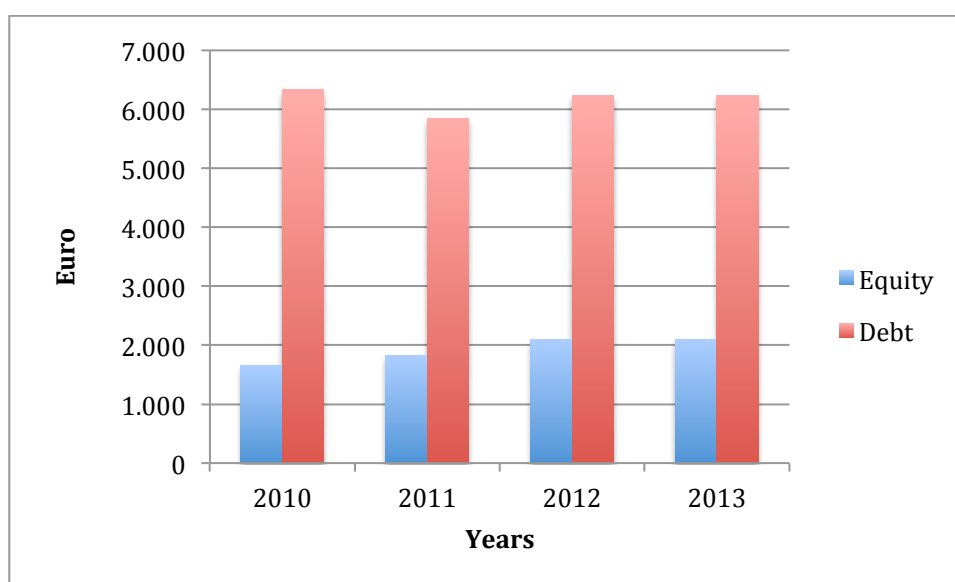
The above graph and table show shifts in ROI and its determinants ROS and CT. it is important to note again how shifts in ROI do not tell us much for the purpose of expressing judgement on Trenitalia's performance without an analysis of its determinants.

Trends for ROI, ROS and CT 2010-2011: In 2011 ROI rose from 4.28% (2010) to 6.47% (2011). This because EBIT grew by 45.1% against 2010 and because NOIC fell, consequently bringing about a further improvement of the index. Analysing the ROI's components, one notes an increase of both ROS and CT. In particular, one notes a considerable increase in ROS of 5.97% (2010) to 8.69% (2011), due to an increased EBIT that derives from a reduction of operating costs, as revenue was slightly down. Furthermore, there is an increase in CT due to a larger reduction of NOIC as compared to revenue. The decrease in NOIC is caused by a reduction of net current operating assets or net working capital. The reduction in net working capital is almost all attributable to the considerable reduction in trade receivables for an amount of 590 million euro.

Trends for ROI, ROS and CT 2011-2012: In 2012 there was a fall in ROI from 6.47% (2011) to 5.07% (2012). This deterioration is explained by a fall in EBIT of 2.9% as compared to 2011, and increase in NOIC that further worsened the index. Analysing the components of the ROI, we will record a fall in both ROS and CT. In particular, ROS fell from 8.69% (2011) to 7.61% (2012), due to a greater fall in EBIT as compared to sales revenue. Furthermore, there was a drop in CT caused by the drop in revenue and increase in NOIC. The increased NOIC was in turn caused by an increase in net working capital of 223.7 million euro.

Trends for ROI, ROS and CT 2012-2013: In 2013 ROI rose from 5.07% (2012) to 5.18% (2013). This because EBIT grew by 2.6% against the receding year, and a decrease in NOIC that further improved the index. Analysing the makeup of the ROI, one notes an increase in ROS and decrease in CT. In particular, ROS rose from 7.61% (2012) to 7.85% (2013), due to an increase in EBIT and a drop in sales. Furthermore, there was a drop in CT caused by the fall in revenue and increased NOIC. This last rose by 80.4 million euro as compared to 2012. This increase derives from a decrease in severance pay and other provisions for 262.2 million euro partially compensated for by a reduction in fixed assets of 113.5 million euro and reduced working capital for an amount of 68.3 million euro.

Figure 34: Trends for DEBT-EQUITY ratio for Trenitalia



Financial Leverage: Trenitalia fully enjoyed the benefits of financial leverage, indeed, ROI is always greater than interest (i) on third party capital in the period 2010-2013. The Debt-Equity ratio progressively decreased from a high of 3.82 in 2010 to a low of 2.98 in 2013. With a reduction in the DEBT-EQUITY ratio the company is more solid.

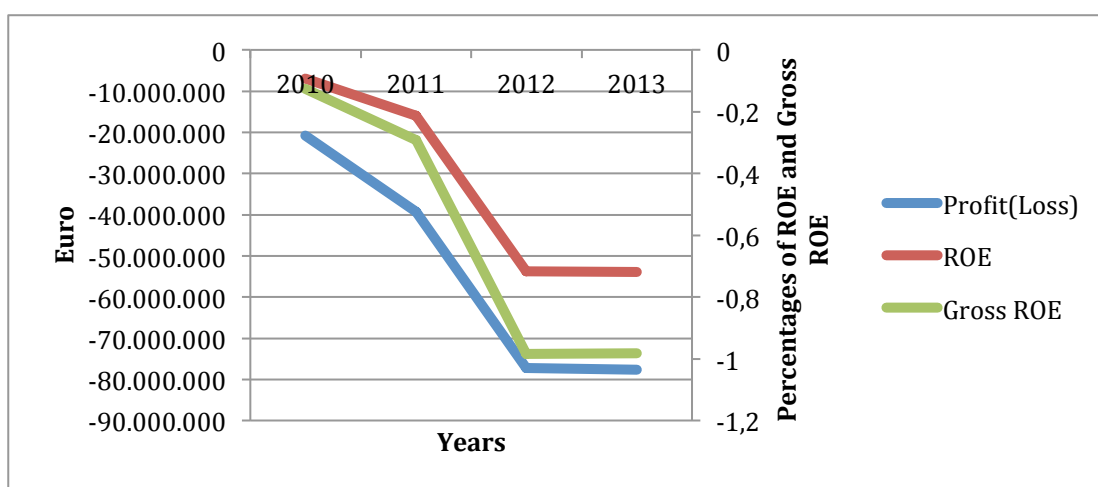
3.5.1.2 Analysis of the profitability of NTV

The following table shows the performance indicators that look at the degree of profitability of the company.

Figure 35: Indexes of Profitability (NTV)

| | 2010 | 2011 | 2012 | 2013 |
|------------------|-------------------------------|------------------------------|------------------------------|-----------------------------|
| ROE | (0,09257) -9,26% | (0,21292) -21,29% | (0,71735) -71,74% | (0,71930) -71,93% |
| Gross ROE | (0,12632) -12,63% | (0,29253) -29,25% | (0,98413) -98,41% | (0,98083) -98,08% |
| ROI | (0,07287) -7,29% | (0,12382) -12,38% | (0,19606) -19,61% | (0,10730) -10,73% |
| ROS | (4,78606) - 478,61% | (1,68153) -168,15% | (1,33370) -133,37% | (0,31062) -31,06% |
| CT | 0,01522 | 0,07364 | 0,14701 | 0,34545 |
| D/E | 0,32918 | 0,81657 | 5,50951 | 5,69601 |

Figure 36: Trends for Profit, ROE and Gross ROE for NTV



Trends for ROE and Gross ROE 2010-2011: In 2011 ROE fell from -9.26% (2010) to -21.29% (2011), as profit fell more than the reduction in equity, this last falling to -17,55% as compared to the previous year. Gross ROE was lower than ROE as EBT was lower than final profit. There was a fall in Gross ROE as compared to the year before because EBT fell by 25,724,878 euro.

Trends for ROE and Gross ROE 2011-2012: in 2012, as already said, NTV entered the railway market and started earning revenue from the sale of tickets as of 28 April of that year. But this operational phase also brought with it very high operating costs that reduced profits. The graph above highlights the considerable drop in profit as a negative coefficient of the blue line. In turn, the reduction in profit impacted on the profitability index for shareholders, which went from -21.29% (2011) to -71.73% (2012). Gross ROE went down due to the considerable drop in profit before tax.

Trends for ROE and Gross ROE 2012-2013: in 2013, the situation of the two indices (ROE and Gross ROE) remained constant as compared to 2012 as the company recorded an EBT and profit very similar to the preceding year against net assets that rose only slightly.

Figure 37: Trends for ROI, ROS and CT for NTV (graph)

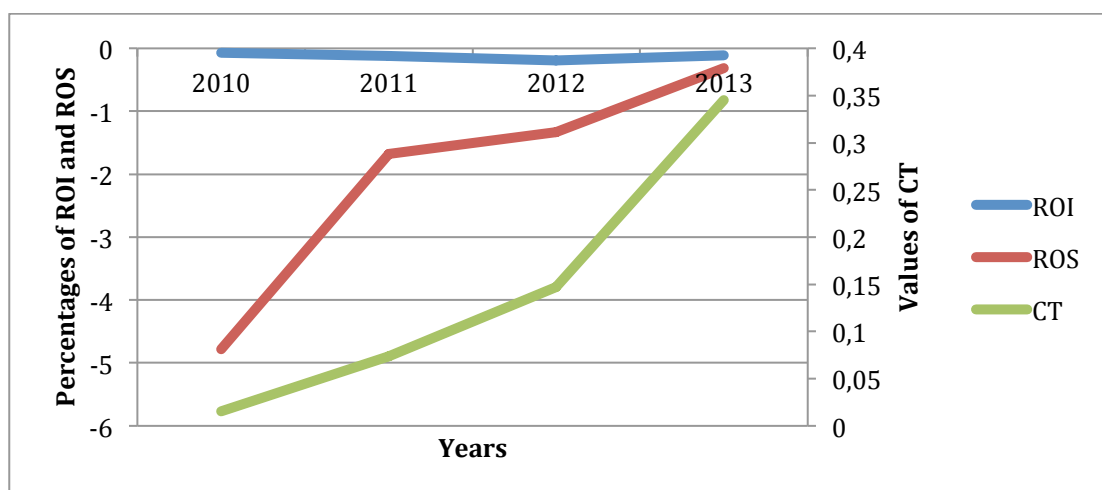




















Figure 38: Trends for ROI, ROS and CT for NTV (table)

| | 2010/2011 | 2011/2012 | 2012/2013 |
|-------|---|---|--|
| ROI |  |  |  |
| ROS |  |  |  |
| CT |  |  |  |
| EBIT |  |  |  |
| NOIC |  |  |  |
| SALES |  |  |  |

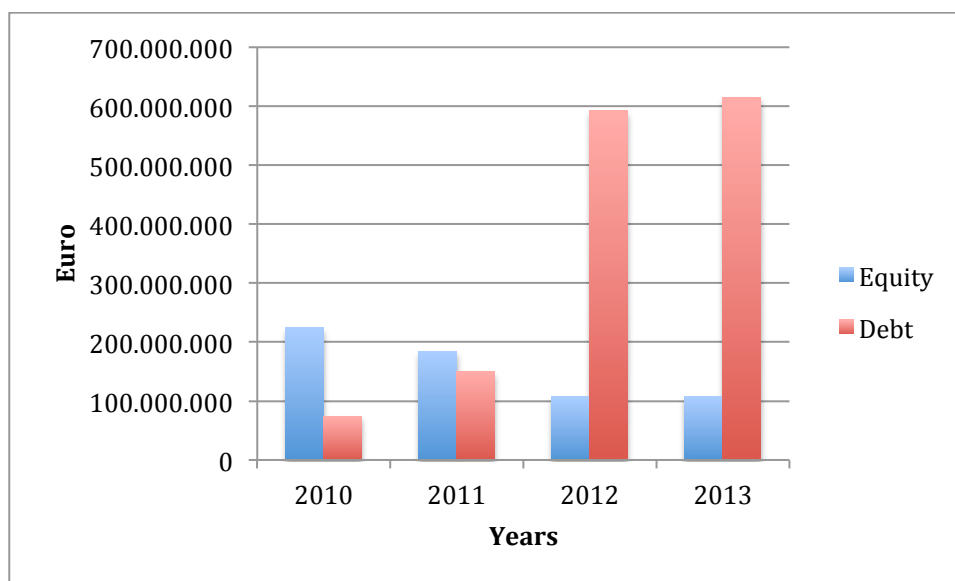
Before proceeding with an analysis of ROI and its determinants ROS and CT we need to make a premise. ROS prior to 2012 was of no significance because sales had not commenced.

Trends for ROI, ROS and CT 2010-2011: in 2011 ROI fell from -7.29% (2010) to -12.38% (2011). This due to a fall in EBIT as compared to 2010 and increase in NOIC that led to a further drop in ROI. Analysing the makeup of ROI, one notes also that sales and NOIC are up and thus increase the CT index from 0.01 (2010) to 0.07 (2011). In particular, increased NOIC was due to an increase in fixed capital of 27.10% and net working capital of 10.02%.

Trends for ROI, ROS and CT 2011-2012: In 2012 ROI went down from -12.38% (2011) to -19.61% (2012). This due to a fall in EBIT and increased NOIC, which had the effect of reducing the index. Analysing the makeup of ROI, we see that both sales and NOIC are up, leading to an increase in CT index from 0.07 (2011) to 0.15 (2012). In particular, NOIC was up by 364.50 million euro on the previous year, due principally to a considerable increase in the asset portfolio of 496.41 million euro and a drop in net working capital of -140,58 million euro, and a decrease in medium to long term liabilities of 8.66 million euro.

Trends for ROI, ROS and CT 2012-2013: In 2013 ROI went up from -19,61% (2012) to -10,73% (2013). This due to the fact that EBIT rose more than NOIC. As already said, in 2012 NTV began to operate and earn income from the sale of tickets with the result that ROS became a significant factor for the analysis of performance. In particular, thanks to a greater increase in EBIT as compared to sales, we see an increase in the ROS index. Lastly, the other component of ROI, that is CT, went up due to a positive variation in sales that was greater than the also positive variation of the NOIC. NOIC rose by 22.6 million euro on the previous year, due principally to the following factors: an increase of the asset portfolio (29.5 million euro) a slight increase in receivables (0.4 million euro), increased debts (-5.4 million euro), mainly suppliers and deferred income relating to the transportation service sold but not yet travelled; an increase in other medium to long-term liabilities (-1,9 million euro), due principally to an increase of the severance pay fund, caused by an increase in the number of employees.

Figure 39: Trends for DEBT-EQUITY ratio for NTV



In relation to an analysis of the effect of financial leverage, we need to point out again that special situation of the company in relation to the year (2012) when it began to operate. Indeed, the bar graph above shows how in the first two years, 2010 and 2011, the company's condition was very solid with net assets greater than third party loans. In

2012 and 2013, instead, there was an increase in debt that rose to 83.3% of total capital. Furthermore, equity progressively decreased across the five-year period.

After having analysed the trends for the two factors that affect ratio, now we shall analyse the effects of financial leverage on ROE.

In the first two years the negative effects of financial leverage on ROE, which derives from the fact that negative ROI is less than the rate of net debt burden ($ROI < i$), were mitigated by the DEBT-EQUITY ratio, which was less than 1. To the contrary, in 2012-2013, the D/E ratio increased enormously, reaching a level of 5.69 and so highlighting a serious situation of financial disequilibrium. In this case, as ROI was less than the cost of debt(s), this amplified the negative effect on ROE.

3.5.2 Solvency analysis

We will now proceed with a study of capital ratios, analysing the structure of investments and financing, so as to evaluate whether the company is capable of maintaining in time a situation of structural equilibrium. The elements that need analysing and constant monitoring over time include how assets are financed and the degree of financial autonomy or degree of indebtedness.

3.5.2.1 Solvency analysis of Trenitalia

Figure 40: Solvency Indexes (Trenitalia)

| | 2010 | 2011 | 2012 | 2013 |
|------------|---------|---------|---------|---------|
| E/FA | 0,15673 | 0,16978 | 0,17107 | 0,20606 |
| (E+NCL)/FA | 0,95169 | 0,95590 | 0,87334 | 0,92269 |
| NFP/EBITDA | 4,98623 | 4,20848 | 4,62228 | 4,50516 |

| | | | | |
|-------------------------|---------|---------|---------|---------|
| D/E | 3,82438 | 3,21895 | 2,98398 | 2,98398 |
| Interest coverage ratio | 1,79947 | 2,12414 | 2,06772 | 2,54991 |

Financing fixed assets

The first index, E/FA, called Primary Fixed assets financing ratio, verifies what part of fixed assets is financed by net equity. For the period selected, the index grew at a constant rate. At the beginning the value of the index was 0.15 (2010), in which 15% of fixed assets were financed by equity, up to 0.21 (2013) in which 21% of fixed assets were financed by equity, so progressively improving across the period. It is not possible to identify a threshold figure for this index, even if in general terms an index of at least 0.6-0.7 is considered satisfactory, in other words a situation where well over 50% of fixed assets are financed by equity.

The second index, (E+NCL)/FA, called Secondary fixed assets financing ratio, looks at how the remaining fixed assets are financed. In the first two years this index was relatively high at 0.95, meaning that 95% of fixed assets were financed medium to long term. After 2011 the index dropped to 0.87 (2012), which meant that, as compared to 2011, there was 9% less of fixed assets financed medium to long term, and it increased up to 0.92(2013).

Degree of financial autonomy

As said, another important aspect of the analysis of solidity is a company's financial autonomy, which depends upon the balance between external sources of finance and the company's own equity. The trend for the Debt-Equity ratio for 2010-2013 is downward, as its highest is 3.82 in 2010, progressively going down to a minimum of 2.98 in 2013. With values up to 1-1.5 indebtedness is to be considered physiological, a fair support to growth without prejudicing solidity. At levels of 1.5-2 indebtedness is to be considered

high. And anything significantly above that becomes a serious problem for a company's solidity. The table above shows how the index goes down in time, so improving the company's solidity, even if the extent of indebtedness was still very high in 2013 (2.98).

However, these indicators, because they only focus on the value of assets, do not give any indication of a company's ability to settle its debts, another factor with which to verify a company's solidity. By virtue of this, additional ratios have been calculated for the purpose of verifying whether the company can meet its obligations.

The first indicator, NFP/EBITDA, measures a company's ability to repay its debts by virtue of its operating activity. Looking at Trenitalia, we see that in the period chosen (2010-2013) the index goes progressively down, and it is thus clear that the company progressively improved its ability to settle its debts year after year.

Another indicator that is used is the interest coverage ratio, which compares EBIT and financial costs, and which indicates the number of times that profit covers net interest. An ideal value for this index needs to be at least over 1.5. For Trenitalia this index remained pretty constant over the years close on a value of 2, which means that profits were enough to cover interest twice over. Furthermore, *ceteris paribus*, the company is potentially in a position to take on new debts.

3.5.2.2 Solvency analysis of NTV

Figure 41: Solvency Indexes (NTV)

| | 2010 | 2011 | 2012 | 2013 |
|------------|-------------|-------------|-------------|-------------|
| E/FA | 1,93540 | 1,25545 | 0,16710 | 0,16035 |
| (E+NCL)/FA | 2,7279 | 2,4115 | 1,09455 | 1,13689 |
| NFP/EBITDA | 3,58630 | 5,56758 | 5,32492 | 17,8363 |

| | | | | |
|-------------------------|----------|---------|---------|---------|
| | | | | |
| D/E | 0,329180 | 0,81657 | 5,50951 | 5,69608 |
| Interest coverage ratio | 3,29270 | 3,34735 | 221,344 | 2,76802 |

Ability to finance fixed assets

During the period under examination, the index (E/FA) fell progressively. In effect, in 2010-2011, the index was over 1, so indicating that the company was more than solid, with equity covering completely the fixed assets and part of current assets. However, in 2012-2013, when the company starts operating (2012), the index dropped considerably to 0.16 (2013), meaning that the company's equity covered only 16% of its fixed assets.

The second index used, (E+NCL)/FA, showed variations similar to the first index, falling progressively and then going up in 2013. However, the index remained above a value of 1, indicating a very solid situation for NTV, in which fixed assets were fully covered by medium to long-term loans.

Degree of financial autonomy

The behaviour of the Debt-Equity ratio for 2010-2013 shows a markedly upward trend, with its lowest point of 0.33 in 2010, then to reach its highest point of 5.69 in 2013. In 2010-2011, the company had a low measure of indebtedness in which net assets were greater than debt. In 2012-2013, the index increased exponentially up to 5.61(2012) and then 5.69 (2013). Indebtedness thus rose to 5 times equity. In this situation, the company became less solid because of the high level of financial risk caused by its state of indebtedness, which increased the risk of insolvency.

The PFN/EBITDA index rose year after year up to 17.83 in the last year (2013). This indicates that as the years went by the company's ability to cover its debts quickly and progressively deteriorated.

The interest coverage ratio increased disproportionately between 2011 and 2012 but then plummeted back down equally quickly to 2.77 in 2013. However, a value of 2.77 was a good result for the company, as it means that profits covered net interest by almost 3 times. Thus, *ceteris paribus*, the company was in a position to take on new debts.

3.5.3 Liquidity Analysis

3.5.3.1 Liquidity analysis of Trenitalia

Figure 42: Liquidity indexes (Trenitalia)

| | 2010 | 2011 | 2012 | 2013 |
|--|---------|---------|---------|---------|
| CA/CL | 0,87524 | 0,87977 | 0,71608 | 0,79399 |
| (Inventories/Sales)*365 | 42,1082 | 41,8619 | 43,8762 | 45,6008 |
| (Trade Receivables/Sales)*365 | 144,93 | 107,66 | 139,31 | 124,87 |
| (Trade payables/Sales)*365 | 115,58 | 113,98 | 132,07 | 107,70 |
| Duration of the working capital cycle | 71,46 | 35,54 | 51,12 | 62,78 |

As already said, an analysis of liquidity concerns the financial equilibrium in the short term. The index used to measure a company's ability to meet its short-term obligations with revenue foreseen in the short term is current ratio (CA/CL).

The trend for current ratio for Trenitalia stayed put at values of between 0.88 (2011) and 0.71 (2012), this meaning that current assets were not enough to cover current liabilities

and that, thus, the company would not be able to meet its short term obligations. Therefore, the indicator shows financial stability if it is above 1, but it needs to be remembered that this indicator does not take into consideration two determining factors for short term financial equilibrium, which are whether income comes before expenditure or after, and if the new financial year will have a balanced financial condition or not.

However, the indices of the cycle of working capital can complete the picture of the liquidity situation of the budget, providing a partial answer to the first of the two problems.

The table above gives average inventories of between 41 (2011) and 45 (2013) days; an average credit collection time of 107 (2011) and 144 (2010) days; and an average timespan for the settlement of commercial debt of 107 (2013) and 132 (2012) days. For the purpose of evaluating liquidity, what is significant is the average timespan between when suppliers are paid and clients pay. To verify this period one needs to calculate the duration of the working capital cycle, which ranges between 35 (2011) and 71 (2010) days. The longer this period is, the more critical is a company's financial condition.

3.5.3.2 Liquidity analysis of NTV

Figure 43: Liquidity indexes (NTV)

| | 2010 | 2011 | 2012 | 2013 |
|--------------------------------------|-------------|-------------|-------------|-------------|
| CA/CL | 6,24204 | 2,90960 | 1,416050 | 1,76580 |
| (Inventories/Sales)*365 | 0 | 0 | 8,27506 | 4,03950 |
| (Trade Receivables/Sales)*365 | 5013,91 | 1464,93 | 621,97 | 255,68 |
| (Trade | 795,47 | 421,00 | 368,05 | 155,86 |

| | | | | |
|--|---------|---------|--------|--------|
| payables/Sales)*365 | | | | |
| Duration of the working capital cycle | 4218,43 | 1043,92 | 262,20 | 103,86 |

NTV's current ratio fell progressively over the years, at its highest in 2010 with a value of 6.24 then to go down to 1.77 in 2013. However, as the index always remained above 1 this indicated good financial equilibrium.

Indexes prior to 2012 are of minor significance, as sales did not commence until that year. Thus, only analysing the last two years, there was a very low average duration of days for spares, these being substantially only spare parts for acts of vandalism on rolling stock and supplies for catering on board trains. Furthermore, there is a longer average period of collection of receivables compared to an equally long average time of payment of trade debts. However, in 2013 the average time of collection of receivables decreased to a greater extent than the average time of payment of trade payables, thus helping to decrease the duration of the working capital cycle, and so improving the company's liquidity

4) CONCLUSIONS

As said in my introduction, one of the main aims of the work done is that of illustrating financial statement analysis, and in particular an analysis by means of economic and financial indicators applied to the balance sheets and income statements of Trenitalia and NTV. All this in consideration of the fact that such an analysis of a company's performance applied to its balance sheet gives greater guarantees when it comes to looking at a company's future performance, in terms of its effective capacity for growth, development and solidity.

For this reason in this part of my work I have decided to make evident how NTV's potential for growth can influence railway market share and hence the performance of the two companies in the years to come.

The table below shows income for 2010-2013 for NTV and for Trenitalia only the Long Haul passenger division (national and international passenger transport) of which Trenitalia's high-speed service is a part. This means that the data below are purely indicative as, on the one hand they could favor the incumbent, in that to this division is ascribed also income from some national and international rail services that are not high-speed, and on the other could also bring advantage to NTV, in that revenue could be not just from railway tickets, and so ascribable to high-speed, but also from other branches of the company. Market shares have been based on the same revenue, and so these need to be considered as purely indicative.

However, having made the above assumptions, we can see how NTV's revenue grew enormously from 2011 (24 million) to 2013 (249 million Euro), whilst Trenitalia's revenue remained constant from 2011 to 2013, compensating for the drop in 2012 with an increase in 2013. Furthermore, we can see how NTV's market share of high-speed grew, up to 9.63% in 2013, with a corresponding drop in market share for the incumbent.

NTV's aim is to reach a 20% market share (Giuseppe Sciarrone, Ex CEO)⁵⁶.

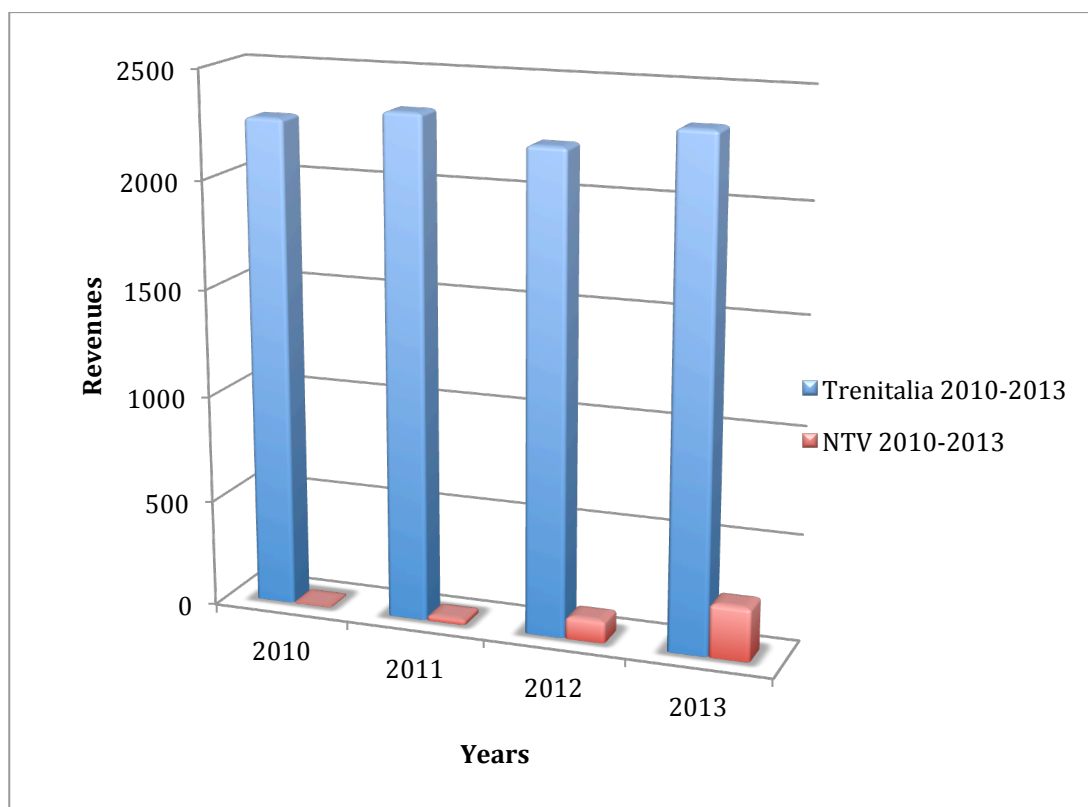
Figure 44: Revenues and AV market share for Trenitalia(only LH division) and NTV in 2010-2013

| Revenues are in Millions of Euro. | 2010 | 2011 | 2012 | 2013 |
|--|-------------------------|-------------------------|----------------------|-------------------------|
| Trenitalia: revenues from medium and long distance(Long Haul passengers divison) | 2273 | 2334 | 2274 | 2336 |
| NTV: revenues | 4 | 24 | 103 | 249 |
| Trenitalia market share AV | 0,998243303 (99,82%) | 0,989821883 (98,98%) | 0,955737 (95,57%) | 0,903675048 (90,37%) |
| NTV market share AV | 0,001756697 (0,18%) | 0,010178117 (1,02%) | 0,044263 (4,43%) | 0,096324952 (9,63%) |

Source: Trenitalia's and NTV's financial statement 2010-2013(revenues). Market shares are computed from revenues.

⁵⁶ Huges Murray, Railway Gazette International, 2008.

Figure 45.1: Revenues for Trenitalia (only LH division) and NTV in 2010-2013



Furthermore, reaching break-even in 2016⁵⁷ (initially it was expected that income could cover costs by 2014), NTV and hence its investors will see returns on their investments and the company will be able to grow.

In addition, in deliberating the industrial plan in 2015 the shareholders meeting approved recapitalization for 100 million in two installments, that will provide the necessary financial stability with which to continue with the new development strategy⁵⁸.

⁵⁷<http://www.ilsole24ore.com/art/notizie/2014-01-09/ntv-piu-passeggeri-ma-slitta-break-even-064821.shtml?uuid=ABhSaVo>

⁵⁸

http://www.repubblica.it/economia/finanza/2015/07/17/news/ntv_aumento_di_capitale_da_100 mln_per_i_treni_italo-119282294/

This strategy includes extending to sectors outside high-speed, with the purchase of trains that will no longer be high-class design and luxury and less expensive (20 million euro each) and that will need to be able to compete also on routes currently only handled by the incumbent ⁵⁹.

In conclusion, NTV's diversification strategy will probably lead to better performance and will again generate further competition within the railway market.

As regards Trenitalia's future performance it is impossible to make any kind of forecast, given that it already benefits from positive performance and will adopt countermeasures aimed at containing NTV's strategies.

⁵⁹ <http://www.ilfattoquotidiano.it/2015/06/13/ntv-i-treni-italo-in-crisi-fanno-marcia-indietro-meno-lusso-piu-tratte-low-cost/1774971/>

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