ΤΕΙ ΚΡΗΤΗΣ

ΤΜΗΜΑ ΧΡΗΜΑΤΟΟΙΚΟΝΟΜΙΚΗΣ & ΑΣΦΑΛΙΣΤΙΚΗΣ

ΤΕΧΝΟΛΟΓΙΚΟ ΕΚΠΑΙΔΕΥΤΙΚΟ ΙΔΡΥΜΑ ΚΡΗΤΗΣ

ΣΧΟΛΗ ΔΙΟΙΚΗΣΗΣ ΚΑΙ ΟΙΚΟΝΟΜΙΑΣ

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ΠΤΥΧΙΑΚΗ ΕΡΓΑΣΙΑ

ΧΡΗΜΑΤΟΟΙΚΟΝΟΜΙΚΗ ΑΝΑΛΥΣΗ
J SAINSBURY PLC & TESCO PLC

Επιμέλεια : Βασιλειάδη Σωτηρία, Α.Μ.402

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Introduction

In this dissertation our main interest is to present a financial analysis of two major UK companies, J. Sainsbury plc and Tesco plc for a period of three years. First and foremost we present the Food & Drug Retail Sector that the selected companies are constituents by mentioning their greater competitors, the position of the selected companies in the sector, as well as the main characteristics of the sector. Continuing, we introduce the first company, J. Sainsbury plc, historical review, business structure, strategy, its corporate governance and its major shareholders, as well as its stock performance and pest analysis. A similar analysis is also presented for the second selected company, Tesco plc. Continuing, the theoretical approach on financial analysis is presented, its forms, the categories and aims of each analyst, several methods that are used for financial analysis as well as their limitations. An analysis on financial statements, their categories as well as the financial ratio analysis is also presented. After the theoretical approach on financial analysis, we demonstrate the financial analysis of the two selected companies, J. Sainsbury plc and Tesco plc by mentioning the changes on major accounts in income statements, balance sheets as well as cash flow statements for the years 2006, 2007 and 2008. Financial ratio analysis for the companies is also presented with graphs indicating the change on liquidity, profitability, debt, operating performance, cash flow indicator and investment valuation ratios. Furthermore, a financial analysis of the most important ratios of two competitors is presented due to limitation on sector data. In addition, we present the Break-Even Point (BEP) analysis followed by a calculation of the companies' BEPs. Continuing, we present a theoretical introduction to investment theory by analyzing the efficient market hypothesis, portfolio diversification as well as the capital asset pricing model (CAPM) with practical application on the risk profiles of both our companies. Nonetheless, stock evaluation of the companies' is applied compared to the sector and the market index. Last but not least, an approach on bankruptcy risk is presented with the use of the Z-score financial analysis tool to predict bankruptcy, how it is estimated for different kinds of companies as well a calculation of the Z-score of J. Sainsbury plc and Tesco plc.

Contents

Ch.1. Food & Drug Retail Sector

The Food & Drug Retail Sector includes both our selected to analyze companies, J.Sainsbury plc and Tesco plc. They are listed along with other companies as shown on the table below in the Food Retailers & Wholesalers sub sector and are part of the UK main market. Market capitalization (£m) is also available on the table below:

Table 1.1 Food & Drug Retail Sector Listed Companies

List Date	Company	Market Cap.(£m)
11/4/2008	CRAWSHAW GROUP PLC	6,93825612
27/4/1984	GREGGS	500,19416070
30/11/1972	MORRISON(WM.)SUPERMARKETS	7636,73627429
11/7/1975	SAINSBURY(J)	6249,37902530
19/12/2007	SNACKTIME PLC	17,82339497
23/12/1947	TESCO	34779,97826013
24/5/1988	THORNTONS	72,26689779

Source: www.londonstockexchange.com

Since the beginning of the decade, the companies we are studying, J.Sainsbury plc and Tesco plc are leaders of the sector, as they hold together more than 40% of the entire market share. Analytically:

Table 1.2 UK Main Food Retailers 2001-2002

UK: Main Food Retailers 2001-2002		
Group	**No. of outlets**	**Mkt. share**
Tesco	728	23.8%
Sainsbury's	463	16.5%

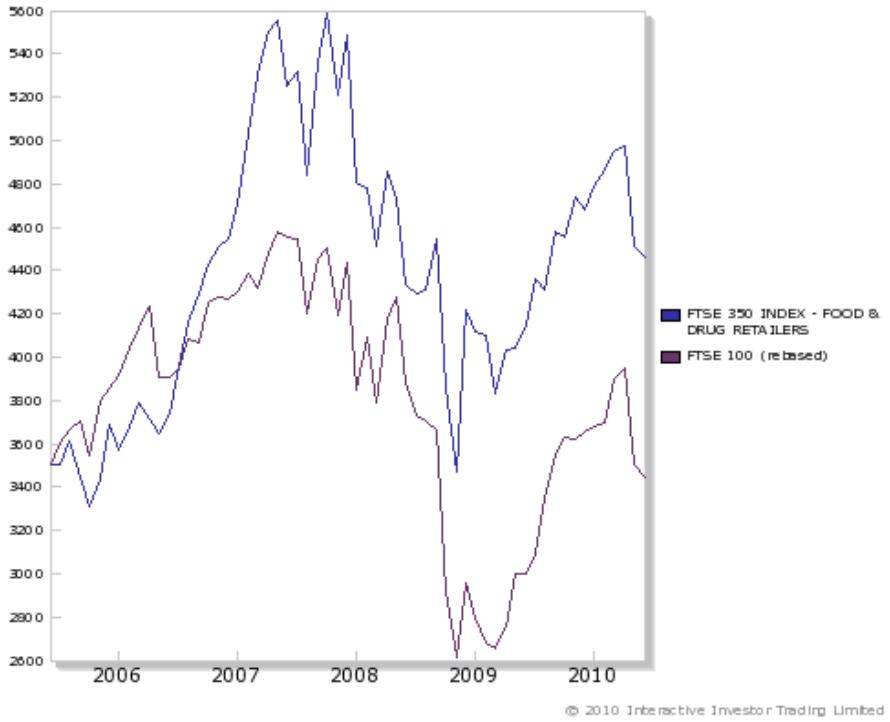
Source: Mintel 2002, as cited by London Economics November 2003.

According to RNCOS, a leading market and information analysis company, the UK retail market has been clearly dominated by supermarkets as they compose almost 75% of the market share. The outcomes of their research with main subject "UK Food Retailing Market Forecast (2005-2010)" (www.rncos.com) indicate that large chain supermarkets are rather competitive especially in terms of pricing. Lowering prices in order to be more appealing to existent and potential clients, has led

the industry not only in experiencing lower profit margins but also in setting back its general growth. Combined with the results of another RNCOS report with main focus on "European Convenience Stores Market Report (2006-2008)" (www.rncos.com), as well as a report on "UK Supermarket Analysis (2007-2010)" (www.rncos.com), it is a fact that market concentration and declining profits have increased competition and enhanced the need for retailers to differentiate from one another and position themselves.

The UK food sector presents similarities to the U.S. retail market and is experiencing high market concentration in recent years, which has led to a great effort of establishment through differentiation. The UK supermarkets are by fact the world leaders as far as product innovation is concerned, as strategic moves were needed to be done to improve their operation. Along with the new food hygiene regulations introduced by EU regulatory system in January 2006 which required the establishment of a food management safety system which improves quality, the implementation of information technology has resulted in reduction of overall costs. It has allowed retailers to manage logistics, warehousing and distribution in a more efficient way, creating economies of scale. Furthermore, inventory improvement has altered distribution channels and frequencies, influencing the entire supply chain. As a consequence, the industry is driven to a rather high consolidation pattern, as nowadays almost three-fourth of the market share in UK is held only by the top four supermarkets. In addition to the development of online retailing, a recent and rather emerging selling mode, UK supermarkets have managed to create and sustain their own consumer class and influence somewhat their clients' behavior as well as attracting new consumer groups. However, despite the market sales and growth, one of the most important indicators of performance in the sector is the stock market, also used for predicting expected performance. In the figure below, we get information about the performance of the food and drug retailers sector in comparison to the FTSE index for the last five (5) years, from 2006 since 2010. The graph indicates that the sector was underperforming in the year 2006, however in the years after it managed to perform more favorable than the index.

Graph 1.1 FTSE – Food & Drug Retail Sector Stock Performance



Source:www.iii.co.uk

It is without doubt a fact that in the last decades the sector of food and drug retailers has altered rapidly as well as radically. Homogeneity of products sold has become less and less through the years, as the existing trend is the development of supermarkets and hypermarkets, either composed by a single retailer or by a group of retailers, offering a great variety of goods easily accessed. What has made this trend so popular according to several surveys is that "the most important reason for shopping at a particular outlet is not whether the prices are lower or the staff is friendlier but simply where the shops are located in relation to the clients' homes or workplaces." London Economics (November 2003). Consequently, as a result of the hectic way of life adopted nowadays, food retailers found the way to adjust themselves and stay alive, expand their stores and get richer by opening chain-stores while pursuing economies of scales, taking under consideration the fact that "the UK Competition Commission has relied on the assumption that consumers will on average be unwilling to travel more than 10 or 15 minutes (for urban and rural areas, respectively) to look for alternative food retailers." London Economics (November 2003). According to survey's data the most important factor affecting

the choice of clients upon which store to select is convenience, along with other factors demonstrated on the table below:

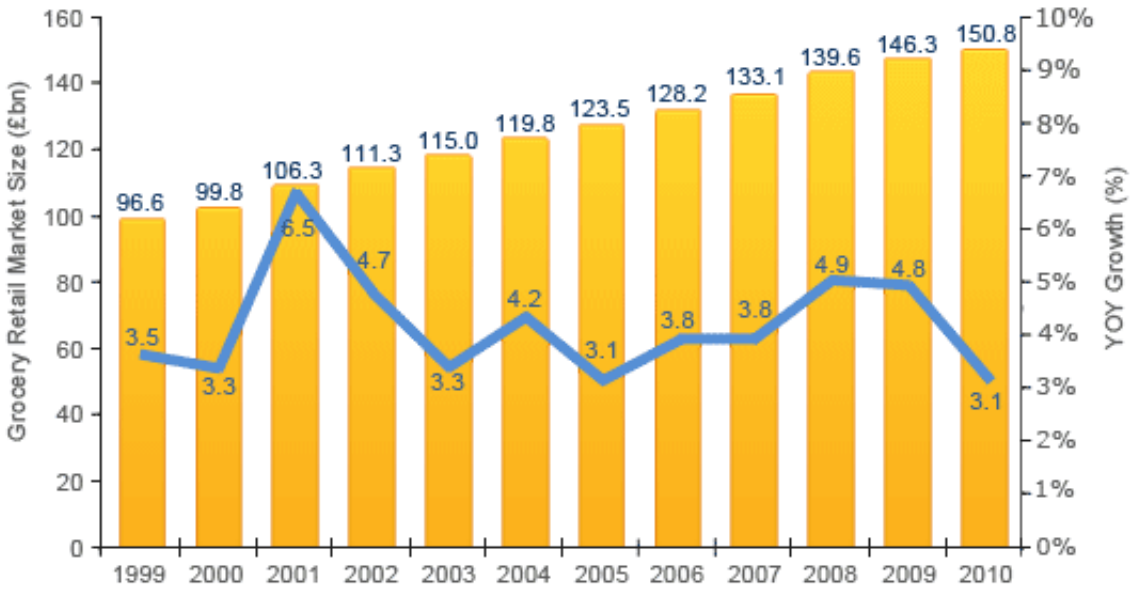
Table1.3 Factors for Choosing Grocery Store

Factors affecting the choice of grocery store	
Most important factor	**Proportion of respondents**
Convenience	54%
Product range/selection	14%
Low price	13%
Quality	9%
Cleanliness	2%
Friendly staff	1%
Opening hours	1%
Others	6%

Source: London Economics (1997), as cited by London Economics November 2003.

The UK market can be characterized as a polarized market as it comprises mostly of dominant independent retailers and huge corporate chains. Due to strong competition, independent retailers are getting less and less every year as they cannot compete multiple retailers neither in scale nor in efficiency. Large multiple supermarket chains dominate the UK grocery retailing and are characterized by their great size, visibility and the power to influence market behavior. Retailers' growth is increasing with a very high rate compared to other sectors and have developed their own retailer brands, acquired knowledge of consumer patters and trends and their dominance is increasing often through take-over and merging. Managing their distribution channels more efficiently, increasing the number of stores they acquire and decentralization has led to an increase of their consumers' base. The UK grocery market is a billion industry and is one of the most concentrated grocery retail sectors in Europe, very competitive and has a very high own brand share in the grocery market. The performance of the UK grocery market over the years is presented on the graph below:

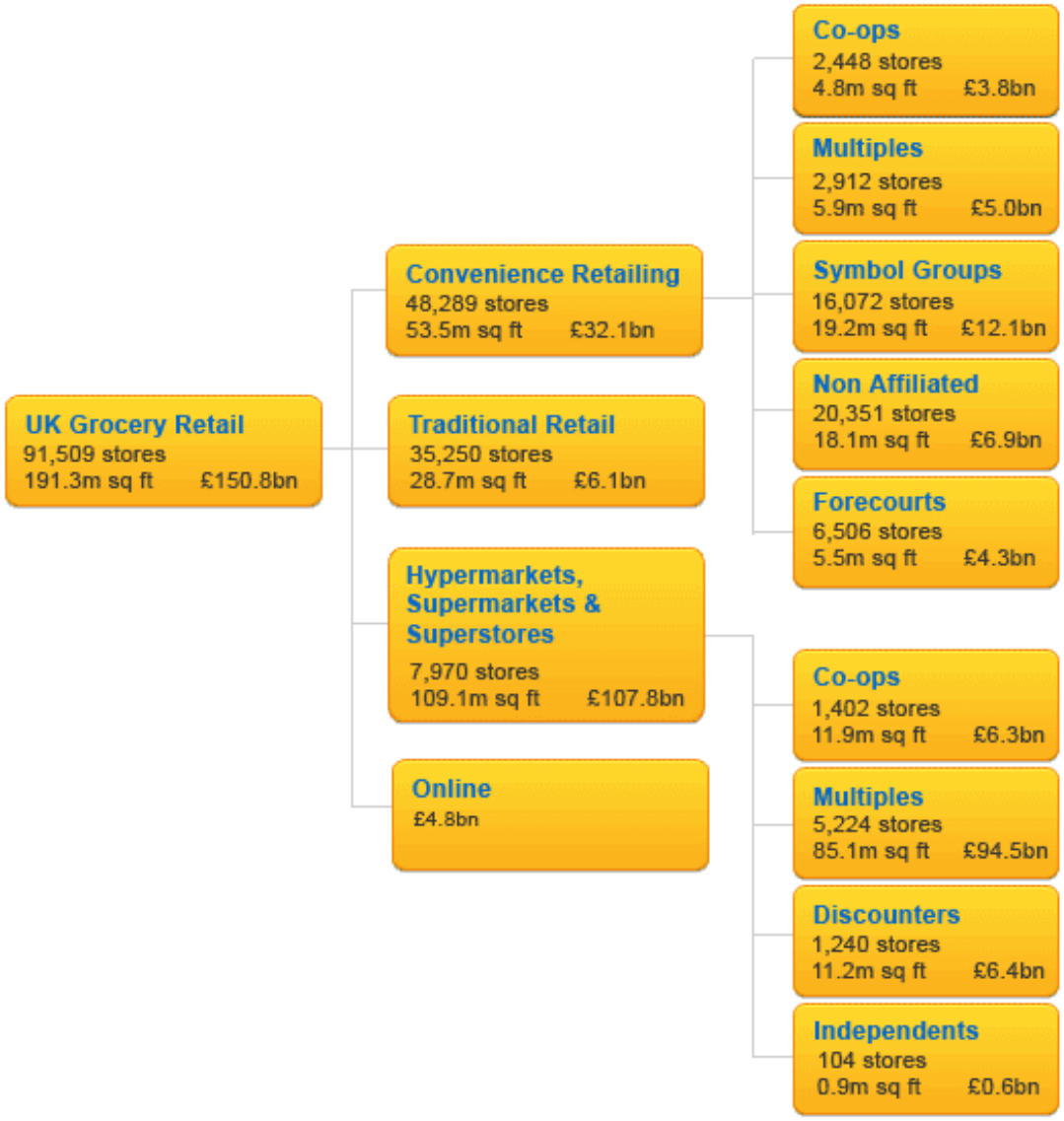
Graph 1.2 UK Grocery Market Performance



Source: www.igd.com

Multiple retailing is not a new concept and the pursuit of economies of scale began due to urbanisation, mass manufacturing technology as well as rising incomes. The wider car ownership and the reduced cost of car travelling, the increase in households and women working, the busy lifestyle people have nowadays as well the wider ownership of fridge freezers and storage capacity paved the way to retail revolution. Strong competition to this concentrated sector developed the diversification of products sold, as new non-food products have been introduced in several categories such as clothing, telecoms, house appliances and electronics, etc. the boundaries of retailing have become blurry and volatile and retail companies cannot be categorised based on the products they sell as food retailers are expanding their products ranges firstly within food products and then within non-food products and services basically growing in the non-food market rather than the food market. Developing stores within every urban, suburban and rural area along with selling a huge products range and services has turned hypermarkets and such supermarkets first in costumers' preference increasing their value and eliminating independent retailers.

Figure 1.1 UK Grocery Retailing - Store Numbers & Sector Value



Source: www.igd.com

Figure 1.1 presents the store numbers and sector value in the UK grocery retailing. The sector had a total performance of £150b including 91.509 stores and a total of 191,3m sq ft. The convenience retailing currently constitutes 48.289 stores however the hypermarkets, supermarkets & superstores appear to be larger with a total of 109,1m sq ft in only 7.970 stores and perform better as their value reaches the amount of £107,8b out of the sector's total value of £150b.

1.1 SWOT Analysis

The Food & Drug Retailers Market has nowadays become a rather concentrated and competitive market. In order for a retailer to establish its position and its market share, it is required to achieve obtaining a very competitive management administration as well as adopting a dominant strategic plan. The competitive environment in which a firm operates is the key factor for the existence of gaining-profit opportunities, since most decisions depend upon the structure of the market. Identifying the market, its needs and its benefits, one should take advantage of all the factors that will lead to success and supremacy over other sector competitors. Developing a strong internal environment by exploiting its strengths and reducing its weaknesses, as well as an external environment by grasping the opportunities, being prepared for possible threats, in addition to taking under consideration the most important external factor, the customers, a company would be then on its way to success. Identification of the industry structure is achieved by determining the number of buyers and sellers as well as the size of the firms included in the industry and are considered competitors. The degree of product differentiation offered, the cost structures and conditions of the market as well as the barriers to entry for a new firm are all important information for a company to create and develop its strategy, which is composed by decisions on product pricing, product differentiation, distribution, as well as marketing, including promotion and advertising. A strategic plan that includes all of these factors will conduce to the firm's high performance, measured by profitability, efficiency, its growth along with the market share it holds and last but not least, the costumers' satisfaction. However, let us keep in mind that in reality, information is indeed imperfect and resources are limited in supply.

First and foremost, a food retailer should examine its internal factors which are more feasible to improve and are also of great importance as they can as easily create value as destroy value. The company's assets such as stores, warehouses as well as skilled personnel are two of the most important internal factors. Managing resources and having achieved a not only well organised but also efficient distribution system will contribute to a profitable operation. The number of chain-stores as well as their location is very important as they need to be located in places where they

can service all possible neighbourhoods. Ease of access as well as parking lots provide convenience to consumers and attract potential ones. A wide range of quality products, cleanliness, friendly personnel as well as opening hours are all characteristics that affect the choice of store. Strong reputation is then achieved and increased by high quality brand-labelled products and combined with marketing expertise which promotes the firm through personal marketing campaigns and smart advertising addressing directly to several consumer groups are key factors for creating value through internal activities.

The market that a firm operates composes its external environment. Although it is not feasible to somehow control the factors affecting the market, it actually depends on the company to create the desirable conditions that will allow it to differentiate from competitors and create and sustain a competitive advantage. The fundamental aim of the firm is to add value. Added value is accomplished by creating a competitive advantage, either by enjoying monopoly profits and/or ricardian rents. The opportunity of moving into new attractive market segments such as organic products which are nowadays a very demanding trend is a way to achieve product differentiation. Aiming specific consumer groups and offering products that are appealing to several different consumers' categories such as diabetics, athletes, people on diet, vegetarians, products referring to specific cultural food habits, will allow monopoly profit as consumers will be more willing to pay premium price for such products. This introduction to totally different products will lead to internal expansion through diversification and generally in firm growth. However in the long-run, monopoly profits will not be sustainable as competitors can easily copy such ideas. Growth can also be achieved through mergers and acquisitions with other retailers as well as strategic alliances which lead to increase of asset value, either tangible such as facilities and skilled personnel as well as intangible such as the reputation of the firm merged. However, the ideal would be for retailers to manage and try to lower their costs such as transaction costs, governmental costs and organizational costs as much as possible, as this way they can generate ricardian rents which add value to the firm. Ricardian rents can also be treated to protect possible price war from competitors usually by putting products on offer for specific time period.

Furthermore, the opportunities of entering into new markets such as branching in new cities or even new countries if available, as well as the internet market are ways to grow and add value. Especially e-retail has grown tremendously and online shopping offers more and more profits by the year due to people's changed and busier lifestyle as well the reduction of costs such as transaction costs and fuel costs since fuel prices are increasing dramatically. A well established online store with effective distribution channels will attract more consumers such as working women or people with health problems who have either no time or are incapable of paying a visit to the supermarket. Although important to taking advantage of these opportunities, a retailer should always keep in mind for similar threats, such as new competitors entering their home market or competitors with more innovative and satisfactory products and services. Price war is one of the major competition threats however potential new taxation and new obligatory regulation can also threaten a company's profitable operation. Economic downturns are a major uncontrolled threat to operational efficiency as well as terrorism, activism, and meteorological catastrophes may present a systematic threat for the companies affecting transportation, supplies and storage.

Table 1.4 SWOT Analysis

	Opportunities	**Threats**
Strengths	**Offensive** Make the most of these	**Adjust** Restore strengths
Weaknesses	**Defensive** Watch competition closely	**Survive** Turn around

Source: www.12manage.com

1.2 UK Retail Industry Porter's Five Forces Analysis

Porter's Five Forces Analysis is a powerful tool to analyze and understand the competitive environment of an industry, analysing the basic five forces affecting companies operating in it.

1. Threat of New Entrants – Barriers to Entry

The UK retail is one of the world's most competitive and innovative industries and the UK grocery market is primarily dominated by few competitors which possess a market share of almost 75%, with Tesco being the dominant. What was known as grocery market has been over the years transformed into a supermarket dominated business with large store chains causing a severe impact to small traditional shops. These large supermarkets have managed to build their power due to operating efficiency, one-stop shopping, products diversification and major marketing-mix expenditure, creating strong barriers to entry for any new company desiring to enter the grocery market. Supply chains are highly developed, fixed costs are set high, advanced technology for checkouts and stock control systems that impact new entrants have been developed thus, it becomes rather difficult for new entrants to raise sufficient capital as the supermarket industry is characterised as capital intensive. The aggressive strategy and operational tactics of the dominant companies, their promotional activity and high quality distribution systems have created economies of scale and differentiation. New entrants require to be vertically integrated so as to offer low prices, high brand development and large store network thus, capital is necessitated, leading to the assumption that possible new entrants in the UK grocery sector will include already established and high branded companies that have their core business operations outside the UK, such as in the U.S. and in the EU markets.

2. Bargaining Power of Suppliers

In the food retailing business, large superstores have adopted the business model of vertical integration so as to provide low cost quality products to their customers. Retail superstores have specific departments dealing with suppliers and the companies have access to a large list of suppliers and end up choosing the ones that offer the lowest cost for the best quality, suggesting that suppliers' bargaining power is very low concerning grocery and food products. As far as non-food products are concerned, major retailers in the industry tend to work with a limited number of specialized distributors thus, raising the competition among suppliers and consequently making their bargaining power also very low. Major grocery chains can influence the suppliers power on a high degree thus, dominant companies can benefit from negotiating better promotional prices from suppliers that small individual chains are unable to achieve. In addition, the suppliers are also threatened by the fact that large retailers can use alternative resources and supply their stores from abroad at better deals.

3. Bargaining Power of Customers

Customers' power is significant in the food retail industry, especially during economic downturns thus, the bargaining power of buyers is considered to be high. Buyers' power can also grow when products have become standardised, as switching costs are low or even eliminated in some cases. For high brand retailers, to control and retain their customer base is highly significant and can be accomplished by instore promotions, low prices, customizing service and customer retention strategies so as to achieve constant satisfaction of their customers' needs. Costumers' demand for one-stop shopping has increased in the last years, providing supermarkets with new strategic expansions entering new markets such banking and financial services, clothing, electronics, pharmacies, telecoms, etc. Consumers have also become more aware of fair trading and have developed a more ecological and ethical perspective around production, increasing their expectations from large retailers.

4. Threat of Substitutes

Demand for certain products may be reduced as a result of substitution, fact which creates the threat that consumers will shift their demand towards alternatives. In the grocery industry which is the core business of superstores, substitution consists of local off license, grocers and small chains of convenience stores which are emerging in the industry. However, the magnitude of superstores' size and their effort to acquire existing small-scale operations and opening Metro and Express stores allows the creation of competitive advantage and larger store chains, therefore reducing the substitution threat. However, these companies are product diversified providing a large variety of non-food products, having entered markets where specialised retailers already exist, thus substitution threat on such products is high.

5. Bargaining Power of Competitors

The grocery environment has seen a very significant growth in the size and market dominance of the few larger retailers, with greater store size and store chain, increased retailer concentration as well as the utilisation of a range of formats, which are now prominent characteristics of the sector. The purchasing power of the food-retailing industry is concentrated in a relatively small number of retailers. Operating in a mature, flat market where growth is difficult has led to the diversification into non-food products, consumers are increasingly demanding and sophisticated where large chains are producing large amounts of consumer information that can be used to communicate with the consumer. This highly competitive market has experienced an accelerated level of development, resulting in a situation in which UK grocery retailers need to be innovative to maintain and build market share. Such innovation can be seen in the development of a range of trading formats, in response to changes in consumer behaviour. The dominant market leaders have responded by refocusing on price and value, whilst reinforcing the added value elements of their service. Due to the recent crisis and the reduction of consumers' disposable income, pricing has become a large factor in consumers' decision-making process thus retailers are cutting prices to maintain their customer base.

J Sainsbury plc

Ch.2. J Sainsbury plc (SBRY)

Sainsbury supermarkets along with Sainsbury's Bank comprise the J Sainsbury plc, one of the major companies in the United Kingdom. It was in 1869 that Sainsbury's Supermarkets opened its first store and continued to expand through all those years, counting today a chain of 537 supermarkets and 335 convenience stores all around the UK. Providing customers with healthy, safe, fresh and tasty food has a heritage upon the Sainsbury's brand name where fair prices and quality follow each other closely along with a responsible approach to business. Sainsbury's stores have a particular emphasis on fresh food and they strive to innovate continuously and improve products in line with customer needs. They now serve over nineteen (19) million customers per week and they have a market share of around 16%. A variety of 30,000 products is offered at the company's large stores also including complementary non-food products and services in many of their stores. An internet-based home delivery shopping service is also available to almost 90% of UK households. Thus, Sainsbury is wisely characterised as the UK's longest standing major food retailing chain.

2.1 SBRY Historical Review

A short historical review of this dominant in its retail company is necessary, as it set an example and paved the way for other companies to adopt environmental sensitivity and focus on providing customers with quality.

- **1869: We opened our first store on London's Drury Lane.** The founders of Sainsbury's were John James and Ann Sainsbury, who opened in 1869 the first store in Drury Lane. Although this area was one of London's poorest areas, the store managed to become popular rather quickly due to the high-quality products it offered at low prices.

- **1882: We started selling our first own brand products.** It was not until 1882 that Sainsbury started having their own-label products with bacon being the first product, which was actually smoked in the in-store smoking ovens.

Own-label products were seen as the best way to offer costumers choice and good value.

- **1898: Lloyd Maunder (our longest established supplier) started supplying us with meat and poultry.** Building up strong relationships with suppliers was one of Sainsbury's priorities, thus, in 1898 Lloyd Maunder started supplying Sainsbury with meat and poultry and has since then been the company's longest established supplier. Strong and long-term relationships with suppliers ensure that customers always have the freshest food available as well as the healthiest, since they have worked hard with suppliers so as to reduce the number of additives in not only children's food but also from their own-brand soft drinks.

- **1914: We started to recruit women to help with colleague shortages during the First World War.** A rather important to our opinion achievement was the recruitment of women in 1914 so as to help with colleague shortages during the First World War.

- **1916: We set up our training school in Blackfriars, ensuring our colleagues were the best trained.** Women attended a new training school which was specially set up at Blackfriars which helped them gain the necessary knowledge so as to run stores for the first time. The training school in Blackfriars is one of the greatest historical moments of Sainsbury and was set up in 1916, so that all colleagues could have the best of training. In fact, their training was so well regarded by their competitors in the early 1900s that they advertised for "Sainsbury's trained men". Such training continues to be provided until nowadays, with programmes such as Bakery apprenticeship scheme. In the First World War, Sainsbury were an innovator by introducing their rationing scheme so as to ensure that all customers got their fair share of the food that was available. This scheme had a very successful impact that the Government adopted this system during the Second World War.

- **1944: We halved labels on our cans, to save paper and help the war effort.** In an effort to help the war, Sainsbury decided to halve labels on their cans in 1944 as a way to save paper.

- **1946: The first issue of our colleague magazine, The Journal, arrived in store.** In 1946, the first issue of their colleague magazine, the Journal, arrived in store.

- **1950s: Our first self-service stores opened, years before our competitors.** Innovation was also obvious in the 1950s, when Sainsbury's first self-service store opened in Croydon, bringing an end to queuing at counters. As years went by, all stores eventually became self-service with the last one converting in 1982.

- **1961: We became the first food retailer to computerise distribution.** Apart from being the first to create a self-service store, Sainsbury also became the first food retailer to computerise distribution of goods to its stores in 1961.

- **1969: Our own brand lines accounted for 50% of our turnover.** By the end of the 1960s Sainsbury's own brand lines accounted for more than 50% of the company's turnover.

- **1970s: We introduced the first bakeries, fresh fish counters, petrol stations and coffee shops into our stores.** During the 1970s Sainsbury managed to introduce the first fresh fish counters, bakeries, petrol stations and coffee shops into their stores, satisfying their customers and their demanding needs.

- **1975: Our first Savacentres opened, expanding our range to include non-food products.** The expansion of the stores' range to include non-food products was a fact, as the first Savacentres opened in 1975.

- **1989: We introduced the first ever carrier bags made from recycled material.** In the late 1980s, the first reusable carrier bags were introducing themselves to the public, made out of 100% recycled material with the absence of virgin crude oil in their production. They also computerised their stock control and developed CFC-free refrigerants.

- **1991: To encourage customers to reuse carrier bags, we launched our Penny Back scheme for charity.** Although introducing the first ever carrier

bags made from recycled material, in order to encourage customers to reuse their carrier bags, they launched the Penny Back scheme for charity.

- **1994: We were the first major supermarket in the UK to sell Fairtrade food.** In 1994, Fairtrade products such as chocolate, orange juice, coffee and tea could be found at Sainsbury, which made them the first major supermarket in the UK to ever sell Fair-trade food.

- **2004: We launched the TU fashion range in 160 stores.** Several other products such as clothing, specifically womenswear, menswear and kidswear, as well as accessories, jewellery and lingerie were by 2004 expanding the variety of products sold at Sainsbury.

- **2005: We launched 'Try something new today' marking the end of a disappointing period in our history, and a return to what our customers want.** In an effort to return to what customers want, they launched the Try Tips, a great way for customers to try something new today, as well as giving out new ideas and publishing recipes.

- **2007: We were the first retailer to convert all our bananas to 100% Fairtrade.** Sainsbury's is also counting several other achievements, such as converting their bananas to 100% Fair-trade as well as using sustainable palm oil in the production of fish fingers.

- **2007: Our first Make the Difference day encouraging carrier bag reuse, was a massive success.** The company's sensitivity on environmental issues is rather high, thus, on 27th April 2007 it encouraged carrier bag reuse with the first Make the Difference day. On that day, Sainsbury's stopped giving out free disposable carrier bags in its stores. Instead, the company gave customers an estimated seven million free re-usable 'Bags for Life' (usually 10p) for their shopping, so as to reduce the number of disposable carrier bags needed in the future.

- **2008: We were the first retailer to launch our own brand 1% fat milk.** In 2008 Sainsbury was the first retailer that managed launching its own brand 1% fat milk.

- **2009: We were the first major retailer to completely stop selling eggs from caged hens.** In 2009 the company completely removed battery farmed eggs from the stores' shelves in an effort to stop selling eggs from caged hens.

2.2 SBRY Values

The company has adopted a five values framework for how to do business which guide Sainsbury's people in everything they do, from key business decisions to day-to-day activities

1. **Best for food and health**

Sainsbury aims to be "Best for food and health" as part of its long heritage of providing great food at fair prices, having a key role in promoting healthy eating and active lifestyles in order to encourage people to change their behaviour and shopping patterns. Providing customers with simple, honest and visible nutrition information both on the front of pack traffic-light labelling and back of pack percentage Guideline Daily Amount, including new healthy option logos and regularly consulting the Nutrition Science Advisory Group of independent specialists, for guidance on nutrition and health issues, makes healthier eating easy for customers and colleagues, showing the company's commitment to taking responsibilities on health seriously, by approaching such issues with scientific rigour.

The company also encourage customers to lead healthier lifestyles, balancing the food they eat with the exercise they take. The company's Active Kids scheme is in its seventh year and through initiatives such as "Feed your family for £50" and the "Try Team" it inspires customers to cook from scratch, whatever their ability or budget. Being healthy is about more than just food, and as part of the company's comprehensive health strategy, it has continued to improve and develop its health services for customers, running cholesterol tests in its in-store pharmacies and gave its

pharmacists nutrition training so they can help customers with healthy eating advice and guidance, along with launching the Sainsbury's Diets, an approach to dieting.

2. Sourcing with integrity

By "Sourcing with integrity", the company aims to provide customers with quality products at a fair price, doing so in a way that's better for the animals, farmers, growers and workers involved, and which minimises the impact on the environment, by forming partnerships with suppliers that help them to raise environmental and social standards, and move towards real sustainability. Sourcing with integrity is increasing in importance and is a major talking point since the public, and particularly customers, are much more interested nowadays in where food and other products come from, and how they are made. They expect from the company to work very closely with farmers and growers and this is exactly what the company does, by helping suppliers improve their skills and look to the long term sustainability of their land, crops and businesses, as well as improving their local schools, healthcare and infrastructure by paying Fairtrade premiums to farmers.

The company is engaged to "Sourcing with integrity" in many ways such as acting against deforestation as it is a founding member of the WWF Global Forest and Trade Network, it is a sector leader in the Forest Footprint Disclosure, it has a partnership with Woodland Trust - the UK's leading woodland conservation charity donating money when Woodland products are being sold, an action that led to more than 500,000 trees being planted. The company is also managing to Fairtrade by working towards converting 100 per cent of its own-branded instant coffee, rice, pineapple, chocolate, avocados, preserves, beans and pulses to Fairtrade as well as supporting farmers and through the Fair Development Fund continuing to support producers in order to build sustainable businesses and switch to more fairly traded products. Sensitivity on animal welfare is also important as Sainsbury was the first retailer to stop selling eggs from caged hens, but also offers higher welfare Woodland eggs and chickens, selling over 300 lines of several different products that meet the strict welfare standards devised and monitored by the RSPCA.

3. Respect for our environment

One of most important Sainsbury's goals is to be the UK's greenest grocer by taking steps at every level of business to reduce carbon and wider environmental footprint, having divided its climate change strategy into three key sections: operations, products and customers. Using new innovations in the way the company builds and sustains its stores has reduced the impact of its operations in reducing energy consumption and limiting carbon emissions as well as focusing on the latest available renewable energy technologies. The company's environmental agenda also includes the supplier sustainability scorecard, which helps tracking down and measuring supplier environmental footprints, encouraging them to grow sustainably.

Operational carbon emissions reduction is very important thus, Sainsbury was the world-first use of award-winning geothermal technology, enabling the Crayford store to supply 30 per cent of its energy from on-site renewable sources. The company has installed biomass boilers which use renewable resources such as wood chips or pellets rather than fossil fuel-based gas, in addition to being the first supermarket in the world to use a Smart Grid system, which monitors the National Grid and activates a biofuel generator when there is an increased demand for electricity. Developing a carbon footprint specially designed for its farmers, which has the potential to reduce their energy costs and their carbon footprint by 10 per cent annually, as well as helping customers reduce their environmental footprint indicates the commitment of the company to become UK's greener grocer.

Stores have managed to reduce water use and new stores are fitted with rain water harvesting, water-efficient taps, low-flush toilets and waterless urinals as standard. In an attempt to put all waste to positive use, no food is being wasted to landfill but it is being sent to charities, general recycling facilities are offered, as well as customers' plastic bag recycling across all stores. Reduction of packaging is also part of the environmental agenda as plastic is replacing several brand products' glass jars and a variety of other brand products is being switched to newly designed packaging.

4. Making a positive difference to our community

The company aims for its stores to be at the heart of the communities they serve, by supporting and helping even in charitable aspects. Providing jobs for local people, buying from local suppliers, helping in protection of the local environment and supporting local good causes is the reason the company runs the Local Charity of the Year and Local Heroes schemes.

Physical activities are important especially for children and this is why the company is the official supermarket partner of the London 2012 Paralympics Games. It also sponsors the UK School Games and has more than 46.000 schools, nurseries, sports clubs, and Scout and Guide groups registered with Active Kids. Charity is characterising Sainsbury which by 2020 will have donated over £400 million to charitable causes in the decade. So far, is largest sponsor of Comic Relief and has raised almost £60 million to date including its single largest donation of £11.4 million for Red Nose Day 2011. Sainsbury is a founder member and the largest supporter of Fareshare, a national charity set up to relieve food poverty. Every store supports a local charity, the company's employees have also volunteered over 6.500 days to support local causes and a donation of over £115 million worth of equipment and experiences to schools and clubs through the Active Kids scheme as been made since it started in 2005.

5. A great place to work

Last but not least, Sainsbury relies on its colleagues who are working in stores, offices and depots to provide great quality service to customers as they are the company's face. It is essential for the company to do its best in finding the most qualified people and treating them right so that they will not only want to stay but will also want to do their best for customers. The company stays true to its principles of equality, diversity and fairness, communicating regularly and listening genuinely by giving everyone a chance to develop their full potential as well as recognising extra effort.

The company's commitment on 50.000 new job opportunities in the UK along with external accredited training is very important to Sainsbury, which was the first food retailer ever to be awarded a gold accreditation from 'Investors in People' for its commitment to improve business by investing in happy and healthy colleagues. The company offers the opportunity to colleagues to gain a nationally recognised qualification under the "You Can" programme, as well as training for colleagues who work on meat, fish and hot food counters and cafés at the six Food Colleges the company opened across the UK.

Work opportunities for disadvantaged groups is important for the company which is committed to provide 30.000 work opportunities for people from disadvantaged groups by 2020, starting in April 2007 when it was one of the first employers to sign up to Local Employment Partnerships to help ex-offenders and the long-term unemployed. In addition, the company has also recruited over 3,286 people through Job Centre Plus and another 262 through the London Employer Accord.

Long service employees are a fact in Sainsbury as flexible working is feasible, having also developed a new policy for carers with an innovative partnership with Carers UK. Success is to be shared, thus the company has paid out in the last years over £350 million in bonuses to eligible colleagues in stores, depots and offices. In 2011, more than 124.000 eligible colleagues shared a bonus of around £60 million and over 40.000 employees own shares in the business through the Sainsbury's Sharesave scheme or through the Sainsbury's Share Purchase Plan.

2.3 SBRY Business structure

J Sainsbury plc was founded in 1869 and has managed until today to operate a total of 934 stores, comprising 557 supermarkets and 377 convenience stores. J Sainsbury plc jointly owns Sainsbury's Bank with Lloyds Banking Group and has two property joint ventures with Land Securities Group PLC and The British Land Company PLC.

- **Sainsbury's stores**

The company continues taking advantage of the unique opportunity that it has to grow its space. In 2010/2011, the company opened 21 new stores, 24 extensions and 47 convenience stores, equivalent to 1.5 million sq ft of gross new space, or 8.5 per cent growth year-on-year.

- **Sainsbury's online**

The company's online groceries and non-food online sales also continue to grow. The introduction and roll-out of the Click and Collect service, which allows customers the freedom to pick up non-food items ordered online at a store and time convenient for them, has also proven very popular with customers.

- **Sainsbury's property**

The company has managed to create a rather significant portfolio which includes 304 freehold and long leasehold properties and 41 properties within joint venture arrangements.

- **Sainsbury's Bank**

Sainsbury's was the first major British supermarket to open a bank, commencing trading in February 1997. Sainsbury's Bank provides a range of quality products including Insurances, Credit Cards, Savings and Loans. It combines the shopping experience and banking by offering customers great products at fair prices; while consistently rewarding them for choosing Sainsbury's, for their finance and shopping needs.

2.4 SBRY Business strategy & objectives

The company continues to operate around five areas of focus as it believes that these are the crucial areas for successful business. These areas of strategic focus are underpinned by five key values which help the company to prioritise its efforts and to

ensure an ethical and sustainable manner in business and decision making, setting itself apart from other retailers.

Figure 2.1 SBRY Business Strategy & Objectives

Source SBRY Annual Report 2007

1. **Great food**

Offering safe, healthy, fresh and tasty food is at the heart the company. Its leadership position in offering sustainably and ethically sourced great food, remains a key factor for customers' satisfaction and the company will continue to invest further so as to exceed the standards customers expect of the company.

Recent achievements

- Over the coming year the company will recruit and train more than 500 new counter and café colleagues to meet increased demand at the counters and to support the growth in its cafés
- Six food colleges provide in-depth training from experts in areas like product knowledge and food preparation, helping the company to offer the very best food and service to customers.
- £1 in £4 of all Fairtrade sales in UK are at Sainsbury's
- The company is the UK's leading retailer of Marine Stewardship Certified (MSC) fish, with over 80 different sustainable MSC products.
- Over 12 per cent of the company's own-brand products come from certified sustainable sources

2. Compelling general merchandise & clothing

The company continues to make progress in the development and accessibility of non-food ranges and sales are growing at more than three times the rate of food. It is extending its brand into other complementary non-food areas, while also maximising the benefits of the Nectar scheme for customers.

Recent achievements

- The TU brand is now the seventh largest in the UK market by volume
- Childrenswear is now seventh in the market by volume, with sales having grown by over 20 per cent year-on-year
- The success of the company's Back to School range makes the company fourth in that market, up from sixth last year.
- The company's general merchandise ranges are enjoying growth rates of over 20 per cent in many areas, including books and home textiles.

3. Complementary channels & services

The company is reaching more customers through additional channels, with its convenience stores and its online grocery service both enjoying like-for-like sales

growth ahead of its supermarkets. The online grocery service is now available to over 93 per cent of UK households.

Recent achievements

- By Christmas 2011 the Click and Collect service will be available in over 800 stores. It already takes more than 1 in 3 of its non-food online orders.
- The online groceries business continues to grow, with annual sales up over 20 per cent. It now regularly delivers over 130,000 weekly orders.
- The online shopping service now reaches over 93 per cent of UK households, through 187 stores.
- The company opened its 400th convenience store in September 2011.

4. Developing new business

In order to deliver long-term growth for the company, an effort to extend the brand through complementary channels and services such as finance, health and energy will be made, as well as investigate new business opportunities in the digital, food service and international.

Recent achievements

- The company launched its mobile optimised website for non-food shopping.
- Sainsbury's mobile apps for the iPhone, Android and Nokia operating systems have been downloaded over 250,000 times.
- The company opened a trial Fresh Kitchen store in Central London, serving hot and cold food and drink for on the go.
- It has re-launched Sainsbury's Energy in a new partnership with British Gas

5. Growing space & creating property value

The company will continue to grow supermarket space and focus on active property management. In future years it expects to continue to be able to secure new development opportunities as quickly as it opens stores, which offers growth potential for many years to come. A key element of the company’s property strategy is recycling capital to invest in profitable growth. Stores which are fully developed, are

being consider for sale. Going forward, the creation of value through the property portfolio and the growth in supermarket space is the key to increasing the return on the company's investments.

Recent achievements

- In the last two years 59 new supermarkets, 37 extensions and 98 convenience stores opened.
- That's equivalent to 1,5 million sq ft of gross new space, or 8,5 per cent growth year-on-year.
- Of the new stores opened in the last two years, over 70 per cent were in Scotland, Wales or the South West.
- At 19 March 2011, the market value of the property the company owns was estimated at £10,5 billion, an increase of £0,7 billion over the year.
- In the last two years the estimated property value has increased by over £3 billion.

2.5 SBRY Management and board

A board of directors is a body that consists of a predefined number of members that are either elected of appointed and oversee jointly the company's activities. The board's activities differ and are determined by the duties and responsibilities delegated to it. Sainsbury's board of directors is chaired by David Tyler and consists of the chief executive, the chief financial officer, the group commercial director and six non-executive directors.

Table 2.1 SBRY Board of Directors

	Board of Directors	
1.	David Tyler	Chairman
2.	Justin King	Chief Executive
3.	John Rogers	Chief Financial Officer

4.	Mike Coupe	Group Commercial Director
5.	Matt Brittin	Non-Executive Director
6.	Anna Ford	Non-Executive Director
7.	Gary Hughes	Non-Executive Director
8.	John McAdam	Non-Executive Director
9.	Mary Harris	Non-Executive Director
10.	Bob Stack	Non-Executive Director

Source: SBRY Annual Report 2008

The board of directors in accordance with the operating board comprise the company's key people who are focused on delivering sustainable added value for shareholders, considering strategic issues, key projects and major investments. They regularly monitor performance against delivery of agreed key targets, approving the annual budget, the corporate plan and reviewing performance against targets.

Table 2.2 SBRY Operating Board

	Operating Board	
1.	Justin King	Chief Executive
2.	John Rogers	Chief Financial Officer
3.	Luke Jensen	Group Development Director
4.	Gwyn Burr	Customer Service and Colleague Director
5.	Mike Coupe	Group Commercial Director
6.	Tim Fallowfield	Company Secretary
7.	Roger Burnley	Retail and Logistics Director
8.	Neil Sachdev	Property Director
9.	Rob Fraser	IT Director
10.	Helen Buck	Convenience Director

Source: SBRY Annual Report 2008

The company's shareholders, referring to individuals or institutions that legally own shares of J Sainsbury plc are shown in the table below and depending to the number of shares they own they are being granted with certain privileges and rights. Rights such as selling their shares, purchasing new shares, nominating directors and their

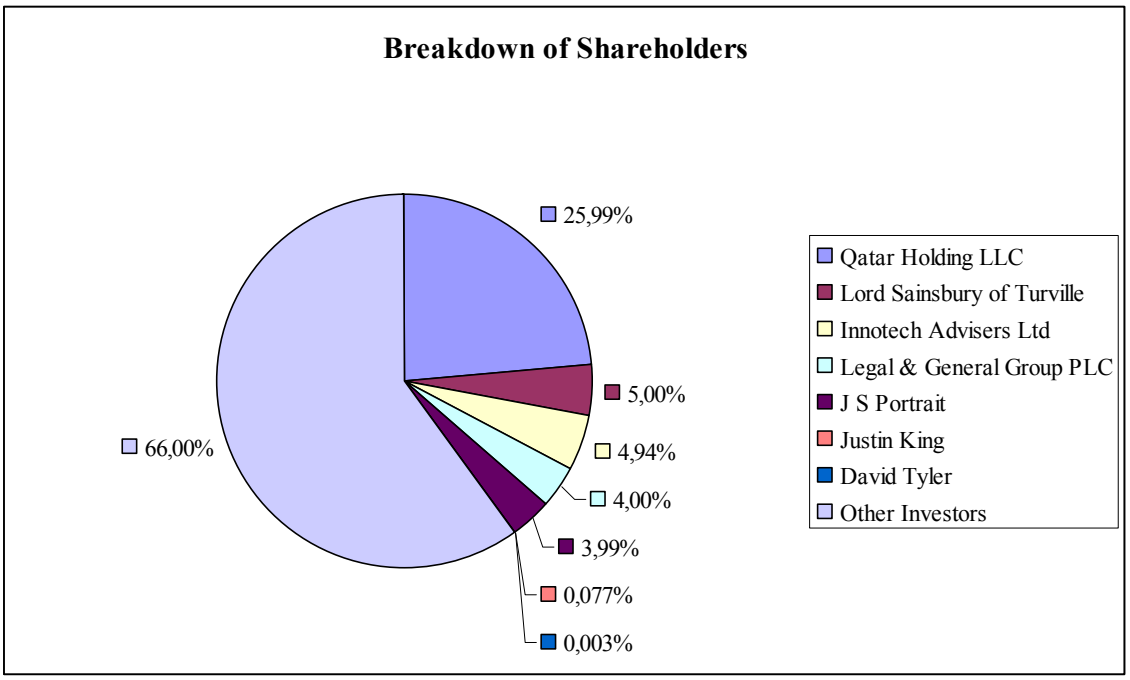
decisions, especially for those who collectively control more than half of the company's outstanding shares may have an impact on the company's activities.

Table 2.3 SBRY Major Shareholders

	Major Shareholders	**Holdings**
1.	Qatar Holding LLC	25,99%
2.	Lord Sainsbury of Turville	5,00%
3.	Innotech Advisers Ltd	4,94%
4.	Legal & General Group PLC	4,00%
5.	J S Portrait	3,99%
6.	Justin King	0,077%
7.	David Tyler	0,003%
8.	Other Investors	66,00%

Source: www.equiniti.is-teledata.com

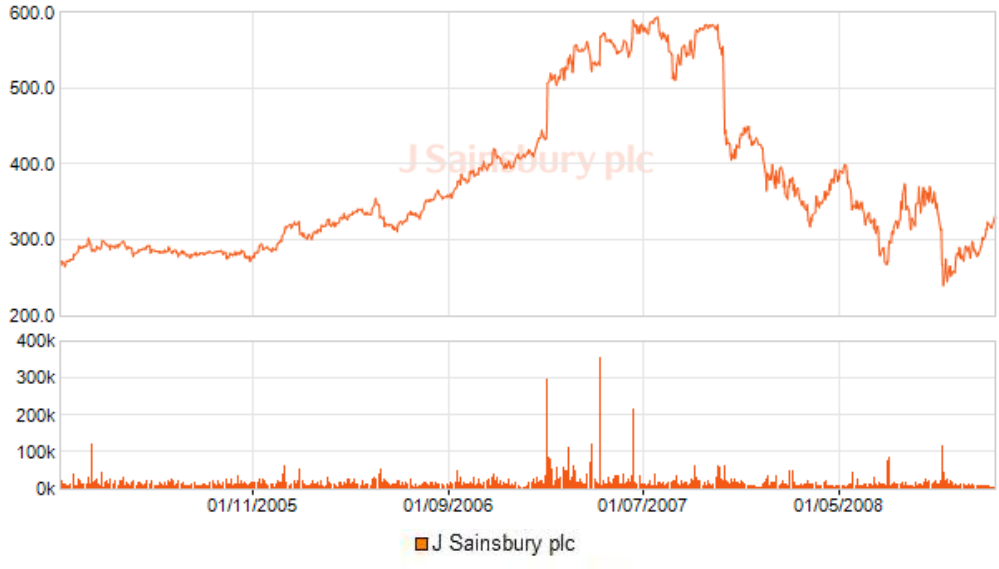
Graph 2.1 SBRY Breakdown of Shareholders



2.6 SBRY Stock Price

Sainsbury's share price chart presents a slowly upwards movement in 2006, with a rapid increase in 2007 and a downward movement in 2008. Some of the factors that caused the company's share to perform a sudden rise involve the company's announcement of £12 million investment in its depots as well as its Electronic - Point of Sale systems upgrade. Identifying its areas of growth, including the company's banking operations, the growth of the online home delivery services, as well as the expansion of supermarket space through the opening of new convenience stores, are all factors that contributed in the company outperforming the sector in 2007. Furthermore, the announcement on April 2007 of Delta Two, a Qatari investment company, that bought a 14% stake in Sainsbury's as well as a further increase of their stake two months later reaching a total of almost 26%, caused the share prise to rise.

Graph 2.2 SBRY Share Price Chart



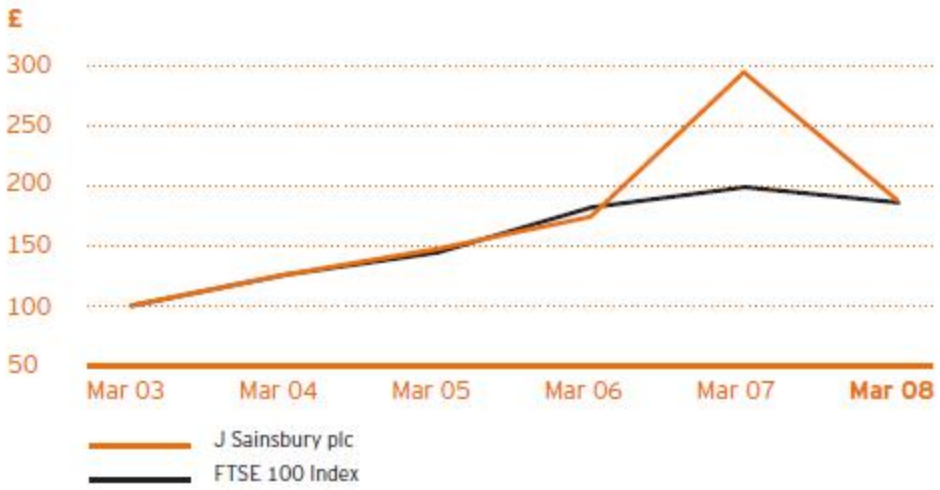
Source: www.j-sainsbury.co.uk

Graph 2.3 SBRY – Food & Drug Retail Sector Share Price Chart

Source: www.j-sainsbury.co.uk

The graph below presents the scenario of an investment of £100 in the FTSE 100 Index compared with an equivalent investment in J Sainsbury plc shares over the period of five years, 2003 – 2008, presenting the total shareholder return performance.

Graph 2.4 SBRY Performance graph



Source: SBRY Annual Report 2008

2.7 SBRY Store portfolio

The company's activities over the years, indicate the innovation that characterises this firm, the quality that is offered to customers, as well as its high environmental sensitivity. The company's profile is such that Sainsbury nowadays operates a range of store formats so as to meet with the shopping requirements and locations of customers. On the tables below we can get information more analytically about the number of stores and the space by store size:

Table 2.4 SBRY Number of stores

	Over 40,000 sq ft	25,000 to 40,000 sq ft	15,000 to 25,000 sq ft	Under 15,000 sq ft	**Total**
Convenience	-	-	-	290	290
Supermarket	164	154	107	77	502
Total stores	164	154	107	367	**792**

Source: www.jsainsburys.co.uk

Table 2.5 SBRY Space by store size

	Over 40,000 sq ft	25,000 to 40,000 sq ft	15,000 to 25,000 sq ft	Under 15,000 sq ft	**Total**
Convenience	-	-	-	729	729
Supermarket	8,117	4,858	2,137	862	15,974
Total space	8,117	4,858	2,137	1,591	**16,703**

Source: www.jsainsburys.co.uk

Sainsbury is a company that has its core business located in the United Kingdom. In 2006, the company had an overall market share position of 14,7%, which was strengthened by 2008 reaching an overall market share position of 14,8%, although there are many different ways that the market can be divided in. The company's market share by region is presented on the table below.

Figure 2.2 SBRY Market Share by Region

Source SBRY Annual Report 2008

Table 2.6 SBRY Market Share by Region

Market share by region	2008 %	2007 %
Scotland	6,1	6,1
North East	8,5	7,7
Lancashire	9,5	9,3
Yorkshire	10,6	9,2
Midlands	15,5	15,8
Wales & West	9,5	9,8
East England	14,3	14,5
London	24,8	24,4
South	19,1	20,5
South West	13,8	15,3
Northern Ireland	16,1	15,2

Source SBRY Annual Report 2008

2.8 SBRY PEST Analysis

Political Factors

Sainsbury's business core is located in the UK in comparison to other retailers that are attempting international business and have expanded their store chain outside the UK. Increasing globalization presents an opportunity to Sainsbury's which can enter the markets of emerging companies through joint ventures or partnerships and explore these new market opportunities, however the company has not adopted such plan on the horizon to do so. Increasing globalization however, also presents a challenge to Sainsbury to compete against unknown forces that are entering the UK market, causing the company to focus on value, price and advertising while reinforcing excellent customer service. Operating in the UK, the company is being influenced by political and legislative conditions as well as trading policies of the UK.

The government has introduced employment legislations encouraging retailers to provide a mix of more flexible job opportunities which the company gives the

opportunity of employing staff from several population categories and in a variety of positions and wage scales. In the UK, the government has also decreased the rate of corporation tax from 30% to 28%, which will save big companies like Sainsbury significant sums of money, providing opportunities to the company for greater profits. Diversification of non-food products sold in SBRY stores has experienced a positive act by the government's partial deregulation of pharmacy licensing enabling the company to expand the number of pharmacies on its premises. However, the government is presently investigating claims concerning fair trade and price fixing among the big retailers within the UK and Sainsbury is at the forefront of this accusation experiencing a negative impact, along with the competition commission which is constantly monitoring the industry. Although Sainsbury is very well established among consumers, these allegations can lead to a negative public image as the consumers might feel betrayed.

The company's performance has also experienced a direct impact from government legislations and policies concerning suppliers, when the Food Retailing Commission banned many of the practices standing, such as demanding payments from suppliers and changing agreed prices retrospectively or without notice. The presence of powerful competitors with established brands creates a threat of intense price wars and strong requirements for product differentiation along with the government's policies for monopoly controls and reduction of buyer's power, affecting the company's performance and profits.

Economical Factors

Consumers' behaviour is very significant for the company's satisfactory performance as behaviour swings can affect profits. Consumers spend a great amount of time and energy on buying behaviour and decision-making activities which are determined by several internal factors such as demographic, cultural, life style, etc. as well as external factors such as promotions, advertising, customer service and most important economic and market stability. The current credit crisis in the UK due to weakening property markets, high commodity costs as well as the global credit crisis contributed to the market facing a significant economic challenge. The wide scope of the crisis

caused a downturn in many industries and the UK retailing market is recognised as one of the markets that have been most severely affected.

Consumers face major impacts due to the financial crisis such as job uncertainty, unemployment, decreased disposable income, decreased saving rates, higher product and service prices, greater consumption risk and fewer credit financing opportunities. It is a fact that Consumer Price Index inflation reached a value of 3% in the end of 2008 where in the beginning of 2006 it was valued at 1,9%. Inflation is increasing, the unemployment rate is increasing affecting and reducing the household disposable income with affected the company in many ways. Consumers changed their habits and instead of eating out they prefer home cooking which means more often visits to supermarkets. However, although consumers' regular consumption theoretically appears to be increasing, consumers are seen to be purchasing very carefully as they focus on efficiency buying and cutting back on waste and premium products, shifting to products with comparatively good quality and low price. Job loss, economic crisis, devaluation of the pound are together pushing more people to stay indoors however, this shift of buying behaviour can be considered to promote the use of online buying channels through which consumers can compare prices and gather information for their purchasing decisions avoiding transaction costs, especially since the fuel prices are going up.

The credit crisis will result in rising purchasing costs for Sainsbury with a potential impact on the company's margins, which can in sequence lead to increasing products' prices, also a result of the rising costs of the company's supply chain due to increasing fuel prices. The group is also affected in its offering financial services as the purchasing power of consumers is decreased and the crisis has affected the ability of Sainsbury bank to provide credit as it is not, at least yet, an established brand in the banking industry. Economic factors are likely to influence demand, costs, prices and profits and are of major concern for the company, as these economic factors are largely outside the control of the company.

Social Factors

Social factors are also important to be taken under consideration as changes in social trends can affect the company. During the recent crisis, more and more people stay in and prefer preparing home cooked meals emphasising on fresh, easy style cooking, changing the existent trend of eating out which is expensive due to food inflation, serving an opportunity for Sainsbury's to encourage new recipes and simple eating. Based on the hectic lifestyle and the constantly increasing fuel price, customers are moving towards one-stop shopping therefore, the company has increased the amount of non-food items available for sale through products diversification.

The type of goods and services demanded by consumers is a function of their social conditioning and their consequent attitudes and beliefs. Consumers are becoming more and more aware of health issues, and their attitudes towards food are constantly changing. There has been a huge emphasis by the government to promote healthy eating primarily due to the increasing level of obesity within the UK thus, people are purchasing healthy foods and are being more health conscious increasing the use of organic food due to its potential effects on health, however enlarging this market segment. Sainsbury has increased the organic products sold, as also the latest legislation created a new tax on advertising highly processed and fatty foods. The so-called “fat tax” directly affected the company’s product ranges that have subsequently been adapted, affecting relationships with both suppliers and customers.

Responsibility to society and acting in a way which benefits society overall has been an increasing trend and need. Environmental issues is a key area for companies to act in a socially responsible way as there is growing concern for green issues, corporate social responsibility, global warming and ozone depletion nowadays than ever before. Retailers are constantly confronting environmental pressure groups in order to improve their wastes and recycling capabilities and the government has launched a new strategy for sustainable consumption and production to cut waste, reduce consumption of resources in order to minimise environmental damage. Supermarkets are investing in green issues by using less plastic, recycling wastes and shifting to environmentally friendly procedures. Profits are used for this but sales can increase because consumers are demanding environmentally friendly products. Reducing energy use also reduces the company’s energy costs, saving up money, however

shifting to environmentally friendly procedures needs capital indicating extra costs. In addition to the string laws on food and drinks, Sainsbury will have to follow more and more packaging and labelling policies to deal with these, which will be an additional financial burden on the company.

Technological Factors

Technology is a major factor in the company's macroeconomic environment influencing its development and its customers. First and foremost, the use of internet has affected the general operation of supermarkets with most important feature the adoption of online retailing, since internet is now available to almost every household, indicating that there are potential new customers everywhere and it has been estimated that online retail sales are growing every year. The internet also provides opportunities of advertising and Sainsbury can make use of the internet to its advantage.

New technologies such as the self checkout machines can be employed by Sainsbury reducing the major problem of queuing and could also boost sales. In addition, the Radio Frequency Identification Device technology can contribute to fewer inventories for the supermarket firms leading to a leaner, more profitable organisation and if adopted by Sainsbury it can benefit the company's supply chain. New technologies benefit customers as they save transaction costs and enjoy more personalised services. Several further technologies can be utilised in stores such as wireless devices, intelligent scale, and electronic shelf labelling as well as the self checkout machine, creating satisfied customers. Using latest technology in logistics controlling inventories and distribution channels produces operating benefits and indicates the company's innovation character. On the whole, Sainsbury needs to manage the use new technologies making service more convenient and increasing customers' satisfaction, leading to an increase in sales and potential competitive advantage.

Ch.3. Tesco plc (TSCO)

Sir Jack Cohen was the founder of Tesco PLC in 1919 and it was not until ten (10) years after that the first Tesco store opened in Burnt Oak Edgware, Middlesex. Tesco group originally operated as a food retailer specialising in food and drink, however, it expanded its products' variety into diversified fields such as clothing, books, electronics, home products as well as financial services. It became member of the London Stock Exchange in 1947, listed on the FTSE 100 Index. Tesco is nowadays one of the largest British retailers that has expanded in foreign markets as well, such as the US, Ireland, Poland, Taiwan and Malaysia. Tesco was the first to introduce the idea of superstores in the UK by opening the first superstore in Westbury, Wiltshire with size 90,000 square feet. Through the years Tesco has managed to grow into a very successful international retailer, always putting product quality and customers' satisfaction first on its priority list.

3.1 TSCO Historical Review

Tesco is one of the leading companies in its industry and an innovator paving the way for its competitors in many fields. A short historical review of this dominant in its retail company is necessary so as to have a general idea of its development through all those years since the day it was founded.

- **1919: Tesco was founded.** The history of Tesco plc began in 1919 when Jack Cohen founded it, when he began to sell surplus groceries from a stall in the East End of London. His first day's profit was £1 and sales £4.
- **1924: The first own-brand product was sold.** The first own-brand product sold by Jack was Tesco Tea – before the company was called Tesco. The name comes from the initials of TE Stockwell, who was a partner in the firm of tea suppliers, and CO from Jack's surname.

- **1929: First Tesco store opens.** Jack Cohen opens his first Tesco store in Burnt Oak, Edgware, North London.
- **1932: Tesco Stores Limited Private.** Tesco Stores Limited became a private limited company.
- **1934: Headquarters – warehouse built.** Jack Cohen bought a plot of land at Angel Road, Edmonton, North London to build a new headquarters and warehouse. It was the first modern food warehouse in the country and introduced new ideas for central stock control.
- **1947: Stock Exchange.** In 1947, the company is being listed in the London Stock Exchange with a stock price of 25p.
- **1956: First Tesco self-service.** The first Tesco self-service supermarket opens in a converted cinema in Maldon.
- **1960s: 356 new stores.** Tesco takes over a chain of 212 stores in the North of England and adds another 144 stores in 1964 and 1965.
- **1961: Largest store in Europe.** Tesco Leicester enters the Guinness Book of Records as the largest store in Europe.
- **1963: Green Shield stamps.** Green shield stamps introduced.
- **1968: Superstore.** The term "superstore" is used when Tesco opens its store in Crawley, West Sussex.
- **1974: First Petrol Station.** Tesco opens its first petrol stations at major sites.
- **1977: Price-cutting.** Tesco introduces a price–cutting campaign under the banner "Checkout at Tesco".
- **1979: £1 billion sales.** Annual sales reach £1 billion
- **1982: Sales > £2 billion.** Annual sales exceed £2 billion. Computerised checkouts introduced into the first Tesco stores.
- **1983: Tesco plc.** Tesco Stores (Holdings) Ltd becomes Tesco PLC.
- **1985: "Healthy Eating".** Tesco becomes the first major retailer to emphasise the nutritional value of its own-brand, to customers, through the "Healthy Eating" initiative.
- **1987: 29 new stores in progress.** Tesco announces a £500 million programme to build another 29 stores.

- **1991: Biggest UK petrol retailer.** Tesco becomes Britain's biggest independent petrol retailer.
- **1992: First Tesco Metro store, Organic Range.** Tesco launches its Organic range. Computers for Schools is launched. The first Tesco Metro store opens at Covent Garden, London. "Every Little Helps" is launched.
- **1993: Tesco Value launched.** Tesco Value is launched.
- **1994: Tesco Express.** The first Tesco Express opens. Tesco becomes the first retailer to offer customers a service commitment at the checkouts through "One in Front".
- **1995: High Quality.** "Would I Buy It" initiative is launched to ensure that products are always of the highest quality for customers. Tesco becomes the market-leading food retailer. Tesco enters Hungary. Tesco Clubcard is launched.
- **1996: 24 hour trading launched.** Tesco launches 24 hour trading. First major price investment for customers. Belfast Metro opens the first Tesco store in Northern Ireland. Tesco enters Poland, the Czech Republic and Slovakia. Tesco introduces "Customer Assistants" to make shopping even easier for customers.
- **1997: Tesco Personal Finance launched.** Tesco opens its first Extra store in Pitsea, Essex. Launch of Clubcard point per pound. Tesco enters the Republic of Ireland. Tesco Personal Finance (TPF) is launched. Terry Leahy becomes Chief Executive of Tesco.
- **1998: Tesco Expanding.** Tesco enters Taiwan and Thailand. Tesco launches its Finest range.
- **2000: Tesco.com.** Tesco.com is launched.
- **2001: "Customer Champions".** Tesco launches "Customer Champions" in many stores and implements a new labour scheduler to further improve service for customers. Tesco becomes the leading organic retailer in the UK. Tesco reaches £1 billion price cuts in total.
- **2002: "Free-From" Products.** Tesco enters Malaysia. Tesco offers "Free-From" products, designed for customers with special dietary needs.
- **2003: Tesco Expanding.** Tesco enters Turkey. Tesco enters Japan.

- **2004: Fairtrade, Music market.** Tesco enters China. Tesco launches own-brand Fairtrade range. Tesco Broadband is launched. Tesco.com becomes first major British supermarket to enter music download market.
- **2005: Tesco Homeplus.** Tesco exits the Taiwanese market in an asset swap deal with Carrefour involving stores and operations in the Czech Republic. Tesco Homeplus launches. Tesco announces annual profits of £2 billion.
- **2006: Tesco Direct.** Tesco Direct launches.
- **2007: Fresh &Easy, USA.** Tesco opens Fresh & Easy in the United States.
- **2008: Tesco Expanding.** Tesco announces plans to establish cash and carry business in India. Tesco aquires 36 hypermarkets in South Korea from Homever. Discount Brands at Tesco launches. Tesco Personal Finance aquisition completed.
- **2009: www.tesco.com/clothing.** Tesco launches www.tesco.com/clothing. Clubcard re-launched in the UK with £150 million investment offering customers the opportunity to double up their vouchers.
- **2010: World's first zero-carbon supermarket opened.** Tesco opens the world's first zero-carbon supermarket in Ramsey, Cambridgeshire. Tesco opens its first 'Lifespace' mall in Qingdao, China.

3.2 TSCO Values

At the heart of Tesco company sit the Tesco Values which have customers as core. The company's core purpose id to create value for customers so as to create a relationship based on loyalty that will last a lifetime.

1. **No one tries harder for customers**

    - Understand customers.
    - Be first to meet their needs.
    - Act responsibly for our communities.

2. **Treat people how we like to be treated**

    - Work as a team.
    - Trust and respect each other.
    - Listen, support and say thank you.
    - Share knowledge and experience.

After discussions with thousands of staff on what they thought Tesco stood for and what they wanted the business to be, Tesco Values were developed in 1997 and were refreshed 10 years later using the same method. Re-launching the Tesco Values was important as the company wants to reflect business today and wishful business in the future to come.

People are the key factor to success for Tesco, including both employees and customers. Setting up the Tesco Values is essential in order for employees to be aware of the kind of business they are working for and for customers to be informed of all the services and benefits they are supplied with as well as setting high expectations, values that are set and followed in every city and country Tesco operates. Customers are the core of success for the company thus, respect and trust play a key role to the company's environment so as to create a great place for employees to work in and a great place for customers to come in and experience the satisfactory service delivered.

3.3 TSCO Corporate Responsibility

The core purpose of Tesco is to create value for customers to earn their lifetime loyalty, which along with an environmental approach and an approach to communities comprise the heart of the company's overall business strategy. The key values the company has adopted throughout the years is to manage to try as hard as possible for customers keeping in mind that people should be treated the same way we like to be treated.

Figure 3.1 TSCO Steering Wheel

Source: TSCO Annual Report 2007

The above figure indicates Tesco's steering wheel which consists of five segments: Community, Operations, People, Finance and Customer. This steering wheel is a management tool used as an approach to prioritise the key issues for the business in order to meet the company's core purpose and its values. The five pillars of Tesco's corporate responsibility strategy are:

1. **Buying and selling products responsibly**

The company aims to build trust among all of its shareholders by buying and selling its products responsibly, action that will help the existing business grow as well as lead to diversification into new business areas such as personal finance and telecoms. Strong relationships with suppliers allow the company to meet changing customer needs and to attract new suppliers working into making supply chains more sustainable in the future due to population growth and environmental change.

2. **Caring for the environment**

Sustainability and competitiveness are ensured through environmental caring. Reducing energy use also reduces the company's energy costs, saving up money that can be differently invested. Focusing on the environment has taken Tesco into new business areas such as offering roof and cavity wall insulation and solar power to UK homeowners with the Home Efficiency Service.

3. **Actively supporting local communities**

Loyalty is essential and loyalty is gained firstly on a local basis. Supporting the local communities the company operates in provides trust to existing and potential customers and greater loyalty, understanding their needs and provide new services and products to them.

4. **Providing customers with healthy choices**

Food safety is a crucial issue thus, providing customers with healthy choices and safe food builds trust, creates competitive advantage as well as it creates the opportunities to work with governments so as to improve the general standards. Promoting and providing healthy and affordable eating choices to customers opens up new business opportunities such as in special eating groups and in groups facing obesity. Tesco launched the "get active" programmes around the world and has managed to help customers get fit, eat healthier and increase their loyalty.

5. **Creating good jobs and careers**

Attracting and retaining good and skilled people helping them develop their capabilities so that they can deliver their best for customers and communities is also an important issue. Satisfactory service is one of the first issues on the customers' list when choosing where to shop from thus, providing good jobs and career opportunities as well as helping the staff understand and adopt the company's vision is very important and will lead to customers' satisfaction.

3.4 TSCO Business strategy & objectives

Tesco follows a seven part strategy aiming to deliver strong sustainable long-term growth by broadening the scope of the business. Since 1997, Tesco's strategy involves the growth of the core business as well as the diversification with new products and services in the existing markets that Tesco operates. Following customers into large expanding markets in the UK such as telecoms, general merchandise and financial services along with expanding in new geographically markets such as different parts of Europe, Asia and the United States of America has led to deliver to the company strong sustained growth. The strategy has been evolved to apply to the company's five business segments, the UK, Asia, Europe, the United States and Tesco Bank, reflecting the consumers' changing needs and the general increasing business globalisation nature the company has adopted.

Strategy parts:

1. **To grow the UK core**

Tesco's goal to grow the UK core had always been important as the UK is a key driver for sales and profit and is indeed the Group's largest business. Several opportunities for further growth and expansion are to be taken under consideration so as to manage the UK core growth.

2. **To be an outstanding international retailer in stores and online**

One of Tesco's most essential goals was to become a successful international retailer, goal which became a fact in 1997 when the company's international business generated 1,8% of the Group's total profits. Nowadays, not only has this figure increased to 25% but Tesco is in the first places in retailing in eight of the thirteen markets it operates outside the UK, leading the way to accomplishing a new goal, that is becoming an outstanding international retailer in stores and online.

3. **To be as strong in everything we sell as we are in food**

After having become the largest food retailer, Tesco decided to face the challenge of becoming "as strong in non-food as in food". This challenge however keeps evolving

as due to the large diversification and range of products and services the company offers to customers, Tesco now aims to be as strong in everything it sells as it is in food, providing always the best prices and the highest quality to costumers.

4. **To grow retail services in all our markets**

The development of retailing services has managed to generate millions of pounds profit, representing almost 16% of the total Group. Up until nowadays, the business involving the services provided has increased and is mainly characterised as UK-focused. The company has decided to strategically expand and grow its retail services to all the markets it is presently operating and go international in this sector as well.

5. **To put our responsibilities to the communities we serve at the heart of what we do**

The company has decided to fully commit to offering to the communities they operate in. It is one the most important objectives of Tesco to emphasize its responsibilities towards these areas as well as the environment thus, the company's goal is to put this commitment in the heart of its business and operations.

6. **To be a creator of highly valued brands**

The first is to be a creator of highly valued brands. Tesco brand has evolved from a logo above a few stores in the UK to a multitude of store, product and service brands across the world. Building brands gives business more meaning with customers. On one level, this relates to the Retail brands such as the Tesco brand itself, but it also refers to the Product brands such as F&F and Technika and the Pillar brands such as Finest and Value.

7. **To build our team so that we create more value**

Tesco's final objective is to create more value by bringing together the best possible team of leaders and directors. Tesco's business continues to grow and diversification offered in products and services require more capable leaders to support the functions within the Group. The importance of choosing capable leaders to sustain and increase the company's competitive growth, expansion and diversification lies not only in their

essential role of today but also in their responsibility to provide their knowledge and support in creating a bigger and better team for the future.

3.5 TSCO Vision

The company's vision is to become the most highly valued company by the people involved in it, its customers, its loyal and committed staff and its shareholders. Visioning a company which gradually grows indicates an innovative company which follows modern trends that will first manage to grow locally and then apply its skills globally so as to become a very successful international retailer. Tesco has launched a four-part vision for the future of the business:

1. **Most Highly Valued**

Tesco's first and foremost vision involves becoming the most highly valued business in the world. Value that is brought not only by customers, but also by the communities the company serves as well as the staff it engages and its shareholders.

2. **Growth Company**

Tesco is a growth company and that is how it will remain, with a continuous effort to pursue growth in every part of its business not only in the UK, but also in every part of the world it operates in. Growth non only in food products but also in non-food products as well as services, such as financial services, electricals, clothing and general merchandise on an international basis.

3. **Modern and Innovative Company**

Innovation has always been important in Tesco, as the company always tried to stay ahead of the curve, adapting modern trends and new technologies for the satisfaction not only of its customers but also of its personnel. Experience has shown that it can follow and anticipate changes and evolve in several aspects.

4. **Win Locally – Apply Skills Globally**

Tesco is a local retailer which has managed through excellent service, competitive prices and product quality to grow substantially through the years and win its dominance locally. Nowadays the company is utilising the skill and scale of the Group to increase its performance and competitiveness of all the businesses it involves in around the world.

3.6 TSCO Management Board

The company's Board of Directors currently comprises Executive Directors, eight independent Non-executive Directors, David Reid, Non-executive Chairman and Patrick Cescau is Senior Independent Director. The large size of the board is considered to be appropriate given the company's large diversification in products and services as well as the numerous markets Tesco operates in and their diversification. The board structure is characterised by strong governance processes and integrity so as to ensure that every decision has been made collectively. The board's matters include the annual and interim financial statements, group governance policies, treasury policies, risk management and internal control systems, strategic and operating plans, major acquisitions and disposals, authority levels for expenditure as well as succession planning for senior executives. The board is to be updated regularly by each business unit within the Group so as to be given the opportunity to understand and explore issues in depth and make the right decisions.

Table 3.1 TSCO Board of Directors

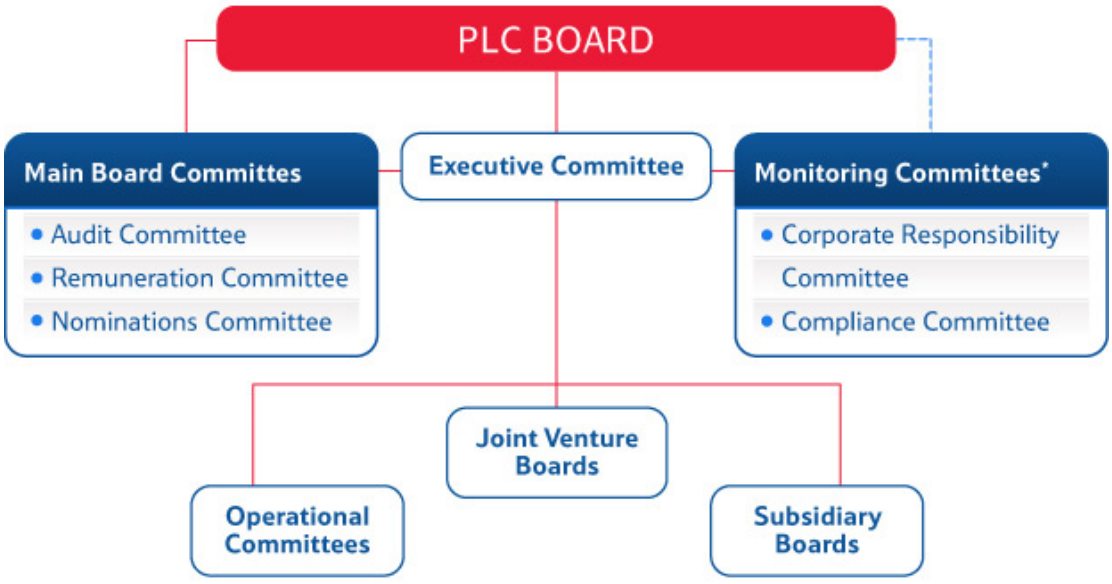
	Board of Directors	
1.	David Reid	Non-Executive Chairman
2.	Philip Clarke	Group Chief Executive
3.	Tim Mason	Deputy Group CEO, CMO and CEO Fresh & Easy
4.	Richard Brasher	CEO – UK & ROI
5.	Andrew Higginson	CEO – Retail Services
6.	Laurie McIlwee	Chief Financial Officer
7.	Lucy Neville – Rolfe CMG	Executive Director (Corporate and Legal Affairs)

8.	David Potts	CEO – Asia
9.	Patrick Cescau	Senior Independent Director
10.	Richard Broadbent	Non-Executive Director
11.	Gareth Bullock	Non-Executive Director
12.	Stuart Chambers	Non-Executive Director
13.	Karen Cook	Non-Executive Director
14.	Ken Hanna	Non-Executive Director
15.	Ken Hydon	Non-Executive Director
16.	Jacqueline Tammenoms Bakker	Non-Executive Director
17.	Jonathan Lloyd	Company Secretary

Source: *www.tescoplc.com*

There are a number of key Committees such as the Audit, Remuneration and Nominations Committees to which certain responsibilities and duties are delegated. These Committees have been given authorisation to take decisions and act on behalf of the board, yet the board is always kept fully informed.

Figure 3.2 TSCO plc Board – Key Activities



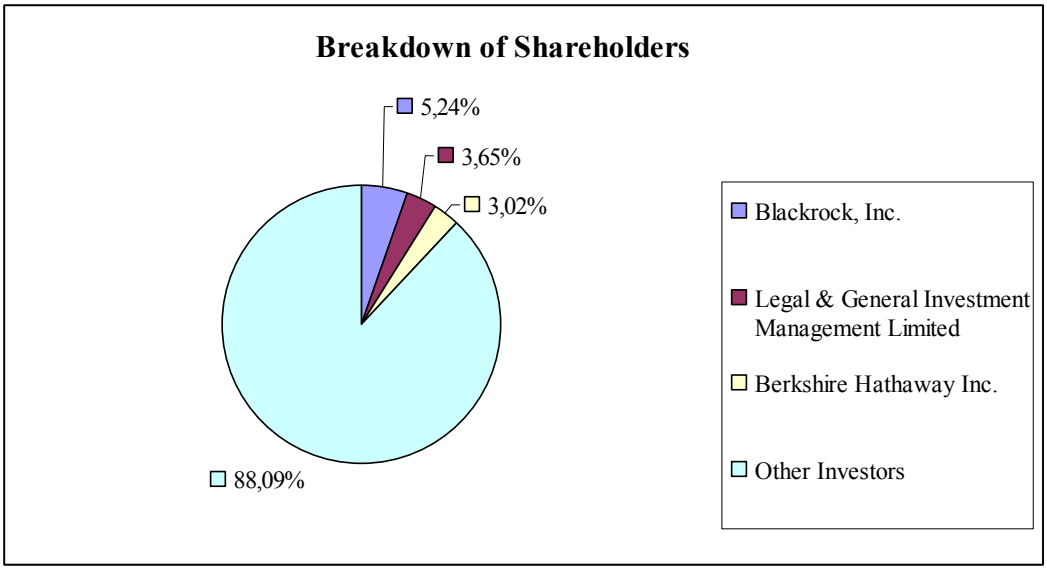
*Source:*www.tescoplc.com

Table 3.2 TSCO Major Shareholders

	Major Shareholders	Holdings
1.	Blackrock, Inc.	5,24%
2.	Legal & General Investment Management Limited	3,65%
3.	Berkshire Hathaway Inc.	3,02%
4.	Other Investors	88,09%

Source: http://www.tescoplc.com/plc/ir/financials/shareholders/

Graph 3.1 TSCO Breakdown of Shareholders

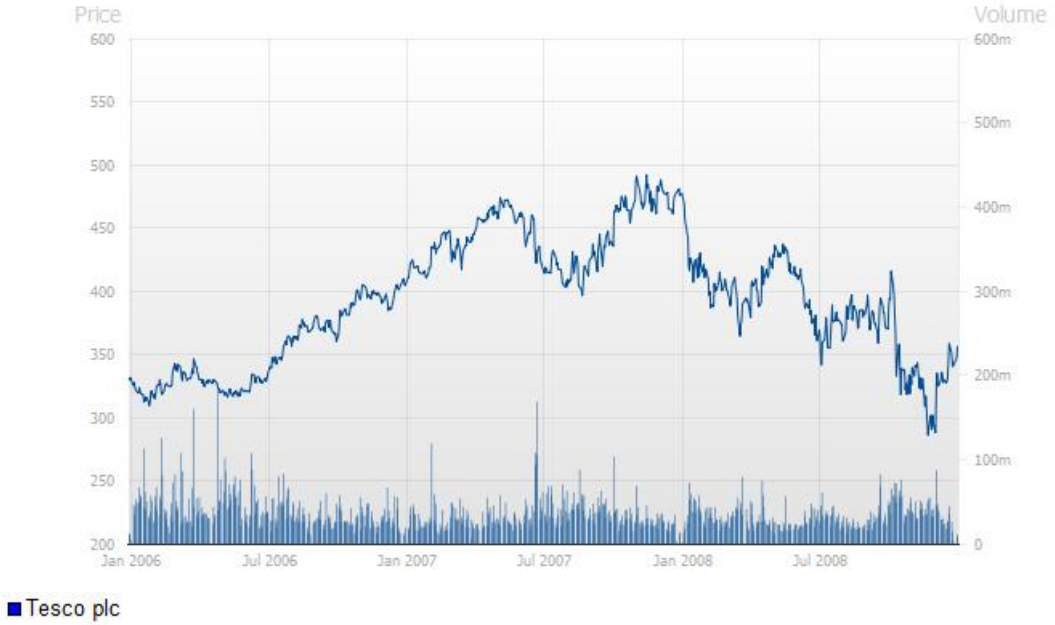


3.7 TSCO Stock Price

Tesco's share price chart presents a general upward movement in 2006 with a sudden short time fall in 2007 and a downward movement that continued in 2008. In general, the company's share is moving along with the sector, as Tesco is the dominant leader in the UK Food & Drug Retail Sector owning the largest market share thus, influencing the sector's movements. In 2006, the company increased to an all-time high of 31,1% with an annual growth rate of 8%. In the same year, Tesco purchased an 80% stake in Casino's Leader Price supermarkets in Poland which were to be re-branded into small Tesco stores. The sudden fall of the share price in 2007 was a result of the fact that Tesco was placed under investigation by the UK Office of Fair Trading for acting as part of a cartel of several other supermarkets as a number of dairy companies to fix the price of certain dairy products such as butter, milk and

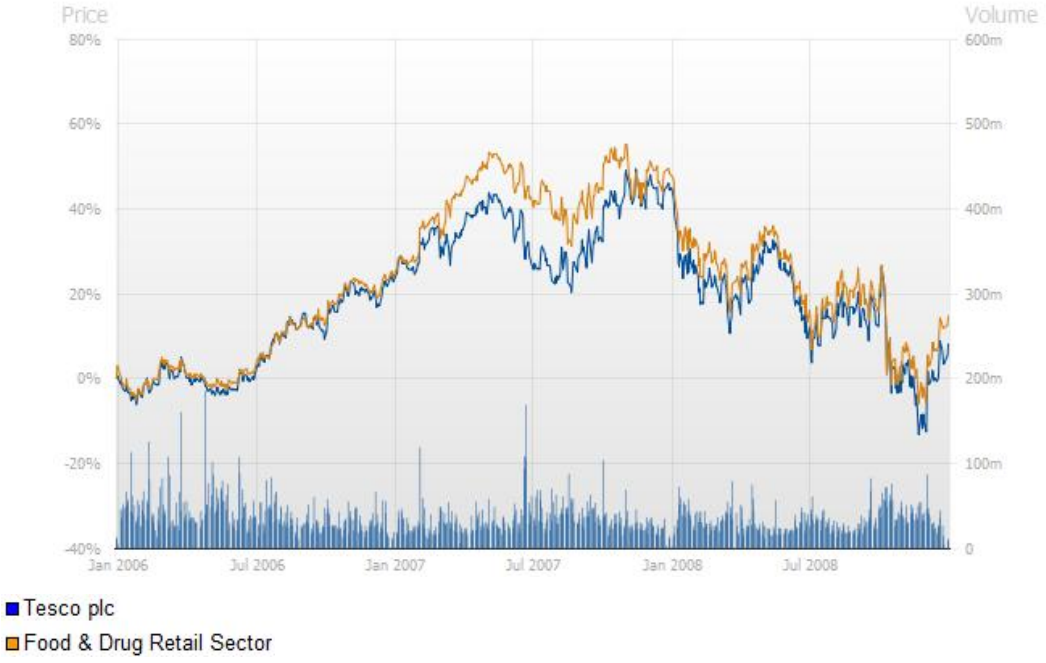
cheese, however its overall 2007 performance was higher than previous years. In 2008, Tesco received 76 threatening letters from a former tax inspector, Phillip Mc Hugh, who threatened to bomb stores and contaminate food in order to poison customers unless he was given £1m. Phillip Mc Hugh was caught and jailed.

Graph 3.2 TSCO Share Price Chart



Source: www.tescoplc.com

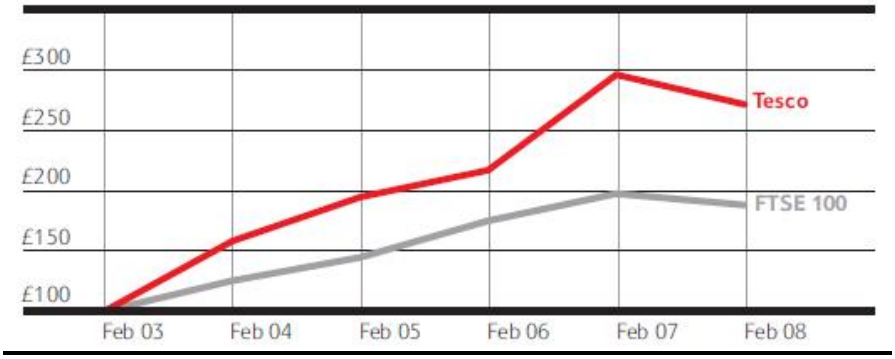
Graph 3.3 TSCO – Food & Drug Retail Sector Share Price Chart



Source: www.tescoplc.com

The graph below presents the scenario of an investment of £100 in the FTSE 100 Index compared with an equivalent investment in Tesco plc shares over the period of five years, 2003 – 2008, presenting the total shareholder return performance.

Graph 3.4 TSCO Performance graph

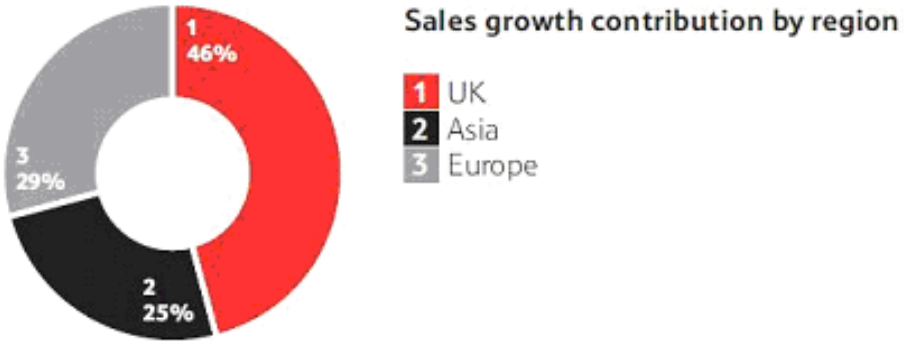


Source TSCO Annual Report 2008

3.8 TSCO Store portfolio

Tesco is the dominant retailer in the UK and although it has taken its business internationally, the company's sales growth still remains higher in the UK, where the core of Tesco business is. Analytically, the sales growth in the UK is at 46%, in Europe is at 29% whereas in Asia is at 25%.

Graph 3.5 TSCO Sales growth contribution by region



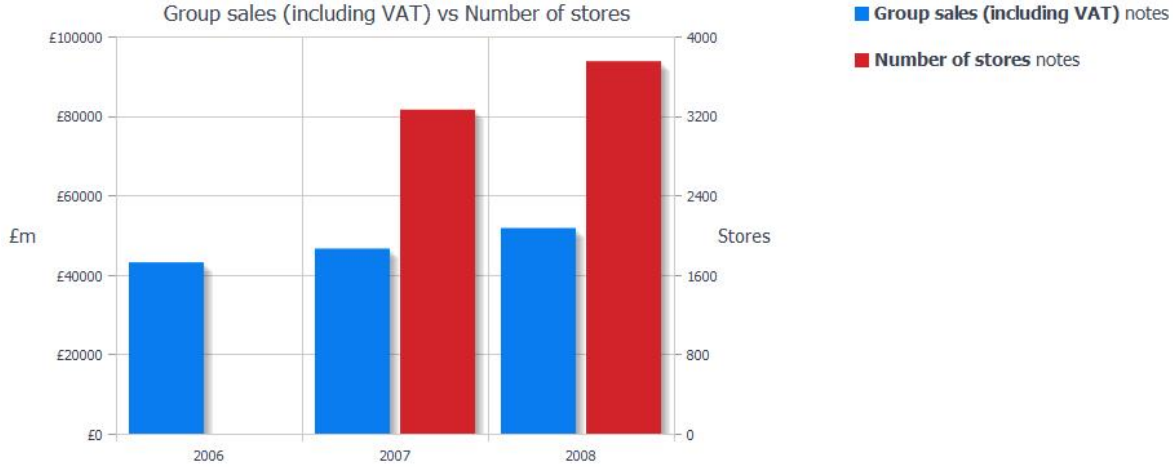
Source: TSCO Annual Report 2008

Tesco is the dominant retailer in the UK and although it has taken its business internationally, the company's profit growth still remains higher in the UK, where the core of Tesco business is. Analytically, the profit growth in the UK is at 50%, in Europe is at 29% whereas in Asia is at 21%.

Graph 3.6 TSCO Profit growth contribution by region

Source: TSCO Annual Report 2008

Graph 3.7 TSCO Group sales vs Number of stores



Source: www.tescoplc.com

The graph 3.7 indicate Tesco's sales performance, number of stores as well as group space, increasing from 2004 to 2008 both in the UK where Tesco's core business operates and internationally.

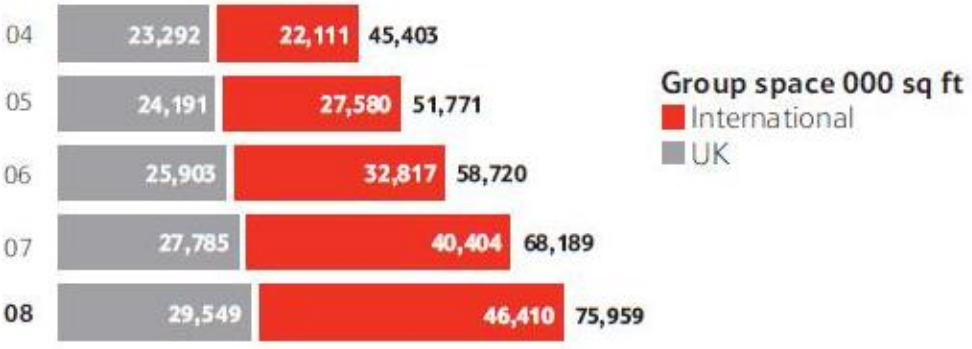
Figure 3.3 TSCO Sales Performance £m

Source: TSCO Annual Report 2008

Figure 3.4 TSCO Number of Stores

Source: TSCO Annual Report 2008

Figure 3.5 TSCO Group Space 000 sq ft



Source: TSCO Annual Report 2008

3.9 TSCO PEST Analysis

Political Factors

Tesco's major business core is located in the UK, however, the accession of some major countries to the Word Trade Organization like China, as well as the joining of several Eastern European and Baltic States to the European Union motivated the company to enter these markets and make its vision of becoming international become more realistic and appealing. Operating nowadays in a globalized environment strengthens the companies supply chains experiencing economies of scale and scope, however the company's performance is influenced by political and legislative conditions of these countries as well as their trading policies, where foreign trade restrictions attract taxes and tariffs making goods more expensive and creating fear of customers demanding substitutes.

The government has introduced employment legislations encouraging retailers to provide a mix of more flexible job opportunities. Tesco meets the demands of employing staff from several population categories such as students, disabled, elderly, working parents, etc. by creating several job positions such as full time to part time, lower paid to higher paid, locally based, receiving personnel loyalty in a high staff turnover industry. The government has also decreased the rate of corporation tax by 2%, providing opportunities to the company for greater profits to be invested. However, the government is presently investigating claims concerning fair trade and price fixing, along with the competition commission which is constantly monitoring the industry. Diversification of non-food products sold in Tesco stores has experienced a positive act by the government's partial deregulation of pharmacy licensing enabling the company to expand the number of pharmacies on its premises.

The company's performance has also experienced a direct impact from government legislations and policies concerning suppliers, when the Food Retailing Commission banned many of the practices standing, such as demanding payments from suppliers and changing agreed prices retrospectively or without notice. The presence

of powerful competitors with established brands creates a threat of intense price wars and strong requirements for product differentiation along with the government's policies for monopoly controls and reduction of buyer's power. Tesco managed to reduce fuel prices on customers based on the amount spent on its groceries in an effort to implement politically correct pricing policies.

Economical Factors

Consumers' behaviour is very significant for the company's satisfactory performance as behaviour swings can affect profits. Consumers spend a great amount of time and energy on buying behaviour and decision-making activities which are determined by several internal factors such as demographic, cultural, life style, etc. as well as external factors such as promotions, advertising, customer service and most important economic and market stability. The current credit crisis in the UK due to weakening property markets, high commodity costs as well as the global credit crisis contributed to the market facing a significant economic challenge. The wide scope of the crisis caused a downturn in many industries and the UK retailing market is recognised as one of the markets that have been most severely affected.

Consumers face major impacts due to the financial crisis such as job uncertainty, unemployment, decreased disposable income, decreased saving rates, higher product and service prices, greater consumption risk and fewer credit financing opportunities. It is a fact that Consumer Price Index inflation reached a value of 3% in the end of 2008 where in the beginning of 2006 it was valued at 1,9%. Inflation is increasing, the unemployment rate is increasing affecting and reducing the household disposable income which affected the company in many ways. Consumers changed their habits and instead of eating out they prefer home cooking which means more often visits to supermarkets. However, although consumers' regular consumption theoretically appears to be increasing, consumers are seen to be purchasing very carefully as they focus on efficiency buying and cutting back on waste and premium products, shifting to products with comparatively good quality and low price. Job loss, economic crisis, devaluation of the pound are together pushing more people to stay indoors however, this shift of buying behaviour can be considered to promote

the use of online buying channels through which consumers can compare prices and gather information for their purchasing decisions avoiding transaction costs, especially since the fuel prices are going up.

The company is greatly concerned of such economic factors because they are likely to influence demand, costs, prices and profits and recognises unemployment as the most influential factor which decreases the effective demand for many goods, adversely affecting the demand required to produce such goods. Although the company is expanding its international business entering new markets and expecting higher profits, it is still highly dependent of the UK market and the slowdown in the UK food market is affecting it exposing it to concentration risk as these economic factors are largely outside the control of the company.

Social Factors

Social factors are also important to be taken under consideration as changes in social trends can affect the company. During the recent crisis, more and more people stay in and prefer preparing home cooked meals, changing the existent trend of eating out which is expensive due to food inflation. Based on the hectic lifestyle and the constantly increasing fuel price, customers are moving towards one-stop shopping therefore, Tesco has increased the amount of non-food items available for sale through products diversification as well as increased its number of stores, however, focusing on the supply chain and other operational improvements drives costs high.

The type of goods and services demanded by consumers is a function of their social conditioning and their consequent attitudes and beliefs. Consumers are becoming more and more aware of health issues, and their attitudes towards food are constantly changing. People are purchasing healthy foods and are being more health conscious increasing the use of organic food due to its potential effects on health, however enlarging this market segment. One example of Tesco adapting its product mix is to accommodate an increased demand for organic products, being the first to allow customers to pay in cheques and cash at the checkout. The latest legislation created a new tax on advertising highly processed and fatty foods. The so-called “fat tax”

directly affected the Tesco product ranges that have subsequently been adapted, affecting relationships with both suppliers and customers.

Responsibility to society and acting in a way which benefits society overall has been an increasing trend and need. Environmental issues is a key area for companies to act in a socially responsible way as there is growing concern for green issues, corporate social responsibility, global warming and ozone depletion nowadays than ever before. Retailers are constantly confronting environmental pressure groups in order to improve their wastes and recycling capabilities and the government has launched a new strategy for sustainable consumption and production to cut waste, reduce consumption of resources in order to minimise environmental damage. Supermarkets are investing in green issues by using less plastic, recycling wastes and shifting to environmentally friendly procedures. Profits are used for this but sales can increase because consumers are demanding environmentally friendly products. Reducing energy use also reduces the company's energy costs, saving up money that can be differently invested, although investing on green issues can be an extra high cost. Focusing on the environment has taken Tesco into new business areas such as offering roof and cavity wall insulation and solar power to UK homeowners with the Home Efficiency Service.

Technological Factors

Technology is a major factor in the company's macroeconomic environment influencing its development and its customers. First and foremost, the use of internet has affected the general operation of supermarkets with the most important feature the adoption of online retailing, since internet is now available to almost every household, this indicates that there are potential new customers everywhere and it has been estimated that online purchases are growing every year. New technologies benefit customers as they save transaction costs and enjoy more personalised services. Launching the Efficient Consumer Response, adopting the Electronic Point of Sale and the Electronic Funds Transfer Systems the company has improved the efficiency of distribution and stocking activities, with needs being communicated almost in real time to the supplier.

Several further technologies are utilised in Tesco stores such as wireless devices, intelligent scale and electronic shelf labelling creating satisfied customers. One of the drawbacks of supermarket shopping is the queuing system where customers often find themselves in at the checkout however Tesco has employed self checkout machines which are solving the problem of queuing. Using latest technology in logistics controlling inventories and distribution channels produces operating benefits and indicates the company's innovation character. On the whole, Tesco has managed to use new technologies making service more convenient increasing customers satisfaction, leading to an increase in sales and potential competitive advantage.

Ch.4. Theoretical Approach of Financial Analysis

One of the most important parts when conducting a business analysis for a company is the process of financial analysis. “Financial analysis is the use of financial statements to analyze a company’s financial position and performance, and to assess future financial performance.” Wild et al. (2003). Financial statements are conducted periodically and formally represent the company’s financial activities. The most important statements are balance sheets which analytically demonstrate the company’s assets and liabilities, income statements which indicate the company’s financial performance, its income and expenses, also including earnings which reflect its profitability, cash flow statements which are a report of the company’s cash inflows and outflows reporting on investing and financing, as well as shareholder’s equity statement which basically informs on any changes in equity. In addition, reports conducted and published by the company’s management and by auditors, usually accompanied by explanatory notes and supplementary information combine a proper output of financial analysis system. Wild et al. (2003).

The main purpose of financial analysis is the evaluation of both the strengths and the weaknesses of the company analyzed as well as the ascertainment of its financial power, its profitability, its liquidity, its solvency and its stability. Financial analysis is a presentation of the company’s degree of profitability, reporting on income and earnings and the company’s ability to sustain growth presented in the income statement. Liquidity is the company’s ability to satisfy its obligations and to raise cash, implying the existence and maintenance of positive cash flows and along with solvency, which is the company’s ability to honor its credit obligations, are based on the company’s balance sheet. All the above contribute to the company’s stability, which indicates that the company has such profile and financial position that it is able to continue running in the long-term by meeting its obligations and without experiencing great losses. (www.wikipedia.org). The evaluation of the company is achieved by examining its previous performance and its present performance. Comparisons on company’s performance can be made leading to problem solving and a better decision making compared to previous trends and results. A future estimation and a forecast of the company’s potential profitability can be made when conducting a variety of possible scenarios and alternative solutions.

4.1 Forms of Financial Statements' Analysis

Financial statements provide financial information about the company that may be of different utility. A variety of this information may be specifically used for dissimilar evaluations as well as intriguing a range of people concentrated in certain reports and figures according to their source of interest. Thus, the analysis of financial statements can be separated into two main categories:

1. **According to the position of the person conducting the analysis.**

The relation of the analyst with the company based on which financial statements are being analyzed leads to categorizing into internal analysis and external analysis.

i. The internal analysis is being conducted by people that are directly connected to the company and its internal environment and have the ability to check the company's account books and transactions thoroughly at any time. The basic objective and advantage of this analysis is the fact that it allows the analyst to check all the procedures and methods that have been applied and define any alteration of the company's financial position.

ii. On the other hand, the external analysis is being conducted by people who are not part of the company's internal environment and it is based exclusively on financial statements and financial reports that have been published by the company and its management board, as well as the reports composed by auditors. Its purpose is to define the financial position of the company and its profitability, in terms of the company's ability to meet several current and expected liabilities, tax payments, dividends payment etc. The analyst however, is unable to penetrate in depth into the company's procedures, methods and figures as such reports usually provide only the basic and necessary information about the company.

2. **According to the main phases of the analysis conduct.**

Financial statements' analysis may occur in several phases and according to the information analyzed and the period of the analysis they are categorized into typical analysis and fundamental analysis.

i. Typical analysis is basically the preparatory stage of the fundamental analysis thus, it takes precedence. Its main objective is to inspect the external structure of the balance sheet and the income statements and if considered required to proceed on any necessary corrections and adjustments.

ii. The fundamental analysis follows the typical analysis as it is mainly based on its outcomes, however it is extended. It involves the formation of several financial ratios and the illustration and explanation of their results which provide a more accurate representation of the company's financial condition.

4.2 Categories and Aims of Analysts

According to who is conducting the analysis of financial statements and the purposes of this analysis in aspect of decision-making sector, analysts are separated in certain categories. Each category is interested in specific figures as they have different demands and expectations from the company.

1. **Investors and shareholders**

Investors are the parties that place their money to invest on the company. The most common investors of a company are the shareholders, people who have spent their money investing on buying an amount of the company's stocks. Investing on the company by providing funds involves a variety of risks, as these funds are basically a protection shield against the company's loans. The company, after meeting its credit obligations and is still on profit levels, it pays out dividends, a certain amount of money to stockholders. Stockholders are interested in the company's financial position and the levels of profitability as they desire getting dividends. The financial

health of the company and its continuous growth are information that are of great interest to stockholders, as they wish to obtain a general idea on the company's prosperity, concerned about the money they have invested and their future profits. Evaluation of share prices is a rather complex procedure made by special analysts and along with other factors affecting the company's activities, shareholders gather the information needed to decide what is of their best interest either in buying more stocks or in cases of possible loss indication, selling the stocks they hold.

2. Managers

The managers of a company use information from financial analysis in order to define the financial position of the company, its potential profitability and its future performance so as to control and supervise its activities. Managers are considered to be in a more advanced position than other analysts are, as they have the opportunity and the authority to go through the company's account books at any time as well as exploit and utilize valuable internal and yet not published information. Financial analysis is the main tool of the company's management and managers are directly connected to it, having the ability to proceed on extended analysis, detect and cope with any possible problems.

3. Creditors

A company's creditors are considered to be those who lend funds to the company temporarily and expect to get interest in return. There is however a variety of creditors, such as those supplying the company with goods or providing services that are known as trade creditors, who credit the company for a short time of period usually in a range of 30 to 60 days and do not receive interest in case of extending the credit. Wild et al. (2003). Furthermore, another form of crediting is the debtholders, known as nontrade creditors, who provide financing to the company, either short-term or long-term in return for a repayment including interest on specific future dates. Banks are also a category of creditors to the company which has the obligation to return the fund along with the interest in specific date. Creditors are interested in information concerning the creditworthiness of the company, future performance forecasting as well as the evaluation of the

company's assets and their ability to be liquidized so as to repay debts even in cases of bankruptcy. The elements creditors are mostly interested in the company's financial analysis of the cash flow statements as well as several financial ratios and financial forecasting.

4. Prospective mergers and acquisitions

In cases of a company being merged or acquired, analysts process data and seek for information similar to these of investment analysis. When there is a possibility of a merger or acquisition, analysis should first be on evaluating the intangible assets of the company, such as its clients and its reputation. These assets in addition to the company's liabilities are included in the decision of whether the merge or acquisition will occur or not. When a company decides to merge with another one or decides to buy it off, its interest involves potential profit and growth that is to be gained by these actions. A company that presents unhealthy financial activities and is not profitable is not a very good merger candidate. Those interested in merging obtain this information about the company from financial analysis before deciding on merging.

5. Auditors

The main purpose of auditing a company is to examine whether the financial position of a company and its results are authentically presented. A variety of financial statements and documents is being thoroughly examined such as all kinds of financial statements, budgets, analysts' reports, collaborator banks, securities, personnel etc. The core objective is to trace and prevent any possible accounting mistakes, either intentionally or unintentionally made, as well as to examine such mistakes if found. Auditors have the authority to observe, approve, analyze as well as make statements and conduct official reports about the genuineness of the financial results and the position of the company audited. Evaluation of the company including credit ability and stock value is also part of auditing, in addition to underlying imperfections and determining the company's weaknesses as a whole unit.

6. **Financial analysts, stock brokers, bank executives, scientific scope**

Financial analysis of a company is also used by a variety of several other interested groups, which according to their aims on the analysis, tend to emphasize on different parts of it and pay attention to certain figures and measures. Possible tax collectors, unions or even clients and suppliers may be concentrated on specific parts of the financial analysis.

4.3 Methods of Financial Statements' Analysis

The analysis of financial statements is very important and is conducted by a variety of people at several stages aiming at the relation among financial data. Consequently, there are several methods used for a financial statement's analysis according to the field of interest as well as the time the analysis is conducted. Application of the comparative financial statement analysis, also known as horizontal analysis, involves the reviewing of sequential financial statements such as income statements, cash flows, balance sheets etc., so as to observe the changes in individual accounts. This year-to-year change analysis is applied for a short period of time, usually two or three years and is easy to present changes as numbers appear either in amount of pounds (£) or in percentages (%). In cases of analyzing more than 3 years, it is more useful to apply the index-number trend analysis which is basically tracking items over a series of years. There is a preselected base period as well as an index number, where changes are presented in percentages referred to the base period. The common-size financial analysis, also known as vertical analysis involves the up-down evaluation of financial accounts that compose subgroups and is also applied as a way to compare companies.

Furthermore, one of the most widely known and used financial analysis tools is ratio analysis. Division of specific accounts provides figures used for periodical comparison on profitability, liquidity, performance, solvency, investment valuation, etc. Moreover, cash flow analysis is used to evaluate a company's funds, analyzing both the amount of funds and the ways these funds are obtained as well as how these funds are used and reinvested. In addition to the valuation of a company's stock or its

entire internal value which is an important financial analysis method that includes equity valuation and debt valuation, financial analysis is considered absolute.

4.4 Limitations of Financial Statements

Analysts conducting financial analysis of a company are required to have knowledge of the business environment as a whole, including market and industry forces, marketing, logistics, strategy analysis etc., so as to produce complete results when conducting a financial analysis of the company. Thus, financial analysis appears to have certain limitations if analysts do not have the ability and the knowledge to understand market and industry trends as well as not being able to manage the proper use of the industry ratios and their indications, which also makes industry comparisons difficult.

Companies do not always use the same accounting methods and in addition to changes in accounting methods throughout a financial year, such as from LIFO to FIFO or vice versa, this may lead to complications on the financial analysis. Apart from changes in accounting methods, other changes may occur throughout a financial year that involve non-operating items, buys or sells of assets as well as market effects such as inflation, an economic crisis or even the obligatory subjection to new regulation.

Financial statements are prepared periodically in specific times throughout the year whereas several reports from the company's management may be released in between whenever considered necessary. Therefore, as a consequence, analysts get new information and revise their reports and forecasts on a real time basis. Usually such reports are also based on historical data and include forecasting information, in comparison to financial statements which are very limited in forecasting, and report on present financial data and economic figures for the period analyzed.

4.5 Cash Flow Statements

"Cash flow measures recognize inflows when cash is received but not necessarily earned, and they recognize outflows when cash is paid but the expenses not necessarily incurred." Wild et al. (2003). Cash flows are used for several activities such as operating, financing as well as investing activities, thus, a cash flow statement includes and provides all the information concerning cash inflows and cash outflows. It is important for those interested and involved with a company to be able to have knowledge of how the company generates its cash as well as how it uses cash either for conducting its operations, investing as well as financing such as sharing dividends and generally enables them to develop models in order to evaluate the company.

4.6 Categories of Cash Flow Statements Activities

A cash flow statement is basically a report used to analyze cash flows which are linked to the company's liquidity, solvency and financial flexibility, according to Wild et al. (2003). The primary business activities of a company are its operating activities, which are activities related to earnings and produce revenue, such as suppliers' credit and accounts like inventories, receivables, payables, etc., yet activities not related to financing or investing activities. These activities indicate possible profit or loss for the company, as well as the company's ability to operate without the need of external sources of financing. Components of operating activities are cash receipts from sales, fees as well as cash payments to employees, suppliers and also insurance and taxes.

Cash flows from operating activities can be reporting with the use of two methods: indirect method and direct method. When using the indirect method, "net income is adjusted for noncash income (expense) items and accruals to yield cash flows from operations," Wild et al. (2003), whereas the direct method "adjusts each income item for its related accruals, and, arguably, provides a better format to assess the amount of operating cash inflows (outflows)." Wild et al. (2003). Cash flows from investing activities usually involve future generated income from investments, assets and collecting lending funds. On the other hand, cash flows from financing activities

usually involve resources from loan creditors as well as returns on investments and proceeds from issued shares, bonds, notes and loans. Cash flow statements have however certain limitations, such as the fact that several elements like interest are listed in operating cash flows although an outcome of financing of investing activities.

4.7 Financial Ratio Analysis

Financial ratio analysis is one of the most popular methods used to analyze financial statements. This rather popular tool may often prove to be misleading and in need of further investigation, yet, is one of the most widely used methods in financial analysis. It is considered to be a supplementary analysis to the financial statements as it provides ratios deriving from mathematical formulas on many of the accounts of the financial statements. According to the measurement information they provide, financial ratios are divided in categories.

4.7.1 Liquidity Ratios

One of the most important indicators of a company's financial health is its ability to liquidate assets in order to meet its obligations to creditors and pay off debts. Liquidity ratios are a way to measure the extent to which the company is able to turn its assets into cash and continue operating. In general, the higher the value of the liquidity measures, the safer the company it is to cover its debts.

1. Current Ratio = Current Assets / Current Liabilities. The current ratio is a very important liquidity ratio as it provides information on the ability of the company to manage its short-term obligations if they come due at that specific time, by liquidating its assets. If the ratio is equal or higher than one (1) that implies that the company is financially healthy and short-term obligations of the company may be satisfied by turning into cash its current assets. A current ratio lower than one (1) suggests that the company may not be able to meet its obligations, however that does not mean it can necessarily go bankrupt.

2. Quick Ratio = (Current Assets - Inventories) / Current Liabilities. The quick ratio is similar to the current ratio, yet more conservative as its calculation includes certain elements of current assets so as to measure the company's capability to satisfy its short-term obligations by turning into cash its most liquid current assets. The higher the ratio, the better liquidity capability of the company and the better its financial position.

3. Cash Ratio = Cash and Cash Equivalents / Current Liabilities. The cash ratio measures the extent to which a company is able to quickly liquidate assets in order to cover short-term liabilities. This ratio is considered to be the stringent as it measures the ability of a business to repay its current liabilities by only using its cash and cash equivalents and nothing else, excluding inventories and prepaid items for which cash cannot be obtained immediately.

4. Defensive Interval Ratio = Cash and Cash Equivalents + Accounts Receivable +Marketable Securities / Daily Operational Expenses. The defensive interval ratio measures the period of time that the company can operate using only current liquid assets without having to access long-term assets.

4.7.2 Profitability Ratios

Profitability ratios are very important for a company as they measure its overall performance and efficiency in terms of profit. A company's ability to generate earnings and achieve long-term sustainable profitability levels is important for existing and potential investors and can be shown through profitability ratios. High profitability ratios indicate a financially healthy company operating profitably and generating revenues through very well resources' utilization. However, one important factor when calculating profitability ratios in some industries is seasonality, as certain industries experience higher than average earnings at specific times of the year, such as summer or Christmas holidays.

1. Return on Assets (ROA) = Net Income / Average Total Assets. ROA is the ratio which indicates the degree of a company's profitability relatively to its assets,

providing information on revenues that are generated from using the company's assets. Comparison of ROA with previous years indicates the company's ability to allocate its resources wisely and manage to generate higher earnings on smaller investments.

2. Return on Equity (ROE) = Net Income / Average Shareholders' Equity. ROE is one of the most widely used profitability ratios as it provides information to the stockholders on how profitable their investment in the specific company is, by indicating the amount of earnings a company generates in relation to the amount of money invested in the company's stocks by its shareholders; shareholders' equity basically refers to what the shareholders own.

3. Gross Profit Margin = Gross Profit / Net Sales. The gross profit margin indicates if the company is financially healthy and has generated enough revenues to surplus the cost of sold products.

4. Operating Profit Margin = Operating Profit / Net Sales. This ratio is used to measure the amount of revenue a company still holds after having paid for production variable costs. It is important to get a satisfactory operating profit margin which implies that the company is able to meet its other obligations concerning operating procedures such as its fixed costs.

5. Pretax Profit Margin = Pretax Profit / Net Sales. This ratio is similar to the operating profit margin ratio however it is calculated based on the company's profit before taxes are included.

6. Net Profit Margin = Net Profit / Net Sales. The net profit margin is the amount of net profit generated by the company as a percent of the sales generated basically measuring how much of each £pound earned by the company is translated into profits, indicating how effective a company is at controlling its costs.

7. Effective Tax Rate = Income Tax Expense / Pretax Income. The effective tax rate represents the amount of tax the company pays given as the rate the company pays on its taxable income.

4.7.3 Debt Ratios

The category of debt ratios is very important as these ratios generally present an overall idea of the company's amount of debt and if the company is high levered or not. Such information is useful in terms of the financial risk the company as well as the stockholders face if the company is indeed high levered. The levels of debt a company faces indicate the need for the company to generate more returns so as not to face bankruptcy risk and if possible to generate even more earnings, the company's investors will profit.

1. Debt Ratio = Total Liabilities / Total Assets. The debt ratio is basically a way to measure how much leverage the company uses and the higher the ratio, the more levered the company is, also increasing its operational risk. Although it measures a company's amount of debt, it is not considered to calculate the pure amount of debt as it takes into account other kinds of liabilities as well.

2. Debt to Equity Ratio = Total Liabilities / Shareholders' Equity. The debt to equity ratio measures the amount of all kinds of creditors' liabilities as opposed to the amount of the shareholders' equity. The higher the ratio, the more levered the company is as it does not appear to be strongly positioned in equity.

3. Capitalization Ratio = Long term Debt / (Long term Debt +Shareholders' Equity). The capitalization ratio indicates the way the company's capital is structured by presenting the percentage of debt and the percentage of equity. It is considered to be an important measurement of leverage as part of the company's capital structure providing information on its operation and possible growth possibilities.

4. Interest Coverage Ratio = EBIT / Interest Expense. The interest coverage ratio indicates how many times earnings can cover the interest when the company is in debt. It reveals the company's capability to meet its interest obligations even in cases of financial distress and the higher the ratio, the more feasible for the company to survive in such situation.
5. Cash Flow to Debt Ratio = Operating Cash Flow / Total Debt. The cash flow to debt ratio compares the operating cash flow of a firm to its total debt, indicating the firm's ability to cover total debt payment with its cash flow generated from operating activities.

4.7.4 Operating Performance Ratios

These ratios generally measure the company's operating performance in aspects of efficient allocation of resources so as to generate revenues. They are indicators of the company's overall operating procedure and the higher the ratio the more efficiently the company is operating.

1. Inventory Turnover = Cost of Sales / Average Inventory. The inventory turnover is a measure of the number of times a company's inventory is sold and replaced over a specific period of time, used to measure the inventory management efficiency of the company.

2. Accounts Receivable Turnover = Net Sales / Average Accounts Receivable. The accounts receivable turnover expresses the number of times that accounts receivables are collected over a specific time period, quantifying the company's effectiveness in extending credit as well as collecting debts.

3. Accounts Payable Turnover = Cost of Sales / Average Accounts Payable. The accounts payable turnover evaluates how fast a company pays off its creditors, basically the number of times a company pays its payables over a specific period of time, indicating the company's collection manner.

4. Asset Turnover = Net Sales / Total Assets. The asset turnover measures the company's efficiency at using its assets in generating revenue, determining the amount of revenue that is generated from every £pound of assets a company owns.

5. Fixed-Asset Turnover =Revenue / Property, Plant & Equipment. The fixed-asset turnover is a ratio measuring the efficient use of certain non-current assets in terms of generating revenue. It indicates how efficiently and productively the company uses fixed assets such as property, plant and equipment to generate revenue from these asset investments. The higher the ratio the more productive the use of assets.

6. Revenue per Employee = Revenue/Number of Employees (Average). Revenue per employee measures the average revenue generated by each employee of the company, providing a broad indication of how expensive a company is to run, signifying how efficiently a company is operating in utilizing its employees.

7. Cash Conversion Cycle (CCC) = Days Inventory Outstanding (DIO) + Days Sales Outstanding (DSO) - Days Payable Outstanding (DPO). The cash conversion cycle expresses how long a company needs to sell inventory, to collect receivables and to pay its payables. It measures the number of days each net input £pound is tied up in the sales process before it is converted into cash through sales to customers and repaid to suppliers, indicating the company's management performance efficiency.

8. Operating Cycle (OC) = Days Inventory Outstanding (DIO) + Days Sales Outstanding (DSO). The operating cycle expresses how long a company needs between purchasing inventory and receiving cash from its sale. It measures the number of days from cash to inventory to accounts receivable to cash, indicating the company's management performance efficiency.

4.7.5 Cash Flow Indicator Ratios

The cash flow indicator ratios are another way to consider a company financially healthy as it measures its performance by the amount of cash that the company generates. Ratios calculation is made by using cash flows so as to measure the amount of cash flows generated, invested and used to pay dividends and meet other obligations.

1. Dividend Payout Ratio = Dividends per Common Share / Earnings per Common Share. The dividend payout ratio indicates the percentage of the amount of earnings that is paid to stockholders as dividends. A low dividend payout percentage suggests that the company is not paying much to shareholders as it may uses earnings to invest in capital growth.

2. Operating Cash Flows / Sales Ratio = Operating Cash Flow / Net Sales (Revenue). This ratio basically expresses in percentage the ability of the company to turn into cash its sales. It is important for the company not only to increase its revenue but also its operating cash flows.

4.7.6 Investment Valuation Ratios

This category of ratios is basically used by existing and potential investors in order to valuate an investment on a company. By using these ratios they get information and measurements on the company's share price in comparison to its earnings, cash flows and other values, suggesting if the stock is overvalued or undervalued, as well as information on the amount of dividends the company usually pays out to shareholders.

1. Price / Cash Flow Ratio = Stock price per share / Operating Cash Flow per Share. The price / cash flow ratio is used to measure the investment valuation as it calculates the market price of the stock to the amount of the generated operating cash flow per stock of the company. Operating cash flow may appear

to be more reliable than earnings in evaluation, as earnings are affected by several other factors.

2. Price / Earnings Ratio (PE) = Stock Price per Share / Earnings per Share (EPS). The P/E ratio is one of the most widely known and used ways to indicate investment valuation as it measures the company's share price in relation to the earnings the company earned per share. The higher the P/E ratio, the more expensive the share is sold as it implies a possible forecasted high growth of earnings.

3. Dividend Yield = Annual Dividend per Share / Stock Price per Share. The dividend yield is the percentage of the per share dividend divided by the price per share, expressing the annual percentage of earnings paid as dividends for a stock.

4. Price / Sales Ratio = Stock Price per Share / Net Sales per share. The price to sales ratio is a stock valuation indicator measuring the company's stock against its annual earnings, reflecting how many times investors are paying for every £pound of the company's sales and can vary substantially across industries.

5. Price / Book Value Ratio = Stock Price per Share / Shareholders' Equity per share. The Price to book value ratios expresses how many times a company's stock is trading per share compared to the company's book value per share, indicating how much is being paid for the company's assets by shareholders, comparing the company's book value to its current market price.

Ch.5. J. Sainsbury plc Financial Analysis

5.1 SBRY Income Statement Analysis

At the end of each financial year, J. Sainsbury plc publishes its financial statements so that they are available to the public and everyone interested. The financial statements are presented in sterling, rounded to the nearest million (£m). On the table below we present the company's Income Statement for the years 2006, 2007 and 2008.

Table 5.1 SBRY Income Statement – 2006, 2007, 2008.

SBRY Income Statement	**2008** £m	**2007** £m	**2006** £m
Continuing operations			
Revenue	17.837,00	17.151,00	16.061,00
Cost of sales	(16.835,00)	(15.979,00)	(14.994,00)
Gross profit	1.002,00	1.172,00	1.067,00
Administrative expenses	(502,00)	(669,00)	(839,00)
Other income	30,00	17,00	1,00
Operating profit	530,00	520,00	229,00
Finance income	83,00	64,00	30,00
Finance costs	(132,00)	(107,00)	(155,00)
Share of post-tax loss from joint ventures	(2,00)	—	—
Profit before taxation	479,00	477,00	104,00
Analysed as:			
Underlying profit before tax	488,00	380,00	267,00
Profit on sale of properties	7,00	7,00	1,00
Financing fair value movements	(4,00)	8,00	(12,00)
One-off items	(12,00)	82,00	—
	479,00	477,00	104,00
Income tax expense	(150,00)	(153,00)	(46,00)
Profit for the financial year	329,00	324,00	58,00
Attributable to:			
Equity holders of the parent	329,00	325,00	64,00
Minority interests	—	(1,00)	(6,00)
	329	324	58
Earnings per share	pence	pence	pence
Basic	19,10	19,20	3,80
Diluted	18,60	18,90	3,80
Underlying basic	19,60	14,70	—
Underlying diluted	19,10	14,50	—
Dividends per share	pence	pence	pence
Interim	3,00	2,40	—
Proposed final (not recognised as a liability at balance sheet date)	9,00	7,35	5,85

Source: Sainsbury's Annual Reports

From the above presented income statements of J. Sainsbury plc for the years 2006, 2007 and 2008, we get information on the company's operations and profit results, it's financial performance as the company's income and expenses are presented, also including it's earnings, giving as information on the company's profitability. It is clear that the company's profits are growing gradually from the year 2006 to 2007 as well as from the year 2007 to 2008. This is resulting from the fact that both revenue and operating profit are increasing.

In the beginning of 2007, the group resulted in a profit of £10 million due to the selling of a five per cent shareholding in Sainsbury's Bank plc to the Bank of Scotland (a wholly owned subsidiary of HBOS plc) for a cash consideration of £21 million, profit that has been recognised in the income statement as other income. In 2008, the Group has incurred £27 million of costs associated with the Office of Fair Trading dairy inquiry. Low operating profit for the year 2006 in comparison to the following years is a result of £51 million of Business Review costs and £63 million of IT insourcing costs, £50 million of which is included in costs of sales and £64 million included in administrative expenses.

The effective tax rate in 2008 is 31,3%, in 2007 the effective tax rate is 32,2% and in 2006 the effective tax rate is 44,2%, higher than the standard rate of corporation tax in the UK. Further information of the income statement include an increase of equity holders with the market value of the own shares at £74.9 million in 2008, £129.5 million in 2007 and £80.1 million in 2006.

The amount of dividends that the company pays out to it's stockholders is increasing year by year, as more analytically, in 2006, the final dividend proposed was 5,85 pence per share, resulting in a total final proposed dividend of £99 million. In the following year 2007, the Directors proposed a final dividend of 7,35 pence per share, resulting in a total final proposed dividend of £126 million, whereas for the following year 2008, a final dividend of 9,00 pence per share was proposed by the Directors, which resulted in a total final proposed dividend of £155 million. The proposed final dividends for all three years 2006, 2007 and 2008 have not been included as a liability in all years. In 2006, dividends relatively lower than the following years, as the company experienced costs associated with the transition process of its IT services

being migrated back to the Group, along with numerous employees of Accenture, which was previously providing the company's IT services.

5.2 SBRY Balance Sheet Analysis

The company's balance sheet is giving information on the company's liquidity and on its ability to raise cash and honor its obligators. It presents detailed categories of the company's possessed assets as well as the company's liabilities. On the table below we present the company's Balance Sheet for the years 2006, 2007 and 2008.

Table 5.2 SBRY Balance Sheet – 2006, 2007, 2008.

SBRY Balance Sheet	**2008** £m	**2007** £m	**2006** £m
Non-current assets			
Property, plant and equipment	7.424,00	7.176,00	7.060,00
Intangible assets	165,00	175,00	191,00
Investments in subsidiaries	—	—	—
Investments in joint ventures	148,00	98,00	10,00
Available-for-sale financial assets	106,00	137,00	113,00
Amounts due from Sainsbury's Bank customers	—	—	1.473,00
Other receivables	55,00	50,00	—
Deferred income tax asset	—	—	55,00
Retirement benefit asset	495,00	—	—
	8.393,00	7.636,00	8.902,00
Current assets			
Inventories	681,00	590,00	576,00
Trade and other receivables	206,00	197,00	276,00
Amounts due from Sainsbury's Bank customers and other banks	—	—	1.888,00
Derivative financial instruments	4,00	—	—
Cash and cash equivalents	719,00	1.128,00	1.028,00
	1.610,00	1.915,00	3.820,00
Non-current assets held for sale	112,00	25,00	25,00
	1.722,00	1.940,00	3.845,00
Total assets	10.115,00	9.576,00	12.747,00
Current liabilities			
Trade and other payables	(2.280,00)	(2.267,00)	(2.094,00)
Amounts due from Sainsbury's Bank customers and other banks	—	—	(2.299,00)
Short-term borrowings	(118,00)	(373,00)	(253,00)
Derivative financial instruments	(6,00)	(2,00)	(10,00)
Taxes payable	(191,00)	(65,00)	(63,00)
Provisions	(10,00)	(14,00)	(91,00)
	(2.605,00)	(2.721,00)	(4.810,00)
Net current liabilities	(883,00)	(781,00)	(965,00)

Non-current liabilities			
Other payables	(89,00)	(33,00)	(30,00)
Amounts due from Sainsbury's Bank customers and other banks	—	—	(1.009,00)
Long-term borrowings	(2.084,00)	(2.090,00)	(2.178,00)
Derivative financial instruments	(18,00)	(43,00)	(2,00)
Deferred income tax liability	(321,00)	(168,00)	—
Provisions	(63,00)	(69,00)	(95,00)
Retirement benefit obligations	—	(103,00)	(658,00)
	(2.575,00)	(2.506,00)	(3.972,00)
	(5.180,00)	(5.227,00)	(8.782,00)
Net assets	4.935,00	4.349,00	3.965,00
Equity			
Called up share capital	499,00	495,00	489,00
Share premium account	896,00	857,00	782,00
Capital redemption reserve	680,00	670,00	668,00
Other reserves	494,00	143,00	(1,00)
Retained earnings	2.366,00	2.184,00	1.948,00
Total equity	4.935,00	4.349,00	3.965,00

Source: Sainsbury's Annual Reports

From the above presented balance sheets of J. Sainsbury plc for the years 2006, 2007 and 2008, we get detailed information on the company's assets, current and non-current, the company's liabilities, current and non-current as well as information on the company's equity.

In the beginning of 2007, the Company sold a five per cent shareholding in Sainsbury's Bank plc to the Bank of Scotland (a wholly owned subsidiary of HBOS plc). Consequently, the Bank became a 50:50 joint venture between the Company and HBOS plc and as a result of this action a joint venture investment of £88 million is presented in the balance sheet.

In 2006, an additional one off contribution of £350 million by utilising funds is made, and the one off £350 million contribution is paid into the pension schemes in two tranches of £110 million and of £240 million in cash in March 2006 and May 2006 respectively. The company's retirement benefit obligations relate to two funded defined benefit schemes, the J Sainsbury Pension and Death Benefit Scheme ("JSPDBS") and the J Sainsbury Executive Pension Scheme ("JSEPS") and an unfunded pension liability relating to senior employees. The defined benefit schemes were subject to a triennial valuation in 2006 with the results of this valuation approved in 2007, leading to the retirement benefit obligations calculated on

a consistent with this basis valuation in 2008. The restructuring provisions of £97 million include employee and pension related costs of £37 million as part of the Business Review and IT insourcing costs of £60 million. The disposal provisions of £26 million relate to indemnities arising from the disposal of subsidiaries, the timing of utilisation of which is uncertain.

On 24 March 2006, the Group raised £2,071 million of new long-term financing secured on 127 of its supermarket properties. Simultaneously, the Company repurchased its unsecured medium-term notes of £1,701 million. The Group entered into three interest rate swaps to convert £782 million of the £1,203 million loan from fixed to floating rates of interest, transaction that has been accounted for as a fair value hedge. Property, plant and equipment of the 127 supermarket properties, with a net book value of £2,515 million are pledged as security for the new long-term financing obtained in 2006.

On the same financial year, properties of £25 million held in the retail operations division comprise the assets held for sale which is expected to occur in the next financial year beginning 26 March 2006. In 2007 the assets held for sale of £25 million consist of properties held in the retail operations division, sale is expected to occur in the next financial year beginning 25 March 2007. Non-current assets relating to properties held in the retail operations division of £112 million comprise the assets held for sale in 2008 and the sale of these assets is expected to occur in the next financial year beginning 23 March 2008. Furthermore, the market value of the own shares was £80,1 million in 2006, £74,9 million in 2007 and £129,5 million in the financial year 2008.

5.3 SBRY Cash Flow Statement Analysis

Cash flow statements provide information on the company's activities, categorizing them into operating activities, financing activities and investing activities. The cash flow statement provides detailed information on the inflows and outflows of the company from and to investments and investors, operating procedures as well as financing activities. On the table below we present the company's Cash Flow Statement for the years 2006, 2007 and 2008.

Table 5.3 SBRY Cash Flow Statement – 2006, 2007, 2008.

SBRY Cash Flow Statement	**2008** £m	**2007** £m	**2006** £m
Cash flows from operating activities			
Cash generated from operations	998,00	830,00	780,00
Interest paid	(123,00)	(95,00)	(159,00)
Corporation tax (paid)/received	(64,00)	9,00	3,00
Net cash from operating activities	811,00	744,00	624,00
Cash flows from investing activities			
Purchase of property, plant and equipment	(973,00)	(778,00)	(549,00)
Purchase of intangible assets	(6,00)	(7,00)	(6,00)
Proceeds from disposal of property, plant and equipment	198,00	106,00	164,00
Acquisition of and investment in subsidiaries, net of cash acquired	(7,00)	(3,00)	(6,00)
Investment in joint ventures	(31,00)	—	—
Proceeds from part disposal of Sainsbury's Bank	—	21,00	—
Cash disposed on part disposal of Sainsbury's Bank	—	(33,00)	—
Cost of disposal of operations	(1,00)	(1,00)	(13,00)
Interest received	29,00	15,00	6,00
Dividends received	—	—	—
Net cash from investing activities	(791,00)	(680,00)	(404,00)
Cash flows from financing activities			
Proceeds from issuance of ordinary shares	43,00	81,00	22,00
Capital redemption	(10,00)	(2,00)	(9,00)
Repayment of short-term borrowings	—	(53,00)	(348,00)
Repayment of long-term borrowings	(36,00)	(22,00)	(1,70)
Proceeds from short-term borrowings	—	—	50,00
Proceeds from long-term borrowings	—	—	2,06
Debt restructuring costs	—	(2,00)	(22,00)
Repayment of capital element of obligations under finance lease borrowings	—	—	(1,00)
Interest elements of obligations under finance lease payments	(3,00)	(3,00)	(3,00)
Dividends paid	(178,00)	(140,00)	(131,00)
Issue of loan from minority shareholder	—	—	9,00
Net cash from financing activities	(184,00)	(141,00)	(78,00)
Net (decrease)/increase in cash and cash equivalents	(164,00)	(77,00)	142,00
Opening cash and cash equivalents	765,00	842,00	700,00
Cash attributable to discontinued operations	—	—	—
			700,00
Effects of foreign exchange rates	—	—	—
Closing cash and cash equivalents	601,00	765,00	842,00

Source: Sainsbury's Annual Reports

The cash flow statements for the years 2006, 2007 and 2008 include detailed information on the company's net cash from operating activities, investing activities as well as financing activities.

Analytically, £110 million of cash in 2006 and £240 million of cash in 2007 paid into the defined benefit pension schemes are included in the cash flow statement. In 2005, the Group acquired 100 per cent of the shares in SL Shaw Ltd for a total consideration of £6 million and in 2006 the Group acquired 100 per cent of the shares in Culcheth Provision Stores Ltd for a total cash consideration of £3 million, net of cash acquired. The goodwill balance above relates to the Group's acquired subsidiaries - Bells Stores Ltd, Jacksons Stores Ltd, JB Beaumont Ltd, SL Shaw Ltd and Culcheth Provision Stores Ltd - and is allocated to the respective cash-generating units within the retail segment. To calculate the cash-generating units value in use, the company's Board approved cash flows for the following financial year are assumed to inflate at the long-term average growth rate for the UK food retail sector and are discounted at ten per cent over a 25 year period. Based on the operating performance of the respective cash-generating units, no impairment loss was deemed necessary in the financial years 2006 and 2007.

In 2006, a final dividend of 5.85 pence per share was proposed by the Directors, resulting in a total final proposed dividend of £99 million. A final dividend of 7.35 pence per share was proposed by the Directors in 2007, resulting in a total final proposed dividend of £126 million, whereas in 2008, the Directors proposed a final dividend of 9.00 pence per share, which resulted in a total final proposed dividend of £155 million.

In 2006, the B shares have been classified as short-term borrowings and preference dividends paid in respect of B shares are shown as part of operating activities in the cash flow statement. Preference B shares were issued on 12 July 2004 and a preference dividend calculated at the rate of 75 per cent of the six-month LIBOR is paid in respect of outstanding B shares, until their redemption, which is fixed at 35 pence per B share. The redemption dates are 18 January and 18 July each year until 18 July 2007. The preference dividend rate for the financial year 2006 is 3.43 per cent and total dividend paid in respect of B shares amounted to £1 million. The preference

dividend rate for 2007 is 4.30 per cent and total preference dividend paid in respect of B shares amounted to £0.4 million. All remaining B shares were redeemed on 18 July 2007 at the book value of £10 million and total preference dividends paid in respect of B shares amounted to £0.2 million.

5.4 SBRY Common Size Analysis

By transforming the amounts of pounds in the balance sheet into a percentage base analysis, we get a better idea on the year-to-year changes in the accounts. With a total of 100%, the percentage of each subcategory of the account is presented, indicating the percentage of the main subcategories that compose the account.

Table 5.4 SBRY Common Size Analysis – 2006, 2007, 2008.

SBRY Common Size Analysis	**2008** (%)	**2007** (%)	**2006** (%)
Non-current assets			
Property. plant and equipment	73,40	74,94	55,39
Intangible assets	1,63	1,83	1,50
Investments in subsidiaries	—	—	—
Investments in joint ventures	1,46	1,02	0,08
Available-for-sale financial assets	1,05	1,43	0,89
Other receivables	0,54	0,52	—
Deferred income tax asset	—	—	0,43
Retirement benefit asset	4,89	—	
	82,98	79,74	69,84
Current assets			
Inventories	6,73	6,16	4,52
Trade and other receivables	2,04	2,06	2,17
Derivative financial instruments	0,04	—	—
Cash and cash equivalents	7,11	11,78	8,06
	15,92	20,00	29,97
Non-current assets held for sale	1,11	0,26	0,20
	17,02	20,26	30,16
Total assets	100,00	100,00	100,00
Current liabilities			
Trade and other payables	44,02	43,37	23,84
Short-term borrowings	2,28	7,14	2,88
Derivative financial instruments	0,12	0,04	0,11
Taxes payable	3,69	1,24	0,72
Provisions	0,19	0,27	1,04
	50,29	52,06	54,77
Net current liabilities	17,05	14,94	10,99
Non-current liabilities			

Other payables	1,72	0,63	0,34
Long-term borrowings	40,23		24,80
Derivative financial instruments	0,35	0,82	0,02
Deferred income tax liability	6,20	3,21	
Provisions	1,22	1,32	1,08
Retirement benefit obligations		1,97	7,49
	49,71	47,94	45,23
	100,00	100,00	100,00
Net assets	48,79	45,42	31,11
Equity			
Called up share capital	10,11	11,38	12,33
Share premium account	18,16	19,71	19,72
Capital redemption reserve	13,78	15,41	16,85
Other reserves	10,01	3,29	-0,03
Retained earnings	47,94	50,22	49,13
Total equity	100,00	100,00	100,00

5.5 SBRY Trend Analysis

The trend analysis is another transformation of the financial statements where there is a preselected base period, where changes are presented in percentages referred to the base period. The base period used is the year 2005 and the percentages of the years 2006, 2007 and 2008 indicate changes compared to the base period. Note that in certain accounts there was no available information for the base year thus transformation in percentage was not possible, whereas in some accounts base year 2006 was used for calculating trend.

Table 5.5 SBRY Trend Analysis – 2006, 2007, 2008. Base year 2005.

SBRY Trend Analysis	**2008** (%)	**2007** (%)	**2006** (%)
Non-current assets			
Property. plant and equipment	104,92	101,41	99,77
Intangible assets	81,28	86,21	94,09
Investments in subsidiaries	—	—	—
Investments in joint ventures	740,00	490,00	50,00
Available-for-sale financial assets	93,81	121,24	100,00
Other receivables	—	—	—
Deferred income tax asset	—	—	—
Retirement benefit asset	100,00		
	94,28	85,78	100,00
Current assets			
Inventories	121,82	105,55	103,04
Trade and other receivables	64,58	61,76	86,52

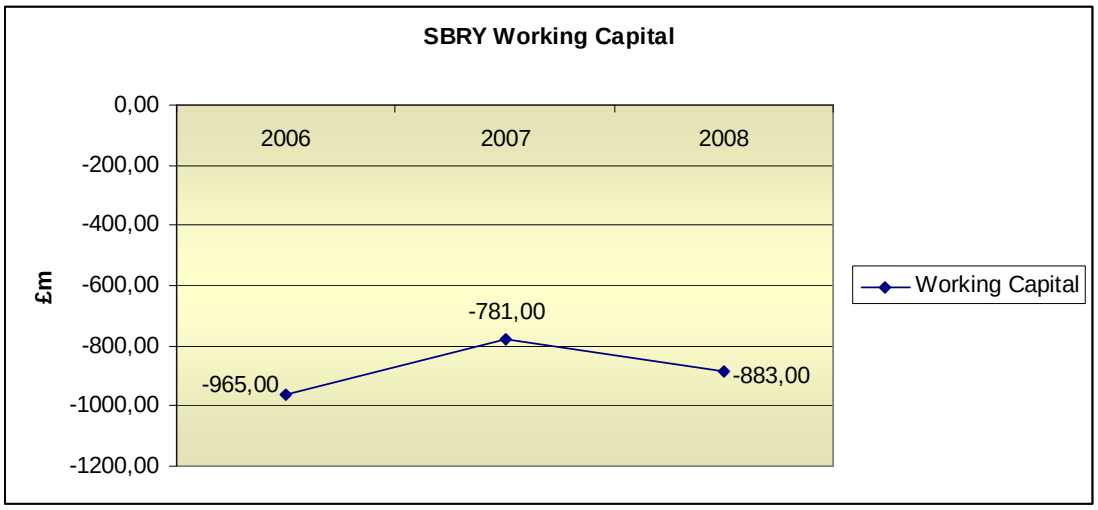
Derivative financial instruments	—	—	—
Cash and cash equivalents	101,84	159,77	145,61
	55,50	66,01	131,68
Non-current assets held for sale	128,74	28,74	28,74
	57,63	64,93	128,68
Total assets	87,06	82,42	109,72
Current liabilities			
Trade and other payables	108,93	108,31	100,05
Short-term borrowings	33,33	105,37	71,47
Derivative financial instruments	—	—	—
Taxes payable	347,27	118,18	114,55
Provisions	14,29	20,00	130,00
	51,73	54,03	95,51
Net current liabilities	43,12	38,13	47,12
Non-current liabilities			
Other payables	287,10	106,45	96,77
Long-term borrowings	116,23	116,56	121,47
Derivative financial instruments	900,00	2150,00	100,00
Deferred income tax liability	—	—	—
Provisions	72,41	79,31	109,20
Retirement benefit obligations	—	19,22	122,76
	104,25	101,46	160,81
	69,01	69,64	117,00
Net assets	120,01	105,76	96,43
Equity			
Called up share capital	80,48	79,84	78,87
Share premium account	117,74	112,61	102,76
Capital redemption reserve	124,31	122,49	122,12
Other reserves	567,82	164,37	-1,15
Retained earnings	117,59	108,55	96,82
Total equity	120,01	105,76	96,43

5.6 SBRY Working Capital (WC) Analysis

Working Capital (WC) is a way to measure a company's efficiency as well as its short-term financial health. Working capital represents the ability of the company to pay off its short-term liabilities and expenses based on its available current assets. Working capital is calculated as currents assets minus current liabilities and if the result is positive it means that the company it able to pay off its short-term liabilities whereas negative working capital means that a company is currently unable to meet its short-term liabilities using its current assets.

Working Capital = Current Assets − Current Liabilities

Graph 5.1 SBRY Working Capital



Sainsbury's working capital is negative, suggesting that the company is currently unable to meet its short-term liabilities with its current assets as its debts outweigh its current assets. In 2006, the company's working capital was estimated at £m-965,00 whereas in 2007 increased at £m-781,00 indicating that the company may be operating in a slow collection manner yet, in 2008 working capital decreased at £m-883,00.

Working capital is important to investors as it provides information on the company's operating efficiency and affects their decision about investing in the company or not. Although Sainsbury is experiencing a working capital deficit, it is important to notice that grocery stores have high inventory turns and do business on a cash basis, meaning that since cash is generated quickly, on a daily basis, it is not considered necessary to have large amount of working capital available.

5.7 SBRY Financial Ratios Analysis

5.7.1 Liquidity Ratios

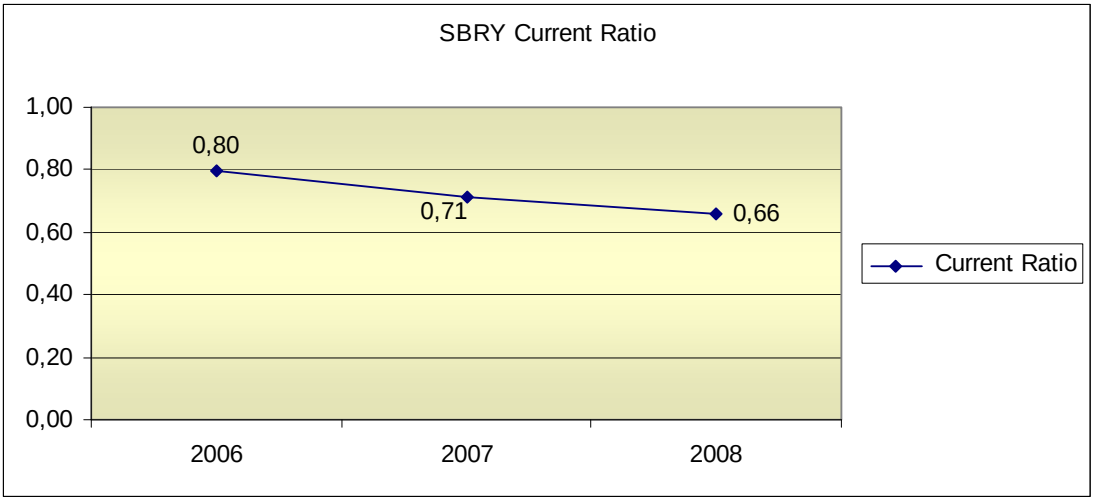
Liquidity ratios indicate the company's ability to liquidate its assets when necessary so as to pay its creditors and obligators. They are a way to measure the extent to which the company is able to turn its assets into cash and continue operating when

cash is not enough to cover the current obligations. In general, the higher the value of the liquidity measures, the safer the company it is to cover its debts.

Table 5.6 SBRY Liquidity Ratios

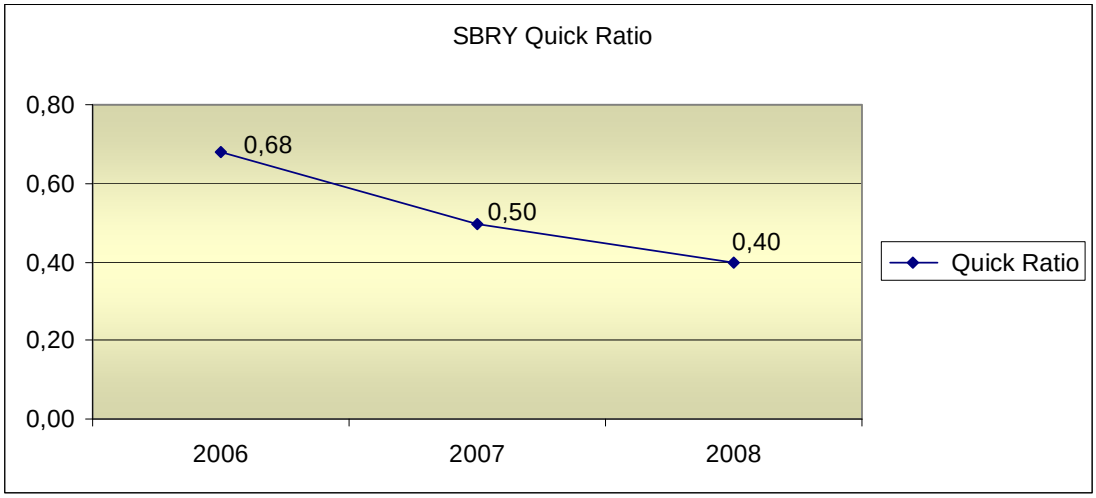
SBRY LIQUIDITY RATIOS	2006	2007	2008
Current Ratio	0,80	0,71	0,66
Quick Ratio	0,68	0,50	0,40
Cash Ratio	0,21	0,41	0,28
Defensive Interval Ratio	29,68	28,60	19,25

Graph 5.2 SBRY Current Ratio



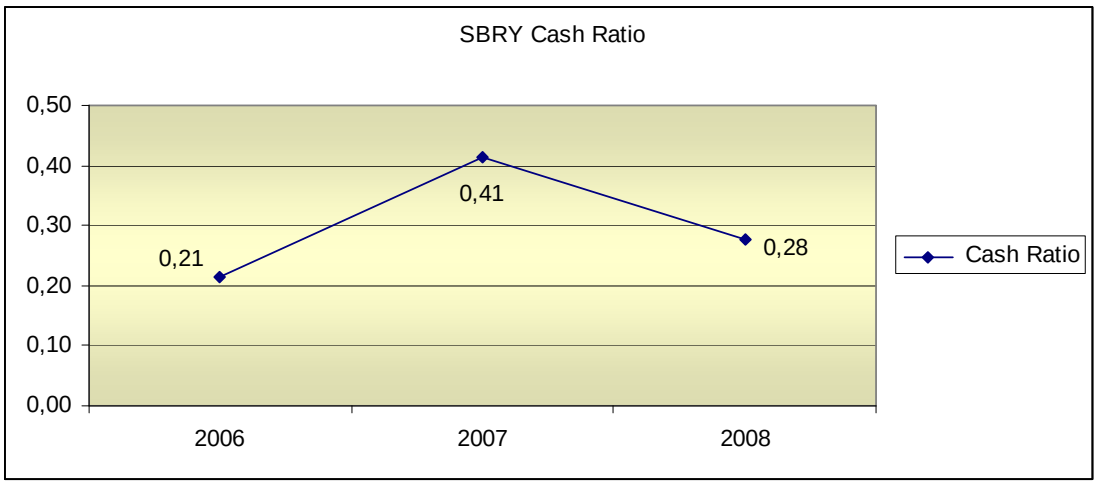
The current ratio indicates the ability of the company to manage its short-term obligations if they come due at that specific time, by liquidating its assets. Sainsbury's current ratio is lower than one (1), suggesting that the company may not be able to meet its obligations, however that does not mean it can necessarily go bankrupt. In 2006, current ratio is 0,80 decreasing at 0,71 in 2007 and yet experiencing another decrease in 2008 at 0,66. These figures suggest that if the company's current liabilities in 2008 were £100, its current assets were only £66. Low current ratio was expected since the company is experiencing working capital deficit and although its current liabilities are decreasing from 2006 to 2008 since the company reduced its short-term borrowings, current assets are also decreasing on a faster rate.

Graph 5.3 SBRY Quick Ratio



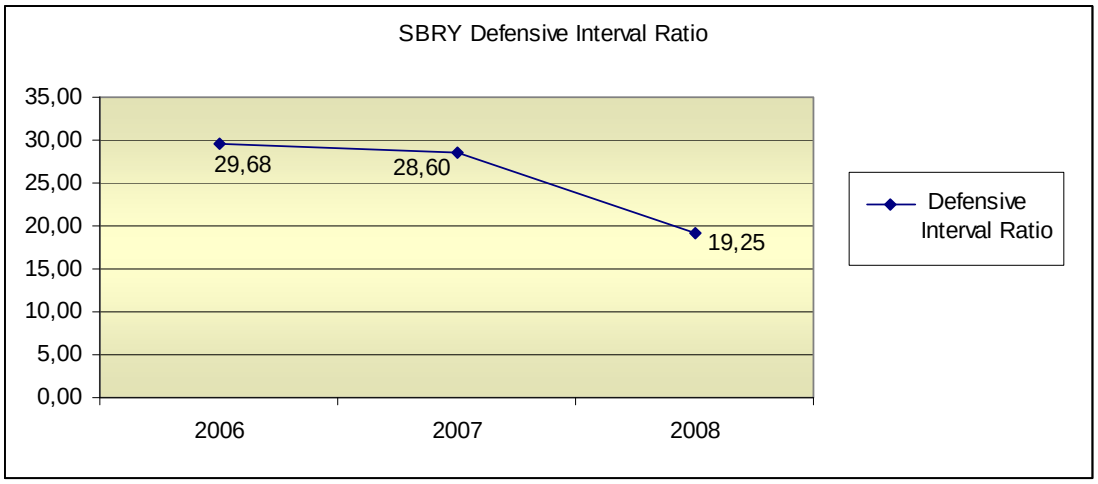
The quick ratio is similar to the current ratio, yet more conservative as its calculation includes certain elements of current assets so as to measure the company's capability to satisfy its short-term obligations, indicating the relationship between the amounts of assets that can quickly be turned into cash versus the amount of current liabilities. Quick ratio is 0,68 in 2006, decreasing at 0,50 in 2007 and yet experiencing another decrease in 2008 at 0,40. Although suggesting a less effective liquidity capability as well as a worse financial position, the decline in the quick ratio may have resulted from investments made in long-term activities in order to ensure profitability and increase market share.

Graph 5.4 SBRY Cash Ratio



Cash ratio is considered to be the stringent as it measures the ability of a business to repay its current liabilities by only using its cash and cash equivalents and nothing else, excluding inventories and prepaid items for which cash cannot be obtained immediately. Cash ratio is rather low in 2006 at 0,21 however increased in 2007 at 0,41 due to a decrease in the company's current liabilities however in 2008 the cash ratio decreased at 0,28 as there was a decrease in the company's cash and cash equivalents. Although the cash ratio is low, grocery stores generate cash on a daily basis thus, it is not considered to be rather stressful.

Graph 5.5 SBRY Defensive Interval Ratio



The defensive interval ratio measures the period of time that the company can operate using only current liquid assets without having to access long-term assets, indicating the company's defensive assets to its daily expenses. In 2006, the defensive interval was 29,68 days, decreasing in 2007 at 28,60 days and experiencing a higher decrease in 2008 dropping at 19,25 days as a result of a decrease in cash and cash equivalents.

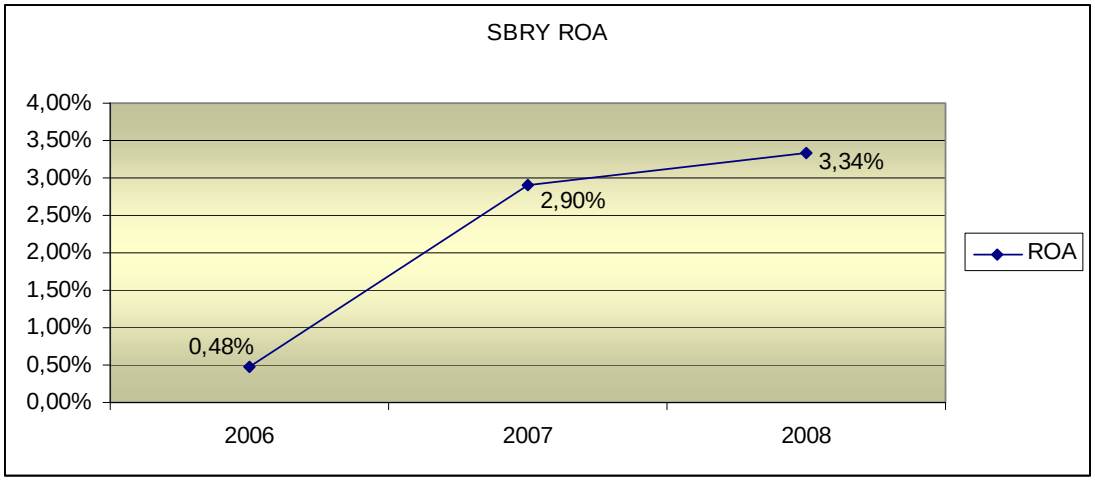
5.7.2 Profitability Ratios

Profitability ratios are very important for a company as they measure its overall performance and efficiency in terms of profit. A company's ability to generate earnings and achieve long-term sustainable profitability levels is important for existing and potential investors and can be shown through profitability ratios.

Table 5.7 SBRY Profitability Ratios

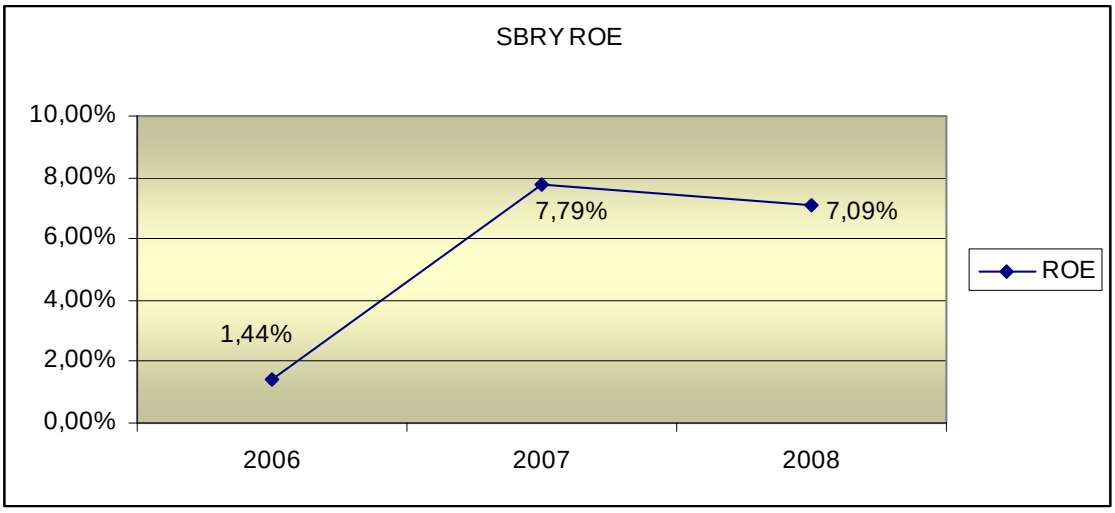
SBRY PROFITABILITY RATIOS	2006	2007	2008
ROA	0,48%	2,90%	3,34%
ROE	1,44%	7,79%	7,09%
Du Pont ROE	1,46%	7,45%	6,67%
Gross Profit Margin	6,64%	6,83%	5,62%
Operating Profit Margin	1,43%	3,03%	2,97%
Pretax Profit Margin	0,65%	2,78%	2,69%
Net Profit Margin	0,36%	1,89%	1,84%
Effective Tax Rate	44,23%	32,08%	31,32%

Graph 5.6 SBRY ROA



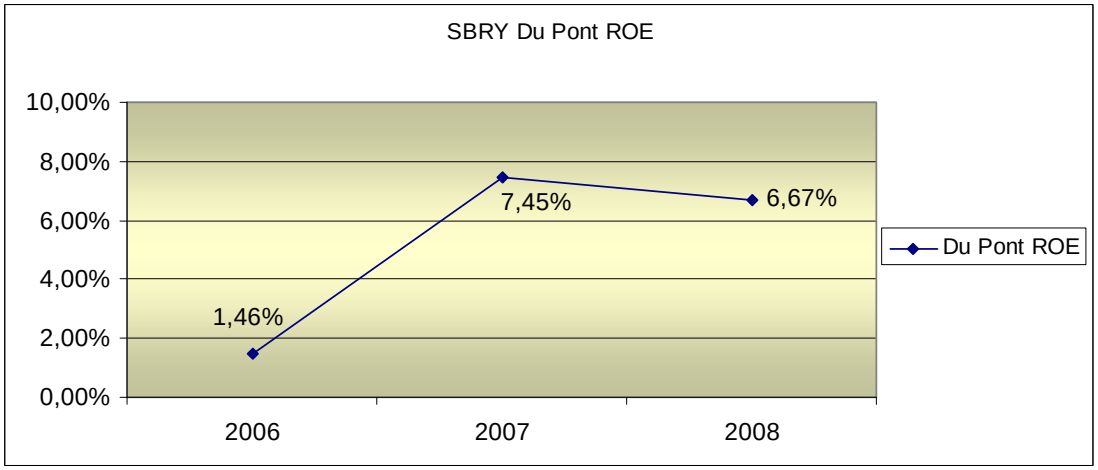
Return on assets indicates the degree of a company's profitability relatively to its assets, providing information on how much profit a company generates for each £1 in assets. In 2006 ROA is 0,48%, highly increasing in 2007 at 2,90% and continuing to grow in 2008 at 3,34%. This increase was due to both an increase in the company's net income and a decrease in total assets, especially on current assets, accounts receivables. The company is improving its financial health over the years, presenting greater ability to allocate its resources wisely and manage to generate higher earnings on smaller investments.

Graph 5.7 SBRY ROE



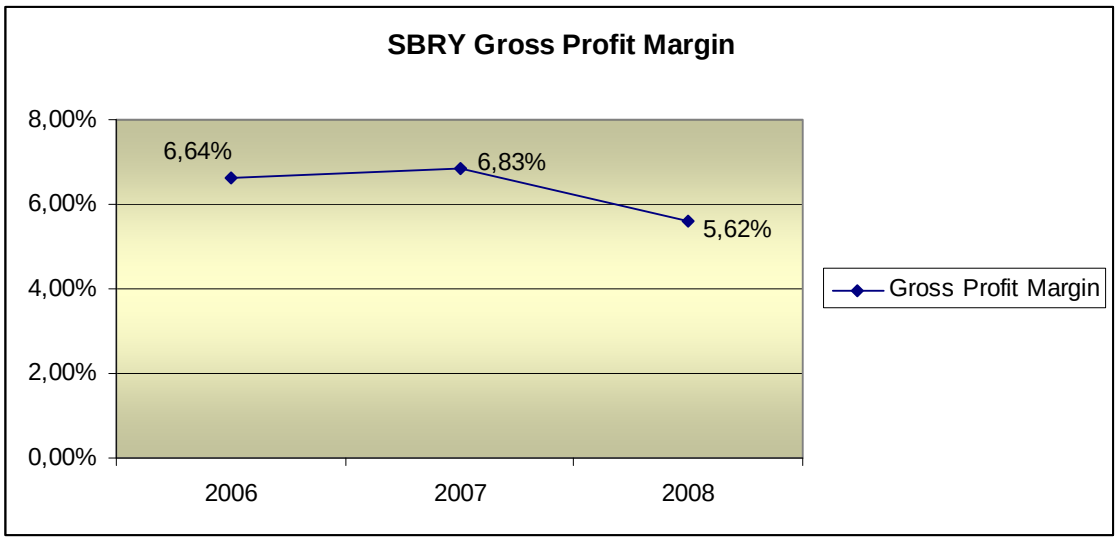
Return on equity provides information to the stockholders on how profitable their investment in the specific company is, by indicating the amount of earnings a company generates in relation to the amount of money invested in the company's stocks by its shareholders. ROE is 1,44% in 2006, highly increasing in 2007 at 7,79% and then slightly decreasing in 2008 at 7,09%. The high increase in 2007 is a result of the company's increase in net income, as shareholders' equity is not so much altered, indicating that investments on the company are becoming more profitable suggesting higher returns on their investments and potential higher dividends to investors.

Graph 5.8 SBRY Du Pont ROE



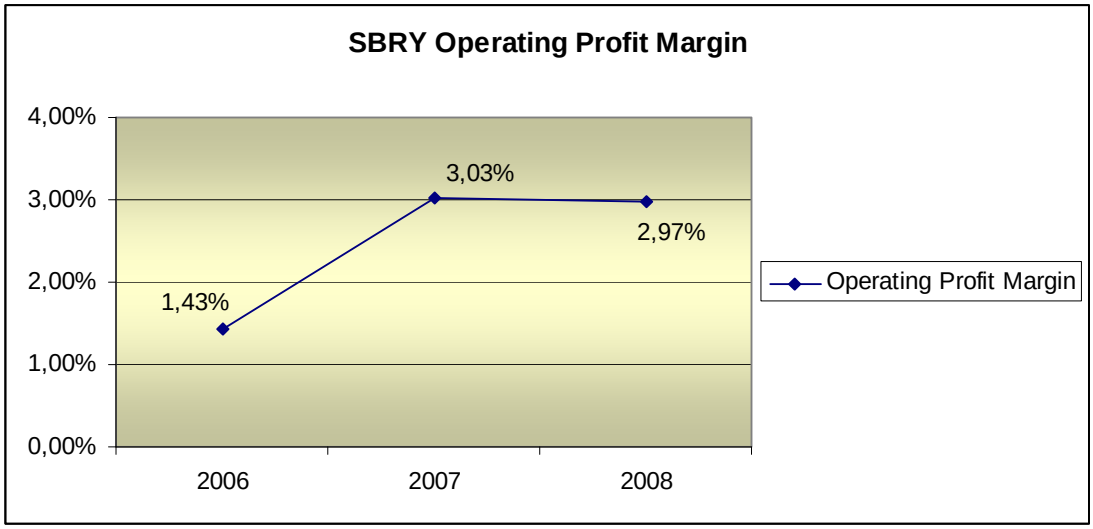
The Du Pont ROE ratio is basically an expression which breaks down ROE into three parts, operating efficiency measured by net profit margin, asset use efficiency measured by asset turnover and financial leverage measured by equity multiplier. The Du Pont ROE is 1,46% in 2006, increasing in 2007 at 7,45% and decreasing in 2008 at 6,67%.

Graph 5.9 SBRY Gross Profit Margin



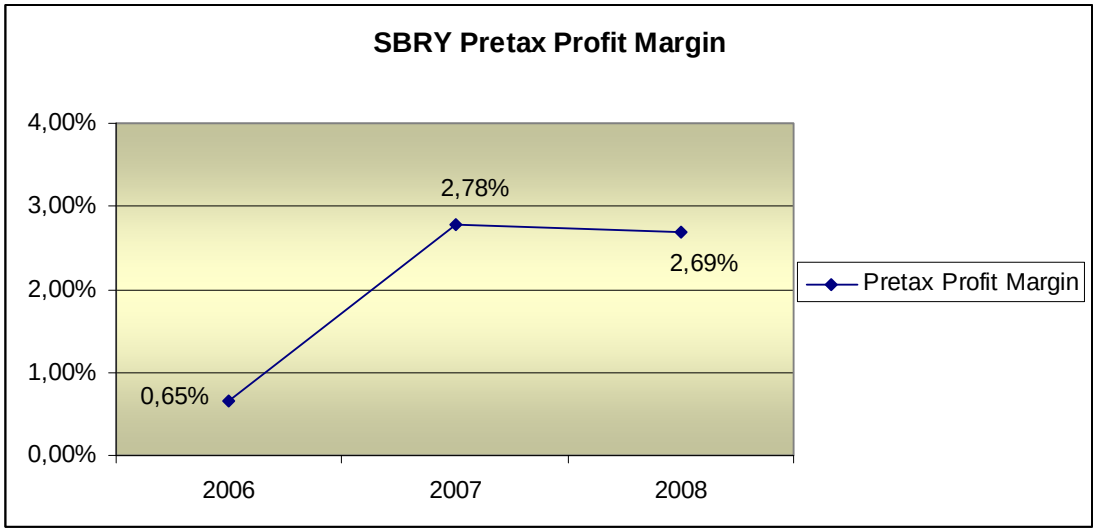
The gross profit margin indicates if the company is financially healthy and has generated enough revenues to surplus the cost of sold products. In 2006 gross profit margin was at 6,64%, increasing in 2007 at 6,83% and decreasing in 2008 at 5,62%. The decline in 2008 is a result of a reduction in gross profit due to an increase in cost of sales. This percentage indicates that in 2008, the company estimated a 5,62% of sales available for expenses and profit after cost from sales was deducted.

Graph 5.10 SBRY Operating Profit Margin



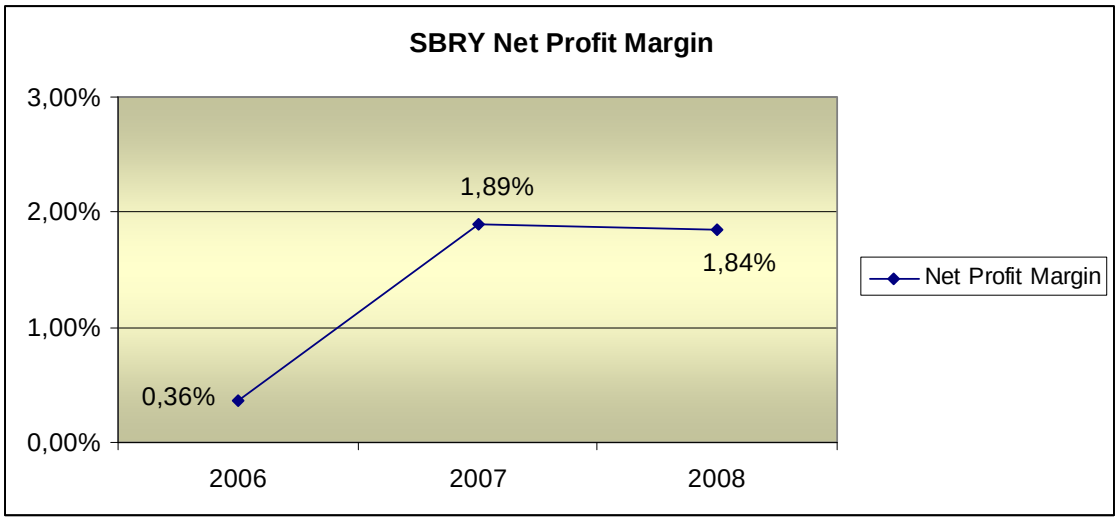
This ratio is used to measure the amount of revenue a company still holds after having paid for production variable costs. It is important to get a satisfactory operating profit margin which implies that the company is able to meet its other obligations concerning operating procedures such as its fixed costs. In 2006 operating profit margin was at 1,43%, increasing in 2007 at 3,03% and slightly decreasing in 2008 at 2,97%, generally indicating that the company's production costs were decreased. This percentage indicates that in 2008, the company still holds 2,97% of sales available for expenses and profit after having paid for production variable costs.

Graph 5.11 SBRY Pretax Profit Margin



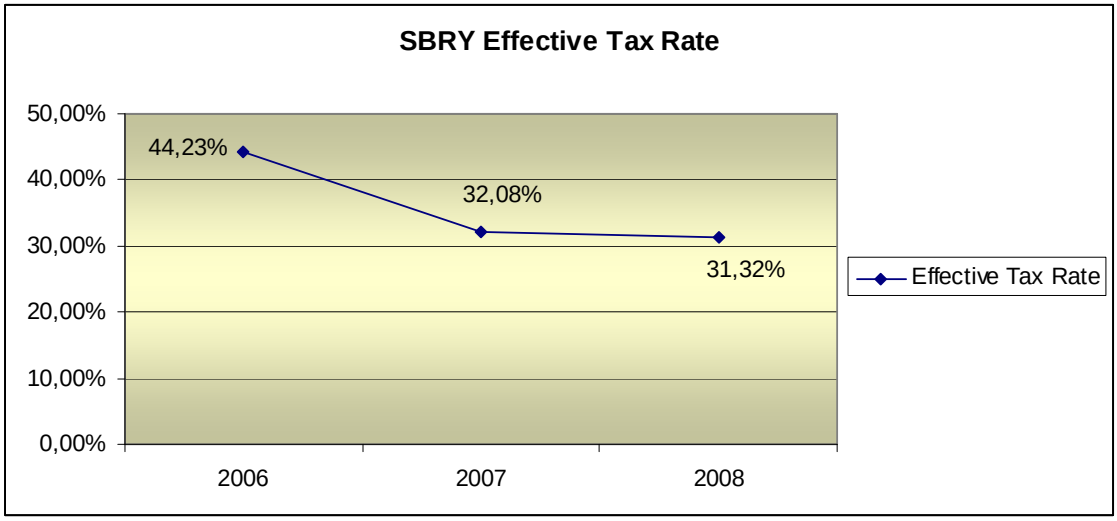
Pretax profit margin is used to measure the amount of revenue a company still holds based on the company's profit before taxes. In 2006 pretax profit margin was at 0,65%, highly increasing in 2007 at 2,78% and slightly decreasing in 2008 at 2,69%, generally indicating that the company's expenses have decreased. This percentage indicates that in 2008, the company still holds 2,69% of sales available for profit , yet before taxes.

Graph 5.12 SBRY Net Profit Margin



The net profit margin is the amount of net profit generated by the company as a percent of the sales generated basically measuring how much of each £pound earned by the company is translated into profits, indicating how effective a company is at controlling its costs. In 2006 net profit margin was at 0,36% highly increasing in 2007 at 1,89% and slightly decreasing in 2008 at 1,84%. The company has low margins suggesting high costs and indicating low margin of safety, as a decrease in sales may lead to losses.

Graph 5.13 SBRY Effective Tax Rate



The effective tax rate represents the amount of tax the company pays given as the rate the company pays on its taxable income. In 2006, the effective tax rate was 44,23%, decreasing in 2007 at 32,08% and decreasing again in 2008 at 31,32%. This decrease is a result of the government decreasing the rate of corporation tax by 2% giving the opportunity for higher profits.

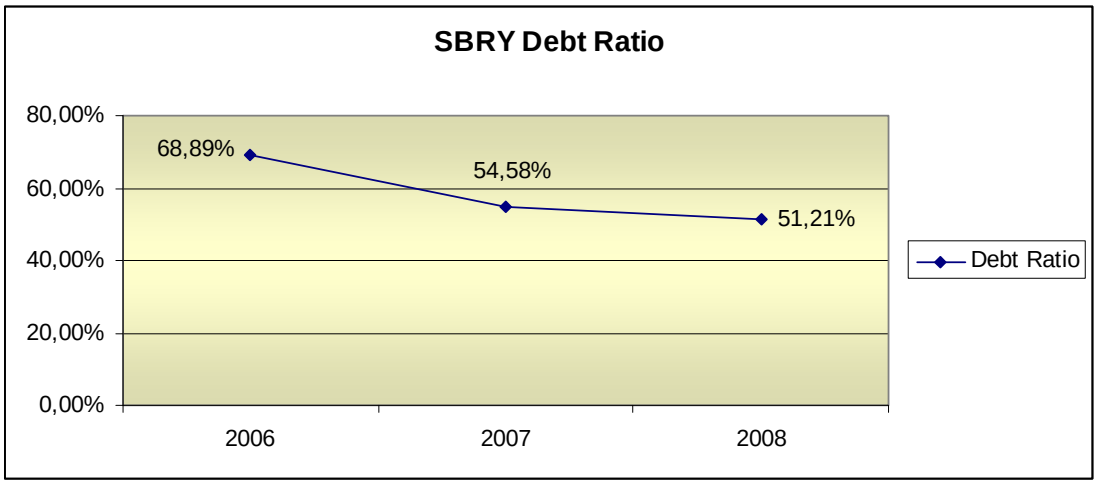
5.7.3 Debt Ratios

The category of debt ratios is very important as these ratios generally present an overall idea of the company's amount of debt and if the company is high levered or not, indicating the need to generate more revenue so as to not go bankrupt.

Table 5.8 SBRY Debt Ratios

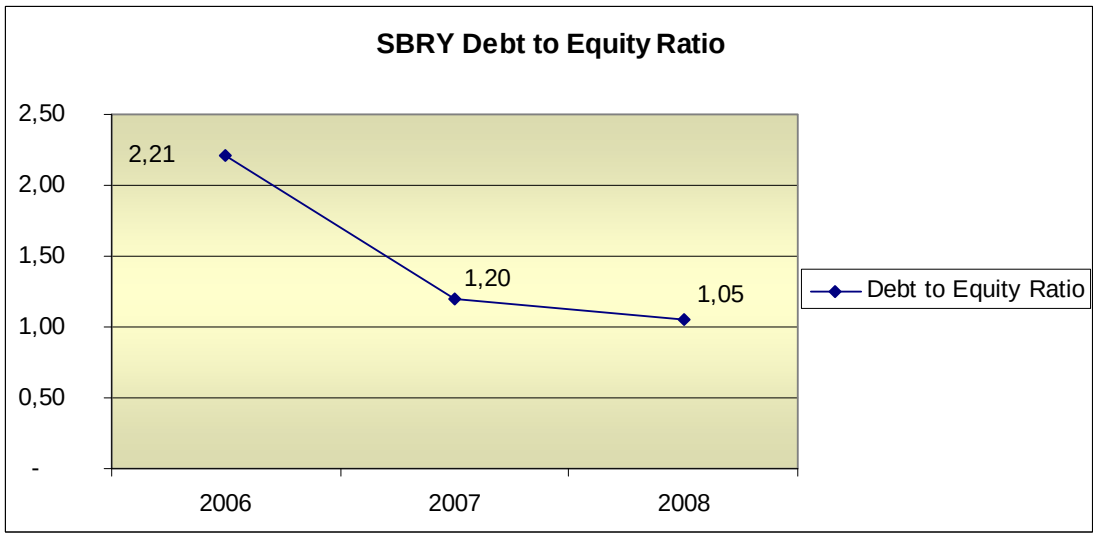
SBRY DEBT RATIOS	2006	2007	2008
Debt Ratio	68,89%	54,58%	51,21%
Debt to Equity Ratio	2,21	1,20	1,05
Capitalization Ratio	50,04%	36,56%	34,29%
Interest Coverage Ratio	2,26	3,12	3,19
Cash Flow to Debt Ratio	0,16	0,30	0,31

Graph 5.14 SBRY Debt Ratio



The debt ratio is basically a way to measure how much leverage the company uses and the higher the ratio, the more levered the company is. The debt ratio in 2006 is 68,89% decreasing in 2007 at 54,58% and decreasing again in 2008 at 51,21%, indicating that in 2008, 51,21% of the company's debt is relative to its assets. Sainsbury has managed to reduce its debt ratio although it is still high however large retail companies get high debt ratios though without suggesting financial problems.

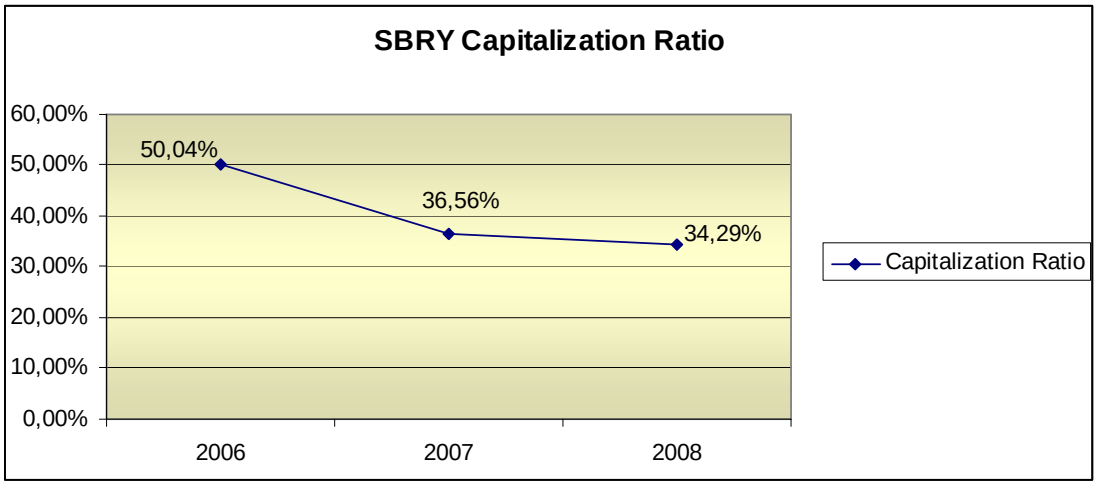
Graph 5.15 SBRY Debt to Equity Ratio



The debt to equity ratio measures the amount of all kinds of creditors' liabilities as opposed to the amount of the shareholders' equity. The debt to equity ratio in 2008 is 2,21, decreasing in 2008 at 1,20 and decreased again in 2008 at 1,05 suggesting that in 2008 the creditors have supplied £1,05 for each £1 supplied by the stockholders.

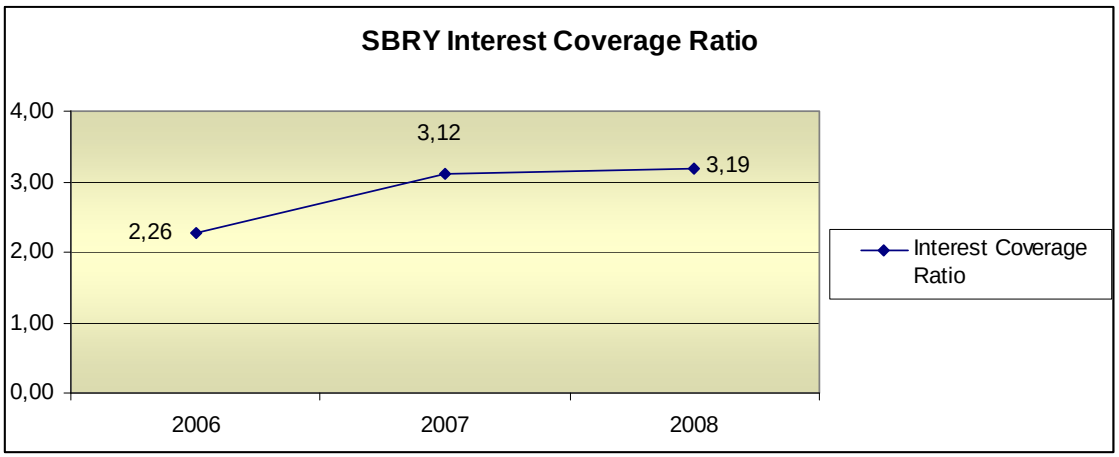
The company has managed to reduce significantly its debt to equity ratio by both decreasing total liabilities as well as increasing equity, becoming less levered over the years strongly positioning its equity.

Graph 5.16 SBRY Capitalization Ratio



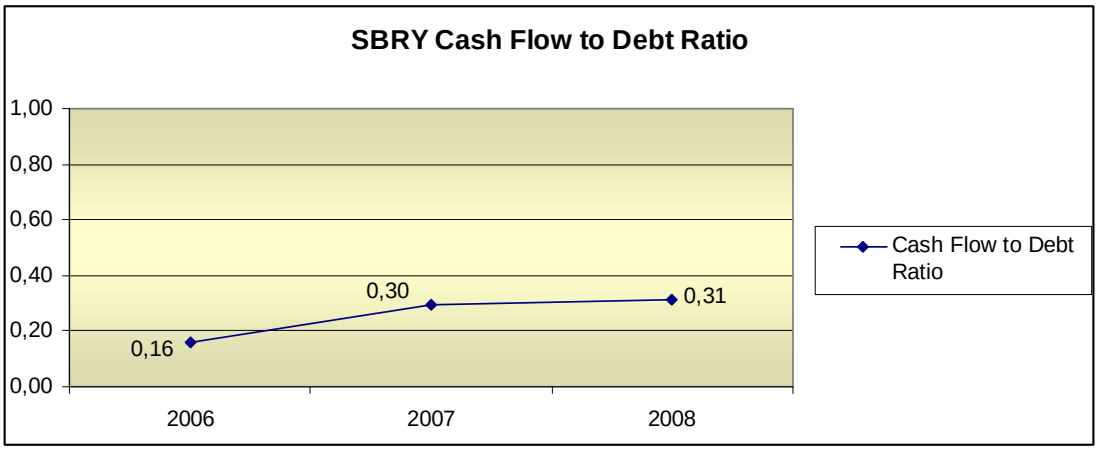
The capitalization ratio indicates the way the company's capital is structured by presenting the percentage of debt and the percentage of equity. It is considered to be an important measurement of leverage as part of the company's capital structure providing information on its operation and possible growth possibilities. In 2006 capitalization ratio was 50,04% decreasing in 2007 at 36,56% and decreasing in 2008 at 34,29%. The decrease of the capitalization ratio over the years is due to the decrease in long-term borrowings as well an increase in the company's equity, indicating that the company managed to reduce its debt compared to its equity .

Graph 5.17 SBRY Interest Coverage Ratio



The interest coverage ratio indicates how many times earnings can cover the interest when the company is in debt. It reveals the company's capability to meet its interest obligations even in cases of financial distress. In 2006 interest coverage ratio was 2,26% increasing in 2007 at 3,12% and increasing again in 2008 at 3,19%. The increase of interest coverage ratio indicates that the company managed to improve its paying interest becoming more feasible for the company to survive financial distress.

Graph 5.18 SBRY Cash Flow to Debt Ratio



The cash flow to debt ratio compares the operating cash flow of a firm to its total debt, indicating the firm's ability to cover total debt payment with its cash flow generated from operating activities. In 2006 the cash flow to debt ratio was 0,16 increasing in 2007 at 0,30 and again increasing in 2008 at 0,31. The company has managed over the years to improve its ability to cover total debt with its yearly cash flow from operations.

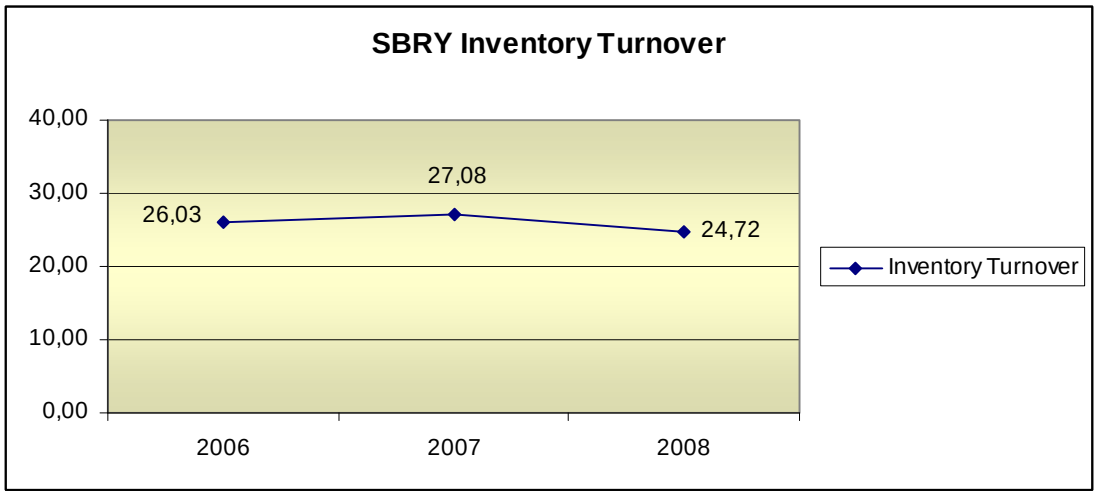
5.7.4 Operating Performance Ratios

The company's operating performance in aspects of efficient allocation of resources so as to generate revenues is measured by the operating performance ratios.

Table 5.9 SBRY Operating Performance Ratios

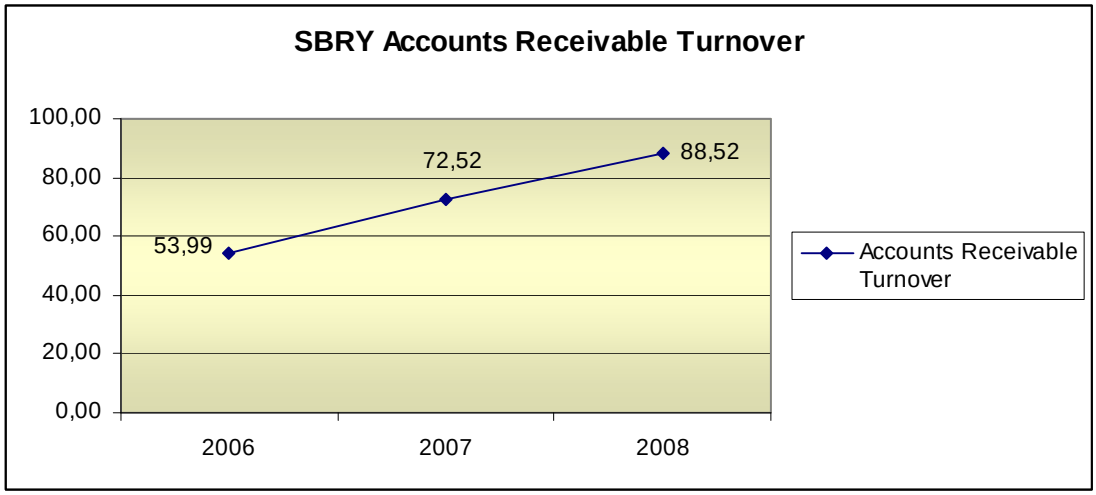
SBRY OPERATING PERFORMANCE RATIOS	2006	2007	2008
Inventory Turnover	26,03	27,08	24,72
Accounts Receivable Turnover	53,99	72,52	88,52
Accounts Payable Turnover	7,16	7,33	7,40
Asset Turnover	1,26	1,79	1,76
Fixed-Asset Turnover	2,27	2,39	2,40
Revenue per Employee (£)	166.954	179.592	180.903
Cash Conversion Cycle	-30,39	-31,46	-31,39
Operating Cycle	20,58	18,35	17,90

Graph 5.19 SBRY Inventory Turnover



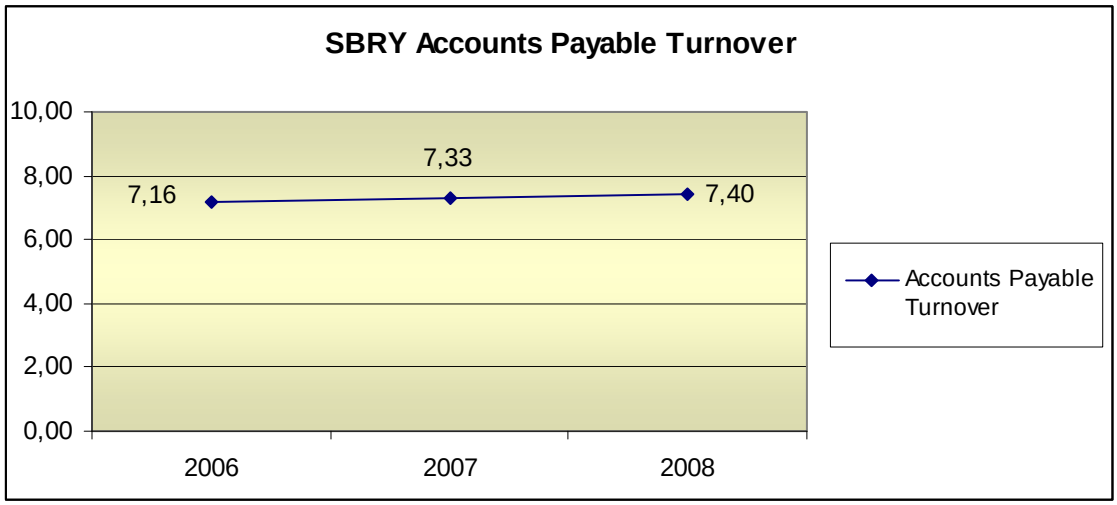
The inventory turnover is a measure of the number of times a company's inventory is sold and replaced over a specific period of time, used to measure the inventory management efficiency of the company. In 2006 the inventory turnover was 26,03 times increasing in 2007 at 27,08 times and decreasing in 2008 at 24,72 times. Low inventory turnover indicates poor sales, possible excess inventory and increased holding costs. High inventory turnover reduces holding costs however it could be considered problem to possible price rise or even loss of sales due to inventory shortage.

Graph 5.20 SBRY Accounts Receivable Turnover



The accounts receivable turnover expresses the number of times that accounts receivables are collected over a specific time period, quantifying the company's effectiveness in extending credit as well as collecting debts, basically suggesting the average time needed to convert receivables into cash. In 2006 the accounts receivable turnover was 53,99 times increasing in 2007 at 72,52 times and increasing in 2008 at 88,52 times. The company managed to improve its collection period as maintaining accounts receivable is basically extending an interest-free loan.

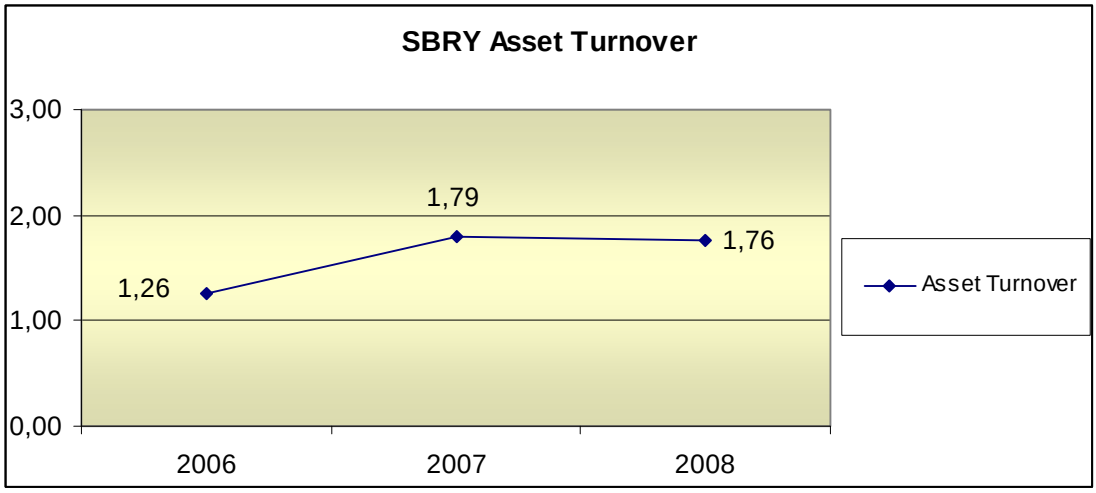
Graph 5.21 SBRY Accounts Payable Turnover



The accounts payable turnover evaluates how fast a company pays off its creditors, basically the number of times a company pays its payables over a specific period of

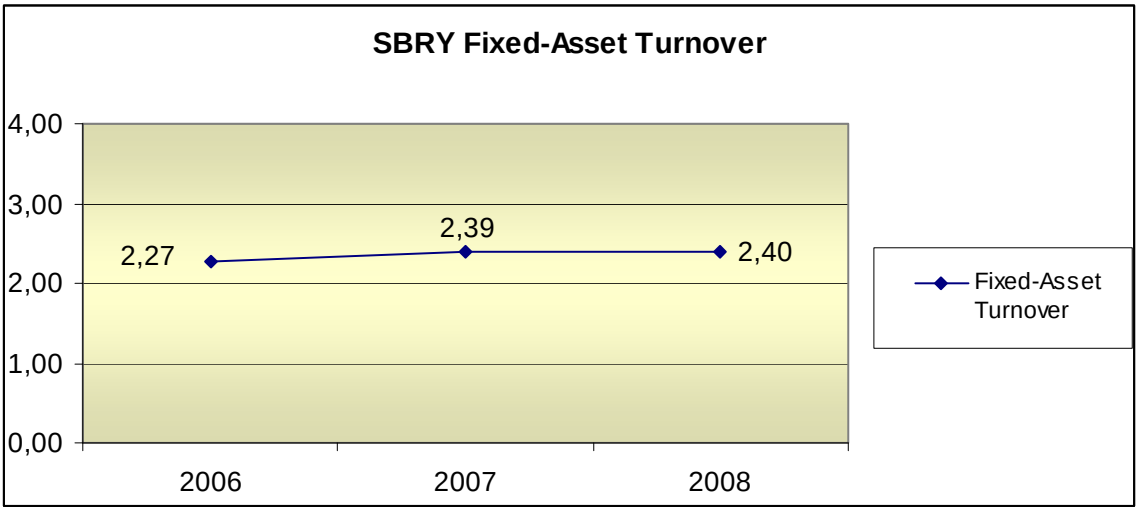
time, indicating the company's collection manner. In 2006 the accounts payable turnover was 7,16 times increasing in 2007 at 7,33 times and increasing in 2008 at 7,40 times. The company managed to increase its accounts payable turnover indicating that payables are being made more quickly, which also resulted from the fact that Sainsbury managed to shorten its receivables collection period. High payables turnover is beneficiary since the company is getting appealing to potential new suppliers, yet even managing better prices and discounts.

Graph 5.22 SBRY Asset Turnover



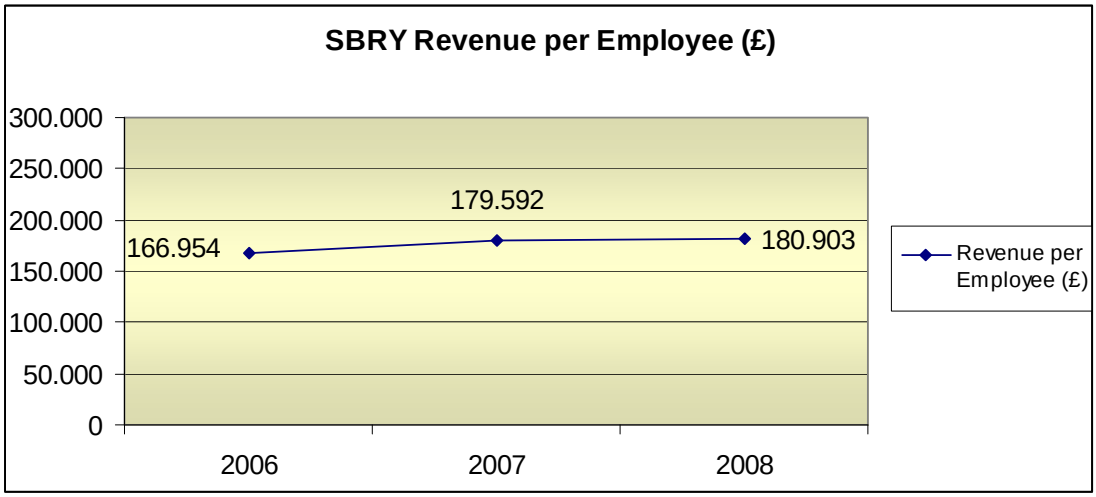
The asset turnover measures the company's efficiency at using its assets in generating revenue, determining the amount of revenue that is generated from every £pound of assets a company owns. In 2006 the asset turnover was 1,26 increasing in 2007 at 1,79 due to decrease in current assets, slightly decreasing in 2008 at 1,76, suggesting that in 2008 the company made £1,76 sales for each £1 of assets. We would expect higher asset turnover as it indicates the competitive pricing strategy in the retail industry and companies with low profit margins like Sainsbury's are expected to have comparatively high asset turnover.

Graph 5.23 SBRY Fixed-Asset Turnover



The fixed-asset turnover is a ratio measuring the efficient use of certain non-current assets in terms of generating revenue. In 2006 the fixed-asset turnover was 2,27 increasing in 2007 at 2,39 and increasing in 2008 at 2,40. The company presents a more efficient and productive use of its fixed assets over the years managing to generate more revenue from these asset investments.

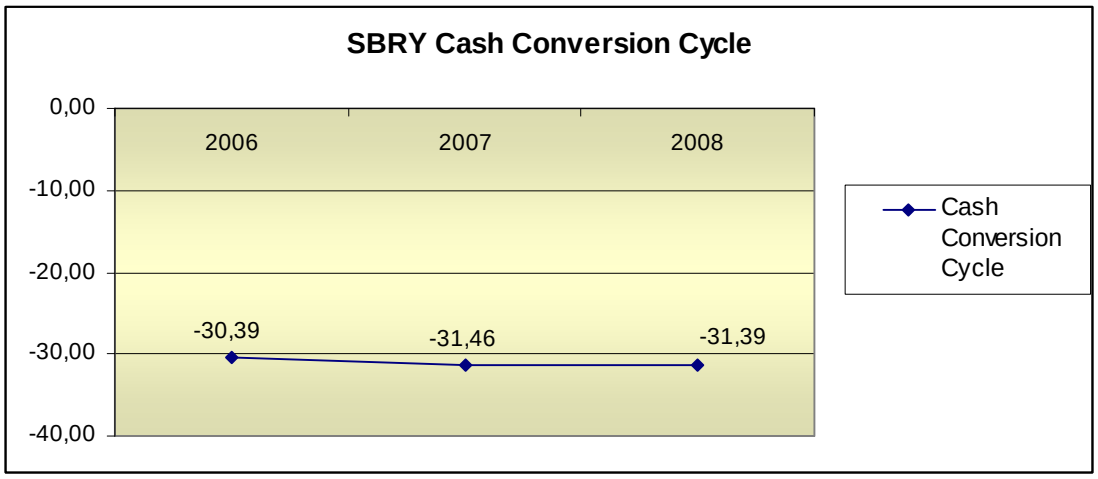
Graph 5.24 SBRY Revenue per Employee (£)



Revenue per employee measures the average revenue generated by each employee of the company, providing a broad indication of how expensive a company is to run, signifying how efficiently a company is operating in utilizing its employees. In 2006 revenue per employee was £166.954 increasing in 2007 at £179.592 and reaching in

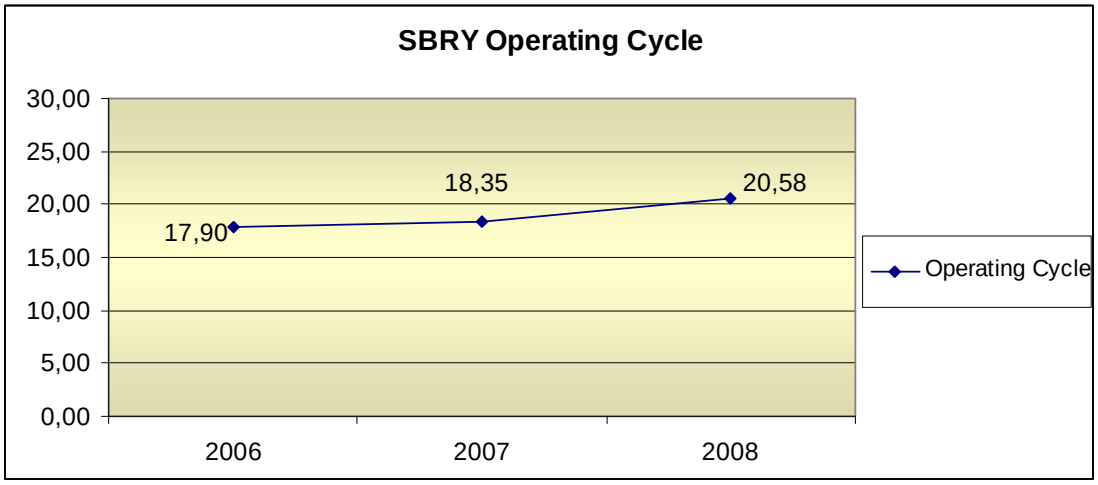
2008 the amount of £180.903. The company's productivity presents an increase over the years considered to be more efficient.

Graph 5.25 SBRY Cash Conversion Cycle



The cash conversion cycle expresses how long a company needs to sell inventory, to collect receivables and to pay its payables. It measures the number of days each net input £pound is tied up in the sales process before it is converted into cash through sales to customers and repaid to suppliers, indicating the company's management performance efficiency. The cash conversion cycle in 2006 is -30,39 days reaching -31,46 days in 2007 and -31,39 days in 2008. The negative cash conversion cycle indicates that the company is collecting its receivables before paying its suppliers and suggests that a strict collection and negligent payment policy is adopted.

Graph 5.26 SBRY Operating Cycle



The operating cycle expresses how long a company needs between purchasing inventory and receiving cash from its sale. It measures the number of days from cash to inventory to accounts receivable to cash, indicating the company's management performance efficiency. The operating cycle in 2006 is 17,90 days increasing at 18,35 days in 2007 and increasing at 20,58 days in 2008, suggesting that in 2008 cash is tied up in receivables and inventory for 20,58 days, indicating that over the years less cash is available to meet the company's short-term obligations leading to profitability reduction by increasing borrowing requirements and interest expense.

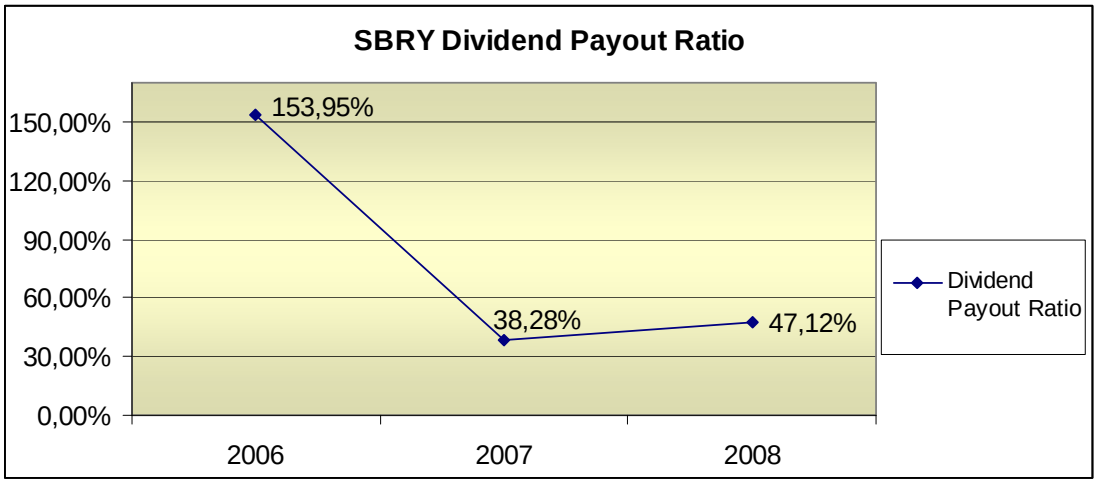
5.7.5 Cash Flow Indicator Ratios

The company's financial health and its high performance can be measured by the amount of cash that the company generates. The cash flow indicator ratios measure the amount of generated cash flows, invested cash and cash used to meet obligations.

Table 5.10 SBRY Cash Flow Indicator Ratios

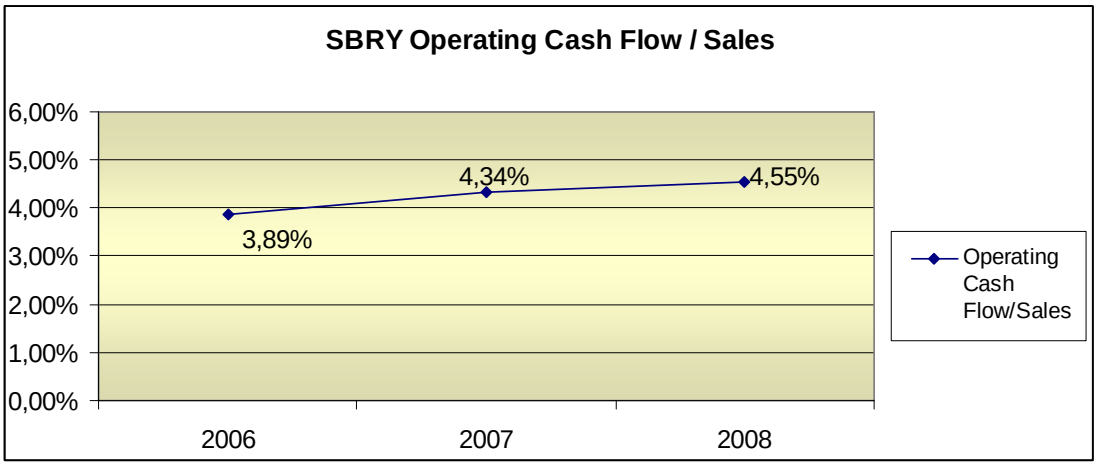
SBRY CASH FLOW INDICATOR RATIOS	2006	2007	2008
Dividend Payout Ratio	153,95%	38,28%	47,12%
Operating Cash Flow/Sales	3,89%	4,34%	4,55%

Graph 5.27 SBRY Dividend Payout Ratio



The dividend payout ratio indicates the percentage of the amount of earnings that is paid to stockholders as dividends. In 2006 the dividend payout ratio was 153,95% and decreased in 2007 at 38,28% increasing in 2008 at 47,12%. In 2006, the dividend payout ratio is extremely high, beyond one (1) as the company's earnings per share were lower than the dividends per share, however in the years after earnings per share were highly increased.

Graph 5.28 SBRY Operating Cash Flow / Sales



This ratio basically expresses in percentage the ability of the company to turn its sales into cash. It is important for the company not only to increase its revenue but also its operating cash flows. The operating cash flow to sales ratio is 3,89% in 2006, increasing at 4,34% in 2007 and increasing again at 4,55% in 2008 suggesting an increase in the amount of sales turned into cash.

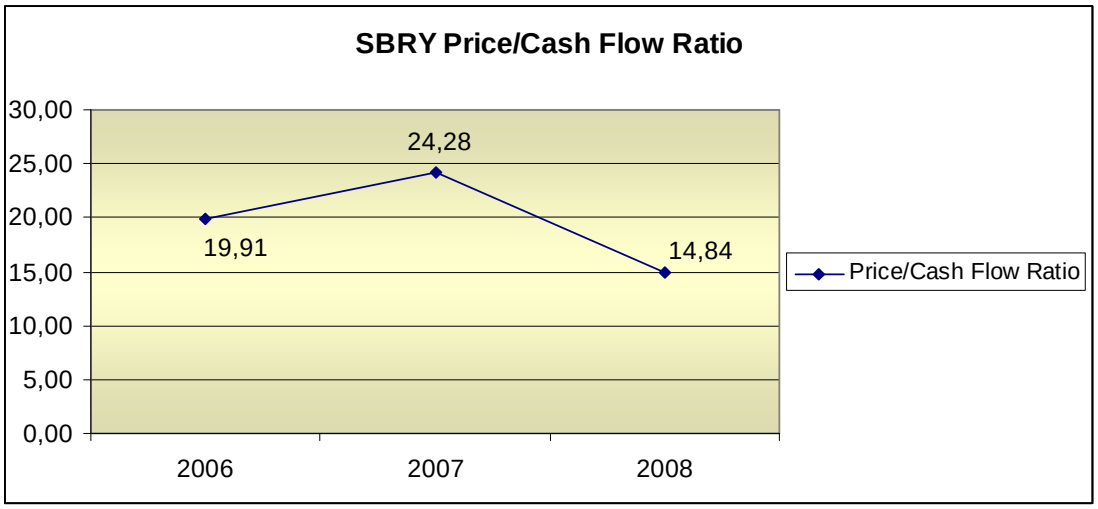
5.7.6 Investment Valuation Ratios

The investment valuation ratios are used to evaluate the investments on the company providing information on the company's stock and whether it is overvalued or undervalued.

Table 5.11 SBRY Investment Valuation Ratios

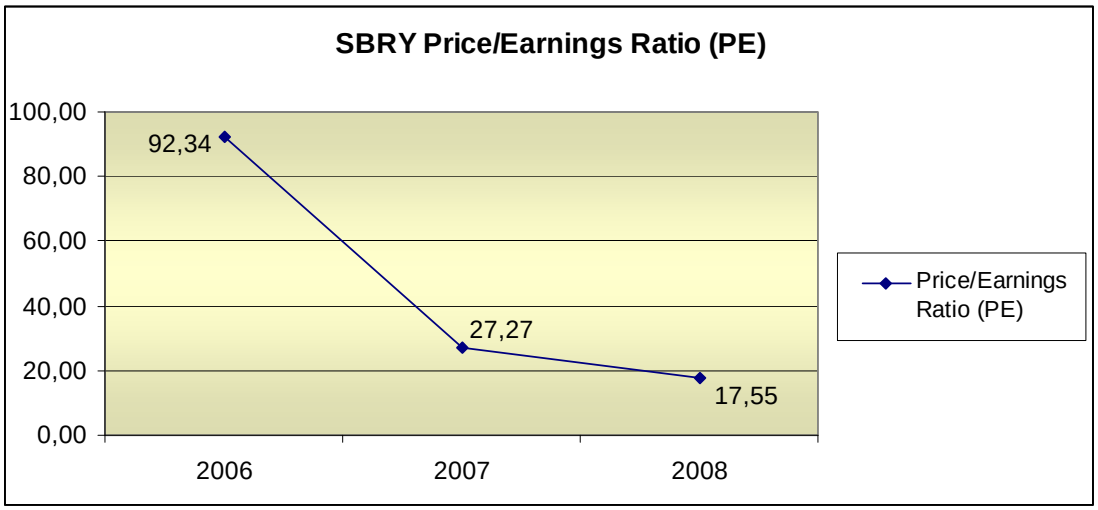
SBRY INVESTMENT VALUATION RATIOS	2006	2007	2008
Price/Cash Flow Ratio	19,91	24,28	14,84
Price/Earnings Ratio (PE)	92,34	27,27	17,55
Dividend Yield	1,67%	1,40%	2,68%
Price/Sales Ratio	0,77	1,05	0,67
Price/Book Value Ratio	3,13	4,15	2,44

Graph 5.29 SBRY Price / Cash Flow Ratio



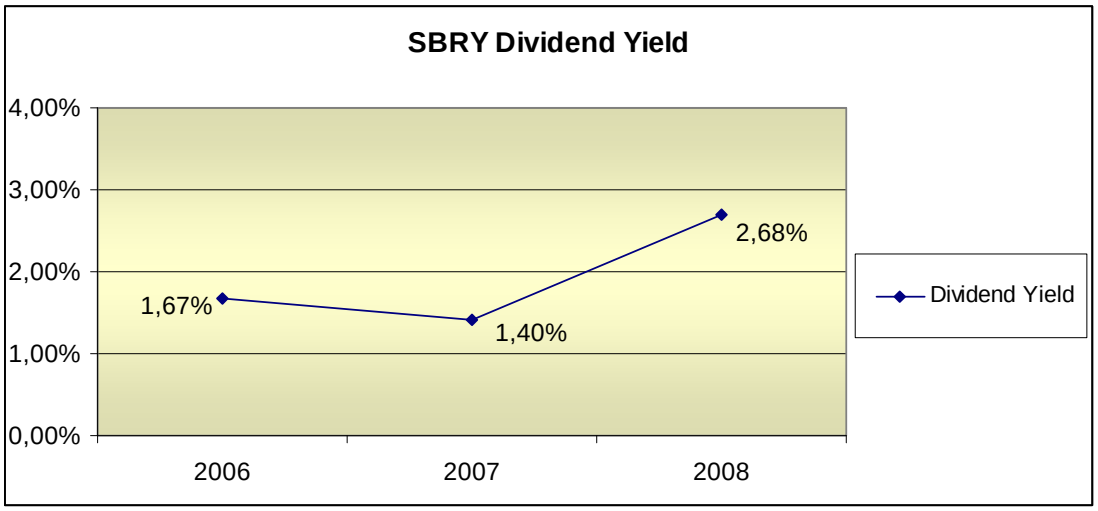
The price / cash flow ratio is used to measure the investment valuation as it calculates the market price of the stock to the amount of the generated operating cash flow per stock of the company. Operating cash flow may appear to be more reliable than earnings in evaluation, as earnings are affected by several other factors. In 2006 the price to cash flow ratio was 19,91 increasing in 2007 at 24,28 and decreasing in 2008 at 14,84. The high increase in 2007 is due to a sudden increase of the company's share price due to a Qatari investment company that bought a total of almost 26%, in Sainsbury's stake.

Graph 5.30 SBRY Price/Earnings Ratio (PE)



The P/E ratio is one of the most widely known and used ways to indicate investment valuation as it measures the company's share price in relation to the earnings the company earned per share. The higher the P/E ratio, the more expensive the share is sold as it implies a possible forecasted high growth of earnings. In 2006 the price to earnings ratio is 92,34 decreasing in 2007 at 27,27 and decreasing in 2008 at 17,55. In 2006, the company presented relatively low earnings per share which increased in 2007 leading to a decrease of the PE ratio.

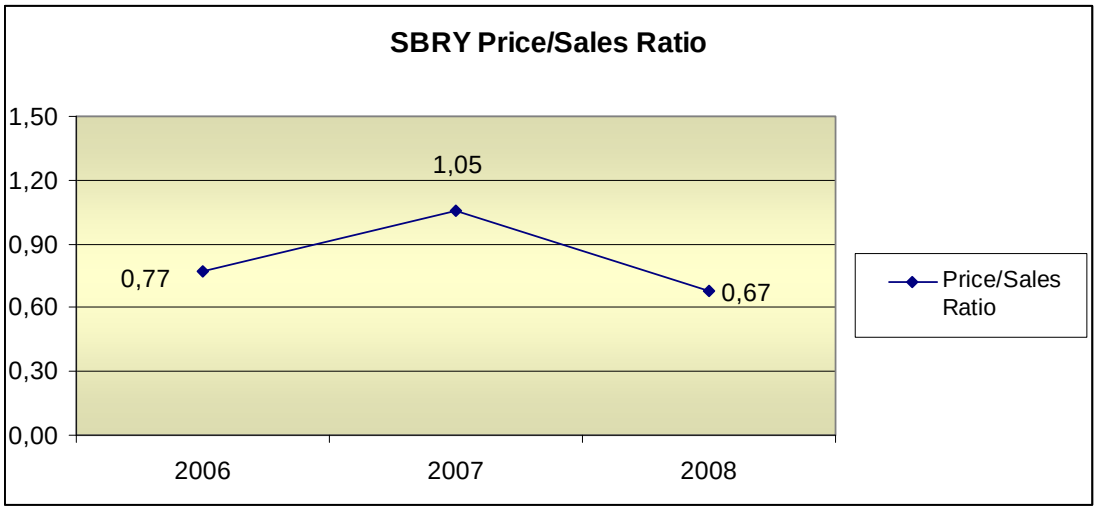
Graph 5.31 SBRY Dividend Yield



The dividend yield is the percentage of the per share dividend divided by the price per share, expressing the annual percentage of earnings paid as dividends for a stock. In 2006 the dividend yield was 1,67% decreasing in 2007 at 1,40% and increasing in

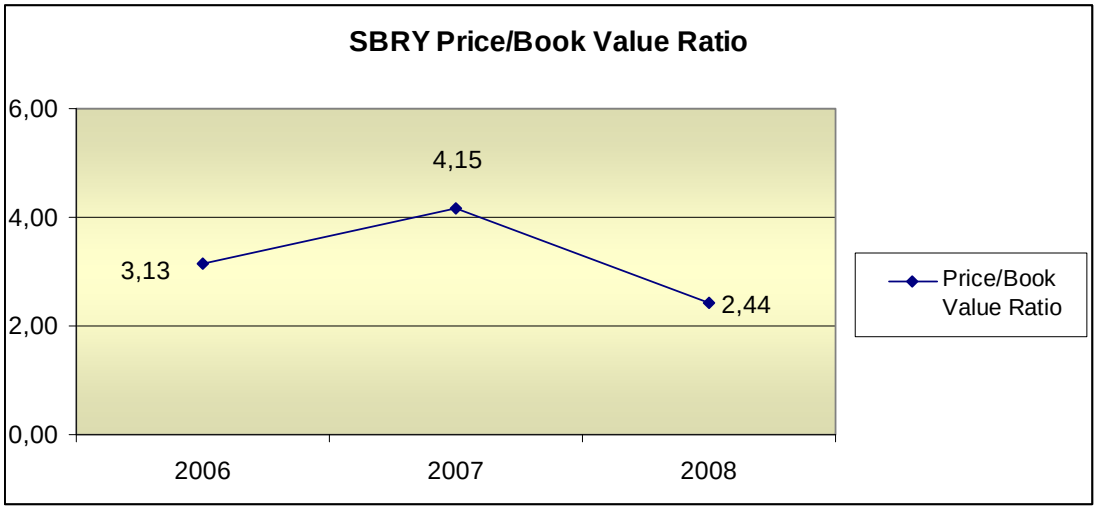
2008 at 2,68%. In 2007 the share price increased causing a decrease of the dividend yield whereas the share price in 2008 decreased and dividend per share increased causing the dividend yield to increase.

Graph 5.32 SBRY Price/Sales Ratio



The price to sales ratio is a stock valuation indicator measuring the company's stock against its annual sales, reflecting how many times investors are paying for every £pound of the company's sales and can vary substantially across industries. In 2006 the price to sales ratio was 0,77 increasing in 2007 at 1,05 due to an increase in the company's share price and decreasing in 2008 at 0,67. Low price to sales ratio is better for investors as they pay less for every unit of sales and it is considered to be a more appealing investment.

Graph 5.33 Price/Book Value Ratio



The Price to book value ratios expresses how many times a company's stock is trading per share compared to the company's book value per share, indicating how much is being paid for the company's assets by shareholders, comparing the company's book value to its current market price. In 2006 the price to book ratio is 3,13 increasing in 2007 at 4,15 due to an increase in the company's share price and decreasing in 2008 at 2,44.

Ch.6. Tesco plc Financial Analysis

6.1 TSCO Income Statement Analysis

At the end of each financial year, Tesco plc publishes its financial statements so that it is available for those interested. The financial statements are presented in sterling, rounded to the nearest million (£m). On the table below we present the company's Income Statement for the years 2006, 2007 and 2008.

Table 6.1 TSCO Income Statement – 2006, 2007, 2008.

TSCO Income Statement	2008 £m	2007 £m	2006 £m
Continuing operations			
Revenue (sales excluding VAT)	47.298,00	42.641,00	39.454,00
Cost of Sales	(43.668,00)	(39.401,00)	(36.426,00)
pensions adjustment-finance act 2006	-	258,00	-
impairment on the gerrards cross site	-	(35,00)	-
Gross profit	3.630,00	3.463,00	3.028,00
Administrative expenses	(1.027,00)	(907,00)	(825,00)
Profit arising on property-related items	188,00	92,00	77,00
Operating profit	2.791,00	2.648,00	2.280,00
Share of post-tax profits of joint ventures and associates	75,00	106,00	82,00
profit on sale of investments in associates	-	25,00	-
Finance income	187,00	90,00	114,00
Finance costs	(250,00)	(216,00)	(241,00)
Profit before tax	2.803,00	2.653,00	2.235,00
Taxation	(673,00)	(772,00)	(649,00)
profit for the period from continuing operations	2.130,00	1.881,00	1.586,00
profit/loss for the period from discontinuing operation	-	18,00	(10,00)
Profit for the year	2.130,00	1.899,00	1.576,00
Attributable to:			
Owners / equity holders of the parent	2.124,00	1.892,00	1.570,00
Minority interests	6,00	7,00	6,00
	2.130,00	1.899,00	1.576,00
Earnings per share			
Basic (pence)	26,95	23,84	20,07
Diluted (pence)	26,61	23,54	19,79
Dividends per share	10,9	9,64	8,63

Source: Tesco's Annual Reports

From the above presented income statements of Tesco plc for the years 2006, 2007 and 2008, we get information on the company's operations and profit results, it's financial performance as the company's income and expenses are presented, also including it's earnings, giving as information on the company's profitability. It is clear that the company's profits are growing gradually from the year 2006 to 2007 as well as from the year 2007 to 2008. This is resulting from the fact that both revenue and operating profit are increasing.

Tesco presents an increase in sales over the year which is a result of its expansion both by acquiring new stores in the markets it already operates and by its entrance in new markets, expanding its business internationally. Establishing cash and carry business in India, launching discount brands as well acquiring 36 hypermarkets in South Korea lead to a higher customers' base list increasing sales. Cost of sales also increased expectedly as well as the pension schemes were an expense, since the company operates a variety of post-employment benefit arrangements, contribution schemes which were fully expensed against profits in 2007 plus £0,1m fees that were received by auditors for the audit of the pension scheme

The company's expansion and the enlargement of its store chain have also increased its costs generally. Administrative expenses were increased, more personnel was employed, finance costs also increased, however its sales increased as well as the reduction of corporation taxes by the government by 2% in 2008 benefited the company which presented higher profits over the years, increasing its equity holders as well as the dividends.

The amount of dividends that the company pays out to it's stockholders is increasing year by year, as more analytically, in 2006, the final dividend proposed was 8,63 pence per share, in 2007, the Directors proposed a final dividend of 9,64 pence per share, whereas for the following year 2008, a final dividend of 10,9 pence per share was proposed. The proposed final dividends for all three years 2006, 2007 and 2008 have not been included as a liability in all years. Dividends paid out are increasing over the years indicating that the company has the ability to spend a larger amount of its profits to dividends.

The company's income statement does not present any large changes in trends and the company managed to expand and invest in new stores entering new markets, yet increasing the amount of its net profits over the years and increasing its value and its operations.

6.2 TSCO Balance Sheet Analysis

The company's balance sheet is giving information on the company's liquidity and on its ability to raise cash and honor its obligators. It presents detailed categories of the company's possessed assets as well as the company's liabilities. On the table below we present the company's Balance Sheet for the years 2006, 2007 and 2008.

Table 6.2 TSCO Balance Sheet – 2006, 2007, 2008.

TSCO balance sheet	2008 £m	2007 £m	2006 £m
Non-current assets			
Goodwill and other intangible assets	2.336,0	2.045,0	1.525,0
Property, plant and equipment	19.787,0	16.976,0	15.882,0
Investment property	1.112,0	856,0	745,0
Investments in joint ventures and associates	305,0	314,0	476,0
Other investments	4,0	8,0	4,0
Loans and advances to customers	—	—	—
Derivative financial instruments	216,0	—	—
Deferred tax assets	104,0	32,0	12,0
	23.864,0	20.231,0	18.644,0
Current assets			
Inventories	2.430,0	1.931,0	1.464,0
Trade and other receivables	1.311,0	1.079,0	892,0
Loans and advances to customers	—	—	—
Loans and advances to banks and other financial assets	—	—	—
Derivative financial instruments	97,0	108,0	70,0
Current tax assets	6,0	8,0	
Short-term investments	360,0	—	—
Cash and cash equivalents	1.788,0	1.042,0	1.325,0
	5.992,0	4.168,0	3.751,0
Non-current assets classified as held for sale	308,0	408,0	168,0
	6.300,0	4.576,0	3.919,0
Total Assets	**30.164,0**	**24.807,0**	**22.563,0**
Current liabilities			
Trade and other payables	(7.277,0)	(6.046,0)	(5.083,0)
Financial liabilities			
Borrowings	(2.084,0)	(1.554,0)	(1.646,0)

Derivative financial instruments and other liabilities	(443,0)	(87,0)	(239,0)
Customer deposits	—	—	—
Deposits by banks	—	—	—
Current tax liabilities	(455,0)	(461,0)	(462,0)
Provisions	(4,0)	(4,0)	(2,0)
	(10.263,0)	(8.152,0)	(7.432,0)
liabilities directly associated with the disposal group	—	—	(86,0)
			(7.518,0)
Net current liabilities	(3.963,0)	(3.576,0)	(3.599,0)
Non-current liabilities			
Financial liabilities			
Borrowings	(5.972,0)	(4.146,0)	(3.742,0)
Derivative financial instruments and other liabilities	(322,0)	(399,0)	(294,0)
Post-employment benefit obligations	(838,0)	(950,0)	(1.211,0)
other non current liabilities	(42,0)	(29,0)	(29,0)
Deferred tax liabilities	(802,0)	(535,0)	(320,0)
Provisions	(23,0)	(25,0)	(5,0)
	(7.999,0)	(6.084,0)	(5.601,0)
	(18.262,0)	(14.236,0)	(13.033,0)
Net assets	11.902,0	10.571,0	9.444,0
Equity			
Share capital	393,0	397,0	395,0
Share premium account	4.511,0	4.376,0	3.988,0
Other reserves	40,0	40,0	40,0
Retained earnings	6.871,0	5.693,0	4.957,0
Equity attributable to owners of the parent	11.815,0	10.506,0	9.380,0
Minority interests	87,0	65,0	64,0
Total equity	11.902,00	10.571,00	9.444,00

Source: Tesco's Annual Reports

The Company uses interest rate swaps and cross-currency swaps to hedge the fair value of fixed rate bonds. The total notional amount of outstanding swaps used for fair value hedging is £2,703m in 2006, £2,196m in 2007 with various maturities out to 2033, including in 2008 £166m of goodwill transferred in from joint ventures the acquisition of additional shares in Hymall. The company's property has increased over the years due to acquiring new stores including in 2006 £67m, in 2007 £78m and in 2008 £103, in respect of interest capitalised, principally relating to land and building assets. Carrying value of land and buildings includes £9m in 2006, £ 8m in 2007 and £6, in 2008 relating to the prepayment of lease premiums. The estimated fair value of investment property is £1.373m in 2006, £1.522m in 2007 and £2.265m in 2008, value that has been determined by applying an appropriate rental yield to the rentals earned by the investment property.

At the Balance Sheet date, the company has unused tax losses of £96m in 2006, £131m in 2007 and £146m in 2008 available for offset against future profits. A deferred tax asset has been recognised in respect of £27m in 2006, £98m in 2007 and £9m in 2008 of such losses. No deferred tax asset has been recognised in respect of the remaining £69m in 2006, £33m in 2007 and 1£37m in 2008 due to the unpredictability of future profit streams. Included in unrecognised tax losses are losses of £10m in 2007 and £39m in 2008 that will expire in 2011 and £22m in 2007 and £57m in 2008 that will expire in 2027.The company's inventories have increased due to fact that it needs inventories for more stores and the company is also presenting a possible longer collection period for its receivables, also increasing its cash and its short-term investments.

The company's liabilities have also increased over the years increasing its payables and its long-term borrowings for investing in new stores. Amounts shown as liabilities for the future purchases of minority interests refer to Samsung Tesco – £220m in 2007, £246m in 2006, Hymall – £48m in 2007 and dunnhumby – £38m in 2007. Property provisions have increased and comprise future rents payable net of rents receivable on onerous and vacant property leases, provisions for terminal dilapidations and provisions for future rents above market value on unprofitable stores. The majority of the provision is expected to be utilised over the period to 2020.

The Company operates a scheme offering retirement healthcare benefits. The cost of providing these benefits has been accounted for on a similar basis to that used for defined benefit pension schemes. The liability was in 2006 £10m, in 2007 £11m and in 2008 £11m, determined in accordance with the advice of independent actuaries.The qualifying employee share ownership trust subscribed for 10 million shares in 2006, 1.5 million shares in 2007 and none shares in 2008 from the Company

6.3 TSCO Cash Flow Statement Analysis

Cash flow statements provide information on the company's activities, categorizing them into operating activities, financing activities and investing activities. The cash flow statement provides information on the inflows and outflows of the company

from and to investments and investors, operating procedures as well as financing activities. On the table below we present the company's Cash Flow Statement for the years 2006, 2007 and 2008.

Table 6.3 TSCO Cash Flow Statement – 2006, 2007, 2008.

TSCO cash flow statement			
	2008	2007	2006
Year ended 27 February 2010	£m	£m	£m
Cash flows from operating activities			
Cash generated from operations	4.099,00	3.532,00	3.142,00
Interest paid	(410,00)	(376,00)	(364,00)
Corporation tax paid	(346,00)	(545,00)	(429,00)
Net cash from operating activities	**3.343,00**	**2.611,00**	**2.619,00**
Cash flows from investing activities			
Acquisition of subsidiaries, net of cash acquired	(169,00)	(325,00)	(54,00)
Proceeds from sale of subsidiaries, net of cash disposed	—	(22,00)	—
Proceeds from sale of joint ventures and associates	—	41,00	—
Purchase of property, plant and equipment and investment property	(3.442,00)	(2.852,00)	(2.561,00)
Proceeds from sale of property, plant and equipment	(158,00)	(174,00)	664,00
Purchase of intangible assets	(158,00)	(174,00)	(139,00)
Increase in loans to joint ventures	(36,00)	(21,00)	(16,00)
Investments in joint ventures and associates	(61,00)	(49,00)	—
Investments in short-term investments and other investments	(360,00)	—	(34,00)
Dividends received	88,00	124,00	82,00
Interest received	128,00	82,00	96,00
Net cash used in investing activities	**(2.954,00)**	**(2.343,00)**	**(1.962,00)**
Cash flows from financing activities			
Proceeds from the issue of ordinary share capital	138,00	156,00	123,00
Proceeds from the issue of ordinary share capital to minority interests	16,00	—	—
Increase in borrowings	9.333,00	4.743,00	-—
Repayment of borrowings	(7.593,00)	(4.559,00)	(109,00)
New finance leases	(32,00)	(15,00)	-—
Repayment of obligations under finance leases	(32,00)	(15,00)	(6,00)
Dividends paid	(792,00)	(467,00)	(441,00)
Dividends paid to minority interests	(2,00)	-—	-—
Own shares purchased	(775,00)	(590,00)	(59,00)
Net cash from financing activities	**412,00**	**(533,00)**	**(492,00)**
Net (decrease)/increase in cash and cash equivalents	801,00	(265,00)	165,00
Cash and cash equivalents at beginning of year	1.042,00	1.325,00	1.146,00
Effect of foreign exchange rate changes	55,00	18,00	16,00
Cash and cash equivalents at end of year	1.788,00	1.042,00	1.327,00

Source: Tesco's Annual Reports

The company increased its operating activities by a large increase in inventories generating more cash from its operating activities, profit that increased also due to the corporation tax being decreased by the government from 30% to 28%. The company invested money in purchasing property and equipment as it opened new stores, also managing to repay a large amount of previous borrowings. The company managed over the years to perform better and increase its cash and cash equivalents despite the fact that she acquired new property.

6.4 TSCO Common Size Analysis

By transforming the amounts of pounds in the balance sheet into a percentage base analysis, we get a better idea on the year-to-year changes in the accounts. With a total of 100%, the percentage of each subcategory of the account is presented, indicating the main subcategories that compose the account.

Table 6.4 TSCO Common Size Analysis – 2006, 2007, 2008.

TSCO Common Size Analysis (%)	2008 (%)	2007 (%)	2006 (%)
Non-current assets			
Goodwill and other intangible assets	7,74	8,24	6,76
Property, plant and equipment	65,60	68,43	70,39
Investment property	3,69	3,45	3,30
Investments in joint ventures and associates	1,01	1,27	2,11
Other investments	0,01	0,03	0,02
Loans and advances to customers	—	—	—
Derivative financial instruments	0,72	—	—
Deferred tax assets	0,34	0,13	0,05
	79,11	81,55	82,63
Current assets	—	—	—
Inventories	8,06	7,78	6,49
Trade and other receivables	4,35	4,35	3,95
Loans and advances to customers	—	—	—
Loans and advances to banks and other financial assets	—	—	—
Derivative financial instruments	0,32	0,44	0,31
Current tax assets	0,02	0,03	—
Short-term investments	1,19	—	—
Cash and cash equivalents	5,93	4,20	5,87
	19,86	16,80	16,62
Non-current assets classified as held for sale	1,02	1,64	0,74
	20,89	18,45	17,37
	100,00	100,00	100,00

Current liabilities			
Trade and other payables	39,85	42,47	39,00
Financial liabilities	—	—	—
Borrowings	11,41	10,92	12,63
Derivative financial instruments and other liabilities	2,43	0,61	1,83
Customer deposits	—	—	—
Deposits by banks	—	—	—
Current tax liabilities	2,49	3,24	3,54
Provisions	0,02	0,03	0,02
	56,20	57,26	57,02
liabilities directly associated with the disposal group	—	—	0,66
	—	—	57,68
Net current liabilities	21,70	25,12	27,61
Non-current liabilities	—	—	—
Financial liabilities	—	—	—
Borrowings	32,70	29,12	28,71
Derivative financial instruments and other liabilities	1,76	2,80	2,26
Post-employment benefit obligations	4,59	6,67	9,29
other non current liabilities	0,23	0,20	0,22
Deferred tax liabilities	4,39	3,76	2,46
Provisions	0,13	0,18	0,04
	43,80	42,74	42,98
	100,00	100,00	100,00
Net assets	39	43	42
Equity			
Share capital	3,30	3,76	4,18
Share premium account	37,90	41,40	42,23
Other reserves	0,34	0,38	0,42
Retained earnings	57,73	53,85	52,49
Equity attributable to owners of the parent	99,27	99,39	99,32
Minority interests	0,73	0,61	0,68
Total equity	100,00	100,00	100,00

Source: Tesco's Annual Reports

6.5 TSCO Trend Analysis

The trend analysis is another transformation of the financial statements where there is a preselected base period, where changes are presented in percentages referred to the base period. The base period used is the year 2006 and the percentages of the years 2007 and 2008 indicate changes compared to the base period.

Table 6.5 TSCO Trend Analysis – 2006, 2007, 2008. Base year 2005.

TSCO Trend Analysis	2008 (%)	2007 (%)	2006 (%)
Non-current assets			
Goodwill and other intangible assets	165,91	145,24	108,31
Property, plant and equipment	136,26	116,91	109,37
Investment property	196,81	151,50	131,86
Investments in joint ventures and associates	73,32	75,48	114,42
Other investments	57,14	114,29	57,14
Loans and advances to customers	n/a	n/a	n/a
Derivative financial instruments	n/a	n/a	n/a
Deferred tax assets	742,86	228,57	85,71
	140,95	119,49	110,12
Current assets			
Inventories	185,64	147,52	111,84
Trade and other receivables	170,48	140,31	115,99
Loans and advances to customers	n/a	n/a	n/a
Loans and advances to banks and other financial assets	n/a	n/a	n/a
Derivative financial instruments	n/a	n/a	n/a
Current tax assets	n/a	n/a	n/a
Short-term investments	n/a	n/a	n/a
Cash and cash equivalents	156,02	90,92	115,62
	185,86	129,28	116,35
Non-current assets classified as held for sale	n/a	n/a	n/a
	195,41	141,94	121,56
	149,66	123,08	111,95
Current liabilities			
Trade and other payables	146,30	121,55	102,19
Financial liabilities			
Borrowings	432,37	322,41	341,49
Derivative financial instruments and other liabilities	n/a	n/a	n/a
Customer deposits	n/a	n/a	n/a
Deposits by banks	n/a	n/a	n/a
Current tax liabilities	205,88	208,60	209,05
Provisions	133,33	133,33	66,67
	180,69	143,52	130,85
liabilities directly associated with the disposal group	n/a	n/a	n/a
	n/a	n/a	132,36
Net current liabilities	161,36	145,60	146,54
Non-current liabilities			
Financial liabilities			
Borrowings	130,88	90,86	82,01
Derivative financial instruments and other liabilities			
Post-employment benefit obligations	114,01	129,25	164,76
other non current liabilities	200,00	138,10	138,10
Deferred tax liabilities	161,69	107,86	64,52

Provisions	383,33	416,67	83,33
	137,42	104,52	96,22
	158,79	123,78	113,32
Net assets	137,53	122,15	109,13
Equity			
Share capital	101,03	102,06	101,54
Share premium account	121,79	118,14	107,67
Other reserves	100,00	100,00	100,00
Retained earnings	153,71	127,36	110,89
Equity attributable to owners of the parent	137,34	122,12	109,03
Minority interests	170,59	127,45	125,49
Total equity	137,53	122,15	109,13

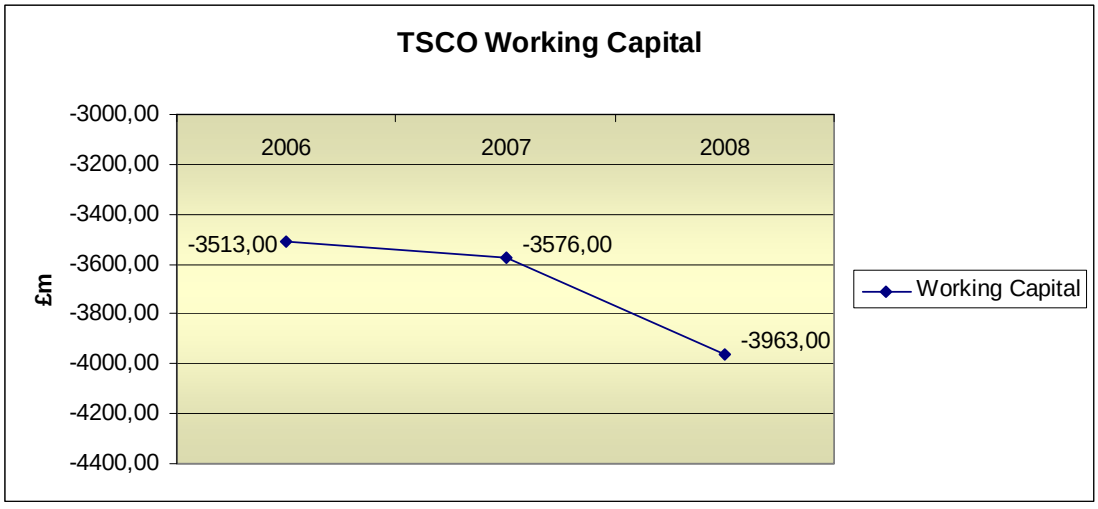
Source: Tesco's Annual Reports

6.6 TSCO Working Capital (WC) Analysis

Working Capital (WC) is a way to measure a company's efficiency as well as its short-term financial health. Working capital represents the ability of the company to pay off its short-term liabilities and expenses based on its available current assets. Working capital is calculated as currents assets minus current liabilities and if the result is positive it means that the company it able to pay off its short-term liabilities whereas negative working capital means that a company is currently unable to meet its short-term liabilities using its current assets.

Working Capital = Current Assets − Current Liabilities

Graph 6.1 TSCO Working Capital



Tesco's working capital is negative, suggesting that the company is currently unable to meet its short-term liabilities with its current assets as its debts outweigh its current assets. In 2006, the company's working capital was estimated at £m-3513,00 whereas in 2007 decreased at £m-3576,00 and continued decreasing in 2008 at £m-3963,00 indicating that the company may be operating in a faster collection manner. Working capital is important to investors as it provides information on the company's operating efficiency and affects their decision about investing in the company or not. Although Tesco is experiencing a working capital deficit, it is important to notice that grocery stores have high inventory turns and do business on a cash basis, meaning that since cash is generated quickly, on a daily basis, it is not considered necessary to have large amount of working capital available.

6.7 TSCO Financial Ratios Analysis

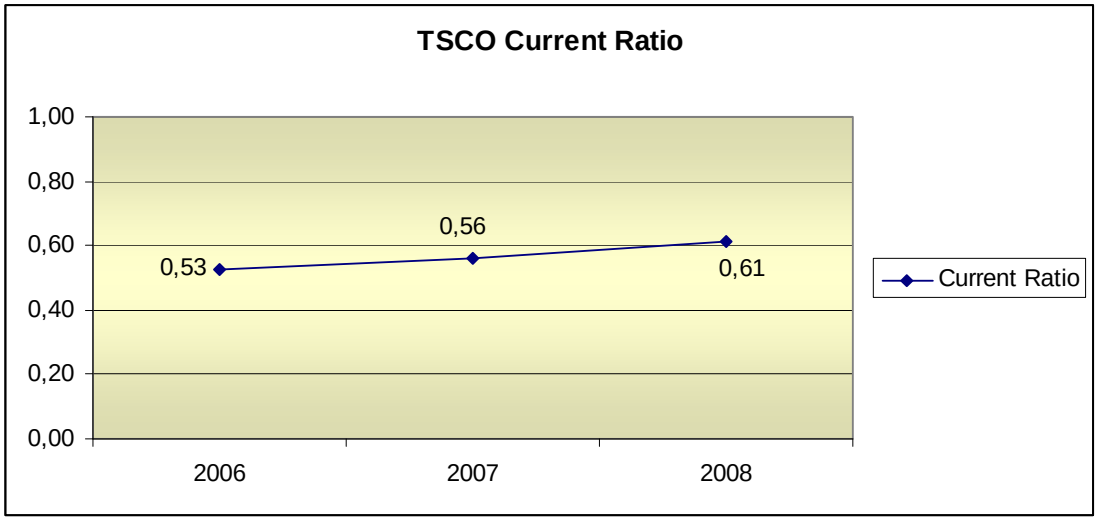
6.7.1 Liquidity Ratios

Liquidity ratios indicate the company's ability to liquidate its assets when necessary so as to pay its creditors and obligators. They are a way to measure the extent to which the company is able to turn its assets into cash and continue operating when cash is not enough to cover the current obligations. In general, the higher the value of the liquidity measures, the safer the company it is to cover its debts.

Table 6.6 TSCO Liquidity Ratios

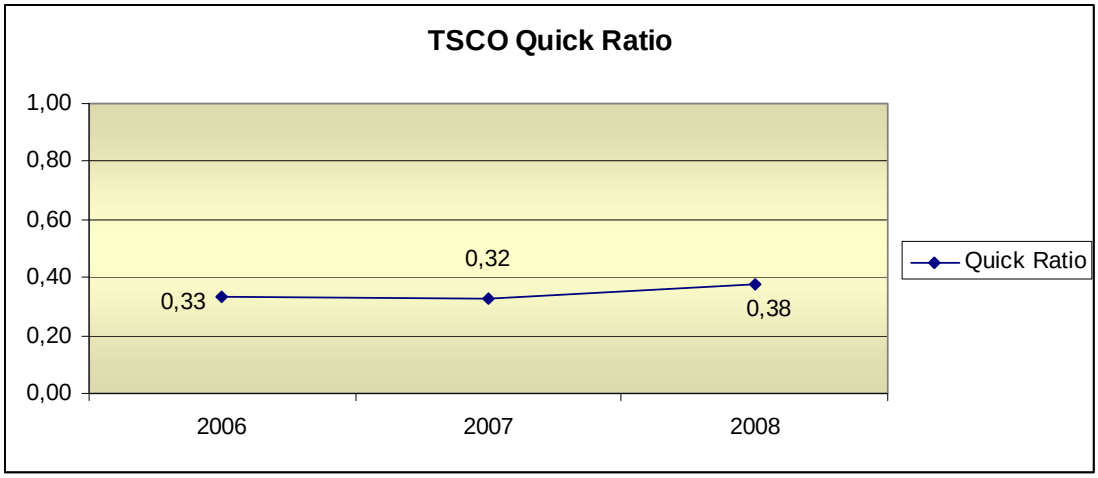
TSCO LIQUIDITY RATIOS	2006	2007	2008
Current Ratio	0,53	0,56	0,61
Quick Ratio	0,33	0,32	0,38
Cash Ratio	0,18	0,13	0,17
Defensive Interval Ratio	21,89	19,70	25,57

Graph 6.2 TSCO Current Ratio



The current ratio indicates the ability of the company to manage its short-term obligations if they come due at that specific time, by liquidating its assets. Tesco's current ratio is lower than one (1), suggesting that the company may not be able to meet its obligations, however that does not mean it can necessarily go bankrupt. In 2006, current ratio is 0,53 increasing at 0,56 in 2007 and yet experiencing another increase in 2008 at 0,61. These figures suggest that if the company's current liabilities in 2008 were £100, its current assets were only £61. Low current ratio was expected since the company is experiencing working capital deficit however, current ratio is increasing over the years indicating that the company's financial health is improving.

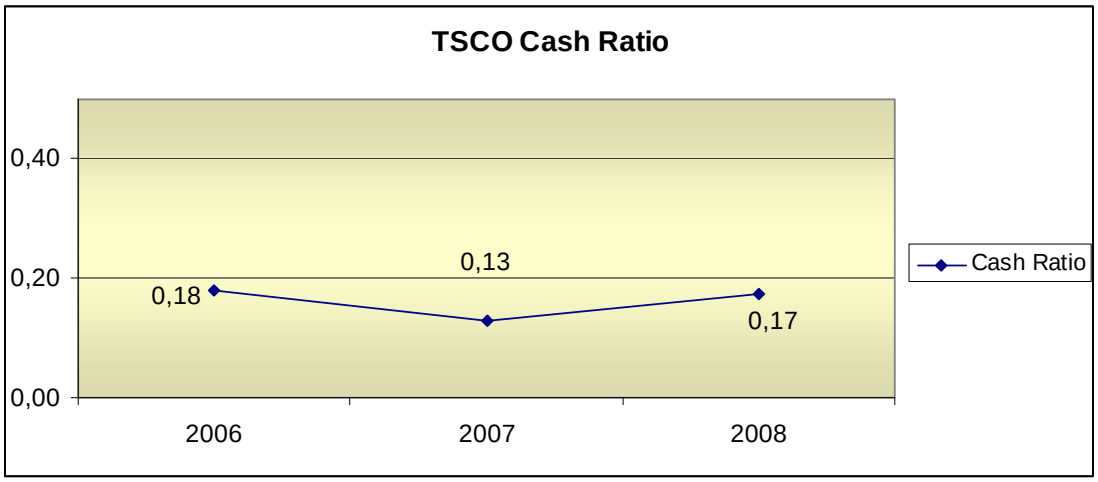
Graph 6.3 TSCO Quick Ratio



The quick ratio is similar to the current ratio, yet more conservative as its calculation includes certain elements of current assets so as to measure the company's capability

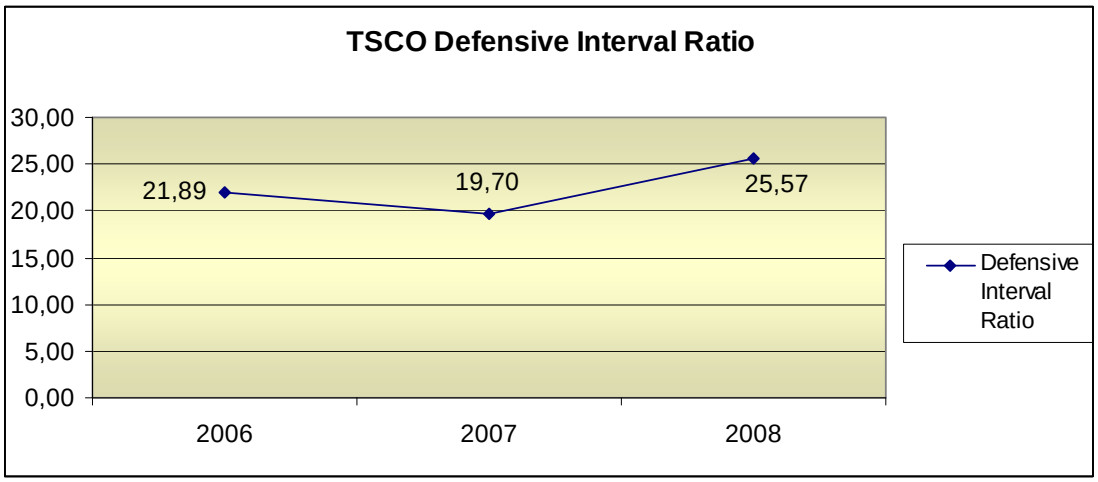
to satisfy its short-term obligations, indicating the relationship between the amounts of assets that can quickly be turned into cash versus the amount of current liabilities. Quick ratio is 0,33 in 2006, slightly decreasing at 0,32 in 2007 and yet experiencing an increase in 2008 at 0,38. Although suggesting that the company's quickly liquidated assets are not sufficient to cover its current obligations, indicating a bad financial position, the increase in the quick ratio suggests that currents assets are increasing in a higher rate than current liabilities.

Graph 6.4 TSCO Cash Ratio



Cash ratio is considered to be the stringent as it measures the ability of a business to repay its current liabilities by only using its cash and cash equivalents and nothing else, excluding inventories and prepaid items for which cash cannot be obtained immediately. Cash ratio is rather low in 2006 at 0,18 decreased in 2007 at 0,13 due to an increase in the company's current liabilities however in 2008 the cash ratio increased at 0,17 as although there was an increase in the company's cash and cash equivalents, current liabilities also increased though on a higher rate. Although the cash ratio is low, grocery stores generate cash on a daily basis thus, it is not considered to be rather stressful.

Graph 6.5 TSCO Defensive Interval Ratio



The defensive interval ratio measures the period of time that the company can operate using only current liquid assets without having to access long-term assets, indicating the company's defensive assets to its daily expenses. In 2006, the defensive interval was 21,89 days, decreasing in 2007 at 19,70 days and experiencing an increase in 2008 at 25,57 days as a result of an increase in cash and cash equivalents.

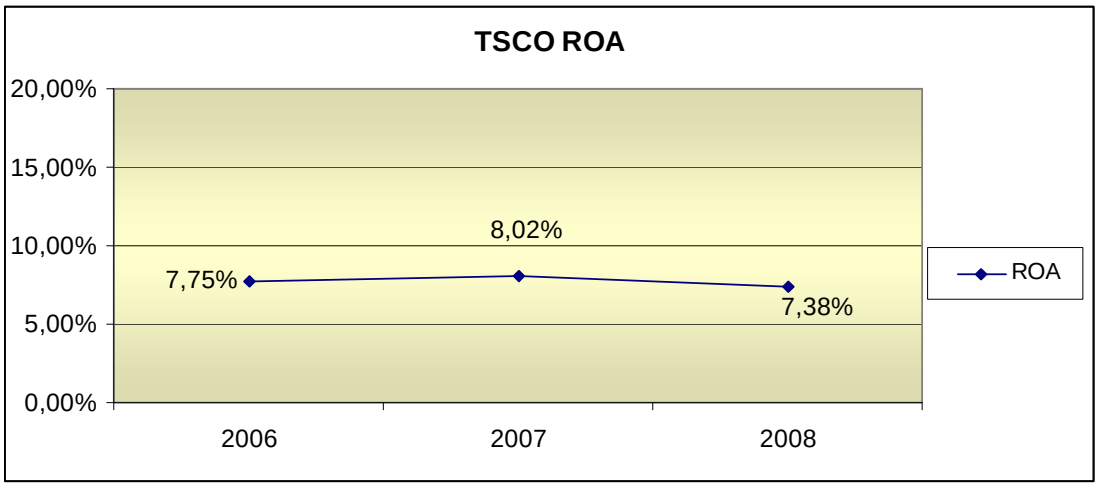
6.7.2 Profitability Ratios

Profitability ratios are very important for a company as they measure its overall performance and efficiency in terms of profit. A company's ability to generate earnings and achieve long-term sustainable profitability levels is important for existing and potential investors and can be shown through profitability ratios.

Table 6.7 TSCO Profitability Ratios

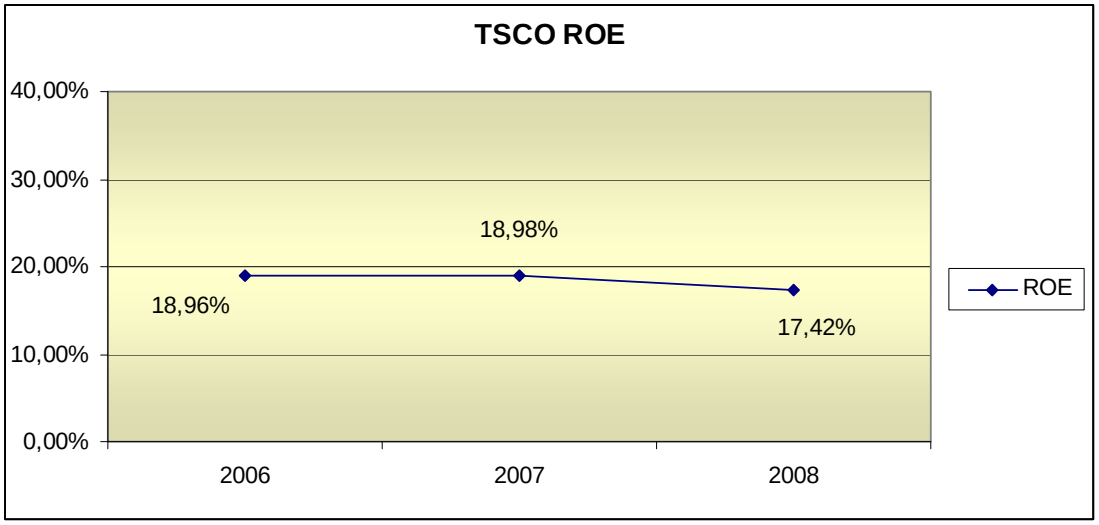
TSCO PROFITABILITY RATIOS	2006	2007	2008
ROA	7,75%	8,02%	7,38%
ROE	18,96%	18,98%	17,42%
Du Pont ROE	16,69%	17,96%	17,90%
Gross Profit Margin	7,67%	8,12%	7,67%
Operating Profit Margin	5,90%	6,21%	5,78%
Pretax Profit Margin	5,93%	6,22%	5,66%
Net Profit Margin	4,50%	4,45%	3,99%
Effective Tax Rate	24,01%	29,10%	29,04%

Graph 6.6 TSCO ROA



Return on assets indicates the degree of a company's profitability relatively to its assets, providing information on how much profit a company generates for each £1 in assets. In 2006 ROA is 7,75%, increasing in 2007 at 8,02% and decreasing in 2008 at 7,38%. Tesco's net income is increasing through the years however the decrease in 2008 results in its property as well as its inventories which experienced a higher increase rate due to the company's expanding strategy.

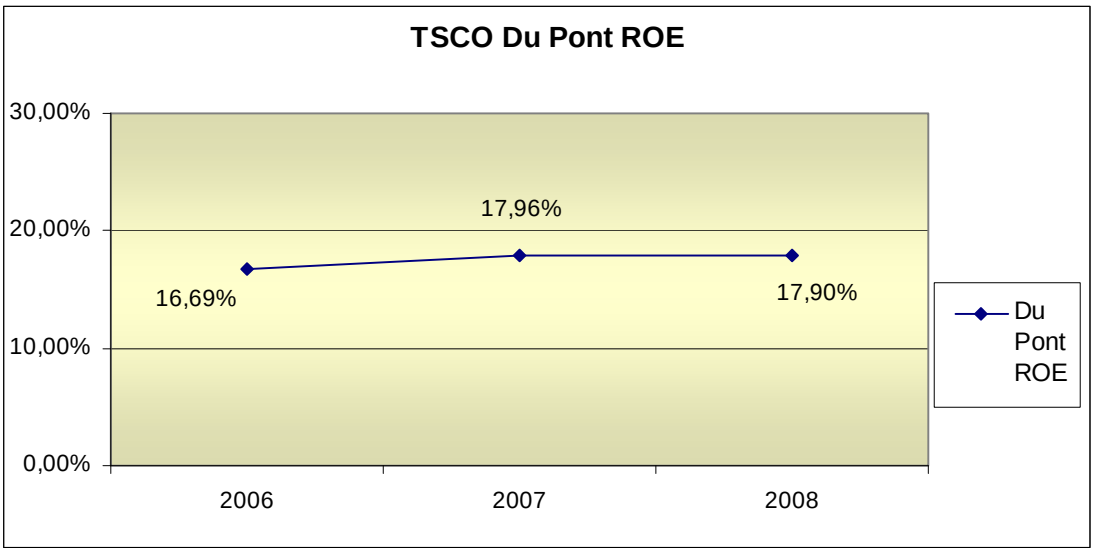
Graph 6.7 TSCO ROE



Return on equity provides information to the stockholders on how profitable their investment in the specific company is, by indicating the amount of earnings a company generates in relation to the amount of money invested in the company's stocks by its shareholders. ROE is 18,96% in 2006, slightly increasing in 2007 at 18,98% and then decreasing in 2008 at 17,42%. Tesco's net income is increasing through the years and shareholders' equity is also increasing through the years,

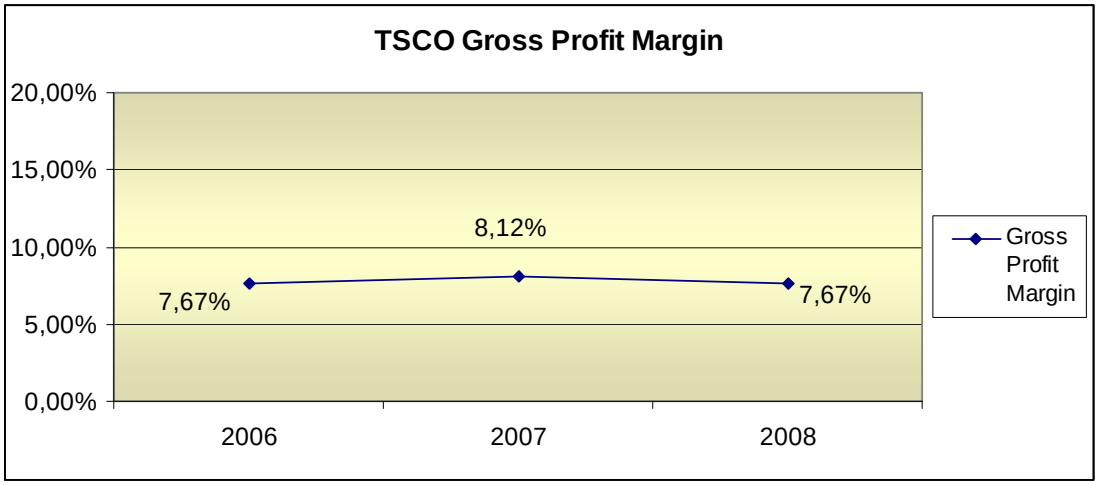
however the decreasing in 2008 is due to a higher increase rate on equity than the increase rate on net income. Investments on the company seem profitable suggesting high returns for investors.

Graph 6.8 TSCO Du Pont ROE



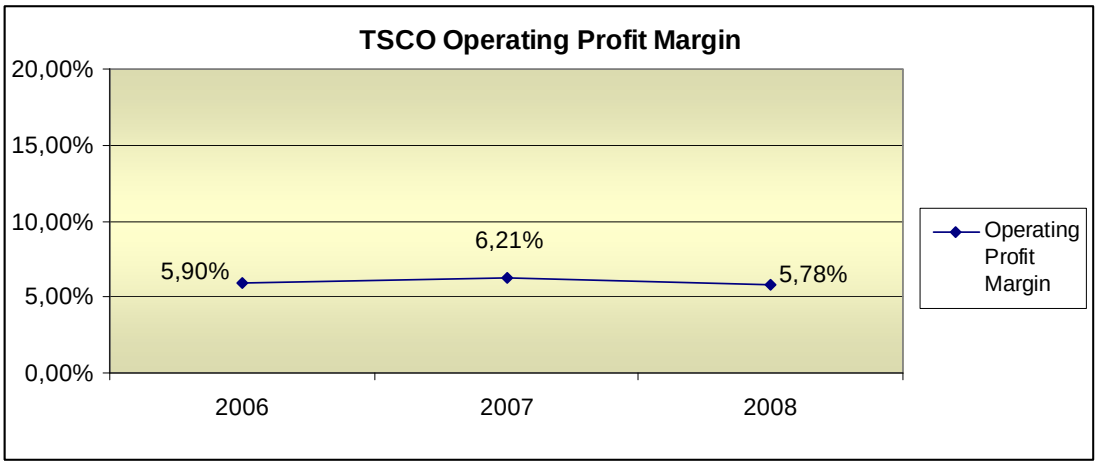
The Du Pont ROE ratio is basically an expression which breaks down ROE into three parts, operating efficiency measured by net profit margin, asset use efficiency measured by asset turnover and financial leverage measured by equity multiplier. The Du Pont ROE is 16,69% in 2006, increasing in 2007 at 17,96% and decreasing in 2008 at 17,90%.

Graph 6.9 TSCO Gross Profit Margin



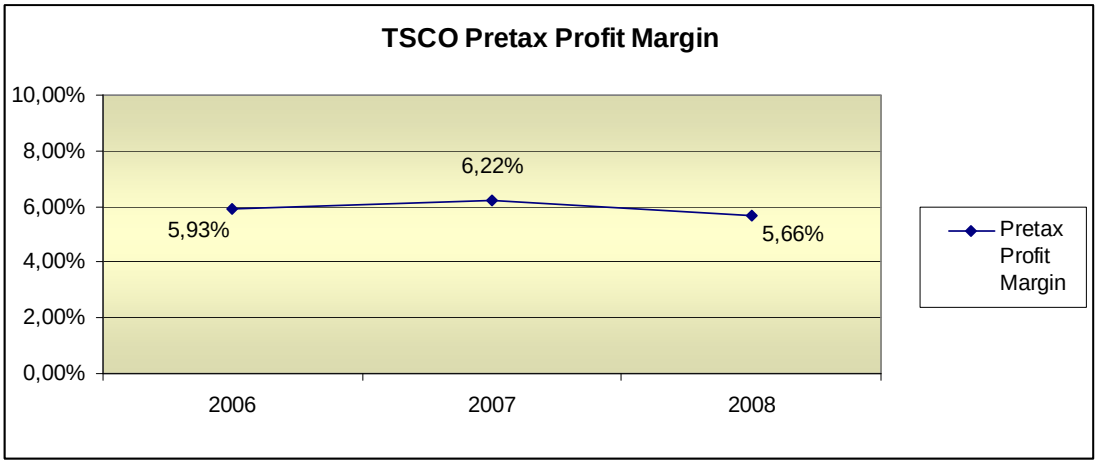
The gross profit margin indicates if the company is financially healthy and has generated enough revenues to surplus the cost of sold products. In 2006 gross profit margin was at 7,67%, increasing in 2007 at 8,12% and decreasing in 2008 at 7,67%. The decline in 2008 is a result of an increase in cost of sales leading to lower gross profit. This percentage indicates that in 2008, the company estimated a 7,67% of sales available for expenses and profit after cost from sales was deducted.

Graph 6.10 TSCO Operating Profit Margin



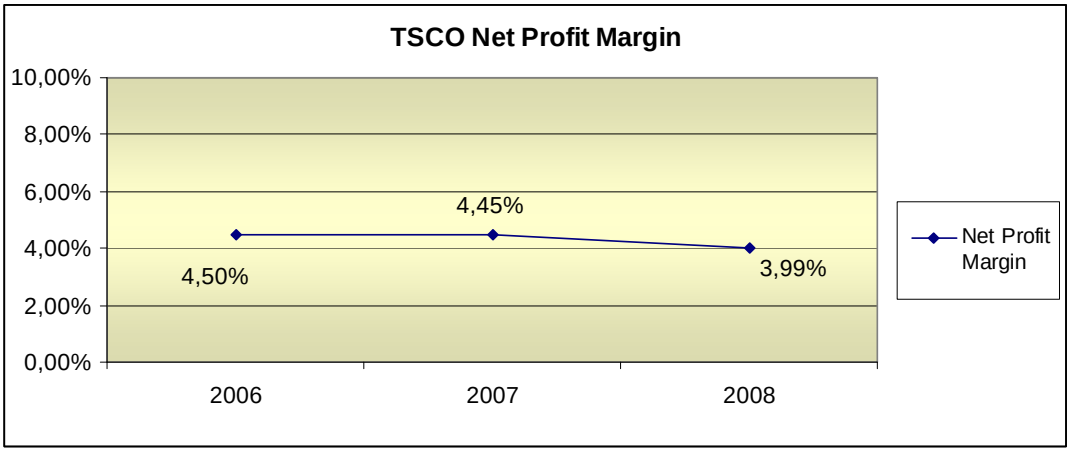
This ratio is used to measure the amount of revenue a company still holds after having paid for production variable costs. It is important to get a satisfactory operating profit margin which implies that the company is able to meet its other obligations concerning operating procedures such as its fixed costs. In 2006 operating profit margin was at 5,90%, increasing in 2007 at 6,21% and decreasing in 2008 at 5,78%. This percentage indicates that in 2008, the company still holds 5,78% of sales available for expenses and profit after having paid for production variable costs.

Graph 6.11 TSCO Pretax Profit Margin



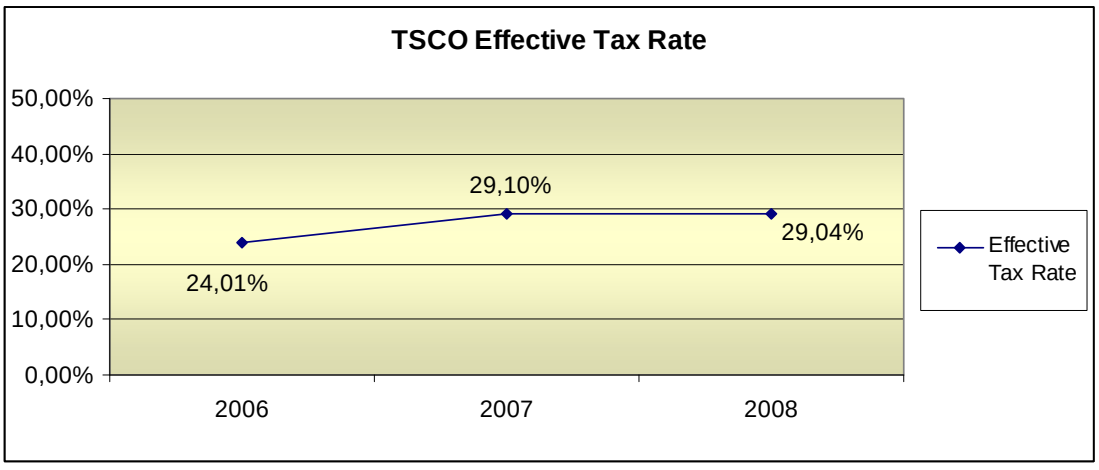
Pretax profit margin is used to measure the amount of revenue a company still holds based on the company's profit before taxes. In 2006 pretax profit margin was at 5,93%, increasing in 2007 at 6,22% and decreasing in 2008 at 5,66%, due to the company's higher operating expenses from expanding. This percentage indicates that in 2008, the company still holds 5,66% of sales available for profit , yet before taxes.

Graph 6.12 TSCO Net Profit Margin



The net profit margin is the amount of net profit generated by the company as a percent of the sales generated basically measuring how much of each £pound earned by the company is translated into profits, indicating how effective a company is at controlling its costs. In 2006 net profit margin was at 4,50% decreasing in 2007 at 4,45% and again decreasing in 2008 at 3,99%. The company's costs are not extremely high and the company is presenting itself to be financially healthy and has generated enough revenues to surplus its expenses and is considered to some extent safe from a decrease in sales.

Graph 6.13 TSCO Effective Tax Rate



The effective tax rate represents the amount of tax the company pays given as the rate the company pays on its taxable income. In 2006, the effective tax rate was 24,01%, increasing in 2007 at 29,10% and decreasing in 2008 at 29,04%. This decrease is a result of the government decreasing the rate of corporation tax by 2% giving the opportunity for higher profits.

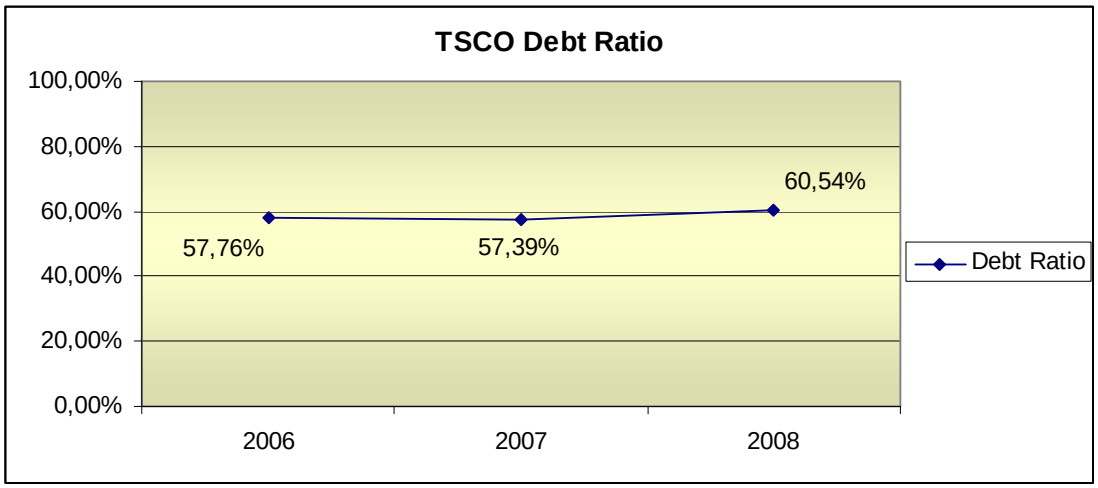
6.7.3 Debt Ratios

The category of debt ratios is very important as these ratios generally present an overall idea of the company's amount of debt and if the company is high levered or not, indicating the need to generate more revenue so as to not go bankrupt.

Table 6.8 TSCO Debt Ratios

TSCO DEBT RATIOS	2006	2007	2008
Debt Ratio	57,76%	57,39%	60,54%
Debt to Equity Ratio	1,38	1,35	1,53
Capitalization Ratio	37,23%	36,53%	40,19%
Interest Coverage Ratio	3,44	3,44	4,16
Cash Flow to Debt Ratio	0,47	0,43	0,42
Long-term Debt to Total Assets	0,25	0,25	0,27

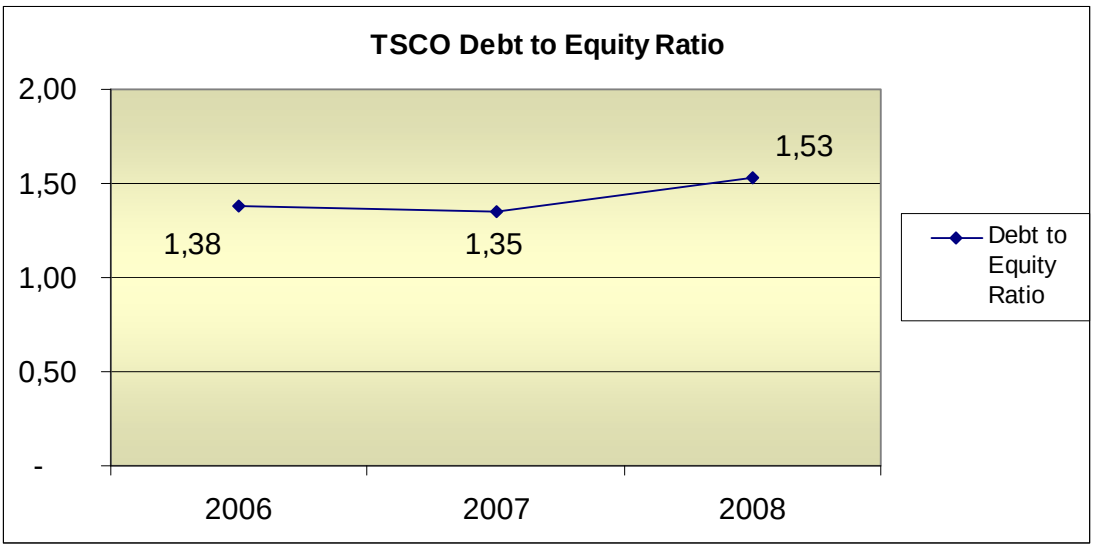
Graph 6.14 TSCO Debt Ratio



The debt ratio is basically a way to measure how much leverage the company uses and the higher the ratio, the more levered the company is. The debt ratio in 2006 is

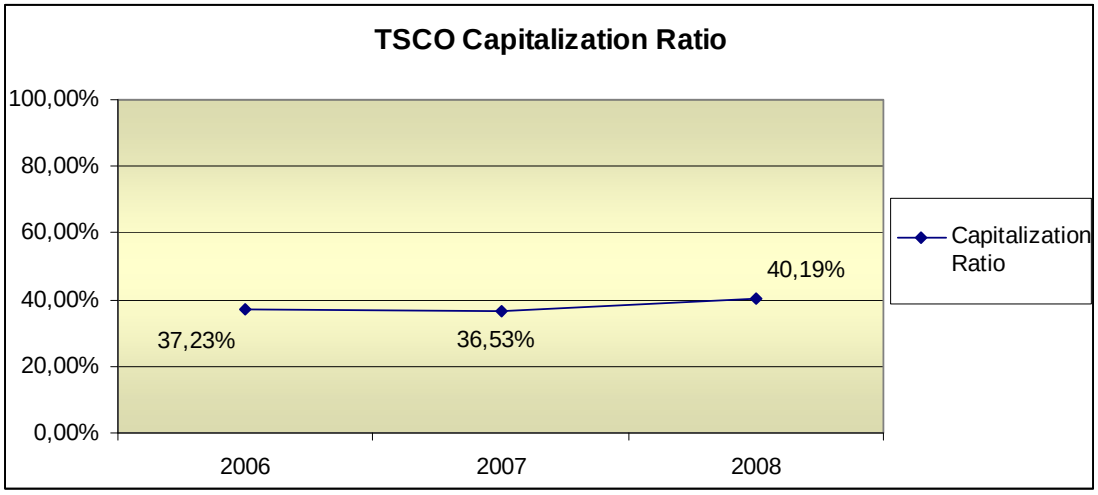
57,76% decreasing in 2007 at 57,39% and increasing again in 2008 at 60,54%, indicating that in 2008, 60,54% of the company's debt is relative to its assets. Although the company's assets increased over the years, Tesco acquired new stores and increased its obligations to suppliers leading to an increase of its debt ratio however large retail companies get high debt ratios though without suggesting financial problems.

Graph 6.15 TSCO Debt to Equity Ratio



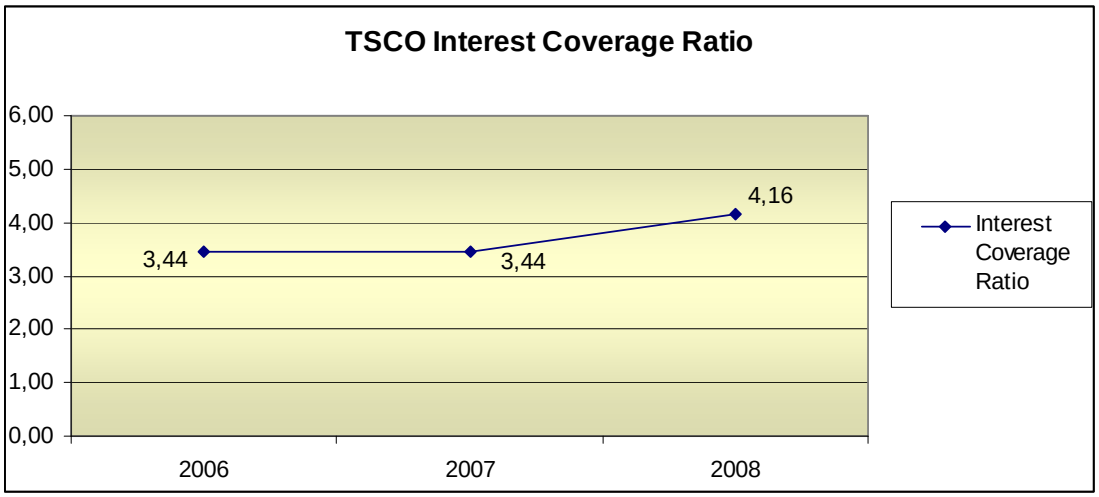
The debt to equity ratio measures the amount of all kinds of creditors' liabilities as opposed to the amount of the shareholders' equity. The debt to equity ratio in 2008 is 1,38, decreasing in 2008 at 1,35 and increased again in 2008 at 1,53, suggesting that in 2008 the creditors have supplied £1,53 for each £1 supplied by the stockholders. The increase in 2008 is a result of the company's increasing long-term borrowings due to its acquisition of new stores however it not considered to be highly levered.

Graph 6.16 TSCO Capitalization Ratio



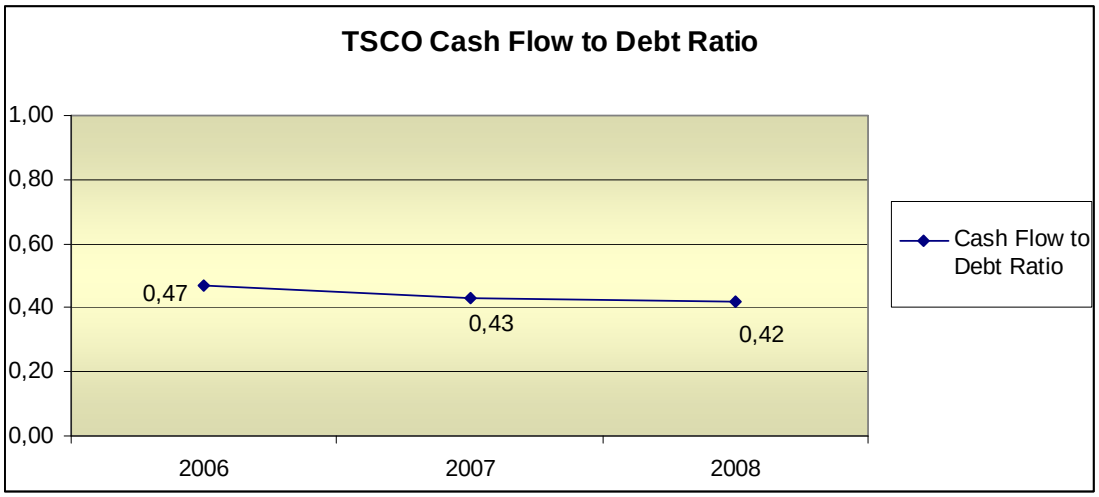
The capitalization ratio indicates the way the company's capital is structured by presenting the percentage of debt and the percentage of equity. It is considered to be an important measurement of leverage as part of the company's capital structure providing information on its operation and possible growth possibilities. In 2006 capitalization ratio was 37,23% decreasing in 2007 at 36,53% and increasing in 2008 at 40,19%. Although the company's equity is increasing over the years, the overall increase of capitalization ratio is a result of the higher rate of increasing long-term borrowings due to the company's acquisition of new stores, suggesting that the company is more debt financing.

Graph 6.17 TSCO Interest Coverage Ratio



The interest coverage ratio indicates how many times earnings can cover the interest when the company is in debt. It reveals the company's capability to meet its interest obligations even in cases of financial distress. In 2006 interest coverage ratio was 3,44% remaining stable in 2007 at 3,144% and increasing in 2008 at 4,16%. The increase of interest coverage ratio indicates that the company managed to improve its paying interest becoming more feasible for the company to survive financial distress.

Graph 6.18 TSCO Cash Flow to Debt Ratio



The cash flow to debt ratio compares the operating cash flow of a firm to its total debt, indicating the firm's ability to cover total debt payment with its cash flow generated from operating activities. In 2006 the cash flow to debt ratio was 0,47 decreasing in 2007 at 0,43 and again decreasing in 2008 at 0,42. The company has managed over the years to reduce its ability to cover total debt with its yearly cash flow from operations as a result of the company's increasing debt due to expansion.

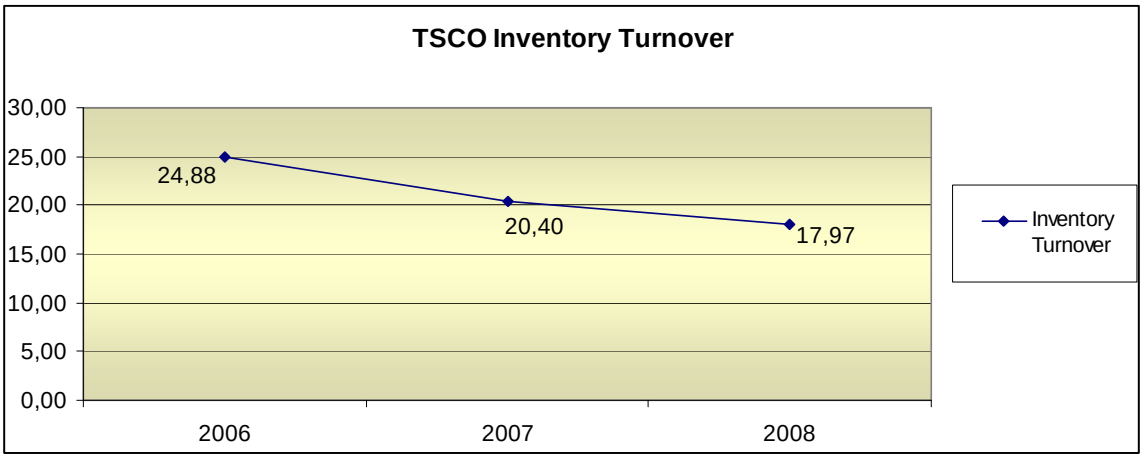
6.7.4 Operating Performance Ratios

The company's operating performance in aspects of efficient allocation of resources so as to generate revenues is measured by the operating performance ratios.

Table 6.9 TSCO Operating Performance Ratios

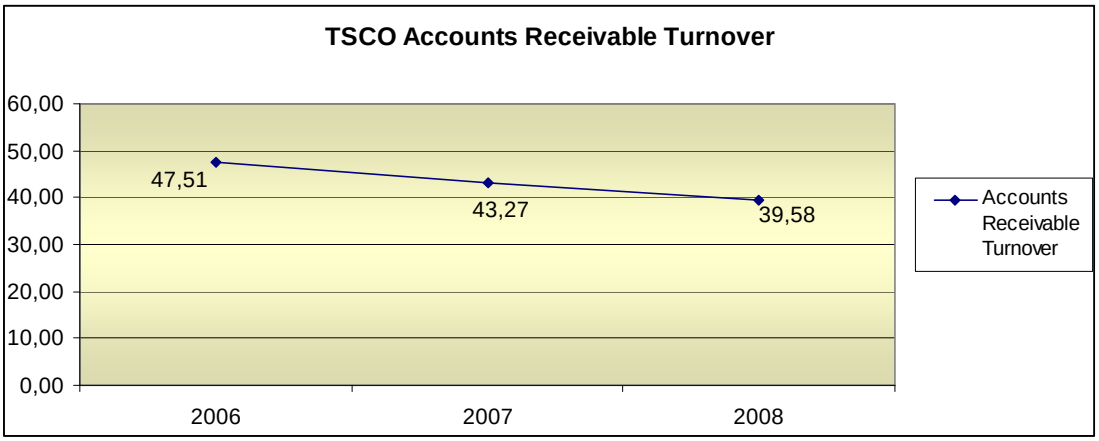
TSCO OPERATING PERFORMANCE RATIOS	2006	2007	2008
Inventory Turnover	24,88	20,40	17,97
Accounts Receivable Turnover	47,51	43,27	39,58
Accounts Payable Turnover	7,24	7,08	6,56
Asset Turnover	1,75	1,72	1,57
Fixed-Asset Turnover	2,48	2,51	2,39
Revenue per Employee (£)	150.831	157.686	167.209
Cash Conversion Cycle	-28,81	-27,39	-28,23
Operating Cycle	21,58	24,16	27,45

Graph 6.19 TSCO Inventory Turnover



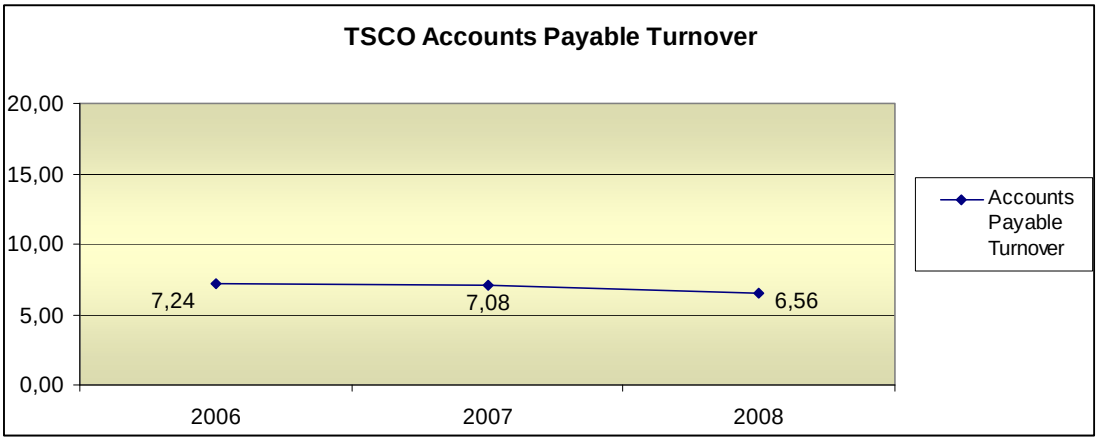
The inventory turnover is a measure of the number of times a company's inventory is sold and replaced over a specific period of time, used to measure the inventory management efficiency of the company. In 2006 the inventory turnover was 24,88 times decreasing in 2007 at 20,40 times and decreasing in 2008 at 17,97 times. Low inventory turnover indicates poor sales, possible excess inventory and increased holding costs. High inventory turnover reduces holding costs however it could be considered problem to possible price rise or even loss of sales due to inventory shortage.

Graph 6.20 TSCO Accounts Receivable Turnover



The accounts receivable turnover expresses the number of times that accounts receivables are collected over a specific time period, quantifying the company's effectiveness in extending credit as well as collecting debts, basically suggesting the average time needed to convert receivables into cash. In 2006 the accounts receivable turnover was 47,51 times decreasing in 2007 at 43,27 times and again decreasing in 2008 at 39,58 times. Prolonging receivables collection period is not wise as maintaining accounts receivable is basically extending an interest-free loan and since Tesco is an increasing store chain procedure it could use this cash profitably in investing as well as reducing amounts of borrowings.

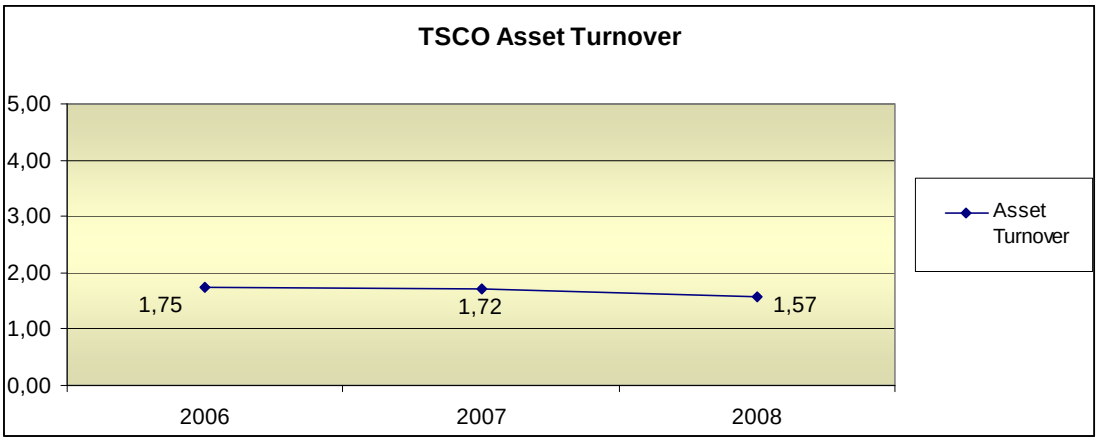
Graph 6.21 TSCO Accounts Payable Turnover



The accounts payable turnover evaluates how fast a company pays off its creditors, basically the number of times a company pays its payables over a specific period of time, indicating the company's collection manner. In 2006 the accounts payable

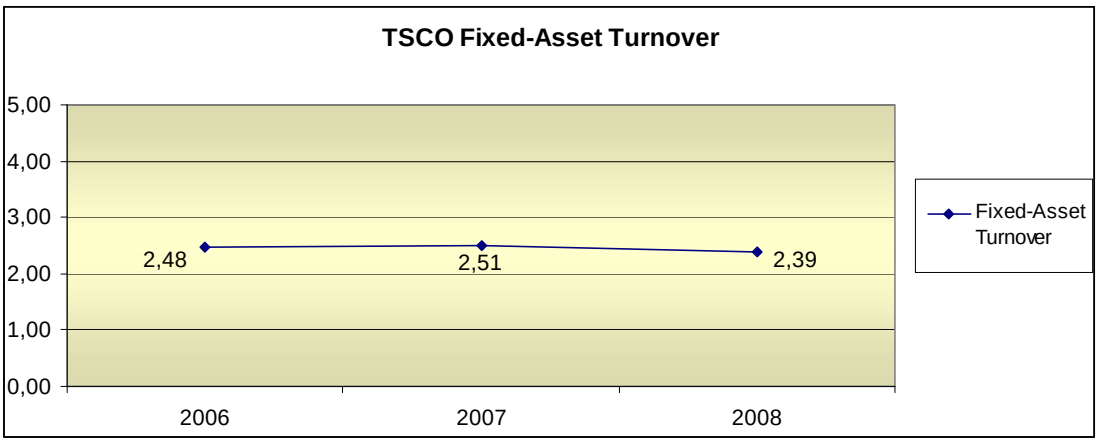
turnover was 7,24 times decreasing in 2007 at 7,08 times and decreasing in 2008 at 6,56 times. The company decreased its accounts payable turnover indicating that payables are being made more slowly, which also resulted from the fact that Tesco prolonged its receivables collection period. Falling payables turnover may lead to altering payment terms with suppliers and is an indication of possible worsening financial condition.

Graph 6.22 TSCO Asset Turnover



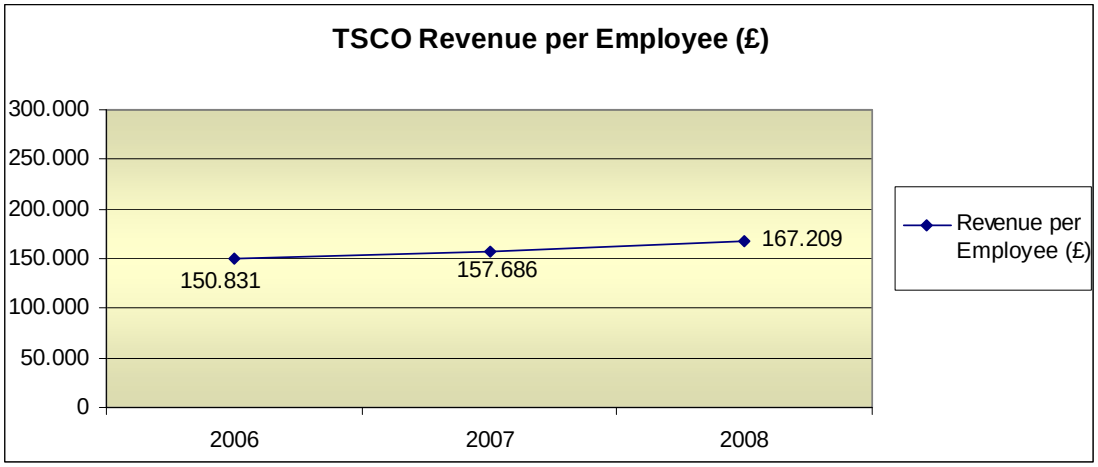
The asset turnover measures the company's efficiency at using its assets in generating revenue, determining the amount of revenue that is generated from every £pound of assets a company owns. In 2006 the asset turnover was 1,75 decreasing in 2007 at 1,72 and decreasing in 2008 at 1,57 due to an increase in the company's assets, suggesting that in 2008 the company made £1,57 sales for each £1 of assets. High asset turnover indicates the competitive pricing strategy in the retail industry however low asset turnover is expected in companies with higher profit margins like Tesco.

Graph 6.23 TSCO Fixed-Asset Turnover



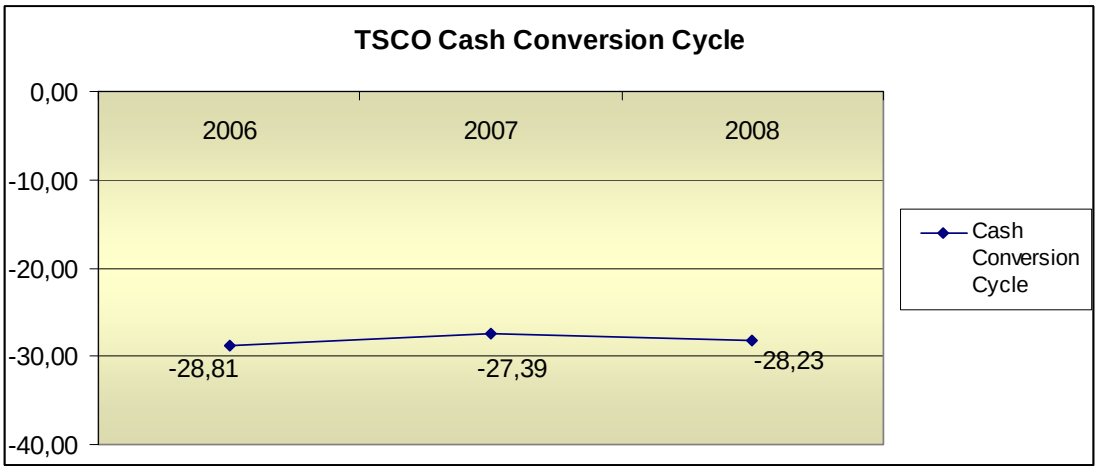
The fixed-asset turnover is a ratio measuring the efficient use of certain non-current assets in terms of generating revenue. In 2006 the fixed-asset turnover was 2,48 increasing in 2007 at 2,51 and decreasing in 2008 at 2,39 due to Tesco's acquiring more stores and facilities. The company presents a more efficient and productive use of its fixed assets over the years managing to generate more revenue from these asset investments as it managed to expand its store chain and have a respectively low decrease of the fixed-asset turnover.

Graph 6.24 TSCO Revenue per Employee (£)



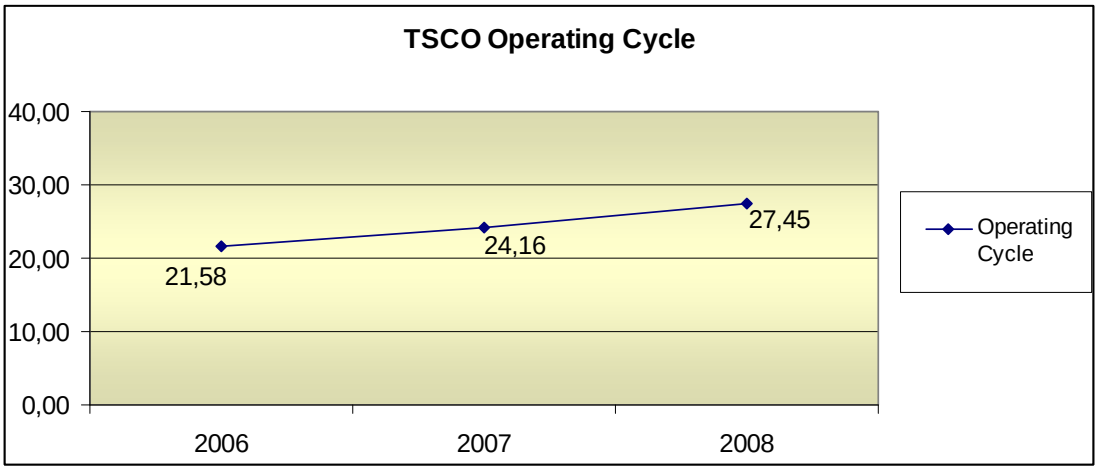
Revenue per employee measures the average revenue generated by each employee of the company, providing a broad indication of how expensive a company is to run, signifying how efficiently a company is operating in utilizing its employees. In 2006 revenue per employee was £150.831 increasing in 2007 at £157.686 and increasing in 2008 at £167.209, suggesting that the company is utilizing its employees in a more efficient and productive way.

Graph 6.25 TSCO Cash Conversion Cycle



The cash conversion cycle expresses how long a company needs to sell inventory, to collect receivables and to pay its payables. It measures the number of days each net input £pound is tied up in the sales process before it is converted into cash through sales to customers and repaid to suppliers, indicating the company's management performance efficiency. The cash conversion cycle in 2006 is -28,81 days reaching -27,39 days in 2007 and -28,23 days in 2008. The negative cash conversion cycle indicates that the company is collecting its receivables before paying its suppliers and suggests that a strict collection and negligent payment policy is adopted.

Graph 6.26 TSCO Operating Cycle



The operating cycle expresses how long a company needs between purchasing inventory and receiving cash from its sale. It measures the number of days from cash

to inventory to accounts receivable to cash, indicating the company's management performance efficiency. The operating cycle in 2006 is 21,58 days increasing at 24,16 days in 2007 and increasing at 27,45 days in 2008, suggesting that in 2008 cash is tied up in receivables and inventory for 27,45 days, indicating that over the years less cash is available to meet the company's short-term obligations leading to profitability reduction by increasing borrowing requirements and interest expense.

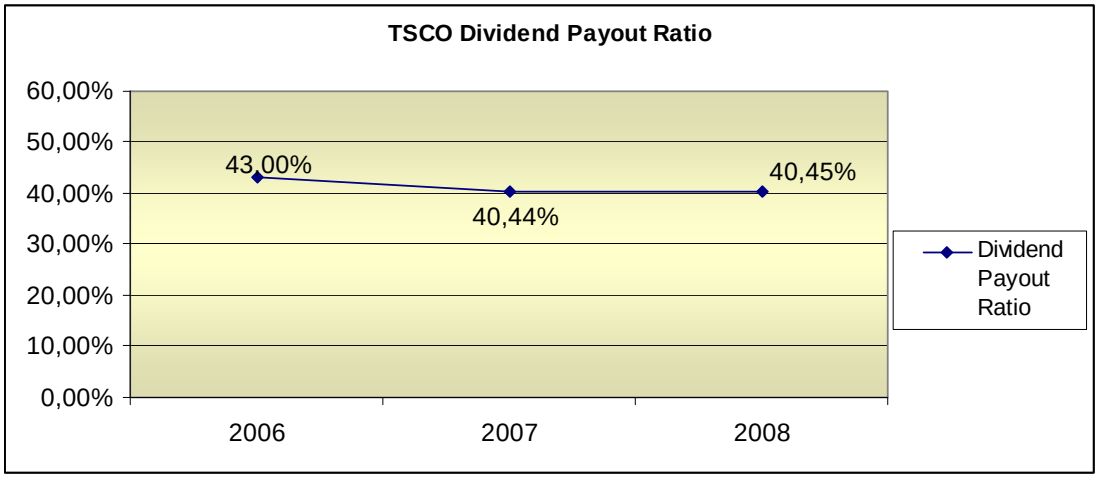
6.7.5 Cash Flow Indicator Ratios

The company's financial health and its high performance can be measured by the amount of cash that the company generates. The cash flow indicator ratios measure the amount of generated cash flows, invested cash and cash used to meet obligations.

Table 6.10 TSCO Cash Flow Indicator Ratios

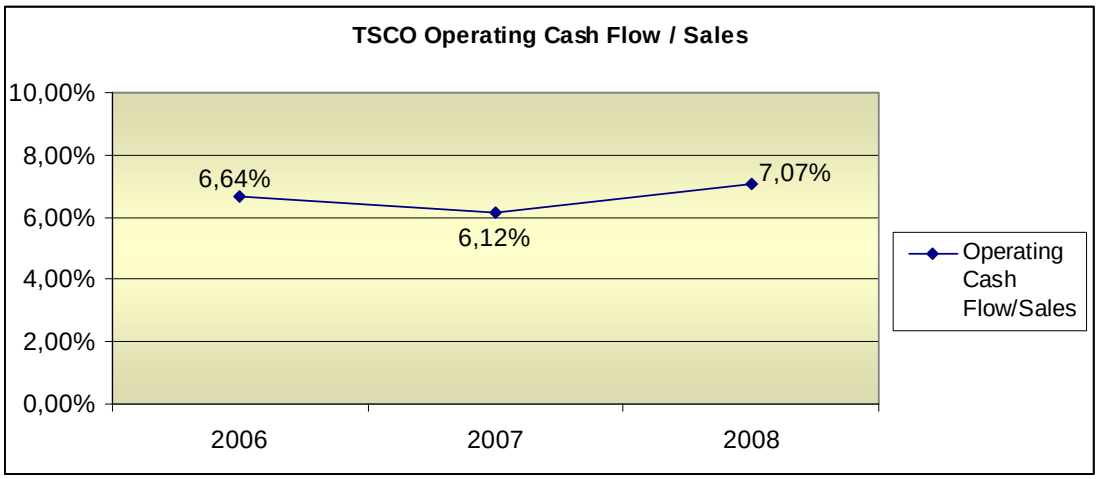
TSCO CASH FLOW INDICATOR RATIOS	2006	2007	2008
Dividend Payout Ratio	43,00%	40,44%	40,45%
Operating Cash Flow/Sales	6,64%	6,12%	7,07%

Graph 6.27 TSCO Dividend Payout Ratio



The dividend payout ratio indicates the percentage of the amount of earnings that is paid to stockholders as dividends. In 2006 the dividend payout ratio was 43,00% and decreased in 2007 at 40,44% increasing in 2008 at 40,45%. The company's dividend payout ratio becomes slightly lower over the years, probably to the company's using earnings to invest in capital growth.

Graph 6.28 TSCO Operating Cash Flow / Sales



This ratio basically expresses in percentage the ability of the company to turn its sales into cash. It is important for the company not only to increase its revenue but also its operating cash flows. The operating cash flow to sales ratio is 6,64% in 2006, decreasing at 6,12% in 2007 and increasing again at 7,07% in 2008 suggesting an increase in the amount of sales turned into cash.

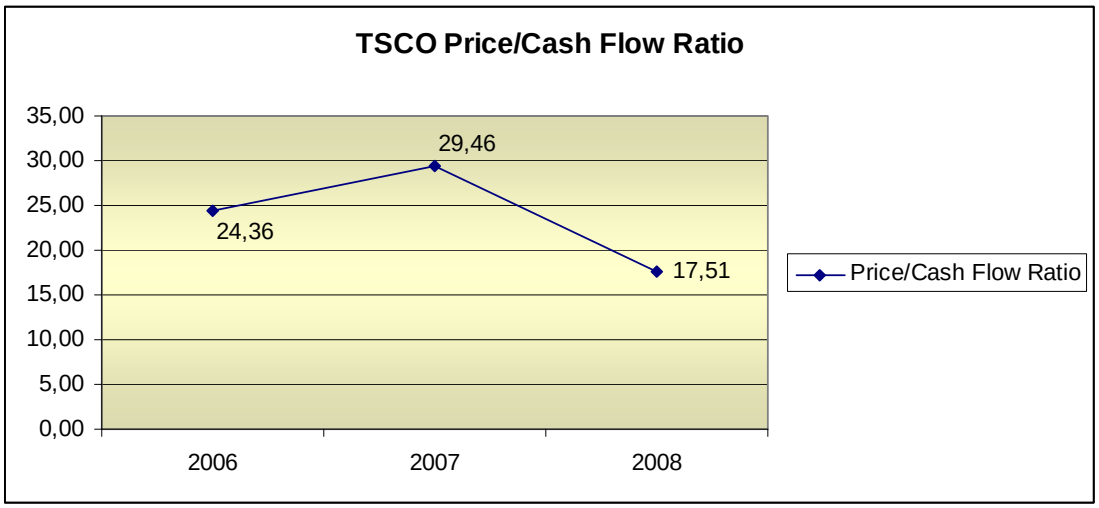
6.7.6 Investment Valuation Ratios

The investment valuation ratios are used to evaluate the investments on the company providing information on the company's stock and whether it is overvalued or undervalued.

Table 6.11 TSCO Investment Valuation Ratios

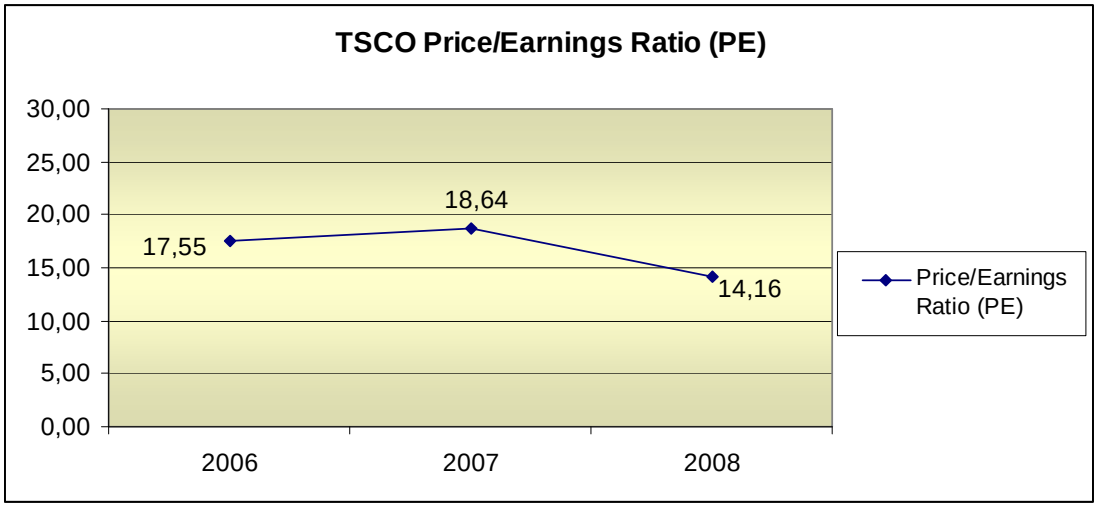
TSCO INVESTMENT VALUATION RATIOS	2006	2007	2008
Price/Cash Flow Ratio	24,36	29,46	17,51
Price/Earnings Ratio (PE)	17,55	18,64	14,16
Dividend Yield	2,45%	2,17%	2,86%
Price/Sales Ratio	1,62	1,80	1,24
Price/Book Value Ratio	6,76	7,28	4,92

Graph 6.29 TSCO Price / Cash Flow Ratio



The price / cash flow ratio is used to measure the investment valuation as it calculates the market price of the stock to the amount of the generated operating cash flow per stock of the company. Operating cash flow may appear to be more reliable than earnings in evaluation, as earnings are affected by several other factors. In 2006 the price to cash flow ratio was 24,36 increasing in 2007 at 29,46 and decreasing in 2008 at 17,51. The high increase in 2007 is due to an overall increase of the company's share price due to Tesco's international expansion strategy.

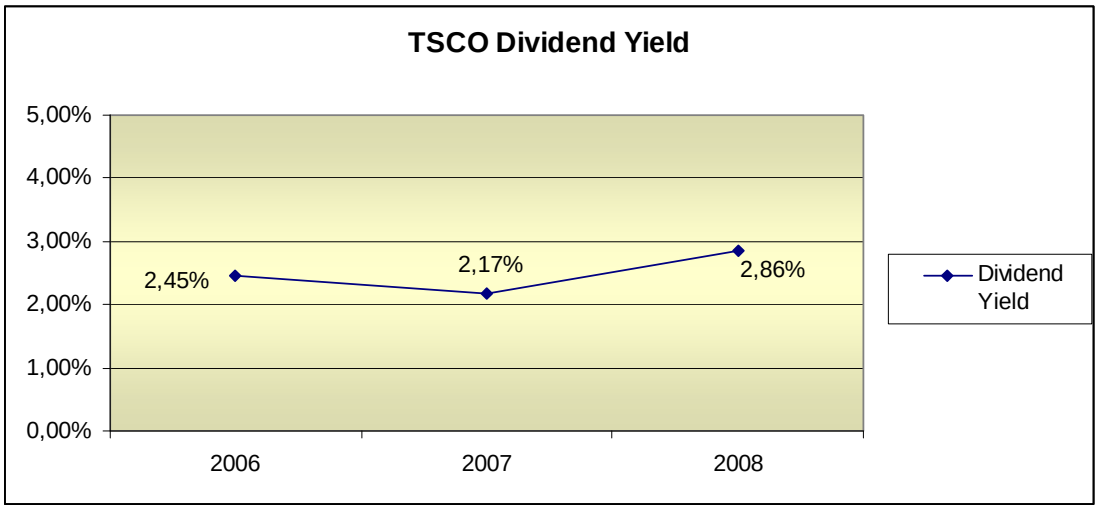
Graph 6.30 TSCO Price / Earnings Ratio (PE)



The P/E ratio is one of the most widely known and used ways to indicate investment valuation as it measures the company's share price in relation to the earnings the company earned per share. The higher the P/E ratio, the more expensive the share is

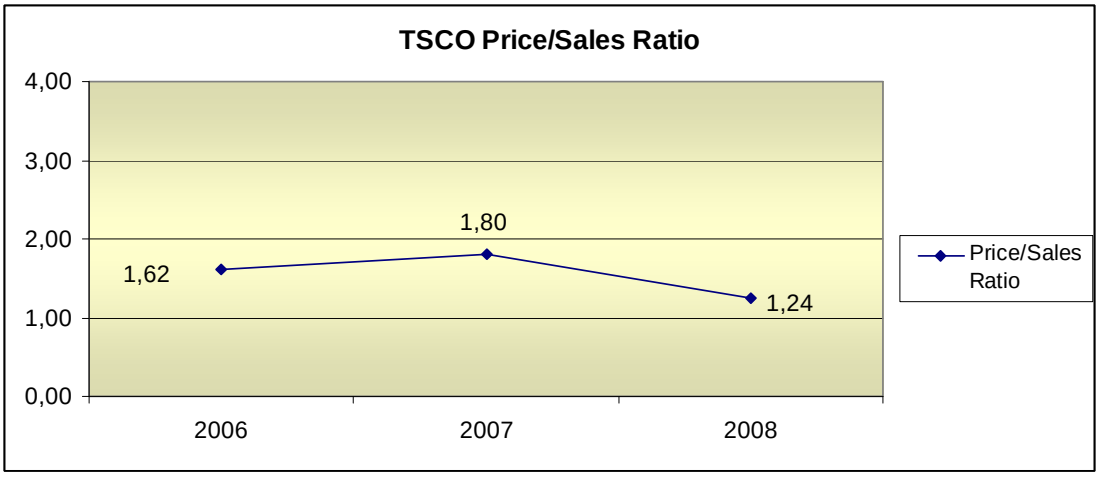
sold as it implies a possible forecasted high growth of earnings. In 2006 the price to earnings ratio is 17,55 increasing in 2007 at 18,64 and decreasing in 2008 at 14,16. The company's share price was higher in 2007 however fell in 2008 leading to this up-down trend.

Graph 6.31 TSCO Dividend Yield



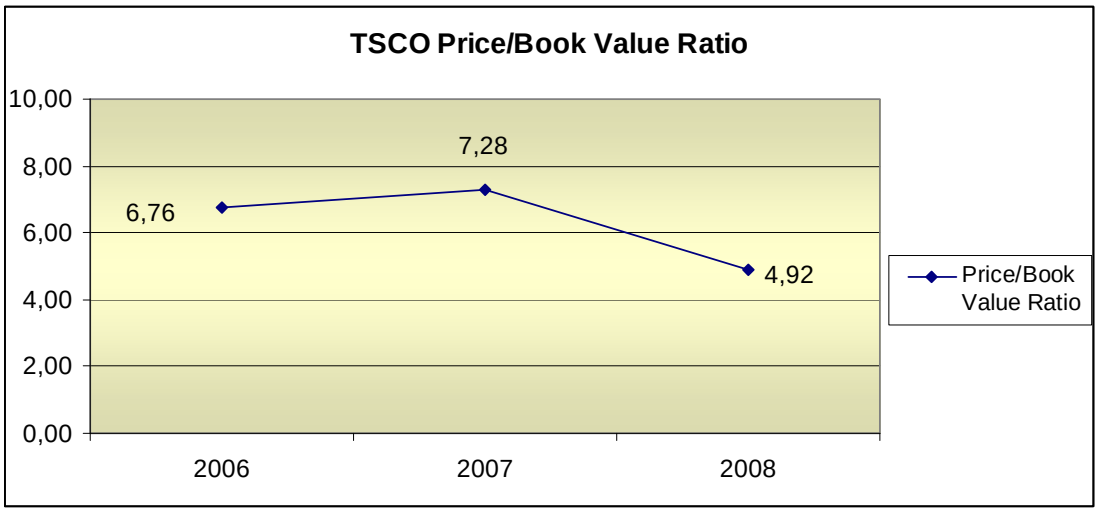
The dividend yield is the percentage of the per share dividend divided by the price per share, expressing the annual percentage of earnings paid as dividends for a stock. In 2006 the dividend yield was 2,45% decreasing in 2007 at 2,17% and increasing in 2008 at 2,86%. In 2007 the share price increased causing a decrease of the dividend yield whereas the share price in 2008 decreased and dividend per share increased causing the dividend yield to increase.

Graph 6.32 TSCO Price / Sales Ratio



The price to sales ratio is a stock valuation indicator measuring the company's stock against its annual sales, reflecting how many times investors are paying for every £pound of the company's sales and can vary substantially across industries. In 2006 the price to sales ratio was 1,62 increasing in 2007 at 1,80 due to an increase in the company's share price and decreasing in 2008 at 1,24. Low price to sales ratio is better for investors as they pay less for every unit of sales and it is considered to be a more appealing investment.

Graph 6.33 TSCO Price / Book Value Ratio



The Price to book value ratios expresses how many times a company's stock is trading per share compared to the company's book value per share, indicating how much is being paid for the company's assets by shareholders, comparing the company's book value to its current market price. In 2006 the price to book ratio is 6,76 increasing in 2007 at 7,28 due to an increase in the company's share price and decreasing in 2008 at 4,92

Ch.7. Financial Analysis of Competitors

Examining the financial statements and financial ratios of J Sainsbury plc and Tesco plc we get information on their financial position in the sector and the market they operate, also acquiring knowledge of the sector's trends and performance, as J Sainsbury plc and Tesco plc are two of the top dominants in the UK retail sector. A financial analysis of the companies with the sector is considered favorable so as to obtain a better idea of their performance either over, under or along the retail sector, yet limitation in collecting data for sector is not allowing a further sector to companies' analysis. However, a selection of two top competitors of J Sainsbury plc and Tesco plc are chosen to perform competitors' analysis and presentation of most essential financial figures and ratios. The competitor companies selected are Wm Morrison plc and Marks & Spencer plc which also operate in the UK retailing a wide range of food and non-food products.

7.1 J Sainsbury plc

J Sainsbury plc, together with its subsidiaries, engages in retailing, financial services, and property investment businesses in the United Kingdom. The company's stores offer a range of food, and complementary non-food products and services primarily under the Sainsbury's brand. It also provides an Internet-based home delivery shopping service. The company operates approximately 872 stores comprising 537 supermarkets and 335 convenience stores; and holds 294 freehold and long leasehold stores, as well as 2 property joint ventures containing 43 supermarkets. In addition, it provides insurance, credit cards, savings products, and loans. The company was founded in 1869 and is headquartered in London, the United Kingdom.

Table 7.1 SBRY Financial Ratios

Sainsbury's Financial Ratios	2006	2007	2008
Current Ratio	0,80	0,71	0,66
ROA	0,48%	2,90%	3,34%
ROE	1,44%	7,79%	7,09%
Gross Profit Margin	6,64%	6,83%	5,62%
Net Profit Margin	0,36%	1,89%	1,84%
Inventory Turnover	26,03	27,08	24,72
Accounts Receivable Turnover	53,99	72,52	88,52
Accounts Payable Turnover	7,16	7,33	7,40
Debt to Equity Ratio	2,21	1,20	1,05

7.2 Tesco plc

Tesco plc, together with its subsidiaries, operates as a grocery retailer. It operates stores that primarily offer food products, as well as general merchandise, clothing products, and electrical products. The company also provides telecom, retail banking, financial, and insurance services. In addition, it engages in data analysis, distribution, and property operations. Tesco plc also sells its products through online and catalogues. The company operates in the United Kingdom, China, the Czech Republic, Hungary, the Republic of Ireland, India, Japan, Malaysia, Poland, Slovakia, South Korea, Thailand, Turkey, and the United States. It operates approximately 5,000 stores. The company was formerly known as Tesco Stores (Holdings) Limited and changed its name to Tesco PLC in 1983. Tesco PLC was founded in 1919 and is based in Cheshunt, the United Kingdom.

Table 7.2 TSCO Financial Ratios

Tesco Financial Ratios	2006	2007	2008
Current Ratio	0,53	0,56	0,61
ROA	7,75%	8,02%	7,38%
ROE	18,96%	18,98%	17,42%
Gross Profit Margin	7,67%	8,12%	7,67%
Net Profit Margin	4,50%	4,45%	3,99%
Inventory Turnover	24,88	20,40	17,97
Accounts Receivable Turnover	47,51	43,27	39,58
Accounts Payable Turnover	7,24	7,08	6,56
Debt to Equity Ratio	1,38	1,35	1,53

7.3 Wm Morrison plc

It was in 1899 that egg and butter merchant William Morrison began work to create the company from a stall in a Bradford market. Morrison's is headquartered in Bradford, England and is nowadays UK's fourth largest food retailer with 455 stores. Its business is mainly grocery products and food products, fresh and frozen, meat products, while also offering alcohol products, beers, wines, spirits and a small range of nonfood items such as health and beauty products, household products, baby products and entertainment products. The company sources and processes most of the fresh food that it sells through its own manufacturing facilities, having close control over provenance and quality, distributing its stores on its own network. It basically involves in the whole sale of produce, manufacturing and distribution, processing fresh meat, packaging, baking operations and development and investments on properties.

Table 7.3 MRW Financial Ratios

Morrisons Financial Ratios	2006	2007	2008
Current Ratio	0,45	0,41	0,49
ROA	0,62%	3,36%	7,26%
ROE	1,26%	6,31%	12,65%
Gross Profit Margin	2,66%	5,10%	6,31%
Net Profit Margin	0,38%	1,99%	4,27%
Inventory Turnover	29,53	32,14	27,49
Accounts Receivables Turnover	74,92	78,52	61,06
Accounts Payables Turnover	8,02	7,88	7,24
Debt / Equity	1,04	0,88	0,74

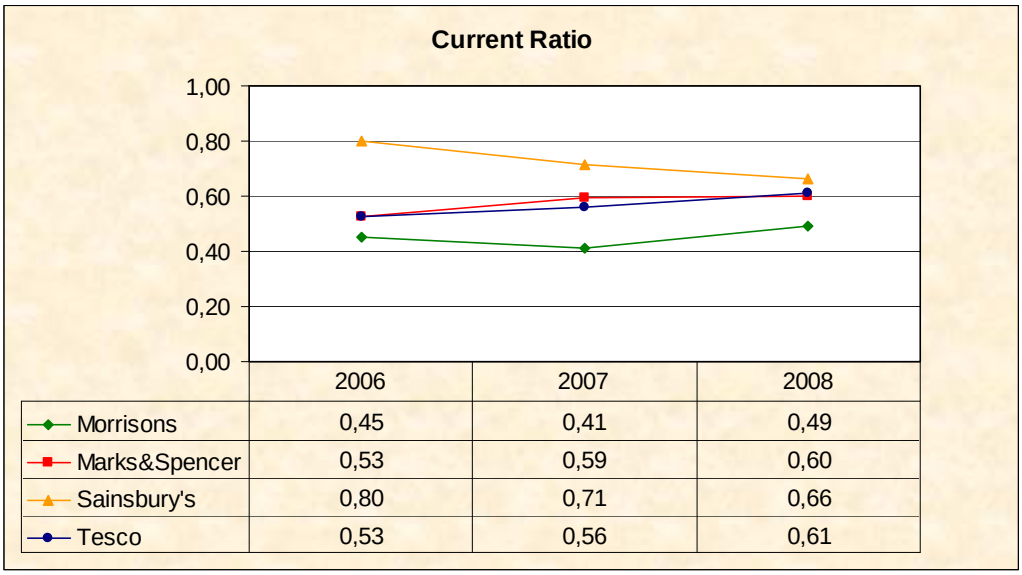
7.4 Marks & Spencer plc

Marks and Spencer plc, through its subsidiaries, engages in retailing clothing, food, and home products in the United Kingdom and internationally. Its clothing products include womenswear, lingerie, menswear, school wear, kids wear, shoes and slippers, as well as offers accessories, handbags and purses, bags and briefcases, ties, jewellery, and beauty products. The company also provides home and furniture products comprising bath linens and accessories, bedding, cookware, curtains and blinds, cushions and throws, dinnerware, domestic and small appliances, luggage, rugs, storage, lighting products, home accessories, and other furniture products for living and dining rooms, bathrooms, kids bedrooms, office, nursery, kitchen, and conservatory and garden. In addition, it offers various technology products, including sound and vision products, such as audio and iPods, DVD and home theatre products, digital photography personal alarms, TVs and accessories, computing and communication products, beauty electrical products, which comprise shavers and grooming, electric toothbrushes, hair care products, and female beauty products, home and kitchen appliances. Furthermore, the company provides flowers and gifts that comprise bouquets, books and DVDs, flowers and plants, cards, and stationery products, food and wine gifts, personalized and wedding cakes, as well as offers procurement and financial services. It markets its products through operating 705 stores in the United Kingdom and 361 wholly owned, partly owned, and franchised stores internationally in 42 countries, as well as through online. The company was founded in 1884 and is headquartered in London, the United Kingdom.

Table 7.4 MKS Financial Ratios

Marks & Spencer Financial Ratios	2006	2007	2008
Current Ratio	0,53	0,59	0,60
ROA	12,25%	11,48%	7,00%
ROE	40,01%	42,00%	24,40%
Gross Profit Margin	38,90%	38,65%	36,15%
Net Profit Margin	7,67%	9,11%	5,61%
Inventory Turnover	12,61	12,23	11,29
Accounts Receivables Turnover	71,57	75,82	75,83
Accounts Payables Turnover	33,03	37,05	17,93
Debt / Equity	2,27	2,66	2,49

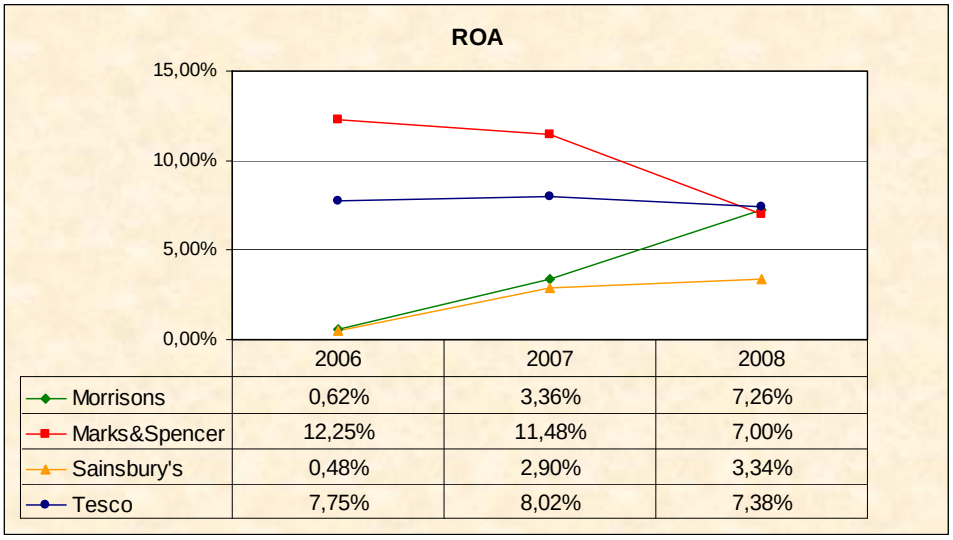
Graph 7.1 SBRY – TSCO – MRW – MKS – Current Ratio



	2006	2007	2008
Morrisons	0,45	0,41	0,49
Marks&Spencer	0,53	0,59	0,60
Sainsbury's	0,80	0,71	0,66
Tesco	0,53	0,56	0,61

The current ratio indicates the ability of the company to manage its short-term obligations if they come due at that specific time, by liquidating its assets. All companies are presenting current ratios lower than one (1) for all the years examined, however that does not mean they can necessarily go bankrupt. The companies are experiencing working capital deficit however grocery stores generate cash leading to an increasing of their current assets on a daily basis thus, it is not considered to be rather stressful. When comparing from 2006 to 2008, all companies managed to increase their current ratio except for Sainsbury which although experiences a decrease over the years it is still the one with better ability to manage its short-term obligations.

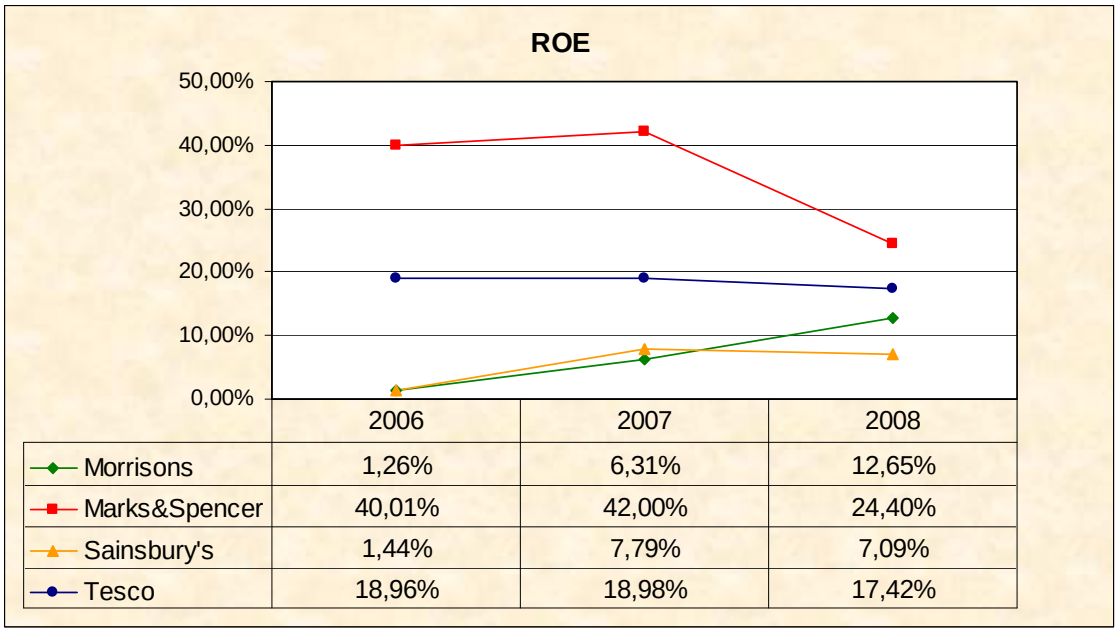
Graph 7.2 SBRY – TSCO – MRW – MKS – ROA



	2006	2007	2008
Morrisons	0,62%	3,36%	7,26%
Marks&Spencer	12,25%	11,48%	7,00%
Sainsbury's	0,48%	2,90%	3,34%
Tesco	7,75%	8,02%	7,38%

Return on assets indicates the degree of a company's profitability relatively to its assets, providing information on how much profit a company generates for each £1 in assets. Morrisons and Sainsbury present an overall increase of return on assets over the years due to a reduction of their operating expenses compared to the increase of their assets although Morrisons managed a higher increase improving its financial health over the years, presenting greater ability to allocate its resources wisely and manage to generate higher earnings on smaller investments. Tesco and Marks & Spencer present an overall decrease of return on assets over the years due to an increase of assets from acquiring new stores and entering new markets on a higher rate than net income, yet Marks & Spencer also experienced a reduction of net income due to an increase on operating expenses, financially positioning worse.

Graph 7.3 SBRY – TSCO – MRW – MKS – ROE

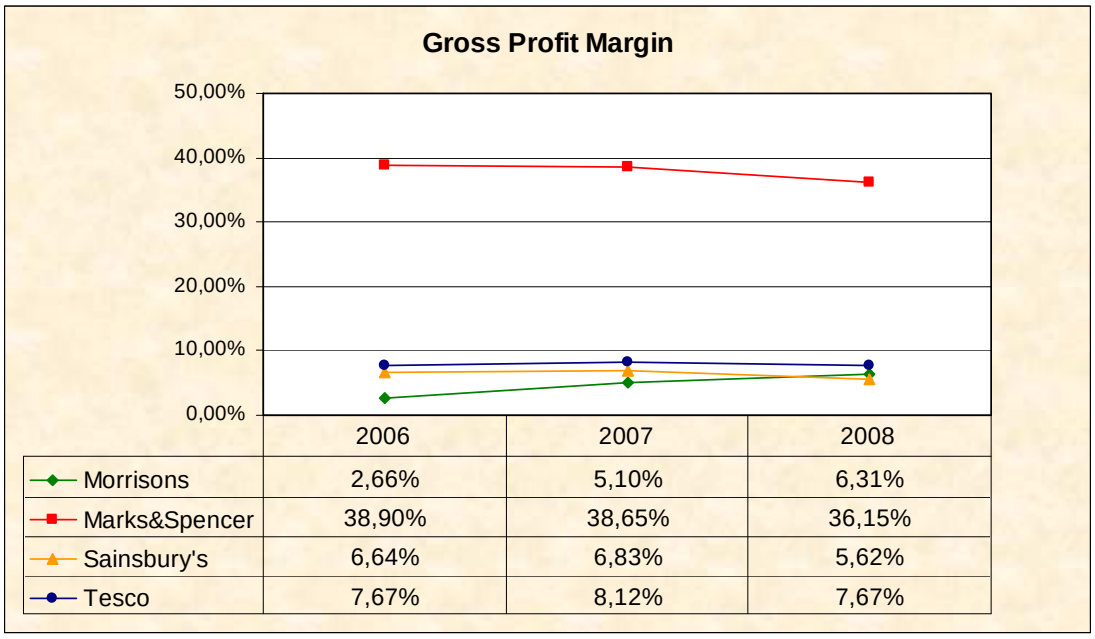


	2006	2007	2008
Morrisons	1,26%	6,31%	12,65%
Marks&Spencer	40,01%	42,00%	24,40%
Sainsbury's	1,44%	7,79%	7,09%
Tesco	18,96%	18,98%	17,42%

Return on equity provides information to the stockholders on how profitable their investment in the specific company is, by indicating the amount of earnings a company generates in relation to the amount of money invested in the company's stocks by its shareholders. Sainsbury's and Morrisons present an overall increase of return on equity over the years due to an increase in net income, as shareholders' equity is not so much altered, indicating that investments on the company are becoming more profitable suggesting higher returns on their investments and

potential higher dividends to investors. Tesco and Marks & Spencer present an overall decrease of return on equity over the years due to their property as well as their inventories which experienced a higher increase rate due to their expansion strategy however Marks & Spencer also experienced a reduction of net income due to an increase on operating expenses.

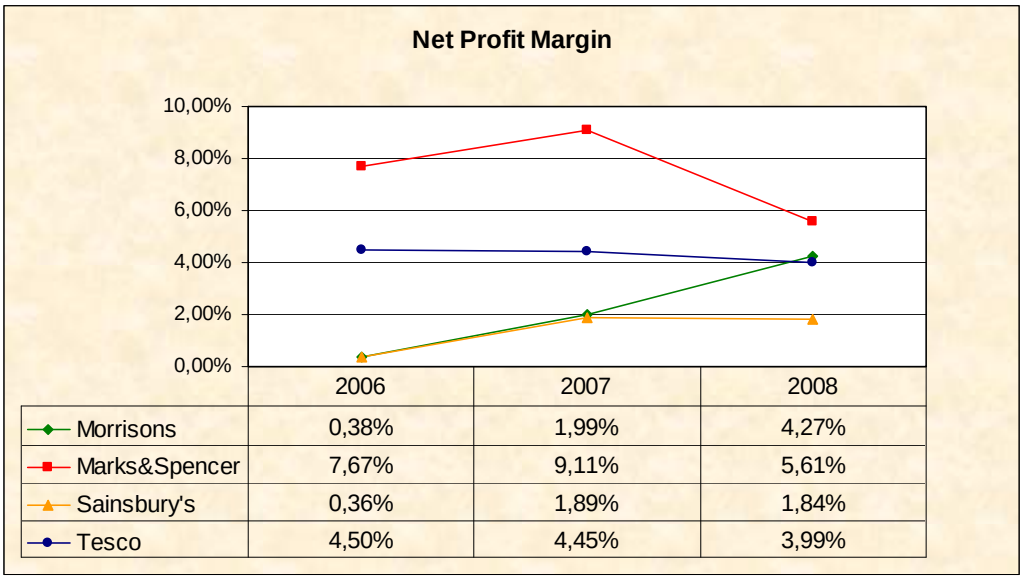
Graph 7.4 SBRY – TSCO – MRW – MKS – Gross Profit Margin



	2006	2007	2008
Morrisons	2,66%	5,10%	6,31%
Marks&Spencer	38,90%	38,65%	36,15%
Sainsbury's	6,64%	6,83%	5,62%
Tesco	7,67%	8,12%	7,67%

The gross profit margin indicates if the company is financially healthy and has generated enough revenues to surplus the cost of sold products. Tesco managed to maintain its gross profit margin over the years and Morrisons was the only one that managed to present an increase of almost 4% especially due to a reduction in corporation tax. Sainsbury and Marks & Spencer performed lower gross profit margins over the years yet Marks & Spencer has by far higher gross profit margins as it presents lower cost of sales and retails more non-food products suggesting that the company does not suffer losses from expired or rotten inventories.

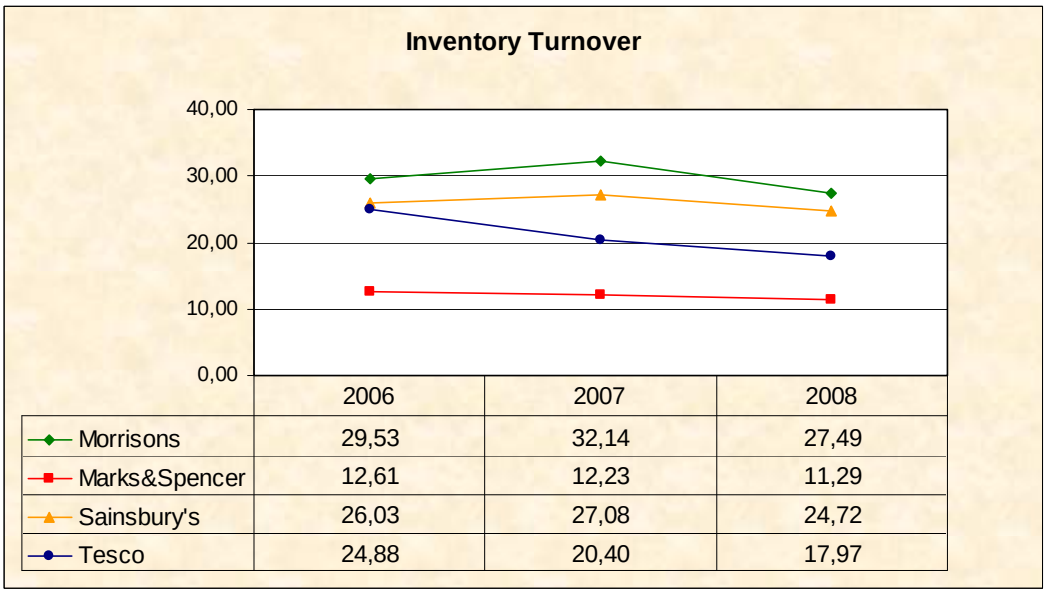
Graph 7.5 SBRY – TSCO – MRW – MKS – Net Profit Margin



	2006	2007	2008
Morrisons	0,38%	1,99%	4,27%
Marks&Spencer	7,67%	9,11%	5,61%
Sainsbury's	0,36%	1,89%	1,84%
Tesco	4,50%	4,45%	3,99%

The net profit margin is the amount of net profit generated by the company as a percent of the sales generated basically measuring how much of each £pound earned by the company is translated into profits, indicating how effective a company is at controlling its costs. Sainsbury's and Morrisons managed to increase their net profit margins over the years mostly by reducing their expenses whereas Tesco and Marks & Spencer present a reduction of their net profit margins over the years with Marks & Spencer suffering from high expenses, yet still presenting higher net profit margins than the rest of the companies.

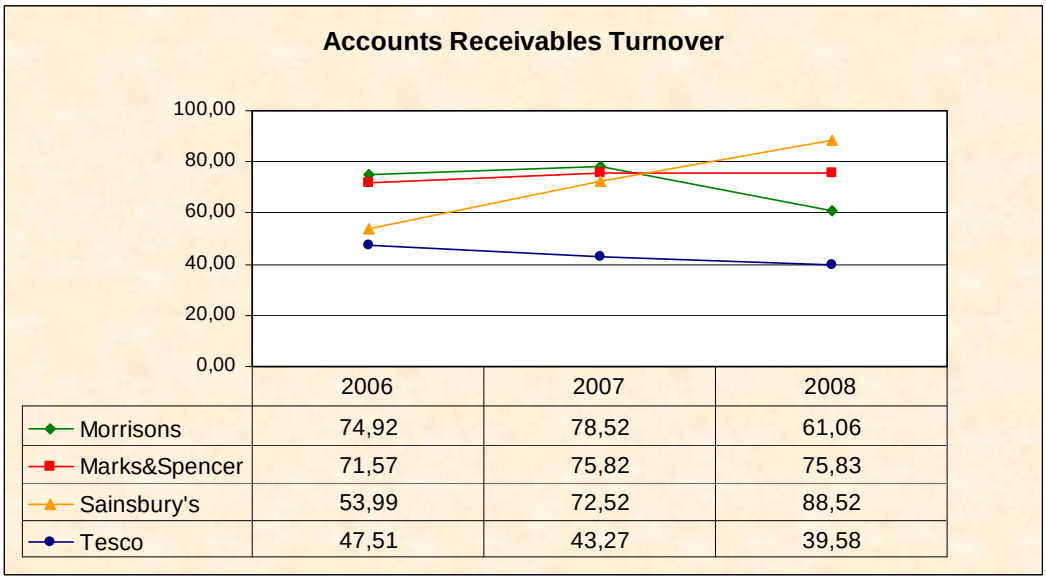
Graph 7.6 SBRY – TSCO – MRW – MKS – Inventory Turnover



	2006	2007	2008
Morrisons	29,53	32,14	27,49
Marks&Spencer	12,61	12,23	11,29
Sainsbury's	26,03	27,08	24,72
Tesco	24,88	20,40	17,97

The inventory turnover is a measure of the number of times a company's inventory is sold and replaced over a specific period of time, used to measure the inventory management efficiency of the company. All companies managed to reduce the days of inventory turnover over the years with Marks & Spencer presenting the lowest inventory turnover at 11,29 times and Morrisons presenting the highest inventory turnover at 27,49 times. Low inventory turnover indicates poor sales, possible excess inventory and increased holding costs due to possessing more warehouses. High inventory turnover reduces holding costs however it could be considered problem to possible sudden price rise or even loss of sales due to inventory shortage.

Graph 7.7 SBRY – TSCO – MRW – MKS – Accounts Receivables Turnover

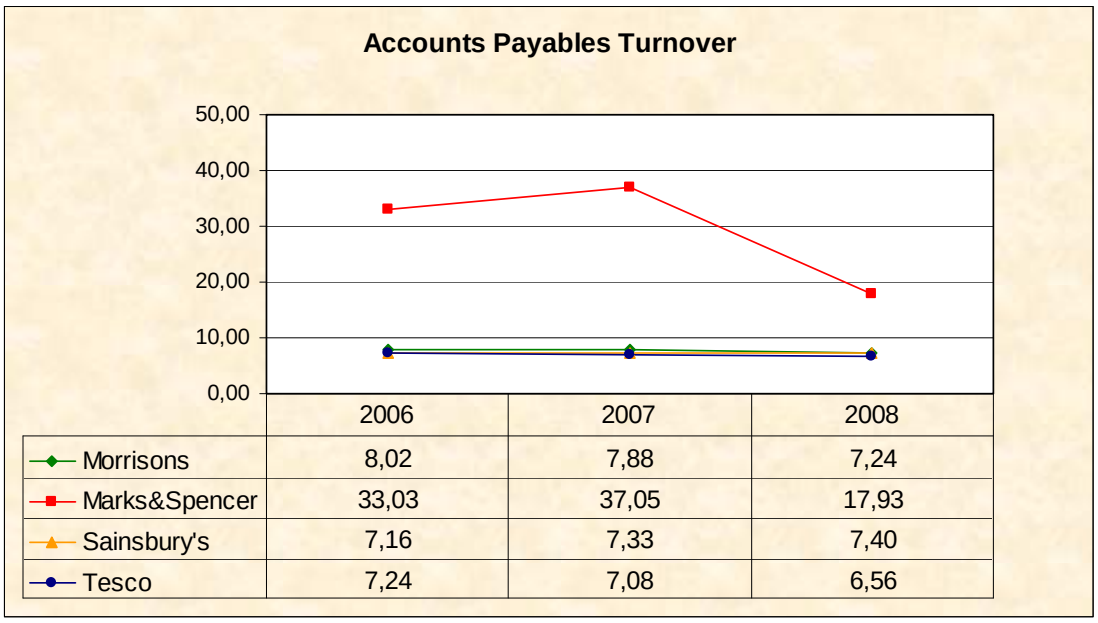


	2006	2007	2008
Morrisons	74,92	78,52	61,06
Marks&Spencer	71,57	75,82	75,83
Sainsbury's	53,99	72,52	88,52
Tesco	47,51	43,27	39,58

The accounts receivables turnover expresses the number of times that accounts receivables are collected over a specific time period, quantifying the company's effectiveness in collecting debts, basically suggesting the average time needed to convert receivables into cash. Sainsbury's and Marks & Spencer present an increase in accounts receivables turnover managing to improve their collection period as maintaining accounts receivable is basically extending an interest-free loan, with Sainsbury's presenting an accounts receivables turnover of 88,52 times. Sainsbury's and Marks & Spencer present an increase in accounts receivables turnover with Tesco presenting an accounts receivables turnover of only 39,58 times. Prolonging receivables collection period is not wise as maintaining accounts receivable is

basically extending an interest-free loan and since Tesco and Marks & Spencer are both in an increasing store chain procedure they could use this cash profitably in investing as well as reducing amounts of borrowings.

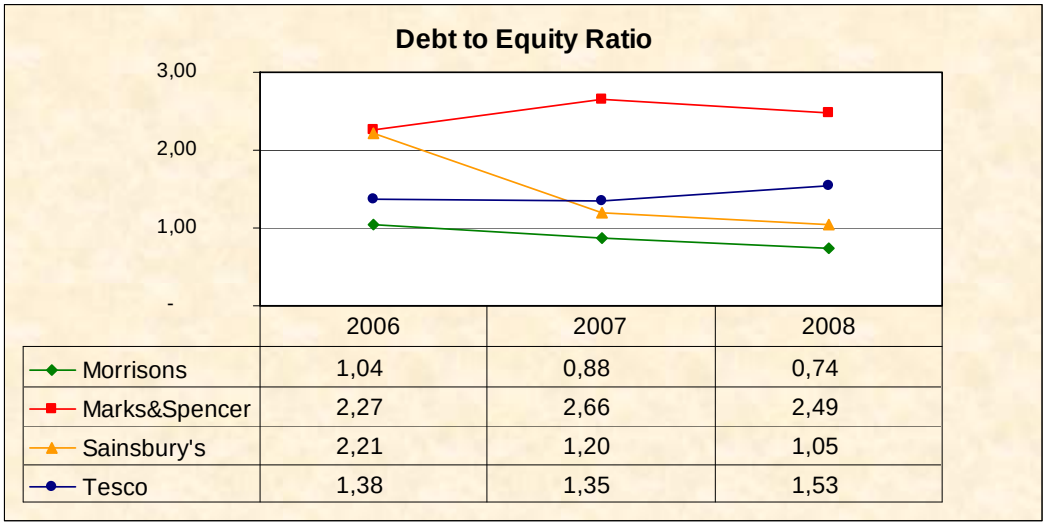
Graph 7.8 SBRY – TSCO – MRW – MKS – Accounts Payables Turnover



	2006	2007	2008
Morrisons	8,02	7,88	7,24
Marks&Spencer	33,03	37,05	17,93
Sainsbury's	7,16	7,33	7,40
Tesco	7,24	7,08	6,56

The accounts payable turnover evaluates how fast a company pays off its creditors, basically the number of times a company pays its payables over a specific period of time, indicating the company's collection manner. Morrisons and Tesco have slightly decreased their accounts payables turnover and Sainsbury's has slightly increased its accounts payables turnover. Marks & Spencer is presenting a high decrease in accounts payables turnover, yet still having the highest payables turnover of all companies in overall. Accounts payables turnover may at some point be affected by accounts receivables turnover and high payables turnover is beneficiary for a company since the company is getting appealing to potential new suppliers, yet even managing better prices and discounts.

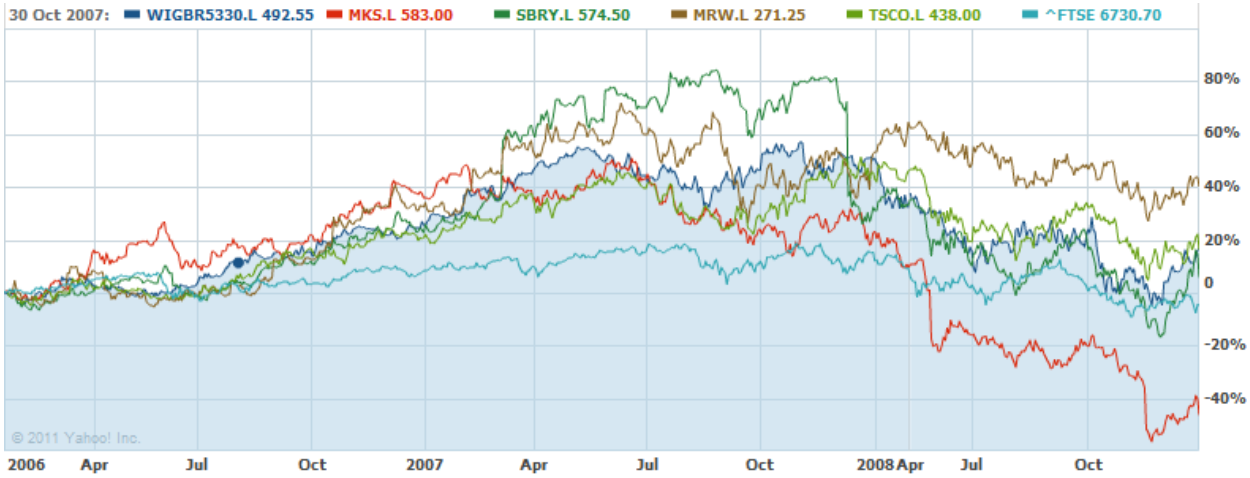
Graph 7.9 SBRY – TSCO – MRW – MKS – Debt to Equity Ratio



	2006	2007	2008
Morrisons	1,04	0,88	0,74
Marks&Spencer	2,27	2,66	2,49
Sainsbury's	2,21	1,20	1,05
Tesco	1,38	1,35	1,53

The debt to equity ratio measures the amount of all kinds of creditors' liabilities as opposed to the amount of the shareholders' equity. Tesco and Marks & Spencer present a slight increase of their debt to equity ratio as a result of both the companies increasing their borrowings due to their entrance in new markets and the acquisition of new stores with Marks & Spencer characterized as mainly financed with debt and being to some extend in a risky position. Morrisons and Sainsbury have managed to reduce their debt to equity ratios by decreasing total liabilities as well as increasing equity, becoming less levered over the years strongly positioning their equity.

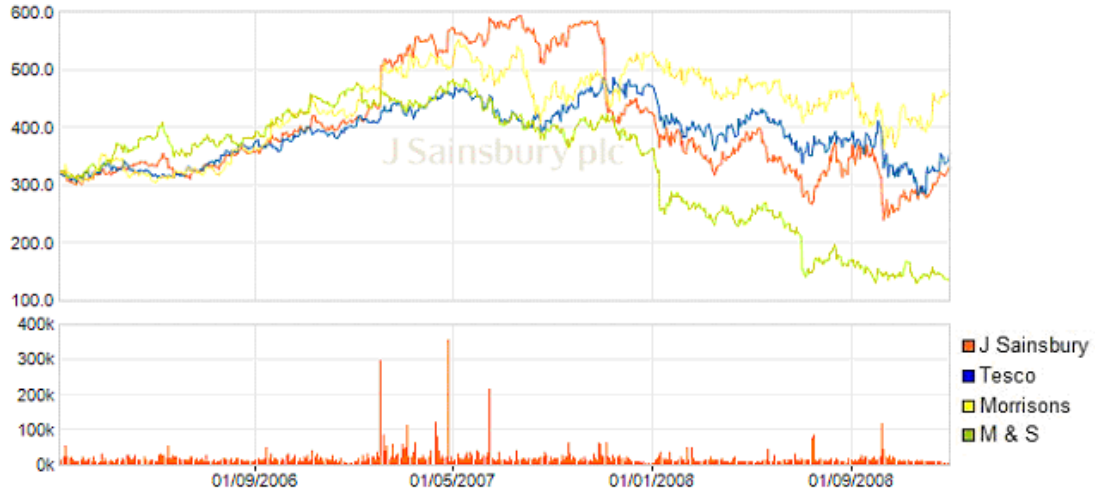
Graph 7.10 SBRY – TSCO – MRW – MKS – FTSE100 – F&D Share Price Chart



Source : uk.finance.yahoo.com

Comparing the companies' share prices for the years 2006, 2007 and 2008 we get information on their performance. First and foremost, all four companies overperform the market index for all years except for Marks & Spencer which underperforms the market index from May 2008 until the end of the year, reaching a negative yield of -59,79%, when comparing with 2006 where the company overperformed its competitors. Sainsbury is moving along with the sector, presenting small volatilities either over the sector or under the sector however in 2007 the company overperformed its competitors but in 2008 it went back to being fairly volatile with the sector. Tesco appears to be the one moving closer to the sector in overall however steadily overperforming the sector in 2008, yet still appearing to be the less volatile. Last but not least, Morrisons is on average overperforming the sector and in 2008 the company appears to perform better than the sector and its competitors. Concluding, Sainsbury and Marks & Spencer appear to be the more volatile compared to the others, suggesting higher risk for investors, yet when overperforming higher returns. Tesco appears to be the less volatile and not deviating much from the sector, suggesting less risk, better choice for more risk averse investors.

Graph 7.11 SBRY – TSCO – MRW – MKS – Share Price Chart



	Yield	First	Last	High	Low
J Sainsbury plc	+2,10%	321,75	328,50	594,00	240,00
Tesco	+10,68%	325,25	360,00	492,00	285,90
Morrisons	+43,53%	195,25	280,25	335,25	161,50
Marks & Spencer	-59,79%	497,00	214,75	749,00	200,00

Source: www.j-sainsbury.co.uk

Ch.8. Break – Even Point (BEP) Analysis

A company's administration deals with a variety of decisions concerning mostly the issues of sales, costs and profits. The relationship of these sizes is of major importance and one of the analyses used to define it is the Break-Even Point (BEP) analysis. The Break-even method is a method that can be widely applied to products, investments, options, as well as the entire company's operations. It is one of the simplest, yet least used analytical tools in management that provides a better understanding of the relationships between sales, costs and profits. The Break-even analysis determines the break-even point, which in general is the point at which gains equal losses thus, operations neither make money nor lose money, meaning that at that point, a company is experiencing neither profit nor loss, since total revenues equal total costs. It can be considered as "the point that corresponds to this level of production capacity, under which the company operates at a loss", (Tsorakidis et.all, n.a).

It is important for a company to first determine how much its product costs and then make a decision upon the product's fair price. The break-even analysis is mostly based on categorizing production costs between fixed costs and variable costs. Fixed costs represent the expenses that are not related with the volume of production and are not dependent on the activities of the business. Fixed costs include property, bills, salaries, depreciation, administrative expenses, finance costs, etc., and some of them have a tendency to be time-related. In general, they are the sum of all costs in order for the company to produce the first unit of product. Although they change over time, they are considered to be fixed in relation to production quantity over a relevant time period. Variable costs on the other hand represent the expenses that are related to the volume of the company's production. Thus, they are considered to be volume-related and include input materials, direct labor costs, etc.. Once those costs are identified, the break-even point can be determined. Reaching the break-even point is considered to be the first major step towards profitability as the break-even point is the lower limit of profit when setting prices and determining margins. Breaking even does not return past losses or reserves future losses however, it provides information about determining prices and costs.

There are three (3) different methods used to compute the BEP of a company:

1. **The Equation Method**

When dealing with a company that produces only one product, the calculation of the BEP is considered to be rather easy and is determined in units of products that need to be sold so that the profits made will cover the amount of total costs. The assumptions employed under the break-even analysis indicate that the behavior of both revenues and costs is linear throughout the relevant range of activity. The break even point can be directly computed based on the equation method in terms of Total Revenue (TR) and Total Costs (TC), providing the necessary quantity of units (Q) that needs to be sold in order for the company to achieve coverage of its fixed costs as:

$TR = TC$
$TR = TFC + VC$
$P \times Q = TFC + (V \times Q)$
$P \times Q - (V \times Q) = TFC$
$(P - V) \times Q = TFC$
$Q = TFC / (P - V)$,where:
TR is Total Revenue,
TC is Total Costs,
TFC is Total Fixed Cost,
VC is Variable Cost,
P is Unit Sale Price,
V is Unit Variable Cost,
Q is Unit Quantity Sales.

2. **The Contribution Margin Method**

For most companies that produce a variety of products, it is not as effective to determine the quantity needed to be sold for each product thus, in such cases the BEP is calculated using the selling price. When applying the contribution margin method, we calculate the sales price minus the variable cost, specifically for a unit of product so as to get the unit contribution margin:

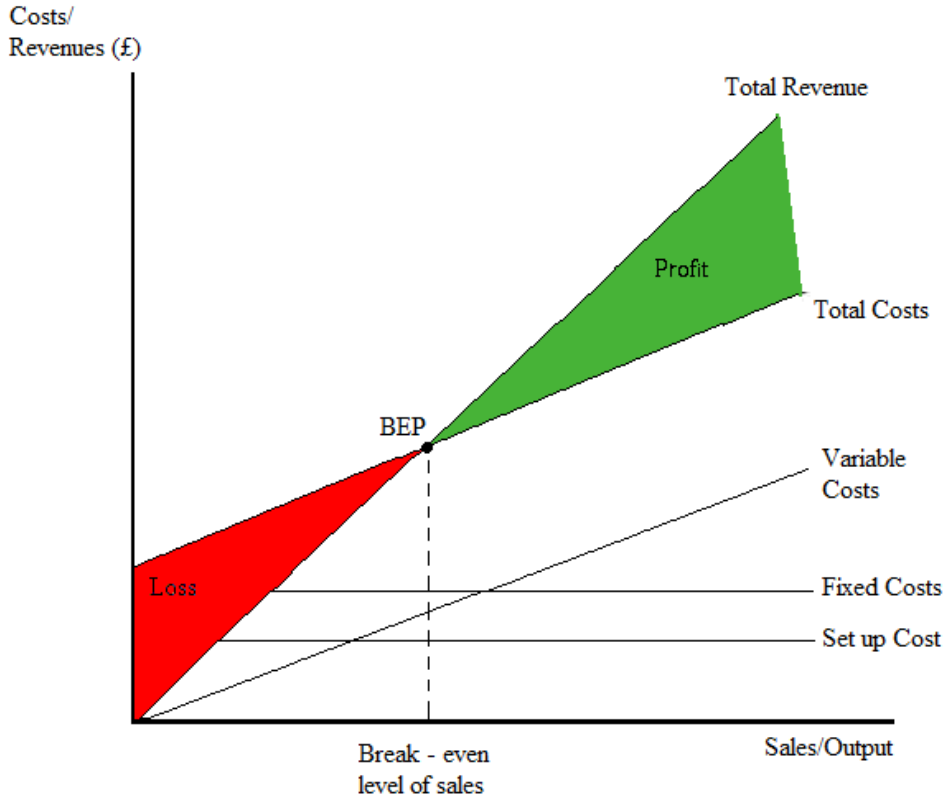
Unit Contribution Margin = Unit Sales Price – Unit Variable Cost.
The BEP is then calculated:
BEP = (Fixed Cost + Desired Profit) / Unit Contribution Margin.

This method is preferably used when we wish to calculate the amount of units of product that needs to be sold so as to achieve a specific amount of profit.

3. The Graphic Method

When using the graphical method, the horizontal axis measures the production quantity that is produced and sold, whereas the vertical axis measures the expenses. Total costs represent the sum of fixed costs plus variable costs and it is clear that the point where total revenues equal total expenses is the break-even point and production quantity is shown graphically. Evidently, any point left to the BEP equals losses for the company since total expenses are more than total revenues whereas any point right of the BEP equals profit as total revenues cover and also exceed total costs, creating profit for the company.

Graph 8.1 Break – Even Point



However, if the company is unable to sell that much quantity, it can ensure its viability by managing to reduce the break-even point, either by reducing its fixed costs and/or the unit's variable costs or by increasing the selling price of the unit. Although it is a very useful tool as it provides managers with the information needed to estimate the outcome of their plans (Tsorakidis et.all, n.a), it is subject to some restrictions as well. It is not considered to be handy in cases of estimating the level that produces profits under different selling prices since only a specific selling price can be used in every single estimation, thus, it will require several different calculations and diagrams. Furthermore Tsorakidis et.all, also mention the difficulty in calculating the company's total costs as during production, mistakes may occur. In some cases, sales may increase leading to an increase of the labor cost that will consequently lead to an increase in the variable costs which may change the total costs' levels. Changes in costs may affect the product's quality and in general, the BEP formula cannot include parameters such as competition which may cause prices to change according to demand.

The BEP formula can be used for easily calculating the break – even point of a company which is involved with only one product. In cases of companies which sell more than one products, total costs and total revenues are usually known thus, it is preferable to calculate the variable cost ratio which basically represents the variable costs expressed as a percentage of sales, and is calculated as:

Variable Cost Ratio = Total Variable Costs / Revenue
Sales = Total Fixed Costs + Variable Cost Ratio * Sales
Break – Even Point = Total Fixed Costs / (1 – Variable Cost Ratio)

Using this formula to calculate the break – even point of the companies we are examining, will provide us with results characterized by uncertainty, since the information we can use are only based on the companies' income statements and cash flow statements, as we do not have access to further information.

8.1 SBRY Break – Even Point Analysis

Collecting information from the company's income statements and cash flow statements has led to the identification of the company's variable costs and fixed costs, so as to proceed in the calculation of its break – even point. Let us not forget that the calculation below do not reflect the company's realistic break – even point, as we do not have access to any further financial information.

Variable costs include cost of sales, interest paid, corporation tax paid as well as taxation. It is evident that the total variable costs for the company are gradually increasing from 2006 to 2008. The total variable costs are presented on the table below:

Table 8.1 SBRY Variable Costs

SBRY VARIABLE COSTS	**2008 (£m)**	**2007 (£m)**	**2006 (£m)**
Cost of Sales	16.835,00	15.979,00	14.994,00
Interest Paid	123,00	95,00	159,00
Corporation tax paid	64,00	-	-
Taxation	150,00	153,00	46,00
TOTAL VARIABLE COSTS	**17.172,00**	**16.227,00**	**15.199,00**

Fixed costs include depreciation, administrative expenses as well as finance costs. It is evident that the total fixed costs for the company are decreasing from 2006 to 2008, mostly due to the reduction of administrative expenses and finance costs. The total fixed costs are presented on the table below:

Table 8.2 SBRY Fixed Costs

SBRY FIXED COSTS	**2008 (£m)**	**2007 (£m)**	**2006 (£m)**
Depreciation	463,00	479,00	449,00
Administrative Expenses	502,00	669,00	839,00
Finance Costs	132,00	107,00	155,00
TOTAL FIXED COSTS	**1.097,00**	**1.255,00**	**1.443,00**

Calculating the sum of total variable costs and total fixed costs we get the company's total costs which are increasing from 2006 to 2008 and are shown on the table below:

Table 8.3 SBRY Total Costs

SBRY TOTAL COSTS	2008 (£m)	2007 (£m)	2006 (£m)
Total Variable Costs	17.172,00	16.227,00	15.199,00
Total Fixed Costs	1.097,00	1.255,00	1.443,00
TOTAL COSTS	**18.269,00**	**17.482,00**	**16.642,00**

Table 8.4 SBRY Total Revenue

SBRY TOTAL REVENUE	2008 (£m)	2007 (£m)	2006 (£m)
Revenue	17.837,00	17.151,00	16.061,00

Dividing total variable costs to revenue we calculate the variable cost ratio, which basically represents the variable costs expressed as a percentage of sales. Results indicate the proportion of each revenue pound represented by variable costs and more analytically, the variable cost for every extra pound (£) earned are £0,95 in 2006, £0,95 in 2007 and slightly increased at £0,96 in 2008.

Table 8.5 SBRY Variable Cost Ratio

SBRY	2008	2007	2006
Variable Cost Ratio	0,96	0,95	0,95

Calculating the equation:

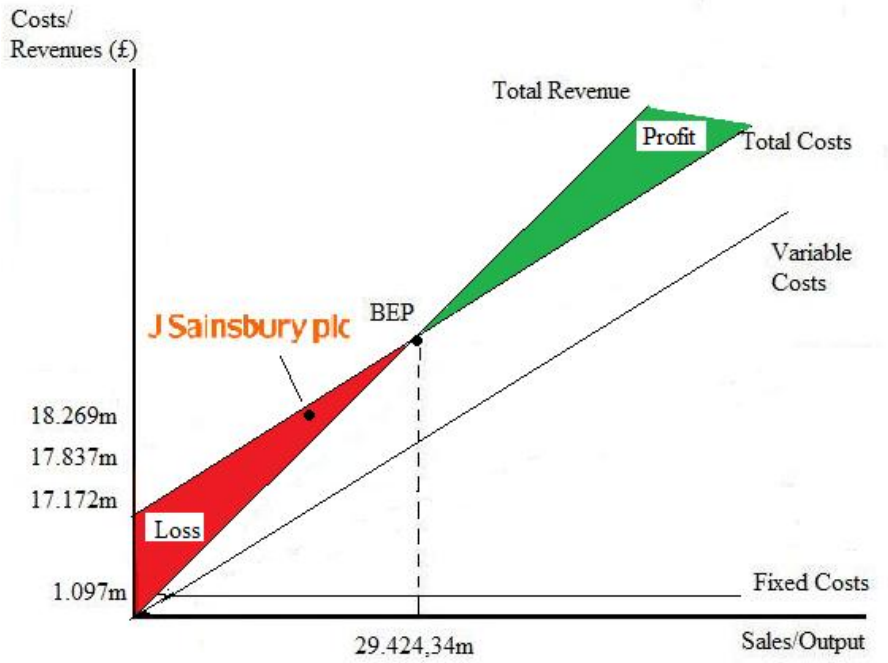
Break – Even Point = Total Fixed Costs / (1 – Variable Cost Ratio), we get the company's break – even level of sales. Results indicate that the company is facing losses on all three years examined, form 2006 to 2008, as the break – even point appears to be higher than the company's revenue.

Table 8.6 SBRY Break – Even Point

SBRY BEP	2008 (£m)	2007 (£m)	2006 (£m)
Break Even Point	29.424,34	23.294,92	26.886,34

It is evident that the company is not experiencing a blooming era, if only we take under consideration the fact that it takes a fiscal year (supposedly 365 days) to make revenue of £m16.061,00 for 2006, but in order to make £m26.886,34 according to the break – even point it would take 611 days. Similarly, it requires almost 496 days for 2007 and 602 for the year 2008.

Graph 8.2 SBRY Break – Even Point 2008



8.2 TSCO Break – Even Point Analysis

Collecting information from the company's income statements and cash flow statements has led to the identification of the company's variable costs and fixed costs, so as to proceed in the calculation of its break – even point. Let us not forget that the calculation below do not reflect the company's realistic break – even point, as we do not have access to any further financial information.

Variable costs include cost of sales, interest paid, corporation tax paid as well as taxation. Total variable costs for the company are gradually increasing from 2006 to 2008. The total variable costs are presented on the table below:

Table 8.7 TSCO Variable Costs

TSCO VARIABLE COSTS	**2008 (£m)**	**2007 (£m)**	**2006 (£m)**
Cost of Sales	43.668,00	39.401,00	36.426,00
Interest Paid	410,00	376,00	364,00
Corporation tax paid	346,00	545,00	429,00
Taxation	673,00	772,00	649,00
TOTAL VARIABLE COSTS	**45.097,00**	**41.094,00**	**37.868,00**

Fixed costs include depreciation, administrative expenses as well as finance costs. It is evident that the total fixed costs for the company are increasing from 2006 to 2008, and total fixed costs are presented on the table below:

Table 8.8 TSCO Fixed Costs

TSCO FIXED COSTS	**2008 (£m)**	**2007 (£m)**	**2006 (£m)**
Depreciation	876	785	758
Administrative Expenses	1.027,00	907,00	825,00
Finance Costs	250,00	216,00	241,00
TOTAL FIXED COSTS	**2.153,00**	**1.908,00**	**1.824,00**

Calculating the sum of total variable costs and total fixed costs we get the company's total costs which are increasing from 2006 to 2008 and are shown on the table below:

Table 8.9 TSCO Total Costs

TSCO TOTAL COSTS	**2008**	**2007**	**2006**
Total Variable Costs	45.097,00	41.094,00	37.868,00
Total Fixed Costs	2.153,00	1.908,00	1.824,00
TOTAL COSTS	**47.250,00**	**43.002,00**	**39.692,00**

Table 8.10 TSCO Total Revenue

TSCO TOTAL REVENUE	**2008 (£m)**	**2007 (£m)**	**2006 (£m)**
Revenue	47.298,00	42.641,00	39.454,00

Dividing total variable costs to revenue we calculate the variable cost ratio, which basically represents the variable costs expressed as a percentage of sales. Results indicate the proportion of each revenue pound represented by variable costs and more analytically, the variable cost for every extra pound (£) earned are £0,96 in 2006, £0,96 in 2007 and slightly decreased at £0,95 in 2008.

Table 8.11 TSCO Variable Cost Ratio

TSCO	**2008**	**2007**	**2006**
Variable Cost Ratio	0,95	0,96	0,96

Calculating the equation:

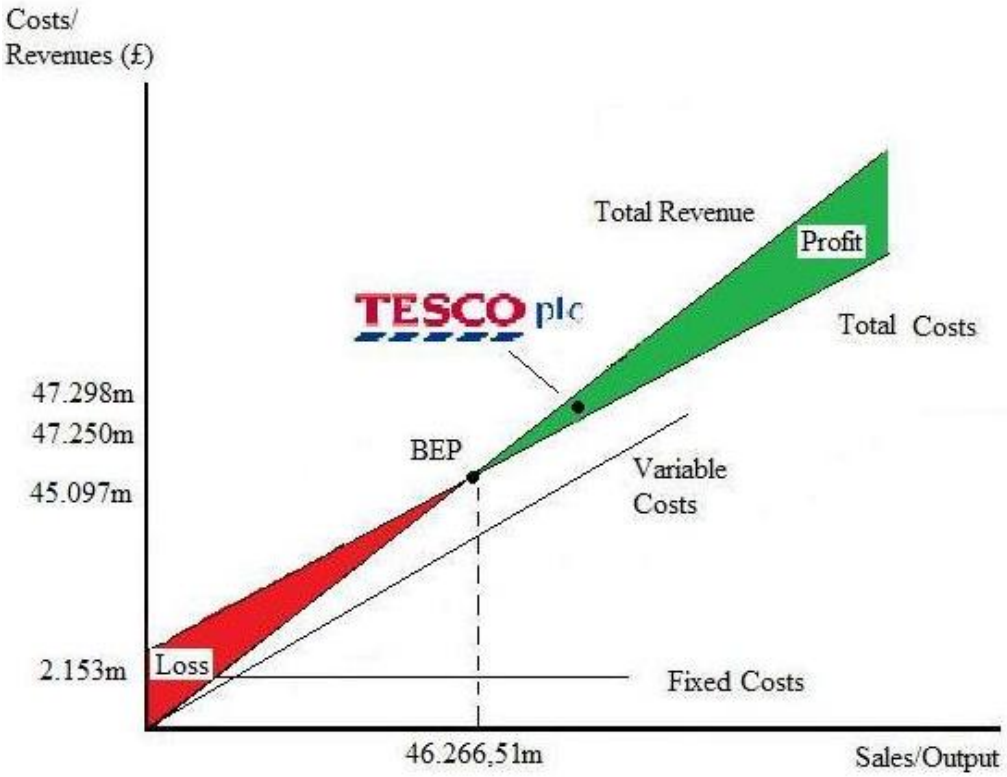
Break – Even Point = Total Fixed Costs / (1 – Variable Cost Ratio), we get the company's break – even level of sales. Results indicate that the company is facing losses on the years 2006 and 2007, as the break – even point appears to be higher than the company's revenue and profit for the year 2008, as the break – even point appears to be lower than the company's revenue.

Table 8.12 TSCO Break – Even Point

TSCO BEP	**2008 (£m)**	**2007 (£m)**	**2006 (£m)**
Break Even Point	46.266,51	52.591,49	45.374,59

It is evident that the company experienced losses for the years 2006 and 2007 but improved performance in 2008. It requires a fiscal year (supposedly 365 days) to make revenue of £m39.454,00 for 2006, but in order to make £m45.374,59 according to the break – even point it would take almost 420 days. Similarly, it requires 450 days for 2007 and 357 for the year 2008.

Graph 8.3 TSCO Break – Even Point 2008



Ch.9. Risk Evaluation

9.1 Introduction to Investment Theory

In the last decades, several researchers have tried to determine the factors that affect the stock markets and influence their behaviour, causing large price movements in stock market prices, as indicated by historical evidence. Let us not forget the major stock market "crash" in 1987, the "Black Monday" as it is referred to in financial markets, when stock markets around the world "crashed", proving that prices are sensitive to macroeconomic news, and can indeed, fall dramatically, causing even a global effect. Consequently, it was of great importance to develop fundamental grounds on explaining the causes that determine stock market returns, as well as the investors' behaviour, thus, explaining the underlying factors of an investment portfolio's efficiency as well as the underlying risk.

9.2 Efficient Market Hypothesis (EMH)

One of the pioneers was Harry Markowitz, who in 1959 attempted to analyse the various types of information that are to be taken under consideration in a portfolio analysis. Before the evolvement of the modern portfolio theory, the decision about which securities would be included in an investment portfolio was mainly relied on information about the firm's financial statements, its dividend policy and generally the analysis of the firm. These fundamental factors ought to affect share prices, according to the Efficient Market Hypothesis (EMH), which was first developed by Eugene Fama in the early 1960s. The EMH asserted that financial markets were characterised by informational efficiency and that all this acknowledged information was fully reflected in the current prices of all the traded assets, implying that price changes were independent. Fama (1969). Indeed, certain unknown information at present may sometimes appear randomly in the future and lead to irrational market reactions, significantly influencing asset prices in either direction. Outperforming the market is rather impossible, due to information efficiency, however, new information can lead to investors' misjudges, causing overreactions or underreactions. It is rather difficult to predict price movements, since possible rumours, press releases and any other kinds of events, can tremendously affect the stock market over the short-term. In

an effort to review both theory and evidence, Fama (1969) defined three forms of market efficiency, each of which had different effects to the way the markets work. The first form was weak-form efficiency, implying that there is no serial dependency evident among share prices, thus, no patterns exist. Investors should not take under consideration historical prices, since future price movements are random and a result of unexpected information. Excess returns might be produced from fundamental analysis but not from technical analysis, hence, studying the markets' past data is not an effective investment strategy for investors to rely on. Secondly, the semi-strong-form efficiency suggests that new information could cause rapid adjustments to share prices; however, excess returns may be produced neither by technical, nor by fundamental analysis. Last but not least, the strong-form efficiency implied that all information, either private or public, was fully reflected by share prices, leading to no excess returns.

9.3 Correlation - Portfolio Diversification

Markowitz on the contrary, ignored this kind of fundamental information and argued that, the performance of each security individually in the past, as well as the investors' beliefs concerning the future performances of securities were, indeed, able to comprise the basic sources of information about an investment and a portfolio selection. Furthermore, he riskily suggested that the best way to evaluate a security would be by calculating a few simple statistics, such as the mean of returns and the standard deviation of returns. Calculating the standard deviation of a security is a way to quantify its risk, as the higher the standard deviation, the higher the risk. Another suggested statistic to calculate is the correlation among the returns of the assets that are included in a portfolio. Since the returns on securities exhibit a tendency to move together up and down, correlation among security returns is a highly significant feature of investments. Had this imperfect correlation not existed, risk could then be eliminated by portfolio diversification.

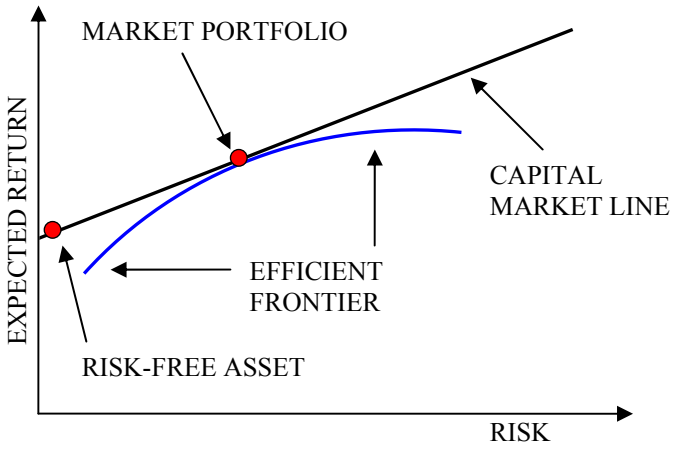
Correlation among returns is not the same, nevertheless it varies, and it is assumed that securities in the same or related industries appear to be highly correlated in comparison to securities of different or unrelated industries. Consequently, reduction

of risk could be accomplished if, among several efficient portfolios, the one whose securities are not highly correlated with each other is chosen. The key to constructing a diversified portfolio of assets is the correlation among securities. Correlation is an important indicator of the co-movement between two random variables and a way to measure the direction and the degree of linear association between them, meaning if they appear to be independent or not, Brooks (2002). For two random variables X and Y, with expected values μ_X and μ_Y respectively and standard deviations σ_X and σ_Y respectively, the correlation coefficient $\rho_{X,Y}$ can be defined as:

$$\rho_{X,Y} = \frac{\operatorname{cov}(X,Y)}{\sigma_X \sigma_Y} = \frac{\mathrm{E}((X-\mu_X)(Y-\mu_Y))}{\sigma_X \sigma_Y}$$

Correlation can be defined if the standard deviations of both variables are measurable and nonzero, and it must lie between -1 and +1 by definition, due to the Cauchy-Schwarz inequality. If the correlation coefficient $\rho_{X,Y} = 0$, the two assets are independent, meaning there is no linear dependence between the two assets and there is diversification in a portfolio comprised by these assets. If the correlation coefficient $\rho_{X,Y} = +1$, perfect correlation of increasing linear relationship between the two assets exists, implying that the two assets will always move up and down together, meaning there is no diversification in a portfolio comprised by these assets. If the correlation coefficient $\rho_{X,Y} = -1$, perfect correlation of decreasing linear relationship between the two assets exists, implying that the two assets will move up and down in reverse, meaning there is no diversification in a portfolio comprised by these assets.To conclude, the closer the correlation coefficient is to -1 or +1, the stronger the correlation between the variables. Keep in mind that the correlation coefficient can also take values in between of -1 and +1, still indicating the direction and degree of linear dependence between the variables.

Figure 9.1 Efficient Frontier

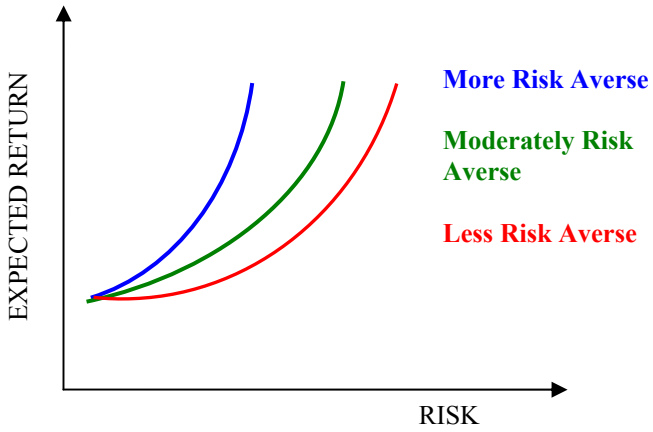


However, diversification may be better achieved when more assets are included in a portfolio and once we include risk-free assets in a portfolio, the risk will be lower. The variation of the portfolio

weights may produce greater benefits and will eventually lead to a set of portfolios, which for each level of returns, it will provide the lowest level of risk and for each level of risk it will provide the highest level of returns. This set of investable portfolios is called the efficient frontier, and investors, according to their preference of risk, can decide which portfolio satisfies them the best. The efficient frontier comprised by all risky and risk-free assets in the economy is shown in figure 9.1.

All assets' combinations are obtained in the efficient frontier; however, the biggest challenge is for investors to choose which of these portfolios expresses their preferences the most. Investors are characterised by different utility levels and different risk aversion levels. Some are more conservative whereas others are more risky, thus different portfolios would be selected for each investor. In figure 9.2 we demonstrate utility curves for investors at the same preference level of returns but at different preference levels of risk aversion. "The proper choice among efficient portfolios depends on the willingness and ability of the investor to assume risk. If a greater degree of uncertainty can be borne, a greater level of likely return can be obtained". Markowitz (1959).

Figure 9.2 Levels of Risk Aversion



9.4 Non-Economic Influences

It is rather interesting, how the investors' willingness and behaviour, as well as a number of several underlying psychological factors, may be responsible for exaggerated stock price movements. People tend to misjudge noises and believe that they see patterns, inducing themselves in positive or negative overreactions. Economic decisions and their effects on returns and market prices may result from

cognition, mood and emotion. Knowledge and practice are two different things, as O' Shaughnessy (2005) claimed, and based on Goethe, he stated that ideas depend on enthusiasm, whereas everything else on perseverance, since people are usually overwhelmed by emotions affecting their better judgement.

Emotions could indeed be a factor in traditionally rational considerations, such as time and risk preference, Hirshleifer (2001), also arguing that the purely rational approach had come under the wider psychology of investors' approach, which was evidently a determinant of asset prices, as well as misevaluation and risk, which were considered as factors that determine security expected returns. Individual psychology can affect prices by the making of irrational choices, caused by ambiguity. Even in cases where there is sufficient amount of information, ambiguity may still be rather high, as investors appear to have doubts on the reliability of information. Ellsberg (1961). "The degree of belief is the extent to which we are prepared to act upon it" (Ramsay, 1926) as cited by Ellsberg (1961).

In addition to individual psychology, group thinking is another similar phenomenon, where difficulty and reluctance to differ from a group is observed. People reach in accord with the majority of the group, setting aside their individual doubts out of fear, instead, coming under the group's doubts thus once again making hasty and irrational decisions. Ambiguity aversion is present in investors, since the lack of a reliable and identifiable level of information during their decision making process may often be associated with higher risk, consequent of emotions such as fear and uncertainty. Hirshleifer (2001). However, uncertainty always exists, as it is one of the most prominent characteristics of investments on securities. It is not feasible to perfectly understand, manage and predict beyond error the several economic forces and conditions that have an effect on investments and share prices. Even if we had the ability to perfectly understand the consequences of the economic circumstances, still, "non-economic influences can change the course of general prosperity, the level of the market, or the success of a particular security". Markowitz (1959).

Markowitz model altered the way decisions on investments were made, however, statistics were not an accurate approach for estimating uncertain future returns. Whilst increasing the number of assets included in an investment portfolio, correlations to be

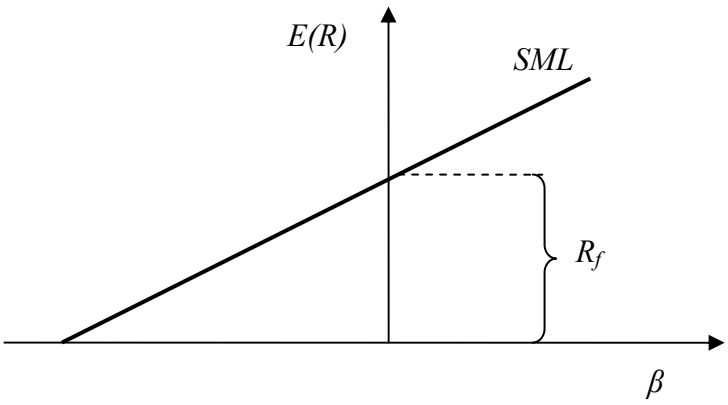
estimated were also increasing, making it rather difficult to accurately estimate them; thus further research was required. Building on Markowitz innovative diversification and modern portfolio selection model which was based on simple statistics, while abolishing at the same time the previous in need of fundamental analysis models, William Sharpe in 1964 and John Lintner in 1965, independently marked the birth of the asset pricing theory. Sharpe dealt with predicting the markets' behaviour while investing under conditions of uncertainty. He claimed that financial transactions were influenced by risk and that additional risk may lead to higher level of expected rate of returns. Sharpe (1964). The selection by risk averse investors of an optimal portfolio was the issue Lintner attempted to cope with, whilst investors were characterised by having an alternative possibility of investing in risk-free assets. Several combinations of expected returns were expressed, evidencing relation between risk parameters and rates of return. Lintner (1965).

9.5 Capital Asset Pricing Model (CAPM)

The Capital Asset Pricing Model (CAPM) changed the existent investment theory as it allowed both more risk averse and less risk averse investors to choose a more favourable portfolio which assumingly included the entire world's risky assets as well as one risk-free asset. All investors had the opportunity to lend and borrow at a risk-free rate, no matter the amount. Furthermore, CAPM suggests that all information is known and shared and there is no informational benefit for any of the investors as far as the future risk and the expected returns of the assets are concerned. If an asset was to be included in an existent investment portfolio which was well diversified, the compulsory rate of return of that asset was determined by CAPM. The risk contribution of the new asset to the present portfolio was explained in terms of the new asset's price. In CAPM, the relation between risk and expected returns is determined by the way assets associate to create efficient portfolios. Fama, French (2003). The model takes under consideration the expected returns of the market, the expected returns of the risk-free asset, as well as the systemic risk known as beta (β), which is the risk of the entire market that it cannot be avoided, even in a perfectly diversified portfolio.

The relation between the asset's expected rate of return and the beta is described by the Security Market Line (SML), as shown in figure 9.3. Securities must be priced according to their risk, thus, using the SML makes it feasible to compute the expected rate of returns of an asset in relation to the market as a whole, having taken under consideration the asset's risk. The expected rate of return for any individual asset is calculated as:

Figure 9.3 Security Market Line



$E(R_i) = R_f + \beta_i\,(E(R_m) - R_f)$, where:

$E(R_i)$ is the asset's expected return,

$E(R_m)$ is market's expected return,

R_f is the risk-free interest rate,

β_i is beta.

Note that $(E(R_m) - R_f)$ is also known as the risk premium. The beta coefficient describes the correlation between the market return and the portfolio return. Assets correspond to market movements; some correspond to a high degree whereas others to a lower degree. The beta coefficient actually measures the sensitivity of an asset price to the market movements. If $\beta_i = 0$, no correlation with the market exists. If $\beta_i = +1$, perfect positive correlation exists, meaning the asset moves along with the market. If $\beta_i = -1$, perfect negative correlation exists, meaning the asset moves in reverse with the market. If $0 < \beta_i < 1$, the asset moves along with the market however, in a lower degree.

Based on the capital asset pricing model (CAPM), Black, Jensen, Scholes, (1972), indicated a nonzero mean for the beta factor and established that the beta factor is present and significant for explaining returns. In 1986, Mankiw, Shapiro, made comparisons on the traditional CAPM and the consumption CAPM. From the data examined, they concluded that there is a stronger relation between average return with

the beta measured with respect to a stock market, than the relation of the average return with the beta measured with respect to consumption growth. The beta of the stock market can provide much more information on its return than the consumption beta. Since the Sharpe-Lintner CAPM, no such asset pricing model has been formed, based in "the nature of tastes and investment opportunities and with clear testable predictions about risk and return". Fama, French (2003). However, book-to-market effect is what causes "persistent negative abnormal returns of acquiring firms" Fama, French, (1993), and returns do respond to size and market factors, although not consistently, while supporting the hypothesis that "market and size factors in fundamentals are the source of the market and size factors in returns." Fama, French (1995). In overall, there are many problems so as not to consider most applications of the CAPM valid, and research should be based on more advanced models. Fama, French, (2003). Nevertheless, CAPM is still being widely used in the cost of equity capital estimations as well as portfolio performance evaluation and it is considered to be the predominant for equity returns and risk estimation.

9.6 Arbitrage Pricing Theory (APT)

Inspired by the CAPM, in 1976, Stephen Ross first developed the concept of The Arbitrage Pricing Theory (APT), important part of the general asset pricing theory, mostly influencing the share pricing. The development of the arbitrage pricing theory came as an alternative to the CAPM methodology, allowing more than one generating factor included. It considers a linear function of several macroeconomic factors, where each factor's sensitivity to market returns is represented by a specific beta coefficient. The asset is priced according to the rate of returns and in the case of price divergence arbitrage brings the price back to equality. The APT is broader than the CAPM, it has a less restrictive form and apart from the statistical estimation, it allows more explanatory factors for returns. Unlike the CAPM that grounds on utility maximisation problem, the APT concerns about minimising the sensitivity of the asset to economic factors and their changes that can alter the expected returns of the asset, nonetheless, the expected returns of the entire portfolio. The explanatory macroeconomic factors include shocks in inflation, changes in the risk premium as well as Gross National Product (GNP), which is a way to observe the welfare of the

economy and several features are used as indices, such as interest rates, oil prices and currency exchange rates.

9.7 Investment Risk Analysis

An investment is being evaluated based on its risk and its expected rate of returns and this is the reason why an investment portfolio should be characterized by high rate of returns and low risk. When examining the rate of returns of an investment for a time period of one year, the rate of returns is expressed as the percentage of the annual returns on an investment of the total invested value. Hence, investing on a well diversified portfolio rather than on a simple asset is preferable since investment diversification is more likely to minimize risk and increase the investment's portfolio rate of returns. Thus, the major factor influencing the selection of the assets to be included in an investment portfolio is the assets' level of risk, which can be discriminated in systematic risk and non-systematic risk.

9.7.1 Systematic Risk

Systematic risk involves the risk that an asset's value will be affected due to market factors and that is why systematic risk is also known as market risk. Market risk virtually affects all securities, although in different proportions and is basically originated in the correlation between the security price and the market trend. Some of the market factors that affect a security's value include interest rates and sudden changes in interest rates, consumer prices, inflation, commodity prices, foreign exchange rates, taxation, recession and generally any factors that influence a country's political and economical conditions. These factors affect the entire market and cannot be avoided or eliminated, however systematic risk can be reduced through portfolio diversification as different portions of the market tend to underperform at different times.

9.7.2 Estimation of Systematic Risk

Investors holding a well diversified security portfolio are exposed to systematic risk thus, the ability to estimate the amount of market risk of the securities included in their portfolio is important. The estimation of a portfolio's market risk can be made by using the beta coefficient, a financial tool available to measure the systematic risk. A portfolio's beta is basically the weighted average of the betas of all the securities included in this portfolio and in a well diversified portfolio, beta is the basic measure of the market risk. The beta calculation formula is presented below:

$$b(i) = \frac{Cov(ri, rm)}{var(rm)}$$, where:

b(i) is the beta coefficient for security i,

Cov (r_i, r_m) is the covariance of security i returns and market m returns,

Var (r_m) is the variance of the market returns.

A security's beta coefficient describes the relation of the security's returns with the returns of the market by measuring its volatility, in other words, the security's sensitivity on market movements and its tendency to respond to market swings. Beta coefficient can be estimated by regressing the company's stock returns against the market index returns and the higher the beta, the more sensitive the security to market movements.

Analytically, if $b_i = 0$, no correlation with the market exists. If $b_i = +1$, perfect positive correlation exists, meaning the security moves along with the market. If $b_i = -1$, perfect negative correlation exists, meaning the security moves in reverse with the market. If $0 < b_i < 1$, the security moves along with the market either above or below its respective average however, in a lower degree. If $b_i > 1$, the security is considered to be highly risky indicating that the security's price will be more volatile than the market whereas if $b_i < 1$, the security is considered to be of lower risk and will be less volatile than the market.

9.7.3 Unsystematic Risk

Unsystematic Risk involves the risk that an asset's value will be affected due to external factors which mostly influence the issuer company or in some cases the entire industry. Unsystematic risk is the risk that is specific to a firm or an industry and some of the major factors of unsystematic risk include the company's management, marketing strategy, labor problems, strikes, weather conditions, nationalization of assets, financial performance, competition conditions of the industry and generally any factors that affect the company itself and cause changes to its conditions and position. Unsystematic risk is also known as diversified risk, as it can be mitigated through diversification, therefore an investor's exposure to unsystematic risk is low when holding a well diversified security portfolio.

9.7.4 Rate of Returns

Apart from its risk, an investment is also being evaluated based on its expected rate of returns. In order to calculate a securities rate of returns, one must first identify its main two components, which are:

1. **Dividends.**

Dividends are payments made to a company's shareholders by the company. The most common type of dividends is in the form of cash, it is however also possible, though not so common, that instead of cash, the company may distribute dividends in the form of shares, either newly created shares or existing shares bought in the market. In any form, dividends distributed to shareholders represent a portion of the company's profit which is being allocated to them, as a reward for holding the company's stocks. For a single period of time, without taking into consideration the time value of money, the rate of return can be calculated as:

$$r_t = \frac{P_{t+1} + D_{t+1} - P_t}{P_t}$$, where:

r_t is the security's return,

P_t is the purchase value of security,

P_{t+1} is the share price at time t+1,

D_{t+1} the current dividend distributed.

For a single period of time, taking into consideration the time value of money, the rate of return can be calculated when transforming the below formula to r:

$$P_t = \frac{P_{t+1} + D_{t+1}}{(1 + r)}$$, where:

r is the security's return,

P_t is the purchase value of security,

P_{t+1} is the share price at time t+1,

D_{t+1} the current dividend distributed.

2. Capital Gain / Loss

Considering that the value of the stock will not remain the same after a period of time from its purchase, capital gain / loss exists. If the value of the security has increased and gives a higher worth than the purchase price, the shareholders experience capital gain when the security is sold. If the value of the security has decreased and gives a lower worth than the purchase price, the shareholders experience capital loss when the security is sold; the amount of capital gained or lost depends on the share's volatility. For a single period of time, the rate of return can be calculated as:

$$r = \frac{(Vt+1 - Vt)}{(Vt)}$$, where:

r is the security's return

V_t is the purchase value of the security

V_{t+1} is the value of security after a single time period.

9.8 Stock Evaluation SBRY - TSCO – Food & Drug Retail Sector – FTSE100

Information on the shares' daily closing prices for Sainsbury and Tesco for all three years 2006, 2007 and 2008 are used to calculate the min value, the max value, the mean value, the standard deviation (st.dev) and the volatility (st.dev/mean) of the companies' stocks. Further calculation of the same statistics has been made for the Food & Drug retail sector as well as for the FTSE100 index for further comparison on the stocks' evaluation.

Table 9.1 Stock Evaluation SBRY-TSCO–Food & Drug Retail Sector–FTSE100 2006

2006	MIN	MAX	MEAN	ST.DEV	VOLATILITY
SBRY	301	420	350,88	33,3	0,095
TSCO	309	409,75	352,19	29,88	0,085
Food & Drug Retail Sector	332,22	443,87	384,05	35,67	0,093
FTSE 100	5.506,8	6.260	5.920,32	180,13	0,03

Comparing the stock statistics for SBRY, TSCO and Food & Drug retail sector, we get information on evaluating the stocks. In 2006, Sainsbury's stock experienced the lowest share price as well as the highest share price compared to Tesco and both companies' average share price was lower than the sector's. Investing on Sainsbury appears to be riskier than investing on Tesco, as Sainsbury share's standard deviation is higher than Tesco's, though the sector's standard deviation is even higher. Higher risk on Sainsbury's stock is also supported by the shares' volatility since Sainsbury's share is more volatile than Tesco's and appears to be in a small degree more volatile than the sector's.

Graph 9.1 Stock Evaluation SBRY - TSCO – Food & Drug Retail Sector 2006

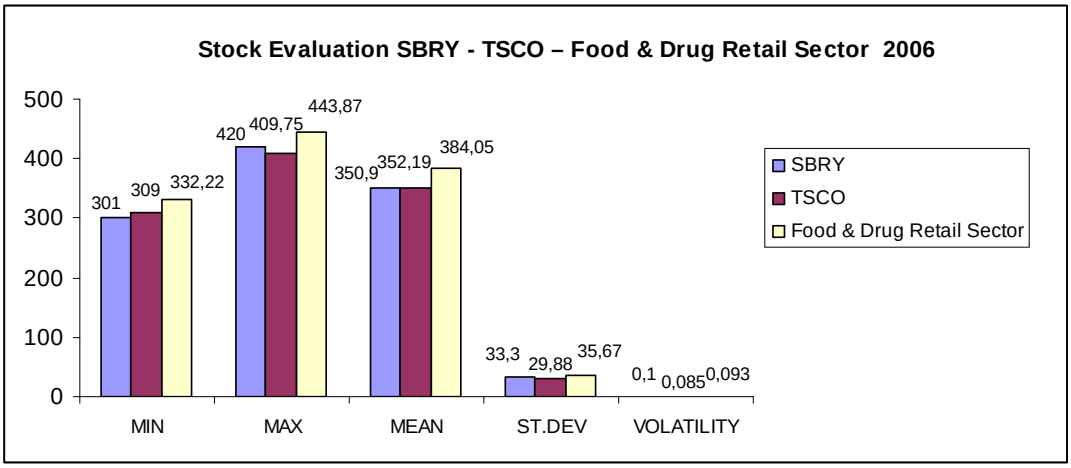


Table 9.2 Stock Evaluation SBRY-TSCO–Food & Drug Retail Sector–FTSE100 2007

2007	MIN	MAX	MEAN	ST.DEV	VOLATILITY
SBRY	405,25	594	523,6	58,55	0,112
TSCO	396,25	492	444,32	23,55	0,053
Food & Drug Retail Sector	445,29	534,88	498,79	21	0,042
FTSE 100	5.858,9	6.732,4	6.403,46	177,19	0,028

In 2007, Tesco's stock experienced the lowest share price and Sainsbury's stock experienced the highest share price, higher than the sector, also performing the highest average share price for the year, a lot higher than the sector's. Sainsbury appears to be riskier than Tesco, with a standard deviation more than twice Tesco's standard deviation and a lot riskier than the sector. As expected, Sainsbury's share is once more, more volatile than Tesco's and the sector's, implying higher risk included in investing on Sainsbury, though possible higher rate of returns.

Graph 9.2 Stock Evaluation SBRY - TSCO – Food & Drug Retail Sector 2007

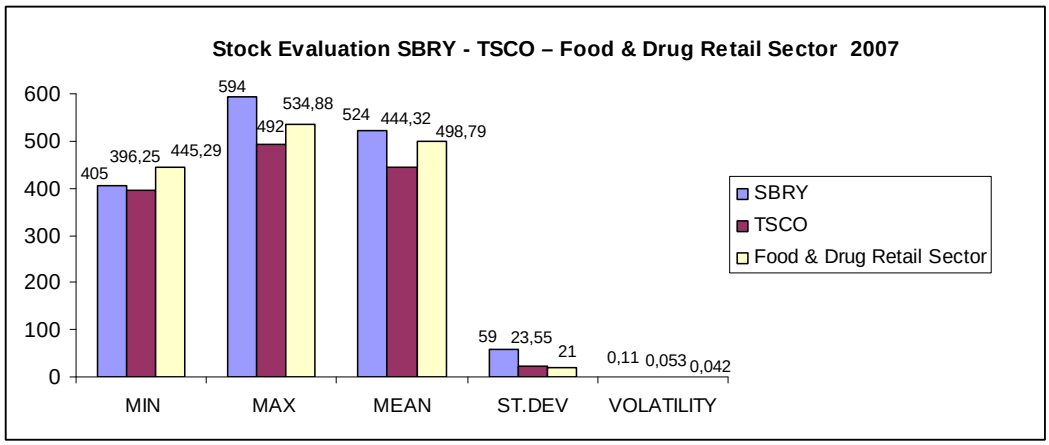


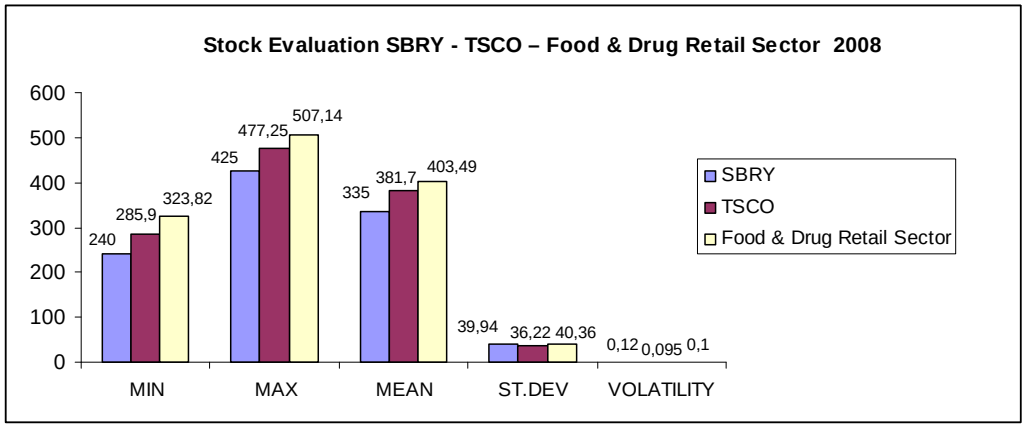
Table 9.3 Stock Evaluation SBRY-TSCO–Food & Drug Retail Sector-FTSE100 2008

2008	MIN	MAX	MEAN	ST.DEV	VOLATILITY
SBRY	240	425,25	335,22	39,94	0,119
TSCO	285,9	477,25	381,70	36,22	0,095
Food & Drug Retail Sector	323,82	507,14	403,49	40,36	0,1
FTSE 100	3.781	6.479,4	5.361,03	717,44	0,134

In 2008, both companies Sainsbury and Tesco experience the lowest share prices of all three years evaluated, with Sainsbury reaching a rather low price, which was quite lower than Tesco. Tesco experienced the higher share price, though still underperforming the sector which on average performed better than both companies. Investing on Sainsbury is still considered to be riskier than investing on Tesco, as Sainsbury presents a higher standard deviation than Tesco, though the sector's standard deviation was even higher. Tesco appears to be more volatile than previous

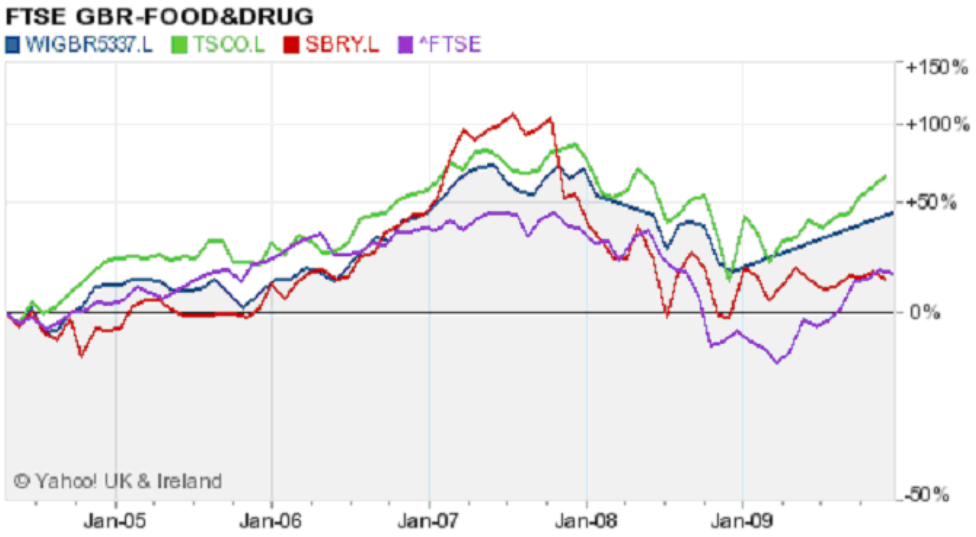
years however, it is still less volatile and Sainsbury which appears to be more volatile than the sector.

Graph 9.3 Stock Evaluation SBRY - TSCO – Food & Drug Retail Sector 2008



The below chart presents the changes in percentage of the stock prices of Sainsbury, Tesco, Food & Drug retail sector as well as FTSE100 index, illustrating Sainsbury's share sudden rise in 2007 and sudden fall in 2008. Generally, both companies and the sector present an upward movement from 2006 to 2007 and a downward movement from 2007 to 2008, at some cases reaching even lower prices than 2006.

Graph 9.4 SBRY-TSCO-SECTOR-FTSE100 Stock Changes (%)



Source:uk.finance.yahoo.com

9.9 Risk Profile of Sainsbury (SBRY)

The evaluation of Sainsbury's risk profile will provide information on the riskiness of an investment in the company's securities, thus an estimation of the beta coefficient will be calculated. The beta calculation formula is:

$$b\,(i) = \frac{\text{Cov}\,(ri, rm)}{\text{var}(rm)}$$

Calculating the covariance of Sainsbury returns and market returns as well as the variance of the market returns using the Microsoft Office Excel software we get:

$\text{Cov}\,(r_S, r_m) = 0{,}00020150820$
$\text{Var}\,(r_m) = 0{,}00024852347$
} **beta = 0,810821611**

The beta coefficient for Sainsbury indicates that the company's share is positively correlated with the market on a high degree and the security moves along with the market however, though on a lower degree. The security is estimated to be on average less volatile than the market as well as less risky than the market.

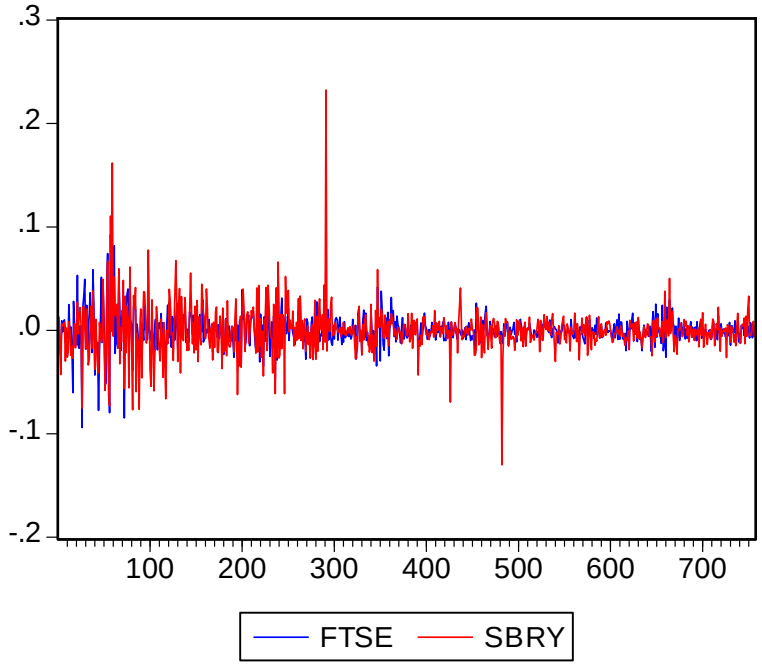
In order to calculate the rate of returns we must first identify the risk free rate and the risk premium. The estimation of the risk free rate is made based on UK treasury bonds with 10 years maturity with an interest rate when issued on 8,75%. (online.wsj.com). This estimation is considered accurate to use, as the UK government is considered to be a reliable loan recipient.

The estimation of the risk premium is usually made by using historical data and basically refers to the return in excess of the risk free rate of the return that an investment is expected to yield. In UK, the risk premium for the years we are examining has been estimated at 4,79% and it is going to be used on returns' calculation.(pages.stern.nyu.edu..)

Using the formula $E(R_S) = R_f + \beta_S (E(R_m) - R_f)$ we are in position to estimate the stock's expected returns;

$E(R_S) = 0{,}084498355$ => **$E(R_S) = 8{,}45\%$.**

Graph 9.5 SBRY – FTSE100 Returns



Using the E-Views statistical software we are regressing Sainsbury's stock returns (R_S) against market returns (R_m) under the equation:

$R_S = a + bR_m$

Using daily historical prices and running a regression of Sainsbury's stock returns against FTSE100 index returns over a time period of three (3) years, 2006, 2007 and 2008, we get the following graph of the linear regression, where the vertical axis presents the company and horizontal axis presents the market.

Graph 9.6 $R_S = a + bR_m$ Regression

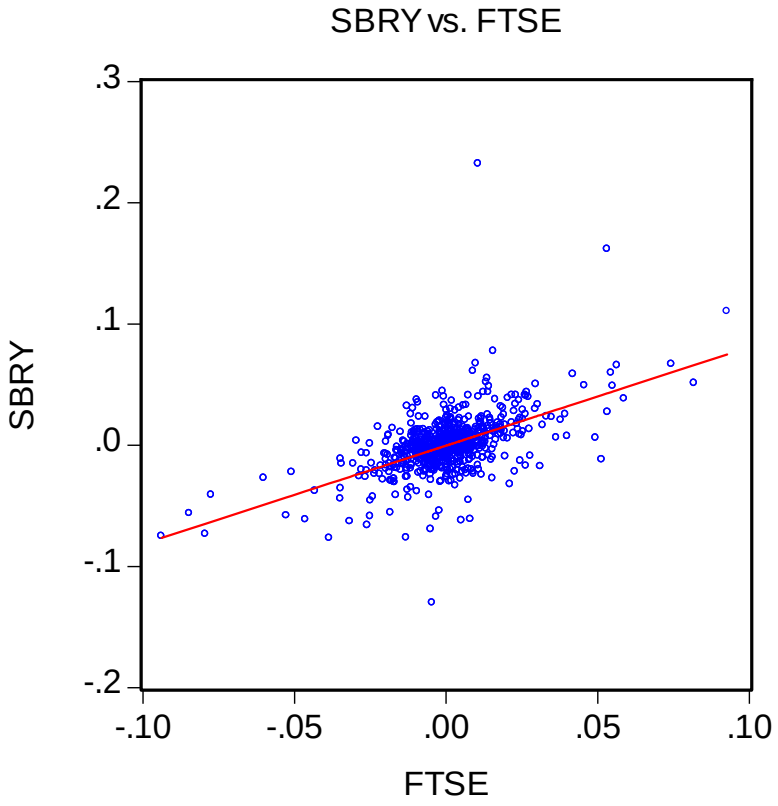


Table 9.4 Results of $R_S = a + bR_m$ Regression

Dependent Variable: SBRY
Method: Least Squares
Sample: 1 756
Included observations: 756

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.000294	0.000689	-0.426402	0.6699
FTSE	0.811896	0.043705	18.57673	0.0000

R-squared	0.313981	Mean dependent var	-2.75E-05
Adjusted R-squared	0.313071	S.D. dependent var	0.022842
S.E. of regression	0.018932	Akaike info criterion	-5.093323
Sum squared resid	0.270239	Schwarz criterion	-5.081079
Log likelihood	1927.276	F-statistic	345.0948
Durbin-Watson stat	2.083860	Prob(F-statistic)	0.000000

The results of the regression $R_S = a + bR_m$ give an estimation of the model which is:

$$\mathbf{R_S = -0{,}000294 + 0{,}811896\ R_m + \varepsilon}$$
$$(0{,}000689)\quad (0{,}043705)$$

The slope of the regression corresponds to the beta of the stock, and measures the riskiness of the stock. The beta is highly significant with a t-statistic of 18,57673 ± 0,043705 > 1,96 with 0,00 < 0,05 probability to reject the null hypothesis by mistake. Since the beta coefficient has a value of 0,811896 it is less than 1, the stock is considered to be defensive and is not of very high risk, thus it is not considered to have very high returns. The intercept a, is not statistically significant with a t-statistic of -0,42640 ± 0,00068 < 1,96 with 0,66 > 0,05 probability to reject the null hypothesis by mistake and with negative coefficient value of – 0,000294, estimating a negative performance of the stock during the regressed period.

The R squared (R^2) of the regression measures the proportion of the variability of the dependent variable that is explained by the independent variable in a regression, in our case it provides an estimation of the proportion of the risk of the firm that can be attributed to market risk. In our model, R squared = 31,39%, implying that 31,39% of the variability of SBRY returns is explained by FTSE returns, suggesting that 31,39% of Sainsbury's risk can be attributed to market risk whereas the remaining 1- R^2 = 68,61% of the risk can be attributed to firm specific risk and comes from firm components. Adjusted R squared has a value of 31,30% and our sample size includes 756 observations referring to the 756 days of stock trading in the period of 2006 - 2008.

The difference a- R_f (1-b) is called Jensen's alpha and measures the performance of the stock versus the market after adjusting for risk. Jensen's a has a negative value of -0,0093042 estimating that the performance of the stock was not good compared to the market, positioning it below the security market line. The fact that intercept a < R_f (1-b) also suggests that the stock did worse than expected during the period regressed.

9.10 Risk Profile of Tesco (TSCO)

The evaluation of Tesco's risk profile will provide information on the riskiness of an investment in the company's securities, thus an estimation of the beta coefficient will be calculated. The beta calculation formula is:

$$b\,(i) = \frac{\text{Cov}\,(ri, rm)}{\text{var}(rm)}$$

Calculating the covariance of Tesco's returns and market returns as well as the variance of the market returns using the Microsoft Office Excel software we get:

$\text{Cov}\,(r_T, r_m) = 0{,}000164692$
$\text{Var}\,(r_m) = 0{,}000248523$
} **beta = 0,662681723**

The beta coefficient for Tesco indicates that the company's share is positively correlated with the market on a degree somewhat above average and the security moves along with the market however, on a lower degree. The security is estimated to be on average less volatile than the market as well as less risky than the market.

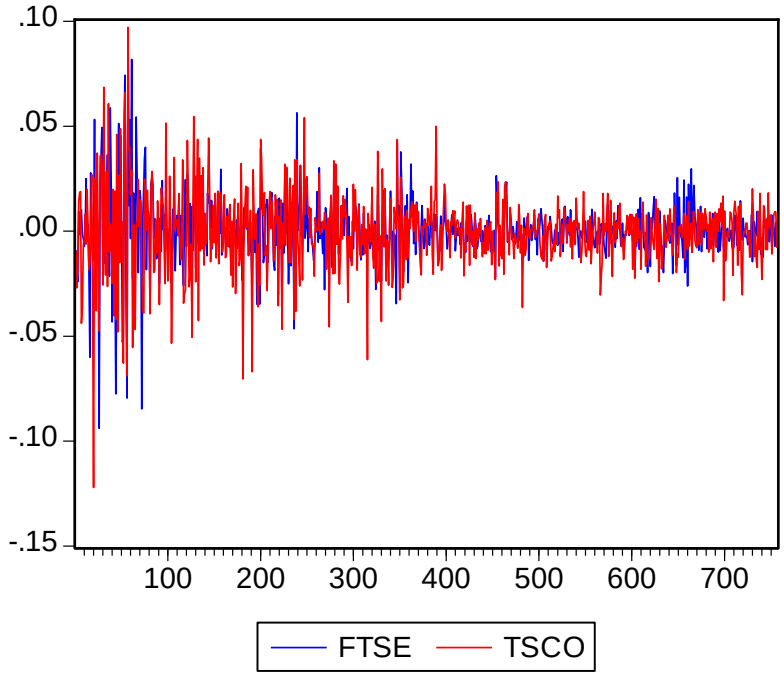
In order to calculate the rate of returns we must first identify the risk free rate and the risk premium. The estimation of the risk free rate is made based on UK treasury bonds with 10 years maturity with an interest rate when issued on 8,75%. (online.wsj.com). This estimation is considered accurate to use, as the UK government is considered to be a reliable loan recipient.

The estimation of the risk premium is usually made by using historical data and basically refers to the return in excess of the risk free rate of the return that an investment is expected to yield. In UK, the risk premium for the years we are examining has been estimated at 4,79% and it is going to be used on returns' calculation. (pages.stern.nyu.edu..)

Using the formula $E(R_T) = R_f + \beta_T (E(R_m) - R_f)$ we are in position to estimate the stock's expected returns,

$E(R_T) = 0{,}077402455 => \mathbf{E(R_T) = 7{,}74\%.}$

Graph 9.7 TSCO – FTSE100 Returns



Using the E-Views statistical software we are regressing Tesco's stock returns (R_T) against market returns (R_m) under the equation:

$R_T = a + bR_m$

Using daily historical prices and running a regression of Tesco's stock returns against FTSE100 index returns over a time period of three (3) years, 2006, 2007 and 2008, we get the following graph of the linear regression, where the vertical axis presents the company and horizontal axis presents the market.

Graph 9.8 $R_T = a + bR_m$ Regression

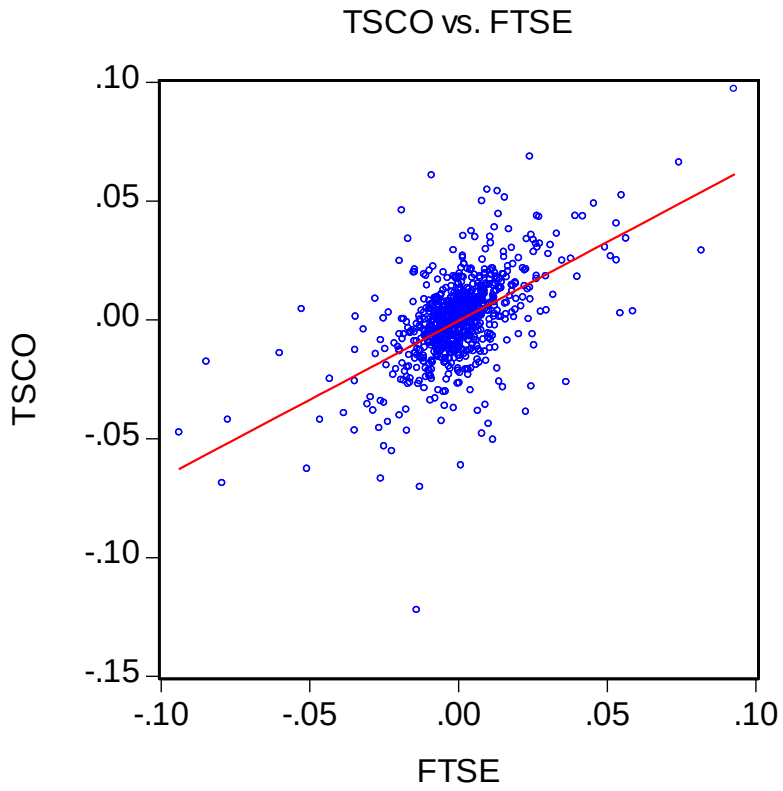


Table 9.5 Results of $R_T = a + bR_m$ Regression

Dependent Variable: TSCO
Method: Least Squares
Sample: 1 756
Included observations: 756

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.000352	0.000563	-0.624957	0.5322
FTSE	0.663559	0.035727	18.57312	0.0000

R-squared	0.313897	Mean dependent var	-0.000134
Adjusted R-squared	0.312987	S.D. dependent var	0.018671
S.E. of regression	0.015476	Akaike info criterion	-5.496441
Sum squared resid	0.180582	Schwarz criterion	-5.484198
Log likelihood	2079.655	F-statistic	344.9609
Durbin-Watson stat	2.082591	Prob(F-statistic)	0.000000

The results of the regression $R_T = a + bR_m$ give an estimation of the model which is:

$$\mathbf{R_T = 0{,}000352 + 0{,}663559\ R_m + \varepsilon}$$
$$(0{,}000563) \qquad (0{,}035727)$$

The slope of the regression corresponds to the beta of the stock, and measures the riskiness of the stock. The beta is highly significant with a t-statistic of 18,57312 ± 0,035727 > 1,96 with 0,00 < 0,05 probability to reject the null hypothesis by mistake. Since the beta coefficient has a value of 0,663559 it is less than 1, the stock is considered to be defensive and is not of very high risk, thus it is not considered to have very high returns. The intercept a, is not statistically significant with a t-statistic of -0,624957 ± 0,000563 < 1,96 with 0,53 > 0,05 probability to reject the null hypothesis by mistake and with negative coefficient value of – 0,000352, estimating a negative performance of the stock during the regressed period.

The R squared (R^2) of the regression measures the proportion of the variability of the dependent variable that is explained by the independent variable in a regression, in our case it provides an estimation of the proportion of the risk of the firm that can be attributed to market risk. In our model, R squared = 31,38%, implying that 31,38% of the variability of TSCO returns is explained by FTSE returns, suggesting that 31,38% of Sainsbury's risk can be attributed to market risk whereas the remaining 1- R^2 = 68,62% of the risk can be attributed to firm specific risk and comes from firm components. Adjusted R squared has a value of 31,29% and our sample size includes 756 observations referring to the 756 days of stock trading in the period of 2006 - 2008.

The difference a- R_f (1-b) is called Jensen's alpha and measures the performance of the stock versus the market after adjusting for risk. Jensen's a has a negative value of - 0,0294386 estimating that the performance of the stock was not good compared to the market, positioning it below the security market line. The fact that intercept a < R_f (1-b) also suggests that the stock did worse than expected during the period regressed.

9.11 Bankruptcy Risk

A company faces several different types of risks while operating, however, the most important risk a company can come against with is the risk of going bankrupt. Bankruptcy risk is also known as insolvency risk or default risk and it is referred to the company's inability to meet with its debt obligations. There are however different types of bankruptcy for individuals and different types of bankruptcy for corporations. According to bankruptcy law, when a company faces bankruptcy it can either start fresh by liquidating available assets so as to repay the portion of its outstanding debts that can be repaid, or it can continue operating and use its income to pay its debts under specific requirements. Bankruptcy risk can be also faced by banks when giving loans as well as by stockholders and bondholders when making an investment.

Bankruptcy does not occur suddenly. Going bankrupt is a procedure which includes a variety of factors indicating that a company is moving towards bankruptcy and can be at some point traced and if early, it may also be avoided. Identifying bankruptcy risk as well as being able to measure it to some extend is essential for a company and its viability and sustainability. Bankruptcy has impacts on the company, its personnel, its debtors, its investors, its suppliers, etc., and if a large corporation goes bankrupt it can at some point affect the sector. Thus, the ability to predict a company's bankruptcy risk is considered crucial and one of the most well known financial tools used to predict bankruptcy risk is the Z-score formula developed by Altman.

9.12 Z-score Financial Analysis Tool

The Z-score formula is a financial analysis tool that was developed in 1968 by Dr. Edward I. Altman, a financial economist and assistant professor of finance at New York University's Stern school of Business. In the 1930s, Mervyn paved the way when he assessed after collecting matched samples, that in predicting a firm's bankruptcy several accounting ratios appeared to be valuable. The first to apply a statistical method to predict bankruptcy was William Beaver (1967), who applied t-tests for a pair-matched sample of firms, based on univariate analysis, using each accounting ratio one at the time. As mentioned by Altman (2000), according to

Beaver's findings, there were a number of indicators that could discriminate between the matched samples of the non-failed and the failed firms for a time period of five (5) years prior to failure. Although Beaver was questioning the use of a multivariate analysis, he was the one to "set the stage for the multivariate attempts", Altman (2000). However, several years later, Altman improved Beaver's method, by using a discriminant analysis where multiple variables could be taken into account simultaneously.

The Altman's Z-score formula is a quantitative balance-sheet method, which is used in order to determine a company's financial health. This formula is basically forming a measure of the company's financial health by estimating its likelihood of bankruptcy. It is used to predict corporate defaults and is an easy-to-calculate control measure for the financial distress status of companies, especially in academic studies.

The Z-Score bankruptcy predictor combines five common business ratios by using a weighting system calculated by Altman, so as to determine the likelihood of a company going bankrupt. This multivariate formula is considered to be a powerful diagnostic tool that forecasts the probability of a company entering bankruptcy within a period of two (2) years. Several key ratios are used in the formulation of an Altman Z-Score Value, such as corporate income and balance sheet values. More detailed, the Z-score bankruptcy predictor combines five common ratios by using a weighting system that Altman determined so as to estimate the financial health of the company.

9.13 Estimation of the Z-score formula

The Z-score is a linear combination of five common business ratios, weighted by coefficients. These coefficients were estimated by identifying a set of firms which had declared bankruptcy and then collecting a matched sample of firms which had managed to survive. All these firms were matching by industry and approximate size of assets. Although it was derived based on data from manufacturing firms, it has since then been proven that with certain modifications it is still an effective measure in determining the existing risk that both non-manufacturing and service firms will go bankrupt as well. Studies measuring the effectiveness of the Z-score analysis have

shown that it is a relatively accurate model, since real world application has shown so far that the Z-score formula managed to successfully predict corporate bankruptcies two years prior with 72% - 80% reliability.

Public Companies

The original Z-score bankruptcy model used was as follows:

$Z = b_1*X_1 + b_2*X_2 + \ldots + b_n*X_n$, where:
$b_1, b_2, \ldots, b_n$ = discriminant coefficients, and
$X_1, X_2, \ldots, X_n$ = independent variables.

For Public Companies, the Model is calculated as follows:

$Z = 1.2*X_1 + 1.4*X_2 + 3.3*X_3 + 0.6*X_4 + 0.999*X_5$, where:

- X_1 = Working Capital = (Current Assets-Current Liabilities) / Total Assets. This ratio measures liquid assets in relation to the size of the company.
- X_2 = Retained Earnings / Total Assets. This ratio measures profitability that reflects the company's age and earning power.
- X_3 = Earnings Before Interest and Taxes (EBIT) / Total Assets. This ratio measures operating efficiency apart from tax and leveraging factors. It recognizes operating earnings as being important to long-term viability.
- X_4 = Market Value of Equity / Total Liabilities. This ratio adds market dimension that can show up security price fluctuation as a possible red flag.
- X_5 = Sales / Total Assets.This ratio is standard measure for sales turnover (varies greatly from industry to industry).

Altman found that the ratio profile for the bankrupt group fell at -0.25 avg, and for the non-bankrupt group at +4.48 avg. The interpretation of these ratios is considered accurate, based on the zones of discrimination Altman recognised. More analytically:

- If Z-score is above 3.0 ($Z > 3.0$) – Safe Zone. The company is considered to be safe, based on the financial figures only.

- If Z-score is between 2.7 and 2.99 (2.7 < Z < 2.99) – The company is considered to be on alert, meaning that this zone is an area where one should exercise caution.
- If Z-score is between 1.8 and 2.7 (1.8 < Z < 2.7) – Grey Zone. The company is considered to have a rather good chance of going bankrupt within 2 years of operations from the date of financial figures given.
- If Z-score is below 1.8 (Z < 1.8) – Distress Zone. The company is considered to have a very high probability of financial catastrophe.

Concluding, companies characterised as safe, meaning companies that have low probability of entering bankruptcy and considered to be financially healthy, should get a Z-score greater than 3.0. Generally speaking, the lower the company's Z-score the higher the odds of the company to go bankrupt. Probabilities of bankruptcy within distress zone range are around 95% for one year and around 70% within two years.

Private Firms

The Altman's Z-score formula is also used for Private Firms; however, in this case, an alteration of the coefficients appears.
For Private Firms, the Model is calculated as follows:

$Z = 0{,}717*X_1 + 0{,}847*X_2 + 3{,}107*X_3 + 0{,}420*X_4 + 0{,}998*X_5$, where:

- X_1 = Working Capital =(Current Assets-Current Liabilities) / Total Assets. This ratio measures liquid assets in relation to the size of the company.
- X_2 = Retained Earnings / Total Assets. This ratio measures profitability that reflects the company's age and earning power.
- X_3 = Earnings Before Interest and Taxes (EBIT) / Total Assets. This ratio measures operating efficiency apart from tax and leveraging factors. It recognizes operating earnings as being important to long-term viability.
- X_4 = Market Value of Equity / Total Liabilities. This ratio adds market dimension that can show up security price fluctuation as a possible red flag.

- X_5 = Sales / Total Assets. This ratio is standard measure for sales turnover (varies greatly from industry to industry).

The interpretation of these ratios is considered accurate, based on the zones of discrimination Altman recognised. More analytically:

- If Z-score is above 2.9 (Z > 2.9) – Safe Zone. The company is considered to be safe, based on the financial figures only.
- If Z-score is between 1.23 and 2.9 (1.23 < Z < 2.9) – Grey Zone. The company is considered to have a rather good chance of going bankrupt within 2 years of operations from the date of financial figures given.
- If Z-score is below 1.23 (Z < 1.23) – Distress Zone. The company is considered to have a very high probability of financial catastrophe.

This model is appropriate for private manufacturing firms and it is not considered to be wise to apply it to other companies. The higher the Z-score is, the less the probability of the firm going bankrupt. More detailed, if a firm gets a score of 2.90 or above, this is a strong indicator that bankruptcy is not likely to happen, whereas a score of 1.23 or below indicates the existence of a strong probability of the firm to go bankrupt. Probabilities of bankruptcy range with 95% for one (1) year and 70% for two (2) years.

Private General Firms

The need to predict the likelihood of a privately owned non-manufacturing company going bankrupt, led to the development of another version of the Altman Z-score. In this case, different coefficients of the already mentioned Altman's Z-score formulas are used, in addition to the fact that only four out of five common business ratios are measured to predict bankruptcy.

For Private General Firms, the Model is calculated as follows:

$Z = 6.56*X_1 + 3.26*X_2 + 6.72*X_3 + 1.05*X_4$, where:

- X_1 = Working Capital = (Current Assets-Current Liabilities) / Total Assets. This ratio measures liquid assets in relation to the size of the company.
- X_2 = Retained Earnings / Total Assets. This ratio measures profitability that reflects the company's age and earning power.
- X_3 = Earnings Before Interest and Taxes (EBIT) / Total Assets. This ratio measures operating efficiency apart from tax and leveraging factors. It recognizes operating earnings as being important to long-term viability.
- X_4 = Market Value of Equity / Total Liabilities. This ratio adds market dimension that can show up security price fluctuation as a possible red flag.

The interpretation of these ratios is considered accurate, based on the zones of discrimination Altman recognised. More analytically:

- If Z-score is above 2.6 ($Z > 2.6$) – Safe Zone. The company is considered to be safe, based on the financial figures only.
- If Z-score is between 1.1 and 2.6 ($1.1 < Z < 2.6$) – Grey Zone. The company is considered to have a rather good chance of going bankrupt within 2 years of operations from the date of financial figures given.
- If Z-score is below 1.1 ($Z < 1.1$) – Distress Zone. The company is considered to have a very high probability of financial catastrophe.

This version of the Altman's Z-score formula should only be applied on privately owned non-manufacturing companies and it is not appropriate for any other firms. As it appeared in the above formulas, the higher the score a firm gets, the lower the possibility of the firm going bankrupt. A score of 2.60 or above is the indicator of a financially healthy company which is not likely to go bankrupt within a period of two (2) years. A score of 1.1 or lower indicates that the firm is highly likely to enter bankruptcy with probability range to be around 95% for one (1) year and 70% for two (2) years. It is obvious once again that higher score is desired.

Although the Altman Z-score model was originally designed to predict the bankruptcy probability of publicly held manufacturing companies with assets of more than $1 million, it proved to become broadly used. After several later variations made by Altman, the model appeared to be also applicable to privately held companies as well

as non-manufacturing companies. The Z-score gained wide acceptance around 1985 and onwards, where it began to be applied by management accountants, auditors, as well as database systems for loan evaluation and credit ability, even though neither the Altman's Z-score model nor any other such model is considered safe to be applied in cases of financial companies with balance sheet's opacity.

However, although the Altman's Z-score model proved to be successful for the time and the sample used to examine its probability to predict firm bankruptcy, one must not pass over the age of the model and its limited examination which imply that the model may not be as effective nowadays as it used to be. "The generalizability of this model to industries and periods outside of those in the original sample has received little attention", Grice, Ingram (2001), thus, Grice and Ingram considered it important to study whether the model is still as useful in recent periods as it used to be, as well as its ability to still predict bankruptcy of both manufacturing and non-manufacturing firms. Though it might have been assumed that the model would be stable across economic conditions that change over time, their results led them to question the current uses of the model, as they indicated that the model's accuracy declined when applied to a different sample, suggesting significantly lower model accuracy in recent times, especially when non-manufacturing firms were included in the sample. What appears interesting is the fact that their results indicated that the model is useful for predicting financial distress conditions other than bankruptcy, yet, "while firms that experience financial distress are more likely to declare bankruptcy than other firms, most financially distressed firms do not declare bankruptcy.", Grice, Ingram (2001).

Brockman and Turtle (2003) examined the Altman Z-score model from a different point of view, since the model is also used for portfolio and security analysis, and compared its results to the down-and-out call (DOC) valuation model of Merton (1973), concluding weaknesses of the Z-score model. Suggesting that healthy firms without debt are also exposed to several potential barriers as firms with debt, such as violation of regulation, infraction of criminal code as well as lawsuits; it should be taken under consideration that bankruptcy could possibly and easily occur as well, if penalties or fines are to be imposed by authorised government regulators when those barriers are breached. Presenting evidence that equity behaves as a barrier option and after expanding their analysis, Brockman and Turtle (2003) consider that a path-

dependent approach is more suitable, since whenever a legally binding barrier is breached, equity can be knocked out.

After testing a large cross-section of industrial firms they showed that the implied barriers are both economically and statistically significant, fact which provided validation of the barrier model. In addition, several other tests also confirmed that the barriers' significance remains even after using a range of input variables, however, when illustrating a particular application of the DOC framework to the problem of bankruptcy prediction, results indicated that "implied failure probabilities dominate Z-scores in most cases.", Brockman and Turtle (2003). Reaching to the conclusion that "failure probabilities never underperform Z-scores in predicting corporate failure, and in many cases they clearly outperform", Brockman and Turtle (2003), they also presented results which demonstrate that both failure probabilities and Z-scores have the power to predict whether a firm will go bankrupt or not in the short-term, however failure probabilities have the ability to predict bankruptcy over longer horizons.

The common business ratios Altman used in his model do not include several factors that have altered through the years affecting a firm's financial condition and market position as well as its probability to go bankrupt. If the model is used as a credit risk criterion, Altman and Heine (2002) suggest that is should be better considered to be an additional tool in the credit and security analysis process, not the key measure. Continuing, they explain that especially after Basel II, when new regulations and barriers were set, defaults and bankruptcies reached unprecedented levels and although quantitative measures including mainly financial ratios provide the satisfactory explanatory power, several qualitative elements should not be underestimated. Mentioning examples such as the Enron and WorldCom cases, Altman and Heine (2002) underline the fact that the Z-score model is simply not enough nowadays and suggest that "what is needed is a "credit-culture" within financial institutions, whereby credit risk tools are "listened-to" and evaluated in good times as well as in difficult situations.", Altman and Heine (2002).

9.14 Calculation of Z-score

The ability to predict a company's bankruptcy risk is considered crucial and one of the most well known financial tools used to predict bankruptcy risk is the Z-score formula developed by Altman. Using Altman's Z-score model to predict bankruptcy risk for Sainsbury and Tesco we get the results as shown on the table below:

Table 9.6 Z-score for SBRY and TSCO

Z-score	**2006**	**2007**	**2008**
SBRY	1,68	2,67	2,71
TSCO	2,63	2,66	2,43

The Z-score value for Sainsbury for the year 2006 was rather low, only at 1,68 indicating that the company is in the grey zone, with good possibility of going bankrupt in the next 2 years. However, in the year that followed, Sainsbury managed to improve its score by reaching a Z-score value of 2,67 which was increased in 2008 reaching at 2,71 indicating that the company managed to exit the grey zone and enter a safer zone where caution needs to be exercised. Tesco, on the other hand, did not face high bankruptcy risk for the years 2006, 2007 and 2008, as results present a Z-score value of 2,63 for 2006, a Z-score value of 2,66 for 2007 and a slightly reduced Z-score value of 2,43 for 2008. Tesco generally appears to be in a safer zone than Sainsbury, however it was left behind by the end of 2008, being on alert and in need of exercising caution as its Z-score value decreased, indicating the existence of a possibility to go bankrupt within the next two years.

The general downturn affected the households' disposable income, factor which was also affected by the fuel price increase, the inflation increase as well as the unemployment increase. People experienced a change in trend and turned towards home-cooked meals rather than eating out. Sainsbury's high increase of Z-score value in 2007 also results in Delta Two, a Qatari investment company that bought a total of almost 26% stake of the company. The decrease of corporation tax by 2% as well as a decrease of 2% in interest rates, increased consumers' spending income and led to greater profits which helped the companies continue on their strategy of expanding and investing in new environmentally friendly stores.

Ch.10. Conclusions

This dissertation aimed in the presentation of two major retail companies of the UK, J Sainsbury plc and Tesco plc, based on a financial analysis of the companies' financial statements; income statements, balance sheets and cash flow statements for a period of three years, 2006, 2007 and 2008. A financial ratios analysis has been conducted as well as a comparison of the most important financial ratios of J Sainsbury plc and Tesco plc with two of their major competitors, Wm Morrison plc and Marks & Spencer plc. Break even point analysis is also presented by calculating each company's break even point. Furthermore, a risk evaluation has been conducted by performing a stock evaluation for the companies' stocks and a comparison with the sector and the market, in addition to a calculation of the rate of returns indicating the risk profiles of the companies. Bankruptcy risk has also been demonstrated and an analysis and calculation of the Z-score financial tool has been presented.

The UK retail market is characterized by high consolidation since it is dominated by large supermarkets as nowadays, almost three fourth of the UK market share is held only by a small number of top supermarkets. The UK grocery market is an industry worth billions and it is one of the most concentrated grocery retail sectors in Europe. Competition in the large chain supermarkets is extremely high especially in terms of pricing. Retailers are lowering the prices of their products in order to become more appealing to existent and potential clients however lowering prices has led in experiencing lower profit margins and has generally postponed their general growth. Increased competition due to declining profits and market concentration has increased the need for products differentiation. As a result, homogeneity of products sold has become less and less through the years and large hypermarkets have been developed, composed either by a single retailer or by a group of retailers, also offering a large variety of non-food products such as clothing, financial services, electronics, telecoms, etc., also appearing a very own brand share in the grocery market. In an effort to position themselves, large retailers have developed a recent selling mode, online retailing, managing to create a consumers' base and sustain it, attract new costumers as well as influencing their spending behavior. Retailers play important

role to the entire UK market as large retailers are major investors, regenerating the entire market, also connecting with other markets.

J Sainsbury plc is one of the major top retailers in the UK market in which it is based and has its core business operations. J Sainsbury plc, along with its subsidiaries engages in retailing and financial services, with its stores offering a range of food and non-food products mostly under the Sainsbury's brand, also providing an internet based home delivery shopping service. Since 2004, a major change has been happening in the company's board as well its management, which has taken a large and aggressive approach. Renovating existing stores, expanding store chain by acquiring new facilities, improving the IT system and its supply chain are some of the most important changes. Brand repositioning through quality improvement focusing on cost reduction and increasing growth has resulted into good numbers in sales and increase in profit margins. Although the company's profit margins have increased, they are still low compared to the market and other competitors however the company managed to strengthen its overall market share position reaching the number two position in the market in food products. Sainsbury is experiencing a working capital deficit however grocery stores have high inventory turns and do business on a cash basis, meaning that since cash is generated quickly, on a daily basis, it is not considered necessary to have large amount of working capital available. Working capital deficit implies low liquidity ratios and the company, as expected, seems to not being able to manage its short-term obligations by liquidating its assets, however that does not mean it can necessarily go bankrupt, presenting a defensive internal ratio of almost 26 days on average, indicating the number of days that the company can operate using only current liquid assets to manage its daily expenses. In general, the company is improving its financial health over the years, presenting greater ability to allocate its resources wisely and managing to generate higher earnings on smaller investments. In addition, investments on the company are becoming more profitable suggesting higher returns on their investments and potential higher dividends to investors. The company is experiencing low profit margins suggesting high costs and indicating low margin of safety, as a decrease in sales may lead to losses. Although Sainsbury has managed to reduce its debt ratio, it is still high however large retail companies get high debt ratios without suggesting financial problems, managing to become less levered over the years and strongly positioning its equity, improving its ability to cover a larger amount of its total debt with its yearly cash flow from

operations. An increase in productivity was achieved with the company becoming more efficient, also managing to improve its collection period as maintaining accounts receivables is basically like extending an interest-free loan. As a result, the company also managed to increase its accounts payable turnover indicating that payables are being made more quickly which is considered to be beneficiary since the company is getting appealing to potential new suppliers, even managing better prices and discounts, yet its cash conversion cycle is negative indicating that the company is collecting its receivables before paying its suppliers and suggests that a strict collection and negligent payment policy is adopted. Earnings per share were increased over the years share price was increasing and so did the dividend yield, with equity increasing and more investors being interested and investing in the company. The company's variable costs have increased over the years and although fixed costs have decreased, yet not in the same magnitude leading to an overall increase of the company's total costs over the years, leading to a break even point higher than the company's revenues. Sainsbury's share is experiencing high volatility, higher than the sector's implying higher risk included in investing on Sainsbury, though possible higher rate of returns. The beta coefficient for Sainsbury indicates that the company's share is positively correlated with the market on a high degree and the security moves along with the market though on a lower degree. The security is estimated to be on average less volatile than the market as well as less risky than the market. Estimating the company's bankruptcy risk by calculating its Z-score values, the company appeared to be in the grey zone having good possibility of going bankrupt, yet it managed to improve its Z-score value over the years entering a safer zone where caution needed to be exercised. All things considered, J Sainsbury plc has managed to grow over the years, regain consumers' trust and offer satisfaction, generally improving its financial position and considered to be a strong competitor in the UK retail market.

Tesco plc, together with its subsidiaries, operates as a grocery retailer. It operates stores that primarily offer food products, as well as general merchandise, clothing products, and electrical products. The company also provides telecom, retail banking, financial, and insurance services. In addition, it engages in data analysis, distribution, and property operations. Tesco plc also sells its products through online and catalogues. The company operates in the United Kingdom, China, the Czech

Republic, Hungary, the Republic of Ireland, India, Japan, Malaysia, Poland, Slovakia, South Korea, Thailand, Turkey, and the United States. The company is experiencing a working capital deficit however grocery stores have high inventory turns and do business on a cash basis, meaning that since cash is generated quickly, on a daily basis, it is not considered necessary to have large amount of working capital available. Working capital deficit implies low liquidity ratios and the company, as expected, seems to not being able to manage its short-term obligations by liquidating its assets, however that does not mean it can necessarily go bankrupt, presenting a defensive internal ratio of 22 days on average, indicating the number of days that the company can operate using only current liquid assets to manage its daily expenses. An increase in the company's net income is subsidized form a sudden decrease due to the company's expanding strategy which resulted in an increase in property and inventories. Investments on the company seem profitable suggesting high returns for investors and although the company has decreased profit margins, they are still considered satisfactory since the company's costs are not extremely high, the company is presenting itself to be financially healthy, has generated enough revenues to surplus its expenses and is considered to some extent safe from a decrease in sales. Tesco acquired new stores as pat of its expanding strategy and increased its obligations to suppliers leading to an increase of its debt ratio however large retail companies get high debt ratios though without suggesting financial problems. Although the company's equity is increasing over the years, the overall increase of capitalization ratio is a result of the higher rate of increasing long-term borrowings due to the company's acquisition of new stores, suggesting that the company is more debt financing, yet reducing its ability to cover total debt with its yearly cash flow from operations as a result of the company's increasing debt due to expansion. Tesco is utilizing its employees in a more efficient and productive way over the years however it increased its collection period which is not wise as maintaining accounts receivable is basically extending an interest-free loan as well as decreased its accounts payable turnover indicating that payables are being made more slowly, which also resulted from the fact that Tesco prolonged its receivables collection period. Falling payables turnover may lead to altering payment terms with suppliers and is an indication of possible worsening financial condition, nonetheless, Tesco is an increasing store chain procedure and slow collection period is unwise as it could use this cash profitably in investing as well as reducing amounts of borrowings. As

expected, the negative cash conversion cycle indicates that the company is collecting its receivables before paying its suppliers and suggests that a strict collection and negligent payment policy is adopted. The company's share price is increasing and an increase in the dividend yield is observed however the company's dividend payout ratio becomes slightly lower over the years, probably to the company's using earnings to invest in capital growth. Tesco's variable costs have increased over the years and so have its fixed costs, conclusively an increase in the company's total costs is observed, managing in 2008 a break even point lower than its revenues. Tesco's share price is characterized to be volatile to some extend suggesting being somewhat risky for the investors and with high rate of returns. The beta coefficient for Tesco indicates that the company's share is positively correlated with the market on a degree somewhat above average and the security moves along with the market however, on a lower degree. The security is estimated to be on average less volatile than the market as well as less risky than the market. Estimating the company's bankruptcy risk by calculating its Z-score values, the company appeared to be in a safe zone being on alert and in need of exercising caution. All things considered, Tesco plc is the dominant UK retailer and certain downturns are a result of its international expansion which will in the end increase the company's growth, position and financial health.

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