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Thesis:

***Accrual Accounting and Valuation:
Pricing Book Values***

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Thank you,

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Abstract

This thesis deals with the value added by accrual accounting in the presentation of the actual financial situation of a company and the usefulness of the residual income model in forecasting share prices.

The concept of accrual accounting is described together with its importance in presenting a complete figure of the financial situation of a company; not only the cash transactions that may result in overestimation and underestimation of revenue and expenses.

The residual income valuation model together with its advantages and disadvantages are described. The model is used to value a sample of twenty companies, which thereafter are invested in portfolios depending on whether they are undervalued or overvalued. The results show that a positive return is generated from the undervalued shares and a negative from overvalued shares, showing that the residual income has a weak predicting power regarding overvalued shares, so the residual income model is not very useful in predicting share prices.

Keywords:

Accruals, Accrual Accounting, Accrual Anomaly, Ohlson Model, Valuation, Residual Income

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Introduction

One of the main purposes of accounting and a primary objective of financial reporting is to provide information that assists existing and potential investors, creditors and lenders in making financial decisions about providing or not capital to an entity.

Financial statements are the source from which investors draw information about the company in which they have invested or would like to invest. The basic purpose of investors is to predict the future course of share prices with the aim of making investment decisions that will make them the highest profit for a given level of risk. Therefore, one of the main purposes of publishing financial statements is to provide information that is useful in decision making.

Financial statements provide data that improve the forecasting analysis regarding future earnings. The level of earnings is the key figure in which investors, economic analysts and the company administration are focused on.

The valuation process not only categorizes the shares as overvalued or undervalued to identify investment opportunities, but also helps the interested parties to draw conclusions about market expectations for the future earnings and the profitability perspective of a business by comparing them to its basic elements and by creating referential points.

Theoretically, all stock valuation models are equivalent. But it turns out that one model is superior to others and this happens because the valuation is always depending on the characteristics of the share that is under examination.

Residual income valuation model is one of the absolute valuation models and represents an economic earnings stream and valuation method for estimating the intrinsic value of a company's common stock. The residual income valuation model values a company as the sum of its book value and the present value of the expected residual income. It attempts to measure the economic profit, which is the profit remaining after the deduction of the opportunity costs for all sources of capital.

The residual income model has many advantages. Firstly, it is easily computed with data from the financial statements that each company issues, which makes it easily understood as well. Secondly, valuation does not rely heavily on the terminal value as is the case with the dividend discount and the free cash flow models. Thirdly, it can be easily applied to value shares in companies that do not pay dividends or their free cash flows cannot be forecasted, are negative or zero. Finally, it focuses on economic profitability, which is the cornerstone of each business and also is not affected by shareholder transactions (dividends paid, stock issuances and stock repurchases).

Nevertheless, it has also disadvantages. Accounting data may suffer from distortions or alterations from the management of the company while differences in accounting and taxation practices always require control and appropriate modifications or adjustments by the analysts. Finally, its calculation is based on the "clean surplus accounting" relation which in many cases does not hold.

In this thesis, the residual income model was used to value twenty companies trading in the London Stock Exchange. Given the valuation results, a portfolio with undervalued and a portfolio with overvalued stocks was constructed for a five years period. For each year, the portfolio return, abnormal return and the 5-years abnormal return was computed for each of the portfolios.

According to the portfolio results, a positive return is generated from undervalued shares and a negative from overvalued shares, showing that the residual income has a weak predicting power regarding the overvalued shares.

Taking this into account, the residual income model cannot be used to predict share prices since it is weak in predicting the overvalued shares, which are equally important to undervalued shares in order to make successful valuations and investment decisions.

Chapter 1 – Accruals

Definition of accruals

Accruals: Defines an expense or asset in balance sheet that has been recognized before it is paid. Accruals are recognized as liabilities or assets (depending on the type) and are identified due to the extremely high payment probability. We would say that they are generally transitory payments, to which are recorded as 'accrued' in the balance sheet at the date that the payment begins to be expected. They remain in that section of the balance sheet until they are actually paid.

The use of accrual accounting has significantly increased the amount of information in the balance sheet. Prior of the use of accruals only cash transactions were recorded in the financial statements. But cash transactions do not provide information on other important business activities, such as revenue based on credit and future liabilities. By using accruals, a company can measure what it owes and what revenue it expects to receive. In addition, their use allows the company to show assets that have no monetary value, such as goodwill.

The accrual accounting of both income and expenses refers to the time that revenue and expenses are recognized, that is their time of realization and recognition and their entry in the accounting books. The accruals are the profit that has not been collected yet for an accounting period.

There are two types of accruals, revenue accruals and expenses accruals.

Revenues are produced when value is received from the sale of products. To measure this value inflow, revenue accruals recognize value increases that are not cash flows and deduct cash flows that are not value increases. The most common

revenue accruals are receivables: A sale on credit is considered an increase in value even though cash has not been received.

On the other hand, expense accruals recognize value given up in generating revenue that is not a cash flow and adjust cash outflows that are not given. Cash payments are modified by accruals.

Accrual Accounting

The role of financial accounting is to provide financial measures to enterprises. These measures can be used by investors, financial analysts, creditors and customers. The success of a business depends directly on its ability to make larger cash inflows out of outflows. Therefore, cash flows could be used as a measurement of financial behavior. However, cash flows due to the timing and the matching problems are not always a good measurement of financial behavior. Accrual accounting achieves mitigation of the above problems and improves the measurement of the financial behavior of enterprises through the introduction of accruals.

According to the principle of accrual base accounting, revenue is recorded in the income statement when the firm earns it and expenses are reported when the company incurs them, regardless of the time cash changes hand, namely when cash from sales is collected and expenses are actually paid.

The accounting result of the accruals is a revenue statement that counts more effectively the profitability of the business at a certain time period; this is the reason accruals are created.

Taking all the above into account, the components of earnings are:

$$\mathbf{Earnings}_{t+1} = \mathbf{Cash\ flow}_t + \mathbf{Accruals}_t$$

The importance of accruals

The advantages of applying the accrual basis can be summarized as below:

1. They enhance the reliability of the financial statements.
2. Facilitate the creation of comparable data for the calculation of the budgetary size.
3. It enhances the reception and evaluation of good decisions (compare cost-benefit ratio).
4. Provides a better estimation of current and future ability of the company to generate positive cash flows.

Using accrual accounting, enterprises avoid inaccuracies, because when a company uses accrual accounting, its financial statements will present a more valid, integrated measurement of transactions and events for each period. This helps users to better understand the financial state of the company and make more accurate predictions regarding its future economic situation.

Unlike cash - based accounting that simply records financial events and transactions when cash is exchanged resulting in overestimation and underestimation of revenue and expenses, accrual accounting provides a more complete figure, because it presents also the revenue that the company expects to receive and the payments it has to make in the future.

Academical research on accruals

Accruals, accounting earnings and cash flows

There are many surveys which conclude that net income is perhaps the best measure of predictive capacity of returns in relation to cash flow. It's being referred

that earnings have greater explanatory capacity for returns on shares in relation to the cash flows from operating activities due to accruals.

Dechow (1994) shows that accrual accounting earnings are better than cash accounting earnings at showing firm performance. However, Sloan (1996) shows that the accrual component of earnings because of the subjectivity (of the management) involved in the estimation of accruals is less persistent than the cash component, suggesting that despite that accrual accounting is superior to cash accounting, when it comes to earnings, their cash component is more persistent than their accrual component. This means that when evaluating the performance of a firm, the cash component should receive a higher weight than the accrual component; however, investors do not assign this higher weight to the cash component resulting in significant mispricing of the securities. According to the study, this behavior happens because investors do not fully understand the level of subjectivity that is involved in accrual estimation, resulting in them making flawed investment decisions.

Dechow (2004) focuses on better understanding the persistence of the component of accounting earnings and this paper showed that accounting earnings have better predictive ability of the future profitability compared to current cash flows from operating activities. According to Dechow's study, accounting earnings appear to be less likely to be distorted in relation to cash flow and concludes that accruals are the reason for to better predictive capacity of earnings.

According to Dechow, when a business generates profits in cash, its managers will have to decide how to use these cash flows. Similarly, when the company has negative cash flows, its managers will have to decide again how to finance their shortcomings. When businesses generate positive cash flows they have three options on how to use them. These are:

1. Distribute to equity holders as dividends or repurchase shares.
2. Distribute to debt holders, namely repay interest and capital of the company's debt).
3. Retain within the company and invest in in projects with positive net present value to grow.

Conversely, negative cash flows occur when the company invests heavily in its business activity or loses money from operating activities. An enterprise that has negative cash flows must cover this shortage by several sources:

1. By receiving equity financing (by issuing new shares),
2. By obtaining financing from debt holders, i.e. borrow,
3. By using its own cash, namely by reducing its cash balance.

Examining each of the above earning options concludes that the cash flow that leads the change of the cash balance components has low stability on earnings as happens with accrual earnings.

According to Richardson, 2005, when accruals are less reliable as precursors of future earnings, the predictability of returns is stronger, due to the failure of investors to distinguish unreliable accruals from relatively reliable cash flows. On the other hand, it turns out that current earnings are showing a significantly greater predictive capacity than current cash flows, as shown by the survey. This greater predictive capacity is due to the fact that accruals are calculated by the difference between earnings and cash flows.

Accruals and returns

A key issue for understanding capital markets includes if the limited attention of investors influences their decisions and equilibrium on security prices. Most, if not all studies, base their existing explanations of accruals in some form of investor rationalization. The predictive capacity of accruals for future stock returns is one of the main points of study in financial accounting. This fact comes in contrast to the assumption of market efficiency and shows the possibility of achieving abnormal returns. In addition, it confirms the manipulation of earnings since managers have the ability to influence share prices. Finally, the predictive capacity of earnings for future returns on shares is proven to be due to a greater extent of accruals.

Many researches confirm that the limited attention of investors influences their transactions and there is evidence indicating that it affects stock prices, too (Hirshleifer 2009). The investors face a constant flow of financial reports for many firms over time, which contains many items that require economic and statistical analysis, therefore it is natural for them to look at the results with limited attention.

Relevant surveys show that accruals in their attempt to interpret shares, give more information as stand-alone variable or as a component of earnings than cash flows. Accruals are therefore taken into account by the investors because they offer them more accurate information.

A lot of research has been done to show that accrual anomaly reflects the limited attention of investors. Firstly, the ability of accruals to predict returns is associated with the ability of accruals and cash flows to predict future earnings; specifically Sloan (1996) states that the accrual component of the earnings is less persistent than the cash component, which happens due to the fact that the estimation

of accruals implies greater subjectivity. Secondly, the returns that are provided from accruals are concentrated around subsequent earnings announcements (Sloan 1996). Thirdly, high accruals are associated with an upward trend in the forecasts of analysts which indicates expected errors from analyst or problematic agencies of analysts that may lead in misguiding the investors in their options.

The accrual anomaly, first documented by Sloan (1996), refers to the negative relationship between the levels of accruals in relation to future stock returns: businesses with high (low) accruals show low (high) future returns. This has the effect of creating a peculiarity in market anomaly. Richardson (2005) also shows a negative relationship between long-term accruals and future price movements of shares. He extends the definition of accruals to a longer accrual and shows how this extended measure of accruals is also associated with even higher returns.

However, an alternative interpretation of the evidence is that markets are efficient but that we have not correctly identified the values of the risk factors leading to the accrual anomaly. Indeed, several recent studies have argued that accrual anomaly may originate in part or in full from the rational risk premium (Fama and French 2008; Khan 2008).

But how investors take advantage of the information that accruals provide to them? This is where the question arises: "Investors take advantage of the accruals due to the additional information they contain in predicting the cash flow or because they remain in the aggregate earnings as incorrect data and show a measure of performance of the company?"

Dechow (2008) studies conclude that low persistence of accruals is mainly due to managerial discretion in the assumptions used when preparing the financial

statements. With subsequent studies, Xie (2001) supports Dechow survey and adds that this anomaly is mainly due to the misunderstanding of investors from the manipulation of earnings. However, Khan (2008) makes a completely different conclusion, by stating that the anomaly is simply a compensation for higher risk in investment.

Therefore, if naive investors are affecting prices, we expect unreasonably high prices for companies with high accruals and low prices for companies with low accruals. Companies with high accruals should therefore have low future abnormal returns and low accruals will have high returns. According to this case, more recent surveys have found that companies with high accruals have lower performance than the companies that have low accruals in the United States (Sloan 1996).

Sloan (1996) investigates the pricing of the market for all accruals. It finds that the market is unable to fully appreciate lower earnings accruals and consequently overestimates total accruals. Chan et al. (2006) refers similar findings. Both studies interpret the accrual anomaly as a consequence of managerial opportunism, with the implicit assumption that the managers use accruals to manipulate earnings. Using quarterly data, Collins and Hribar (2000)¹ also found that the market overestimates the overall accruals.

Following Sloan's survey (1996), hundreds of studies state that the net income of the company has a lower persistence than accrual earnings. Investors tend to overestimate accrual earnings when they are expecting earnings and are surprised when the accruals appear to be of low stability in the future. Furthermore, Sloan

¹ Daniel W. Collins and Paul Hribar. "Earnings-Based and Accrual-Based Market Anomalies: One Effect or Two?", *Journal of Accounting and Economics*, February 2000

(1996) shows that commercial hedging strategies build market portfolio with low accruals and the sale of those with high accruals create positive risk-weighted returns.

Accruals and Accrual anomaly

The anomalies are, by their very nature, a challenge to existing theory and a promising empirical research topic. The accrual anomaly directly challenges the efficiency of the capital market compared to the published accounting information. Exploring the generalization, the reasons behind the anomaly of the accruals and its impact in the effectiveness of the market attracts the interest of researchers.

The accrual anomaly, as documented by Sloan (1996), has been one of the most active in-depth issues in accounting research over the last decade. Sloan (1996) shows that the strategy lasts in companies with the most negative accruals and slows down in companies with the most positive accruals. Sloan attributes the returns on the erroneous estimate of the persistence of the net income of the company and accrual earnings. In particular, the market systematically overestimates the insistence of accruals that they tend to reverse and underline the persistence of cash flows. Bad assessment is the perception that stock markets are not able to predict the lowest persistence of accruals. If the bad assessment of accruals leads to accrual anomaly, then the better information on expected future accruals should weaken this bad assessment. When analysts forecast cash flows except earnings, indirectly they forecast accruals. Disagreements exist, however, as to explanation of the results surveys are following Sloan's conclusions, that this result is due to logical arguments of distortions (Xie 2001; Dechow and Dichev 2000; Richardson et al. 2005).

Other surveys claim that the result is due to a general growth effect and some factors of growth such as declining returns on new investments explain lower

persistence of the accruals (Fairfield et al., 2003). Evidence shows that the accruals that are less persistent result to accruals that are independent of the increase of sales and those excessive accruals are associated with extreme cases of profit manipulation.

Sloan (1996) documents that companies with high accruals gain on average an unusual lower return compared to the companies that have low accrual, and they came in this conclusion because investors overestimate the persistence of accruals in earnings when they form the expectations of earnings. He argues that naive investors are usually surprised later when they realize that earnings of companies with high accruals are lower than their expectations while those with low accruals go beyond expectations.

A large set of studies (e.g., Xie, 2001; Dechow et al Dichev, 2002; Richardson et al. 2005; Richardson et al. 2006) follow Sloan (1996) and link the accrual anomaly with the greatest subjectivity involved in estimation of accruals. These distortions could result from incorrect estimates of cumulative future benefits and obligations and the occasional use of accruals by managers to mislead users of finance statements. The misunderstanding of investors of the consequences of the accounting distortions, leads to a significant increase in overestimation of the accrual interest in stock price formation. Therefore, under the interpretation of a wrong valuation basis, the accounting distortions could have an important role behind the performance of companies with high accruals compared to those with low accruals.

Several studies divide their components of accruals more closely in two additional items:

- Non-discretionary and
- Discretionary.

More specifically, Xie (2001) examines the stability of accrual profits and market pricing of the persistence of these components in the United States. The evidence by Xie (2001) suggests that the accrual anomaly is less resilient than normal accruals, and regular accruals are less durable than cash flows and that US markets outweigh both normal and abnormal accruals.

A manager can increase or decrease the levels of accrual accounting (such as accounts receivable, accounts payable, revenue and prepaid expenses) to achieve the desired profit.

Managers of listed companies have information that is vital to business valuation. Investors, with little or no access to internal information, must rely primarily on public data to decide regarding the purchase and sale of shares. Periodic and annual earnings announcement serve this purpose and are considered as the most prevalent source of information for investors because earnings are a summary and direct indicator of economic performance Dechow (1994). It is understood that market efficiency is based on information flowing on capital markets. When the information is inaccurate, it leads to erroneous assessment of shares value. Profit management overshadows actual performance and reduces the ability of investors to make informed decisions (Xie, Davidson & DaDalt 2003). The possible 'victims' of it are not just equity investors, but also bond investors, bankers, lawmakers, associations, suppliers, customers and competitors, who may also make erroneous decisions due to misleading information.

Dechow (1994) argues that earnings can be misquoted through the revenue recognition process, and particularly through sales on credit than cash sales. In their research, they considered all changes in sales on credit during the period to be the result of profit management. Total accruals, therefore, can be affected by the increase

in receivables. Therefore, they argued that the change in receivables that is supposed to be discretionary should be deducted from the total change in revenue when abnormal accruals are to be estimated.

It is worth mentioning that while there is unanimity among the researchers about the existence of accrual anomaly, its interpretation is not that clear. More specifically, the surveys are divided into two major categories: one that accounts for the anomaly in accounting distortions (Dechow and Dichev 2002, Richardson et al., 2005, Xie 2001) and the other that attributes the anomaly to factors associated with growth (Fairfield et al., 2003a, Fairfield et al. 2003b).

The growth component corresponds to accruals due to the growth of production and the return component corresponds to accruals due either to accounting distortions or to less efficient use of existing funds. Indeed, Richardson, Sloan, Soliman, Tuna, (2006) show both components contribute to lower stability of accruals.

Dechow and Dichev (2002) provide evidence that companies with low quality on accrual basis have less stable earnings. Richardson (2006) divides total accruals into a component of growth and a component of profitability and examines their impact on the stability of earnings.

The second stream of literature takes the view that achievement of the anomaly can be explained as a more general anomaly of growth. Fairfield et al. (2003a) pointed out that accruals are not only components of current profitability but also components of its growth. Accruals of working capital, long-term accruals and total accruals represent an increase in operating assets, in non-operating assets and net operating assets, respectively. Fairfield et al. (2003a) showed there are no statistically

significant differences in the negative relationship between working capital accruals and long-term accruals with their future earnings and stock returns.

At the same time, he claims that investors misinterpret the elementary impact of economic growth for future earnings, leading to significant bad assessment of the performance of companies. Following the research, Fairfield et al. (2003b) argues that the lower stability of the accruals compared to the cash flows are mainly due to the increase on investment which is not in line with the increase in revenue. Zhang (2007) shows that the magnitude of accrual anomaly is stronger when accruals are more likely to measure growth.

Up to this point, it is clear that the existing surveys provide convincing evidence for the reasons that are leading to accrual anomaly. The first stream attributes the lowest stability accruals to accounting distortions, while the second trend to growth. Nevertheless, both trends take into account some form to justify the effect of accruals on stock returns. Affluent investors are unaware of the consequences of accounting and growth-based factors of future earnings, leading to significant bad share valuation.

Dechow and Sloan (1997), attribute the growth anomaly to investors' expectations. The companies with low (high) growth are undervalued (overvalued) because investors evaluate their weak (strong) previous performance to form a pessimistic (optimistic) assessment of their future return.

A large set of studies (e.g., Xie, 2001, Dechow and Dichev, 2002, Richardson et al. 2006) follow Sloan (1996) and link the accrual anomaly to the most important subjectivity involved in the assessment of accruals which leads investors to make erroneous decisions.

Chapter 2 - Valuation

Valuation is the knowledge of the value of an asset and what determines it. It is a prerequisite for making decisions about:

- ❖ selecting an investment portfolio
- ❖ which is the right price to pay or receive in redemption and in investment,
- ❖ financing and
- ❖ Dividend options when operating a business.

Investors purchase financial assets for the cash flows that they expect to receive, which means that the price paid for them should reflect the cash flows that are expected to be generated. Millions of shares of various listed companies trade each day in global stock exchange markets. Investors who buy and sell these shares wonder if they are trading at the right price, and what is the true value of these shares. The answer can only be found with the correct valuation, the thorough examination of the information about the companies and drawing conclusions about the underlying value that this information entails. This is the fundamental analysis. The valuation is therefore based on fundamental analysis, which shows us the way to come to a stronger conclusion about the value of a company or the value of shares. Fundamental investors distinguish prices from value. The doctrine that follows is "price is what we pay, but value is what we receive".

What is received from the investments is the future payments, so fundamental investors predict these payments to ascertain whether the price requested is reasonable.

Fundamental investors talk about the discovery of fundamental values. Intrinsic value is the value of an investment that is justified by the information available about its expected payments. Nevertheless, fundamental analysis does not refute uncertainty, but offers principles, which, if followed faithfully reduce uncertainty.

Fundamental Analysis

The process of fundamental analysis has 5 steps in order to make the best valuation analysis:

1st Step: Knowing the company

- i. The product of the company
- ii. The management.
- iii. The knowledge base of the company.
- iv. The competition in the industry
- v. The regulatory constrains

These features are known as "the economic factors that are leading the company".

2nd Step: Analyzing information

- i. In Financial statements
- ii. Outside of Financial statements

The analysis of information is the focus of fundamental analysis, it is the way the analyst recognizes the appropriate information and organizes them in such a way to generate intrinsic value. This information will be discovered and collected from the

annual report and the financial statements, including not just accounting numbers, but also managerial reports from the executives of the company describing its performance.

The knowledge that outsiders gain about the company is included in its financial statements, which are based on accounting principles; therefore they include speculative information, which is the reason they are audited.

The analyst does not want to be overwhelmed by the huge amount of information that is available from the companies, thus seeks ways to effectively organize them, and reduce them to manageable size. The analysts need simple and clear data.

Making the right decisions usually depends on good information. To understand the value creation, analysts should adopt a long-term perspective to manage all cash flows and the data in the financial statements and to understand how to compare cash flows from different periods.

3rd Step: Developing Forecasting

- i. Specifying payoffs
- ii. Forecasting payoffs

A shareholder can obtain payments in two forms:

- i. In the form of future dividends
- ii. As revenue from the sale of a share.

However, these payments depend on the future success of the operations of the company, and successful operation happens when the sales price of the products is

greater than the production costs. So, the analyst needs to identify and to forecast these payments.

4th Step: Converting the forecast to a valuation

To complete the analysis, the expected payments must be rolled into a number and then must be converted into value. Payments will be made in the future, but investors prefer to know the value now, thus the expected payments should be discounted to consider the time value of the money. Payments are uncertain and may be either considerably better or worse than expected. So, depending on the risk that the investors are willing to take, the expected payments should be discounted according to the risk they contain. Therefore, this step involves combining the expected payments with the time value of money and the risk they entail.

5th Step: Trading on the valuation

Outside Investor: Compare value with price to *buy, sell* or *hold*

Inside Investor: Compare value with cost to *accept* or *reject* a strategy.

For the investor outside of company, the price of the investment is the market price of the shares. If the value they will get from this investment is higher than the purchase price, the analysis proposes to buy the shares, if it is less, to sell. If the purchase price is equal to the benefit of the investment, then the analyst concludes that the market of the industry is effective.

For the investor, within the company, the price of investment is the cost of investing. If the estimated value of investment or a strategic proposal is greater than the cost, then value is created. The analysis states that the strategy or proposal for investment is accepted, while if it does not cover the costs, it is rejected.

Fundamental analysis is the process that converts the knowledge about a business in a strategy valuation and a profitable commercial transaction. The valuation model that is followed by each analyst is important because it determines the returns and the relative information, and therefore the forecasts of the fundamental analysis. Thus, the valuation model provides the valuation architecture, and a good or bad estimation depends on the model of valuation that has been adopted.

The importance of valuation

To evaluate the value of a company's investments, an investor must understand very well the way a business operates, how it adds and returns value to investors.

When individuals or organizations invest in a business, they give cash with the expectation of receiving higher returns in the future. This investment gives them a claim to the company for a refund. This claim is depicted either in the form of a contract that is not marketable (such as most loan agreements with banks) or in the form of securities which can be traded in the security markets (such as stocks and bonds).

Corporate claims. Corporate requirements range from simple forms, such as equity and debts, to more complex requirements, such as convertible bonds and options. Despite their complexity, the potential requirements are relatively easy to assess: once the value stocks or bonds are fixed, basic techniques on pricing options can be used to get the derived price. Techniques follow the principles of finance. Share capital is the most important corporate requirement, and the value of the share capital comes from the financial analysis. The share capital is the owners' claims from the company and is the most difficult determinant value.

The value of the loan receivables is calculated in an easier way, is to determine how much interest and the amount of capital which must be returned.

Creditors (bondholders, banks and other creditors) provide loans to the business in return for periodical interest payments. Shareholders contribute cash in exchange for shares, which entitle them to receive payment in the form of dividends or cash from share repurchases. The amount of the profit, minus the amount which is paid for the claim, is called return. When an enterprise issues loans or shares they trade on the capital market. The capital market may be:

- Either an official organized stock market where the investment audience can find, compare, and select from a list of trading firms.
- Either a simple process of raising funds from the family and friends.

Holders of the various claims may also, if they wish to sell their investments, do so by selling them in the capital market. Thus, payments come both by the company and by sales on the capital markets.

- For shareholders, repayments occur in the form of dividends from the company and in the form of proceeds from the sale of shares. The sale of the shares is either in the company as a share repurchase (when the company buys back its shares) or to other investors in the stock market.
- Creditors collect the amount they have lent either from the company itself through interest and repayment of capital or through the sale of debt in the bond market.

The value negotiated in the capital market is based on the expected payments of the business; creditors have the need of creating high enough a value to cover

interest and capital. Shareholders acquire the residual value after the bondholders are paid. Therefore, the owners are interested in maximizing the value of the business which results in the maximization of their residual value; this is the reason they hire or/and dismiss managers, whose obligation is to maximize their value.

$$\text{Value of the company} = \text{Value of debt} + \text{value of equity}$$

The above equality shows that the total value produced in a company is divided among the different providers of capital: its shareholders and its creditors. Thus, the valuation of a company is done either by appraising the value of the business and distributing it among the two groups or by directly assessing the value of each component/ group.

The company participates in three activities:

Financial activities are transactions which aim to create cash for the business. These activities are investment activities for the providers of capital and financial activities for the business.

Investment activities use the cash that was created through the financial activities for acquiring assets that are necessary for the operation of the business. These elements can be either tangible assets, such as inventory and plant and equipment, or intangible assets such as technology and know-how.

Operational activities are the activities that have to do with the everyday business of the company; the assets that the company has invested in the production and the sale of its products. When the cash flows from operational activities succeed, the businesses create enough cash to re-invest in assets, paid down debt or return to the shareholders.

Understanding these activities is a fundamental importance to understand the value produced in a business.

Valuation models

Given the importance of valuation, before its implementation, it should be carefully investigated which method is more appropriate to assess the value of the business. The existing models often differ in their assumptions and as a result determine differently the value of assets. However, they present some common characteristics and therefore it is possible to categorize them, which results in many advantages. For example, it becomes easier for analysts to find out the model that is more appropriate for each case and to understand the reasons that cause different results to each case.

The below table presents the different valuation models which are broadly separated into two categories: the absolute and relative valuation models.

Table 1: Valuation Models

Absolute Valuation	Relative Valuation
Dividend Discount Model – DDM	Price / Earnings (P/E)
Discounted Cash Flow Model - DCF Model	Price / Book Value (P/BV)
Residual Income Valuation Model - RIV Model	Price / Sales (P/S)
Abnormal Earnings Growth Valuation Model – AEG Model	Price / Cash Flow (P/CF)
	Enterprise Value / EBITDA

The choice of a model for the valuation of a company is based on certain selection criteria, depending on the characteristics of each company that is going to be valued. These selection criteria are summarized below:

- Compatibility with business features.
- Data availability and quality.
- Compatibility with valuation purposes.

Valuation based on Accrual Accounting

The cash flow statement links operational and cash flows from investment activities with cash-based accounting. The above methods are therefore based on cash-based accounting. In addition, dividends and cash flows do not add value to the company, for at least some time. On the other hand, the balance sheet and the income statement are drawn up based on the principles of accrual accounting. Accruals are the basis for determining earnings (which appear in the income statement) and the book value of assets and liabilities (which appears in the balance sheet). With the help of accruals, the investments of a company are not deducted from its revenue (as in cash flows), but instead they appear in the balance sheet as an asset for a period. This period expires when such investments starts producing revenue, by which time its costs are combined with the corresponding revenue they have generated and the respective earnings or losses from the investment.

In conclusion, accrual accounting measures the value that is added to the business each period. The most basic model based on accrual accounting is the residual income model.

Residual Income/Earnings

The concept of residual income (RI) in recent years has gathered the interest of both the academic community and the analysts. Using accounting features, such as equity and abnormal earnings, on the dividend discount model was the primary idea that created the residual income valuation model. The theory has evolved over the years and the conclusion that has emerged is that the value of an enterprise can be expressed as a function of equity and future abnormal earnings. In addition, residual income has been used to measure the value of an entire business as well as the value of individual shares.

Residual income is the amount of net income generated in excess of the minimum rate of return that equity holders require to invest in the company. Residual income concepts have been used as a measurement of internal corporate performance where the company's management team appraises the return generated compared to the company's minimum required return.

In accordance with the established traditional accounting practices, income statement is used to show the cost of borrowing as an expense in the form of interest that any company is obliged to pay for the capital it has borrowed. Nowhere in the process of drawing up these financial statements is presented the cost of the equity used by the company to finance its operation and investments. So, based on these practices, it is possible for a business to show a positive net income but not create value for its shareholders because it cannot exceed the cost of the capital they have invested. The residual income came to cover this weakness, since the maximization of the value of the capital invested in the company by its shareholders is the primary goal of any company's management.

Advantages of the residual income model

- It is entirely based on accounting principles which makes it easy to calculate.
- The terminal value does not make up such a large portion of the total present value compared to other methods.
- The forecasts of residual income can be confirmed using subsequent financial statements.
- Can be applied to non-dividend paying companies or to companies that are not expected to generate positive cash flows in the near-term future, cases where neither the dividend discount model nor the free cash flow model can be applied.
- Can be used to value companies with unpredictable cash flows.
- Focuses on economic profitability, the cornerstone of each business.
- The residual income model is not affected by dividends paid, stock issuances and stock repurchases, namely it is not affected by shareholder transactions.

Disadvantages of the residual income model

- It is based on accounting data, which can be manipulated by the management.
- The accounting data may require significant adjustments to represent the real financial situation of a company.

- It assumes that the interest expense is appropriately reflects cost of debt.

Equation of Residual Income

Residual income is a measure that captures the value added to book value.

$$\text{Residual Income}_1 = \text{Earnings}_1 - (\text{Required return} * \text{Investment}_0)$$

The model that measures the value added from the forecasted residual income is the *Residual Income Model*:

$$\text{Value} = \text{Book Value} + \text{Present value of expected residual income}$$

According to Penman there are some steps to follow for a Residual Income valuation:

1. Identify in the most recent balance sheet the book value of the company.
2. Forecast earnings and dividends up to the forecasting horizon.
3. Forecast future book values from the current book values.
4. Calculate the future residual income from the forecasts of earnings and book values.
5. Discount the residual income to the present value.
6. Calculate a continuing value at the forecast horizon.
7. Discount the continuing value to present value.
8. Find the Value of the share by adding the current book value, the discounted present value of residual income and the discounted present value of continuing value.

RI is residual income (or earning) for equity

Residual Income (or earnings) = Comprehensive earnings – (Required return of equity

* Beginning-of-period book value)

$$RI_t = \text{Earn}_t - (\rho_E - 1) * B_{t-1}$$

Present Value (PV) of Residual Income

$$\text{PV of } RI_t = \frac{RI_t}{(1+r)^t}$$

Value of common equity

The valuation model that shows the extra value added to the equity according to

Penman is:

$$V_0^E = B_0 + \frac{RI_1}{\rho_E} + \frac{RI_2}{\rho_E^2} + \frac{RI_3}{\rho_E^3} + \dots$$

Where:

V_0^E is value of common equity

B_0 is the current book value

ρ_E is the required return

How the forecast of residual income works in three cases:

1st case: zero RI after T periods

Assuming zero RI after T period, the value of the firm is shown with the equation below:

$$V_0^E = B_0 + PV \text{ of RI for } T \text{ periods}$$

Continuing Value

In this case RI is forecasted to be zero in perpetuity at time T. So, the continuing value will be:

$$CV_T = 0$$

The forecasted premium at the horizon is:

$$V_T^E - B_T = 0$$

Terminal Value

$$V_T^E = B_T$$

2nd Case: Constant RI after T

Assuming constant RI after period T:

$$V_0^E = B_0 + PV \text{ of RI for } T \text{ periods} + \frac{1}{\rho_E^T} \left[\frac{RI_{T+1}}{\rho_E - 1} \right]$$

Continuing Value

In this case RI is forecasted to be constant in perpetuity at time T. So, the continuing value will be:

$$CV_T = \frac{RI_{T+1}}{\rho_E - 1}$$

The forecasted premium at the horizon is:

$$V_T^E - B_T = CV_T$$

Terminal Value:

$$V_T^E = B_T + \frac{RI_{T+1}}{\rho_E - 1}$$

3rd Case: with growing RI after T

Assuming growing RI after period T

$$V_0^E = B_0 + PV \text{ of } RI \text{ for } T \text{ periods} + \frac{1}{\rho_E^T} \left[\frac{RI_{T+1}}{\rho_E - g} \right]$$

Continuing Value

In this case RI is forecasted to grow at constant rate in perpetuity at time T. So, the continuing value will be:

$$CV_T = \frac{RI_{T+1}}{\rho_E - g}$$

The forecasted premium is:

$$CV_T = V_T^E - B_T$$

Terminal Value:

$$V_T^E = B_T + \frac{RI_{T+1}}{\rho_E - g}$$

The Ohlson model

The Ohlson model (1995) is a different outline of the valuation method of the fair value of the share based on discounted future abnormal earnings.

The recent literature that has dominated in recent years and links the value of an enterprise and its accounting figures is based on the model of residual income. A great difficulty of the model of residual income is the estimation of future abnormal earnings in an indefinite horizon. Ohlson tried to modify the residual income model to make it more practical.

The initial study was in 1989, but the most important was that in 1995, which was followed by others. Modern scientists have supported the model, which is proposed as an alternative to discounted cash flow for business valuation.

The model of Ohlson (1995) attempts to move one step forward in two levels. Initially, it predicts and explains the share prices better than discounted dividend and cash flow models which are based on short-term forecasts. Furthermore, presents a simpler and more integrated procedure of valuation apart from the traditional models.

The previous empirical residual income studies ignored Ohlson's dynamic of information (1995). So, in many cases, results were similar without considering

Ohlson's variables. Dechow, Hutton and Sloan (1999) show in their study that residual income follows the process of mean reversion. The rate of reversion to the mean is linked to the business characteristics, which derive from its accounting and financial analysis and are reduced in proportion to its earnings and increased with dividend return. Also, it showed that the information incorporated in the analysts' forecasts of earnings increases their accuracy. An important part of their research covered whether the values of the variables of the previous years used in the Ohlson model (1995) reflect the valuation forecast of a company's share price for the following years.

The assumptions of the model

The model consists of three basic assumptions:

1. In the first one, the market value of common equity is equal to the present value of the expected future dividends paid by the company to the shareholders, which is the fulfillment of the Dividend Discounted Model (DDM).

$$V_t = \sum_{T=1}^{\infty} R_f^{-T} E_t(d_{t+T}) \quad (1)$$

Where,

V_t : is the market value of the firm's equity at time t

d_t : is the net dividends that are paid at time t

E_t : is the expected value factor at time t

R_f : is the risk-free rate plus one

2. In the second one, two conditions should be satisfied
 - a. The change in book values between two periods equals earnings minus dividends and satisfies the clean surplus relation and
 - b. dividends reduce book value but not current earnings.

The mathematical restrictions following this relationship are applied below:

$$BV_t = BV_{t-1} + NI_t - d_t \quad (2)$$

Where,

BV_t : (net) book value at time t

NI_t : earnings for the period from time t

Then Ohlson defines the residual income as the current earnings minus the beginning book value multiplied by the cost of capital.

$$RI_t = NI_t - (R_f - 1)BV_{t-1} \quad (3)$$

Combining equations (2) and (3) gives

$$d_t = RI_t - BV_t + R_f BV_{t-1} \quad (4)$$

Then, substituting equation (4) into equation (1) generates the equation below, which is the equation of the Residual Income Valuation Model:

$$V_t = BV_t + \sum_{T=1}^{\infty} R_f^{-T} E_t(RI_{t+T}) \quad (5)$$

This equation shows that the share price is equal to the book value of the company and the sum of the present value of future abnormal earnings.

3. In the third assumption is the linear information dynamics (LID), which explains the stochastic time-series behavior of abnormal earnings. The LID describes the link between the company's intrinsic value and the current information.

$$RI_{t+1} = \omega RI_t + v_t + \varepsilon_{1t+1} \quad (6)$$

$$v_{t+1} = \gamma v_t + \varepsilon_{2t+1} \quad (7)$$

Where,

v_t : is the information other than residual income

$\varepsilon_{1t+1}, \varepsilon_{2t+1}$: residual terms, unpredictable, mean-zero variables

ω, γ : fixed persistence parameters that are non-negative and less than 1.

Jointly, the three assumptions (DDM, CSR and LID) let the derivation of the linear valuation equation as below:

$$V_t = BV_t + \alpha_1 RI_t + \alpha_2 v_t \quad (8)$$

where,

$$\alpha_1 = \omega / (R_f - \omega) \geq 0$$

$$\alpha_2 = R_f / (R_f - \omega) (R_f - \gamma) \geq 0$$

Conclusion on Ohlson model

The residual income methodology also has weaknesses, which are primarily internal, namely the validity of the clean surplus relationship. In his "Residual Income Valuation: The Problems" article, in 2000, Ohlson identifies three problems.

The first problem that he reports is that in the per-share valuation, the clean surplus relation will generally not hold if there are expected changes in the number of shares (eg a share split). This problem makes invalid one of the basic conditions that should hold to apply it. In particular, the model is valid (a) in the absence of convertible debt securities that cause dilution and (b) when the pure surplus relation holds under the condition that the total number of shares remain unchanged and the issue of new shares is not above par.

He identifies the second problem to be in the all equity approach. If the company wants to bring new shareholders, the equity approach does not work, because in this case the company will derive a net benefit from the capital that they will bring.

Lastly, the third problem that he identifies is that GAAP violates the clean surplus relation because capital contributions are not shown in market values.

He concludes that valuation using expected earnings per share, after adjusting them for dividends is preferable to the expected residual income and current book value since its results make more economic sense.

The Ohlson model (1995) is a very important step in company's valuation, which based on the residual income model goes one step further by adding new variables and parameters, which when further exploited lead to a clearer conclusion. What comes from the use of the model is the strong positive correlation that exists

between the share price, high profits and the book value of the companies. In addition, it places great emphasis on the book value to identify the share price and considers investments to be a key factor in the balance sheet rather than a factor that reduces the cash flow.

Empirical studies which have been conducted by Dechow, Hutton and Sloan (1999) and the results of Ohlson model (1995) have similar effects to the other valuation models, and often traditional models explain more accurately future share prices. This occurs because investors are overwhelmed by analyst information and their expectation regarding future earnings is built based on incomplete information regarding current earnings and the book value of the companies.

Certainly, Ohlson model (1995) is a useful framework for further empirical analysis, creating the basis for the unification of the characteristics of previous valuation models by adding the book value and short-term profit forecasts, combining the accounting variables with abnormal earnings. Then, with its structure manages to combine the growth of a company with the conservatism of financial statements. Finally, the model focuses on the relationship between the variables containing current information and future abnormal earnings. The models that were used before the Ohlson model (1995) which were based on the discounting dividends model often resulted in an unrealistic assumption about dividend policy.

Chapter 3 - Empirical Analysis

Methodology

The main purpose of this thesis is to find out if the residual income model is a tool which can forecast accurately stock prices and help analysts, investors and companies themselves in their investment decisions.

The design and approach of the study is based on Stephen H. Penman book “Financial Statement Analysis and Security Valuation”, and the published financial statements of the companies. Financial data for the firms were downloaded from DataStream and Microsoft Excel 2016 was used to perform the valuations. Actual dividend per share and earnings per share instead of forecasted numbers are used; this choice was made to increase the accuracy of the residual income model. Specifically, forecasts do not predict accurately the price evolution of a share, thus the actual value were used to decrease uncertainty, which now relates with the residual model only and not its input.

Below is presented the valuation methodology and its assumptions:

1. 20 companies trading in the London Stock Exchange (FTSE 350 and most of them also in FTSE 100) were valued. Financial institutions, i.e. banks, companies that provide financial services and insurance companies were excluded.
2. Historical data from 2006 until 2016 were collected; actual earnings per share and dividend per share were used to calculate the ending book value per share as per the below equation:

$$\text{Ending } Bps_t = \frac{\text{Price}_t}{\text{PTBV}_t} \quad (1)$$

$$Bps_t = \text{Ending } Bps_{t-1} + Eps_t - Dps_t \quad (2)$$

Bps_t: Book Value per share current year.

Ending Bps_{t-1}: Ending book value of the previous year which is used as the beginning book value of the year that we are calculating.

Eps_t: Earnings per share of the current year.

Dps_t: Dividend per share of the current year.

For example, to compute 2006 ending book value, 2005 ending book value per share was used as 2006 beginning book value per share and 2006 actual earnings per share and dividend per share were used.

3. CAPM is used to compute the required rate of return for each year.

$$\text{CAPM} = \text{Risk-free rate}^2 + (\text{Beta}^3 * \text{ERP}_{\text{Country}}^4) \quad (3)$$

Thereafter, to make the forecasts, the average of the 5-year CAPM is used, i.e. 2007 required rate of return (and discount rate) is the average CAPM of years 2007-2011.

4. The residual income for each year is calculated as per below:

Residual Income (or earnings) (RI) = Comprehensive earnings –
(Required return of equity * Beginning-of-period book value)

$$RI_t = \text{Earn}_t - (\rho_E - 1) * B_{t-1}$$

² Risk-free rate = 10Y bond (long-term interest rate) of United Kingdom from OECD.

³ Beta = the beta of the company from Datastream.

⁴ ERP_{country} = ERP of United Kingdom from Datastream.

$$RI_t = Earn_t - (1 + CAPM - 1) * B_{t-1}$$

So, in the end the equation of residual income for each year is formed as below:

$$RI_t = Earn_t - (CAPM * B_{t-1})$$

As Earnings_t in the equation above we use Earnings per share (Eps)

$$RI_t = Eps_t - (Bps_t * CAPM) \quad (4)$$

5. It is assumed that all firms of the sample will have constant growth, which is assumed to be the yield 10-year UK bonds. Therefore, the residual income model with constant growth is used.

$$CV = \frac{RI_{T+1} * g}{\rho_E - g}$$

$$\text{Where } g = 1 + g, \rho_E = 1 + r^5$$

So, the final equation of Continuing Value is:

$$\begin{aligned} CV &= \frac{RI_{T+1} * (1+g)}{(1+r) - (1+g)} \\ &= \frac{RI_{T+1} * (1+g)}{r - g} \end{aligned} \quad (5)$$

6. The residual income of each year as well as the continuing value are discounted and added to result the total share price for each year.

$$\text{Total PV of } RE_T = \sum \frac{RI_1}{(1+r)} + \frac{RI_2}{(1+r)^2} + \dots + \frac{RI_T}{(1+r)^T} \quad (6)$$

⁵ In all equations, ρ_E stands for $(1 + r)$, where $r = CAPM$

$$PV \text{ of } CV = \frac{CV}{(1+r)^T} \quad (7)$$

$$V_0^E = \text{Ending Bps}_t + \text{Present Value of RI} + \frac{1}{\rho_E^T} * (CV_T) \quad (8)$$

Appendix 1 shows the valuation results for each company. The table below summarizes the expected share prices and the actual price for each year.

Table 2: Residual Income Valuation results

		Residual Income					
		2006	2007	2008	2009	2010	2011
Ass. British Foods	Actual Price	12,21	12,25	12,25	7,55	9,25	13,67
	Expected Price	7,80	7,89	9,43	12,14	14,10	15,92
BAE Systems	Actual Price	6,32	6,78	3,90	4,05	3,85	3,41
	Expected Price	5,26	6,02	5,20	6,94	6,88	7,00
BAT	Actual Price	21,21	26,75	18,62	22,70	28,75	36,58
	Expected Price	14,96	13,84	16,54	20,82	22,74	24,09
BP	Actual Price	8,42	8,37	5,44	6,75	5,43	5,51
	Expected Price	7,64	6,12	7,85	5,78	5,23	5,38
Centrica	Actual Price	4,68	4,35	2,75	3,16	3,87	3,46
	Expected Price	2,40	3,00	2,92	3,10	3,07	2,35
Chemring	Actual Price	4,11	4,9	3,53	5,79	5,94	4,19
	Expected Price	12,62	13,96	8,40	8,01	8,73	3,93
Compass	Actual Price	4,34	4,23	3,58	5,05	6,83	7,37
	Expected Price	4,09	4,38	4,77	6,45	7,57	8,13
Cranswick	Actual Price	8,26	13,44	11,64	6,05	8,84	9,95
	Expected Price	10,41	9,34	11,94	13,91	16,49	22,29
Croda	Actual Price	8,99	8,19	5,56	9,33	19,53	22,37
	Expected Price	11,42	13,02	12,91	16,70	18,57	18,36
Dechra	Actual Price	3,48	4,53	3,45	5,02	5,29	5,63
	Expected Price	3,61	3,81	4,48	5,37	6,31	6,37
Diageo	Actual Price	12,26	14,88	14,7	9,94	12,2	13,72
	Expected Price	7,84	8,65	9,13	12,69	13,44	15,38
GSK	Actual Price	19,95	17,41	13,29	14,85	14,47	17,62
	Expected Price	8,56	10,02	10,98	11,01	12,43	11,24
Hill & Smith	Actual Price	4,02	4,53	2,08	3,87	3,24	2,99
	Expected Price	5,72	6,79	6,62	9,33	11,79	13,54
Imperial Brands	Actual Price	22	25,96	32,13	19,13	22,06	22,78
	Expected Price	19,16	19,84	21,69	26,02	27,83	33,23
Intertek	Actual Price	4,02	4,53	2,08	3,87	3,24	2,99
	Expected Price	5,72	6,79	6,62	9,33	11,77	13,54
Johnson Matthey	Actual Price	20,82	25,50	11,28	17,16	23,68	21,88
	Expected Price	10,24	10,80	10,80	14,86	16,04	15,99
J Sainsbury	Actual Price	6,07	5,79	3,40	3,64	4,39	3,63
	Expected Price	4,74	5,27	6,14	7,17	6,19	5,88
Morgan Sindall	Actual Price	13,53	19,71	14,15	5,61	6,75	8,16
	Expected Price	11,99	11,51	12,14	13,75	10,44	9,07
Smith & Nephew	Actual Price	7,91	7,9	4,54	7,2	7,9	7,49
	Expected Price	5,47	5,60	5,67	5,37	6,66	9,96
SSE	Actual Price	23,06	22,3	12,59	13,07	14,3	15,46
	Expected Price	14,16	15,22	15,25	20,36	23,87	14,32

Portfolio construction using Residual Income

Using the expected prices from the valuation and actual prices, two portfolios of 1.000.000 € each are constructed: one through investing in overvalued shares and one through investing in undervalued shares. The amount was invested for a five years period.

- Equal weighting portfolio, namely an equal amount of capital is invested in each stock at the beginning of each year. Based on the share price of each stock, a specific number of shares is bought or sold short for each stock.
- At year end, based on the number of shares owned or sold short for each stock and the share price at that time, the ending portfolio value is calculated.
- For the undervalued portfolio, when the ending value is higher than the beginning value, a positive return is generated and a negative return when a lower value results. This happens because the shares were bought at a lower price at the beginning of the year and their price has increased, resulting in a higher value for the portfolio; the value of the investment has increased.
- For the overvalued portfolio happens the exact opposite: stock is sold at a price in the beginning of the year and it should have a lower price at year end when it will be bought in order to generate a positive return.
- FTSE 350, the index in which all companies participate, is assumed to be the market and its return for each year using daily return is calculated.
- The abnormal return is the difference of the annual portfolio return and the annual index return. The table below shows the portfolio, market and abnormal return for the undervalued and overvalued portfolio. Using the abnormal

returns of the five years, a 5-years abnormal return is calculated and shown below:

Table 3: Undervalued Stocks (RI) Portfolio Returns

Undervalued stocks	2006	2007	2008	2009	2010
Portfolio return	43,99%	-2,59%	-37,14%	39,74%	15,43%
Market return	14,97%	-4,44%	-58,61%	33,90%	15,53%
Abnormal return	29,02%	1,85%	21,47%	5,84%	-0,10%
5-year abnormal return	11,03%				

Table 4: Overvalued Stocks (RI) Portfolio Returns

Overvalued stocks	2006	2007	2008	2009	2010
Portfolio return	-18,99%	-2,57%	40,20%	-26,74%	-26,29%
Market return	14,97%	-4,44%	-58,61%	33,90%	15,53%
Abnormal return	-33,96%	1,87%	98,81%	-60,64%	-41,82%
5-year abnormal return	-21,07%				

- As shown from the abnormal return and the 5-year abnormal return, the residual income model seems to have a high predicting power regarding the undervalued stocks but a low predicting power as far as the overvalued stocks are concerned.
- A model is important to predict accurately both undervalued and overvalued stocks for an investor to realize positive returns and increase its investment value. Otherwise, as happens with the sample tested, the negative returns of one portfolio wipe out the positive returns of the other portfolio.
- Consequently, the residual income model cannot be used to accurately forecast the share price evolution given that it has a very low degree of accuracy regarding the overvalued shares.

Forward P/E ratio valuation

- In order to test the results of the residual income model, namely an absolute valuation model, a relative valuation model was used.
- As mentioned, relative valuation methods, i.e. valuation with multiples, are used as another way of valuating securities. Forward P/E is one of the multiples used for stock valuation and is calculated as the ratio of the current price of the stock and the expected 12-months earnings per share.
- Forward P/E was found from Datastream-I/B/E/S and using the earnings of the following year the expected price for the current year was found, i.e. 2006 forward P/E ratio and 2007 earnings were used to find 2006 expected price.
- The table below summarizes the expected share prices and the actual price for each year.

Table 5: Forward P/E Valuation results

		Forward P/E ratio					
		2006	2007	2008	2009	2010	2011
Ass. British Foods	Actual Price	12,21	12,25	12,25	7,55	9,25	13,67
	Expected Price	11,41	10,69	8,77	7,74	10,77	12,30
BAE Systems	Actual Price	6,32	6,78	3,90	4,05	3,85	3,41
	Expected Price	4,90	5,07	6,25	4,27	4,01	4,36
BAT	Actual Price	21,21	26,75	18,62	22,70	28,75	36,58
	Expected Price	19,09	17,23	24,41	20,54	24,65	25,07
BP	Actual Price	8,42	8,37	5,44	6,75	5,43	5,51
	Expected Price	6,97	7,51	3,43	2,54	8,25	4,85
Centrica	Actual Price	4,68	4,35	2,75	3,16	3,87	3,46
	Expected Price	5,12	2,73	3,26	3,36	3,02	4,11
Chemring	Actual Price	4,11	4,9	3,53	5,79	5,94	4,19
	Expected Price	3,07	3,44	5,09	4,44	5,94	4,93
Compass	Actual Price	4,34	4,23	3,58	5,05	6,83	7,37
	Expected Price	2,77	4,28	5,56	5,64	6,68	7,56
Cranwick	Actual Price	8,26	13,44	11,64	6,05	8,84	9,95
	Expected Price	9,78	11,60	7,66	6,53	9,70	8,70
Croda	Actual Price	8,99	8,19	5,56	9,33	19,53	22,37
	Expected Price	6,98	8,64	6,54	7,14	17,19	24,79
Dechra	Actual Price	3,48	4,53	3,45	5,02	5,29	5,63
	Expected Price	3,27	2,92	4,51	4,08	5,49	5,63
Diageo	Actual Price	12,26	14,88	14,7	9,94	12,2	13,72
	Expected Price	11,21	12,49	10,23	9,97	10,89	12,93
GSK	Actual Price	19,95	17,41	13,29	14,85	14,47	17,62
	Expected Price	21,35	13,92	15,89	12,62	10,13	13,00
Hill & Smith	Actual Price	4,02	4,53	2,08	3,87	3,24	2,99
	Expected Price	3,86	4,31	4,34	2,27	3,85	3,37
Imperial Brands	Actual Price	22	25,96	32,13	19,13	22,06	22,78
	Expected Price	21,71	23,85	23,15	18,86	21,40	22,19
Intertek	Actual Price	4,02	4,53	2,08	3,87	3,24	2,99
	Expected Price	9,54	9,47	16,14	10,18	15,47	27,71
Johnson Matthey	Actual Price	20,82	25,50	11,28	17,16	23,68	21,88
	Expected Price	19,16	15,84	16,04	14,54	26,57	30,13
J Sainsbury	Actual Price	6,07	5,79	3,40	3,64	4,39	3,63
	Expected Price	5,61	4,87	5,07	4,33	4,35	4,89
Morgan Sindall	Actual Price	13,53	19,71	14,15	5,61	6,75	8,16
	Expected Price	14,42	16,93	12,13	6,78	7,61	8,51
Smith & Nephew	Actual Price	7,91	7,9	4,54	7,2	7,9	7,49
	Expected Price	6,74	7,03	7,31	5,76	8,32	7,95
SSE	Actual Price	23,06	22,3	12,59	13,07	14,3	15,46
	Expected Price	19,83	12,03	20,10	11,91	12,65	14,60

Portfolio construction using forward P/E ratio

- Using the results from the valuation, all stocks were invested in an undervalued and an overvalued portfolio of an amount of € 1.000.000.
- Equal weighting was used as per the residual model in order to be able to directly compare the results.
- The tables below show the portfolio, market, abnormal return and the 5-year abnormal return for each of the undervalued and overvalued portfolios. As shown, valuation using forward P/E ratio has worse results than valuation using the residual income. This means that forward P/E ratio is also weak in predicting the share prices.

Table 6: Undervalued Stocks (Forward P/E) Portfolio Returns

Undervalued stocks	2006	2007	2008	2009	2010
Portfolio return	32,26%	-14,96%	-36,73%	34,94%	19,82%
Market return	14,97%	-4,44%	-58,61%	33,90%	15,53%
Abnormal return	17,29%	-10,52%	21,88%	1,04%	4,29%
5-year abnormal return	6,15%				

Table 7: Overvalued Stocks (Forward P/E) Portfolio Returns

Overvalued stocks	2006	2007	2008	2009	2010
Portfolio return	-24,02%	-4,15%	41,66%	-35,49%	-18,64%
Market return	14,97%	-4,44%	-58,61%	33,90%	15,53%
Abnormal return	-38,98%	0,30%	100,27%	-69,39%	-34,17%
5-year abnormal return	-24,40%				

Conclusion

As stated, residual income reveals the value created for the company's shareholders if the company covers the total cost of capital that it has used, namely capital provided by both its shareholders and debtholders. Companies with earnings higher than the total cost of capital, increase in value in the long run thanks to the additional value created internally. Similarly, a business that shows earnings less than its cost of capital decrease in value in the long run because it will destroy rather than create value for its shareholders.

A sample of twenty companies trading in the London Stock Exchange was valued using the residual income model. According to the valuation results and the actual share prices, a portfolio with undervalued and a portfolio with overvalued stocks was constructed, each of them investing an amount of € 1.000.000 for five years. The portfolio return, abnormal return and the 5-years abnormal return was computed for each of the portfolios.

The results show that a positive return is generated from the undervalued shares and a negative from overvalued shares, showing that the residual income model has a weak predicting power regarding overvalued shares, so it cannot be considered very useful in predicting share prices. A valuation model should accurately predict the undervalued and overvalued shares for the investors to have a positive return on the portfolio.

Bibliography

Books

Stephen H. Penman (International Edition 2010), “Financial Statement Analysis and Security Valuation”, 4th Edition. McGraw-Hill.

Papers

Baginski, S., Wahlen J., (2003), “Residual Income Risk, Intrinsic Values, and Share Prices”. *The Accounting Review*, Vol. 78, No. 1, pp. 327-351

Dechow, P., (1994). “Accounting earnings and cash flows as measures of firm performance. The role of accrual accounting”. *Journal of Financial Economics*, 18, pp. 3-42

Dechow, P., Sloan, R. (1997). “Returns to contrarian investment strategies: Tests of naive expectation hypotheses”. *Journal of Financial Economics*, 43, pp. 3-27.

Dechow, P., Kothari, S., Watts, R. (1998). “The relation between earnings and cash flows”. *Journal of Accounting and Economics*, 25, pp. 133-168.

Dechow, P., Hutton, A., Sloan, R. (1999), “An empirical assessment of residual income valuation model”. *Journal of Accounting and Economics*, 26, pp. 1-34.

Dechow, P., Dichev, I. (2002). “The quality of accruals and earnings: The role of accrual estimation errors”. *The Accounting Review*, 77, pp. 35-59.

Dechow, P., Richardson, S., Sloan, R. (2008). “The persistence and pricing of the cash component of earnings”. *Journal of Accounting Research*, 46, pp. 537-566.

Fairfield, P., Whisenant, J., Yohn, T. (2003a). “Accrued earnings and growth: implications for current profitability and market mispricing”. *The Accounting Review*, 78, pp. 353–371.

Feltham Gerald A., Ohlson James A., (1995). “Valuation and Clean Surplus Accounting for Operating and Financial Activities”, *Contemporary Accounting Research*, Vol. 11, No. 2, pp. 689-731

Hirshleifer, D., Hou, K., Teoh, S. (2012). "The accrual anomaly: risk or mispricing?" *Management Science*, 58, pp. 320-355.

Khan, M. (2008). "Are accruals really mispriced? Evidence from tests of an intertemporal capital asset pricing model". *Journal of Accounting and Economics*, 45, pp. 55-77.

Ohlson J. (1995). "Earnings, Book Values, and Dividends in Equity Valuation". *Contemporary Accounting Research*, Vol. 11, No. 11, pp. 661-687

Ohlson, J. (2000). "Residual Income Valuation: The Problems", *Stern School of Business, New York University*

Penman, S., (2001). "On Comparing Cash Flow and Accrual Accounting Models for Use in Equity Valuation", *Columbia University New York*

Penman S., and T. Sougiannis. (1998) "A Comparison of Dividend, Cash Flow, and Earnings Approaches to Equity Valuation", *Contemporary Accounting Research*, 45-70.

Richardson, S., Sloan, R., Soliman, M., Tuna, I. (2005). "Accrual reliability, earnings persistence and stock prices". *Journal of Accounting and Economics*, 39, pp. 437-485.

Richardson, S., R. Sloan, M. Soliman, and I. Tuna, (2006). "The implications of firm growth and accounting distortions for accruals and profitability". *The Accounting Review* Vol. 81, No. 3, pp. 713-743.

Sloan Richard G., (1996), "Do Stock Prices Fully Reflect Information in Accruals and Cash Flows About Future Earnings?" *The Accounting Review*, Vol. 71, No. 3, pp. 289-315

Xie, H. (2001). "The mispricing of abnormal accruals". *The Accounting Review*, 76, pp. 357-373.

Zhang, X. (2007). "Accruals, investment, and the accrual anomaly". *The Accounting Review*, 82, pp. 1333-1363.

Cheng, Q., (2005). "What determines residual income?" *The Accounting Review* 80, (1), pp.85-112.

Databases

Datastream

OECD

Appendix 1

Below are the results of the residual model for all companies separately.

Associated British Foods

	2011	2012	2013	2014	2015	2016
Yield to maturity of UK 10 year bond will be used as expected growth	3,14%	1,92%	2,39%	2,57%	1,90%	1,31%

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
BETA	0,84	0,84	0,84	0,84	0,84	0,84	0,84	0,84	0,84	0,84	0,84
Dividend Payout per share	49,21	41,76	44,8	46,15	34,34	36,03	40,54	42,71	35,25	51,97	35,54
Gross Profit	2.425.070	2.581.823	2.519.167	2.501.029	3.001.169	3.133.169	3.586.114	3.839.686	3.835.049	4.055.423	4.054.726
EBITDA	998887	1151882	926721	1065901	1448328	1468933	1676735	1731971	1988274	1609117	1754920
Risk Free (10Y Bond)	4,50%	5,01%	4,59%	3,65%	3,62%	3,14%	1,92%	2,39%	2,57%	1,90%	1,31%
ERP Country	3,95%	3,38%	3,83%	8,84%	4,07%	4,69%	8,16%	6,57%	4,66%	5,37%	3,95%
CAPM	0,07818	0,078492	0,078072	0,110756	0,070388	0,070796	0,087744	0,079088	0,064844	0,064108	0,04628
Average CAPM	0,0617	0,0836	0,0838	0,0746	0,0733	0,0684					

	2006	FY2007	FY2008	FY2009	FY2010	FY2011
Beginning BV	6,60	7,10	7,58	8,03	8,39	8,80
EPS (Et)	0,76	0,76	0,72	0,57	0,65	0,84
DPS(Dt=Et*payout ratio)	0,26	0,28	0,27	0,21	0,24	0,26
Ending BV per share(BPS) (B ₂₀₀₆ + Et-Dt)	7,10	7,58	8,03	8,39	8,80	9,38
Required rate of return (CAPM)		8,17%	8,17%	8,17%	8,17%	8,17%
RE		0,1407	0,0639	-0,1155	-0,0690	0,0737
		1	2	3	4	5
Discount rate		1,0817	1,1701	1,2657	1,3691	1,4809
Present Value of RE		0,13	0,05	-0,09	-0,05	0,05
Total Present Value of RE to 2011	0,09					
Continuing Value (CV)					0,90	
Present Value of CV	0,61					
Value per share	7,80					

	2007	FY2008	FY2009	FY2010	FY2011	FY2012
Beginning BV	7,27	7,75	8,20	8,56	8,97	9,55
EPS (Et)	0,76	0,72	0,57	0,65	0,84	0,88
DPS(Dt=Et*payout ratio)	0,28	0,27	0,21	0,24	0,26	0,30
Ending BV per share(BPS) (B ₂₀₀₇ + Et-Dt)	7,75	8,20	8,56	8,97	9,55	10,13
Required rate of return (CAPM)		8,36%	8,36%	8,36%	8,36%	8,36%
RE		0,0345	-0,1456	-0,0999	0,0416	0,0331
		1	2	3	4	5
Discount rate		1,0836	1,1742	1,2724	1,3787	1,4940
Present Value of RE		0,03	-0,12	-0,08	0,03	0,02
Total Present Value of RE to 2012	-0,12					
Continuing Value (CV)					0,38	
Present Value of CV	0,26					
Value per share	7,89					

	2008	FY2009	FY2010	FY2011	FY2012	FY2013
Beginning BV	7,95	8,40	8,76	9,17	9,75	10,33
EPS (Et)	0,72	0,57	0,65	0,84	0,88	1,07
DPS(Dt=Et*payout ratio)	0,27	0,21	0,24	0,26	0,30	0,35
Ending BV per share(BPS) (B ₂₀₀₈ + Et-Dt)	8,40	8,76	9,17	9,75	10,33	11,05
Required rate of return (CAPM)		8,38%	8,38%	8,38%	8,38%	8,38%
RE		-0,1641	-0,1184	0,0230	0,0143	0,1440
		1	2	3	4	5
Discount rate		1,0838	1,1746	1,2731	1,3797	1,4954
Present Value of RE		-0,15	-0,10	0,02	0,01	0,10
Total Present Value of RE to 2013	-0,13					
Continuing Value (CV)					1,74	
Present Value of CV	1,16					
Value per share	9,43					

Accrual Accounting and Valuation: Pricing Book Values

	Residual Income Forecast					
	2009	FY2010	FY2011	FY2012	FY2013	FY2014
Beginning BV	7,85	8,21	8,62	9,20	9,78	10,50
EPS (Et)	0,57	0,65	0,84	0,88	1,07	1,18
DPS(Dt=Et*payout ratio)	0,21	0,24	0,26	0,30	0,35	0,38
Ending BV per share(BPS) (B ₂₀₀₉ + Et-Dt)	8,21	8,62	9,20	9,78	10,50	11,30
Required rate of return (CAPM)		7,46%	7,46%	7,46%	7,46%	7,46%
RE		0,0069	0,1537	0,1504	0,2867	0,3370
		1	2	3	4	5
Discount rate		1,0746	1,1548	1,2409	1,3335	1,4330
Present Value of RE		0,01	0,13	0,12	0,22	0,24
Total Present Value of RE to 2014	0,71					
Continuing Value (CV)					4,61	
Present Value of CV	3,22					
Value per share	12,14					

	Residual Income Forecast					
	2010	FY2011	FY2012	FY2013	FY2014	FY2015
Beginning BV	6,24	6,65	7,23	7,81	8,53	9,33
EPS (Et)	0,65	0,84	0,88	1,07	1,18	1,34
DPS(Dt=Et*payout ratio)	0,24	0,26	0,30	0,35	0,38	0,44
Ending BV per share(BPS) (B ₂₀₁₀ + Et-Dt)	6,65	7,23	7,81	8,53	9,33	10,23
Required rate of return (CAPM)		7,33%	7,33%	7,33%	7,33%	7,33%
RE		0,3100	0,3075	0,4448	0,4961	0,5901
		1	2	3	4	5
Discount rate		1,0733	1,1520	1,2364	1,3270	1,4243
Present Value of RE		0,29	0,27	0,36	0,37	0,41
Total Present Value of RE to 2015	1,70					
Continuing Value (CV)						8,19
Present Value of CV	5,75					
Value per share	14,10					

	Residual Income Forecast					
	2011	FY2012	FY2013	FY2014	FY2015	FY2016
Beginning BV	7,52	8,10	8,68	9,40	10,20	11,10
EPS (Et)	0,84	0,88	1,07	1,18	1,34	1,38
DPS(Dt=Et*payout ratio)	0,26	0,30	0,35	0,38	0,44	0,47
Ending BV per share(BPS) (B ₂₀₁₁ + Et-Dt)	8,10	8,68	9,40	10,20	11,10	12,01
Required rate of return (CAPM)		6,84%	6,84%	6,84%	6,84%	6,84%
RE		0,2863	0,4270	0,4823	0,5808	0,5585
		1	2	3	4	5
Discount rate		1,0684	1,1415	1,2196	1,3030	1,3921
Present Value of RE		0,27	0,37	0,40	0,45	0,40
Total Present Value of RE to 2016	1,88					
Continuing Value (CV)						8,26
Present Value of CV	5,93					
Value per share	15,92					

BAE Systems

	Yield to maturity of UK 10 year bond will be used as expected growth										
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
BETA	0,68	0,68	0,68	0,68	0,68	0,68	0,68	0,68	0,68	0,68	0,68
Dividend Payout per share	56,78	49,23	29,23	47,88	60,34	51,51	59,09	60,89	87,68	71,97	73,98
Gross Profit	10.023.920	12.768.946	12.903.737	13.011.138	13.435.057	12.247.629	12.923.517	12.230.192	11.550.977	13.401.255	13.017.323
EBITDA	2086828	2369120	3132854	1025381	2620062	2479349	2475651	1336539	1992140	2187097	1983365
Risk Free (10Y Bond)	4,50%	5,01%	4,59%	3,65%	3,62%	3,14%	1,92%	2,39%	2,57%	1,90%	1,31%
ERP Country	3,95%	3,38%	3,83%	8,84%	4,07%	4,69%	8,16%	6,57%	4,66%	5,37%	3,95%
CAPM	7,19%	7,31%	7,19%	9,66%	6,39%	6,33%	7,47%	6,86%	5,74%	5,55%	4,00%
Average CAPM	0,0738	0,0741	0,0734	0,0656	0,0639	0,0592					

	Residual Income Forecast					
	2006	FY2007	FY2008	FY2009	FY2010	FY2011
Beginning BV	1,23	1,47	1,68	1,88	2,15	2,46
EPS (Et)	0,40	0,37	0,34	0,44	0,50	0,48
DPS(Dt=Et*payout ratio)	0,16	0,16	0,14	0,17	0,19	0,23
Ending BV per share(BPS) (B ₂₀₀₆ + Et-Dt)	1,47	1,68	1,88	2,15	2,46	2,71
Required rate of return (CAPM)		7,38%	7,38%	7,38%	7,38%	7,38%
RE		0,246	0,201	0,281	0,318	0,280
		1	2	3	4	5
Discount rate		1,0738	1,1530	1,2381	1,3295	1,4276
Present Value of RE		0,229	0,175	0,227	0,240	0,196
Total Present Value of RE to 2011	1,067					
Continuing Value (CV)						3,88
Present Value of CV	2,72					
Value per share	5,26					

Accrual Accounting and Valuation: Pricing Book Values

	Residual Income Forecast					
	2007	FY2008	FY2009	FY2010	FY2011	FY2012
Beginning BV	1,86	2,07	2,27	2,54	2,85	3,10
EPS (Et)	0,37	0,34	0,44	0,50	0,48	0,56
DPS(Dt=Et*payout ratio)	0,16	0,14	0,17	0,19	0,23	0,24
Ending BV per share(BPS) (B _{2007+ Et-Dt})	2,07	2,27	2,54	2,85	3,10	3,42
Required rate of return (CAPM)		7,41%	7,41%	7,41%	7,41%	7,41%
RE		0,1718	0,2518	0,2888	0,2503	0,3066
		1	2	3	4	5
Discount rate		1,0741	1,1537	1,2392	1,3310	1,4296
Present Value of RE		0,16	0,22	0,23	0,19	0,21
Total Present Value of RE to 2012	1,01					
Continuing Value (CV)					4,20	
Present Value of CV	2,94					
Value per share	6,02					

	Residual Income Forecast					
	2008	FY2009	FY2010	FY2011	FY2012	FY2013
Beginning BV	2,31	2,51	2,78	3,09	3,34	3,66
EPS (Et)	0,34	0,44	0,50	0,48	0,56	0,46
DPS(Dt=Et*payout ratio)	0,14	0,17	0,19	0,23	0,24	0,24
Ending BV per share(BPS) (B _{2008+ Et-Dt})	2,51	2,78	3,09	3,34	3,66	3,88
Required rate of return (CAPM)		7,34%	7,34%	7,34%	7,34%	7,34%
RE		0,2359	0,2732	0,2348	0,2914	0,1752
		1	2	3	4	5
Discount rate		1,0734	1,1522	1,2368	1,3275	1,4250
Present Value of RE		0,22	0,24	0,19	0,22	0,12
Total Present Value of RE to 2013	0,99					
Continuing Value (CV)						2,42
Present Value of CV	1,70					
Value per share	5,20					

	Residual Income Forecast					
	2009	FY2010	FY2011	FY2012	FY2013	FY2014
Beginning BV	2,09	2,36	2,67	2,92	3,24	3,46
EPS (Et)	0,44	0,50	0,48	0,56	0,46	0,54
DPS(Dt=Et*payout ratio)	0,17	0,19	0,23	0,24	0,24	0,26
Ending BV per share(BPS) (B _{2009+ Et-Dt})	2,36	2,67	2,92	3,24	3,46	3,74
Required rate of return (CAPM)		6,56%	6,56%	6,56%	6,56%	6,56%
RE		0,3248	0,2884	0,3475	0,2330	0,2947
		1	2	3	4	5
Discount rate		1,0656	1,1355	1,2100	1,2894	1,3740
Present Value of RE		0,30	0,25	0,29	0,18	0,21
Total Present Value of RE to 2014	1,24					
Continuing Value (CV)						4,58
Present Value of CV	3,33					
Value per share	6,94					

	Residual Income Forecast					
	2010	FY2011	FY2012	FY2013	FY2014	FY2015
Beginning BV	1,48	1,79	2,04	2,36	2,58	2,86
EPS (Et)	0,50	0,48	0,56	0,46	0,54	0,51
DPS(Dt=Et*payout ratio)	0,19	0,23	0,24	0,24	0,26	0,28
Ending BV per share(BPS) (B _{2010+ Et-Dt})	1,79	2,04	2,36	2,58	2,86	3,09
Required rate of return (CAPM)		6,39%	6,39%	6,39%	6,39%	6,39%
RE		0,3496	0,4092	0,2951	0,3572	0,3125
		1	2	3	4	5
Discount rate		1,0639	1,1319	1,2042	1,2812	1,3630
Present Value of RE		0,33	0,36	0,25	0,28	0,23
Total Present Value of RE to 2015	1,44					
Continuing Value (CV)						4,97
Present Value of CV	3,64					
Value per share	6,88					

	Residual Income Forecast					
	2011	FY2012	FY2013	FY2014	FY2015	FY2016
Beginning BV	1,82	2,07	2,39	2,61	2,89	3,12
EPS (Et)	0,48	0,56	0,46	0,54	0,51	0,47
DPS(Dt=Et*payout ratio)	0,23	0,24	0,24	0,26	0,28	0,25
Ending BV per share(BPS) (B _{2011+ Et-Dt})	2,07	2,39	2,61	2,89	3,12	3,34
Required rate of return (CAPM)		5,92%	5,92%	5,92%	5,92%	5,92%
RE		0,4185	0,3055	0,3689	0,3253	0,2723
		1	2	3	4	5
Discount rate		1,0592	1,1219	1,1883	1,2587	1,3332
Present Value of RE		0,40	0,27	0,31	0,26	0,20
Total Present Value of RE to 2016	1,44					
Continuing Value (CV)						4,65
Present Value of CV	3,49					
Value per share	7,00					

British American Tobacco

Yield to maturity of UK 10 year bond will be used as expected growth	2011	2012	2013	2014	2015	2016
	3,14%	1,92%	2,39%	2,57%	1,90%	1,31%

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
BETA	1,32	1,32	1,32	1,32	1,32	1,32	1,32	1,32	1,32	1,32	1,32
Dividend Payout per share	60,71	62,93	67,89	72,63	78,65	80,52	68,1	69,34	88,62	66,7	67,72
Gross Profit	10.107.857	10.587.457	11.078.318	11.526.012	13.030.478	13.801.493	14.647.474	14.153.526	13.577.486	13.870.919	13.488.654
EBITDA	4515028	4527197	4282981	5293489	5747797	6388124	7366540	8240385	7739192	9288379	8735942
Risk Free (10Y Bond)	4,50%	5,01%	4,59%	3,65%	3,62%	3,14%	1,92%	2,39%	2,57%	1,90%	1,31%
ERP Country	3,95%	3,38%	3,83%	8,84%	4,07%	4,69%	8,16%	6,57%	4,66%	5,37%	3,95%
CAPM	0,09714	0,094716	0,096456	0,153188	0,089924	0,093308	0,126912	0,110624	0,087212	0,089884	0,06524
Average CAPM	0,1055	0,1120	0,1148	0,1016	0,1016	0,0960					

Residual Income Forecast						
	2006	FY2007	FY2008	FY2009	FY2010	FY2011
Beginning BV	4,60	5,33	5,96	6,52	7,99	8,38
EPS (Et)	1,45	1,43	1,28	1,48	1,72	2,08
DPS(Dt=Et+payout ratio)	0,72	0,80	0,72	0,01	1,33	1,51
Ending BV per share(BPS) (B ₂₀₀₆ + Et-Dt)	5,33	5,96	6,52	7,99	8,38	8,95
Required rate of return (CAPM)		10,55%	10,55%	10,55%	10,55%	10,55%
RE		0,8012	0,5921	0,6371	0,8359	1,1358
		1	2	3	4	5
Discount rate		1,106	1,222	1,351	1,494	1,651
Present Value of RE		0,7248	0,4845	0,4715	0,5597	0,6879
Total Present Value of RE to 2011	2,9283					
Continuing Value (CV)						11,072
Present Value of CV	6,7057					
Value per share	14,96					

Residual Income Forecast						
	2007	FY2008	FY2009	FY2010	FY2011	FY2012
Beginning BV	4,63	5,26	5,82	7,29	7,68	8,25
EPS (Et)	1,43	1,28	1,48	1,72	2,08	1,99
DPS(Dt=Et+payout ratio)	0,80	0,72	0,01	1,33	1,51	1,66
Ending BV per share(BPS) (B ₂₀₀₇ + Et-Dt)	5,26	5,82	7,29	7,68	8,25	8,58
Required rate of return (CAPM)		11,20%	11,20%	11,20%	11,20%	11,20%
RE		0,6282	0,6635	0,8598	1,1560	1,0290
		1	2	3	4	5
Discount rate		1,1120	1,2365	1,3750	1,5290	1,7003
Present Value of RE		0,56	0,54	0,63	0,76	0,61
Total Present Value of RE to 2012	3,09					
Continuing Value (CV)						9,35
Present Value of CV	5,50					
Value per share	13,84					

Residual Income Forecast						
	2008	FY2009	FY2010	FY2011	FY2012	FY2013
Beginning BV	4,68	5,24	6,71	7,10	7,67	8,00
EPS (Et)	1,28	1,48	1,72	2,08	1,99	2,46
DPS(Dt=Et+payout ratio)	0,72	0,01	1,33	1,51	1,66	1,71
Ending BV per share(BPS) (B ₂₀₀₈ + Et-Dt)	5,24	6,71	7,10	7,67	8,00	8,75
Required rate of return (CAPM)		11,48%	11,48%	11,48%	11,48%	11,48%
RE		0,7097	0,9049	1,1995	1,0716	1,4555
		1	2	3	4	5
Discount rate		1,1148	1,2428	1,3855	1,5445	1,7218
Present Value of RE		0,64	0,73	0,87	0,69	0,85
Total Present Value of RE to 2013	3,77					
Continuing Value (CV)						12,96
Present Value of CV	7,53					
Value per share	16,54					

Residual Income Forecast						
	2009	FY2010	FY2011	FY2012	FY2013	FY2014
Beginning BV	3,62	5,09	5,48	6,05	6,38	7,13
EPS (Et)	1,48	1,72	2,08	1,99	2,46	2,43
DPS(Dt=Et+payout ratio)	0,01	1,33	1,51	1,66	1,71	1,91
Ending BV per share(BPS) (B ₂₀₀₉ + Et-Dt)	5,09	5,48	6,05	6,38	7,13	7,65
Required rate of return (CAPM)		10,16%	10,16%	10,16%	10,16%	10,16%
RE		1,1632	1,4653	1,3418	1,7356	1,6528
		1	2	3	4	5
Discount rate		1,1016	1,2135	1,3368	1,4726	1,6223
Present Value of RE		1,06	1,21	1,00	1,18	1,02
Total Present Value of RE to 2014	5,46					
Continuing Value (CV)						16,66
Present Value of CV	10,27					
Value per share	20,82					

Accrual Accounting and Valuation: Pricing Book Values

	Residual Income Forecast					
	2010	FY2011	FY2012	FY2013	FY2014	FY2015
Beginning BV	4,32	4,71	5,28	5,61	6,36	6,88
EPS (Et)	1,72	2,08	1,99	2,46	2,43	2,66
DPS(Dt-Et* payout ratio)	1,33	1,51	1,66	1,71	1,91	2,09
Ending BV per share(BPS) (B2010+ Et-Dt)	4,71	5,28	5,61	6,36	6,88	7,45
ROE (ROCE)	34,2%	35,6%	48,6%	55,4%	51,3%	82,5%
Required rate of return (CAPM)		10,16%	10,16%	10,16%	10,16%	10,16%
RE		1,5436	1,4200	1,8138	1,7310	1,9031
		1	2	3	4	5
Discount rate		1,1016	1,2135	1,3368	1,4726	1,6223
Present Value of RE		1,40	1,17	1,36	1,18	1,17
Total Present Value of RE to 2015	6,28					
Continuing Value (CV)						19,07
Present Value of CV	11,75					
Value per share	22,74					

	Residual Income Forecast					
	2011	FY2012	FY2013	FY2014	FY2015	FY2016
Beginning BV	5,41	5,98	6,31	7,06	7,58	8,15
EPS (Et)	2,08	1,99	2,46	2,43	2,66	2,59
DPS(Dt-Et* payout ratio)	1,51	1,66	1,71	1,91	2,09	1,98
Ending BV per share(BPS) (B2011+ Et-Dt)	5,98	6,31	7,06	7,58	8,15	8,76
ROE (ROCE)	32,0%	35,6%	37,3%	34,2%	35,6%	48,6%
Required rate of return (CAPM)		9,60%	9,60%	9,60%	9,60%	9,60%
RE		1,3842	1,7822	1,7023	1,8776	1,7490
		1	2	3	4	5
Discount rate		1,0960	1,2012	1,3165	1,4429	1,5814
Present Value of RE		1,26	1,48	1,29	1,30	1,11
Total Present Value of RE to 2016	6,45					
Continuing Value (CV)						18,44
Present Value of CV	11,66					
Value per share	24,09					

BP

Yield to maturity of UK 10 year bond will be used as expected growth	2011	2012	2013	2014	2015	2016
	3,14%	1,92%	2,39%	2,57%	1,90%	1,31%

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
BETA	1,65	1,65	1,65	1,65	1,65	1,65	1,65	1,65	1,65	1,65	1,65
Dividend Payout per share	35,65	41,63	52,99	62,19	47,11	21,44	56,22	29,22	42,7	38,4	37,8
Gross Profit	40.870.492	39.204.304	39.947.617	34.907.098	8.334.304	41.801.898	31.830.637	34.802.937	31.164.577	28.608.303	25.015.820
EBITDA	32846610	27001233	24138045	24993280	2010724	33897756	22028549	31750823	13764176	4202160	9782721
Risk Free (10Y Bond)	4,50%	5,01%	4,59%	3,65%	3,62%	3,14%	1,92%	2,39%	2,57%	1,90%	1,31%
ERP Country	3,95%	3,38%	3,83%	8,84%	4,07%	4,69%	8,16%	6,57%	4,66%	5,37%	3,95%
CAPM	11,02%	10,59%	10,91%	18,24%	10,34%	10,88%	15,38%	13,23%	10,26%	10,76%	7,83%
Average CAPM	9,00%	9,00%	9,00%	9,00%	9,00%	9,00%					

	Residual Income Forecast					
	2006	FY2007	FY2008	FY2009	FY2010	FY2011
Beginning BV	3,44	4,05	4,43	4,86	4,78	5,01
EPS (Et)	0,92	0,67	0,73	0,33	0,33	0,92
DPS(Dt-Et* payout ratio)	0,31	0,29	0,30	0,41	0,10	0,21
Ending BV per share(BPS) (B2006+ Et-Dt)	4,05	4,43	4,86	4,78	5,01	5,72
Required rate of return (CAPM)		9,00%	9,00%	9,00%	9,00%	9,00%
RE		0,2713	0,2926	-0,1002	-0,1209	0,4052
		1	2	3	4	5
Discount rate		1,0900	1,1881	1,2950	1,4116	1,5386
Present Value of RE		0,25	0,25	-0,08	-0,09	0,26
Total Present Value of RE to 2011	0,50					
Continuing Value (CV)						4,61
Present Value of CV	3,00					
Value per share	7,64					

Accrual Accounting and Valuation: Pricing Book Values

	Residual Income Forecast					
	2007	FY2008	FY2009	FY2010	FY2011	FY2012
Beginning BV	3,29	3,67	4,10	4,02	4,25	4,96
EPS (Et)	0,67	0,73	0,33	0,33	0,92	0,72
DPS(Dt=Et*payout ratio)	0,29	0,30	0,41	0,10	0,21	0,26
Ending BV per share(BPS) (B ₂₀₀₇ + Et-Dt)	3,67	4,10	4,02	4,25	4,96	5,42
Required rate of return (CAPM)		9,00%	9,00%	9,00%	9,00%	9,00%
RE		0,3610	-0,0318	-0,0525	0,4736	0,2322
		1	2	3	4	5
Discount rate		1,0900	1,1881	1,2950	1,4116	1,5386
Present Value of RE		0,33	-0,03	-0,04	0,34	0,15
Total Present Value of RE to 2012	0,75					
Continuing Value (CV)					2,61	
Present Value of CV	1,70					
Value per share	6,12					

	Residual Income Forecast					
	2008	FY2009	FY2010	FY2011	FY2012	FY2013
Beginning BV	3,40	3,83	3,75	3,98	4,69	5,15
EPS (Et)	0,73	0,33	0,33	0,92	0,72	0,96
DPS(Dt=Et*payout ratio)	0,30	0,41	0,10	0,21	0,26	0,28
Ending BV per share(BPS) (B ₂₀₀₈ + Et-Dt)	3,83	3,75	3,98	4,69	5,15	5,83
Required rate of return (CAPM)		9,00%	9,00%	9,00%	9,00%	9,00%
RE		-0,0075	-0,0282	0,4979	0,2565	0,4353
		1	2	3	4	5
Discount rate		1,0900	1,1881	1,2950	1,4116	1,5386
Present Value of RE		-0,01	-0,02	0,38	0,18	0,28
Total Present Value of RE to 2013	0,82					
Continuing Value (CV)					4,93	
Present Value of CV	3,20					
Value per share	7,85					

	Residual Income Forecast					
	2009	FY2010	FY2011	FY2012	FY2013	FY2014
Beginning BV	3,46	3,38	3,61	4,32	4,78	5,46
EPS (Et)	0,33	0,33	0,92	0,72	0,96	0,70
DPS(Dt=Et*payout ratio)	0,41	0,10	0,21	0,26	0,28	0,32
Ending BV per share(BPS) (B ₂₀₀₉ + Et-Dt)	3,38	3,61	4,32	4,78	5,46	5,84
Required rate of return (CAPM)		9,00%	9,00%	9,00%	9,00%	9,00%
RE		0,0051	0,5312	0,2898	0,4686	0,1744
		1	2	3	4	5
Discount rate		1,0900	1,1881	1,2950	1,4116	1,5386
Present Value of RE		0,00	0,45	0,22	0,33	0,11
Total Present Value of RE to 2014	1,12					
Continuing Value (CV)					1,96	
Present Value of CV	1,28					
Value per share	5,78					

	Residual Income Forecast					
	2010	FY2011	FY2012	FY2013	FY2014	FY2015
Beginning BV	3,81	4,04	4,75	5,21	5,89	6,27
EPS (Et)	0,33	0,92	0,72	0,96	0,70	0,60
DPS(Dt=Et*payout ratio)	0,10	0,21	0,26	0,28	0,32	0,36
Ending BV per share(BPS) (B ₂₀₁₀ + Et-Dt)	4,04	4,75	5,21	5,89	6,27	6,51
Required rate of return (CAPM)		9,00%	9,00%	9,00%	9,00%	9,00%
RE		0,4925	0,2511	0,4299	0,1357	0,0141
		1	2	3	4	5
Discount rate		1,0900	1,1881	1,2950	1,4116	1,5386
Present Value of RE		0,45	0,21	0,33	0,10	0,01
Total Present Value of RE to 2015	1,10					
Continuing Value (CV)					0,14	
Present Value of CV	0,09					
Value per share	5,23					

	Residual Income Forecast					
	2011	FY2012	FY2013	FY2014	FY2015	FY2016
Beginning BV	3,77	4,48	4,94	5,62	6,00	6,24
EPS (Et)	0,92	0,72	0,96	0,70	0,60	0,60
DPS(Dt=Et*payout ratio)	0,21	0,26	0,28	0,32	0,36	0,34
Ending BV per share(BPS) (B ₂₀₁₁ + Et-Dt)	4,48	4,94	5,62	6,00	6,24	6,50
Required rate of return (CAPM)		9,00%	9,00%	9,00%	9,00%	9,00%
RE		0,2754	0,4542	0,1600	0,0384	0,0150
		1	2	3	4	5
Discount rate		1,0900	1,1881	1,2950	1,4116	1,5386
Present Value of RE		0,25	0,38	0,12	0,03	0,01
Total Present Value of RE to 2016	0,80					
Continuing Value (CV)					0,16	
Present Value of CV	0,10					
Value per share	5,38					

Centrica

Yield to maturity of UK 10 year bond will be used as expected growth	2011	2012	2013	2014	2015	2016
	3,14%	1,92%	2,39%	2,57%	1,90%	1,31%

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
BETA	0,97	0,97	0,97	0,97	0,97	0,97	0,97	0,97	0,97	0,97	0,97
Dividend Payout per share	38,4	37,36	37,9	38,01	38,13	45,1	66,77	92,16	79,8	40,83	38,17
Gross Profit	5.338.533	6.027.223	3.619.387	4.830.590	5.629.129	5.607.973	6.291.582	6.014.984	5.416.847	5.835.675	5.375.629
EBITDA	1316512	3892709	1320784	2423322	4940188	3046810	4892122	3882212	2820695	3633403	4206889
Risk Free (10Y Bond)	4,50%	5,01%	4,59%	3,65%	3,62%	3,14%	1,92%	2,39%	2,57%	1,90%	1,31%
ERP Country	3,95%	3,38%	3,83%	8,84%	4,07%	4,69%	8,16%	6,57%	4,66%	5,37%	3,95%
CAPM	0,083315	0,082886	0,083051	0,122248	0,075679	0,076893	0,098352	0,087629	0,070902	0,071089	0,051415
Average CAPM	0,0882	0,0912	0,0922	0,0819	0,0810	0,0759					

Residual Income Forecast						
	2006	FY2007	FY2008	FY2009	FY2010	FY2011
Beginning BV	0,85	0,89	1,15	1,20	1,31	1,49
EPS (Et)	0,18	0,40	0,19	0,25	0,33	0,25
DPS(Dt=Et+payout ratio)	0,14	0,14	0,14	0,14	0,15	0,18
Ending BV per share(BPS) (B ₂₀₀₆ + Et-Dt)	0,89	1,15	1,20	1,31	1,49	1,56
Required rate of return (CAPM)		8,82%	8,82%	8,82%	8,82%	8,82%
RE		0,29857	0,08416	0,134458	0,198582	0,112408
		1	2	3	4	5
Discount rate		1,0882	1,1842	1,2886	1,4023	1,5260
Present Value of RE		0,2744	0,0711	0,1043	0,1416	0,0737
Total Present Value of RE to 2011	0,6651					
Continuing Value (CV)						1,28
Present Value of CV	0,84					
Value per share	2,40					

Residual Income Forecast						
	2007	FY2008	FY2009	FY2010	FY2011	FY2012
Beginning BV	0,57	0,83	0,88	0,99	1,17	1,24
EPS (Et)	0,40	0,19	0,25	0,33	0,25	0,34
DPS(Dt=Et+payout ratio)	0,14	0,14	0,14	0,15	0,18	0,19
Ending BV per share(BPS) (B ₂₀₀₇ + Et-Dt)	0,83	0,88	0,99	1,17	1,24	1,39
Required rate of return (CAPM)		9,12%	9,12%	9,12%	9,12%	9,12%
RE		0,1097	0,1597	0,2233	0,1369	0,2132
		1	2	3	4	5
Discount rate		1,0912	1,1907	1,2993	1,4178	1,5471
Present Value of RE		0,10	0,13	0,17	0,10	0,14
Total Present Value of RE to 2012	0,64					
Continuing Value (CV)						2,36
Present Value of CV	1,53					
Value per share	3,00					

Residual Income Forecast						
	2008	FY2009	FY2010	FY2011	FY2012	FY2013
Beginning BV	1,10	1,15	1,26	1,44	1,51	1,66
EPS (Et)	0,19	0,25	0,33	0,25	0,34	0,33
DPS(Dt=Et+payout ratio)	0,14	0,14	0,15	0,18	0,19	0,20
Ending BV per share(BPS) (B ₂₀₀₈ + Et-Dt)	1,15	1,26	1,44	1,51	1,66	1,79
Required rate of return (CAPM)		9,22%	9,22%	9,22%	9,22%	9,22%
RE		0,1338	0,1972	0,1108	0,1869	0,1650
		1	2	3	4	5
Discount rate		1,0922	1,1929	1,3029	1,4230	1,5542
Present Value of RE		0,12	0,17	0,09	0,13	0,11
Total Present Value of RE to 2013	0,61					
Continuing Value (CV)						1,81
Present Value of CV	1,16					
Value per share	2,92					

Accrual Accounting and Valuation: Pricing Book Values

	Residual Income Forecast					
	2009	FY2010	FY2011	FY2012	FY2013	FY2014
Beginning BV	0,88	0,99	1,17	1,24	1,39	1,52
EPS (Et)	0,25	0,33	0,25	0,34	0,33	0,29
DPS(Dt=Et*payout ratio)	0,14	0,15	0,18	0,19	0,20	0,22
Ending BV per share(BPS) (B ₂₀₀₉ +Et-Dt)	0,99	1,17	1,24	1,39	1,52	1,59
Required rate of return (CAPM)		8,19%	8,19%	8,19%	8,19%	8,19%
RE		0,2342	0,1484	0,2262	0,2055	0,1598
		1	2	3	4	5
Discount rate		1,0819	1,1705	1,2664	1,3701	1,4823
Present Value of RE		0,22	0,13	0,18	0,15	0,11
Total Present Value of RE to 2014	0,78					
Continuing Value (CV)						1,98
Present Value of CV	1,33					
Value per share	3,10					

	Residual Income Forecast					
	2010	FY2011	FY2012	FY2013	FY2014	FY2015
Beginning BV	0,92	1,10	1,17	1,32	1,45	1,52
EPS (Et)	0,33	0,25	0,34	0,33	0,29	0,28
DPS(Dt=Et*payout ratio)	0,15	0,18	0,19	0,20	0,22	0,16
Ending BV per share(BPS) (B ₂₀₁₀ +Et-Dt)	1,10	1,17	1,32	1,45	1,52	1,64
Required rate of return (CAPM)		8,10%	8,10%	8,10%	8,10%	8,10%
RE		0,1552	0,2331	0,2126	0,1669	0,1472
		1	2	3	4	5
Discount rate		1,0810	1,1686	1,2632	1,3655	1,4761
Present Value of RE		0,14	0,20	0,17	0,12	0,10
Total Present Value of RE to 2015	0,73					
Continuing Value (CV)						1,83
Present Value of CV	1,24					
Value per share	3,07					

	Residual Income Forecast					
	2011	FY2012	FY2013	FY2014	FY2015	FY2016
Beginning BV	1,32	1,39	1,54	1,67	1,74	1,86
EPS (Et)	0,25	0,34	0,33	0,29	0,28	0,18
DPS(Dt=Et*payout ratio)	0,18	0,19	0,20	0,22	0,16	0,14
Ending BV per share(BPS) (B ₂₀₁₁ +Et-Dt)	1,39	1,54	1,67	1,74	1,86	1,90
Required rate of return (CAPM)		7,59%	7,59%	7,59%	7,59%	7,59%
RE		0,2231	0,2032	0,1579	0,1388	0,0358
		1	2	3	4	5
Discount rate		1,0759	1,1576	1,2454	1,3399	1,4416
Present Value of RE		0,21	0,18	0,13	0,10	0,02
Total Present Value of RE to 2016	0,64					
Continuing Value (CV)						0,46
Present Value of CV	0,32					
Value per share	2,35					

Chemring

Yield to maturity of UK 10 year bond will be used as expected growth	2011	2012	2013	2014	2015	2016
	3,14%	1,92%	2,39%	2,57%	1,90%	1,31%

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
BETA	-0,04	-0,04	-0,04	-0,04	-0,04	-0,04	-0,04	-0,04	-0,04	-0,04	-0,04
Dividend Payout per share	22,75	23,81	28,46	25,12	31,22	37,19	38,45	39,96	45,2	48,7	52,27
Gross Profit	241.336	242.761	239.043	238.163	235.651	246.200	229.667	173.941	155.685	142.112	155.697
EBITDA	66519	92586	88845	153301	163506	156351	101221	9135	64944	56034	72399
Risk Free (10Y Bond)	4,50%	5,01%	4,59%	3,65%	3,62%	3,14%	1,92%	2,39%	2,57%	1,90%	1,31%
ERP Country	3,95%	3,38%	3,83%	8,84%	4,07%	4,69%	8,16%	6,57%	4,66%	5,37%	3,95%
CAPM	0,04342	0,048748	0,04437	0,03296	0,03457	0,02952	0,01594	0,021272	0,02384	0,01685	0,01152
Average CAPM	0,0380	0,0315	0,0269	0,0250	0,0215	0,0179					

	Residual Income Forecast					
	2006	FY2007	FY2008	FY2009	FY2010	FY2011
Beginning BV (B ₂₀₀₆)	0,74	0,85	1,02	1,19	1,48	1,82
EPS (Et)	0,14	0,21	0,22	0,37	0,45	0,55
DPS(Dt=Et*payout ratio)	0,03	0,04	0,05	0,08	0,11	0,13
Ending BV per share(BPS) (B ₂₀₀₆ +Et-Dt)	0,85	1,02	1,19	1,48	1,82	2,24
Required rate of return (CAPM)		3,80%	3,80%	3,80%	3,80%	3,80%
RE		0,1712	0,1748	0,3138	0,3808	0,4649
		1	2	3	4	5
Discount rate		1,0380	1,0774	1,1184	1,1609	1,2050
Present Value of RE		0,16	0,16	0,28	0,33	0,39
Total Present Value of RE to 2011	1,32					
Continuing Value (CV)						12,59
Present Value of CV	10,45					
Value per share	12,62					

Accrual Accounting and Valuation: Pricing Book Values

	Residual Income Forecast					
	2007	FY2008	FY2009	FY2010	FY2011	FY2012
Beginning BV	0,99	1,16	1,33	1,62	1,96	2,38
EPS (Et)	0,21	0,22	0,37	0,45	0,55	0,49
DPS(Dt=Et*payout ratio)	0,04	0,05	0,08	0,11	0,13	0,17
Ending BV per share(BPS) (B ₂₀₀₇ + Et-Dt)	1,16	1,33	1,62	1,96	2,38	2,70
Required rate of return (CAPM)		3,15%	3,15%	3,15%	3,15%	3,15%
RE		0,1781	0,3190	0,3883	0,4750	0,4050
		1	2	3	4	5
Discount rate		1,0315	1,0640	1,0975	1,1321	1,1677
Present Value of RE		0,17	0,30	0,35	0,42	0,35
Total Present Value of RE to 2012	1,59					
Continuing Value (CV)						13,08
Present Value of CV	11,20					
Value per share	13,96					

	Residual Income Forecast					
	2008	FY2009	FY2010	FY2011	FY2012	FY2013
Beginning BV	1,56	1,73	2,02	2,36	2,78	3,10
EPS (Et)	0,22	0,37	0,45	0,55	0,49	0,24
DPS(Dt=Et*payout ratio)	0,05	0,08	0,11	0,13	0,17	0,08
Ending BV per share(BPS) (B ₂₀₀₈ + Et-Dt)	1,73	2,02	2,36	2,78	3,10	3,26
Required rate of return (CAPM)		2,69%	2,69%	2,69%	2,69%	2,69%
RE		0,3157	0,3865	0,4752	0,4066	0,1523
		1	2	3	4	5
Discount rate		1,0269	1,0545	1,0829	1,1120	1,1419
Present Value of RE		0,31	0,37	0,44	0,37	0,13
Total Present Value of RE to 2013	1,61					
Continuing Value (CV)						5,77
Present Value of CV	5,06					
Value per share	8,40					

	Residual Income Forecast					
	2009	FY2010	FY2011	FY2012	FY2013	FY2014
Beginning BV	1,40	1,69	2,03	2,45	2,77	2,93
EPS (Et)	0,37	0,45	0,55	0,49	0,24	0,21
DPS(Dt=Et*payout ratio)	0,08	0,11	0,13	0,17	0,08	0,07
Ending BV per share(BPS) (B ₂₀₀₉ + Et-Dt)	1,69	2,03	2,45	2,77	2,93	3,07
Required rate of return (CAPM)		2,50%	2,50%	2,50%	2,50%	2,50%
RE		0,3993	0,4888	0,4208	0,1668	0,1333
		1	2	3	4	5
Discount rate		1,0250	1,0506	1,0769	1,1038	1,1314
Present Value of RE		0,39	0,47	0,39	0,15	0,12
Total Present Value of RE to 2014	1,51					
Continuing Value (CV)						5,44
Present Value of CV	4,81					
Value per share	8,01					

	Residual Income Forecast					
	2010	FY2011	FY2012	FY2013	FY2014	FY2015
Beginning BV	1,80	2,14	2,56	2,88	3,04	3,18
EPS (Et)	0,45	0,55	0,49	0,24	0,21	0,05
DPS(Dt=Et*payout ratio)	0,11	0,13	0,17	0,08	0,07	0,03
Ending BV per share(BPS) (B ₂₀₁₀ + Et-Dt)	2,14	2,56	2,88	3,04	3,18	3,20
Required rate of return (CAPM)		2,15%	2,15%	2,15%	2,15%	2,15%
RE		0,4950	0,4281	0,1746	0,1416	-0,0188
		1	2	3	4	5
Discount rate		1,0215	1,0435	1,0659	1,0888	1,1122
Present Value of RE		0,48	0,41	0,16	0,13	-0,02
Total Present Value of RE to 2015	1,17					
Continuing Value (CV)						6,03
Present Value of CV	5,42					
Value per share	8,73					

	Residual Income Forecast					
	2011	FY2012	FY2013	FY2014	FY2015	FY2016
Beginning BV	2,51	2,93	3,25	3,41	3,55	3,57
EPS (Et)	0,55	0,49	0,24	0,21	0,05	0,07
DPS(Dt=Et*payout ratio)	0,13	0,17	0,08	0,07	0,03	0,04
Ending BV per share(BPS) (B ₂₀₁₁ + Et-Dt)	2,93	3,25	3,41	3,55	3,57	3,60
Required rate of return (CAPM)		1,79%	1,79%	1,79%	1,79%	1,79%
RE		0,4318	0,1790	0,1465	-0,0139	0,0056
		1	2	3	4	5
Discount rate		1,0179	1,0361	1,0547	1,0735	1,0928
Present Value of RE		0,42	0,17	0,14	-0,01	0,01
Total Present Value of RE to 2016	0,73					
Continuing Value (CV)						0,30
Present Value of CV	0,28					
Value per share	3,93					

Compass Group

Yield to maturity of will be used as expected growth	2011	2012	2013	2014	2015	2016
	3,14%	1,92%	2,39%	2,57%	1,90%	1,31%

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
BETA	0,99	0,99	0,99	0,99	0,99	0,99	0,99	0,99	0,99	0,99	0,99
Dividend Payout per share	81,83	72	57,42	44,76	48,61	50,13	66,36	60,95	55,23	56,23	52,5
Gross Profit	9.986.964	10.126.276	10.062.656	10.339.288	11.300.576	12.463.526	14.187.119	14.598.319	14.443.357	16.671.630	17.781.626
EBITDA	1116141	977602	900864	1236986	1426154	1529989	1451116	1328125	1997294	2146394	2116917
Risk Free (10Y Bond)	4,50%	5,01%	4,59%	3,65%	3,62%	3,14%	1,92%	2,39%	2,57%	1,90%	1,31%
ERP Country	3,95%	3,38%	3,83%	8,84%	4,07%	4,69%	8,16%	6,57%	4,66%	5,37%	3,95%
CAPM	0,084105	0,083562	0,083817	0,124016	0,076493	0,077831	0,099984	0,088943	0,071834	0,072163	0,052205
Average CAPM	0,0891	0,0924	0,0935	0,0830	0,0822	0,0770					

Residual Income Forecast						
	2006	FY2007	FY2008	FY2009	FY2010	FY2011
Beginning BV	1,61	1,63	1,69	1,79	1,98	2,19
EPS (Et)	0,17	0,21	0,23	0,34	0,42	0,47
DPS(Dt=Et*payout ratio)	0,15	0,15	0,13	0,15	0,21	0,23
Ending BV per share(BPS) (B ₂₀₀₆ + Et-Dt)	1,63	1,69	1,79	1,98	2,19	2,43
Required rate of return (CAPM)		8,91%	8,91%	8,91%	8,91%	8,91%
RE		0,0594	0,0705	0,1636	0,2249	0,2535
		1	2	3	4	5
Discount rate		1,0891	1,1861	1,2918	1,4069	1,5323
Present Value of RE		0,05	0,06	0,13	0,16	0,17
Total Present Value of RE to 2011	0,57					
Continuing Value (CV)						2,90
Present Value of CV	1,89					
Value per share	4,09					

Residual Income Forecast						
	2007	FY2008	FY2009	FY2010	FY2011	FY2012
Beginning BV	1,67	1,73	1,83	2,02	2,23	2,47
EPS (Et)	0,21	0,23	0,34	0,42	0,47	0,53
DPS(Dt=Et*payout ratio)	0,15	0,13	0,15	0,21	0,23	0,26
Ending BV per share(BPS) (B ₂₀₀₇ + Et-Dt)	1,73	1,83	2,02	2,23	2,47	2,74
Required rate of return (CAPM)		9,24%	9,24%	9,24%	9,24%	9,24%
RE		0,0609	0,1534	0,2139	0,2418	0,2768
		1	2	3	4	5
Discount rate		1,0924	1,1933	1,3036	1,4241	1,5556
Present Value of RE		0,06	0,13	0,16	0,17	0,18
Total Present Value of RE to 2012	0,70					
Continuing Value (CV)						3,03
Present Value of CV	1,95					
Value per share	4,38					

Residual Income Forecast						
	2008	FY2009	FY2010	FY2011	FY2012	FY2013
Beginning BV	1,63	1,73	1,92	2,13	2,37	2,64
EPS (Et)	0,23	0,34	0,42	0,47	0,53	0,58
DPS(Dt=Et*payout ratio)	0,13	0,15	0,21	0,23	0,26	0,29
Ending BV per share(BPS) (B ₂₀₀₈ + Et-Dt)	1,73	1,92	2,13	2,37	2,64	2,93
Required rate of return (CAPM)		9,35%	9,35%	9,35%	9,35%	9,35%
RE		0,1605	0,2208	0,2484	0,2832	0,3060
		1	2	3	4	5
Discount rate		1,0935	1,1957	1,3075	1,4298	1,5635
Present Value of RE		0,15	0,18	0,19	0,20	0,20
Total Present Value of RE to 2013	0,92					
Continuing Value (CV)						3,33
Present Value of CV	2,13					
Value per share	4,77					

Residual Income Forecast						
	2009	FY2010	FY2011	FY2012	FY2013	FY2014
Beginning BV	1,43	1,62	1,83	2,07	2,34	2,63
EPS (Et)	0,34	0,42	0,47	0,53	0,58	0,67
DPS(Dt=Et*payout ratio)	0,15	0,21	0,23	0,26	0,29	0,36
Ending BV per share(BPS) (B ₂₀₀₉ + Et-Dt)	1,62	1,83	2,07	2,34	2,63	2,94
Required rate of return (CAPM)		8,30%	8,30%	8,30%	8,30%	8,30%
RE		0,2681	0,2982	0,3358	0,3617	0,4260
		1	2	3	4	5
Discount rate		1,0830	1,1729	1,2702	1,3757	1,4898
Present Value of RE		0,25	0,25	0,26	0,26	0,29
Total Present Value of RE to 2014	1,31					
Continuing Value (CV)						5,24
Present Value of CV	3,52					
Value per share	6,45					

Accrual Accounting and Valuation: Pricing Book Values

	Residual Income Forecast					
	2010	FY2011	FY2012	FY2013	FY2014	FY2015
Beginning BV	1,85	2,06	2,30	2,57	2,86	3,17
EPS (Et)	0,42	0,47	0,53	0,58	0,67	0,78
DPS(Dt=Et+payout ratio)	0,21	0,23	0,26	0,29	0,36	0,42
Ending BV per share(BPS) (B ₂₀₁₀ + Et-Dt)	2,06	2,30	2,57	2,86	3,17	3,53
Required rate of return (CAPM)		8,22%	8,22%	8,22%	8,22%	8,22%
RE		0,2809	0,3187	0,3449	0,4094	0,4898
		1	2	3	4	5
Discount rate		1,0822	1,1712	1,2674	1,3716	1,4844
Present Value of RE		0,26	0,27	0,27	0,30	0,33
Total Present Value of RE to 2015	1,43					
Continuing Value (CV)						6,05
Present Value of CV	4,08					
Value per share	7,57					

	Residual Income Forecast					
	2011	FY2012	FY2013	FY2014	FY2015	FY2016
Beginning BV	2,17	2,41	2,68	2,97	3,28	3,64
EPS (Et)	0,47	0,53	0,58	0,67	0,78	0,76
DPS(Dt=Et+payout ratio)	0,23	0,26	0,29	0,36	0,42	0,40
Ending BV per share(BPS) (B ₂₀₁₁ + Et-Dt)	2,41	2,68	2,97	3,28	3,64	4,00
Required rate of return (CAPM)		7,70%	7,70%	7,70%	7,70%	7,70%
RE		0,3236	0,3513	0,4174	0,4997	0,4520
		1	2	3	4	5
Discount rate		1,0770	1,1599	1,2492	1,3454	1,4490
Present Value of RE		0,30	0,30	0,33	0,37	0,31
Total Present Value of RE to 2016	1,62					
Continuing Value (CV)						5,93
Present Value of CV	4,10					
Value per share	8,13					

Cranswick

Yield to maturity of UK 10 year bond will be used as expected growth	2011	2012	2013	2014	2015	2016
	3,14%	1,92%	2,39%	2,57%	1,90%	1,31%

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
BETA	0,56	0,56	0,56	0,56	0,56	0,56	0,56	0,56	0,56	0,56	0,56
Dividend Payout per share	32,23	36,06	35,6	52,67	35,71	36,91	36,26	39,95	36,09	40,44	40,97
Gross Profit	112.584	125.566	107.292	102.791	109.368	119.177	118.478	130.782	139.793	158.576	186.541
EBITDA	65694	63469	51801	51376	67852	73836	79068	76642	94926	98505	95554
Risk Free (10Y Bond)	4,50%	5,01%	4,59%	3,65%	3,62%	3,14%	1,92%	2,39%	2,57%	1,90%	1,31%
ERP Country	3,95%	3,38%	3,83%	8,84%	4,07%	4,69%	8,16%	6,57%	4,66%	5,37%	3,95%
CAPM	0,06712	0,069028	0,06735	0,086	0,05899	0,05766	0,0649	0,06069	0,0518	0,04907	0,03522
Average CAPM	0,0678	0,0670	0,0656	0,0588	0,0568	0,0523					

	Residual Income Forecast					
	2006	FY2007	FY2008	FY2009	FY2010	FY2011
Beginning BV	2,76	3,15	3,70	4,18	4,53	4,94
EPS (Et)	0,61	0,80	0,73	0,56	0,67	0,88
DPS(Dt=Et+payout ratio)	0,22	0,25	0,25	0,21	0,26	0,30
Ending BV per share(BPS) (B ₂₀₀₆ + Et-Dt)	3,15	3,70	4,18	4,53	4,94	5,52
Required rate of return (CAPM)		6,78%	6,78%	6,78%	6,78%	6,78%
RE		0,5491	0,4466	0,2529	0,3351	0,5057
		1	2	3	4	5
Discount rate		1,0678	1,1402	1,2175	1,3000	1,3882
Present Value of RE		0,51	0,39	0,21	0,26	0,36
Total Present Value of RE to 2011	1,74					
Continuing Value (CV)						7,66
Present Value of CV	5,52					
Value per share	10,41					

Accrual Accounting and Valuation: Pricing Book Values

	Residual Income Forecast					
	2007	FY2008	FY2009	FY2010	FY2011	FY2012
Beginning BV	3,65	4,20	4,68	5,03	5,44	6,02
EPS (Et)	0,80	0,73	0,56	0,67	0,88	0,77
DPS(Dt=Et*payout ratio)	0,25	0,25	0,21	0,26	0,30	0,33
Ending BV per share(BPS) (B ₂₀₀₇ + Et-Dt)	4,20	4,68	5,03	5,44	6,02	6,46
Required rate of return (CAPM)		6,70%	6,70%	6,70%	6,70%	6,70%
RE		0,4164	0,2230	0,3055	0,4767	0,3372
		1	2	3	4	5
Discount rate		1,0670	1,1385	1,2148	1,2962	1,3830
Present Value of RE		0,39	0,20	0,25	0,37	0,24
Total Present Value of RE to 2012	1,45					
Continuing Value (CV)					5,11	
Present Value of CV	3,69					
Value per share	9,34					

	Residual Income Forecast					
	2008	FY2009	FY2010	FY2011	FY2012	FY2013
Beginning BV	4,38	4,86	5,21	5,62	6,20	6,64
EPS (Et)	0,73	0,56	0,67	0,88	0,77	0,97
DPS(Dt=Et*payout ratio)	0,25	0,21	0,26	0,30	0,33	0,36
Ending BV per share(BPS) (B ₂₀₀₈ + Et-Dt)	4,86	5,21	5,62	6,20	6,64	7,25
Required rate of return (CAPM)		6,56%	6,56%	6,56%	6,56%	6,56%
RE		0,2182	0,3013	0,4733	0,3344	0,4944
		1	2	3	4	5
Discount rate		1,0656	1,1355	1,2100	1,2894	1,3740
Present Value of RE		0,20	0,27	0,39	0,26	0,36
Total Present Value of RE to 2013	1,48					
Continuing Value (CV)						7,69
Present Value of CV	5,60					
Value per share	11,94					

	Residual Income Forecast					
	2009	FY2010	FY2011	FY2012	FY2013	FY2014
Beginning BV	4,56	4,91	5,32	5,90	6,34	6,95
EPS (Et)	0,56	0,67	0,88	0,77	0,97	0,98
DPS(Dt=Et*payout ratio)	0,21	0,26	0,30	0,33	0,36	0,37
Ending BV per share(BPS) (B ₂₀₀₉ + Et-Dt)	4,91	5,32	5,90	6,34	6,95	7,56
Required rate of return (CAPM)		5,88%	5,88%	5,88%	5,88%	5,88%
RE		0,3572	0,5331	0,3972	0,5613	0,5355
		1	2	3	4	5
Discount rate		1,0588	1,1211	1,1870	1,2568	1,3307
Present Value of RE		0,34	0,48	0,33	0,45	0,40
Total Present Value of RE to 2014	2,00					
Continuing Value (CV)						9,32
Present Value of CV	7,00					
Value per share	13,91					

	Residual Income Forecast					
	2010	FY2011	FY2012	FY2013	FY2014	FY2015
Beginning BV	3,71	4,12	4,70	5,14	5,75	6,36
EPS (Et)	0,67	0,88	0,77	0,97	0,98	1,12
DPS(Dt=Et*payout ratio)	0,26	0,30	0,33	0,36	0,37	0,42
Ending BV per share(BPS) (B ₂₀₁₀ + Et-Dt)	4,12	4,70	5,14	5,75	6,36	7,06
Required rate of return (CAPM)		5,68%	5,68%	5,68%	5,68%	5,68%
RE		0,6130	0,4780	0,6434	0,6188	0,7190
		1	2	3	4	5
Discount rate		1,0568	1,1168	1,1803	1,2473	1,3181
Present Value of RE		0,58	0,43	0,55	0,50	0,55
Total Present Value of RE to 2015	2,59					
Continuing Value (CV)						12,88
Present Value of CV	9,77					
Value per share	16,49					

	Residual Income Forecast					
	2011	FY2012	FY2013	FY2014	FY2015	FY2016
Beginning BV	4,60	5,18	5,62	6,23	6,84	7,54
EPS (Et)	0,88	0,77	0,97	0,98	1,12	1,39
DPS(Dt=Et*payout ratio)	0,30	0,33	0,36	0,37	0,42	0,47
Ending BV per share(BPS) (B ₂₀₁₁ + Et-Dt)	5,18	5,62	6,23	6,84	7,54	8,46
Required rate of return (CAPM)		5,23%	5,23%	5,23%	5,23%	5,23%
RE		0,4761	0,6442	0,6223	0,7257	0,9475
		1	2	3	4	5
Discount rate		1,0523	1,1073	1,1652	1,2262	1,2903
Present Value of RE		0,45	0,58	0,53	0,59	0,73
Total Present Value of RE to 2016	2,89					
Continuing Value (CV)						18,34
Present Value of CV	14,21					
Value per share	22,29					

Croda International

Yield to maturity of UK 10 year bond will be used as expected growth	2011	2012	2013	2014	2015	2016
	3,14%	1,92%	2,39%	2,57%	1,90%	1,31%

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
BETA	0,97	0,97	0,97	0,97	0,97	0,97	0,97	0,97	0,97	0,97	0,97
Dividend Payout per share	26,76	24,31	38,2	55,13	37	44,9	49,5	49,13	53,69	51,78	49,92
Gross Profit	186.753	273.088	267.208	242.653	370.184	392.270	440.115	427.656	426.398	520.073	544.908
EBITDA	79555	166655	140560	157128	276828	340716	363210	353005	355389	403907	388472
Risk Free (10Y Bond)	4,50%	5,01%	4,59%	3,65%	3,62%	3,14%	1,92%	2,39%	2,57%	1,90%	1,31%
ERP Country	3,95%	3,38%	3,83%	8,84%	4,07%	4,69%	8,16%	6,57%	4,66%	5,37%	3,95%
CAPM	0,083315	0,082886	0,08305	0,12225	0,07568	0,07689	0,09835	0,087629	0,0709	0,07109	0,05142
Average CAPM	0,0882	0,0912	0,0922	0,0819	0,0810	0,0759					

Residual Income Forecast						
	2006	FY2007	FY2008	FY2009	FY2010	FY2011
Beginning BV (B ₂₀₀₆)	0,93	1,13	1,34	1,62	1,91	2,43
EPS (Et)	0,41	0,42	0,46	0,52	0,82	1,37
DPS(Dt=Et*payout ratio)	0,21	0,21	0,18	0,23	0,30	0,62
Ending BV per share(BPS) (B ₂₀₀₆ + Et-Dt)	1,13	1,34	1,62	1,91	2,43	3,18
Required rate of return (CAPM)		8,82%	8,82%	8,82%	8,82%	8,82%
RE		0,3018	0,3171	0,3515	0,6057	1,0895
		1	2	3	4	5
Discount rate		1,0882	1,1842	1,2886	1,4023	1,5260
Present Value of RE		0,28	0,27	0,27	0,43	0,71
Total Present Value of RE to 2011	1,96					
Continuing Value (CV)						12,71
Present Value of CV	8,33					
Value per share	11,42					

Residual Income Forecast						
	2007	FY2008	FY2009	FY2010	FY2011	FY2012
Beginning BV	1,49	1,70	1,98	2,27	2,79	3,54
EPS (Et)	0,42	0,46	0,52	0,82	1,37	1,63
DPS(Dt=Et*payout ratio)	0,21	0,18	0,23	0,30	0,62	0,73
Ending BV per share(BPS) (B ₂₀₀₇ + Et-Dt)	1,70	1,98	2,27	2,79	3,54	4,44
Required rate of return (CAPM)		9,12%	9,12%	9,12%	9,12%	9,12%
RE		0,2794	0,3130	0,5656	1,0472	1,2251
		1	2	3	4	5
Discount rate		1,0912	1,1907	1,2993	1,4178	1,5471
Present Value of RE		0,26	0,26	0,44	0,74	0,79
Total Present Value of RE to 2012	2,48					
Continuing Value (CV)						13,67
Present Value of CV	8,84					
Value per share	13,02					

Residual Income Forecast						
	2008	FY2009	FY2010	FY2011	FY2012	FY2013
Beginning BV	2,18	2,46	2,75	3,27	4,02	4,92
EPS (Et)	0,46	0,52	0,82	1,37	1,63	1,58
DPS(Dt=Et*payout ratio)	0,18	0,23	0,30	0,62	0,73	0,77
Ending BV per share(BPS) (B ₂₀₀₈ + Et-Dt)	2,46	2,75	3,27	4,02	4,92	5,73
Required rate of return (CAPM)		9,22%	9,22%	9,22%	9,22%	9,22%
RE		0,2665	0,5185	0,9994	1,1764	1,0517
		1	2	3	4	5
Discount rate		1,0922	1,1929	1,3029	1,4230	1,5542
Present Value of RE		0,24	0,43	0,77	0,83	0,68
Total Present Value of RE to 2013	2,95					
Continuing Value (CV)						11,66
Present Value of CV	7,50					
Value per share	12,91					

Residual Income Forecast						
	2009	FY2010	FY2011	FY2012	FY2013	FY2014
Beginning BV	2,01	2,30	2,82	3,57	4,47	5,28
EPS (Et)	0,52	0,82	1,37	1,63	1,58	1,72
DPS(Dt=Et*payout ratio)	0,23	0,30	0,62	0,73	0,77	0,87
Ending BV per share(BPS) (B ₂₀₀₉ + Et-Dt)	2,30	2,82	3,57	4,47	5,28	6,13
Required rate of return (CAPM)		8,19%	8,19%	8,19%	8,19%	8,19%
RE		0,5890	1,0776	1,2639	1,1476	1,2180
		1	2	3	4	5
Discount rate		1,0819	1,1705	1,2664	1,3701	1,4823
Present Value of RE		0,54	0,92	1,00	0,84	0,82
Total Present Value of RE to 2014	4,12					
Continuing Value (CV)						15,23
Present Value of CV	10,27					
Value per share	16,70					

Accrual Accounting and Valuation: Pricing Book Values

	Residual Income Forecast					
	2010	FY2011	FY2012	FY2013	FY2014	FY2015
Beginning BV	1,30	1,82	2,57	3,47	4,28	5,13
EPS (Et)	0,82	1,37	1,63	1,58	1,72	1,86
DPS(Dt=Et+payout ratio)	0,30	0,62	0,73	0,77	0,87	0,94
Ending BV per share(BPS) (B2010+ Et-Dt)	1,82	2,57	3,47	4,28	5,13	6,05
Required rate of return (CAPM)		8,10%	8,10%	8,10%	8,10%	8,10%
RE		1,1618	1,3489	1,2333	1,3045	1,3700
		1	2	3	4	5
Discount rate		1,0810	1,1686	1,2632	1,3655	1,4761
Present Value of RE		1,07	1,15	0,98	0,96	0,93
Total Present Value of RE to 2015	5,09					
Continuing Value (CV)						17,22
Present Value of CV	11,66					
Value per share	18,57					

	Residual Income Forecast					
	2011	FY2012	FY2013	FY2014	FY2015	FY2016
Beginning BV	2,36	3,11	4,01	4,82	5,67	6,59
EPS (Et)	1,37	1,63	1,58	1,72	1,86	1,66
DPS(Dt=Et+payout ratio)	0,62	0,73	0,77	0,87	0,94	0,84
Ending BV per share(BPS) (B2011+ Et-Dt)	3,11	4,01	4,82	5,67	6,59	7,41
Required rate of return (CAPM)		7,59%	7,59%	7,59%	7,59%	7,59%
RE		1,3256	1,2142	1,2896	1,3598	1,0976
		1	2	3	4	5
Discount rate		1,0759	1,1576	1,2454	1,3399	1,4416
Present Value of RE		1,23	1,05	1,04	1,01	0,76
Total Present Value of RE to 2016	5,09					
Continuing Value (CV)						14,64
Present Value of CV	10,15					
Value per share	18,36					

Dechra Pharmaceuticals

Yield to maturity of UK 10 year bond will be used as expected growth	2011	2012	2013	2014	2015	2016
	3,14%	1,92%	2,39%	2,57%	1,90%	1,31%

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
BETA	0,78	0,78	0,78	0,78	0,78	0,78	0,78	0,78	0,78	0,78	0,78
Dividend Payout per share	42,42	44,49	58,1	52,69	52,58	56,73	78,06	68	22,79	76,51	76,51
Gross Profit	48.605	54.548	73.221	86.427	91.775	103.137	84.219	122.187	129.098	152.639	185.181
EBITDA	20843	21741	21210	33522	35343	41074	42054	48436	57393	66215	49479
Risk Free (10Y Bond)	4,50%	5,01%	4,59%	3,65%	3,62%	3,14%	1,92%	2,39%	2,57%	1,90%	1,31%
ERP Country	3,95%	3,38%	3,83%	8,84%	4,07%	4,69%	8,16%	6,57%	4,66%	5,37%	3,95%
CAPM	0,07581	0,076464	0,07577	0,10545	0,06795	0,06798	0,08285	0,075146	0,06205	0,06089	0,04391
Average CAPM	0,0787	0,0800	0,0799	0,0712	0,0698	0,0650					

	Residual Income Forecast					
	2006	FY2007	FY2008	FY2009	FY2010	FY2011
Beginning BV (B2006)	0,60	0,71	0,82	0,94	1,11	1,31
EPS (Et)	0,19	0,20	0,20	0,26	0,31	0,37
DPS(Dt=Et+payout ratio)	0,08	0,09	0,08	0,09	0,11	0,13
Ending BV per share(BPS) (B2006+ Et-Dt)	0,71	0,82	0,94	1,11	1,31	1,55
Required rate of return (CAPM)		7,87%	7,87%	7,87%	7,87%	7,87%
RE		0,1355	0,1260	0,1726	0,2069	0,2480
		1	2	3	4	5
Discount rate		1,0787	1,1636	1,2552	1,3540	1,4605
Present Value of RE		0,13	0,11	0,14	0,15	0,17
Total Present Value of RE to 2011	0,69					
Continuing Value (CV)						3,22
Present Value of CV	2,20					
Value per share	3,61					

	Residual Income Forecast					
	2007	FY2008	FY2009	FY2010	FY2011	FY2012
Beginning BV	0,76	0,87	0,99	1,16	1,36	1,60
EPS (Et)	0,20	0,20	0,26	0,31	0,37	0,40
DPS(Dt=Et+payout ratio)	0,09	0,08	0,09	0,11	0,13	0,15
Ending BV per share(BPS) (B2007+ Et-Dt)	0,87	0,99	1,16	1,36	1,60	1,85
Required rate of return (CAPM)		8,00%	8,00%	8,00%	8,00%	8,00%
RE		0,1208	0,1672	0,2012	0,2420	0,2520
		1	2	3	4	5
Discount rate		1,0800	1,1664	1,2597	1,3605	1,4693
Present Value of RE		0,11	0,14	0,16	0,18	0,17
Total Present Value of RE to 2012	0,76					
Continuing Value (CV)						3,19
Present Value of CV	2,17					
Value per share	3,81					

Accrual Accounting and Valuation: Pricing Book Values

	Residual Income Forecast					
	2008	FY2009	FY2010	FY2011	FY2012	FY2013
Beginning BV	1,36	1,48	1,65	1,85	2,09	2,34
EPS (Et)	0,20	0,26	0,31	0,37	0,40	0,47
DPS(Dt=Et*payout ratio)	0,08	0,09	0,11	0,13	0,15	0,17
Ending BV per share(BPS) (B ₂₀₀₈ + Et-Dt)	1,48	1,65	1,85	2,09	2,34	2,64
Required rate of return (CAPM)		7,99%	7,99%	7,99%	7,99%	7,99%
RE		0,1282	0,1622	0,2030	0,2130	0,2591
		1	2	3	4	5
Discount rate		1,0799	1,1662	1,2594	1,3600	1,4686
Present Value of RE		0,12	0,14	0,16	0,16	0,18
Total Present Value of RE to 2013	0,75					
Continuing Value (CV)						3,30
Present Value of CV	2,24					
Value per share	4,48					

	Residual Income Forecast					
	2009	FY2010	FY2011	FY2012	FY2013	FY2014
Beginning BV	1,15	1,32	1,52	1,76	2,01	2,31
EPS (Et)	0,26	0,31	0,37	0,40	0,47	0,48
DPS(Dt=Et*payout ratio)	0,09	0,11	0,13	0,15	0,17	0,20
Ending BV per share(BPS) (B ₂₀₀₉ + Et-Dt)	1,32	1,52	1,76	2,01	2,31	2,59
Required rate of return (CAPM)		7,12%	7,12%	7,12%	7,12%	7,12%
RE		0,2018	0,2447	0,2569	0,3055	0,2956
		1	2	3	4	5
Discount rate		1,0712	1,1475	1,2292	1,3167	1,4104
Present Value of RE		0,19	0,21	0,21	0,23	0,21
Total Present Value of RE to 2014	1,05					
Continuing Value (CV)						4,23
Present Value of CV	3,00					
Value per share	5,37					

	Residual Income Forecast					
	2010	FY2011	FY2012	FY2013	FY2014	FY2015
Beginning BV	1,33	1,53	1,77	2,02	2,32	2,60
EPS (Et)	0,31	0,37	0,40	0,47	0,48	0,55
DPS(Dt=Et*payout ratio)	0,11	0,13	0,15	0,17	0,20	0,23
Ending BV per share(BPS) (B ₂₀₁₀ + Et-Dt)	1,53	1,77	2,02	2,32	2,60	2,92
Required rate of return (CAPM)		6,98%	6,98%	6,98%	6,98%	6,98%
RE		0,2465	0,2590	0,3081	0,2985	0,3462
		1	2	3	4	5
Discount rate		1,0698	1,1445	1,2244	1,3098	1,4012
Present Value of RE		0,23	0,23	0,25	0,23	0,25
Total Present Value of RE to 2015	1,18					
Continuing Value (CV)						5,03
Present Value of CV	3,59					
Value per share	6,31					

	Residual Income Forecast					
	2011	FY2012	FY2013	FY2014	FY2015	FY2016
Beginning BV	1,57	1,81	2,06	2,36	2,64	2,96
EPS (Et)	0,37	0,40	0,47	0,48	0,55	0,50
DPS(Dt=Et*payout ratio)	0,13	0,15	0,17	0,20	0,23	0,22
Ending BV per share(BPS) (B ₂₀₁₁ + Et-Dt)	1,81	2,06	2,36	2,64	2,96	3,24
Required rate of return (CAPM)		6,50%	6,50%	6,50%	6,50%	6,50%
RE		0,2661	0,3166	0,3084	0,3576	0,2894
		1	2	3	4	5
Discount rate		1,0650	1,1342	1,2079	1,2865	1,3701
Present Value of RE		0,25	0,28	0,26	0,28	0,21
Total Present Value of RE to 2016	1,27					
Continuing Value (CV)						4,50
Present Value of CV	3,28					
Value per share	6,37					

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Yield to maturity of UK 10 year bond will be used as expected growth	2011	2012	2013	2014	2015	2016
	3,14%	1,92%	2,39%	2,57%	1,90%	1,31%

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
BETA	0,88	0,88	0,88	0,88	0,88	0,88	0,88	0,88	0,88	0,88	0,88
Dividend Payout per share	46,28	58,84	57,93	55,37	58,17	53,02	55,91	47,73	57,63	59,34	66,16
Gross Profit	6.339.717	6.628.425	6.606.286	6.356.045	6.466.631	6.916.987	7.616.503	8.356.059	7.493.610	8.185.118	8.334.553
EBITDA	3670501	3387569	2651911	3053633	3451013	3603496	3929232	4514423	4198183	4968455	4042877
Risk Free (10Y Bond)	4,50%	5,01%	4,59%	3,65%	3,62%	3,14%	1,92%	2,39%	2,57%	1,90%	1,31%
ERP Country	3,95%	3,38%	3,83%	8,84%	4,07%	4,69%	8,16%	6,57%	4,66%	5,37%	3,95%
CAPM	0,07976	0,079844	0,079604	0,114292	0,072016	0,072672	0,091008	0,081716	0,066708	0,066256	0,04786
Average CAPM	0,0837	0,0859	0,0863	0,0768	0,0757	0,0707					

Residual Income Forecast						
	2006	FY2007	FY2008	FY2009	FY2010	FY2011
Beginning BV	1,74	1,94	2,23	2,53	2,78	3,12
EPS (Et)	0,63	0,75	0,75	0,61	0,75	0,77
DPS(Dt=Et*payout ratio)	0,43	0,46	0,45	0,36	0,41	0,44
Ending BV per share(BPS) (B ₂₀₀₆ + Et-Dt)	1,94	2,23	2,53	2,78	3,12	3,45
Required rate of return (CAPM)		8,37%	8,37%	8,37%	8,37%	8,37%
RE		0,5633	0,5382	0,3773	0,4889	0,4812
		1	2	3	4	5
Discount rate		1,0837	1,1744	1,2727	1,3792	1,4947
Present Value of RE		0,52	0,46	0,30	0,35	0,32
Total Present Value of RE to 2011	1,95					
Continuing Value (CV)					5,90	
Present Value of CV	3,95					
Value per share	7,84					

Residual Income Forecast						
	2007	FY2008	FY2009	FY2010	FY2011	FY2012
Beginning BV	2,34	2,63	2,93	3,18	3,52	3,85
EPS (Et)	0,75	0,75	0,61	0,75	0,77	0,91
DPS(Dt=Et*payout ratio)	0,46	0,45	0,36	0,41	0,44	0,48
Ending BV per share(BPS) (B ₂₀₀₇ + Et-Dt)	2,63	2,93	3,18	3,52	3,85	4,28
Required rate of return (CAPM)		8,59%	8,59%	8,59%	8,59%	8,59%
RE		0,4983	0,3368	0,4476	0,4393	0,5423
		1	2	3	4	5
Discount rate		1,0859	1,1792	1,2805	1,3905	1,5099
Present Value of RE		0,46	0,29	0,35	0,32	0,36
Total Present Value of RE to 2012	1,77					
Continuing Value (CV)					6,42	
Present Value of CV	4,25					
Value per share	8,65					

Residual Income Forecast						
	2008	FY2009	FY2010	FY2011	FY2012	FY2013
Beginning BV	2,22	2,52	2,77	3,11	3,44	3,87
EPS (Et)	0,75	0,61	0,75	0,77	0,91	0,97
DPS(Dt=Et*payout ratio)	0,45	0,36	0,41	0,44	0,48	0,54
Ending BV per share(BPS) (B ₂₀₀₈ + Et-Dt)	2,52	2,77	3,11	3,44	3,87	4,30
Required rate of return (CAPM)		8,63%	8,63%	8,63%	8,63%	8,63%
RE		0,3709	0,4816	0,4731	0,5760	0,5989
		1	2	3	4	5
Discount rate		1,0863	1,1800	1,2819	1,3925	1,5127
Present Value of RE		0,34	0,41	0,37	0,41	0,40
Total Present Value of RE to 2013	1,93					
Continuing Value (CV)					7,08	
Present Value of CV	4,68					
Value per share	9,13					

Residual Income Forecast						
	2009	FY2010	FY2011	FY2012	FY2013	FY2014
Beginning BV	1,87	2,12	2,46	2,79	3,22	3,65
EPS (Et)	0,61	0,75	0,77	0,91	0,97	1,19
DPS(Dt=Et*payout ratio)	0,36	0,41	0,44	0,48	0,54	0,57
Ending BV per share(BPS) (B ₂₀₀₉ + Et-Dt)	2,12	2,46	2,79	3,22	3,65	4,27
Required rate of return (CAPM)		7,68%	7,68%	7,68%	7,68%	7,68%
RE		0,5611	0,5557	0,6627	0,6897	0,8621
		1	2	3	4	5
Discount rate		1,0768	1,1595	1,2485	1,3444	1,4477
Present Value of RE		0,52	0,48	0,53	0,51	0,60
Total Present Value of RE to 2014	2,64					
Continuing Value (CV)					11,49	
Present Value of CV	7,94					
Value per share	12,69					

Accrual Accounting and Valuation: Pricing Book Values

	Residual Income Forecast					
	2010	FY2011	FY2012	FY2013	FY2014	FY2015
Beginning BV	1,35	1,69	2,02	2,45	2,88	3,50
EPS (Et)	0,75	0,77	0,91	0,97	1,19	1,23
DPS(Dt=Et* payout ratio)	0,41	0,44	0,48	0,54	0,57	0,67
Ending BV per share(BPS) (B ₂₀₁₀ + Et-Dt)	1,69	2,02	2,45	2,88	3,50	4,06
Required rate of return (CAPM)		7,57%	7,57%	7,57%	7,57%	7,57%
RE		0,6171	0,7245	0,7520	0,9251	0,9227
		1	2	3	4	5
Discount rate		1,0757	1,1571	1,2447	1,3390	1,4403
Present Value of RE		0,57	0,63	0,60	0,69	0,64
Total Present Value of RE to 2015	3,14					
Continuing Value (CV)						12,40
Present Value of CV	8,61					
Value per share	13,44					

	Residual Income Forecast					
	2011	FY2012	FY2013	FY2014	FY2015	FY2016
Beginning BV	1,81	2,14	2,57	3,00	3,62	4,18
EPS (Et)	0,77	0,91	0,97	1,19	1,23	1,29
DPS(Dt=Et* payout ratio)	0,44	0,48	0,54	0,57	0,67	0,77
Ending BV per share(BPS) (B ₂₀₁₁ + Et-Dt)	2,14	2,57	3,00	3,62	4,18	4,70
Required rate of return (CAPM)		7,07%	7,07%	7,07%	7,07%	7,07%
RE		0,7283	0,7579	0,9341	0,9345	0,9577
		1	2	3	4	5
Discount rate		1,0707	1,1464	1,2274	1,3142	1,4071
Present Value of RE		0,68	0,66	0,76	0,71	0,68
Total Present Value of RE to 2016	3,49					
Continuing Value (CV)						13,71
Present Value of CV	9,74					
Value per share	15,38					

GlaxoSmithKline

Yield to maturity of UK 10 year bond will be used as expected growth	2011	2012	2013	2014	2015	2016
	3,14%	1,92%	2,39%	2,57%	1,90%	1,31%

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
BETA	1,17	1,17	1,17	1,17	1,17	1,17	1,17	1,17	1,17	1,17	1,17
Dividend Payout per share	50,26	56,14	64,33	55,91	59,86	66,92	79,66	69,32	56,89	45,89	46,12
Gross Profit	26.722.006	25.584.649	23.369.388	23.897.939	24.125.506	22.724.683	23.360.983	21.796.219	19.815.857	21.873.108	23.249.504
EBITDA	13433767	12060726	8797642	11453656	6444535	11058303	10897547	10487981	6554990	17362459	5130038
Risk Free (10Y Bond)	4,50%	5,01%	4,59%	3,65%	3,62%	3,14%	1,92%	2,39%	2,57%	1,90%	1,31%
ERP Country	3,95%	3,38%	3,83%	8,84%	4,07%	4,69%	8,16%	6,57%	4,66%	5,37%	3,95%
CAPM	0,091215	0,089646	0,090711	0,139928	0,083819	0,086273	0,114672	0,100769	0,080222	0,081829	0,059315
Average CAPM	0,0981	0,1031	0,1051	0,0932	0,0928	0,0874					

	Residual Income Forecast					
	2006	FY2007	FY2008	FY2009	FY2010	FY2011
Beginning BV	1,83	2,52	3,12	3,58	4,17	4,55
EPS (Et)	1,40	1,29	1,04	1,27	1,13	0,94
DPS(Dt=Et* payout ratio)	0,71	0,69	0,58	0,68	0,75	0,81
Ending BV per share(BPS) (B ₂₀₀₆ + Et-Dt)	2,52	3,12	3,58	4,17	4,55	4,68
Required rate of return (CAPM)		9,81%	9,81%	9,81%	9,81%	9,81%
RE		0,9839	0,6888	0,8609	0,6836	0,4809
		1	2	3	4	5
Discount rate		1,0981	1,2058	1,3241	1,4540	1,5966
Present Value of RE		0,90	0,57	0,65	0,47	0,30
Total Present Value of RE to 2011	2,89					
Continuing Value (CV)						5,02
Present Value of CV	3,15					
Value per share	8,56					

	Residual Income Forecast					
	2007	FY2008	FY2009	FY2010	FY2011	FY2012
Beginning BV	2,49	3,09	3,55	4,14	4,52	4,65
EPS (Et)	1,29	1,04	1,27	1,13	0,94	1,24
DPS(Dt=Et* payout ratio)	0,69	0,58	0,68	0,75	0,81	0,90
Ending BV per share(BPS) (B ₂₀₀₇ + Et-Dt)	3,09	3,55	4,14	4,52	4,65	4,99
Required rate of return (CAPM)		10,31%	10,31%	10,31%	10,31%	10,31%
RE		0,6740	0,8432	0,6640	0,4606	0,7255
		1	2	3	4	5
Discount rate		1,1031	1,2168	1,3423	1,4807	1,6333
Present Value of RE		0,61	0,69	0,49	0,31	0,44
Total Present Value of RE to 2012	2,55					
Continuing Value (CV)						7,15
Present Value of CV	4,38					
Value per share	10,02					

Accrual Accounting and Valuation: Pricing Book Values

Residual Income Forecast						
	2008	FY2009	FY2010	FY2011	FY2012	FY2013
Beginning BV	2,43	2,89	3,48	3,86	3,99	4,33
EPS (Et)	1,04	1,27	1,13	0,94	1,24	1,39
DPS(Dt=Et*payout ratio)	0,58	0,68	0,75	0,81	0,90	0,93
Ending BV per share(BPS) (B ₂₀₀₈ +Et-Dt)	2,89	3,48	3,86	3,99	4,33	4,79
Required rate of return (CAPM)		10,51%	10,51%	10,51%	10,51%	10,51%
RE		0,9043	0,7243	0,5207	0,7849	0,8866
		1	2	3	4	5
Discount rate		1,1051	1,2212	1,3496	1,4914	1,6482
Present Value of RE		0,82	0,59	0,39	0,53	0,54
Total Present Value of RE to 2013	2,86					
Continuing Value (CV)						8,61
Present Value of CV	5,23					
Value per share	10,98					

Residual Income Forecast						
	2009	FY2010	FY2011	FY2012	FY2013	FY2014
Beginning BV	1,62	2,21	2,59	2,72	3,06	3,52
EPS (Et)	1,27	1,13	0,94	1,24	1,39	1,11
DPS(Dt=Et*payout ratio)	0,68	0,75	0,81	0,90	0,93	1,03
Ending BV per share(BPS) (B ₂₀₀₉ +Et-Dt)	2,21	2,59	2,72	3,06	3,52	3,60
Required rate of return (CAPM)		9,32%	9,32%	9,32%	9,32%	9,32%
RE		0,8886	0,6865	0,9548	1,0619	0,7745
		1	2	3	4	5
Discount rate		1,0932	1,1951	1,3065	1,4282	1,5613
Present Value of RE		0,81	0,57	0,73	0,74	0,50
Total Present Value of RE to 2014	3,36					
Continuing Value (CV)						8,50
Present Value of CV	5,44					
Value per share	11,01					

Residual Income Forecast						
	2010	FY2011	FY2012	FY2013	FY2014	FY2015
Beginning BV	2,22	2,60	2,73	3,07	3,53	3,61
EPS (Et)	1,13	0,94	1,24	1,39	1,11	1,27
DPS(Dt=Et*payout ratio)	0,75	0,81	0,90	0,93	1,03	1,09
Ending BV per share(BPS) (B ₂₀₁₀ +Et-Dt)	2,60	2,73	3,07	3,53	3,61	3,79
Required rate of return (CAPM)		9,28%	9,28%	9,28%	9,28%	9,28%
RE		0,6867	0,9551	1,0624	0,7750	0,9183
		1	2	3	4	5
Discount rate		1,0928	1,1942	1,3050	1,4261	1,5585
Present Value of RE		0,63	0,80	0,81	0,54	0,59
Total Present Value of RE to 2015	3,37					
Continuing Value (CV)						10,06
Present Value of CV	6,46					
Value per share	12,43					

Residual Income Forecast						
	2011	FY2012	FY2013	FY2014	FY2015	FY2016
Beginning BV	2,04	2,17	2,51	2,97	3,05	3,23
EPS (Et)	0,94	1,24	1,39	1,11	1,27	0,99
DPS(Dt=Et*payout ratio)	0,81	0,90	0,93	1,03	1,09	0,94
Ending BV per share(BPS) (B ₂₀₁₁ +Et-Dt)	2,17	2,51	2,97	3,05	3,23	3,28
Required rate of return (CAPM)		8,74%	8,74%	8,74%	8,74%	8,74%
RE		1,0206	1,1304	0,8434	0,9877	0,7033
		1	2	3	4	5
Discount rate		1,0874	1,1824	1,2858	1,3982	1,5204
Present Value of RE		0,94	0,96	0,66	0,71	0,46
Total Present Value of RE to 2016	3,72					
Continuing Value (CV)						8,14
Present Value of CV	5,35					
Value per share	11,24					

Hill & Smith

Yield to maturity of will be used as expected growth	2011	2012	2013	2014	2015	2016
	3,14%	1,92%	2,39%	2,57%	1,90%	1,31%

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
BETA	0,41	0,41	0,41	0,41	0,41	0,41	0,41	0,41	0,41	0,41	0,41
Dividend Payout per share	36,36	29,49	33,33	31,68	39,69	63,16	44,25	53,98	51,3	67,08	61,31
Gross Profit	107864	134700	168703	143457	147024	157807	176589	172900	188147	191203	200855
EBITDA	38787	63449	59265	67758	63722	56387	69042	61899	74480	74215	84700
Risk Free (10Y Bond)	4,50%	5,01%	4,59%	3,65%	3,62%	3,14%	1,92%	2,39%	2,57%	1,90%	1,31%
ERP Country	3,95%	3,38%	3,83%	8,84%	4,07%	4,69%	8,16%	6,57%	4,66%	5,37%	3,95%
CAPM	0,061195	0,063958	0,061603	0,072744	0,052887	0,050629	0,052656	0,050837	0,044806	0,041017	0,029295
Average CAPM	0,0604	0,0581	0,0560	0,0504	0,0480	0,0437					

Residual Income Forecast						
	2006	FY2007	FY2008	FY2009	FY2010	FY2011
Beginning BV (B ₂₀₀₆)	0,92	1,12	1,33	1,55	1,81	2,13
EPS (Et)	0,29	0,32	0,32	0,38	0,46	0,42
DPS(Dt=Et*payout ratio)	0,09	0,11	0,10	0,12	0,14	0,15
Ending BV per share(BPS) (B ₂₀₀₆ +Et-Dt)	1,12	1,33	1,55	1,81	2,13	2,40
Required rate of return (CAPM)		6,04%	6,04%	6,04%	6,04%	6,04%
RE		0,2397	0,2264	0,2707	0,3313	0,2750
		1	2	3	4	5
Discount rate		1,0604	1,1244	1,1924	1,2644	1,3408
Present Value of RE		0,23	0,20	0,23	0,26	0,21
Total Present Value of RE to 2011	1,12					
Continuing Value (CV)						4,67
Present Value of CV	3,48					
Value per share	5,72					

Accrual Accounting and Valuation: Pricing Book Values

	Residual Income Forecast					
	2007	FY2008	FY2009	FY2010	FY2011	FY2012
Beginning BV	1,51	1,72	1,94	2,20	2,52	2,79
EPS (Et)	0,32	0,32	0,38	0,46	0,42	0,48
DPS(Dt=Et+payout ratio)	0,11	0,10	0,12	0,14	0,15	0,17
Ending BV per share(BPS) (B ₂₀₀₇ + Et-Dt)	1,72	1,94	2,20	2,52	2,79	3,10
Required rate of return (CAPM)		5,81%	5,81%	5,81%	5,81%	5,81%
RE		0,2073	0,2522	0,3136	0,2579	0,2999
		1	2	3	4	5
Discount rate		1,0581	1,1196	1,1846	1,2534	1,3263
Present Value of RE		0,20	0,23	0,26	0,21	0,23
Total Present Value of RE to 2012	1,12					
Continuing Value (CV)						5,24
Present Value of CV	3,95					
Value per share	6,79					

	Residual Income Forecast					
	2008	FY2009	FY2010	FY2011	FY2012	FY2013
Beginning BV	1,74	1,96	2,22	2,54	2,81	3,12
EPS (Et)	0,32	0,38	0,46	0,42	0,48	0,44
DPS(Dt=Et+payout ratio)	0,10	0,12	0,14	0,15	0,17	0,18
Ending BV per share(BPS) (B ₂₀₀₈ + Et-Dt)	1,96	2,22	2,54	2,81	3,12	3,38
Required rate of return (CAPM)		5,60%	5,60%	5,60%	5,60%	5,60%
RE		0,2557	0,3178	0,2626	0,3053	0,2507
		1	2	3	4	5
Discount rate		1,0560	1,1151	1,1776	1,2435	1,3132
Present Value of RE		0,24	0,28	0,22	0,25	0,19
Total Present Value of RE to 2013	1,19					
Continuing Value (CV)						4,56
Present Value of CV	3,47					
Value per share	6,62					

	Residual Income Forecast					
	2009	FY2010	FY2011	FY2012	FY2013	FY2014
Beginning BV	1,58	1,84	2,16	2,43	2,74	3,00
EPS (Et)	0,38	0,46	0,42	0,48	0,44	0,55
DPS(Dt=Et+payout ratio)	0,12	0,14	0,15	0,17	0,18	0,21
Ending BV per share(BPS) (B ₂₀₀₉ + Et-Dt)	1,84	2,16	2,43	2,74	3,00	3,34
Required rate of return (CAPM)		5,04%	5,04%	5,04%	5,04%	5,04%
RE		0,3511	0,2975	0,3419	0,2888	0,3817
		1	2	3	4	5
Discount rate		1,0504	1,1033	1,1589	1,2174	1,2787
Present Value of RE		0,33	0,27	0,30	0,24	0,30
Total Present Value of RE to 2014	1,43					
Continuing Value (CV)						7,74
Present Value of CV	6,05					
Value per share	9,33					

	Residual Income Forecast					
	2010	FY2011	FY2012	FY2013	FY2014	FY2015
Beginning BV	1,94	2,26	2,53	2,84	3,10	3,44
EPS (Et)	0,46	0,42	0,48	0,44	0,55	0,66
DPS(Dt=Et+payout ratio)	0,14	0,15	0,17	0,18	0,21	0,25
Ending BV per share(BPS) (B ₂₀₁₀ + Et-Dt)	2,26	2,53	2,84	3,10	3,44	3,85
Required rate of return (CAPM)		4,10%	4,80%	4,80%	4,80%	4,80%
RE		0,3163	0,3437	0,2912	0,3849	0,4752
		1	2	3	4	5
Discount rate		1,0410	1,0983	1,1510	1,2063	1,2642
Present Value of RE		0,30	0,31	0,25	0,32	0,38
Total Present Value of RE to 2015	1,56					
Continuing Value (CV)						10,07
Present Value of CV	7,96					
Value per share	11,79					

	Residual Income Forecast					
	2011	FY2012	FY2013	FY2014	FY2015	FY2016
Beginning BV	2,31	2,58	2,89	3,15	3,49	3,90
EPS (Et)	0,42	0,48	0,44	0,55	0,66	0,68
DPS(Dt=Et+payout ratio)	0,15	0,17	0,18	0,21	0,25	0,26
Ending BV per share(BPS) (B ₂₀₁₁ + Et-Dt)	2,58	2,89	3,15	3,49	3,90	4,32
Required rate of return (CAPM)		4,37%	4,37%	4,37%	4,37%	4,37%
RE		0,3537	0,3023	0,3975	0,4896	0,4912
		1	2	3	4	5
Discount rate		1,0437	1,0893	1,1369	1,1866	1,2384
Present Value of RE		0,34	0,28	0,35	0,41	0,40
Total Present Value of RE to 2016	1,78					
Continuing Value (CV)						11,37
Present Value of CV	9,18					
Value per share	13,54					

Imperial Brands

Yield to maturity of UK 10 year bond will be used as expected growth	2011	2012	2013	2014	2015	2016
	3,14%	1,92%	2,39%	2,57%	1,90%	1,31%

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
BETA	0,93	0,93	0,93	0,93	0,93	0,93	0,93	0,93	0,93	0,93	0,93
Dividend Payout per share	50,74	51,75	52,78	55,12	56,77	53,64	60,78	76,89	86,25	79,5	79,9
Gross Profit	3.675.227	3.389.255	5.069.353	6.085.730	6.282.109	6.277.910	6.677.292	6.579.239	6.327.136	6.968.636	7.639.571
EBITDA	2184787	2182586	1796556	2593281	3919006	3955465	2671681	3198317	3700793	4193745	3098641
Risk Free (10Y Bond)	4,50%	5,01%	4,59%	3,65%	3,62%	3,14%	1,92%	2,39%	2,57%	1,90%	1,31%
ERP Country	3,95%	3,38%	3,83%	8,84%	4,07%	4,69%	8,16%	6,57%	4,66%	5,37%	3,95%
CAPM	0,081735	0,081534	0,081519	0,118712	0,074051	0,075017	0,095088	0,085001	0,069038	0,068941	0,049835
Average CAPM	0,0862	0,0889	0,0896	0,0796	0,0786	0,0736					

Residual Income Forecast						
	2006	FY2007	FY2008	FY2009	FY2010	FY2011
Beginning BV	0,21	0,88	1,66	2,46	3,20	4,20
EPS (Et)	1,38	1,58	1,62	1,42	1,82	2,07
DPS(Dt=Et*payout ratio)	0,71	0,80	0,82	0,68	0,82	0,98
Ending BV per share(BPS) (B2006+ Et-Dt)	0,88	1,66	2,46	3,20	4,20	5,29
Required rate of return (CAPM)		8,62%	8,62%	8,62%	8,62%	8,62%
RE		1,4369	1,4079	1,1442	1,4580	1,6140
		1	2	3	4	5
Discount rate		1,0862	1,1798	1,2815	1,3920	1,5120
Present Value of RE		1,32	1,19	0,89	1,05	1,07
Total Present Value of RE to 2011	5,52					
Continuing Value (CV)						19,28
Present Value of CV	12,75					
Value per share	19,16					

Residual Income Forecast						
	2007	FY2008	FY2009	FY2010	FY2011	FY2012
Beginning BV	1,08	1,86	2,66	3,40	4,40	5,49
EPS (Et)	1,58	1,62	1,42	1,82	2,07	2,25
DPS(Dt=Et*payout ratio)	0,80	0,82	0,68	0,82	0,98	1,14
Ending BV per share(BPS) (B2007+ Et-Dt)	1,86	2,66	3,40	4,40	5,49	6,60
Required rate of return (CAPM)		8,89%	8,89%	8,89%	8,89%	8,89%
RE		1,3835	1,1177	1,4288	1,5819	1,6633
		1	2	3	4	5
Discount rate		1,0889	1,1857	1,2911	1,4059	1,5309
Present Value of RE		1,27	0,94	1,11	1,13	1,09
Total Present Value of RE to 2012	5,53					
Continuing Value (CV)						19,05
Present Value of CV	12,44					
Value per share	19,84					

Residual Income Forecast						
	2008	FY2009	FY2010	FY2011	FY2012	FY2013
Beginning BV	2,15	2,95	3,69	4,69	5,78	6,89
EPS (Et)	1,62	1,42	1,82	2,07	2,25	2,48
DPS(Dt=Et*payout ratio)	0,82	0,68	0,82	0,98	1,14	1,30
Ending BV per share(BPS) (B2008+ Et-Dt)	2,95	3,69	4,69	5,78	6,89	8,07
Required rate of return (CAPM)		8,96%	8,96%	8,96%	8,96%	8,96%
RE		1,0894	1,3998	1,5521	1,6327	1,7569
		1	2	3	4	5
Discount rate		1,0896	1,1872	1,2936	1,4095	1,5358
Present Value of RE		1,00	1,18	1,20	1,16	1,14
Total Present Value of RE to 2013	5,68					
Continuing Value (CV)						20,05
Present Value of CV	13,06					
Value per share	21,69					

Residual Income Forecast						
	2009	FY2010	FY2011	FY2012	FY2013	FY2014
Beginning BV	8,50	9,24	10,24	11,33	12,44	13,62
EPS (Et)	1,42	1,82	2,07	2,25	2,48	2,53
DPS(Dt=Et*payout ratio)	0,68	0,82	0,98	1,14	1,30	1,40
Ending BV per share(BPS) (B2009+ Et-Dt)	9,24	10,24	11,33	12,44	13,62	14,75
Required rate of return (CAPM)		7,96%	7,96%	7,96%	7,96%	7,96%
RE		1,0049	1,1681	1,2598	1,3958	1,3559
		1	2	3	4	5
Discount rate		1,0796	1,1655	1,2583	1,3585	1,4666
Present Value of RE		0,93	1,00	1,00	1,03	0,92
Total Present Value of RE to 2014	4,89					
Continuing Value (CV)						17,45
Present Value of CV	11,90					
Value per share	26,02					

Accrual Accounting and Valuation: Pricing Book Values

	Residual Income Forecast					
	2010	FY2011	FY2012	FY2013	FY2014	FY2015
Beginning BV	6,69	7,69	8,78	9,89	11,07	12,20
EPS (Et)	1,82	2,07	2,25	2,48	2,53	2,62
DPS(Dt=Et* payout ratio)	0,82	0,98	1,14	1,30	1,40	1,65
Ending BV per share(BPS) (B ₂₀₁₀ + Et-Dt)	7,69	8,78	9,89	11,07	12,20	13,17
Required rate of return (CAPM)		7,86%	7,86%	7,86%	7,86%	7,86%
RE		1,3799	1,4726	1,6099	1,5711	1,5848
		1	2	3	4	5
Discount rate		1,0786	1,1634	1,2548	1,3534	1,4598
Present Value of RE		1,28	1,27	1,28	1,16	1,09
Total Present Value of RE to 2015	6,07					
Continuing Value (CV)						20,53
Present Value of CV	14,06					
Value per share	27,83					

	Residual Income Forecast					
	2011	FY2012	FY2013	FY2014	FY2015	FY2016
Beginning BV	7,82	8,91	10,02	11,20	12,33	13,30
EPS (Et)	2,07	2,25	2,48	2,53	2,62	2,88
DPS(Dt=Et* payout ratio)	0,98	1,14	1,30	1,40	1,65	1,91
Ending BV per share(BPS) (B ₂₀₁₁ + Et-Dt)	8,91	10,02	11,20	12,33	13,30	14,27
Required rate of return (CAPM)		7,36%	7,36%	7,36%	7,36%	7,36%
RE		1,5125	1,6557	1,6225	1,6411	1,8297
		1	2	3	4	5
Discount rate		1,0736	1,1526	1,2374	1,3285	1,4263
Present Value of RE		1,41	1,44	1,31	1,24	1,28
Total Present Value of RE to 2016	6,67					
Continuing Value (CV)						25,17
Present Value of CV	17,65					
Value per share	33,23					

Intertek Group

Yield to maturity of UK 10 year bond will be used as expected growth	2011	2012	2013	2014	2015	2016
	3,14%	1,92%	2,39%	2,57%	1,90%	1,31%

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
BETA	0,41	0,41	0,41	0,41	0,41	0,41	0,41	0,41	0,41	0,41	0,41
Dividend Payout per share	36,19	38,54	34,96	35,22	34,82	38,82	37,89	36,98	44,84	42,79	39,37
Gross Profit	206705	233053	265321	289845	291567	297261	301596	304598	305268	325469	340598
EBITDA	191466	206685	208098	280826	318142	383814	466774	482212	484505	-237297	559161
Risk Free (10Y Bond)	4,50%	5,01%	4,59%	3,65%	3,62%	3,14%	1,92%	2,39%	2,57%	1,90%	1,31%
ERP Country	3,95%	3,38%	3,83%	8,84%	4,07%	4,69%	8,16%	6,57%	4,66%	5,37%	3,95%
CAPM	0,061195	0,063958	0,0616	0,07274	0,05289	0,05063	0,05266	0,050837	0,04481	0,04102	0,0293
Average CAPM	0,0604	0,0581	0,0560	0,0504	0,0480	0,0437					

	Residual Income Forecast					
	2006	FY2007	FY2008	FY2009	FY2010	FY2011
Beginning BV (B ₂₀₀₆)	0,92	1,12	1,33	1,55	1,81	2,13
EPS (Et)	0,29	0,32	0,32	0,38	0,46	0,42
DPS(Dt=Et* payout ratio)	0,09	0,11	0,10	0,12	0,14	0,15
Ending BV per share(BPS) (B ₂₀₀₆ + Et-Dt)	1,12	1,33	1,55	1,81	2,13	2,40
Required rate of return (CAPM)		6,04%	6,04%	6,04%	6,04%	6,04%
RE		0,2397	0,2264	0,2707	0,3313	0,2750
		1	2	3	4	5
Discount rate		1,0604	1,1244	1,1924	1,2644	1,3408
Present Value of RE		0,23	0,20	0,23	0,26	0,21
Total Present Value of RE to 2011	1,12					
Continuing Value (CV)						4,67
Present Value of CV	3,48					
Value per share	5,72					

	Residual Income Forecast					
	2007	FY2008	FY2009	FY2010	FY2011	FY2012
Beginning BV	1,51	1,72	1,94	2,20	2,52	2,79
EPS (Et)	0,32	0,32	0,38	0,46	0,42	0,48
DPS(Dt=Et* payout ratio)	0,11	0,10	0,12	0,14	0,15	0,17
Ending BV per share(BPS) (B ₂₀₀₇ + Et-Dt)	1,72	1,94	2,20	2,52	2,79	3,10
Required rate of return (CAPM)		5,81%	5,81%	5,81%	5,81%	5,81%
RE		0,2073	0,2522	0,3136	0,2579	0,2999
		1	2	3	4	5
Discount rate		1,0581	1,1196	1,1846	1,2534	1,3263
Present Value of RE		0,20	0,23	0,26	0,21	0,23
Total Present Value of RE to 2012	1,12					
Continuing Value (CV)						5,24
Present Value of CV	3,95					
Value per share	6,79					

Accrual Accounting and Valuation: Pricing Book Values

	Residual Income Forecast					
	2008	FY2009	FY2010	FY2011	FY2012	FY2013
Beginning BV	1,74	1,96	2,22	2,54	2,81	3,12
EPS (Et)	0,32	0,38	0,46	0,42	0,48	0,44
DPS(Dt=Et*payout ratio)	0,10	0,12	0,14	0,15	0,17	0,18
Ending BV per share(BPS) (B ₂₀₀₈ + Et-Dt)	1,96	2,22	2,54	2,81	3,12	3,38
Required rate of return (CAPM)		5,60%	5,60%	5,60%	5,60%	5,60%
RE		0,2557	0,3178	0,2626	0,3053	0,2507
		1	2	3	4	5
Discount rate		1,0560	1,1151	1,1776	1,2435	1,3132
Present Value of RE		0,24	0,28	0,22	0,25	0,19
Total Present Value of RE to 2013	1,19					
Continuing Value (CV)					4,56	
Present Value of CV	3,47					
Value per share	6,62					

	Residual Income Forecast					
	2009	FY2010	FY2011	FY2012	FY2013	FY2014
Beginning BV	1,58	1,84	2,16	2,43	2,74	3,00
EPS (Et)	0,38	0,46	0,42	0,48	0,44	0,55
DPS(Dt=Et*payout ratio)	0,12	0,14	0,15	0,17	0,18	0,21
Ending BV per share(BPS) (B ₂₀₀₉ + Et-Dt)	1,84	2,16	2,43	2,74	3,00	3,34
Required rate of return (CAPM)		5,04%	5,04%	5,04%	5,04%	5,04%
RE		0,3511	0,2975	0,3419	0,2888	0,3817
		1	2	3	4	5
Discount rate		1,0504	1,1033	1,1589	1,2174	1,2787
Present Value of RE		0,33	0,27	0,30	0,24	0,30
Total Present Value of RE to 2014	1,43					
Continuing Value (CV)					7,74	
Present Value of CV	6,05					
Value per share	9,33					

	Residual Income Forecast					
	2010	FY2011	FY2012	FY2013	FY2014	FY2015
Beginning BV	1,94	2,26	2,53	2,84	3,10	3,44
EPS (Et)	0,46	0,42	0,48	0,44	0,55	0,66
DPS(Dt=Et*payout ratio)	0,14	0,15	0,17	0,18	0,21	0,25
Ending BV per share(BPS) (B ₂₀₁₀ + Et-Dt)	2,26	2,53	2,84	3,10	3,44	3,85
Required rate of return (CAPM)		4,80%	4,80%	4,80%	4,80%	4,80%
RE		0,2986	0,3437	0,2912	0,3849	0,4752
		1	2	3	4	5
Discount rate		1,0480	1,0983	1,1510	1,2063	1,2642
Present Value of RE		0,28	0,31	0,25	0,32	0,38
Total Present Value of RE to 2015	1,55					
Continuing Value (CV)					10,07	
Present Value of CV	7,96					
Value per share	11,77					

	Residual Income Forecast					
	2011	FY2012	FY2013	FY2014	FY2015	FY2016
Beginning BV	2,31	2,58	2,89	3,15	3,49	3,90
EPS (Et)	0,42	0,48	0,44	0,55	0,66	0,68
DPS(Dt=Et*payout ratio)	0,15	0,17	0,18	0,21	0,25	0,26
Ending BV per share(BPS) (B ₂₀₁₁ + Et-Dt)	2,58	2,89	3,15	3,49	3,90	4,32
Required rate of return (CAPM)		4,37%	4,37%	4,37%	4,37%	4,37%
RE		0,3537	0,3023	0,3975	0,4896	0,4912
		1	2	3	4	5
Discount rate		1,0437	1,0893	1,1369	1,1866	1,2384
Present Value of RE		0,34	0,28	0,35	0,41	0,40
Total Present Value of RE to 2016	1,78					
Continuing Value (CV)					11,37	
Present Value of CV	9,18					
Value per share	13,54					

Johnson Matthey

Yield to maturity of UK 10 year bond will be used as expected growth	2011	2012	2013	2014	2015	2016
	3,14%	1,92%	2,39%	2,57%	1,90%	1,31%

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
BETA	1,41	1,41	1,41	1,41	1,41	1,41	1,41	1,41	1,41	1,41	1,41
Dividend Payout per share	42,51	43,95	41,36	45,13	50,26	53,74	36,99	42,37	37,26	32,2	43,72
Gross Profit	546.428	646.276	697.882	630.311	580.715	762.063	873.192	864.573	947.542	1.042.611	1.047.002
EBITDA	469610	453945	394477	448647	440684	513109	723832	639303	769538	932230	676195
Risk Free (10Y Bond)	4,50%	5,01%	4,59%	3,65%	3,62%	3,14%	1,92%	2,39%	2,57%	1,90%	1,31%
ERP Country	3,95%	3,38%	3,83%	8,84%	4,07%	4,69%	8,16%	6,57%	4,66%	5,37%	3,95%
CAPM	0,100695	0,097758	0,0999	0,16114	0,09359	0,09753	0,13426	0,116537	0,09141	0,094717	0,068795
Average CAPM	0,1100	0,1173	0,1206	0,1067	0,1069	0,1011					

Residual Income Forecast						
	2006	FY2007	FY2008	FY2009	FY2010	FY2011
Beginning BV (B ₂₀₀₆)	7,03	7,69	8,37	8,99	9,47	10,20
EPS (E _t)	1,12	1,14	1,00	0,90	1,20	1,62
DPS(D _t -E _t *payout ratio)	0,46	0,46	0,38	0,42	0,47	0,66
Ending BV per share(BPS) (B ₂₀₀₆ + E _t -D _t)	7,69	8,37	8,99	9,47	10,20	11,16
Required rate of return (CAPM)		11,00%	11,00%	11,00%	11,00%	11,00%
RE		0,2193	0,0111	-0,1417	0,0780	0,3924
		1	2	3	4	5
Discount rate		1,1100	1,2321	1,3676	1,5181	1,6851
Present Value of RE		0,20	0,01	-0,10	0,05	0,23
Total Present Value of RE to 2011	0,39					
Continuing Value (CV)						3,65
Present Value of CV	2,16					
Value per share	10,24					

Residual Income Forecast						
	2007	FY2008	FY2009	FY2010	FY2011	FY2012
Beginning BV	7,54	8,22	8,84	9,32	10,05	11,01
EPS (E _t)	1,14	1,00	0,90	1,20	1,62	1,89
DPS(D _t -E _t *payout ratio)	0,46	0,38	0,42	0,47	0,66	0,70
Ending BV per share(BPS) (B ₂₀₀₇ + E _t -D _t)	8,22	8,84	9,32	10,05	11,01	12,20
Required rate of return (CAPM)		11,73%	11,73%	11,73%	11,73%	11,73%
RE		-0,0369	-0,1932	0,0211	0,3285	0,4589
		1	2	3	4	5
Discount rate		1,1173	1,2484	1,3948	1,5584	1,7412
Present Value of RE		-0,03	-0,15	0,02	0,21	0,26
Total Present Value of RE to 2012	0,30					
Continuing Value (CV)						3,97
Present Value of CV	2,28					
Value per share	10,80					

Residual Income Forecast						
	2008	FY2009	FY2010	FY2011	FY2012	FY2013
Beginning BV	7,46	8,08	8,56	9,29	10,25	11,44
EPS (E _t)	1,00	0,90	1,20	1,62	1,89	1,93
DPS(D _t -E _t *payout ratio)	0,38	0,42	0,47	0,66	0,70	0,75
Ending BV per share(BPS) (B ₂₀₀₈ + E _t -D _t)	8,08	8,56	9,29	10,25	11,44	12,62
Required rate of return (CAPM)		12,06%	12,06%	12,06%	12,06%	12,06%
RE		-0,1323	0,0796	0,3839	0,5103	0,4080
		1	2	3	4	5
Discount rate		1,1206	1,2557	1,4072	1,5769	1,7671
Present Value of RE		-0,12	0,06	0,27	0,32	0,23
Total Present Value of RE to 2013	0,77					
Continuing Value (CV)						3,44
Present Value of CV	1,95					
Value per share	10,80					

Accrual Accounting and Valuation: Pricing Book Values

	Residual Income Forecast					
	2009	FY2010	FY2011	FY2012	FY2013	FY2014
Beginning BV	5,73	6,21	6,94	7,90	9,09	10,27
EPS (Et)	0,90	1,20	1,62	1,89	1,93	2,24
DPS(Dt=Et* payout ratio)	0,42	0,47	0,66	0,70	0,75	0,87
Ending BV per share(BPS) (B ₂₀₀₉ + Et-Dt)	6,21	6,94	7,90	9,09	10,27	11,64
Required rate of return (CAPM)		10,67%	10,67%	10,67%	10,67%	10,67%
RE		0,4595	0,7771	0,9201	0,8342	0,9980
		1	2	3	4	5
Discount rate		1,1067	1,2248	1,3555	1,5001	1,6602
Present Value of RE		0,42	0,63	0,68	0,56	0,60
Total Present Value of RE to 2014	2,89					
Continuing Value (CV)						9,57
Present Value of CV	5,76					
Value per share	14,86					

	Residual Income Forecast					
	2010	FY2011	FY2012	FY2013	FY2014	FY2015
Beginning BV	6,57	7,30	8,26	9,45	10,63	12,00
EPS (Et)	1,20	1,62	1,89	1,93	2,24	2,41
DPS(Dt=Et* payout ratio)	0,47	0,66	0,70	0,75	0,87	0,93
Ending BV per share(BPS) (B ₂₀₁₀ + Et-Dt)	7,30	8,26	9,45	10,63	12,00	13,48
Required rate of return (CAPM)		10,69%	10,69%	10,69%	10,69%	10,69%
RE		0,7370	0,8798	0,7937	0,9572	0,9690
		1	2	3	4	5
Discount rate		1,1069	1,2252	1,3562	1,5012	1,6617
Present Value of RE		0,67	0,72	0,59	0,64	0,58
Total Present Value of RE to 2015	3,19					
Continuing Value (CV)						9,22
Present Value of CV	5,55					
Value per share	16,04					

	Residual Income Forecast					
	2011	FY2012	FY2013	FY2014	FY2015	FY2016
Beginning BV	7,66	8,62	9,81	10,99	12,36	13,84
EPS (Et)	1,62	1,89	1,93	2,24	2,41	2,19
DPS(Dt=Et* payout ratio)	0,66	0,70	0,75	0,87	0,93	0,85
Ending BV per share(BPS) (B ₂₀₁₁ + Et-Dt)	8,62	9,81	10,99	12,36	13,84	15,18
Required rate of return (CAPM)		10,11%	10,11%	10,11%	10,11%	10,11%
RE		0,8982	0,8189	0,9904	1,0108	0,6553
		1	2	3	4	5
Discount rate		1,1011	1,2124	1,3350	1,4700	1,6186
Present Value of RE		0,82	0,68	0,74	0,69	0,40
Total Present Value of RE to 2016	3,33					
Continuing Value (CV)						6,55
Present Value of CV	4,05					
Value per share	15,99					

J Sainsbury

Yield to maturity of UK 10 year bond will be used as expected growth	2011	2012	2013	2014	2015	2016
	3,14%	1,92%	2,39%	2,57%	1,90%	1,31%

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
BETA	0,40	0,40	0,40	0,40	0,40	0,40	0,40	0,40	0,40	0,40	0,40
Dividend Payout per share	51,78	50,78	62,83	79,52	44,24	43,9	50,31	51,23	45,83	47,89	50,64
Gross Profit	1.564.519	1.728.740	1.426.020	1.252.751	1.221.319	1.364.226	1.401.756	1.568.858	1.643.234	1.530.561	1.995.732
EBITDA	1007792	1475934	1127372	1334909	1384140	1634143	1722352	1693510	1997294	843905	1479616
Risk Free (10Y Bond)	4,50%	5,01%	4,59%	3,65%	3,62%	3,14%	1,92%	2,39%	2,57%	1,90%	1,31%
ERP Country	3,95%	3,38%	3,83%	8,84%	4,07%	4,69%	8,16%	6,57%	4,66%	5,37%	3,95%
CAPM	0,0608	0,06362	0,06122	0,07186	0,05248	0,05016	0,05184	0,05018	0,04434	0,04048	0,0289
Average CAPM	0,0599	0,0575	0,0553	0,0498	0,0474	0,0431					

	Residual Income Forecast					
	2006	FY2007	FY2008	FY2009	FY2010	FY2011
Beginning BV (B ₂₀₀₆)	3,35	3,42	3,51	3,60	3,71	3,83
EPS (Et)	0,19	0,23	0,21	0,26	0,29	0,33
DPS(Dt=Et* payout ratio)	0,12	0,14	0,12	0,15	0,17	0,18
Ending BV per share(BPS) (B ₂₀₀₆ + Et-Dt)	3,42	3,51	3,60	3,71	3,83	3,98
Required rate of return (CAPM)		5,99%	5,99%	5,99%	5,99%	5,99%
RE		0,0198	-0,0056	0,0378	0,0606	0,0916
		1	2	3	4	5
Discount rate		1,0599	1,1234	1,1907	1,2620	1,3376
Present Value of RE		0,02	-0,01	0,03	0,05	0,07
Total Present Value of RE to 2011	0,16					
Continuing Value (CV)						1,55
Present Value of CV	1,16					
Value per share	4,74					

Accrual Accounting and Valuation: Pricing Book Values

	Residual Income Forecast						
	2007	FY2008	FY2009	FY2010	FY2011	FY2012	
Beginning BV	3,77	3,86	3,95	4,06	4,18	4,33	
EPS (Et)	0,23	0,21	0,26	0,29	0,33	0,35	
DPS(Dt=Et*payout ratio)	0,14	0,12	0,15	0,17	0,18	0,20	
Ending BV per share(BPS) (B ₂₀₀₇ + Et-Dt)	3,86	3,95	4,06	4,18	4,33	4,48	
Required rate of return (CAPM)		5,75%	5,75%	5,75%	5,75%	5,75%	
RE		-0,0171	0,0266	0,0497	0,0810	0,0924	
		1	2	3	4	5	
Discount rate		1,0575	1,1183	1,1826	1,2506	1,3225	
Present Value of RE			-0,02	0,02	0,04	0,06	0,07
Total Present Value of RE to 2012	0,18						
Continuing Value (CV)						1,62	
Present Value of CV	1,22						
Value per share	5,27						

	Residual Income Forecast						
	2008	FY2009	FY2010	FY2011	FY2012	FY2013	
Beginning BV	3,89	3,98	4,09	4,21	4,36	4,51	
EPS (Et)	0,21	0,26	0,29	0,33	0,35	0,39	
DPS(Dt=Et*payout ratio)	0,12	0,15	0,17	0,18	0,20	0,20	
Ending BV per share(BPS) (B ₂₀₀₈ + Et-Dt)	3,98	4,09	4,21	4,36	4,51	4,70	
Required rate of return (CAPM)		5,53%	5,53%	5,53%	5,53%	5,53%	
RE		0,0338	0,0572	0,0889	0,1006	0,1301	
		1	2	3	4	5	
Discount rate		1,0553	1,1137	1,1752	1,2402	1,3088	
Present Value of RE			0,03	0,05	0,08	0,08	0,10
Total Present Value of RE to 2013	0,34						
Continuing Value (CV)						2,38	
Present Value of CV	1,82						
Value per share	6,14						

	Residual Income Forecast						
	2009	FY2010	FY2011	FY2012	FY2013	FY2014	
Beginning BV	2,60	2,71	2,83	2,98	3,13	3,32	
EPS (Et)	0,26	0,29	0,33	0,35	0,39	0,40	
DPS(Dt=Et*payout ratio)	0,15	0,17	0,18	0,20	0,20	0,22	
Ending BV per share(BPS) (B ₂₀₀₉ + Et-Dt)	2,71	2,83	2,98	3,13	3,32	3,50	
Required rate of return (CAPM)		4,98%	4,98%	4,98%	4,98%	4,98%	
RE		0,1491	0,1816	0,1941	0,2247	0,2257	
		1	2	3	4	5	
Discount rate		1,0498	1,1021	1,1570	1,2146	1,2751	
Present Value of RE			0,14	0,16	0,17	0,18	0,18
Total Present Value of RE to 2014	0,84						
Continuing Value (CV)						4,62	
Present Value of CV	3,63						
Value per share	7,17						

	Residual Income Forecast						
	2010	FY2011	FY2012	FY2013	FY2014	FY2015	
Beginning BV	3,01	3,13	3,28	3,43	3,62	3,80	
EPS (Et)	0,29	0,33	0,35	0,39	0,40	0,32	
DPS(Dt=Et*payout ratio)	0,17	0,18	0,20	0,20	0,22	0,17	
Ending BV per share(BPS) (B ₂₀₁₀ + Et-Dt)	3,13	3,28	3,43	3,62	3,80	3,95	
Required rate of return (CAPM)		4,74%	4,74%	4,74%	4,74%	4,74%	
RE		0,1745	0,1874	0,2184	0,2199	0,1328	
		1	2	3	4	5	
Discount rate		1,0474	1,0970	1,1490	1,2035	1,2606	
Present Value of RE			0,17	0,17	0,19	0,18	0,11
Total Present Value of RE to 2015	0,82						
Continuing Value (CV)						2,84	
Present Value of CV	2,25						
Value per share	6,19						

	Residual Income Forecast						
	2011	FY2012	FY2013	FY2014	FY2015	FY2016	
Beginning BV	3,40	3,55	3,70	3,89	4,07	4,22	
EPS (Et)	0,33	0,35	0,39	0,40	0,32	0,27	
DPS(Dt=Et*payout ratio)	0,18	0,20	0,20	0,22	0,17	0,14	
Ending BV per share(BPS) (B ₂₀₁₁ + Et-Dt)	3,55	3,70	3,89	4,07	4,22	4,35	
Required rate of return (CAPM)		4,31%	4,31%	4,31%	4,31%	4,31%	
RE		0,1905	0,2223	0,2246	0,1381	0,0825	
		1	2	3	4	5	
Discount rate		1,0431	1,0881	1,1350	1,1839	1,2349	
Present Value of RE			0,18	0,20	0,20	0,12	0,07
Total Present Value of RE to 2016	0,77						
Continuing Value (CV)						1,93	
Present Value of CV	1,56						
Value per share	5,88						

Morgan Sindall

Yield to maturity of UK 10 year bond will be used as expected growth	2011	2012	2013	2014	2015	2016
	3,14%	1,92%	2,39%	2,57%	1,90%	1,31%

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
BETA	0,67	0,67	0,67	0,67	0,67	0,67	0,67	0,67	0,67	0,67	0,67
Dividend Payout per share	35,81	40,51	39,51	53,92	59,57	54,19	37,25	76,35	63,84	57,12	41,75
Gross Profit	242.678	323.936	314.888	247.708	253.241	248.641	230.231	201.756	224.616	293.643	298.347
EBITDA	81536	91769	83260	70910	67340	63929	57823	29567	43554	-2714	64199
Risk Free (10Y Bond)	4,50%	5,01%	4,59%	3,65%	3,62%	3,14%	1,92%	2,39%	2,57%	1,90%	1,31%
ERP Country	3,95%	3,38%	3,83%	8,84%	4,07%	4,69%	8,16%	6,57%	4,66%	5,37%	3,95%
CAPM	0,071465	0,072746	0,07156	0,09573	0,06347	0,06282	0,07387	0,067919	0,05692	0,05498	0,03957
Average CAPM	0,0733	0,0735	0,0728	0,0650	0,0633	0,0587					

Residual Income Forecast						
	2006	FY2007	FY2008	FY2009	FY2010	FY2011
Beginning BV	3,89	4,55	5,29	6,02	6,90	7,66
EPS (Et)	0,95	1,13	1,14	1,29	1,23	1,08
DPS(Dt=Et*payout ratio)	0,29	0,39	0,41	0,41	0,47	0,49
Ending BV per share(BPS) (B ₂₀₀₆ + Et-Dt)	4,55	5,29	6,02	6,90	7,66	8,25
Required rate of return (CAPM)		7,33%	7,33%	7,33%	7,33%	7,33%
RE		0,7422	0,6987	0,7842	0,6685	0,4753
		1	2	3	4	5
Discount rate		1,0733	1,1520	1,2364	1,3270	1,4243
Present Value of RE		0,69	0,61	0,63	0,50	0,33
Total Present Value of RE to 2011	2,77					
Continuing Value (CV)						6,66
Present Value of CV	4,67					
Value per share	11,99					

Residual Income Forecast						
	2007	FY2008	FY2009	FY2010	FY2011	FY2012
Beginning BV	4,85	5,59	6,32	7,20	7,96	8,55
EPS (Et)	1,13	1,14	1,29	1,23	1,08	1,03
DPS(Dt=Et*payout ratio)	0,39	0,41	0,41	0,47	0,49	0,50
Ending BV per share(BPS) (B ₂₀₀₇ + Et-Dt)	5,59	6,32	7,20	7,96	8,55	9,08
Required rate of return (CAPM)		7,35%	7,35%	7,35%	7,35%	7,35%
RE		0,6755	0,7608	0,6449	0,4516	0,3626
		1	2	3	4	5
Discount rate		1,0735	1,1524	1,2371	1,3280	1,4256
Present Value of RE		0,63	0,66	0,52	0,34	0,25
Total Present Value of RE to 2012	2,41					
Continuing Value (CV)						5,01
Present Value of CV	3,51					
Value per share	11,51					

Residual Income Forecast						
	2008	FY2009	FY2010	FY2011	FY2012	FY2013
Beginning BV	5,75	6,48	7,36	8,12	8,71	9,24
EPS (Et)	1,14	1,29	1,23	1,08	1,03	1,07
DPS(Dt=Et*payout ratio)	0,41	0,41	0,47	0,49	0,50	0,52
Ending BV per share(BPS) (B ₂₀₀₈ + Et-Dt)	6,48	7,36	8,12	8,71	9,24	9,79
Required rate of return (CAPM)		7,28%	7,28%	7,28%	7,28%	7,28%
RE		0,7542	0,6389	0,4459	0,3573	0,3573
		1	2	3	4	5
Discount rate		1,0728	1,1509	1,2347	1,3246	1,4210
Present Value of RE		0,70	0,56	0,36	0,27	0,25
Total Present Value of RE to 2013	2,14					
Continuing Value (CV)						5,00
Present Value of CV	3,52					
Value per share	12,14					

Residual Income Forecast						
	2009	FY2010	FY2011	FY2012	FY2013	FY2014
Beginning BV	6,10	6,98	7,74	8,33	8,86	9,41
EPS (Et)	1,29	1,23	1,08	1,03	1,07	1,06
DPS(Dt=Et*payout ratio)	0,41	0,47	0,49	0,50	0,52	0,32
Ending BV per share(BPS) (B ₂₀₀₉ + Et-Dt)	6,98	7,74	8,33	8,86	9,41	10,15
Required rate of return (CAPM)		6,50%	6,50%	6,50%	6,50%	6,50%
RE		0,7269	0,5386	0,4541	0,4584	0,4003
		1	2	3	4	5
Discount rate		1,0650	1,1342	1,2079	1,2865	1,3701
Present Value of RE		0,68	0,47	0,38	0,36	0,29
Total Present Value of RE to 2014	2,18					
Continuing Value (CV)						6,29
Present Value of CV	4,59					
Value per share	13,75					

Accrual Accounting and Valuation: Pricing Book Values

	Residual Income Forecast					
	2010	FY2011	FY2012	FY2013	FY2014	FY2015
Beginning BV	5,10	5,86	6,45	6,98	7,53	8,27
EPS (Et)	1,23	1,08	1,03	1,07	1,06	0,75
DPS(Dt=Et*payout ratio)	0,47	0,49	0,50	0,52	0,32	0,35
Ending BV per share(BPS) (B ₂₀₁₀ + Et-Dt)	5,86	6,45	6,98	7,53	8,27	8,67
Required rate of return (CAPM)		6,33%	6,33%	6,33%	6,33%	6,33%
RE		0,6717	0,5882	0,5934	0,5365	0,2012
		1	2	3	4	5
Discount rate		1,0633	1,1306	1,2022	1,2783	1,3592
Present Value of RE		0,63	0,52	0,49	0,42	0,15
Total Present Value of RE to 2015	2,21					
Continuing Value (CV)						3,22
Present Value of CV	2,37					
Value per share	10,44					

	Residual Income Forecast					
	2011	FY2012	FY2013	FY2014	FY2015	FY2016
Beginning BV	5,87	6,46	6,99	7,54	8,28	8,68
EPS (Et)	1,08	1,03	1,07	1,06	0,75	0,58
DPS(Dt=Et*payout ratio)	0,49	0,50	0,52	0,32	0,35	0,37
Ending BV per share(BPS) (B ₂₀₁₁ + Et-Dt)	6,46	6,99	7,54	8,28	8,68	8,89
Required rate of return (CAPM)		5,87%	5,87%	5,87%	5,87%	5,87%
RE		0,6197	0,6274	0,5740	0,2405	0,0582
		1	2	3	4	5
Discount rate		1,0587	1,1208	1,1866	1,2563	1,3300
Present Value of RE		0,59	0,56	0,48	0,19	0,04
Total Present Value of RE to 2016	1,86					
Continuing Value (CV)						0,99
Present Value of CV	0,74					
Value per share	9,07					

Smith & Nephew

	2011	2012	2013	2014	2015	2016
Yield to maturity of UK 10 year bond will be used as expected growth	3,14%	1,92%	2,39%	2,57%	1,90%	1,31%

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
BETA	0,72	0,72	0,72	0,72	0,72	0,72	0,72	0,72	0,72	0,72	0,72
Dividend Payout per share	24,92	69,8	56,56	32,61	21,99	26,46	32,28	42,14	56,21	68,76	37,39
Gross Profit	1.601.078	1.734.833	1.861.652	1.971.641	2.213.268	2.255.578	2.388.835	2.461.232	2.631.736	3.146.850	3.071.262
EBITDA	579171	499131	501414	687604	891890	859329	1089894	832398	908165	934209	1327076
Risk Free (10Y Bond)	4,50%	5,01%	4,59%	3,65%	3,62%	3,14%	1,92%	2,39%	2,57%	1,90%	1,31%
ERP Country	3,95%	3,38%	3,83%	8,84%	4,07%	4,69%	8,16%	6,57%	4,66%	5,37%	3,95%
CAPM	0,07344	0,074436	0,073476	0,100148	0,065504	0,065168	0,077952	0,071204	0,059252	0,057664	0,04154
Average CAPM	0,0757	0,0764	0,0760	0,0678	0,0662	0,0615					

	Residual Income Forecast					
	2006	FY2007	FY2008	FY2009	FY2010	FY2011
Beginning BV (B ₂₀₀₆)	1,33	1,60	1,85	2,15	2,45	2,86
EPS (Et)	0,35	0,33	0,36	0,39	0,52	0,56
DPS(Dt=Et*payout ratio)	0,08	0,08	0,06	0,09	0,11	0,12
Ending BV per share(BPS) (B ₂₀₀₆ + Et-Dt)	1,60	1,85	2,15	2,45	2,86	3,30
Required rate of return (CAPM)		7,57%	7,57%	7,57%	7,57%	7,57%
RE		0,1900	0,1972	0,2045	0,3035	0,3102
		1	2	3	4	5
Discount rate		1,0757	1,1571	1,2447	1,3390	1,4403
Present Value of RE		0,18	0,17	0,16	0,23	0,22
Total Present Value of RE to 2011	0,95					
Continuing Value (CV)						4,19
Present Value of CV	2,91					
Value per share	5,47					

	Residual Income Forecast					
	2007	FY2008	FY2009	FY2010	FY2011	FY2012
Beginning BV	1,75	2,00	2,30	2,60	3,01	3,45
EPS (Et)	0,33	0,36	0,39	0,52	0,56	0,58
DPS(Dt=Et*payout ratio)	0,08	0,06	0,09	0,11	0,12	0,16
Ending BV per share(BPS) (B ₂₀₀₇ + Et-Dt)	2,00	2,30	2,60	3,01	3,45	3,87
Required rate of return (CAPM)		7,64%	7,64%	7,64%	7,64%	7,64%
RE		0,1843	0,1914	0,2900	0,2964	0,2843
		1	2	3	4	5
Discount rate		1,0764	1,1586	1,2472	1,3424	1,4450
Present Value of RE		0,17	0,17	0,23	0,22	0,20
Total Present Value of RE to 2012	0,99					
Continuing Value (CV)						3,77
Present Value of CV	2,61					
Value per share	5,60					

Accrual Accounting and Valuation: Pricing Book Values

	Residual Income Forecast					
	2008	FY2009	FY2010	FY2011	FY2012	FY2013
Beginning BV	1,39	1,69	1,99	2,40	2,84	3,26
EPS (Et)	0,36	0,39	0,52	0,56	0,58	0,57
DPS(Dt=Et*payout ratio)	0,06	0,09	0,11	0,12	0,16	0,21
Ending BV per share(BPS) (B ₂₀₀₈ +Et-Dt)	1,69	1,99	2,40	2,84	3,26	3,62
Required rate of return (CAPM)		7,60%	7,60%	7,60%	7,60%	7,60%
RE		0,2388	0,3376	0,3442	0,3322	0,2949
		1	2	3	4	5
Discount rate		1,0760	1,1578	1,2458	1,3404	1,4423
Present Value of RE		0,22	0,29	0,28	0,25	0,20
Total Present Value of RE to 2013	1,24					
Continuing Value (CV)						3,95
Present Value of CV	2,74					
Value per share	5,67					

	Residual Income Forecast					
	2009	FY2010	FY2011	FY2012	FY2013	FY2014
Beginning BV	1,36	1,66	2,07	2,51	2,93	3,29
EPS (Et)	0,39	0,52	0,56	0,58	0,57	0,45
DPS(Dt=Et*payout ratio)	0,09	0,11	0,12	0,16	0,21	0,22
Ending BV per share(BPS) (B ₂₀₀₉ +Et-Dt)	1,66	2,07	2,51	2,93	3,29	3,52
Required rate of return (CAPM)		6,78%	6,78%	6,78%	6,78%	6,78%
RE		0,3797	0,3898	0,3813	0,3469	0,2113
		1	2	3	4	5
Discount rate		1,0678	1,1402	1,2175	1,3000	1,3882
Present Value of RE		0,36	0,34	0,31	0,27	0,15
Total Present Value of RE to 2014	1,43					
Continuing Value (CV)						3,17
Present Value of CV	2,28					
Value per share	5,37					

	Residual Income Forecast					
	2010	FY2011	FY2012	FY2013	FY2014	FY2015
Beginning BV	1,72	2,13	2,57	2,99	3,35	3,58
EPS (Et)	0,52	0,56	0,58	0,57	0,45	0,54
DPS(Dt=Et*payout ratio)	0,11	0,12	0,16	0,21	0,22	0,27
Ending BV per share(BPS) (B ₂₀₁₀ +Et-Dt)	2,13	2,57	2,99	3,35	3,58	3,85
Required rate of return (CAPM)		6,62%	6,62%	6,62%	6,62%	6,62%
RE		0,3899	0,3821	0,3482	0,2130	0,2851
		1	2	3	4	5
Discount rate		1,0662	1,1368	1,2120	1,2923	1,3778
Present Value of RE		0,37	0,34	0,29	0,16	0,21
Total Present Value of RE to 2015	1,36					
Continuing Value (CV)						4,37
Present Value of CV	3,17					
Value per share	6,66					

	Residual Income Forecast					
	2011	FY2012	FY2013	FY2014	FY2015	FY2016
Beginning BV	2,34	2,78	3,20	3,56	3,79	4,06
EPS (Et)	0,56	0,58	0,57	0,45	0,54	0,75
DPS(Dt=Et*payout ratio)	0,12	0,16	0,21	0,22	0,27	0,27
Ending BV per share(BPS) (B ₂₀₁₁ +Et-Dt)	2,78	3,20	3,56	3,79	4,06	4,54
Required rate of return (CAPM)		6,15%	6,15%	6,15%	6,15%	6,15%
RE		0,3832	0,3511	0,2169	0,2903	0,4708
		1	2	3	4	5
Discount rate		1,0615	1,1268	1,1961	1,2696	1,3477
Present Value of RE		0,36	0,31	0,18	0,23	0,35
Total Present Value of RE to 2016	1,43					
Continuing Value (CV)						7,74
Present Value of CV	5,74					
Value per share	9,96					

SSE

Yield to maturity of UK 10 year bond will be used as expected growth	2011	2012	2013	2014	2015	2016
	3,14%	1,92%	2,39%	2,57%	1,90%	1,31%

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
BETA	0,77	0,77	0,77	0,77	0,77	0,77	0,77	0,77	0,77	0,77	0,77
Dividend Payout per share	62,25	56,99	59,84	56,89	52,24	46,24	47,89	42,89	46,89	47,82	45,89
Gross Profit	1.948.199	2.389.452	2.477.340	2.253.346	2.354.608	2.636.038	2.901.132	3.304.725	3.382.623	3.151.676	3.947.147
EBITDA	1727347	1973450	1390081	604536	2566144	3412427	1198619	1782332	1949874	2249644	1809396
Risk Free (10Y Bond)	4,50%	5,01%	4,59%	3,65%	3,62%	3,14%	1,92%	2,39%	2,57%	1,90%	1,31%
ERP Country	3,95%	3,38%	3,83%	8,84%	4,07%	4,69%	8,16%	6,57%	4,66%	5,37%	3,95%
CAPM	0,075415	0,076126	0,075391	0,104568	0,067539	0,067513	0,082032	0,074489	0,061582	0,060349	0,043515
Average CAPM	0,0782	0,0794	0,0792	0,0706	0,0692	0,0644					

Accrual Accounting and Valuation: Pricing Book Values

	Residual Income Forecast					
	2006	FY2007	FY2008	FY2009	FY2010	FY2011
Beginning BV (B ₂₀₀₆)	3,63	4,16	4,86	4,99	5,53	5,97
EPS (E _t)	1,24	1,49	0,77	1,30	1,27	1,25
DPS(D _t =E _t *payout ratio)	0,71	0,79	0,64	0,76	0,83	0,92
Ending BV per share(BPS) (B ₂₀₀₆ + E _t -D _t)	4,16	4,86	4,99	5,53	5,97	6,30
Required rate of return (CAPM)		7,82%	7,82%	7,82%	7,82%	7,82%
RE		1,1099	0,3798	0,8676	0,8031	0,7573
		1	2	3	4	5
Discount rate		1,0782	1,1625	1,2534	1,3514	1,4571
Present Value of RE		1,03	0,33	0,69	0,59	0,52
Total Present Value of RE to 2011	3,16					
Continuing Value (CV)						9,96
Present Value of CV	6,83					
Value per share	14,16					

	Residual Income Forecast					
	2007	FY2008	FY2009	FY2010	FY2011	FY2012
Beginning BV	4,47	5,17	5,30	5,84	6,28	6,61
EPS (E _t)	1,49	0,77	1,30	1,27	1,25	1,39
DPS(D _t =E _t *payout ratio)	0,79	0,64	0,76	0,83	0,92	1,00
Ending BV per share(BPS) (B ₂₀₀₇ + E _t -D _t)	5,17	5,30	5,84	6,28	6,61	7,00
Required rate of return (CAPM)		7,94%	7,94%	7,94%	7,94%	7,94%
RE		0,3492	0,8363	0,7714	0,7252	0,8342
		1	2	3	4	5
Discount rate		1,0794	1,1651	1,2576	1,3575	1,4653
Present Value of RE		0,32	0,72	0,61	0,53	0,57
Total Present Value of RE to 2012	2,76					
Continuing Value (CV)						10,69
Present Value of CV	7,29					
Value per share	15,22					

	Residual Income Forecast					
	2008	FY2009	FY2010	FY2011	FY2012	FY2013
Beginning BV	4,67	4,80	5,34	5,78	6,11	6,50
EPS (E _t)	0,77	1,30	1,27	1,25	1,39	1,35
DPS(D _t =E _t *payout ratio)	0,64	0,76	0,83	0,92	1,00	1,02
Ending BV per share(BPS) (B ₂₀₀₈ + E _t -D _t)	4,80	5,34	5,78	6,11	6,50	6,83
Required rate of return (CAPM)		7,92%	7,92%	7,92%	7,92%	7,92%
RE		0,8771	0,8122	0,7661	0,8752	0,8091
		1	2	3	4	5
Discount rate		1,0792	1,1647	1,2569	1,3565	1,4639
Present Value of RE		0,81	0,70	0,61	0,65	0,55
Total Present Value of RE to 2013	3,32					
Continuing Value (CV)						10,44
Present Value of CV	7,13					
Value per share	15,25					

	Residual Income Forecast					
	2009	FY2010	FY2011	FY2012	FY2013	FY2014
Beginning BV	3,35	3,89	4,33	4,66	5,05	5,38
EPS (E _t)	1,30	1,27	1,25	1,39	1,35	1,61
DPS(D _t =E _t *payout ratio)	0,76	0,83	0,92	1,00	1,02	1,12
Ending BV per share(BPS) (B ₂₀₀₉ + E _t -D _t)	3,89	4,33	4,66	5,05	5,38	5,87
Required rate of return (CAPM)		7,06%	7,06%	7,06%	7,06%	7,06%
RE		0,9643	0,9210	1,0335	0,9702	1,1956
		1	2	3	4	5
Discount rate		1,0706	1,1462	1,2271	1,3137	1,4065
Present Value of RE		0,90	0,80	0,84	0,74	0,85
Total Present Value of RE to 2014	4,13					
Continuing Value (CV)						17,34
Present Value of CV	12,33					
Value per share	20,36					

	Residual Income Forecast					
	2010	FY2011	FY2012	FY2013	FY2014	FY2015
Beginning BV	3,81	4,25	4,58	4,97	5,30	5,79
EPS (E _t)	1,27	1,25	1,39	1,35	1,61	1,88
DPS(D _t =E _t *payout ratio)	0,83	0,92	1,00	1,02	1,12	1,20
Ending BV per share(BPS) (B ₂₀₁₀ + E _t -D _t)	4,25	4,58	4,97	5,30	5,79	6,47
Required rate of return (CAPM)		6,92%	6,92%	6,92%	6,92%	6,92%
RE		0,9331	1,0461	0,9832	1,2093	1,4323
		1	2	3	4	5
Discount rate		1,0692	1,1432	1,2223	1,3069	1,3973
Present Value of RE		0,87	0,92	0,80	0,93	1,03
Total Present Value of RE to 2015	4,54					
Continuing Value (CV)						21,07
Present Value of CV	15,08					
Value per share	23,87					

	Residual Income Forecast					
	2011	FY2012	FY2013	FY2014	FY2015	FY2016
Beginning BV	5,05	5,38	5,77	6,10	6,59	7,27
EPS (E _t)	1,25	1,39	1,35	1,61	1,88	0,87
DPS(D _t =E _t *payout ratio)	0,92	1,00	1,02	1,12	1,20	1,05
Ending BV per share(BPS) (B ₂₀₁₁ + E _t -D _t)	5,38	5,77	6,10	6,59	7,27	7,09
Required rate of return (CAPM)		6,44%	6,44%	6,44%	6,44%	6,44%
RE		1,0184	0,9572	1,1856	1,4118	0,4134
		1	2	3	4	5
Discount rate		1,0644	1,1329	1,2059	1,2836	1,3662
Present Value of RE		0,96	0,84	0,98	1,10	0,30
Total Present Value of RE to 2016	4,19					
Continuing Value (CV)						6,49
Present Value of CV	4,75					
Value per share	14,32					

Appendix 2

Below are the results of the portfolio invested using the residual income model.

Undervalued portfolio

2006					
Company	Amount invested	Price 2006 beginning	Number of shares	Price 2006 ending	Ending portfolio value
Chemring	166.667	1,87	89.127	4,11	366.312
Cranswick	166.667	8,26	20.178	13,44	271.192
Croda	166.667	6,95	23.981	8,99	215.589
Dechra	166.667	3,41	48.876	3,48	170.088
Hill & Smith	166.667	3,14	53.079	4,02	213.378
Intertek	166.667	10,14	16.437	12,37	203.326
Total portfolio value	1.000.000				1.439.885

Portfolio return	43,99%
Market return	14,97%
Abnormal return	29,02%

2007					
Company	Amount invested	Price 2007 beginning	Number of shares	Price 2007 ending	Ending portfolio value
Chemring	200.000	4,11	48.662	4,90	238.444
Compass	200.000	4,34	46.083	4,32	199.079
Croda	200.000	8,99	22.247	4,19	93.215
Hill & Smith	200.000	4,02	49.751	4,53	225.372
Intertek	200.000	12,37	16.168	13,48	217.945
Total	1.000.000				974.054

Portfolio return	-2,59%
Market return	-4,44%
Abnormal return	1,85%

2008					
Company	Amount invested	Price 2008 beginning	Number of shares	Price 2008 ending	Ending portfolio value
BAE Systems	76923	6,78	11.346	3,90	44.249
BP	76923	8,37	9.190	5,44	49.994
Centrica	76923	4,35	17.683	2,75	48.628
Chemring	76923	4,90	15.699	3,53	55.417
Compass	76923	4,23	18.185	3,58	65.102
Cranswick	76923	11,64	6.609	6,05	39.984
Croda	76923	8,19	9.392	5,56	52.220
Dechra	76923	4,53	16.981	3,45	58.584
Hill & Smith	76923	4,53	16.981	2,08	35.320
Intertek	76923	13,48	5.706	8,11	46.276
J Sainsbury	76923	5,79	13.286	3,40	45.172
Smith & Nephew	76923	7,90	9.737	4,54	44.206
SSE	76923	22,30	3.449	12,59	43.423
Total	1.000.000				628.577

Portfolio return	-37,14%
Market return	-58,61%
Abnormal return	21,47%

Accrual Accounting and Valuation: Pricing Book Values

Company	2009				
	Amount invested	Price 2009 beginning	Number of shares	Price 2009 ending	Ending portfolio value
Ass. British Foods	76923	7,55	10.188	9,25	94.239
BAE Systems	76923	3,90	19.724	4,05	79.882
Chemring	76923	3,53	21.791	5,79	126.170
Compass	76923	3,58	21.487	5,05	108.509
Cranswick	76923	6,05	12.715	8,84	112.401
Croda	76923	5,56	13.835	9,33	129.081
Dechra	76923	3,45	22.297	5,02	111.931
Diageo	76923	9,94	7.739	12,20	94.416
Hill & Smith	76923	2,08	36.982	3,87	143.120
Imperial Brands	76923	19,13	4.021	22,06	88.703
Intertek	76923	8,11	9.485	14,13	134.023
J Sainsbury	76923	3,40	22.624	3,64	82.351
Morgan Sindall	76923	5,61	13.712	6,75	92.556
Total	1.000.000				1.397.382

Portfolio return	39,74%
Market return	33,90%
Abnormal return	5,84%

Company	2010				
	Amount invested	Price 2010 beginning	Number of shares	Price 2010 ending	Ending portfolio value
Ass. British Foods	76923	9,25	8.316	13,78	114.594
BAE Systems	76923	4,05	18.993	3,85	73.123
Chemring	76923	5,79	13.286	5,94	78.919
Compass	76923	5,05	15.232	6,83	104.035
Cranswick	76923	8,84	8.702	10,04	87.368
Dechra	76923	5,02	15.323	5,29	81.059
Diageo	76923	12,20	6.305	13,83	87.198
Hill & Smith	76923	3,87	19.877	3,24	64.401
Imperial Brands	76923	22,06	3.487	22,97	80.096
Intertek	76923	14,13	5.444	20,72	112.800
J Sainsbury	76923	3,64	21.133	4,39	92.774
Morgan Sindall	76923	6,75	11.396	8,23	93.789
SSE	76923	13,07	5.885	14,30	84.156
Total	1.000.000				1.154.312

Portfolio return	15,43%
Market return	15,53%
Abnormal return	-0,10%

Overvalued portfolio

Company	2006				
	Amount invested	Price 2006 beginning	Number of shares	Price 2006 ending	Ending portfolio value
Ass. British Foods	71.429	12,21	5.850	12,25	71.663
BAE Systems	71.429	5,56	12.847	6,32	81.193
BAT	71.429	18,92	3.775	21,21	80.068
BP	71.429	9,01	7.928	8,42	66.754
Centrica	71.429	3,30	21.645	4,68	101.299
Compass	71.429	3,23	22.114	4,34	95.975
Diageo	71.429	12,26	5.826	14,88	86.691
GSK	71.429	21,38	3.341	19,95	66.653
Imperial Brands	71.429	22,00	3.247	25,96	84.292
Johnson Matthey	71.429	20,46	3.491	20,82	72.683
J Sainsbury	71.429	4,59	15.562	6,07	94.461
Morgan Sindall	71.429	13,53	5.279	19,71	104.049
Smith & Nephew	71.429	7,79	9.169	7,91	72.527
SSE	71.429	14,76	4.839	23,06	111.587
Total	1.000.000				1.189.894

Portfolio return	-18,99%
Market return	14,97%
Abnormal return	-33,96%

Company	2007				
	Amount invested	Price 2007 beginning	Number of shares	Price 2007 ending	Ending portfolio value
Ass. British Foods	66.667	12,25	5.442	12,25	66.665
BAE Systems	66.667	6,32	10.549	6,78	71.522
BAT	66.667	21,21	3.143	26,75	84.075
BP	66.667	8,42	7.918	8,37	66.274
Centrica	66.667	4,68	14.245	4,35	61.966
Cranswick	66.667	13,44	4.960	11,64	57.734
Dechra	66.667	3,48	19.157	4,53	86.781
Diageo	66.667	14,88	4.480	14,70	65.856
GSK	66.667	19,95	3.342	17,41	58.184
Imperial Brands	66.667	25,96	2.568	32,13	82.510
Johnson Matthey	66.667	20,82	3.202	25,50	81.651
J Sainsbury	66.667	6,07	10.983	5,79	63.592
Morgan Sindall	66.667	19,71	3.382	14,15	47.855
Smith & Nephew	66.667	7,91	8.428	7,90	66.581
SSE	66.667	23,06	2.891	22,30	64.469
Total	1.000.000				1.025.715

Portfolio return	-2,57%
Market return	-4,44%
Abnormal return	1,87%

Accrual Accounting and Valuation: Pricing Book Values

2008					
Company	Amount invested	Price 2008 beginning	Number of shares	Price 2008 ending	Ending portfolio value
Ass. British Foods	142857	12,25	11.662	7,55	88.048
BAT	142857	26,75	5.340	18,62	99.431
Diageo	142857	14,70	9.718	9,94	96.597
GSK	142857	17,41	8.205	13,29	109.044
Imperial Brands	142857	32,13	4.446	19,13	85.052
Johnson Matthey	142857	25,50	5.602	11,28	63.191
Morgan Sindall	142857	14,15	10.096	5,61	56.639
Total	1.000.000				598.001

Portfolio return	40,20%
Market return	-58,61%
Abnormal return	98,81%

2009					
Company	Amount invested	Price 2009 beginning	Number of shares	Price 2009 ending	Ending portfolio value
BAT	142857	18,62	7.672	22,70	174.154
BP	142857	5,44	26.261	6,75	177.262
Centrica	142857	2,75	51.948	3,16	164.156
GSK	142857	13,29	10.749	14,85	159.623
Johnson Matthey	142857	11,28	12.665	17,16	217.331
Smith & Nephew	142857	4,54	31.466	7,20	226.555
SSE	142857	12,59	11.347	13,07	148.305
Total	1.000.000				1.267.386

Portfolio return	-26,74%
Market return	33,90%
Abnormal return	-60,64%

2010					
Company	Amount invested	Price 2010 beginning	Number of shares	Price 2010 ending	Ending portfolio value
BAT	142857	22,70	6.293	28,75	180.924
BP	142857	6,75	21.164	5,43	114.921
Centrica	142857	3,16	45.208	3,87	174.955
Croda	142857	9,33	15.312	19,53	299.043
GSK	142857	14,85	9.620	14,47	139.201
Johnson Matthey	142857	17,16	8.325	23,68	197.136
Smith & Nephew	142857	7,20	19.841	7,90	156.744
Total	1.000.000				1.262.924

Portfolio return	-26,29%
Market return	15,53%
Abnormal return	-41,82%

Appendix 3

Below are the results of the portfolio invested using the forward P/E model.

Undervalued portfolio

2006					
Company	Amount invested	Price 2006 beginning	Number of shares	Price 2006 ending	Ending portfolio value
Centrica	166.667	3,30	50.505	4,68	236.363
Cranswick	166.667	8,26	20.178	13,44	271.192
GSK	166.667	21,38	7.795	19,95	155.510
Hill & Smith	166.667	3,14	53.079	4,02	213.378
Intertek	166.667	10,14	16.437	12,37	203.326
Morgan Sindall	166.667	13,53	12.318	19,71	242.788
Total portfolio value	1.000.000				1.322.557

Portfolio return	32,26%
Market return	14,97%
Abnormal return	17,29%

2007					
Company	Amount invested	Price 2007 beginning	Number of shares	Price 2007 ending	Ending portfolio value
Compass	333.333	4,34	76.805	4,32	331.798
Croda	333.333	8,99	37.078	4,19	155.357
Intertek	333.333	12,37	26.947	13,48	363.246
Total	1.000.000				850.400

Portfolio return	-14,96%
Market return	-4,44%
Abnormal return	-10,52%

2008					
Company	Amount invested	Price 2008 beginning	Number of shares	Price 2008 ending	Ending portfolio value
BAE Systems	71429	6,78	10.535	3,90	41.087
BP	71429	8,37	8.534	5,44	46.425
Centrica	71429	4,35	16.420	2,75	45.155
Chemring	71429	4,90	14.577	3,53	51.457
Compass	71429	4,23	16.886	3,58	60.452
Croda	71429	8,19	8.721	5,56	48.489
Dechra	71429	4,53	15.768	3,45	54.400
GSK	71429	17,41	4.103	13,29	54.529
Hill & Smith	71429	4,53	15.768	2,08	32.797
Intertek	71429	13,48	5.299	8,11	42.975
J Sainsbury	71429	5,79	12.337	3,40	41.946
Johnson Matthey	71429	25,50	2.801	11,28	31.595
Smith & Nephew	71429	7,90	9.042	4,54	41.051
SSE	71429	22,30	3.203	12,59	40.326
Total	1.000.000				632.682

Portfolio return	-36,73%
Market return	-58,61%
Abnormal return	21,88%

Accrual Accounting and Valuation: Pricing Book Values

2009					
Company	Amount invested	Price 2009 beginning	Number of shares	Price 2009 ending	Ending portfolio value
Ass. British Foods	90909	7,55	12.041	9,25	111.379
BAE Systems	90909	3,90	23.310	4,05	94.406
Centrica	90909	2,75	33.058	3,16	104.463
Compass	90909	3,58	25.394	5,05	128.240
Cranswick	90909	6,05	15.026	8,84	132.830
Dechra	90909	3,45	26.350	5,02	132.277
Diageo	90909	9,94	9.146	12,20	111.581
Hill & Smith	90909	2,08	43.706	3,87	169.142
Intertek	90909	8,11	11.210	14,13	158.397
J Sainsbury	90909	3,40	26.738	3,64	97.326
Morgan Sindall	90909	5,61	16.205	6,75	109.384
Total	1.000.000				1.349.425

Portfolio return	34,94%
Market return	33,90%
Abnormal return	1,04%

2010					
Company	Amount invested	Price 2010 beginning	Number of shares	Price 2010 ending	Ending portfolio value
Ass. British Foods	100000	9,25	10.811	13,78	148.976
BAE Systems	100000	4,05	24.691	3,85	95.060
Compass	100000	5,05	19.802	6,83	135.248
Cranswick	100000	8,84	11.312	10,04	113.572
Dechra	100000	5,02	19.920	5,29	105.377
Hill & Smith	100000	3,87	25.840	3,24	83.722
Intertek	100000	14,13	7.077	20,72	146.635
Johnson Matthey	100000	17,16	5.828	23,68	138.007
Morgan Sindall	100000	6,75	14.815	8,23	121.927
Smith & Nephew	100000	7,20	13.889	7,90	109.723
Total	1.000.000				1.198.248

Portfolio return	19,82%
Market return	15,53%
Abnormal return	4,29%

Overvalued portfolio

Company	2006				
	Amount invested	Price 2006 beginning	Number of shares	Price 2006 ending	Ending portfolio value
Ass. British Foods	71.429	12,21	5.850	12,25	71.663
BAE Systems	71.429	5,56	12.847	6,32	81.193
BAT	71.429	18,92	3.775	21,21	80.068
BP	71.429	9,01	7.928	8,42	66.754
Chemring	71.429	1,87	38.197	4,11	156.990
Compass	71.429	3,23	22.114	4,34	95.975
Croda	71.429	6,95	10.277	8,99	92.390
Dechra	71.429	3,41	20.947	3,48	72.896
Diageo	71.429	12,26	5.826	14,88	86.691
Imperial Brands	71.429	22,00	3.247	25,96	84.292
Johnson Matthey	71.429	20,46	3.491	20,82	72.683
J Sainsbury	71.429	4,59	15.562	6,07	94.461
Smith & Nephew	71.429	7,79	9.169	7,91	72.527
SSE	71.429	14,76	4.839	23,06	111.587
Total	1.000.000				1.240.168

Portfolio return	-24,02%
Market return	14,97%
Abnormal return	-38,98%

Company	2007				
	Amount invested	Price 2007 beginning	Number of shares	Price 2007 ending	Ending portfolio value
Ass. British Foods	58.824	12,25	4.802	12,25	58.825
BAE Systems	58.824	6,32	9.308	6,78	63.108
BAT	58.824	21,21	2.773	26,75	74.178
BP	58.824	8,42	6.986	8,37	58.473
Centrica	58.824	4,68	12.569	4,35	54.675
Chemring	58.824	4,11	14.312	4,90	70.129
Cranswick	58.824	13,44	4.377	11,64	50.948
Dechra	58.824	3,48	16.903	4,53	76.571
Diageo	58.824	14,88	3.953	14,70	58.109
GSK	58.824	19,95	2.949	17,41	51.342
Hill & Smith	58.824	4,02	14.633	4,53	66.287
Imperial Brands	58.824	25,96	2.266	32,13	72.807
Johnson Matthey	58.824	20,82	2.825	25,50	72.038
J Sainsbury	58.824	6,07	9.691	5,79	56.111
Morgan Sindall	58.824	19,71	2.984	14,15	42.224
Smith & Nephew	58.824	7,91	7.437	7,90	58.752
SSE	58.824	23,06	2.551	22,30	56.887
Total	1.000.000				1.041.463

Portfolio return	-4,15%
Market return	-4,44%
Abnormal return	0,30%

Accrual Accounting and Valuation: Pricing Book Values

2008					
Company	Amount invested	Price 2008 beginning	Number of shares	Price 2008 ending	Ending portfolio value
Ass. British Foods	166667	12,25	13.605	7,55	102.718
BAT	166667	26,75	6.231	18,62	116.021
Cranswick	166667	11,64	14.318	6,05	86.624
Diageo	166667	14,70	11.338	9,94	112.700
Imperial Brands	166667	32,13	5.187	19,13	99.227
Morgan Sindall	166667	14,15	11.779	5,61	66.080
Total	1.000.000				583.370

Portfolio return	41,66%
Market return	-58,61%
Abnormal return	100,27%

2009					
Company	Amount invested	Price 2009 beginning	Number of shares	Price 2009 ending	Ending portfolio value
BAT	111111	18,62	5.967	22,70	135.451
BP	111111	5,44	20.425	6,75	137.869
Chemring	111111	3,53	31.476	5,79	182.246
Croda	111111	5,56	19.984	9,33	186.451
GSK	111111	13,29	8.361	14,85	124.161
Imperial Brands	111111	19,13	5.808	22,06	128.124
Johnson Matthey	111111	11,28	9.850	17,16	169.026
Smith & Nephew	111111	4,54	24.474	7,20	176.213
SSE	111111	12,59	8.825	13,07	115.343
Total	1.000.000				1.354.883

Portfolio return	-35,49%
Market return	33,90%
Abnormal return	-69,39%

2010					
Company	Amount invested	Price 2010 beginning	Number of shares	Price 2010 ending	Ending portfolio value
BAT	100000	22,70	4.405	28,75	126.644
BP	100000	6,75	14.815	5,43	80.445
Centrica	100000	3,16	31.646	3,87	122.470
Chemring	100000	5,79	17.271	5,94	102.590
Croda	100000	9,33	10.718	19,53	209.323
Diageo	100000	12,20	8.197	13,83	113.365
GSK	100000	14,85	6.734	14,47	97.441
Imperial Brands	100000	22,06	4.533	22,97	104.123
J Sainsbury	100000	3,64	27.473	4,39	120.606
SSE	100000	13,07	7.651	14,30	109.409
Total	1.000.000				1.186.416

Portfolio return	-18,64%
Market return	15,53%
Abnormal return	-34,17%