QUALITATIVE AND QUANTITATIVE ANALYSIS OF NESTLÉ

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NESTLÉ ACCOUNTING AND FINANCIAL ANALYSIS

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INTRODUCTION

Throughout the realization of this project, which we have been modifying for the last four months, we have had the opportunity to learn how to value firms from both the commercial situation and the financial performance perspectives.
By doing this we've had the possibility to investigate the inner fittings of one of the most relevant firms of the today's economic paradigm while our knowledge in interpreting accountancy statements has been notably improved.

Our analysis has been divided in two main blocs: the commercial situation of Nestlé in the first place and then the risk and profitability analysis. However, we have decided, in this paper, to break it into three parts in order to have a clearer look in every concept.

BLOC 1: COMMERCIAL SITUATION

We will first start by introducing formerly our firm by describing basic data of its activity, values, competitive advantages and summarized numbers of its product and factory distribution.
Then, we will make reference of the evolution of Nestlé's performance throughout the years by presenting a brief history. Also, we will closely analyse its product lines, organizational structure, and shareholder data of interest and we will also make reference to its market segmentation, its relationship with its suppliers and its competitive paradigm.

BLOC 2: RISK ANALYSIS

At this stage, we will review both the short-term and the long-term risk situation of the firm in order to analyse the soundness of its investments and its capacity to pay its payment obligations. In the short-term analysis we will include figures like the cash ratio, the solvency and liquidity ratio comparison and the availability ratio. Later, with the long term analysis we will focus on the leverage and autonomy ratio calculation to more further talk about the debt's quality ratio, the different risks the firm is exposed to, the Value at Risk and the Equity analysis and we will end up this section by making a market comparison review.

BLOC 3: PROFITABILITY ANALYSIS

In this last part of the paper, we will mainly focus on analysing Nestlé's capacity to obtain profits in order to increase the shareholder's value and its ability to keep a successful and sustainable investment promotion. We will base our conclusions with the Return on Equity and Return on Assets calculations, parsing its tax impact, the optimum leverage level, its financing structure, among other profitability indicators.

BLOC 1:

COMMERCIAL ANALYSIS

1.PRESENTATION AND SUMMARIZED NUMBERS

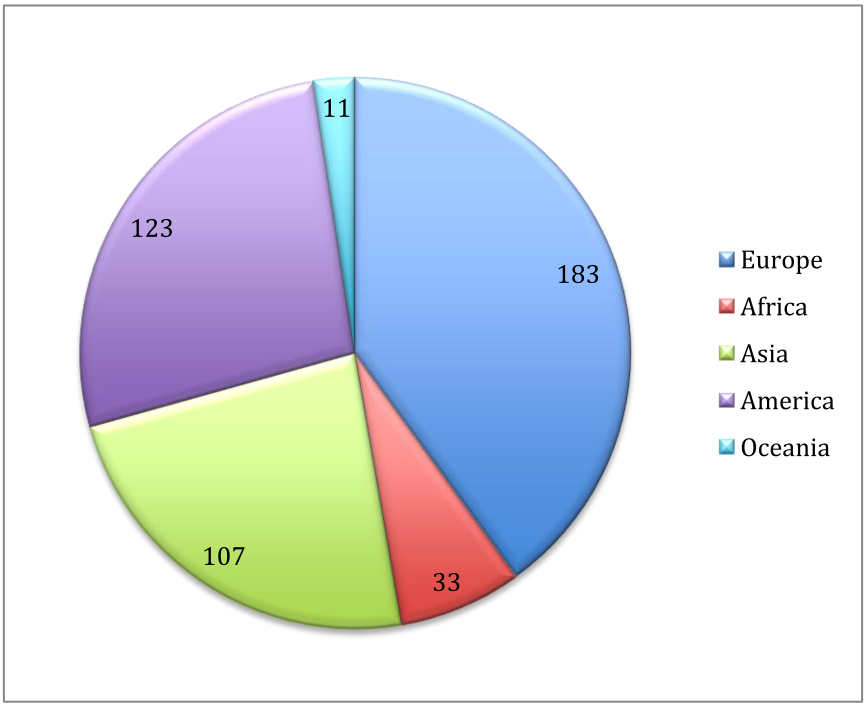
Nestlé S.A. is a Swiss multinational company that mainly produces nutritional, snack-food, and health-related consumer goods.
Its headquarters are in *Vevey, Switzerland*, where it was also created back in 1905. It was founded by the merge between the *"Anglo-Swiss Condensed Milk Company"*, owned by George Page and Charles Page, and the *"Societé Farine Lactée Henri Nestlé"*, owned by Henri Nestlé.

The company grew significantly during the First World War and after during the Second World War, as they started to expand their product lines and they acquired and merged with other firms that had a large growth potential.
Moreover, the firm is now considered one of the most profitable corporations in the sector, according to the yearly ranking developed by Fortune Global 500.
Nestlé is based on several values and a clear philosophy, which leads the company to obtain such good results. Thus, the company sets its:

GOALS	Nestlé's ambition is to be a world leader in nutrition, health and wellness; be trusted by all its stakeholders and be a reference in financial performance in its industry. In brief, *Nestlé*'s business objective is to provide products and render services in a way that creates value for customers (and also for the company itself), and to sustain this value over the long term.
COMPETITIVE ADVANTAGES	Hard to copy product and brand portfolio, R&D capability, geographic presence, people, culture, values and attitudes.
GROWTH DRIVERS	**Areas:** Nutrition, Health and Wellness; Emerging markets and popularly positioned products; Out-of-home; "Premiumisation". These four areas provide Nestlé with large prospects of growth and they are applicable across all categories and around the world. Everything they develop is driven mainly by the area of Nutrition, Health and Wellness that seeks to offer consumers products with the best nutritional characteristics in each category.
OPERATIONAL PILLARS	- Innovation and Renovation - Wherever, whenever, however - Consumer engagement - Operational efficiency The aim is to excel in these areas in order to become consumer-centric and accelerate the firm's performance in order to achieve excellence in execution.

Moreover, concerning its numbers and results, it's important to point out that Nestlé currently employs 339.000 people, holds assets for a value of 102.422 million euros and during 2012, its total sales raised up to 74,8 billion euros.

The company has strong position in 86 countries, by means of 8 business lines, and it also owns 447 factories.



(Factories by geographic position)

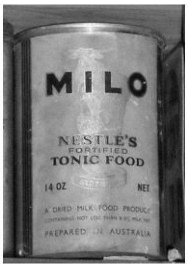
2. HISTORY

The history of *Nestlé* starts back in 1866 when *the Anglo- Swiss Condensed Milk Company* opened the first condensed milk factory in Europe (Charm, Switzerland). Just one year later, 1867 Henry Nestlé created the *Société Farine Lactée Henry Nestlé*.

Then, in 1905 the *Anglo-Swiss Condensed Milk Company,* founded by both Americans Charles and George Page, merged with Nestlé after a being competitors for almost twenty years. The resulting company was known as the Nestlé and Anglo-Swiss Milk Company.

Moreover, during the World War I started in 1914, *Nestlé* had to face some severe disruptions, but it also created new demands, mainly in form of government contracts, for dairy products, which are milk-based products. To face this demand*, Nestlé* acquired several existing factories that where already based in the United States and when the war finished in 1918 the firm had already forty factories around the world.

After, the twenties were a time of deep economic difficulties and Nestlé suffered them as a lot of other firms. Then, they continued expanding their product lines by creating other successful products as *Nescafé* (1938) and *Nestea* (1940) among others.



The Second World War also had an important track in Nestlé. Members of the Board and General Management were sent to the United States in order to coordinate *Nestlé*'s activities in the Western Hemisphere, the British Empire and overseas. Interestingly, the War popularised *Nescafé*, as it became a typical beverage of American servicemen that were battling in Europe and Asia (1943).

The ending of World War II in 1945 signalled the start of a dynamic phase characterized by an accelerated growth for *Nestlé* as dozens of products were added to the product lines and the firm acquired outside companies.

During the seventies, due to the rising oil prices and the slow growth in industrialised countries, *Nestlé* considered responding to a radically changing environment by diversifying outside the food industry for the first time, becoming a major shareholder of *l'Oréal* and acquiring *Alcon Laboratories Inc*.

Then, in 1984 Nestlé formed part of one of the largest acquisitions in the history of the food industry by acquiring the American food giant *Carnation*, and in 1986 the *“Nespresso*” idea began by enabling anyone to create a cup of espresso coffee like a skilled barista. And then in 1988 “*Buitoni*” became a part of Nestlé’s portfolio.

Finally, an important business reorientation was made in 2005 as world’s eating habits were constantly changing and the firm had to move away towards becoming a producer of food with added benefits and a provider of products and services in the area of nutrition, health and wellness.

3. PRODUCT LINES

Most people know Nestlé through its brands. Nestlé's portfolio covers almost every food and beverage category, providing consumers loads of products and services. These are enclosed in several brands that Nestlé uses to commercialize its products.
Considering its product lines, Nestlé offers the following products by means of these brands:
Baby foods: Nestlé believes that infant nutrition is more than just baby food and infant formula. It is about caring for your child through the development of milestones to have a healthy start for a healthy future.

Cerelac Gerber Gerber Graduates NaturNes Nestum

Bottled water: Nestlé is committed to the healthy hydration of its consumers by providing a wide range of portable, convenient, and affordable hydration options, alternatives to sugary and calorie-heavy drinks and choices with nutritional benefits, such as calcium and/or magnesium naturally present in natural mineral waters.


Nestlé Pure Life Perrier Poland Spring S. Pellegrino

Cereals: Nestlé breakfast cereals make it easier to have a nutritious start to the day. These cereals are made with whole grain., which are an important part of a balanced diet. Furthermore, these breakfast cereals are low in fat and many are a source of fibre, what demonstrates Nestlé's commitment to population's wellbeing.

Chocapic Cini Minis Cookie Crisp Estrellitas

Fitness Nesquik

Chocolate and confectionery: Nestlé's chocolate is known for great taste and are also full of goodness, contributing to wellbeing. With a broad range to choose from, they can be enjoyed by almost everyone as a part of a well-balanced diet and active lifestyle.

Aero Butterfinger Cailler Crunch Kit-kat

Orion Smarties Wonka

Coffee: Nestlé offers carefully selected Arabica and Robusta coffee beans to deliver a good tasty coffee.

Nescafé Nespresso

Culinary, chilled and frozen food: Nestlé believes in making food tastier, more balanced and easier to prepare, and thus be able to contribute to improved eating habits and an enjoyable, healthful lifestyle. Nestlé's commitment to healthier eating includes helping to address problems such as nutrient deficiencies.

Buitoni Herta Hot Pockets Lean Cuisine

Maggi Stouffer's Thomy

Dairy: Nestlé takes into account the fact that dairy products are considered to be a foundation of health for many cultures. It exploits the best of its science and product expertise to provide consumers both nutritionally and enriched milk products and delicious dairy treats.

Carnation Coffee-mate La Laitiere Nido

Drinks: With a diverse portfolio of beverages, Nestlé offers many sources of nourishment and refreshment. Whether it's for the healthy development of children, sports, a special treat or everyday refreshment – Nestlé products deliver taste and health.

Juicy Juice Milo Nesquik Nestea

Food service: Since Nestlé is highly committed to leading Nutrition, Health & Wellness company, Nestlé Professional is a world leader in value-added Nutrition, Health & Wellness solutions for the food service industry. Nestlé Professional is the Nestlé 'business to business' out-of-home expert, offering a diverse set of customers (restaurants, fast-food establishments, cafés, hospitals, schools and vending machine operators) tailored food and beverage solutions with a focus on taste and health.

Chef Maggi Milo Sjora

Lean Cuisine Stouffer's

Healthcare nutrition: The Nestlé healthcare nutrition range of products offers complete nutritional solutions for people with specific illnesses, disease states or ageing-related nutritional needs. These nutrition solutions are designed with the benefit of strong scientific research, in-depth understanding of consumers and healthcare providers. The main purpose is to offer high quality and great tasting products that provide clinically proven benefits to those with special nutritional needs.



Boost Nutren Junior Peptamen Resource

Ice cream: Nestlé offers a wide range of products in this area, which are featured by its uniqueness, as well as the delights and pleasures to enhance everyday occasions and especial moments.

Dreyer's Extreme Haagen-Dazs

Movenpick Nestle Ice-cream

Petcare: Nestlé ensures to guarantees that the quality and taste of Purina pet foods is the finest available. It attempts to start with ingredients that meet government standards, and monitors each step of these products until they are delivered.

Alpo Bakers Beneful Cat Chow Chef Michael's

Fancy Feast Felix Gourmet Purina

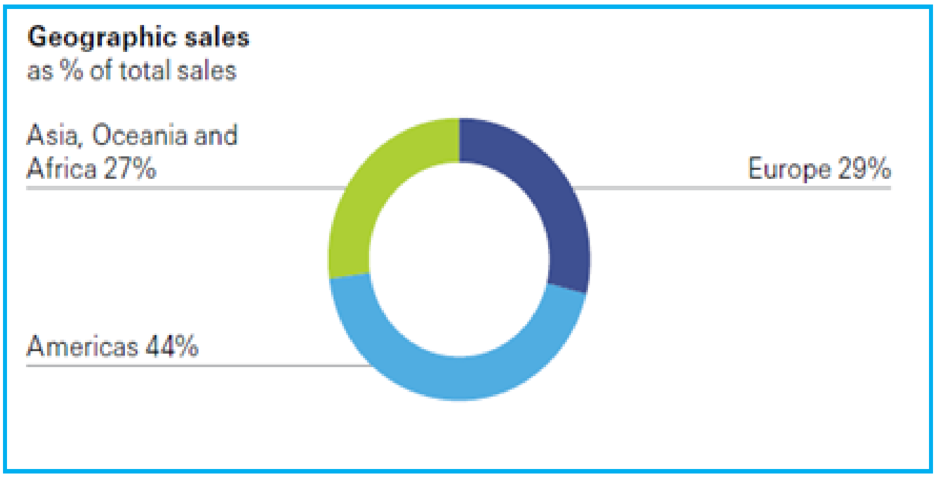
Sports nutrition: Nestle is aware of the fact that most athletes need optimal nutrition and hydration, but even those who do not practice regular sports can benefit from balanced nutrition.

PowerBar

Weight management: In a society where **t**he rise of obesity and the resulting metabolic disorders, such as diabetes and cardiovascular disease, is a major public health concern, Nestle offers personalised programmes to help individuals take a sensible approach to weight loss and weight management.

Jenny Craig

Although splitting its products and services in this numerous product lines, from the company itself, number of sales and financial results obtained through these product lines are classified putting some product lines toghetger, as if there were only few product lines.
These grouped product lines are Powdered and Liquid Beverages, Water, Milk products and Ice creams, Nutrition Health Care, Prepared dishes, Confectionary, Pet Care and Cereals.
As regards their weitgh in total sales, Powdered and Liquid Beverages is the product line with higher sales (16265 million Euros), followed by Milk products and Ice creams (15078 millin eur) and Prepared Dishes and Cooking (11722 million euros).
Furthermore, it is also important to have a look at Nestlé’s sales from a geographical point of view. That is, the group obtains up to a 44% of its total revenue from the American Market, a 29% from Europe, while a 27% from all other continents, Asia, Oceania and Africa.



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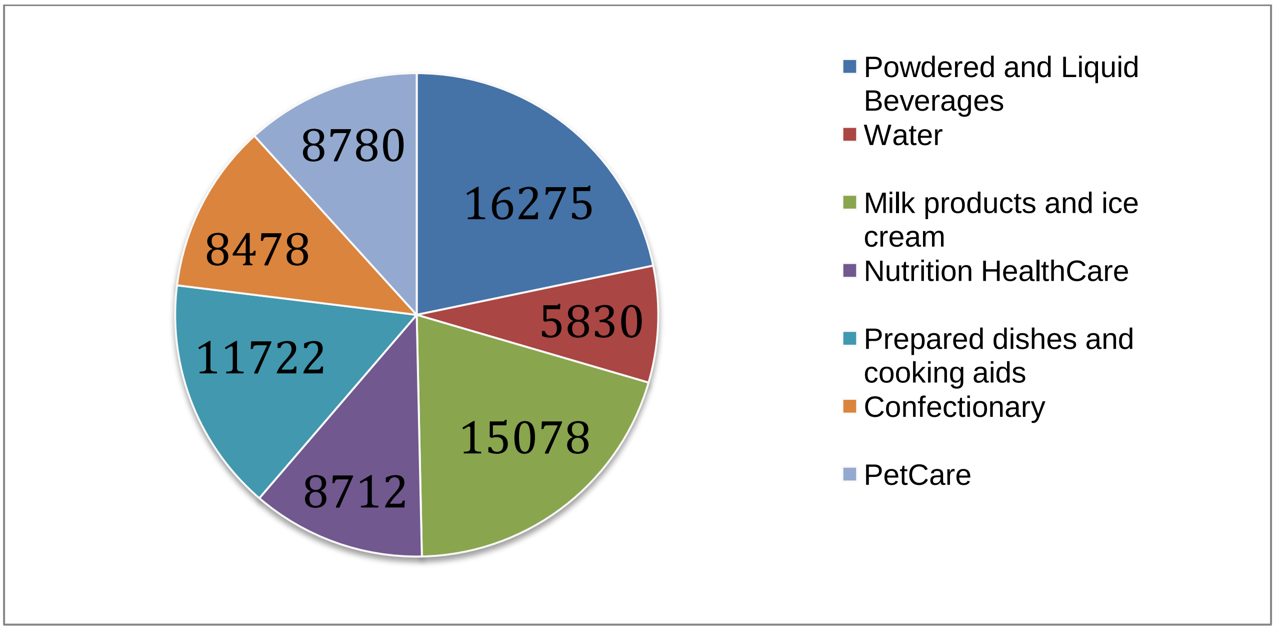


4. ORGANIZATIONAL STRUCTURE

Nestlé is divided in several departments and operative segments.

As regards its departments, these are:

- Corporate Governance. Compliance & Corporate Services
- Corporate communications
- Human Resources
- Operations
- Finance and control
- Strategic Business Units, Marketing and Sales
- Innovation, technology and R&D.

Furthermore, its operating segments are:

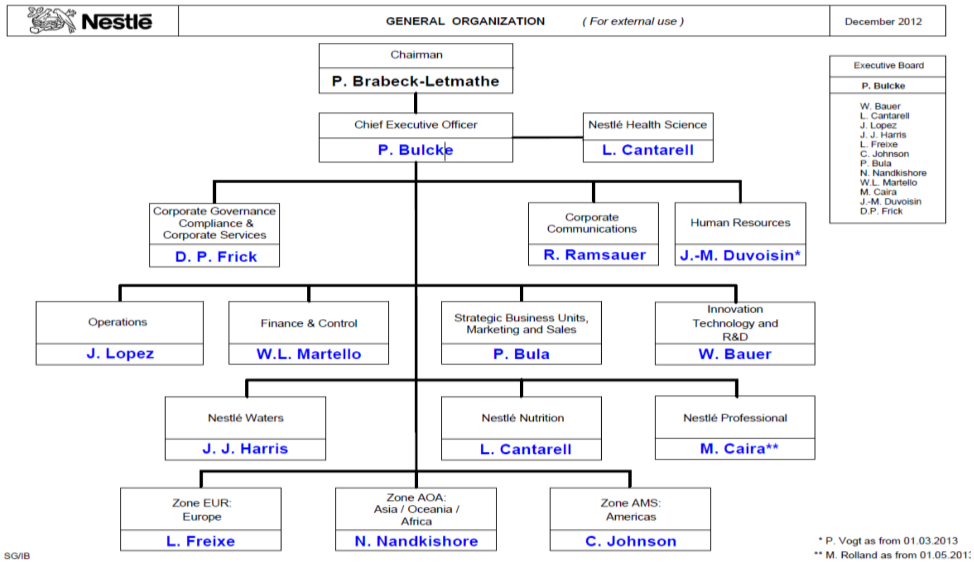
- Nestlé Waters
- Nestlé Nutrition
- Nestlé Professional
- Zone Europe
- Zone Asia/Oceania/Africa
- Zone Americas

Focusing on the company's management is important to consider *Nestlé*'s Board of Directors, made up by 14 people and led by its Chairman Peter Brabeck-Letmathe.

The day-to-day management of the company is taken care of by the Executive Board. The 13 designated Board Members manage diverse parts of the global business.

The Nestlé Group is managed by geographies (Zones Europe, Americas and Asia/Oceania/Africa), but there are some exceptions, which are globally managed businesses, that include *Nestlé Waters, Nestlé Nutrition, Nespresso, Nestlé Professional and Nestlé Health Science*.

Here you can see the general organization of *Nestlé*:



About this chart, we want to draw the attention in the fact that Nestlé owns a 30% of L'Oréal, and this implies that some of Nestlé's directors have also important functions in L'Oréal. This is the case of:

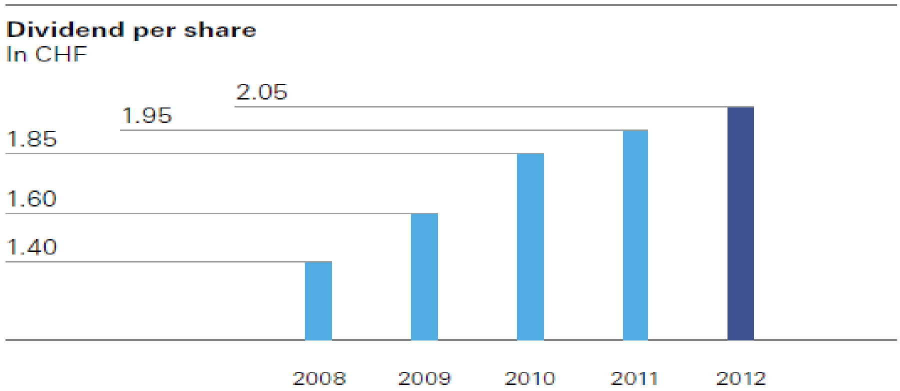
- Peter Brabeck-Letmathe (president of the Board of Directors, chairman of the Chairman's and Corporate Governance Committee) which is President of the Executive Board and also shareholder of L'Oréal.
- Paul Bulcke (CEO, Member of the Executive Board) which is Director and makes up the Strategy Development Comittee.
- Werner J. Bauer (Member of the Executive Board, Director General and Innovation, Technology and R&D Comittee, which runs some functions in L'Oréal, President of Board of Directors of the company emerged from the Joint-Venture between Nestle and L'Oreal.

Regarding its structure as well as organization, it is important to know that Nestlé has established a number of joint ventures over the years, both in food and beverages branches and in pharmaceutical activities, the latter and most important one with L'Oréal.

In the food and beverage sectors, it has created Joint Ventures with Cereal Partners Worldwide (CPW), with General Mills, Beverage Partners Worldwide (BPW), with The Coca-Cola Company, and Dairy Partners of America (DPA), with Fonterra.
The second one (BPW), this company announced a restructuring of BPW to focus on markets in Europe and Canada, which was successfully completed during the year, providing high growth in Russia, France, Germany and Canada.
This performance was achieved by the launch of new product variants in most markets.

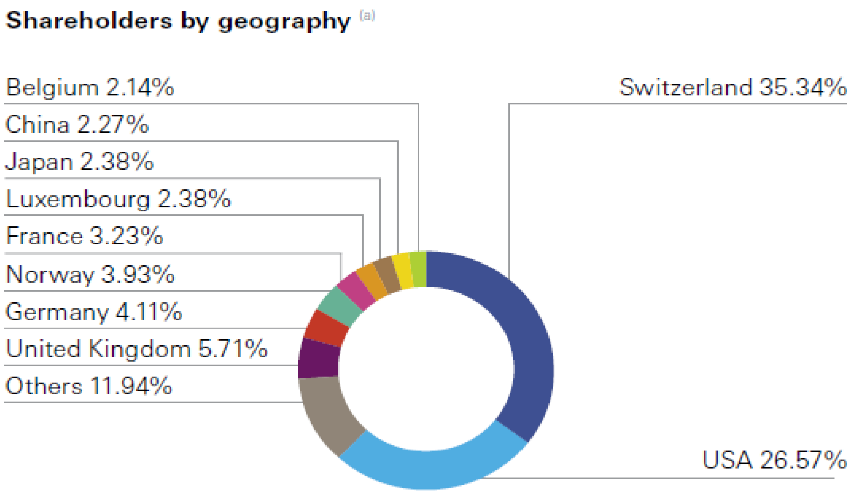
5. SHAREHOLDERS

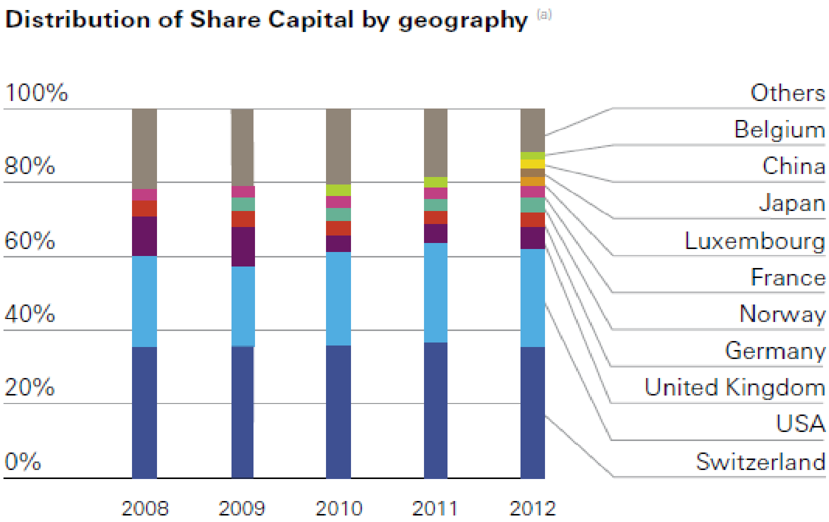
The number of registered shares amounts to **3'224'800'000** with a nominal value of CHF **0.10** each, and they are traded at SIX Swiss Exchange.
At 31 December 2011, the share register showed **142 059** registered shareholders. However, the indirect holders of shares under American Depositary Receipts and the beneficial owners of shareholders registered as nominees are also taken into account, the total number of shareholders probably exceeds **250 000**.



The dividend per share has increased for nearly 45% since 2008, reaching the value of **2,05** CHF (1.69€).

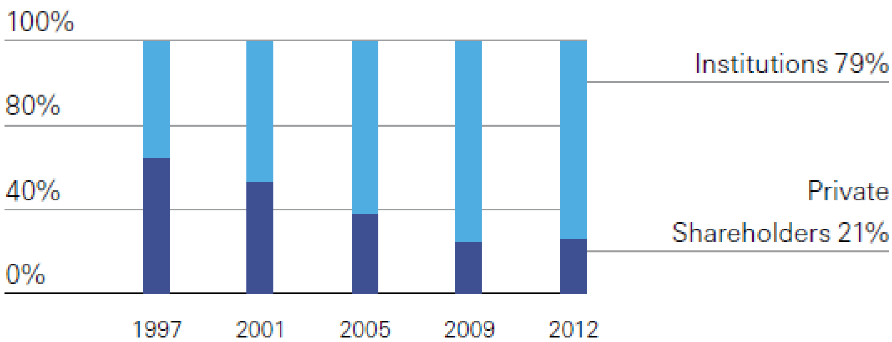
Unfortunately, shareholder identities are not made public under Swiss law, but we can know their country and the distribution of share capital by geography.





Looking at this data it is clear that the predominant countries among shareholders are Switzerland and USA, followed by others European countries such as United Kingdom and Germany.

Moreover, we also know the long-term evolution of the share capital by investor type:



There are 70 entities owning a percentage of Nestlé shares. However here we will only list the most important ones:

Shareholder name	Ownership in %
Chase Nominees Limited	9,8
Citibank N.A.	7
Food Product Holdings S.A.	5
Nortrust Nominees Limited	3,4
Capital Group Companies	2,59
Self Owned	2,47
Government of Norway	2,37

Credit Suisse Group AG	1,48
FMR LLC	1,23
Blackrock, INC.	1,21
UBS AG	1,18
AXA	0,18

The majority of these companies are investment funds entities, like Chase Nominees Limited, Citibank or Blackrock, and therefore they do not have any representative in the direction board.
In fact, there are only two that are represented, AXA (a financial French company) and above all Credit Suisse Group AG. Even if it barely holds 1,5% of Nestlé, it has a strong position in its direction board:

- Mr. Peter Brabeck-Letmath: Chairman of Nestlé and Director Governance of Credit Suisse Group AG.

- Mr. Andreas Niklaus Koopmann: Member of the Corporate Committee of Nestlé and Director of Credit Suisse Group AG.

AXA financial has its CEO and chairman Mr. Henri De La Croix De Castries as a member of the board of directors.

6. MARKET SEGMENTATION

As we have been explaining throughout the previous sections, Nestlé offers a wide range of product and services, most of them are so diversified and aimed at satisfying different needs, what implies to be goaled at a large number of potential customers, and these customers are likely to have different consumption habits and abilities.
Due to the complexity of products and services which Nestlé offers, the company must target at numerous different groups of customers. Hence, it is quite aware of the fact that market segmentation plays an important role for the company because it has to know exactly its target customers and the product or service it is going to offer.
This is the main reason why the company carries out its customer and market segmentation according to:

1. **Geographic position**: Nestlé sales vary if we compare regions. The company actually knows that consumption patterns change during different seasons and regions, what forces the company to offer and distribute slightly different products according to the geographical place of the selling point. Thus, we can talk about geography as criteria for market segmentation.
2. **Age**: the most important customer groups regarding age as a basis for market segmentation are: children and old people. In fact, Nestlé was initially targeted only at these two groups. For the former, it introduces Milo with additional nutritional contents such as vitamins and minerals. For older people, it is important to consider clinical nutrition. However, now they nearly cover all age ranges.
3. **Gender:** this is probably the most doubtful basis, since mostly all products offered by Nestlé are aimed at both men and women. However, from the company is considered that only women take into account what will be the best for their families when shopping.
4. **Income and ability to pay**: Nestlé products are widely known for its tasty and quality. Everyone knows that purchasing Nestlé products might be more expensive than other brands but it assures quality. Thus, since prices may be the highest in some business lines, Nestlé targets at customers with high ability to pay.

7. SUPPLIERS

Recently, Nestlé has been involved in a mediatic scandal concerning one of their suppliers. In some of the products of the Maggi branch, they served a percentage of horse meat instead of the indicated. The problematic supplier is from Germany and Nestlé broke the relation, but the image of the company has been seriously damaged.
Nestlé has the policy to give opportunities to local producers to become one of their suppliers. This is so because the company is widely spread around the world and basically uses fresh raw materials such as milk, coffee and cocoa. Nearly 40% of Nestlé's raw materials expenditure goes towards the procurement of three key commodities. It sources materials from more than 5 million farms, many of them farmers in poorer rural regions of the world.
Their supply base includes:

- Direct suppliers (approximately 165.000 companies).
- 680.000 individual farmers.

Nestlé builds close links with local farmers, and they can also advise them continuously on quality and farming practices in order to maintain and enhance standards.
The company procures processed meat and fish products, but they do not buy animals reared by contract farmers or procured in the open market and they do not raise or process animals as part of their operations.
In total, 3.9 million people around the world benefit economically as a result of Nestlé's commercial operations.

8. COMPETITORS

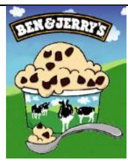
As a multinational company, *Nestlé* is bounded to have many different competitors according to the different product lines they offer and also according to its geographical position. Throughout the years, *Nestlé* has also set different joint ventures in order to reduce its competition in the food and beverages industry.
The main joint ventures developed are:

1981	Galderma (joint venture with L'Oréal)
1990	Cereal Partners Worldwide (joint venture with General Mills)
1991	Beverage Partners Worldwide (joint venture with Coca-Cola)
2002	Schöller and Chef America, Dairy Partners Americas (joint venture with Fonterra) Laboratoires innéov (joint venture with L'Oréal)

However, we can state the main multinational companies that compete with *Nestlé S.A* in its industry:

Kraft Foods	**Unilever**	**Mars Food**	**Procter and Gamble**	**Danone**

We can also analyse the firm's competitors by product lines, therefore checking all the products that compete with the ones produced by *Nestlé S.A.*:

Beverages	**Milk- Products and Ice-Creams**	**Prepared Dishes**	**Confectionary**	**Pet Care**	**Cereals**
	 	 	 		

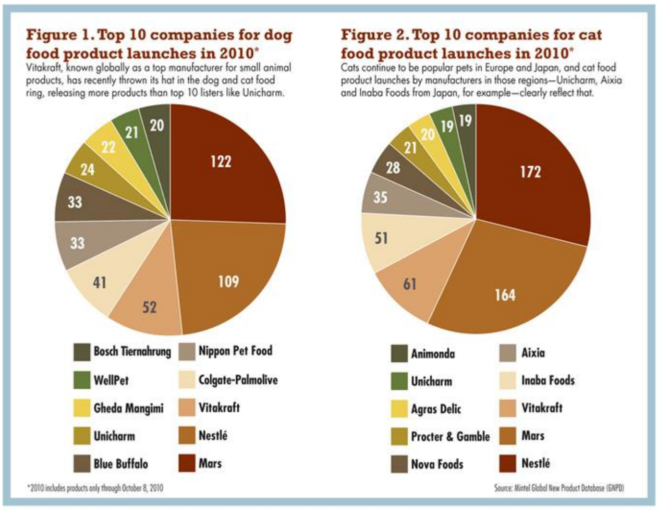
On the beverages line the main products that compete with the ones offered by *Nestlé* are "Maxwell House", a coffee brand of *Kraft Foods*; "Lipton", an iced tea bran of the *PepsiCo/Unilever* company and "Evian", one of *Danone*'s water varieties.
Moreover, on the milk-products and ice-cream section, the major competing products are "Breyers" a brand of the frozen desserts section owned by *Unliever*, "Yolado" brought up by *Danone* and "Ben&Jerry's", a well-known ice-cream brand that is also owned by *Unilever*.

Then, on the prepared food division the main product that competes with *Nestlé*'s range is "Bertolli's" which is a brand of *Unilever*. It is important to remark that in this section, *Nestlé* used to also compete with "DiGiorno", a pizza brand of *Kraft Foods*, but Nestlé now owns that since 2010 limiting competition further.

Also, on the confectionary section Nestlé mainly competes with products produced by *Hershey Foods* ("Hershey's Chocolate"), *Cadbury and Schweppes Company* ("Cadbury's Dairy Milk Chocolate" and *Kraft Foods* ("Milka").

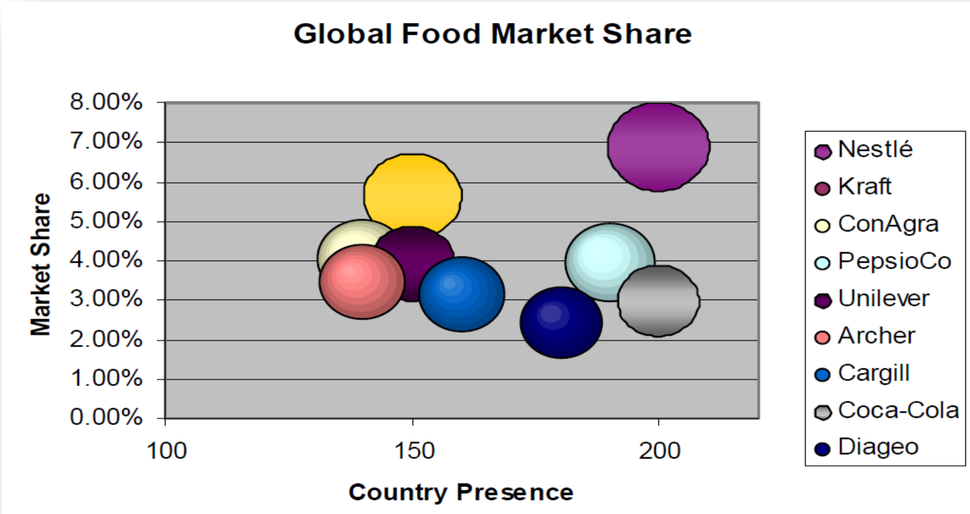
On what concerns the Pet Care division, *Nestlé* is mainly in competition with products like "Iams" and "Eukanuba", both owned by *Procter and Gamble* and "Pedigree", produced by *Mars Foods*.

As indicated on the chart shown below, we can see that Nestlé clearly stands out among competitors on this section by offering a larger variety of products:



Finally, on the cereals product line we can state that there is only one main competitor, which is Kellogg's. However, competition in this division has been reduced due to *Nestlé*'s joint venture with *General Mills* forming *Cereal Partners*, which was mainly developed in order to achieve a higher market growth.

Therefore, we can see on the following graph that Nestlé clearly stands out from competitors in this industry as for market share and country presence:



9. FUTURE EXPECTATIONS

Product Goals 2013:

- Improve Frozen business: with the recent acquisition of *Lean Cuisine* and *Di Giorno* (that used to be a brand from their competitor Kraft) Nestlé want to boost this business area.
- Nespresso: release of a new machine called *Maestria* and new capsules options.
- KitKat: in the last years Nestlé used the market of Japan to prove the reception of multiple flavors of KitKat, and given its success, the company wants to introduce it in other markets.
- Improve communications: Nestlé wants to make a better use of applications and digital means.
- Innovation in the Maggi brand: offer more products in this particular brand.

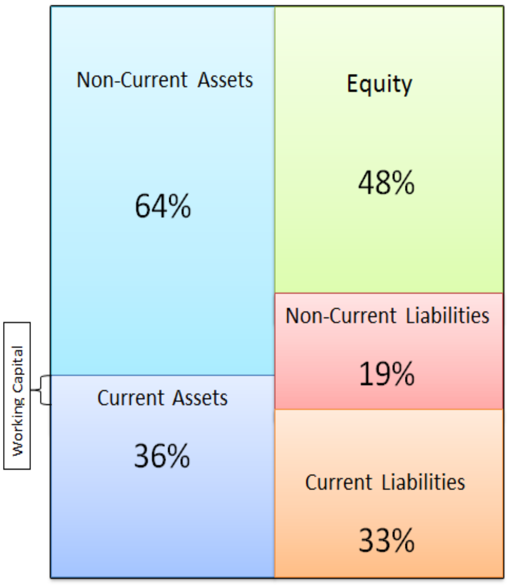
Operational Goals 2013:

- New factories: Dolec Gusto (Germany), Nespresso (Switzerland), Nestlé Health Science + Pet Care (Australia).
- Push sales in emerging markets: China, Indonesia and India are considered key markets for its large population and Nestlé wants to boost their presence there.

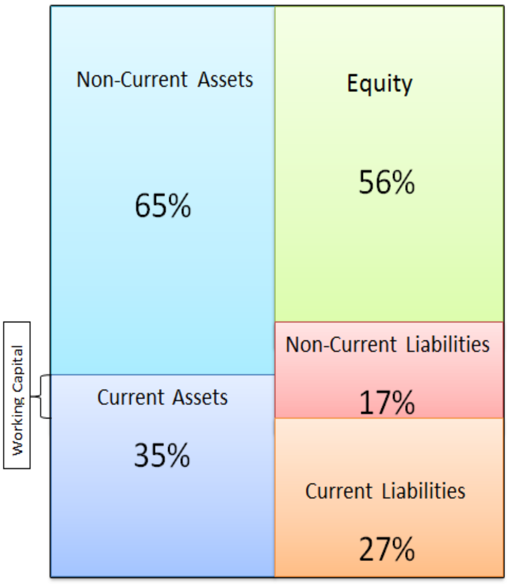
BLOC 2:

RISK ANALYSIS

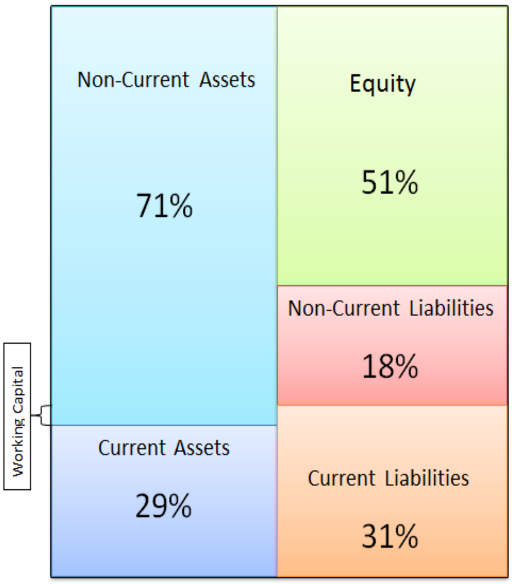
Balance sheets of Nestlé of the last four years



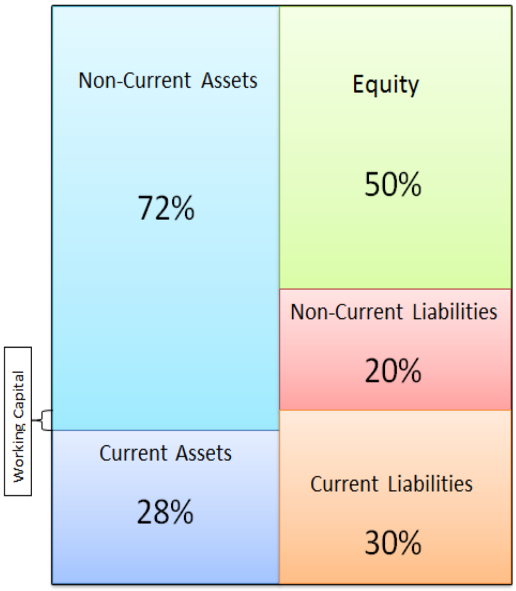
Balance sheet of 2009



Balance sheet of 2010



Balance sheet of 2011



Balance sheet of 2012

Looking at the above balance sheets, we can state that *Nestlé* has a large proportion of non-current assets that could be the different plants, equipment and properties they have in the countries they operate. We have to take into consideration that goodwill is a non-current asset, and that in 2012 was valued in 32615M CHF, which is a considerable amount.
Two important considerations have to be made. The first one is that the equity represents considerable proportion of the Equity and liability side of the balance sheet, being around of the 50% excepting on 2010, where it reached a 56%. The second one is the evolution of the Working capital: for the last two years it has been negative, which means that thee current liabilities are slightly larger than the current assets controlled by the firm.

The idea is to analyse the viability of *Nestlé* according to the calculus of different ratios that can give us an empirical explanation of their figures.

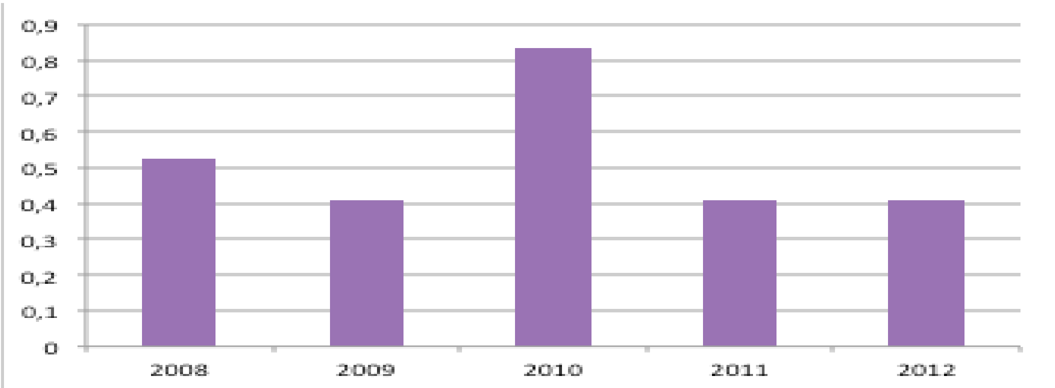
A ratio is the relation between two magnitudes, which have some kind of relation. With the ratios' calculation you can obtain an indicator that summarizes information about the financial situation of the company.
Moreover, ratios cannot be used in isolation to give general interpretations, but they must accompany other indicators that allow carrying out accurate interpretations.
Ratios can also be used for comparison with ratios from other periods, with the aim of knowing the evolution of the company's situation. Thus, they can also be used for comparing with ratios of other companies from the same branch or sector, to study deviations, due to the fact that each ratio must show optimum or ideal intervals in which the value of the ratio must be located.
Financial ratios allow measuring the firm's capacity for paying back its debts in a solvent way within the previously established terms.
The main financial ratios are cash ratio, liquidity ratio and guarantee ratio.

1) SHORT-TERM ANALYSIS

CASH RATIO

It is also known as immediate solvency ratio or acid test, and it indicates the firm's capacity to pay back its short-term without having the risk to fall in bankruptcy.

Cash Ratio= (Debtors + Cash) / Short Term Liabilities = **0,40654914**



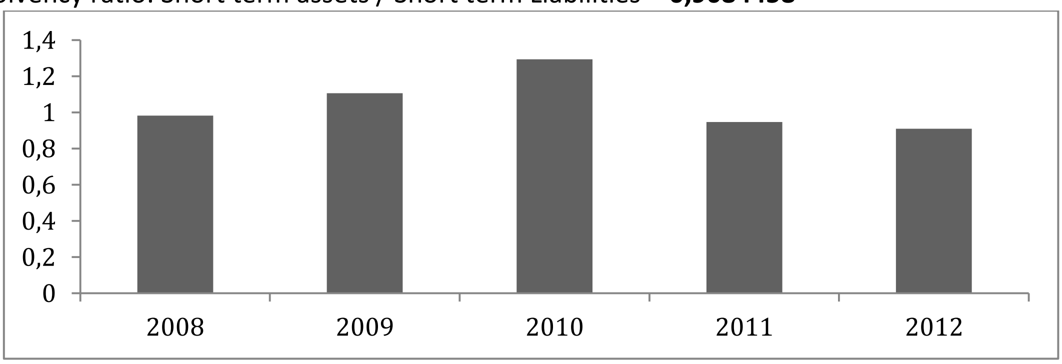
We can see that the value for this ratio in *Nestlé* is roughly 0,41.

In order to avoid liquidity problems, the ratio's value must be closed to 1, but we can see that the value for this ratio in *Nestlé* is roughly 0,41. Since it is quite lower, it means that Nestlé has risk of bankruptcy, due to the fact that, with the resources owned in short term, the company cannot pay back its short-term liabilities. This could be related to the fact that *Nestlé* has a very high bargaining power that could useful for them in order to exercise their power on suppliers to negotiate their payment commitments.

SOLVENCY RATIO AND LIQUIDITY RATIO

By means of solvency ratio, short-term assets are compared with short-term liabilities and it shows the liquidity situation of the company's cash. It is also known as working capital ratio or solvency ratio at short term.

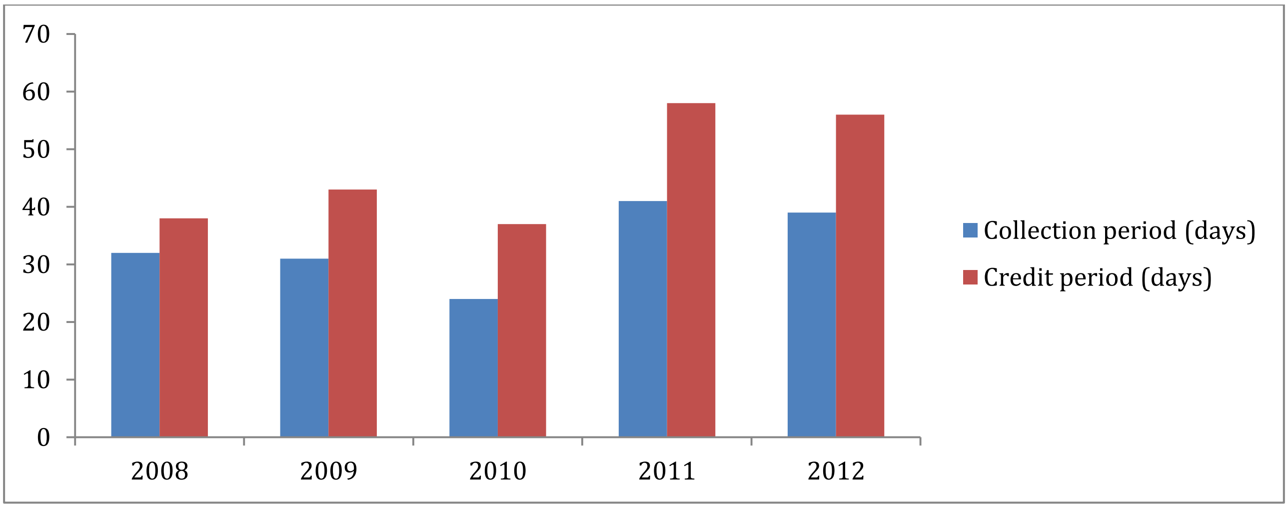
Solvency ratio: Short term assets / Short term Liabilities = **0,9084458**



Evolution of the solvency ratio

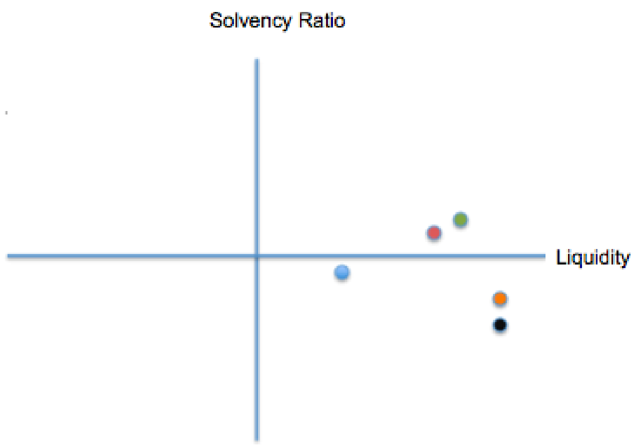
In order to be far from bankruptcy risk, the ratio's value must be higher than 1 and closed to 2. However, *Nestlé* has a solvency ratio of 0,91 what means that in short term, owes more liabilities than assets holds. This is quite a difficult situation, due to the fact that the company is likely to have problems when paying back these short-term debts.

However, we must consider the company and the sector in which it operates. *Nestlé* has admitted that their negative working capital is not a desirable situation and they must work on this aspect. But is this situation a real risk?
Comparing the collection period and the credit period of the company, we see that the last one is higher and it has been increased over the years, so *Nestlé* has the ability to quickly raise money in case of need.



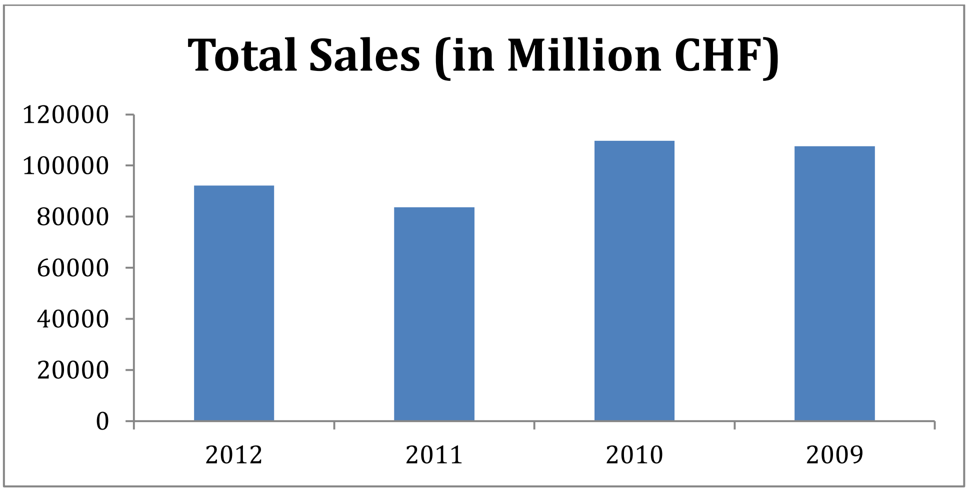
Additionally, this bad solvency situation is due to the decrease of sales for the last two years, and to drive growth in countries around the world. So it has been used for tactical purposes. *Nestlé* is able to do so because it has a very strong brand and can afford this type of situation for some periods, and can counter the short-term debt by their bargaining power among their suppliers, composed by small companies.

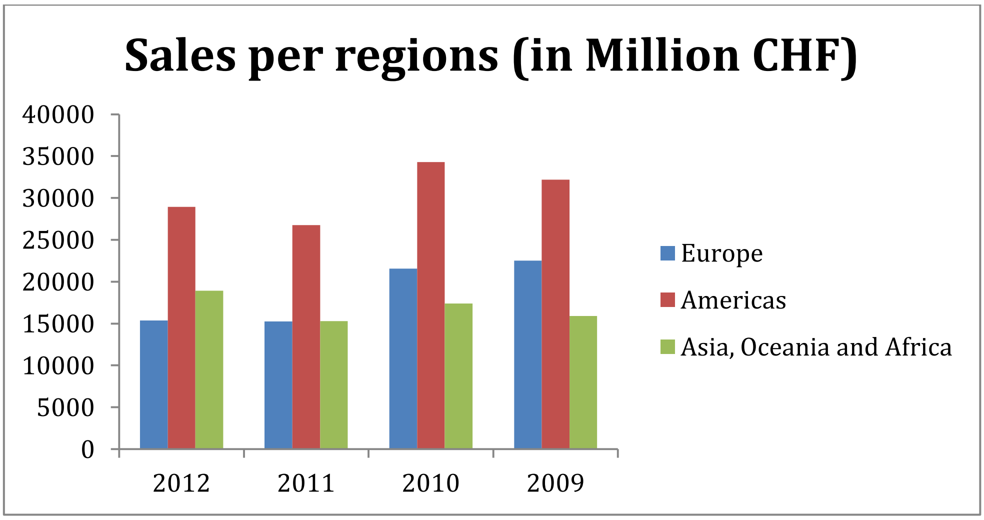
To confirm the possibility of risk, we have also to consider the liquidity:



	Solvency Ratio	Cash Cycle
2008	0,98	6
2009	1,10	12
2010	1,29	13
2011	0,94	17
2012	0,90	17

With this, we can see that although their negative working capital, they can meet their short-term payment commitments due to their positive cash cycle figures which represents the margin the firm has (in days) to clear their payment obligations. This situation is also caused by the fact that the fabrication process of Nestlé is usually short, as food has to be quickly consumed. Therefore, we can consider that the firm develops more commercial activities than production processes.
The causes of this shifting between a positive solvency and a negative one can be explained through the sales.





First of all, we would like to point out that there is not a clear trend in the evolution of Nestlé's Sales.

As we can see from these two graphs, the highest value of sales was recorded in 2010, when they reached an absolute number of 109.722 million CHF. However, the next year Nestlé suffered a decrease of its total sales that represented almost 20.000 million CHF.
We could conclude that this was due to the economic crisis, that in fact was, but we must consider that it started much earlier, so may not be the main important cause.

Countries in whole America continent make up the most important market of Nestlé in terms of sales, and the evolution of total sales in this market has a crucial significance in the company result. As we can see, the evolution of sales in America follows the same kind of trend of the total sales trend, which is a proof of such an importance.

Moreover, we must also consider the significant of the two other markets. In fact, the company has a problem with the European Market: from 2009, it has recorded one year of decrease and two years of constant values (roughly), despite the fact that the company believes it is a market full of opportunities.

In the case of Asia, Oceania and Asia, we can see that it is the most irregular market where Nestlé operates, since it is recording one year of decrease of sales after one year of increase, since 2009.

Hence, we can truly say that Nestlé suffered a hard decrease of its sales due to the decrease of demand in the American market in 2011, in comparison with the previous year, as well as the fact that the two other markets have not reached a clear growth to compensate this decrease.

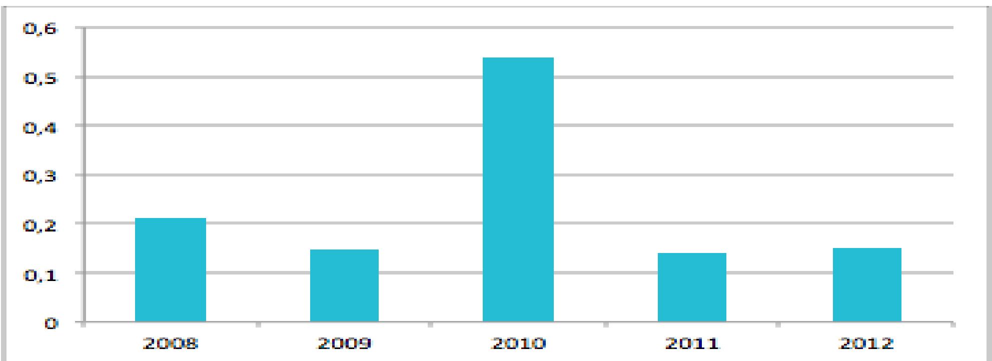
Finally, in 2012 the company could increase its total sales, so it improved from the year before, but without reaching former levels of sales, which were quite higher.

All in all, considering also the fact that in 2010 *Nestlé* had extra income from financial origin and not related with the sales, caused that in this year the working capital was unusually high. The posterior decrease in revenues, added to the strategic inversion on new markets (such as the Asiatic) considered a key factor on the future of the company, had as a consequence the progressive decrease on the working capital.

AVAILABILITY RATIO

It shows the portion of short-term debts that can be paid back with the cash accounts of the company (bank accounts).

Availability ratio: Availability/ Short term liabilities = **0,150698**



The optimum value for this ratio is quite relative and depends quite a lot on the kind of business and the sector or branch, but several authors and experts in the field point out that it must be between 0.3 and 0.4.
We can see that the ratio's value for Nestlé is quite lower, so we can keep on explaining the problems this company faces (will face) when paying back short term liabilities.

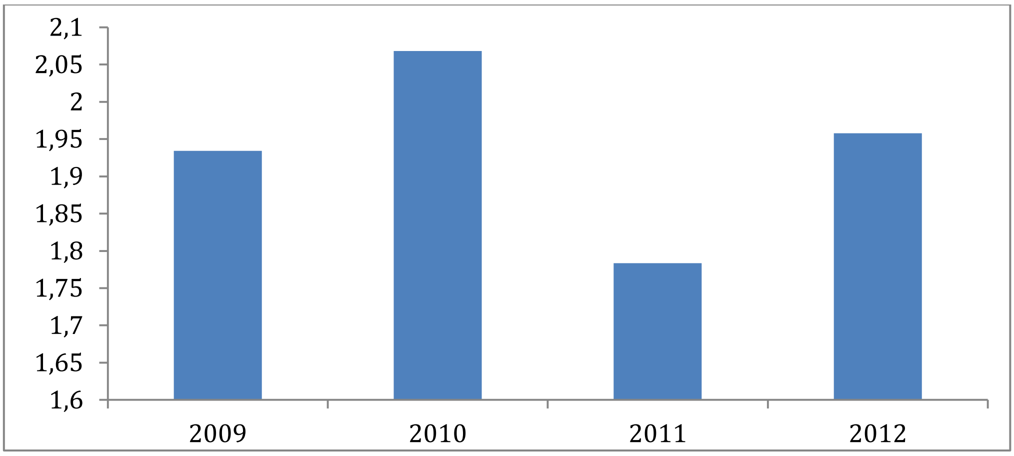
2) LONG TERM ANALYSIS:

LEVERAGE RATIO

This ratio shows us the proportion of the total assets compared to the equity, so the higher the value; the less the assets are financed by the equity, but by the liabilities.

Leverage ratio (2012): Assets/Equities = **1.9578**

Evolution of leverage ratio for the last four years:



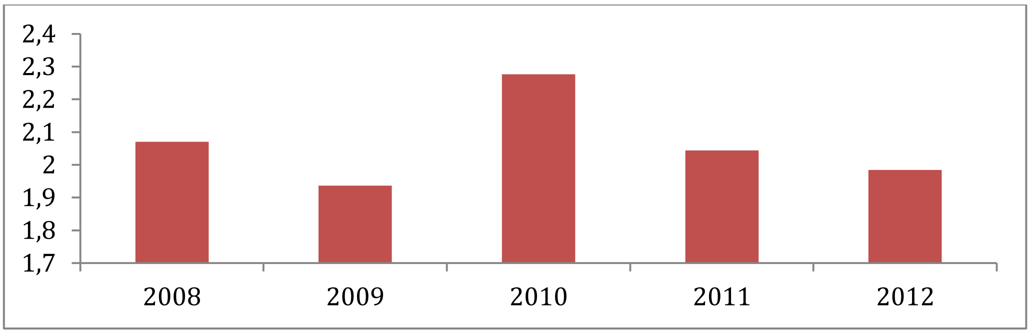
As we could see at the balance sheets of the last four years, the equity fluctuates around 50% of the liabilities and equities, so the leverage ratio will be around 2. This is not a high value that, and put *Nestlé* into a strong position due to the fact that 50% of their assets are financed with equity and not with liabilities.

GUARANTEE RATIO

The total amount of assets is related with the total amount of debt of the company. This ratio measures the company's capacity to face its debts. It is also known as solvency ratio at long term or distance from bankruptcy.

Guarantee ratio: Total assets / Total Liabilities = **1,98395284**

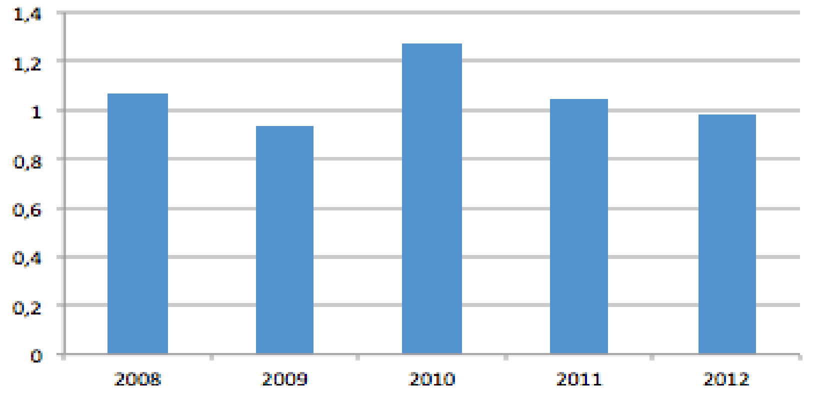
The optimum value must be higher than 1 and closed to 2, thus, according to this ratio we could truly say that *Nestlé* is far from bankruptcy risk.
However, one of the most important features of ratios is that they must complement one to each other, so they have to be taken into account together with other ratios, and as we've just saw above, the problem of *Nestlé* is the amount of debt that it owes at short term, but it's not a problem of not being solvent, because considering the whole amount of debt as well as the whole amount of assets, Nestlé has almost the double of assets than liabilities.
However, it is also important to consider other aspects such as the type of business, and the evolution of this ratio during the last exercises. We can see that it reach the highest value in 2010, and afterwards, it has almost maintained the value, although it has decreased.



AUTONOMY RATIO

This ratio shows the relation between equity and the total amount of liabilities. It is used to check that quality of the firm's funding in terms of dependence of the external funding.
The optimum interval is between 0,8 and 1,5, so the 0,98 obtained by *Nestlé* can be considered as a good value, despite a little too low, because it is far better to obtain high value, what would mean a very good financial autonomy, that is the company does not depend mainly on external funding.

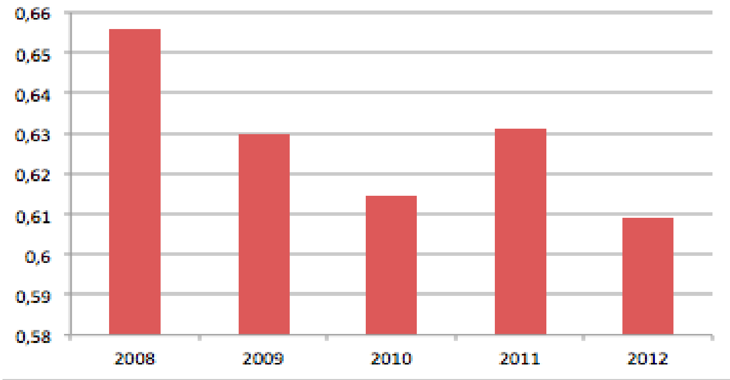
Autonomy ratio: Equity / Liabilities (Total amount) = **0,98395284**



We have also analysed the debt quality ratio that can be considered both for the long-term and the short-term analysis of the firm.

DEBT'S QUALITY RATIO

This ratio indicates the portion of debt that is at short term. Its optimum value cannot be defined exactly, but it is usually considered to be between 0,2 and 0,5.
Debt's quality ratio: Short term debts/ Total debts = **0,60908448**



This ratio demonstrates the most important problem of *Nestlé* regarding its financial structure. *Nestlé* is a solvent company, but has an important issue when considering the proportion of liabilities that it owes at short term.

Thus, all the ratios drive to the same conclusion: the company holds enough assets to guarantee its long term life, but the company is likely to have serious problem when having to pay back its short term debts, because this kind of debts represent the bulk of liabilities (up to a 60% of *Nestlé*'s liabilities must be satisfied in one year term).

However, the company uses different debt ratings, done by agencies such as "*Standard and Poor's"* and "*Moody's and Fitch*" in order to qualify their debt that is actually rated with a double A, which is meant to be very good.

3) DIFFERENT RISKS IN WICH NESTLÉ GROUP IS EXPOSED TO:

1) **Credit Risk:** the firm is exposed to it with the different financial instruments they have in their possession such as liquid assets, non current financial assets, derivatives or trade receivables. To fight against this threat the company uses "credit limits" that consist on daily reviewing their investments.
   The aim is to concentrate less risk on the liquid assets and spread it over other institutions and sectors. To monitor their investments they also use rating agencies' reports.

2) **Liquidity Risk:** this type of risk is recurrent when firms have difficulties to meet commitments with liabilities or payment obligations (refinancing problems). To tackle it, *Nestlé* obtains credit facilities (for an amount that rises almost to 10 billion CHF).

3) **Market Risk:** this risk occurs when working with currency exchange rates, interest rates and market prices, that affect the value of the firm's assets and liabilities.

   - <u>Foreign currency rates:</u> *Nestlé* is exposed to it with transactions. That is why they apply a hedging policy that consists in negotiating forwards, futures, swaps and options.

The results for this hedge for the last two years are:

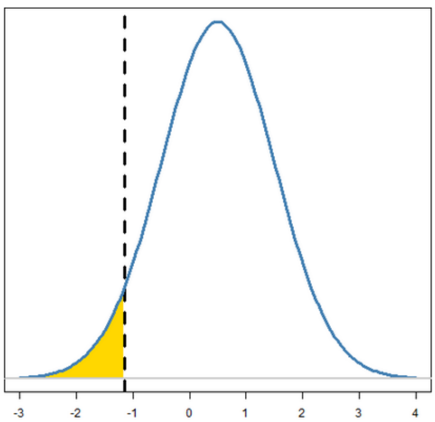
2011	Losses of 84 million CHF
2012	Losses of 113 million CHF

Interest Rate Risk: this risk occurs when the interest in borrowings is variable. In order to secure it the company also uses forwards, futures and swaps.

- Price Risk: this type of risk affects both commodity transactions and the equity. To control the commodity price risk (that affects the supplies of the company), Nestlé uses hedges, futures and options, and the Board of Directors sets the "Commodity Risk Management". To manage the equity price risk they use securities, diversifying their portfolio. Also, they use the analysis of the different rating agencies.

VALUE AT RISK:

In financial mathematics this value estimates the risk of loss of the company's assets and liabilities.
To assess the market risk, on financial and commodity instruments, the firm estimates the size of the losses and the possible changes in financial markets. To do so, they use historic data of up to 250 days period at a 95% confidence level.



In this graph, the yellow area represents the 5% probability of loss that the company could be assuming in the worst of cases and during a given period of time.

This way, Nestlé quantifies the volatility of their financial investments as it measures the deviation of the profitability in relation to its mean.

(In million CHF)

	2011	**2012**
Foreign Currency Risk	3	2
Interest Rate Risk	4	1
Security Price Risk	144	237
Combined	122	233

As we can see, *Nestlé* has managed to reduce the risk of its investments in one million CHF from 2011 to 2012 on what concerns foreign currency risk, and three million CHF in interest rate risk.
However, the losses at risk represented by security price risk and combined types of risks have raised significantly fact that could expose the firm to a considerable exposedness.

In criticism to Value at risk as a tool for risk management we can say that as it involves using historical data in order to predict the volatility, through the variance-covariance matrix, the time series might not be representative and might lead to imprecise results. For example, if the observations are compiled during a very stable period in the markets, the Value at risk number will be low and if the time series represent a very volatile period in the markets, the value will be higher.

EQUITY ANALYSIS (LONG TERM RISK):

Nestlé has 3224800000 outstanding shares at a nominal value (CHF) of 0,10 per share. The possession of one share gives the shareholder the right to one vote.
It is important to remark that Nestlé often develops share buy-back programs in order to a) increase the value of the remaining shares, increasing the value of the company or b) to back-up the threat of investors looking for a controlling stake. This, as it is translated in a decrease of the number of outstanding shares, means that stakeholders' returns for the same amount of income will be higher, so earnings per share will increase.

Moreover, this share capital reduction started back in 2005 and was part of a "share buy-back programme" (that was developed until 2010) and consisted in selling part of the shares of Nestlé's shareholders back to Nestlé in order to increase the flexibility in managing its capital structure and also control the strong financial position of the Group.
In 2006 the firm value increased as a consequence of starting the buy-back programme the previous year:

- Organic growth of 6.2% results in record reported sales of CHF 91.1 billion, an increase of 7.5%
- EBITA margin up 20 basis points, to 12.9% of sales, despite higher input costs
- Net profit increases 20.7% to record CHF 8.0 billion; EPS up 21.3%, underlying EPS up 12.9%
- Return on invested capital increases by 50 basis points
- Above market strong organic growth in both food and beverages (+6%) and pharma (+10.2%)
- Board proposes 12.5% dividend increase to CHF 9.00, and cancellation of shares worth CHF 1 billion

Peter Brabeck-Letmathe, Chairman and CEO: "The 2005 results demonstrate the strength of the Nestlé Model. We have outperformed the market in growth and have again delivered an improvement in EBITA margin. This performance reflects the power of our brands, the quality of our innovation and the benefits of our efficiency programs. The enhanced dividend proposal and the share buy-back demonstrate Nestlé's commitment to creating long-term, sustainable value for our shareholders. For 2006, I expect organic growth of between 5 and 6%, as well as a continued improvement of the EBITA margin in constant currencies."

Below is shown the evolution of the share capital of the Group during the development of this capital management programme:

History of Buy-Backs

Launch Date	Completion	Amount (CHF mio)	Number of shares	Average price (CHF per share)
Jul. 2005	Oct. 2005	1,000	27,843,000*	35.92*
Nov. 2005	Oct. 2006	3,000	76,632,000*	39.14*
Aug. 2007	Jul. 2009	15,000	314,060,000*	47.76*
Aug. 2009	Jun. 2010	10,000	203,400,000	49.17
June 2010	Sep. 2011	1,001	188,465,000*	53.07*

*adjusted to reflect the share split effective 30.06.2008

- Reserves:

  The fair value of Nestlé's reserves at 31st of December have been:

2011	254 million CHF
2012	573 million CHF

- Dividends:

  The dividend related to 2011 was paid the 26th of April 2012 in 1,95 CHF per share, which represented a total dividend of 6213 million CHF.
  For this year, in the Annual General Meeting celebrated the 11th of April 2013, the dividend was proposed at 2,05 CHF per share representing 6601 million CHF.

4) MARKET ANALYSIS

Nestlé shares are traded at the Swiss stock exchange. We have taken the prices of *Nestlé* shares and the value of the Swiss stock market of the last year, two years and four years in order to find out the evolution of the risk of acquiring *Nestlé* shares.

Evolution of the price of the shares of Nestlé(2009-2013)

Data from Yahoo! Finance extracted 22/04/2013

We have analysed the tendency of the share prices using the moving average system, the red line show the sort term tendency, the red one the medium, and the brown the long.
We observe that the short term, medium and long term lines cross for the first time at February 2011th from up to down, so it was an indicative to sell. At May-June of the same year, the red line goes from down to up and crosses the other two lines, indicating that the prices are rising and a buy operation would be a good option. Roughly one month later the tendency has been inversed and the indicators show a decrease of the prices. It isn't until the end of 2011 that the forecast shows a rising tendency, and the red line crosses from down to up the others two.
We observe that the prices have a clear positive tendency, and over the last three years there have been only three important variations of the slope.

<u>Evolution of the Swiss stock market (2009-2013)</u>

Data from Yahoo! Finance extracted 22/04/2013

Analysing this data we observe that both *Nestlé* and the Swiss stock market have a positive trend on their values, and that the volatility of the company is lower when we look at the short and medium term than the overall of the market.

The Beta coefficient between the Swiss stock and Nestlé is 0,6, that means that historically, an increase of 100% in the market stock is traduced by a 60% of increase of 60% on the price level of the shares of the company.

In conclusion, the amount of uncertainty about the size of change in *Nestlé* shares is decreasing over the years, so the chances that a dramatically change on the price of shares happens is quite small.

	Short-Term		**Medium-Term**		**Long-Term**	
	Nestlé	Swiss Market	*Nestlé*	Swiss Market	*Nestlé*	Swiss Market
Mean	60,32	6.708,01	56,38	6.314,06	52,88	6.295,46
Variance	14,266	360.442	25,416	408.628	37,81	296.368
Standard Deviation	3,77	600,36	5,04	639,24	6,15	544,39
Volatility	0,062	0,089	0,089	0,10	0,116	0,08647
Interval at 95%	[52,76-67,87]		[46,3-66,47]		[40,58-65,18]	

5) CONCLUSIONS:

Solvency is lower than one that would normally represent a risk but it doesn't in real terms. As we previously stated, a negative working capital can be backed with both low cash cycle and goodwill.

The firm's equity has increased (due to a growth on reserves) that can be translated to an increase in control and value for both stakeholders and shareholders.

Although the financial risks they are exposed to they have managed to control it with different hedging policies. However, the most prominent risk they are currently exposed to is the actual financial crisis that has affected negatively on their sales.

BLOC 3:

PROFITABILITY ANALYSIS

1- ROE (Return On Equity) analysis:

The return on equity ratio measures the company's profitability by revealing the profit the company generates with the shareholder's investments.

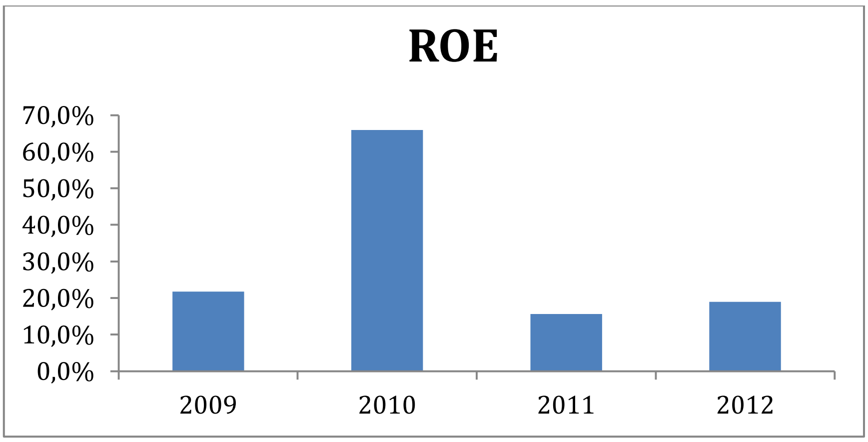
$$\text{ROE} = \frac{\text{Net Income } (31\text{–}12\text{–}X1)}{\text{Equity } (1\text{–}1\text{–}X1)}$$

	2012	2011	2010	2009
ROE	18.97%	15.66%	65.97%	21.75%

It can also be expressed as the DuPont formula, which actually breaks the ROE in three parts, margin ratio, turnover ratio and leverage ratio:

$$\text{ROE} = \underbrace{\frac{\text{Net Income } 31\text{–}12\text{–}X1}{\text{Revenues } 31\text{–}12\text{–}X1}}_{\textbf{Margin ratio}} \times \underbrace{\frac{\text{Revenues } 31\text{–}12\text{–}X1}{\text{Assets } 1\text{–}1\text{–}X1}}_{\textbf{Turnover ratio}} \times \underbrace{\frac{\text{Assets } 1\text{–}1\text{–}X1}{\text{Equity } 1\text{–}1\text{–}X1}}_{\textbf{Leverage ratio}}$$

First of all, margin Ratio is a profitability ratio, which is calculated dividing Net Income by Revenues, and shows which portion of sales is finally kept in earnings.
This ratio is also widely used to compare companies of a same sector or branch. The higher the margin ratio's value, the more profitability the company has. Thus, it could mean that the company has greater control over its costs compared to its competitors. On the other hand, a low margin ratio indicates the lack of a safety margin because there will be a higher risk that a decrease in sales will turn down profits.
Moreover, the turnover ratio also plays an important role in this analysis. It is calculated by dividing sales into assets, and measures how efficiently a firm uses its assets to generate revenues. A high value for this ratio means that the company, lets say 40%, means that we will have 0,4 euro for every euro we own on assets, has the ability to efficiently manage its investments.
Finally, in order to explain the leverage ratio very roughly, we can say that it indicates the way companies use debt to finance its assets. The higher the ratios value the higher the financial leverage of the company, that is, there is more amount of debt used by the company to finance its assets.



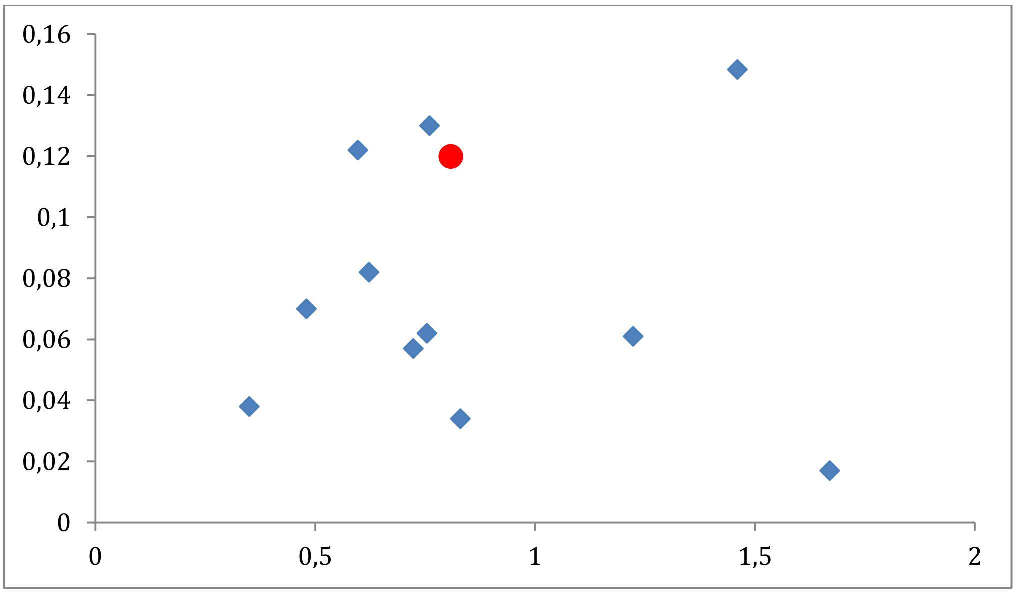
A very high ROE, like the one obtained by Nestlé in 2010, could indicate that the firm has the capability to generate more cash internally and therefore has no cash-flow problems.
Also, in 2010, the Share Buy-Back Program that Nestlé had started back in 2005 was finished and this significant increase of the Return on Equity in 2010 could be related to this fact. When you develop stock buy-backs one of the main consequences is an increase in shareholder value, therefore an increase in Earnings per Share (EPS) as a result of decreasing the number of shares outstanding but having similar earnings than previous years. Then, ROE, like EPS, are both indicators of the capacity of firms to generate a better return for their shareholders so the increase in EPS (2.92CHF in 2009 and 10.16CHF in 2010) values could be translated in an increase of the Return on Equity values too.
We could also relate the increase of the Return on Equity in 2010 with a boost of sales as increased sales that lead to higher profits yield higher returns on equity. However, sales increased from 107 618 (2009) to 109 722 (2010) so we do not consider it relevant in this analysis.

2012	ROE	Margin ratio	Turnover ratio	Leverage ratio
Nestlé	18.95%	0.1199	0.808	1.95
Mean of the companies	16.08%	0.07844	0.85644	2.92358

On 2012 Nestlé had a superior ROE compared to the other companies, reaching 18,95%. This is mainly due to a remarkable margin ratio, which is considerably higher than the others. In contrast, the turnover is slightly lower but similar to the mean, and the leverage ratio is also inferior in comparison to other companies which mean that Nestlé manages to finance its assets with a smaller proportion of debt than other firms in the same industry.

2011	ROE	Margin ratio	Turnover ratio	Leverage ratio
Nestlé	15.66%	0.1172	0.74925	1.78345
Mean of the companies	14,13%	0.07303	0.75234	2.742

On 2011, the ROE of Nestlé was a little higher than the average of the other companies, but lower than 2012 by approximately 3 percentage points. Looking at the ratios we can find easily the explanation: every one of them is lower than the ones from 2012. If we compare the ratios to the average of other companies, the margin ratio is also higher, but the turnover and the leverage lower.



Graph of the margin and turnover for all the companies

However, looking at the graph above, even though the turnover value is similar to the mean, it is higher than the majority of the companies. This is due to the fact that there are two extreme values for that ratio and therefore it biases the mean. We can consider that in fact Nestlé has a quite good turnover ratio.

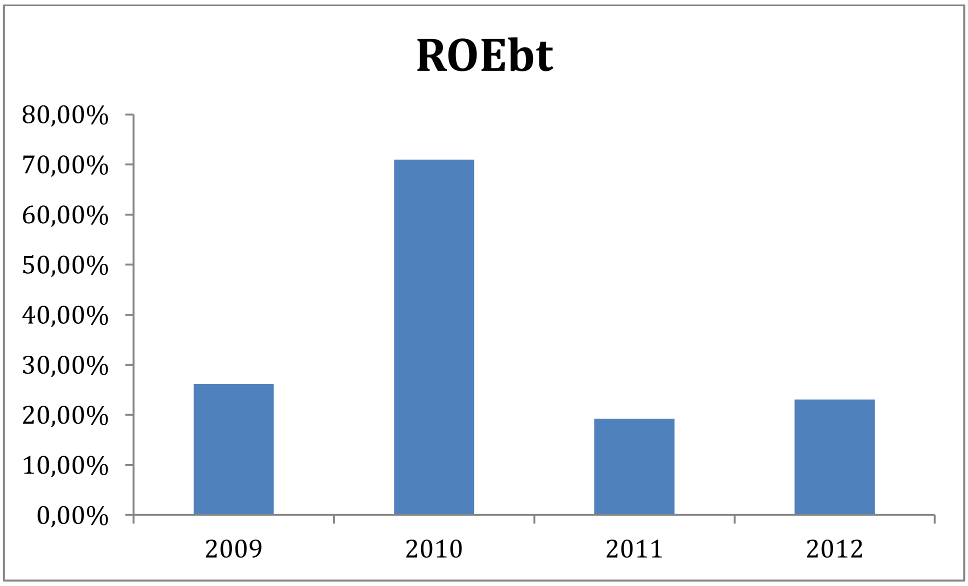
All in all, it is clear that the high ROE is mainly due to an outstandingly good margin ratio, and as we just state a good performance referring to the turnover ratio.
Two high values on these ratios means that Nestlé can be considered as a Brand Champion. Additionally, APCO, an International public relations firm has determined a list of fifty champion brands in which Nestlé appears. However, other of its competitors, like Procter and Gamble and The Coca-Cola Company are also mentioned and could represent a potential threat to this position.

2- ROE before taxes:

Compare a group of companies taking into account their results after taxes biases the analysis giving that they come from different countries and therefore different tax rates. This is why the ratio ROE before taxes is useful, because it allow us to compare the companies without considering the taxes effect.

$$\text{ROE before taxes} = \frac{\text{EBT 31−12−X1}}{\text{Equities 1−1−X1}} = \frac{\text{Net Income (1−tax rate)}}{\text{Equities}}$$

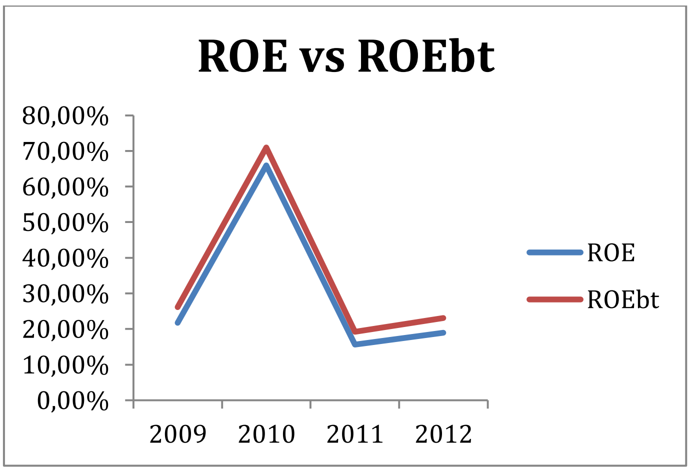
	2012	2011	2010	2009
ROEbt	23.08%	19.24%	70,97%	26.13%



We can see that all data fluctuates at similar values, minus the value obtained for year 2010, and there is no sign of a clear trend.

3- Tax Impact Analysis:

Through the comparison of the ROE and the ROE before taxes we can observe the impact of the taxes. We can work out the real tax rates that the company pays in order to see the weight on the earnings before taxes.

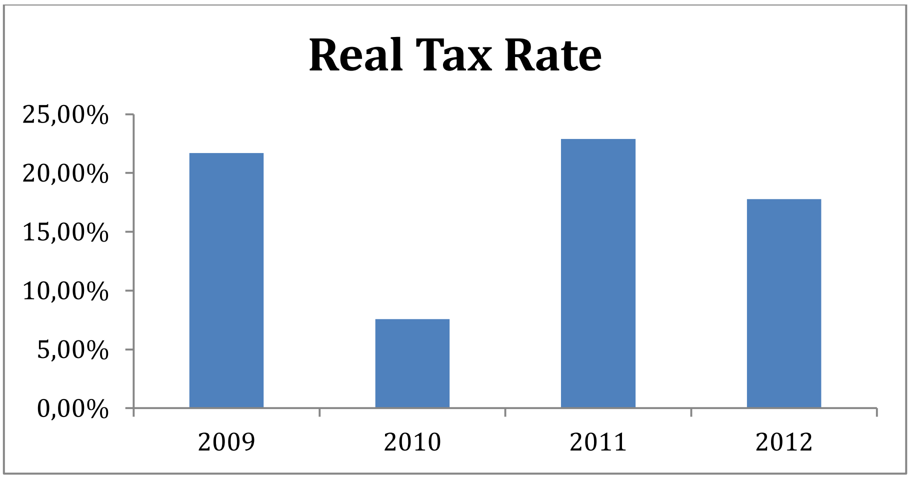


As we can see above, there is not a lot of difference between the returns on equity considering taxes or not considering them. Therefore, both values follow an almost exact trend.
We can work out the real tax rates that the company pays in order to see the weight on the earnings before taxes.

$$\text{Real tax rate} = \frac{\text{Taxes}}{\text{EBT}}$$

	2012	2011	2010	2009
Real Tax rate	17.77%	22.9%	7.58%	21.7%

Real Tax Rate is a ratio that compares the total amount of tax paid with the Earnings Before Taxes, so expresses the tax burden by the corporation.
Obviously, it depends directly on the amount of Earnings that the company obtains during the exercise, but there are also some important aspects to be considered, such as changes in legislation in certain countries, tax deductions and discounts, and last but not least, the fact that huge multinational companies have the resources to avoid paying taxes in countries where tax rates are higher and pay it in countries where rates are lower.



As a conclusion, we can truly assert that Nestlé pays a very low proportion of taxes in relation with the total amount of earnings that the company obtains.
From a social economic and equity point of view, it seems to be quite unequal that such a corporation as it is Nestlé can pay only an average of 17% of taxes (as it was in 2012) whereas a SME pay on average almost a 30%. However, we consider it to be a problem of political economics done by governments, since there should be a consensus among all European countries (especially those which belong to the EU) by means of which blue chips should pay more taxes, as well as avoid them to establish in tax heavens and try to fight against tax avoidance. However, in their defense, Nestlé was founded in *Vevey*, a city in Switzerland, a formerly known tax-heaven, so they didn't purposely evade taxes.
On the other hand, from a company point of view, we can say that Nestlé efficiently deals with tax payment. We have not found any problem with this company in terms of taxation, and we can see how the company pays few taxes, what means that they know how to manage this situation and keep more resources and money within the organization.

4- ROA (Return On Assets) analysis

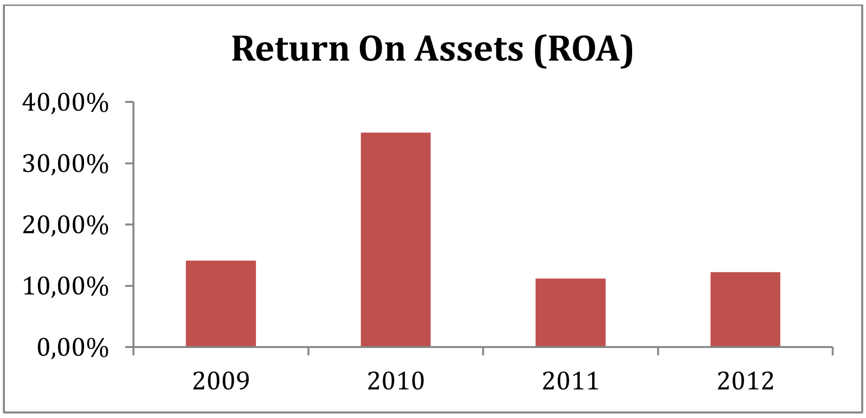
Return on Assets (ROA) is an indicator of profitability. It shows how profitable a company is relative to its total assets. Thus, it also gives information about how efficient management is at using its assets to generate earnings. The company must look forward a high value for ROA, since it means that the company is earning more money from lower amount invested.
As we can see below, ROA formula can be split in two important parts, margin ratio before interests and taxes and turnover ratio.

$$\text{ROA} = \frac{\text{EBIT } 31-12-\text{X1}}{\text{Assets } 1-1-\text{X1}} = \frac{\text{EBIT } 31-12-\text{X1}}{\text{Revenues } 31-12-\text{X1}} \times \frac{\text{Revenues } 31-12-\text{X1}}{\text{Assets } 1-1-\text{X1}}$$

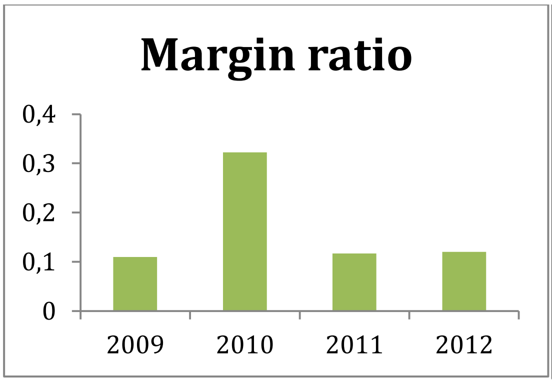
Margin ratio before Interests and taxes **Turnover ratio**

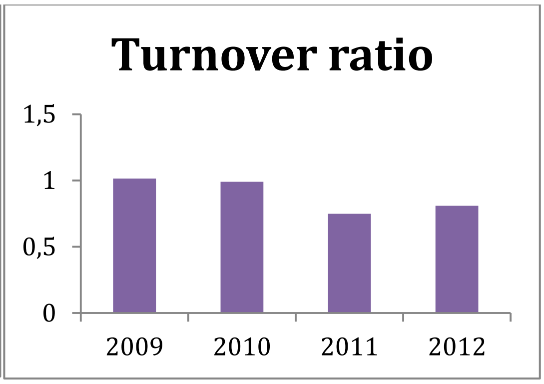
So it gives investors an idea of how the company is converting the money invested through the margin ratio and the turnover ratio.

	Margin ratio BIT	Turnover ratio	ROA
2012	0.1511	0.808	12.22%
2011	0.14909	0.7492	11.17%
2010	0.3538	0.9892	34.99%
2009	0.1391	1.0132	14.09%



Excepting the year 2010, where the ROA reaches an exceptional 34,99%, the values of the ROA for our company fluctuates around 11% and 14%. This means that for every euro invested, the company will generate between 0,11€ and 0,14€. To understand the evolution of the ROA, we have to look at the evolution of the margin ratio before interest and taxes and the turnover ratio.

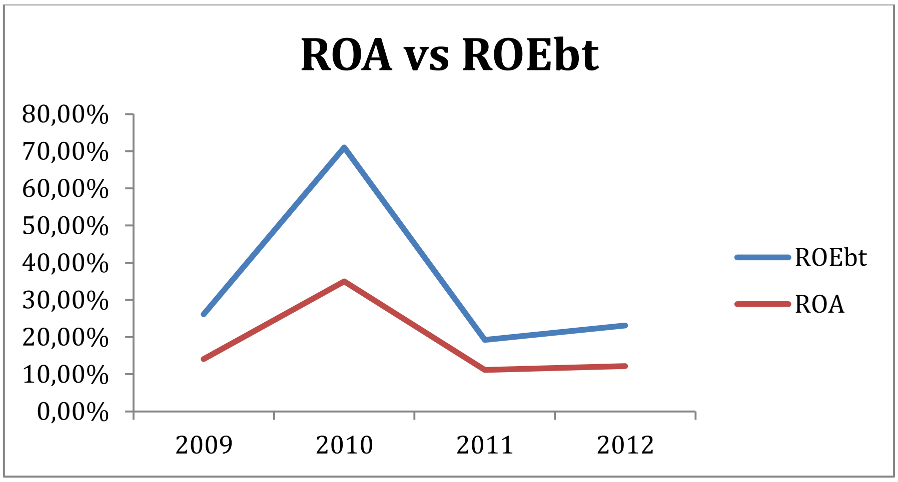




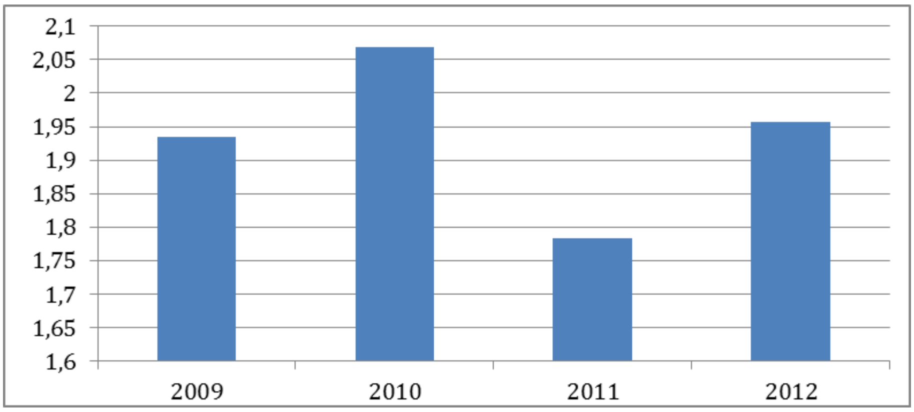
Again, the margin ratio is the key factor for the ROA variation. While the turnover ratio remain quite constant with a slight trend to decrease, the margin knew a huge growth on 2010 –this is why the ROA in this year also increases- and a positive trend.

5- Leverage Impact (Comparison ROEbt and ROA):

As we can observe, on the ROA formula, the leverage ratio doesn't appear, so it doesn't take into the account the debt of the company. Compare ROA and ROE_{bt} allows us to analyse the impact of the leverage.



We can clearly see in the graph plotted above that in year 2010 the level of leverage of the company was the highest for the last four years. We can establish this by looking at the evolution of the leverage ratio during the same period:



We can use the ROA to explain partially the ROE before taxes. We will need additionally the leverage to express the ROE before taxes in function of the ROA.

6- Average interest rate of loans (K)

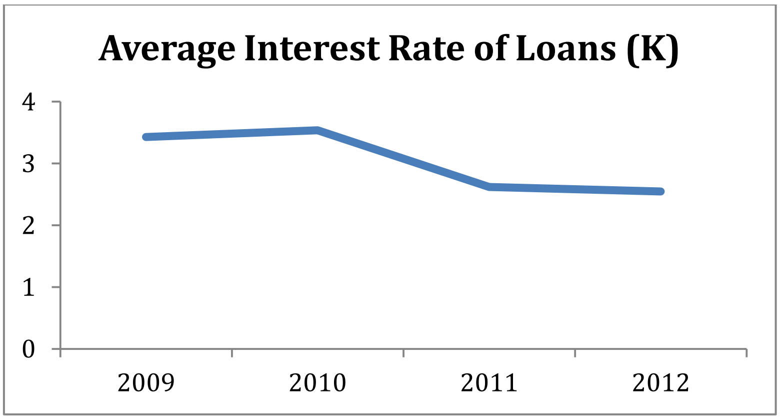
The ROE_{BT} can also be expressed as:

$$\textbf{ROE before taxes} = \textbf{ROA} + (\textbf{ROA} - \textbf{K}) \times \frac{\textbf{Liabilities}}{\textbf{Equities}}$$

Where K is the average interest rate at which Nestlé borrows its loans.
It can be worked out by $\frac{\text{Interest } 31-12-X1}{\text{Loans } 1-1-X1}$

The company's average rate for the last four years was:

	2012	2011	2010	2009
K	2.546%	2.621%	3.537%	3.428%



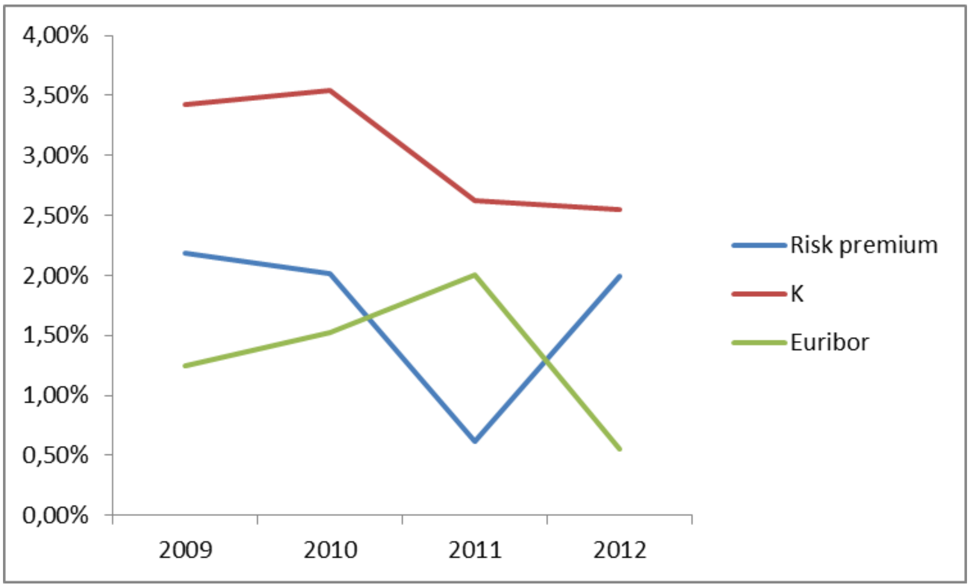
The K value is obtained by summing up two elements or values.
The first one is the value of EURIBOR (Euro Interbank Offered Rate), which is a daily published that indicates the average interest rate at which financial entities borrow and lend money in the interbank market of euro. What is more important here is to see that this value is not under Nestlé's control so has no power to determine neither to modify it, therefore it is an exogenous variable.
Moreover, the other element that forms the K is the Risk Premium Rate. It is the most important part since it depends on the company's behave and financial situation.
Banks are likely to lend money to Nestlé if they can notice that the company holds enough assets, is solvent and profitable, and has enough guarantees to pay back this money when required.

Knowing K and the Euribor we can work out the risk premium:

Risk premium = K – Euribor

We took the values of the Euribor at 31-12 of the last four years

	2012	2011	2010	2009
Euribor	0.549%	2.004%	1.526%	1.242%



If we look at the graphs above, we can notice how Nestlé has successfully managed to obtain loans at a very reasonable interest rate.
First of all, the K value increased in 2010 with respect to 2009 but since 2010 has decreased, and in 2012 was about 2,5%, what means that the average interest rate at which Nestlé financed was this percentage, which can be easily understood and considered to be quite low.

If we first focus on Risk Premium, we can see that it has a negative trend, especially for the year 2011, when it decreased quite a lot. In 2012, it was higher than the year before but it was almost in the same place where it was during 2009 and 2010. This means that the company transmits safety to its lenders, that debtors see lending loans to Nestlé as non-risky operations.

Euribor also plays an important role, although it is not under Nestlé's control. This bank index finally determines the interest rate at which Nestlé's, as well as all other companies and bank institutions finance and borrow money from the markets, in a direct relationship: the higher the Euribor, the higher the interest rate.

As a conclusion, we can truly assert that k has decreased over this period, what is clearly positive for the company, and it has two positive effects:

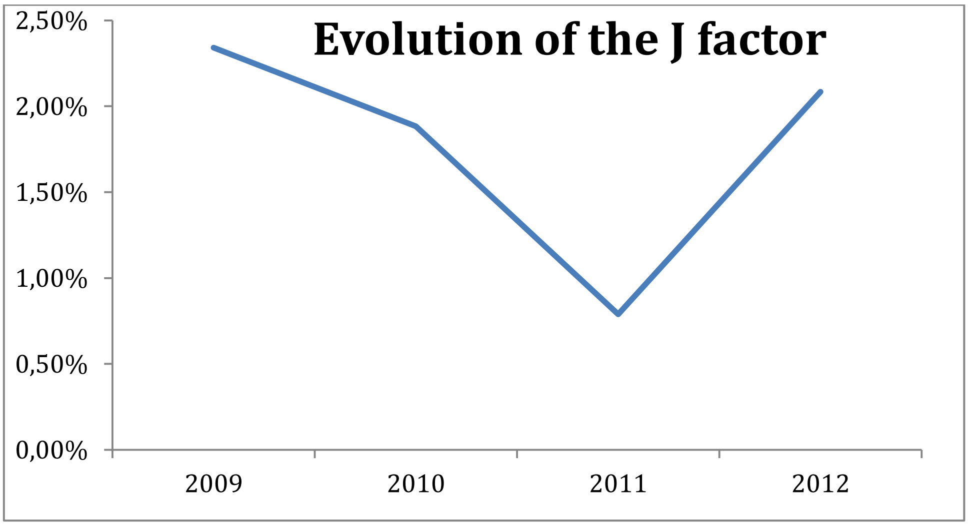
At first, the fact that the company can obtain loans at a cheap price can affect its decision-making, favoring leverage and indebtedness of the company, with an increase towards borrowing loans.
And secondly, it has also a positive effect on the Income Statement, since the amount of interest paid during the economic exercise will be quite low, allowing the firm to avoid decreasing significantly it profit due to interest payment.

7- Optimum level of leverage

The premium risk, which is negotiated with the banks, can be expressed in function of the debt ratio and the sensibility of the banks to the indebtedness level (**J**). A low J means that the bank is willing to lend money at a low cost because it believes that there is a low risk, and therefore the K will also be low. A high J has as a consequence a high borrowing cost for a company. The J factor depends on the leverage of the company –if it's too high a bank will not be willing to lend money- and on macroeconomics aspects.

$$K = \text{euribor} + \frac{\text{Liabilites}}{\text{Equities}} \text{ x } J$$

	2012	**2011**	**2010**	**2009**
J	2.08%	0.78%	1.88%	2.34%

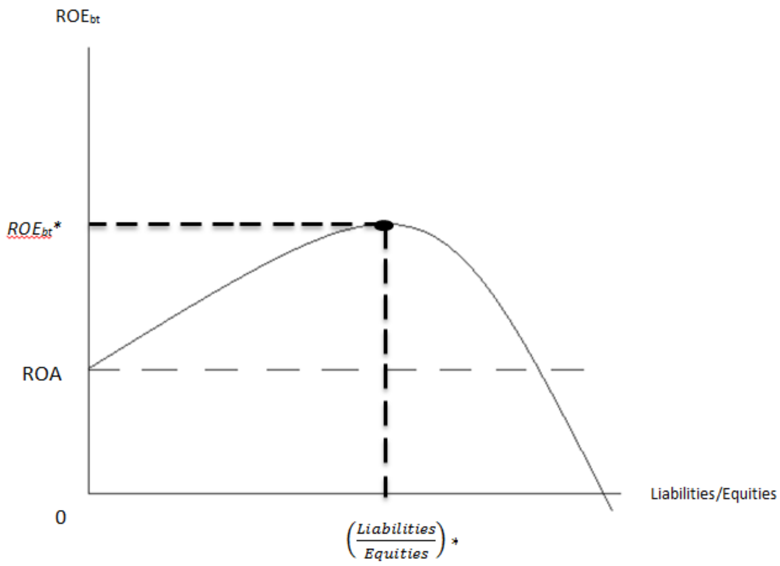


Between 2009 and 2011 it constantly decreased until it reached a minimum of 0,78%, and so at this period the banks had practically no problems to lend money to Nestlé. From 2011 it significantly raised, but we consider that a 2,08%, which is the value at 2012, is still a low value.

Having this expression of the K, we can modify the ROE_{bt}:

$$\textbf{ROE bt = ROA + (ROA – e) x } \frac{\textbf{Liabilities}}{\textbf{Equities}} \textbf{ – J x } \left(\frac{\textbf{Liabilites}}{\textbf{Equities}}\right)^2$$

To obtain easily a higher ROE_{bt}, the company can decide to increase their level of indebtedness. However the risk of the company also increases if it reaches an excessive level of leverage, thus it directly affects the profitability.



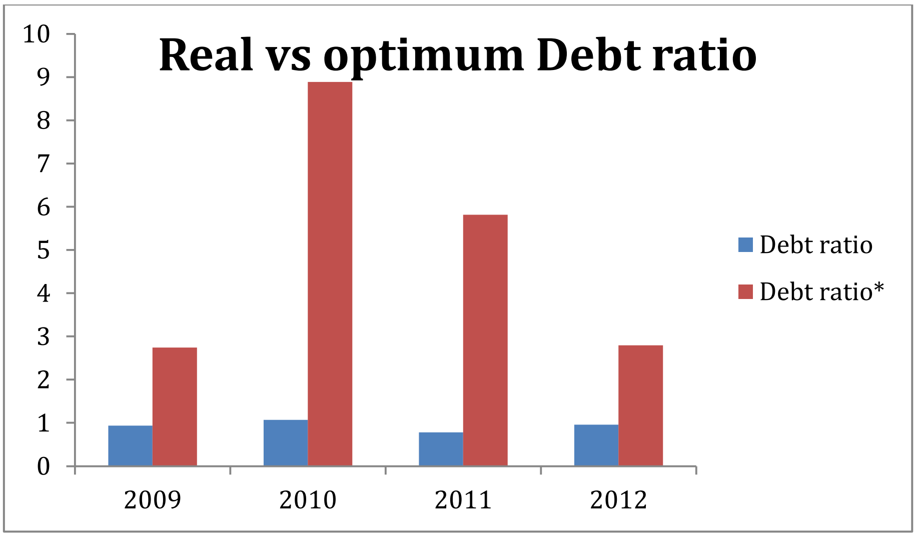
As we can see on the graph, before the ratio $\frac{\text{Liabilities}}{\text{Equities}}$ reaches its optimum, the value of the ROE_{bt} is under its possibilities, and a company can continue indebting itself to make it growth. After this point, we can generally consider a company is over-indebted and with a lower level of leverage and risk, it can achieve a same or better ROE_{bt}.

We can find out the ROE_{bt} optimum through the first derived of the ROE formula in function of the debt ratio:

$$\frac{d\ \text{ROEbt}}{d\ (\frac{\text{Liab}}{\text{Equit}})} = 0 + (\text{ROA} - \text{e}) - 2\text{J} \times \frac{\text{Liabilities}}{\text{Equities}}$$

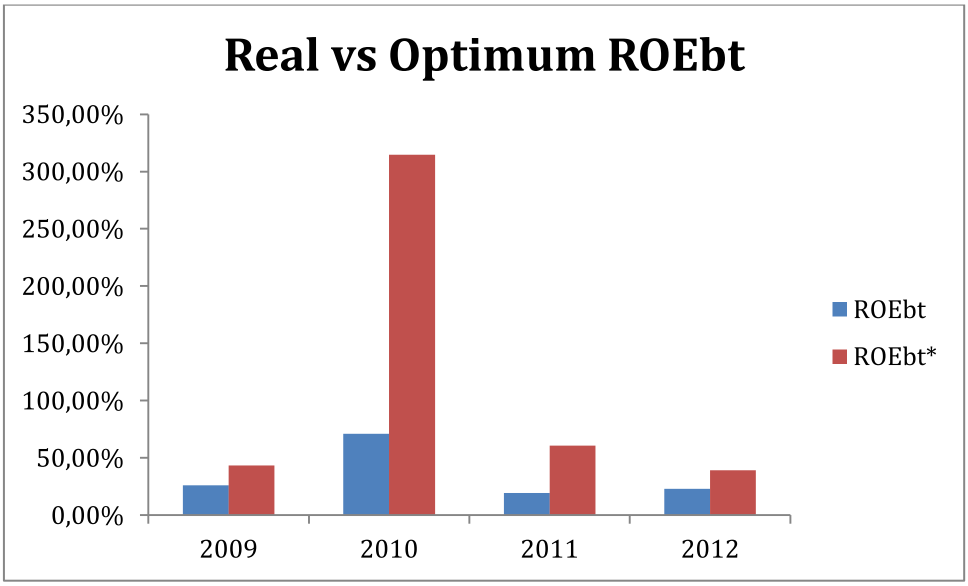
From here we can find out the optimum debt ratio, and compare it the reals debt ratios of the last four years:

	2012	2011	2010	2009
Debt ratio	0.9578	0.783	1.068	0.934
Debt ratio*	2.796	5.811	8.885	2.744



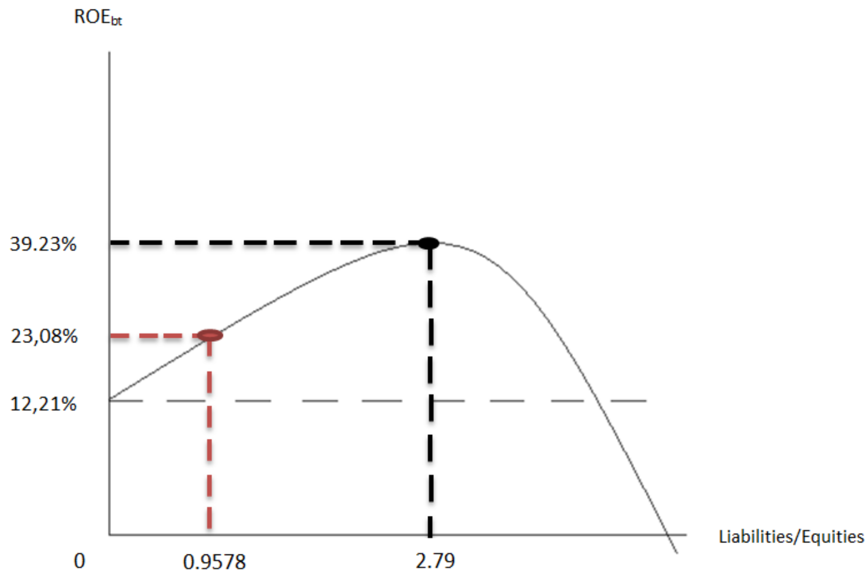
According to this information, Nestlé is still far away from the theoretical optimum of leverage (represented in red), but it is important to remark that this optimum it has been decreasing during three years. Generally, Nestlé's level of leverage has been kept more or less stable during the last four years. This could be perhaps considered as a positive fact as the lower the company's reliance on debt for asset formation, the less risky the firm is since an excessive proportion of debt can lead to very heavy interest payments.
We can also analyze the optimum value of the ROE_{bt} and compare it to the real one over the years:

	2012	2011	2010	2009
ROE_{bt}	23.08%	19.24%	70,97%	26.13%
ROE_{bt}*	39.23%	60.85%	314.56%	43.37%



From the graph above, we can remark that the optimum level of ROEbt increased considerably, fact that we relate to the increase of Nestlé's ROEbt in the same year.

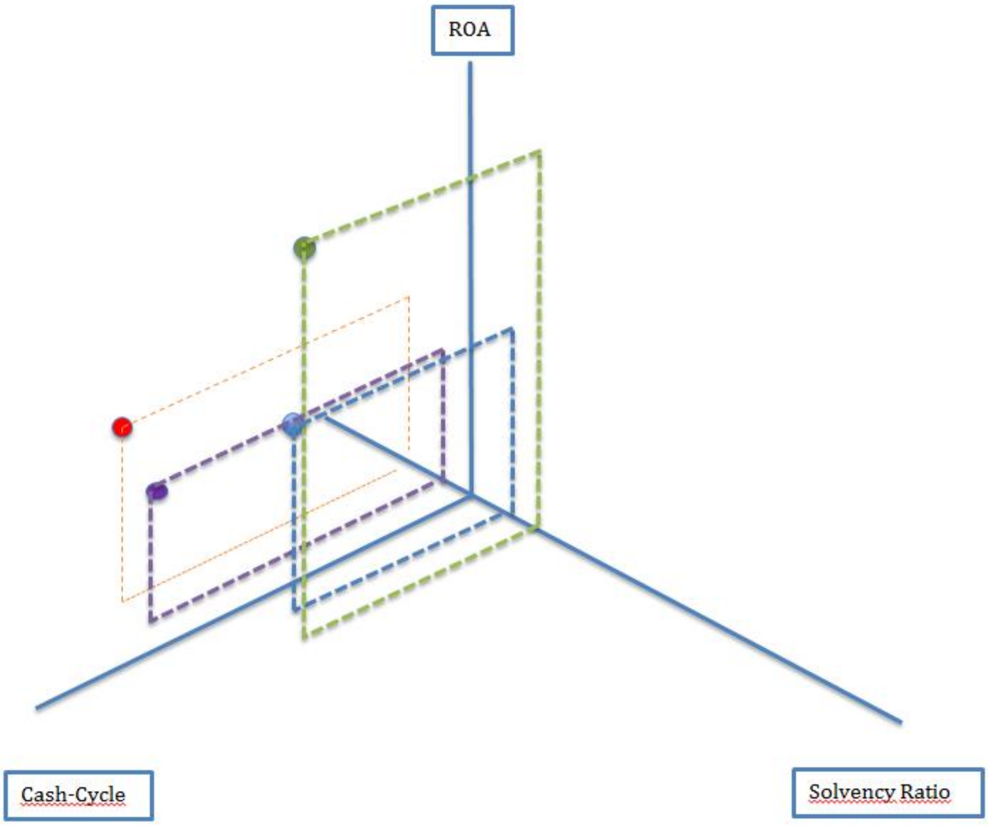
Considering the debt ratio and the ROE_{bt}, we can represent where the companies at 2012 compared to its optimum:



There is a considerable distance between the optimum and the real point. The conclusion that we can abstract is that Nestlé has the capacity the increase the ROE_{bt} through the leverage. As we said before, the strength of this company is the margin ratio, and the leverage one is significantly lower than the average of other companies. So the indebtedness is not, and hasn't been used (as the values from previous years shows us) to boost the ROE_{bt}.

8- Risk VS Profitability Analysis:

	2009	2010	2011	2012
Cash-Cycle	12 days	13 days	17 days	17 days
Solvency Ratio	1,10	1,29	0,94	0,90
ROA	14,09%	34,99%	11,17%	12,22%



As we can see, between 2009 and 2010 the firm's performance was very successful as it was situated in the graph in the first quadrant. We have a low cash cycle, solvency ratio above one and huge values of ROA, 14% and 35% respectively. So there was practically no risk and high levels of profitability, a desirable situation for a company and investors.

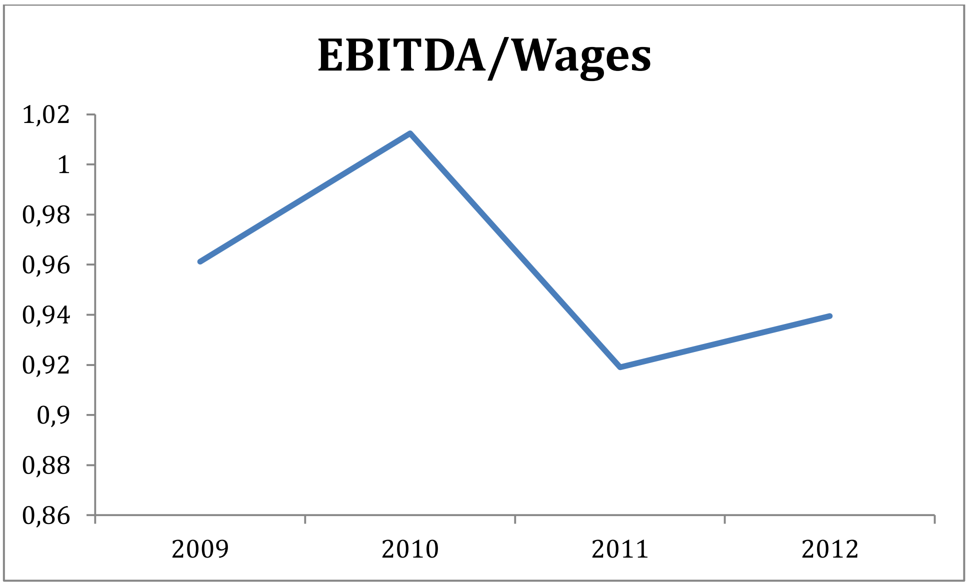
In contrast, since 2011 we can see that the cash-cycle of the company increases, the values for the solvency ratio are below one and the profitability decreases (even though from 2011 and 2012 it increases). Clearly this is not a good position and reveals mismanagement because usually more risk implies more profitability, but the evolution of Nestlé compared with 2009 and 2010 is the worst case: more risk with less profitability.

However, as we previously stated in the risk analysis we can say that Nestlé has sufficiently strength to support a solvency ratio below than one, at least for certain period of time. Additionally, the levels of profitability are still high, even with the level of risk that investors assume. Certainly the evolution is worrying for the company and has to improve it, but the relation of risk and profitability surely still has the potential to attract investors with willingness to risk.

9- Salary Risk:

EBITDA/Wages	
2009	0,961183
2010	1,012378
2011	0,919006
2012	0,939457

This ratio is used to study the impact of wages in EBITDA.
First of all, we can appreciate from the values above and the graph below, that it is one of the most important COST elements to be considered.
In 2010, it represented the highest value, 1,012, (up to a 101,2% of the EBITDA), while in the last exercise, it was roughly a 93%.



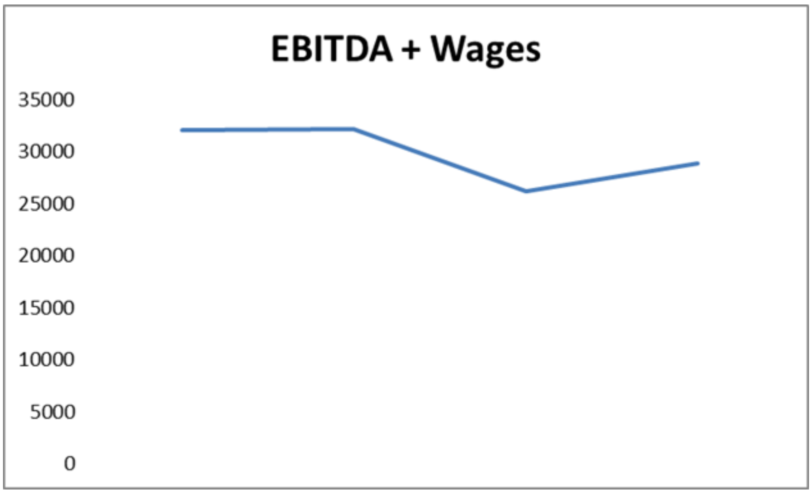
It is also important to take into accounts that, in almost every European country, wages are going down due to the financial crisis, which benefits companies such as Nestlé. The fact that salaries are, on average, have been maintained even decreased, has obviously effects on the financial result of the company. It will reflect the decrease of a very important cost factor, thus the benefits will be quite higher.

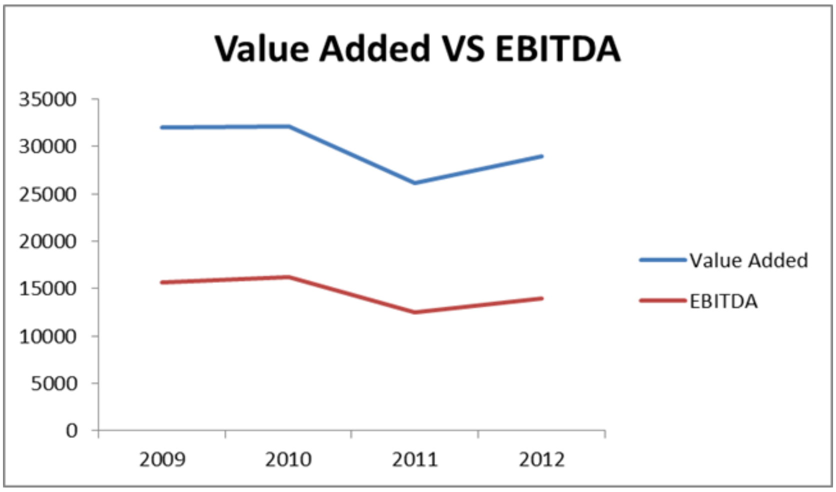
10- Value Added:

The value added figures are obtained by adding the wages to the EBITDA for the same period. With this, we can see the total value that employees have generated for the firm during a given time.

2012	28927
2011	26181
2010	32190
2009	32032

(In million CHF)





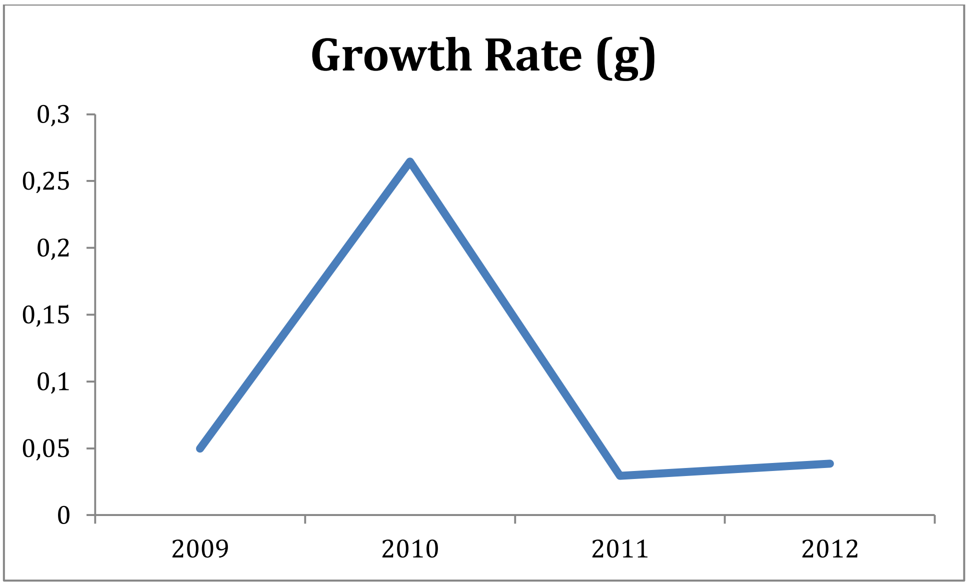
Looking at the graphs above, we can see that value added decreased from 2010 to 2011 but it is now acquiring a positive trend again. However, this positive trend is characterized by a higher increase of the salaries in respect to the EBITDA that is translated into an even more positive value added.

11- Growth Rate:

Is calculated as follows:

g= (1-payout)*(1-real tax)*ROA

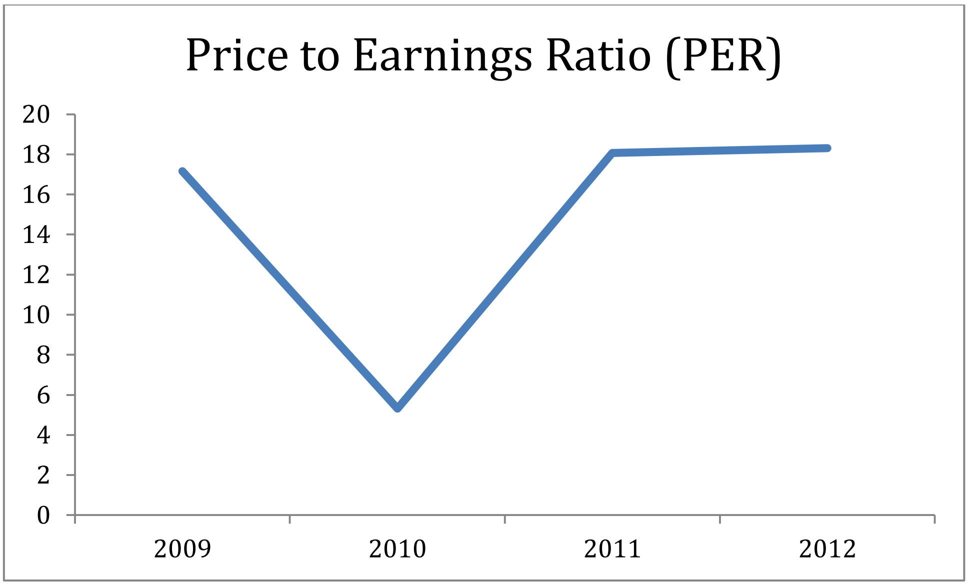
Growth Rate (g)			
2009	2010	2011	2012
0,04987	**0,26459**	**0,02954**	**0,03856**



Growth rate indicates the pace at which the company evolves, so it is clearly linked to its profitability, pay-out policy, and the amount of tax it is forced to pay.
With this indicator, calculated by means of the pay-out policy, the real tax indicator and the Return on Assets (ROA), we have been able to know how the company has grown during the last four years.
In 2009, the company recorded a total growth rate of 5% approximately, whereas in 2010 it was of 26%. It is caused, as we have explained throughout the whole project, because of a high increase of income (financial ones specially) during that exercise.
Finally, in 2012 it increased up to 1% with respect to 2011, what is quite positive for the firm if we consider the world financial crises, but after several analyses, the company can attempt to grow faster.

12- Price per Earnings Ratio (PER):

Price to Earnings Ratio (PER)			
2009	***2010***	***2011***	***2012***
17,1575	5,31988	18,064	18,3033

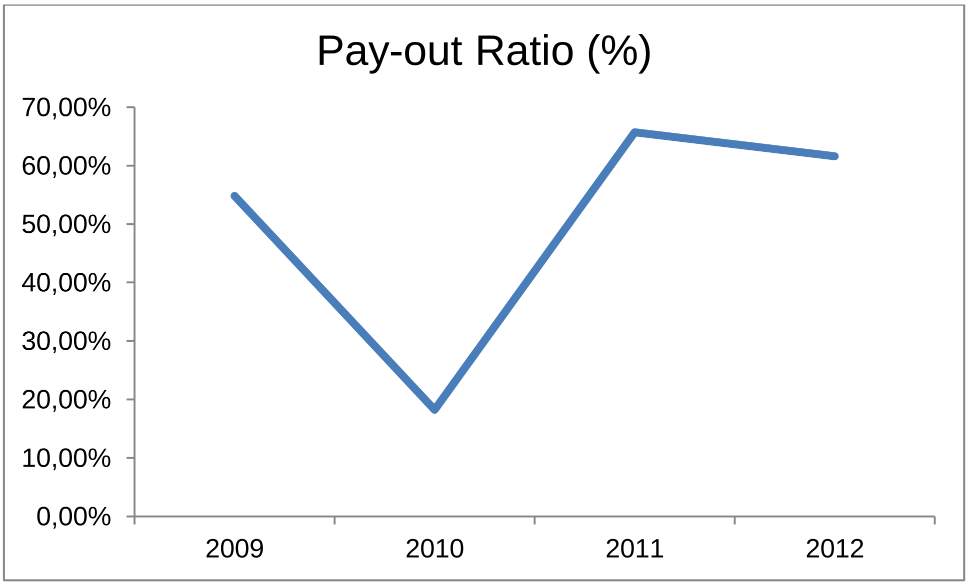


Price to Earnings Ratio is calculated dividing the market share price (determined in the stock exchange) by the net profit (after tax) of the year.
It is one of the most important ratios, since it looks at the relation between both stock price and company's earnings.
This ratio indicates the number of times that the earnings of the company are included in a share price of this company, so gives a key insight of what the market is willing to pay for the company's shares.
The value is quite straightforward to understand: the higher the PER value, the more investors are willing to pay for the company's earnings. However, a higher value of this ratio can mean that the expectance of the investors regarding the value is that the company is overvalued, although usually it would be perceived as a positive trend of future benefits.
On the other hand, a company with a low PER can be seen as a lack of confidence by the market. However, it could also be seen as if the share is undervalued so that its value could increase, even at short term.
In Nestlé's case, we can see how in years 2009, 2011 and 2012, the value was quite high, and we can conclude that investors expected a positive trend for future growth and benefits, whereas in 2010, the value was significantly decreased. This was the year when Nestlé recorded the highest number of profit (specially from financial operations), so we could guess that investors felt that the company reach its top so benefits were likely to go down for the next years, and consequently, their willingness to pay for this benefits felt down.
To sum up, it is so important to compare PER with other companies of the sector or branch, or even more important, to complement with the study of other ratios, what will provide a better and more complex view.

13- Relation-ship of PER with Pay-out ratios:

Pay-out Ratios			
2009	2010	2011	2012
54,80%	18,20%	65,70%	61,60%

We have decided to match Price to Earnings Ratios with Pay-Out Policy, and we have clearly seen that the trend of these two ratios is quite similar, both them determined by the evolution of net income.
In 2010 we can see a big drop of this value (Net income increased strikingly), and the company decided not to distribute most of this gains, what could have caused a big under capitalization of the company, making the retained earnings, and thus, equity, to increase substantially.



14- Conclusions:

One of the main strengths of Nestlé is that it operates with high margin ratios which mean that the company has very large profit margins and is able to properly manage its assets as well as its equities.
Plus, the turnover ratio, although it is not as considerably good as the margin ratio, permits the firm to have outstanding return on equity figures.
However, the firm could increase its profitability by increasing its leverage ratio, which is actually quite low as Nestlé is vastly financed by internal resources, that is equities. Also, increasing the leverage could be taken into account as the cost of capital is not very significant and is currently decreasing. Thus, this would induce to worsen the solvency ratio results that are currently below one. Therefore, the risk would increase also stimulating the profitability of the firm as both variables are closely related.
Another important aspect to highlight is that the tax burden that the company is actually absorbing is much reduced as it is mainly based in a tax heaven (Vevey, Switzerland).

GENERAL OBSERVATIONS AND FINAL CONCLUSIONS:

In general aspects, we believe that the crisis is affecting Nestlé. The situation of the company has been worsened for the last two years with a decrease of profitability and an increase of risk. This is a revealing situation that can repel investors and that can be caused either for external reasons, mismanagement or both.

The negative working capital is a mixed result of a decrease on sales and a management decision that must be analyzed also as a long-term strategy, given that they boosted the investment in emerging markets. Moreover, the important decrease on revenues in Europe and Americas, where the crisis most strongly struck, is the main reason to let us think that the worsening situation is mainly due to external factors.

However, a slight decline of the company does not imply a bad situation. Nestlé still have lot of strengths; such as the high importance of the equity, a controlled level of leverage, a small presence of non-current liabilities, a good fiscal management, low interests costs and high values of ROA and therefore of ROE.

The next years will be important in order to see if Nestlé inverts the trend of more risk with less profitability. Until then, the high profitability, an increasing market price of its shares and a high pay-out policy make Nestlé a good place to invest in.

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