Stockholm School of Economics
Department of Finance
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The Swedish Fashion Wonder

Clothing Retailers' Growth in a Stock Market Perspective

Abstract:
Clothing retailers' historical high growth during the 2000s has created an interest and expectations for growth also in the future. Media focus on a continued high growth pace, but there are critics; some fear that the companies will not be able to deliver in line with expectations, i.e. that a bubble is about to burst on the stock market. To be able to analyze whether that could be the case or not, this thesis aims at exploring the growth expectations incorporated by the stock market. Seven clothing retailer companies, all listed in Sweden, are examined. Through the concept of reverse engineering, the implied long-term growth rate is solved for, using share price, book values and forecasts in EPS. An implied long-term growth rate that is higher than our benchmark of expected inflation and GDP growth could imply an over-priced share. A cross-sectional study, performed five times a year, however shows that the average historical, as well as the current, implied long-term growth rates are no higher than our benchmark. Instead, growth rates are lower, which could imply either that the shares are traded at a too low price or that the short-term forecasts of growth in EPS, set by analysts, could be too high. In addition to the study of implied long-term growth, a firm-specific growth analysis is performed on each of the seven companies. It assesses and compares historical- as well as short-term and long-term growth rates.

Sofia Fagring, 20620 Stéphanie Treschow, 20514

Keywords: Growth, Residual Income Valuation, reverse engineering, clothing retailers

Tutor: Assistant professor Francesco Sangiorgi

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Contents

1. Introduction and purpose

During the last ten years, media has been noteworthy focused on what they refer to as the Swedish Fashion Wonder. Swedish fashion designers have been awarded world-wide and numerous Swedish clothing retailers have seen exceptional growth. The historical strong performance has created an interest in the industry, not only from a design perspective, but also from a financial perspective, foremost at the stock market.

From reviewing articles, as well as financial market reports, we have found that one of the core topics when discussing the clothing retailer companies is *growth*: both historical and in terms of expectations for the future. It seems that high historical growth figures have created optimistic expectations also for the future. Clothing retailers, as well as media and financial analysts guide for a continued strong growth for generally all clothing retailers on the Swedish stock market. However, everybody does not share this view. Ever since the boom in the mid-00s, there has been scepticism regarding whether the companies will actually be able to perform in line with the high growth expectations. Some claim that the high growth expectations and the companies' extreme ongoing expansion eventually will create a bubble and that consumption clearly can not continue in the same pace as it has during the last few years. Others defend the growth and claim that changed consumption patterns as well as market immaturity will allow further growth. Who is right and who is wrong is a question that can only be answered in the future, when we see the actual outcome.

However, growth in the clothing retailer companies is still an interesting question. Growth expectations drive share prices and depending on whether investors believe in the expectations or not, they are willing to pay different prices for a specific share. This thesis will further explore the growth expectations for the Swedish clothing retailer sector, and how these expectations have been incorporated in share prices. By calculating short- and long-term growth figures implied by the stock market, this study will assess and analyse the growth pace that investors expect of the clothing retailer sector in the coming years. Put in correlation to the historic growth and one's own expectations, these figures can work as one of the tools in investment decisions.

1.1 Definition of growth

The term *growth* is frequently used in financial contexts, even though the expression is vague and has a variety of explicit meanings. Nonetheless, investors seem to value growth highly and a premium is often paid for so called *growth-firms*. There is an important distinction between growth in sales and growth in earnings, even though the two are not always clearly separated in the discussion. Growth in sales is a pure top-line item while growth in earnings also includes actions on a bottom-line level. Generally speaking, growth is considered positive and it adds value to the share price[1]. However, it is not possible to draw the direct conclusion that growth automatically creates value. Rather, the growth should be put in relation to the market's required rate of return and the, from that derived, implicitly required growth pace.

A firm generating a return exceeding the return required by the market is said to generate *residual earnings*, stated as:

$$RE_t = Earnings_t - [r_e * \text{common shareholder equity}_{t-1}]$$

or

$$RE_t = [ROE_t - r_e] * \text{common shareholder equity}_{t-1}$$

RE_t = residual $earnings_t$
r_e= required rate of return
ROE_t = return on common shareholders' equity

Based on the idea of residual earnings, the only growth that contributes to the increase of a firm's value is the growth in residual earnings. A growth-firm can therefore be defined as one that earns a ROE greater than the required rate of return (cost of capital) and hence continually increases its residual earnings. Growth in residual earnings is achieved by an increase in the firm's ROE, either from its core operations or by growth in investments[2]. Changes in core operation returns are mainly due to changes in sales and profit margins, i.e. it is affected by both income and costs. The ROE can also be changed through pure financial actions such as changing the firm's leverage.

This study focuses on growth in earnings, and evaluates the firms' growth in residual earnings, i.e. the specific growth that creates value.

[1] Penman (2007) p. 409
[2] Penman (2007) p. 437

1.2 Growth in Swedish clothing retailers

The term "Swedish Fashion Wonder" was initially presented during spring 1999, as young Swedish fashion design took its first tripping steps on the international catwalk scene. Ever since, the design has been awarded world-wide and the clothing retailers have delivered aggressive growth figures. For example, Swedish clothing retailer Odd Molly had a growth of 105 percent in sales for 2008, and for their peer WeSC, the corresponding figure was 38 percent[3]. During the fall 2009, the existence of a Swedish Fashion Wonder has been discussed in media. Stefan Persson, main owner and chairman of the board in Hennes&Mauritz, claims that the Swedish Fashion Wonder does only exist in the eyes of Swedish media. Outside of Sweden there is no knowledge about these companies and in fact their turnover is smaller than one of his stores in a suburban shopping malls outside Stockholm.[4] The article resulted in several other fashion retailer profiles reacting. Some agreed with Stefan Persson, other disagreed. However, this discussion is not about the growth in the sector but rather the size of the fashion retailers. Hence, it does not affect the validity of the intuition leading up to the aim of this thesis.

The growth of the overall Swedish retail sector took off already during the mid-90s. Low interest rates and increased real wages gave the consumers room for spending not only what was necessary, but also for the sake of pleasure, and the retail sector faced 146 consecutive months of positive growth. The fashion industry took advantage of people shopping as a hobby and subsequently the number of Swedish shopping malls increased along with the number of new stores during the early 2000s.[5] Swedish fashion and clothing went from being a marginal business to an established part of the Swedish industry. Politicians started to look upon the fashion business as an industry with great growth potential, job-generating as well as a factor improving the nation's export.[6]

As within most sectors, newly discovered growth opportunities, created an interest among financial investors, and it did not take long until the stock market saw the opportunity to gain from the clothing retailers' growth. Large firms such as Hennes&Mauritz (H&M) and Lindex were already well known on the stock market; and in the beginning of 2000 they were the only two publicly listed clothing retailers. Ever since, several IPOs and buy-outs have taken

[3] Lejonhuvud, DN (2009)
[4] Huldschiner, DI (2009)
[5] Gripenberg DN (2009)
[6] Julander, Expressen (2009)

place and the stock market has become an arena for leveraging the retail upswing. The involvement of venture capitalists on the market has not only raised share prices, but has also created a hype of the entire sector[7].

The century started off with a stock market's rally in the mid-00s, fashion- and clothing retailers were among the most discussed companies on the stock market. Several of the companies have since then been targets of buy-outs, and the clothing retailers currently traded on the stock market are Hennes&Mauritz, KappAhl, Fenix Outdoor, Björn Borg, RNB, Odd Molly and WeSC. Appendix 1 includes a picture published in Swedish newspaper Dagens Nyheter September 2009, giving a clear overview of the clothing retailers' actions on the stock market.

The clothing sector represents 25,5% of the total discretionary market in Sweden. The discretionary market represents all retail sales apart from staples. As shown in figure 2, the clothing sector has seen a positive growth for all years from 1997 to 2009 apart from year 2008.[8]

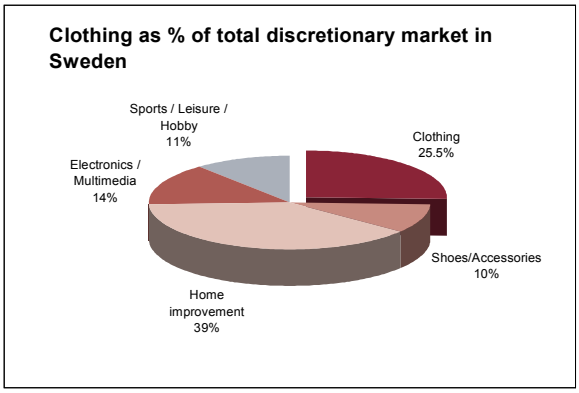

Figure 1 – Clothing as % of discretionary in Sweden
Source: Vem är Vem (2009)

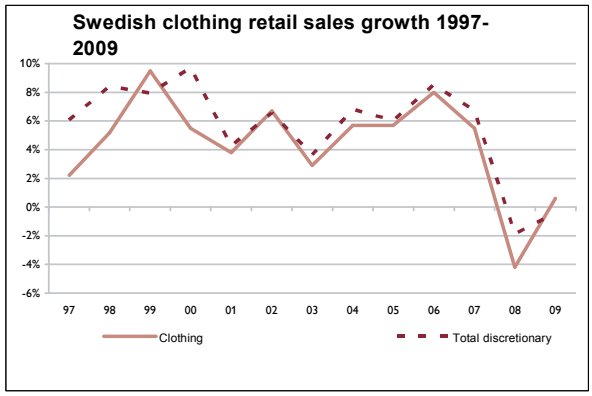

Figure 2 – Yearly growth Swedish clothing and discretionary
Source: Vem är Vem

The retail sector has seen a larger growth than the overall private consumption market from 2004 and onwards. Retail represents 33 percent of total private consumption, and within the sector, clothing represents 16 percent of total sales[9].

During 2008, share prices of the Swedish clothing retailers faced a downturn along with the overall market, but since March 2009, there has been a strong recovery. Looking at consensus

[7] Gripenberg, DN (2009)
[8] Vem är Vem (2009)
[9] Vem är Vem (2009)

estimates, share prices are expected to continue to strengthen. The following graph shows the share price development of Swedish clothing retailers from 2005 until today.

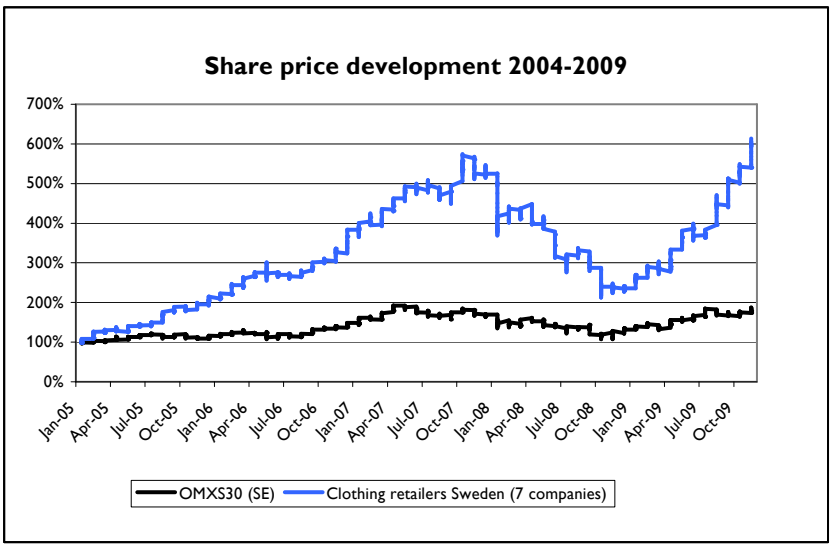

Figure 3 – Share prices Clothing retailer sector compared to OMXS
Source: JCF, Excel Connect

1.3 Question Formulation and method

During the last five years, both small and large Swedish clothing retailers have been growing at a pace higher than the overall retail market[10]. Media as well as the companies themselves, guide for further growth in the future. This thesis aims at exploring at what pace investors expect the companies to grow in the future, i.e. apart from looking at the explicit growth in consensus near-term figures, we are to find the implied long-term growth rates of the stock market.

This will be done through the usage of a fundamental valuation model, based on book values. With the model as a basis, we will through share prices, accounting numbers and analysts' forecasts of future earnings, be able to estimate the expected long-term growth rate implied by the stock market. This will be done through the concept of *reverse engineering*, explained further on. The implied long-term growth rate should not be confused with the short-term future growth rate, calculated as the growth in analysts' estimates of earnings per share, EPS, during the years of the short-term explicit forecast period.

[10] Vem är Vem (2009)

To be able to conclude any patterns in the implied growth rates, several points of time will be studied. A cross-sectional analysis of the seven publicly traded clothing retailers on the Swedish market will be presented. We are collecting data five times a year, from 2004 and onwards, with some limitation due to the unavailability of forecasts[11] and market data[12]. For each of the studied dates, growth figures for an explicit forecast period of five years (short-term growth) as well as for the horizon (long-term growth) will be presented. Once the implied growth rate is found for each date, it will be put in relation to the actual and historical growth, as well as a benchmark created by expected inflation and future GDP growth. Thereby a perception regarding the plausibility of the implied rates can be achieved and used as a tool in investment decisions.

1.3.1 Limitations

Even though we aim to discover market mispricing, a specific target price will not be given. Rather, the findings will create a framework to be used as a tool for active investment strategies. This thesis also aims at exploring and introducing the method of reverse engineering by explaining how it can be used to solve for implied growth rates.

We have focused on the fundamental valuation approach to estimate growth rates, and do not use any other valuation methods.

The number of firms examined is limited, due to the limited existence of publicly traded clothing retailers on the Swedish stock market. Also, the dates studied have been limited to five times a year, and the study begins in 2004, since prior to that there were even fewer clothing retailers on the stock market.

1.4 Contribution

The ongoing discussion regarding the historic as well as future growth in the clothing retailer companies has created an interest for further exploring the subject. By solving for the stock market's implied growth rate, this thesis will add a new dimension to the debate. Academic research methods will be used to interpret the data collected from the financial market.

[11] Consensus estimates not available.
[12] Some of the companies have not been listed the full period.

The implied long-term growth rate that will be attained reflects the market's priced-in expectations for the firms' growth in the long run. This rate should in all fundamental valuation models be compared to the overall economic development in infinity, often represented by the long-term growth rate in GDP and the expected future inflation. If a company would grow more than the overall market in the long run, it would eventually "conquer the world", which is not likely. If a company would have lower growth rate than the market, it would instead disappear as the market outgrows it. Hence, the stock market's implied growth rate can be benchmarked against the expected growth of the economy as well as one's own expectations of future growth. Assuming that the short-term earnings forecasted by financial analysts are correct, the implied long-term growth rate will be an indicator of the fairness of the share's trading level. A high implied long-term growth rate could reflect an over-priced share and a low long-term growth-rate could mean that the stock is undervalued. Hence, implied forecasts calculated by reverse engineering are useful tools in active investment strategies[13].

1.5 Outline

The second chapter of this paper will present the theoretical framework, represented by fundamental valuation as well as by the concept of reverse engineering. It will also lay out the foundation for the Residual Income Valuation model that will be used to find the implied long-term growth rate. Chapter three explains the method used and how the data has been collected. It also specifies what assumptions have been made and how the sensitivity analysis will be performed. Chapter four presents the results of our study as well as the analysis of the results. Chapter five concludes and summarizes our findings.

2. Theoretical framework

2.1 The implied growth rate through reverse engineering

The fundamental valuation process consists of developing forecasts and converting those forecasts into a valuation. The valuation model generates a firm- or equity value, which financial analysts and investors compare to the current share price. From that, a conclusion can be drawn regarding investment decisions, i.e. whether to buy, sell or hold the share.[14] However, rather than asking what value is implied by the forecasts, it is possible to look at

[13] Penman (2007) p. 181
[14] Penman (2007) p. 85

what forecasts are in-line with the current share price. This method is referred to as *reverse engineering*.[15] The term originally comes from the world of technology and the process of discovering the technological principles of a system through analysis of its structure, function and operation. The analysis evolves from the end product and works its way backwards.[16] Similarly, the reverse engineering referred to here, evolves from an end product, represented by the current share price, and aims at discovering the implied long-term growth rate through analysis of analyst forecasts, accounting numbers and market risk.

Several valuation models have the long-term growth rate as a variable; hence the application of these models is a possible way to find the implied growth rate. By exchanging the fundamental value obtained by the model with the current share price, we can solve for the implied growth rate, holding all other factors locked in accordance with available analyst estimates.

It should be emphasized that in order for the reverse engineering method to hold, two assumptions are required: the first is that market prices should be considered efficient and reflect all public information; the second is that analyst forecasts are assumed to reflect the whole of the market's expectations of future profits.[17] These assumptions are based on the semi-strong form of Fama's Efficient Market Hypotheses, i.e. that the market is efficient in the sense that all public available information is incorporated in the share price[18].

The usage of reverse engineering has sometimes been questioned. This is due to the fact that fundamental valuation analysts often assume an inefficient market in contrast to above required assumptions of the model. For the reverse engineering equation to hold, the value of the investment must equal the price, whereas analysts often look upon the price solely as the cost of the investment, not its value. They search for mispriced securities that they can base an investment recommendation on. However, this problem does not apply to our thesis since the purpose is not to assume the implied growth rate as real, but rather to analyze whether the market's expectations goes hand in hand with a sustainable growth rate.

[15] Penman (2007) p. 127
[16] Warden (1992) pp. 283-305
[17] Easton (2009) p. 251
[18] Fama (1970)

2.1.1 Previous work

Literature that reverse-engineers valuation models on equity investment is very new but over the last decade, the usage of the method has increased. This is partly a result of the re-introduction of the Residual Income Valuation model, RIV, introduced by Ohlson (1995). Another reason for the increased popularity is the development of the abnormal earnings growth model, AEG, by Ohlson and Juettner-Nauroth (2005). Also the dividend capitalization model in Botosan (1997) is included in the reverse engineering literature. Through reverse engineering of these models, it is possible to find implied factors in a straight-forward manner, since the models are built on easy accessible information. The increased popularity could also be explained by the advantage of using forecasts in valuation purpose rather than using historical data, which is the case in models such as Sharpe-Lintner's Capital Asset Pricing Model or Fama and French's three factor model.[19]

Through screening of previous empirical literature on the subject, we have found that the majority of earlier studies focus on reverse engineering the implied required rate of return. However, the usage of the method to instead solve for the implied growth rate, which will be done in this study, is supported by several credible authors within the field such as Penman and Easton. Some studies even solve for the required rate of return and the growth in residual earnings simultaneously[20]. Given that the growth factor has not been reverse engineered from the RIV as often as the required rate of return we are hoping to make a valuable contribution to the already existing literature within the field.

2.2 Choice of valuation model

The basic prerequisite for reverse engineering is that it is performed on a suitable valuation model. The model should: 1) be based on information available at the valuation point in time, 2) hold growth as one of the variables, and 3) from a fundamental valuation perspective be as accurate as possible.

Previously, reverse engineering has mainly been performed on the Discounted Cash Flow (DCF), Residual Income Valuation (RIV) and Abnormal Earnings Growth (AEG) models. The latter two of these models, RIV and AEG, are based on accounting-based information. This has been proved to be more reliable empirically than using models based on cash flow,

[19] Easton (2009) p. 242
[20] Easton (2009)

such as the DCF. An additional disadvantage with the DCF is that the model requires forecasts of the dividend growth rate in perpetuity. This is a rather difficult factor to determine from a fundamental perspective and leaves room for potential value errors. To avoid the problem, Claus and Thomas recommend that the RIV model should be used instead[21]. Also Penman emphasizes the advantages of the RIV model. He highlights that the model focuses on value drivers, such as the profitability and the growth of investments. It incorporates values already recognized in the balance sheet and forecasts the income statement and balance sheet rather than the cash flow. The connection between accounting and value is better matched than the connection between cash flows and value[22].

When choosing between the two accounting-based valuation models, RIV and AEG, there is an advantage in using the RIV. Penman (2005) compared the historical values obtained by both RIV and AEG models with the firm's actual share price and found that the RIV-values were much more accurate than those estimated by the usage of AEG. Furthermore, he found that the AEG-estimates are much more variable which also favours the RIV model. We conclude, in accordance with Penman, that RIV provides a more accurate forecast of a firm's value than AEG and it will therefore be used as our preferred valuation model. It has empirically been used more frequently and it is built on parameters that are easy accessible in terms of public accounting information and expected earnings forecasts by analysts[23].

2.3 Residual Income Valuation (RIV)

Equity valuation models were originally considered as a part of the pure finance field. So called asset pricing models (such as the CAPM) have been thoroughly developed, but these are models for risk and required rates of return and not for the value of the equity itself. Instead, the area of pure equity valuation models has caught the interest of financial accounting researchers during the last decades. Equity analysis is basically an examination of information about the firm, and accountants are daily dealing with this type of information.[24] The model which we will build our analysis on is based on accounting values and is referred to as the Residual Income Valuation model. It shows how book value and forecasted earnings relate to expected dividends and to value.[25]

[21] Claus & Thomas (2001) p. 1631
[22] Penman (2007) p. 175
[23] Penman (2007) p. 127
[24] Nissim & Penman (2001) p. 109
[25] Nissim & Penman (2001) p. 110

The RIV model restates the non-controversial and frequently used dividend discount model by rewriting the equation in order to express values in terms of accounting numbers instead of forecasted dividends[26]. It is also of interest to point out that dividend- and cash flow valuation models in the end generate the same value as the RIV model under certain conditions. This is proven in numerous studies, one of the most widely known is written by Penman (1997)[27] and commonly referred to within equity valuation.

The foundation of the RIV model is the value attribute of expected dividends less any capital contributions. This can be written as:

1)
$$V_0 = \sum_{t=1}^{\infty} \frac{(Div_t - N_t)}{(1 + r_e)^t}$$

where: V_0 = fundamental value of equity in the firm
Div_t = dividends
N_t = new issue of shares
r_e = required rate of return

The *clean surplus relation of accounting* allows us to rewrite the formula. This relationship, also known as *accounting stocks and flows equation*, requires that all items with an impact on book value of equity are included in earnings. In other words, the book value of equity at the end of a period equals the book value at the beginning of that period plus the earnings for the period minus net dividends:

$$BPS_t = BPS_{t-1} + EPS_t - DPS_t + N_t$$

or

$$DPS_t = EPS_t - \Delta BPS_t$$

Where: BPS = book value per share
EPS = earnings per share
DPS = dividends per share
N_t = new issue of shares

The above assumption is strong and rarely holds in practice. This may be a possible weakness of the RIV model. For example, current accounting rules state that some unrealized gains and losses, such as gains and losses from certain financial instruments and exchange rate differences, should be put directly on the balance sheet[28]. Another argument is that future

[26] Nissim & Penman. (2001) p. 112
[27] Penman (1997)
[28] IAS 21 The effects of Changes in Foreign Exchange Rates & IAS 39 Financial instruments

equity transactions, that are expected to change the number of outstanding shares, will affect the book value on a per-share basis. Ohlson realises this shortcoming of the model and to avoid the clean surplus assumption problem, he developed the AEG model that we mentioned in chapter 2.2. The AEG model's structure is similar to the one of the RIV model. The difference is that AEG does not use book values but instead focuses only on future expected EPS. The book values in the RIV model are exchanged for capitalized forward earnings in the AEG model.[29] However, as stated in section 2.2, we consider the RIV model empirically superior to the AEG model thus we assume the clean surplus relationship to hold in terms of expectations. Given that the changes can be both positive and negative, we believe that this assumption is reasonable. The effect of the clean surplus assumption is unknown and we have therefore, as many other studies, chosen to ignore these validity discussions[30].

Given the assumption of clean surplus, the RIV model will be rewritten as:

2) $$V_0 = BPS_0 + \sum_{t=1}^{\infty} \frac{(EPS_t - r_e * BPS_{t-1})}{(1 + r_e)^t}$$

Where: BPS = book value per share
EPS = earnings per share
r_e = required rate of return

The first part of the model (BPS0) is the book value per share of common shareholders' equity. The second part, $[(\sum (EPS_t - r_e * BPS_t\text{-}1)) / (1+r_e\text{^}_t)]$, reflects what is referred to as the *residual income,* sometimes also known as residual earnings or abnormal earnings. This value reflects the income that the firm can gain above the required income (based on the market's required rate of return, r_e) and captures the value that will be added to book value[31].

Model 2) assumes that we calculate all residual incomes for the firm until infinity. Making such a forecast is impractical and therefore the model is further sophisticated by defining an explicit forecast period and a horizon value for the future beyond that period. This continuing value is the value at T of residual earnings beyond T and can take following three forms depending on the underlying growth expectations:

[29] Ohlson (2001)
[30] Easton (2009) p. 267
[31] Penman (2007) p. 156

$CV_T = 0$	(CV1)
CV_T = Residual $Income_{T+1}$/ r_e	(CV2)
CV_T = Residual $income_{T+1}$/ (r_e-g)	(CV3)

where: CV= continuing value
r_e = required rate of return

Assuming CV1 would mean that the firm is expected to enter a steady state in horizon of zero residual earnings. Applying CV2 allows positive but constant residual earnings in steady state. The third and most sophisticated version, which will be assumed in our study, allows perpetual growth in expected residual earnings.[32] If we would find an implied growth rate in residual earnings equal to zero for any of the firms in our empirical study, we could conclude that the no-growth case, CV2, is true for that specific firm.

Below is a description of the RIV model that will be used in our analysis. A full derivation of this model is presented in appendix 5.

3)

$$\underbrace{V_0 = BPS_0}_{1} + \underbrace{\sum_{t=1}^{T} \frac{(EPS_t - r_e * \mathrm{BPS}_{t-1})}{(1+r_e)^t}}_{2} + \underbrace{\frac{(EPS_T - r_e * \mathrm{BPS}_{T-1}) * (1+g)}{(r_e - g) * (1+r_e)^T}}_{3}$$

where: BPS = book value per share
EPS = earnings per share
r_e = required rate of return
g = long-term growth rate

The above RIV model consists of three building blocks[33]. The first component is the book value of equity at the beginning of the period, a value that is known for sure. The second component is the sum of the residual incomes during the explicit forecast period. This value is based on near-term rather confident forecasts, usually made by analysts. The third component is the horizon value. This represents the long-term value of equity and is the component that contains the forecasted growth factor that we will solve for through reverse engineering. This is the foremost speculative part, and at the same time it often represents a large part of the value. We emphasize the importance of understanding this value from a valuation perspective and will further discover its elements in section 3.2.5. A figurative way of showing the different components in the RIV model is presented below.

[32] Nissim & Penman (2001) p. 113
[33] Penman (2007) p. 185

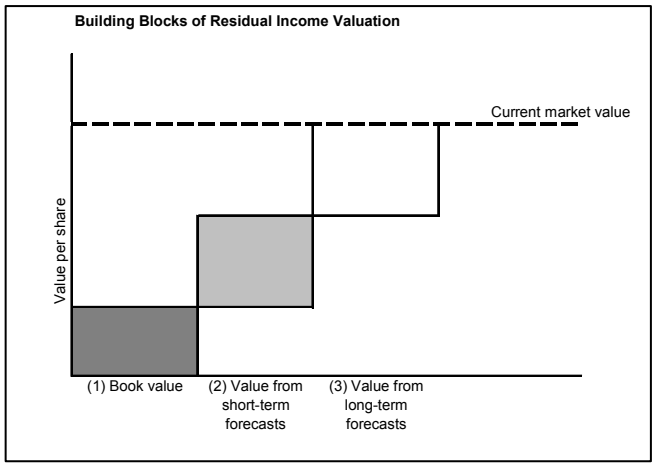

Figure 4 – Building blocks of the Residual Income Valuation model
Source: Penman (2007) p 185

As shown in equation 3), the RIV model contains estimates of the long-term future growth in residual income at the horizon. This is the growth we will solve for through reverse engineering, by exchanging the fundamental value with the current share price and add market estimates. Section 3.2 describes more specifically how we solve for the implied long-term growth in practice.

3. Method

The purpose of this examination is to estimate the expected long-term growth rate implied by market prices, accounting numbers and analysts forecasts. Our method of doing so is to back out the expected growth in residual earnings through reverse engineering.

Our calculations are based on the following model:

$$V_0 = BPS_0 + \frac{(EPS_1 - r_e * \mathrm{BPS}_0)}{(1+r_e)^1} + \frac{(EPS_2 - r_e * \mathrm{BPS}_1)}{(1+r_e)^2} + \frac{(EPS_3 - r_e * \mathrm{BPS}_2)}{(1+r_e)^3} + \frac{(EPS_4 - r_e * \mathrm{BPS}_3)}{(1+r_e)^4} + \frac{(EPS_5 - r_e * \mathrm{BPS}_4)}{(1+r_e)^5} + \frac{(EPS_5 - r_e * \mathrm{BPS}_4) * (1+g)}{(r_e - g) * (1+r_e)^5}$$

The parameters in the above model and our estimation of their values will be thoroughly described in section 3.2.

3.1 Choice of data studied

3.1.1 Firms studied

We are searching for the future expectations for clothing retailers. The criteria 1) the company being a clothing retailer, and 2) the company being listed on the Swedish stock market, has created the below exhaustive list. With the Swedish retail sector as a starting-point, we have created a smaller sub-sector referred to as the clothing sector. The companies included in our portfolio are, in order of market cap; Hennes&Mauritz, KappAhl, Fenix Outdoor, Björn Borg, RNB Retail and Brands, Odd Molly and WeSC. See appendix 1 for company descriptions.

3.1.2 Dates studied

We have observed that previous studies of this kind generally only examine two specific dates and make comparisons between these two points in time[34]. Some studies look at historical valuation dates while others look at more current dates. We have chosen to examine current as well as historical values on a more continuous basis. Hence, several valuation points in time will be included in the list of observations. We will perform a cross-sectional analysis, meaning that we collect the share price at the exact same dates for all companies. Our choice of the examined dates is based on the companies' fiscal years. These differ for the seven clothing companies, which is natural in the retail industry, due to seasonal sales and reporting in accordance with that. Three out of seven of the companies have a full fiscal year from 1 January – 31 December. Two companies have a fiscal year that runs 1 September – 31 August. Another company has a fiscal year of 1 December – 30 November, and lastly, one has 1 May – 30 April. The table below shows the interim years for each company as well as our chosen dates of examination.

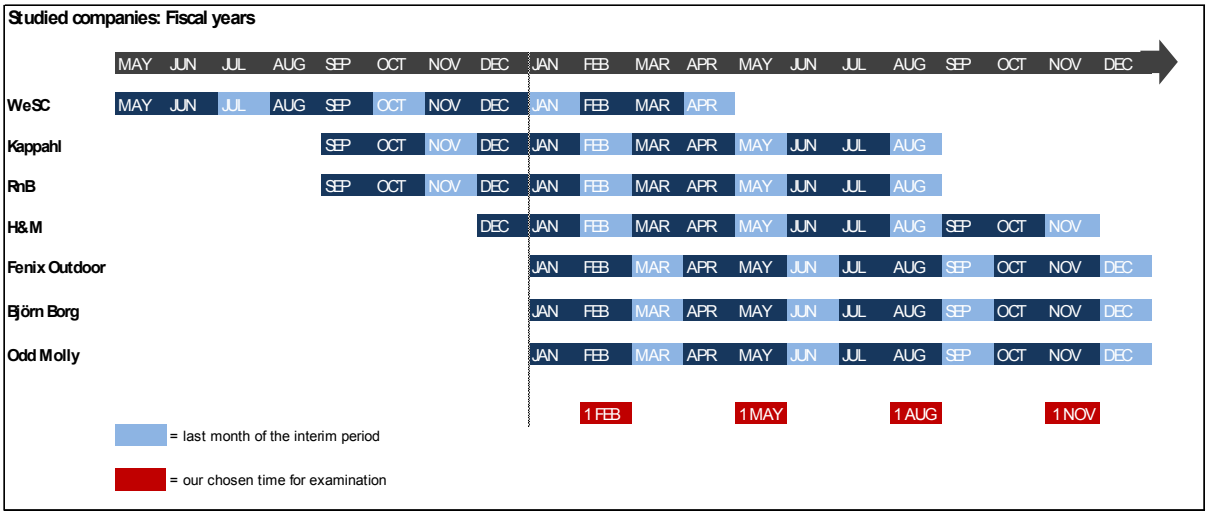

Figure 5- Fiscal years clothing companies
Source: Company annual reports

[34] e.g. Sellgren & Eng (2007) and Stöde & Prelevik (2001)

Immediately after the release of a company's interim report the share prices usually change more than in an average day[35]. Therefore, if we use these values, the analysis will be affected, positively or negatively, by the latest report. In our examination, we would like to have the most neutral numbers possible in terms of share prices and estimates. Therefore we have chosen the following dates: 1 February, 1 May, 1August, and 1 November. As can be seen in the above table, these dates are least affected by interim reporting. Compared to similar studies[36], four examination points per year is regarded as extensive and should eliminate the problem with temporarily drops or peaks of the market. In addition to these four yearly dates, we have also chosen to look at 25 November2009, to get a value that is as up to date as possible.

Throughout the text, we have chosen to name the financial year after the year that has the most number of months included in the accounting, i.e. what H&M refers to as 2008/2009 in their financial reports (1 November, 2008 – 31 October, 2009) will be named 2009 in our report, since most of the months are in 2009. This is in accordance with Datastream standard and also the general practice in the financial industry when comparing estimates.

3.2 The Residual Income Valuation model and its parameters

In the reverse engineering of the RIV model, the following parameters are needed in order to solve for the implied growth rate: share price, book value of common equity, earnings per share (EPS) and dividend per share (DPS) forecasts, and the required rate of return. The horizon value and the choice of steady state year, also has to be considered.

3.2.1 Share Price

The fundamental value, V_0, of the RIV model will be replaced by the current share price in order to solve for the implied long-term growth rate. The share prices are collected from ExcelConnectFactset.

3.2.2 Book value of equity

The book value of equity is collected from the companies' respective interim reports. The same numbers are available from databases. However, in order to obtain precise and

[35] Financial analyst, interview 2009-10-15
[36] E.g. Claus & Thomas (2001)

comparable numbers, and also to ensure they are corresponding to the correct period, we have calculated them manually from figures in the interim reports.

3.2.3 Analysts' forecasts of earnings per share (EPS) and dividend per share (DPS)

The EPS and DPS consensus values are based on all available sell-side equity analysts' forecasts. These are presented alongside a buy- or sell recommendation. These forecasts are provided by DataStream's I/B/E/S function, which is a database collecting analyst forecasts. The estimates are updated in the middle of each month[37].

As mentioned in 3.1.2, the studied companies do not have the same fiscal year ends. However, this does not create a problem since the forecasts in I/B/E/S are not per calendar year but defined according to the company's fiscal year as FY1, FY2 etc[38].

For the main part of the companies included in our study, EPS and DPS forecasts are available for FY1 - FY5. However, for some dates there are no estimates presented for FY4 and FY5 for some of the companies. In situations where there are no DPS estimates available for year 4 and 5, we use the last estimated payout ratio (year 3) and calculate the dividend on basis of the EPS estimate. When EPS estimates are not available for year 4 and 5, we have assumed a growth in EPS that is the same as from year 2 to 3. The closer we approach horizon, the lower the growth will be. Extreme values of growth in earnings are usually only predicted in the nearest future (year 1-3), hence in cases where there is a growth in EPS estimates from year 2 to 3 larger than 25 percent, we have only assumed a continuous growth rate of 25 percent.

3.2.4 The CAPM and the required rate of return

The RIV model calls for an input of a required rate of return. Calculations of these rates are made through the use of the traditional capital asset pricing model, CAPM, introduced in the mid-1960s by Sharpe, Lintner and Treynor.

The CAPM specifies the required rate of return as the risk-free return plus a risk premium, determined by the equity beta of the firm[39].

[37] Thomson DataStream
[38] Thomson Financial (2000) p. 2

The traditional CAPM formula is written as:

$$r_e = r_f + \beta * (r_m - r_f)$$

where: r_e = The required rate of return for stock i.
r_m = The required rate of return for the market
β = The stock's beta value
r_f = The risk-free rate of return

An investor requires a higher rate of return for taking on more risk. The risk of importance is the non-diversifiable risk, i.e. the systematic risk. This risk can not be avoided regardless of how much you diversify the portfolio[40].

Whether CAPM really reflects the accurate required rate of return or not, has been widely discussed. Critics argue that CAPM fail to incorporate several important risk factors and is therefore not in accordance with actual rates of return. In a study performed by Fama and French in 1992, it was concluded that CAPM could not explain the high rates of return of listed companies on the New York Stock Exchange over the last 50 years[41]. Siegel and Thaler claim the CAPM rate of returns to be too low to validate high returns, and they describe the phenomena as the *equity premium puzzle*[42]. Furthermore, there have been discussions among investors whether beta is an appropriate approximation of risk and whether the market volatility is the only relevant risk factor. The latter is particularly interesting for us since our study includes several small companies, in terms of market capitalization, which potentially could be affected by liquidity risk. Trade in these shares is moderate and hence there is a risk of market inefficiency[43]. However, in finding the stock market's implied expected growth-rate, it is of interest to examine and use the required rate of return actually used by the market itself. Yearly surveys performed by ÖhrlingsPriceWaterhouseCoopers show that CAPM is the primary source used by the financial market for estimation of the required rate of return[44]. This is also confirmed in an interview with a financial analyst[45]. Many studies, including master theses at Stockholm School of Economics[46], have been performed with the purpose of proving or rejecting the accuracy of CAPM. These studies use the same method as ours, i.e.

[39] Penman (2007) p. 98
[40] Brealy, Myers (2006) p. 162
[41] Fama & French (1992) p. 464
[42] Mehra & Prescot (1985)
[43] Penman (2007) p. 704
[44] PriceWaterhouseCoopers (2007) p. 3
[45] Financial analyst interview. 2009-10-15
[46] For example: Sellgren & Eng (2007) and Karlsson & Patomella (1994)

reverse engineering of the RIV model to find the implied required rate of return. However, since our study concerns finding the implied expected growth-rate, the CAPM discussion is not of as large importance to us. We will accept the required rate calculated through CAPM to be used as a locked parameter in the reverse engineering of the RIV model.

Our calculations of the required rate of return is made year-specific and individually for each company. They require assumptions regarding the following parameters: *market risk premium*, *risk-free rate*, *beta* and *size premium.*

Market risk premium: To calculate the required rate of return, the market risk premium (E(rm) – rf) is needed. There are two methods to solve for the risk premiums: ex post and ex ante. The first method looks at historical returns and described and calculated by Ridder and Vinel for the period of 1937-1987 [47] and by Frennberg and Hansson for the period 1919-1990[48]. However, to solve for the stock market's implied growth rate as in our thesis, we are interested in the forward looking market premium, i.e. the ex ante risk premium. ÖhrlingsPriceWaterhouseCoopers presents yearly reports of the ex ante expectations for the market risk premium, according to actors within institutional funds, venture capital firms and investment banks as well as corporate finance advisors[49]. These have been used in our calculations of required rate of return.

Risk-free rate of return: The risk-free rate of return used in our calculations is the rate of Swedish government bonds with ten years to maturity. This rate is often used in an academic approach to valuation and the bulk of ex ante risk premium studies use this rate[50]. Also, in the world of professional investors, this is a common choice of risk-free rate. According to PWC's survey, the majority of the respondents use the ten-year Swedish government bond as the underlying risk-free rate[51]. In an interview with a financial analyst we learned that an alternative approach that many analyst uses is to set the risk-free rate as a constant at 4.5 percent regardless current rate.[52] Our thesis however, aims to approach the stock market as academically as possible and with high accuracy; hence the choice falls at the ten-year government bond rate. Furthermore, the choice of a long maturity rate seem appropriate,

[47] Öhrlings PriceWaterhouseCoopers (2009)
[48] Öhrlings PriceWaterhouseCoopers (2009)
[49] Öhrlings PriceWaterhouseCoopers (2004, 2005, 2006, 2007, 2008 and 2009)
[50] Claus & Thomas (2001) ; Daske, Gebhardt and Klein (2006); Gebhardt, Lee and Swaminathan (2000)
[51] Öhrlings PriceWaterhouseCoopers (2009) p. 6
[52] Financial analyst interview, 2009-10-15

considering that the risk-free rate should correspond to the horizon value of the RIV-model, which is based on all future year[53].

Beta: Calculation of beta-values is dependent on the historical volatility of the share in comparison to the overall market. Several of our firms studied have not been publicly traded for a long enough period to calculate truthful historical volatility, and some are trading in very limited volumes. This means we end up with misleading betas for several of the companies. After thorough consideration, we chose to use a sector beta of 1,14 percent, which is legitimate according to a study performed at Stern University[54], for all companies examined. This beta is somewhat higher than the company-specific (and to a large extent misleading) betas. A higher beta leads to a higher required rate of return, and by using a higher rate of return we add conservatism to our study. This since we are searching for high long-term implied growth rates, and increasing the required rate of return means lowering the implied long-term growth rates found through reverse engineering. The required rate of return is also tested for in our sensitivity analysis in chapter 4.3.

Size Premium: According to several empirical studies, the same required return can not be used for valuation of shares in large public companies as for valuations of smaller companies. Practitioners commonly attain smaller companies a higher discount rate to compensate for higher liquidity risk and higher default risk.[55] This is confirmed by a yearly study performed by PWC, asking investors about the size premiums that they use in their valuations. The size premium is added to the market risk in the CAPM formula. Figure 6 states the results of PWC's survey regarding size premiums for companies of various sizes.

Size	Size premium (PWC 09)	Companies
Market Cap < mSEK5000	1.2%	KappAhl
Market Cap < mSEK2000	1.6%	Fenix Outdoor, Björn Borg, RNB, WeSC, Odd Molly
Market Cap < mSEK500	2.6%	
Market Cap < mSEK100	3.9%	

Figure 6 - Size premium
Source: PWC (2009)

[53] Claus & Thomas (2001) p. 1640
[54] NYU, Stern University (2009)
[55] Bonnier & Rodriguez Forsgren (2009)

3.2.5. Horizon

It is of great importance to find a forecast horizon within which the growth can be assumed to have reached a permanent level in order for this continuing value to be accurate[56]. DataStream's I/B/E/S does not provide analysts' forecasts for more distant future than five years ahead. Although it is far from obvious how to determine the horizon time, the five-year time-period that we have data provided for, coincides with a suitable choice for the terminal value of our clothing companies. When the company enters steady state it is supposed to grow at a constant pace. This pace is the long-term growth rate we will solve for through reverse engineering. In order for us to decide whether that growth pace is reasonable or not, it is benchmarked towards the growth in GDP plus the expected inflation.

The choice of steady state and horizon will affect the valuation model. Abnormal performance for a company is assumed to diminish over time and Nissim and Penman have found that after five years its probability should be eliminated. The authors have in their study separated observed firms into different portfolios depending on the firms' original levels of several different ratios, such as return on equity (ROE), return on net operating assets (RNOA) etc. They show that after five years, residual incomes tend to converge to central values although this permanent value often is a non-zero-value. This is referred to as *mean reversion*. The residual incomes are driven by rates of return and growth in book values and therefore it is worth mentioning that Nissim and Penman found mean reversion in ROE, RNOA and in growth of book values on a five year basis as well.[57] As previously mentioned in chapter 1.1, Residual Earnings can be expressed in terms of ratios as:

$$RI_t = [ROE_t - r_E]^* BV_{t-1}$$

where: RI = residual income
ROE = return on equity
BV = book value of equity

Swedish studies have found these time horizons to be as short as four years[58]. This is favourable for our study as the growth factor should contain valid information about how the market looks at the companies' growth in the long-run. Determining the horizon period in a

[56] Nissim & Penman (2001)
[57] Nissim & Penman (2001)
[58] Bergmark & Cecchini (2002)

more precise manner require a rigorous separate study of each of the individual companies. In performing such a study, factors of interest would be patents, entry barriers to the business, the competitive environment, product mix etc. However, an analysis of this kind is outside the scope of this thesis. The characteristics of the retail business enable a rather short horizon point. This is due to the lack of patents in combination with how menial it is to imitate clothes compared to comparisons in industries with more complex products. There is a limited amount of momentum in the clothing business and specific styles can be out of fashion after a short period of time. This is especially true for the smaller retailers. An exception of the rule could be H&M that has been exceptionally successful and has presented a concept that has proved to be difficult to plagiarize.

3.3 Processing and examination of the data

The following version of the RIV model is used in the study:

$$V_0 = BPS_0 + \frac{(EPS_1 - r_e * \mathrm{BPS}_0)}{(1+r_e)^1} + \frac{(EPS_2 - r_e * \mathrm{BPS}_1)}{(1+r_e)^2} + \frac{(EPS_3 - r_e * \mathrm{BPS}_2)}{(1+r_e)^3} + \frac{(EPS_4 - r_e * \mathrm{BPS}_3)}{(1+r_e)^4} + \frac{(EPS_5 - r_e * \mathrm{BPS}_4)}{(1+r_e)^5} + \frac{(EPS_5 - r_e * \mathrm{BPS}_4) * (1+g)}{(r_e - g) * (1+r_e)^5}$$

where:
BPS = book value per share
EPS = earnings per share
r_e = required rate of return
g = long-term growth rate

The data examination and analysis consist of two parts. First we look merely at the long-term growth rates implied by share prices and the estimates at different points in time. Secondly we perform a firm-specific analysis of each of the seven companies and compare three different growth rates: *historical-*, *estimated short-term*, and *estimated long-term.*

Our initial intuition was that, since the growth discussion within the clothing retailer sector has focused merely on exceptionally high growth rates, this could also be reflected in the share price. Therefore, the first part of the analysis will include a testing of the following hypothesis.

The implied long-term growth rate, for the overall clothing retailer sector, will be higher than our approximated benchmark of 4 percent.

The usage of the 4 percent benchmark is supported and further explained in section 4.1.

3.4 Sensitivity analysis

The main part of the analysis will focus on the implied long-term growth rate attained from reverse engineering of the RIV model. Studying the RIV model and its parameters, it is found that the variables with the largest impact on the outcome are the required rate of return (r_e) calculated by using CAPM and the EPS forecast by analysts. These two parameters have therefore been tested in a sensitivity analysis. In the analysis we have also chosen to include a third factor: the choice of valuation of the horizon value.

Required rate of return: The required rate of return used is calculated by the capital asset pricing model, CAPM. The variables used in the model have all been estimated (risk free rate, beta, size premiums and the market risk premium) and therefore a change of input variables will change the r_e. In the sensitivity analysis, the required rate of return will be changed by 10 percent, both up and down.

EPS forecasts: Estimates of EPS for an explicit forecast period of five years are used. These are collected from DataStream and represents consensus forecasts by financial analysts. Under efficient market conditions, the shares should be traded at the fundamental value. However, as stated in section 4.1, this can not be assumed empirically. Due to reasons such as the theory of *analyst optimism*[59] the forecasts of EPS might need revision. In the sensitivity analysis, EPS_1 – EPS_5 will be revised by 10 percent in each direction. The theory of analyst optimism will be further discussed in section 4.1.1.

Horizon Valuation: The concept of reverse engineering has increased in usage during the last decade and mostly, the RIV model is used for calculations. Even though the same underlying fundamental valuation model is used, there might be several ways of calculating the horizon value. The calculations in this study are based on the method developed by Easton[60]. His calculation of horizon value (1) differs from the calculations by for example Skogsvik (2)[61].

1) $$\frac{(EPS_T - r_e * BPS_{T-1}) * (1+g)}{(r_e - g) * (1+r_e)^T}$$

[59] Easton and Sommers (2007)
[60] Easton (2009)
[61] Skogsvik (2002)

2) $$\frac{(EPS_{T+1} - r_e * BPS_T)}{(r_e - g) * (1 + r_e)^T}$$

where: EPS = earnings per share
BPS = book value per share
r_e = required rate of return
g = long-term growth rate

The two equations might seem similar, but the largest difference is that they asses the EPS in horizon differently. In the sensitivity analysis, the return on equity for year T will be calculated and then used to attain the EPS for year T+1. The horizon value will then be calculated in accordance with formula 2 and compared to our original usage of formula 1.

4. Results and Analysis

The analysis is divided into two parts. The first part includes our hypothesis testing and assesses the long-term implied growth rates merely. In the second part, we analyze the growth rates at a firm-specific level. The historic-, short-term- and long-term growth rates will put in relation to each other to discover a possible correlation.

4.1 Implied long-term growth rates

The long-term implied growth rates have been calculated through the concept of reverse engineering. The RIV model presented in 3.3. was set up and with all necessary input, specified in 3.2., we could solve for the implied long-term growth rate with the "Problem Solver" function in Excel. The specific input data that has been used is presented in appendix 2. The same appendix also shows the results of our calculations, i.e. the implied growth rates (g) over time for each of the shares.

Our cross-section analysis examines the implied growth rates for seven different companies at 30 different points in time. Examinations are done quarterly for a period of 6 years. In addition to that, the 25 November is also examined, a date that should represent the most current values in this thesis. It should be noted that there is not available data for all companies at all dates. This is mainly due to two reasons: Firstly, some of the companies have not been listed for the entire examination period and consequently there are neither available share prices, nor analyst forecasts. Secondly, some of the companies have not been covered

by financial analysts for the full period. In case there are no available analyst forecasts, the date has been excluded from our study for that specific company.

Some of the long-term growth rates obtained through reverse engineering were extreme values. The reason for that seems to be sudden drops or peaks (mainly drops) in share prices. To facilitate comparison, we have chosen to exclude the extreme outliers. The extreme values excluded are either growth rates above the required rate or return, r_e (due to model requirements) or growth rates below the cost of capital number taken negative (to gain equality in comparison). 15 extreme values have been eliminated out of 111 values obtained in total.

In order to analyse the level of the long-term implied growth rate, we benchmark it to what might be viewed as a "stable" long-term growth. A common way of estimating the growth in horizon is to take the inflation expectations and add the expected GDP growth for the economy. Hence, our calculated growth benchmark will be the Swedish Central Bank's inflation target of 2 percent[62] plus the expected long-term growth in GDP of 2 percent[63]. The inflation target is defined as the yearly growth in Swedish consumer price index, CPI. This is the most common measure of inflation world-wide and easy for the central bank to track since there are monthly publications of the levels. The GDP is expected to grow in line with the historical average. Since 1980, GDP has grown with an average of 2 percent per year. Our benchmark growth rate in the horizon is therefore: 2 percent + 2 percent = 4 percent.

4.1.1 Level of growth rates

The current (November 25, 2009) level of average implied long-term growth rate for the clothing retailers is found to be 3,6 percent. This is above the historical average for the time period between 2004-2009 of 2,9 percent, but still below the benchmark growth rate of 4 percent, defined in 4.1. Hence, we can directly conclude that our hypothesis (that the current implied long-term growth rate is higher than the benchmark) is not supported.

The following graph shows the implied growth rate over time for the retail sector together with the average growth rate for the period. The graph also includes the growth rate used for benchmarking. The sector average calculated is based on an equally weighted portfolio of our seven companies studied. The reason why it is not value weighted is that in that case, only

[62] Swedish Central Bank (2009)
[63] Konjunkturinstitutet (2009)

H&M results would be visible, since it is one of the largest company on the OMXS in terms of market cap and the other companies studied are mainly small cap firms.

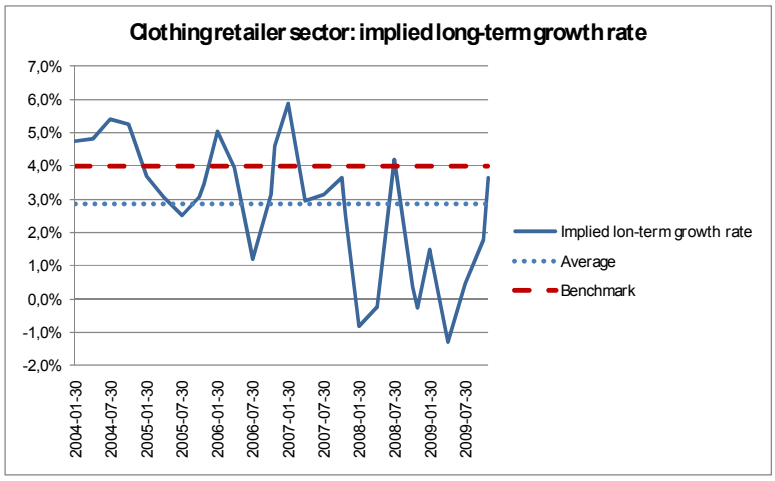

Figure 7 –Implied long-term growth rates over time for the clothing retailer sector
Source: PWC (2009)

The current implied long-term growth rate is 3,6 percent. For the full period from 2004-2009, we find the clothing retailer sector's average implied growth rate to be 2,9 percent, which is 1,1 percent below the benchmark. This could actually imply two things: 1) That the shares are traded at a too low price level, given the assumption that analyst estimates are correct or 2) that the analysts are too optimistic in their estimates of forecasted EPS during the explicit forecast period.

The first explanation is based on the idea of the efficient market hypothesis[64], assuming that the financial market is efficient in terms of information. Hence, prices on traded shares should reflect all known information, and instantly change to reflect new information. In our study, this would mean that since analysts and investors have access to the same information, the share price should be based on the same information as the analyst estimates, and hence correlate. If the long-term implied growth rate is lower than the benchmark and we assume the estimates to be correct, then the share should trade at a higher price since the fundamental value attained from the RIV model is higher than the current share price. There has been critique against the efficient market hypothesis. The difference in share price and fundamental value could be explained by the fact that not all investors trade on a strategy based on fundamental value, but rather based on what other do. One example is so called *noise*

[64] Fama (1965)

traders[65] that buy or sell a share on information without checking out whether that information is already incorporated in the share price or not. This phenomena has been displayed especially after hedge funds and risk capitalists have chosen to invest in companies. The noise traders then follow their action in the belief that the fund managers have found something that the market is not aware of. Further, the *theory of greatest fool* can be used to explain mispricing in relation to fundamental valuation models. This concept is often the reason behind economic bubbles and means that some investors buy an asset even though they know it is over-priced. The motive is that they believe they can sell the asset to an even greater fool and hence make a short-term gain. The bubble will build up and not end until no greater fool can be found. Even the fact that analyst valuation often lead to a buy- or sell recommendation would imply that the prices are not fully a reflection of fundamental valuation.

The theory of market efficiency is often used to explain the phenomena of shares traded at a price higher than fundamental value. In this examination it has been found however that the shares should be traded at a price lower than the fundamental value, given that we believe analyst estimates for the explicit forecast period to be correct.

In the first explanation, we assume analysts' estimates to be correct and market prices to be driven by other factors than the public information and fundamental values. In the second explanation we instead question the accuracy of analyst estimates. When using analysts' earnings forecasts as input in a model to solve for a variable, one should be aware that these forecasts are sometimes known to be optimistic[66]. Studies confirm the fact that analyst optimism yields an upward-biased expected rate of return. In our case the analyst optimism would result in a downward biased long-term growth rate. If the analysts' forecasts of the 5 years' future earnings are too optimistic, i.e. if they are set higher than merited; the model will put more weight on the value of the explicit forecast period and therefore yield a lower growth in horizon given the share price.

The reason that the growth rates that we have calculated does not coincide with the GDP plus inflation rate could hence be due to analyst optimism. Most of the literature on this subject concerns *ex post* measure of optimism. *Ex post* measure means that forecasts of earnings are

[65] Black (1985)
[66] Easton & Sommers (2007)

compared to realizations of the same earnings. In 2007 Easton and Sommers introduced an *ex ante* measure of optimism. In their study they compared the expected rate of return implied by current market prices and analysts' earnings forecasts of next period's earnings with the expected rate of return implied by these prices and current earnings. The difference was found to be 2,84 percent. Easton and Sommers discuss the possibility that the analyst optimism cancel out the equity premium that has been approximated around 3 percent in various studies concerning the same data[67]. The fact that the comparison is made at the same time as the forecast is made, (*ex ante)*, instead of after the realization, (*ex post),* makes it particularly relevant for two reasons. Firstly, because it provides a measure of the bias at the time it is actually needed and secondly because the optimism/pessimism is not affected by unforeseen events occurring between the forecast date and the earnings realization.[68]

4.1.1.1 Negative implied growth rate

Some of our attained implied growth rates were negative numbers. The previously explained figure by Penman (figure 4) will be used when explaining the underlying reason:

The RIV model values shares in three building blocks: (1) Book value, known for sure; (2) value from near-term forecasts, in our case for five years, usually made by analysts with some confidence; and (3) value from long-term growth forecasts, the most speculative part of the valuation. The same relationship between the building blocks and total value can be seen in the RIV model itself.

The first block is known but the second and third blocks are based on forecasts made by analysts. This study compares the value of the three building blocks with the current share price. By keeping the value of block two constant in accordance with analyst EPS forecasts, we solve for the value of block three, i.e. the implicit growth rate in the horizon. Simplified, one could say that the third block is adjusted to set the total value equal to the share price.

In some cases, the current share price is lower than the fundamental value obtained by the RIV model. The third building block would then have to be negative to adjust the fundamental value to the share price, i.e. the generated long-term implied growth rate is negative.

[67] The equity premium is estimated at 3 percent or less in Claus and Thomas (2001), between 2 and 3 percent in Gebhardt, Lee, and Swaminathan (2001), and 4.8 percent in Easton et al. (2002)
[68] Easton and Sommers (2007)

The assumption that the long-term growth should be negative is unlikely, in accordance with Nissim and Penman's three options for continuous value presented in 2.3. Either we assume continuous value of residual earnings to be zero, positively constant, or with a positive growth rate[69]. If growth in the horizon would be negative, then eventually the company would destroy itself and its book value. Instead, the finding of negative implied growth rates indicates the same two possible reasons as above: either that the shares are traded at a too low price or that the analyst estimates of EPS are too high.

4.1.2 Variation of implied growth rates

Figure 8 shows the implied growth rates for the specific shares compared to the overall OMXS index.

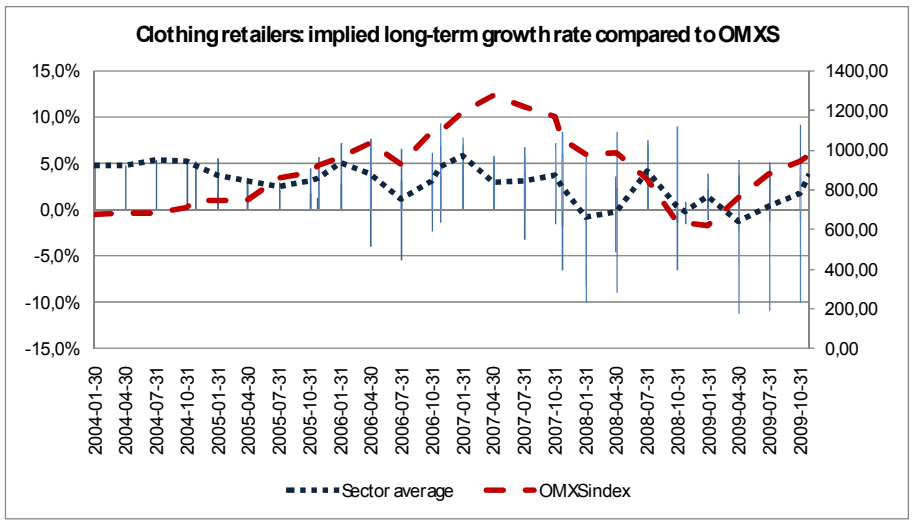

Figure 8 –Clothing retailer sector's implied long-term growth rate compared to OMXS
Source: PWC (2009)

There is correlation between the implied long-term growth rate and the overall OMXS share index, i.e. when the market is highly priced, the implied growth rates are high, and vice versa. We accept the correlation, but can not through this study conclude which factor is dependant on the other. However, the reasoning behind the relationship is logic. Firstly, when analysts forecast high earnings and growth, this raises the fundamental value of the company, which according to the efficient market theory explained earlier, should drive market prices higher. Secondly, in times of high market prices, analysts tend to be more optimistic in their estimates

[69] Nissim & Penman (2001) p. 113

than under low-valued market conditions. This idea is in line with what Fama refers to as the *morbid fear of a recession*[70].

Adding a trend line to the graph of implied long-term sector growth rates, we see that the levels at which the values are fluctuating around has become lower. This pattern is confirmed when assessing the analysis on a company specific level. WeSC has, since the IPO and hence inclusion in our portfolio, been contributing with a lower implied long-term growth rates than the average. Also, during the last two years, RNB has been contributing with negative growth values and thereby decreased the average.

4.1.3 Test of significance

Considerable large differences were discovered between the implied long-term growth rates between the different companies, and also over time. The large standard deviation affects our average outcome. One of our core values assessed is the average implied long-term growth rate for the full period that we compare with the benchmark. This value has been tested with a significance test. We check whether the difference between the current observed value of the implied long-term growth rate and the hypothesized value (the benchmark) is large enough to draw the inference that the benchmark is not the true value. Therefore, the benchmark is the null hypothesis and the test aims to calculate the probability of obtaining a statistic at least as different from the hypothesized value as the observed value. If the probability is low enough, the difference is said to be "statistically significant". Since the true standard deviation is unknown and replaced by an estimate (the sample standard deviation) the test statistic is assumed to follow a t distribution with n-1 degrees of freedom. When testing the null that the population mean is equal to a specified value, the following statistic is used.

$$t = \frac{\bar{x} - \mu}{\sigma/\sqrt{n}}$$

where x = observed value
μ = expected value
σ = sample standard deviation
n = number of observations

[70] Fama (1991)

Hypothesis formulation:
H0: X=μ (Current average implied long-term growth rate is equal to 4 percent benchmark)
H1: X ≠μ (Current average implied long-term growth rate differs from 4 percent benchmark)
Calculations:

$$t = \frac{0.036 - 0.04}{\left(\frac{1.12}{\sqrt{7}}\right)} = -0{,}00319$$

The p-value corresponding to the t-value above with 6 degrees of freedom is higher than any reasonable level of significance (1 percent, 5 percent or 10 percent) and the null can therefore not be rejected. This means that the current implied long-term growth rate is likely to be close to the benchmark of 4 percent. This findings support the idea that implied long-term growth are reasonable and that there are no priced-in excessive growth rates. This is further explained in section 5.

4.2 Company-specific growth analysis

In the analysis of each of the seven companies, three different growth rates are assessed: *historical-*, *forecasted short-term*, and *forecasted long-term*. Short-term growth rate is calculated as the growth in analyst's forecasted near-term earnings. For the calculation of long-term implicit forecast rates, we use the concept of reverse engineering earlier described. The input data needed to solve for the growth is explained in section 3.2. and shown in appendix 2.

4.2.1. Historical growth

The historical growth measure is represented by the growth in actual earnings (EPS) for the firm during the period of 2005-2008. In some cases where data is not available for the full period, the interval of years is shorter. Figure 9 below shows the growth for each of the studied companies as well as the growth of the overall Swedish clothing market[71].

[71] Represented by the total sales increase for the Swedish clothing market. Source: Vem är Vem (2009)

Clothing retail sector: Growth in actual EPS					
	2005	**2006**	**2007**	**2008**	**CAGR**
Hennes & Mauritz	27%	17%	26%	13%	**21%**
Kappahl		14%	118%	-34%	**33%**
Fenix Outdoor	240%	29%	40%	29%	**85%**
RNB		-62%	1348%	-125%	**387%**
Björn Borg	12%	148%	64%	-5%	**55%**
Odd Molly	-209%	458%	257%	262%	**192%**
WeSC				627%	**627%**
Average excl RNB	*17%*	*133%*	*101%*	*149%*	***100%***
Average excl. RNB & WeSC	*17%*	*133%*	*101%*	*53%*	***76%***
Total market sales growth	**6%**	**8%**	**6%**	**2%**	**5%**

Note : CAGR = Compounded annual growth rate 2004-2008

Figure 9 –Growth in actual EPS clothing retailer sector
Source: Company annual reports

The seven clothing retailers on the stock market have had a higher earnings growth rate for the period than the overall Swedish clothing market. There might be several explanations for that. The main pattern discovered is that the smaller and younger firms (Odd Molly and WeSC) have a substantially higher growth in EPS than the more mature peers. This is in line with our initial expectations described in the introduction. The young fashion design companies have seen an exceptional growth and this gives credibility to the growth discussion regarding the Swedish fashion wonder.

However, also the more mature companies in our study have seen a strong earnings growth for the period, far above the sector sales growth. For example H&M have a 21 percent compounded annual growth rate for the years 2004-2008 and KappAhl 33 percent for 2005-2008.

RNB has been excluded from the calculated average due to changes in their business model in form of selling and acquiring new store concepts. There have also been new issues of shares, which has had a negative effect on an EPS level. Hence, its historical EPS are not comparable over time.

WeSC has been excluded in a second average calculation of growth, due to extreme positive growth during 2008, affecting the average substantially.

It should be noted that earnings growth is here compared to sales growth. The reason for this is that for the overall Swedish clothing sector, sales growth is the only available figure. Yet we would like to focus on the earnings growth at a company level in order to compare the implied long-term growth in earnings with the historic growth in earnings and from that conclude reasonability of the findings.

4.2.2. Short-term forecasted growth

The short-term forecasted growth in this study is examined by revision of the earnings forecasts made by analysts. The following table shows the forecasted growth in EPS, based on analyst estimates presented in DataStream.

Clothing retail sector: Growth in forecasted EPS						
	EPS1	EPS2	EPS3	EPS4	EPS5	CAGR
Hennes & Mauritz	2%	15%	15%	4%	11%	9%
Kappahl	21%	16%	10%	10%	10%	14%
Fenix Outdoor	21%	13%	5%	-9%	-9%	4%
RNB	107%	100%	18%	70%	25%	64%
Björn Borg	-18%	13%	15%	11%	4%	5%
Odd Molly	0%	-13%	17%	28%	25%	11%
WeSC	4%	9%	30%	25%	25%	19%
Average	*20%*	*22%*	*16%*	*20%*	*13%*	*18%*

Note: CAGR = Compounded annual growth rate for the future years 1-5

Figure 10 – Growth in forecasted EPS clothing retailer companies
Source: DataStream 2004-2009

The yearly average growth rate, for the seven companies studied, during the coming five years is 18 percent. This may seem high in comparison to the five-year historical sales growth rate annually for the Swedish clothing sector of 5 percent. However, compared to the studied firms' historic five-year annual growth of 100 percent, it is more reasonable. One should bear in mind however that the 100 percent average growth rate is affected by WeSC's extreme growth of 627 percent the last year. Excluding WeSC from the period, the yearly average historical growth rate is 76 percent, which is still a high number. In conclusion, we find the yearly average growth rate in forecasted EPS, reasonable.

4.2.3. Long-term forecasted growth

Through the concept of reverse engineering, the long-term implied growth rate has been solved for. This has been the main part of our study in terms of data processing. As earlier

explained, the average implied long-term growth rate for the firms studied is currently 2,9 percent, which is 1,1 percent below our benchmark. The implied long-term growth rates for the overall sector are discussed in part 4.1, but also on a firm-specific level in 4.2.4.

4.2.4 Company-specific analysis

Following is a summary of the findings in each of the studied firms. A table showing historical EPS growth, growth in short-term EPS forecasts and the current implied long-term growth rate will be followed by a graph showing the implied long-term growth rate over time. For the later, extreme values have been removed, in accordance with the assumptions made in 4.1.

Hennes&Mauritz

Hennes & Mauritz	03	04	05	06	07	08	09(e)	10(e)	11(e)	12(e)	13(e)	T
EPS	7.72	8.79	11.17	13.05	16.42	18.48	18.87	21.63	24.86	25.77	28.61	
Growth in EPS		14%	27%	17%	26%	13%	2%	15%	15%	4%	11%	
5 year historical growth						139%						
Compund annual growth rate 5 years historically						19%						
5 year future est. growth											55%	
Compund annual growth rate, explicit forecast period											9%	
Implied long-term growth rate												3.8%

Figure 11 – Hennes&Mauritz growth table
Source: Annual reports, DataStream

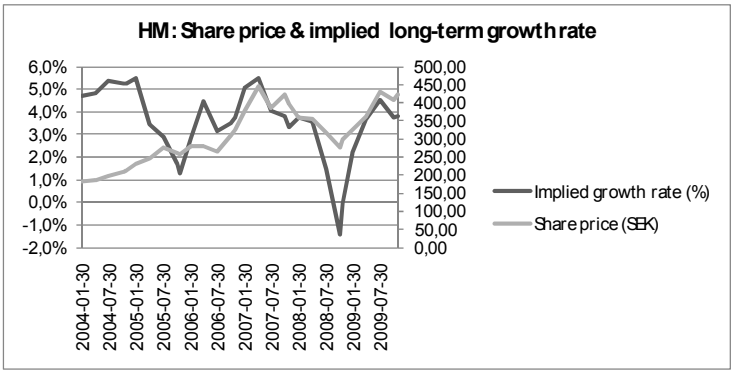

Figure 12 – Hennes&Mauritz implied growth rate
Source: Calculations (share price: JCF, Excel Connect)

Historically, the growth in H&M has been high, considering the fact that it is a mature company that represents 12 percent of the total Swedish clothing retail market[72]. Growth is expected to slow down to some extent for 2009, mainly due to the fact that 2009 has been a weaker year in terms of both sales and margins. However, H&M is the one of the retail companies that has been able to keep up high margins during the economic downturn. The EPS growth for year 10 and 11 can therefore be assumed to reflect mainly growth in sales.

H&M is the company in which the implied long-term growth rate is most stable over time. Apart from a negative value in 2008 (as share prices dropped), the growth rate has been positive over time. The average implied long-term growth for the period is 3,5 percent for H&M, i.e. somewhat below our 4 percent benchmark, but still above the sector average. A low implied growth rate could mean an under priced share or analyst optimism as explained in section 4.1.1. The current (2009-11-25) implied long-term growth rate is 3,8 percent, which leads us to believe that the share is traded at a fairly reasonable price level.

[72] Vem är Vem (2009)

KappAhl

KappAhl	05	06	07	08	09	10(e)	11(e)	12(e)	13(e)	14(e)	T
EPS	3,52	4,03	8,78	5,82	4,2	5,1	5,92	6,52	7,181	7,909	
Growth in EPS		14%	118%	-34%	-28%	21%	16%	10%	10%	10%	
4 year historical growth					19%						
Compund annual growth rate 4 years historically					5%						
4 year future est. growth									71%		
5 year future est. growth										88%	
Compund annual growth rate, explicit forecast period										13%	
Implied long-term growth rate											-0,4%

Figure 13 - KappAhl growth table
Source: Annual reports, DataStream

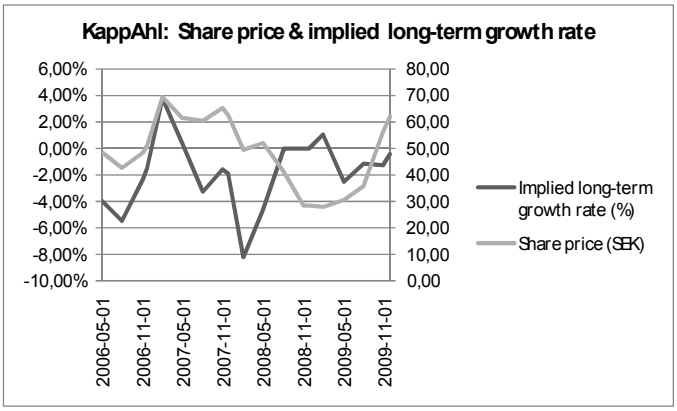

Figure 14 – KappAhl implied growth rate
Source: Calculations (share price: JCF, Excel Connect)

The historic growth in KappAhl has been 5 percent on a yearly basis over the last four years. Comparing the estimated growth for the explicit forecast period of 13 percent annually to the historic growth levels, the forecasted EPS values might seem high. However, due to the negative EPS development in year 2008 and 2009, the historical average growth rate has been lower. As many believe the economic downturn to have reached its bottom, this would imply that KappAhl will be able to regain higher EPS levels in the near future. This is reflected in EPS forecasts of 2010 and 2011.

The current implied long-term growth rate in KappAhl is -0,4 percent. In accordance with previous discussion, a negative long-term growth rate implies that the value of building block one and two, i.e. the book value and residual earnings during the explicit forecast period, is larger than the current share price. Since we assume KappAhl will continue to exist and not

destroy value in the horizon, a negative long-term implied growth rate is not reasonable; instead it is a sign on either analyst optimism or an under-priced share.

Fenix Outdoor

Fenix Outdoor	03	04	05	06	07	08	09(e)	10(e)	11(e)	12(e)	13(e)	T
EPS	1,84	1	3,4	4,4	6,17	7,93	9,62	10,90	11,40	10,32	9,34	
Growth in EPS		-46%	240%	29%	40%	29%	21%	13%	5%	-9%	-9%	
5 year historical growth						331%						
Compund annual growth rate 4 years historically						34%						
5 year future est. growth											18%	
Compund annual growth rate, explicit forecast period											3%	
Implied long-term growth rate												9,6%

Figure 15 – Fenix Outdoor growth table
Source: Annual reports, DataStream

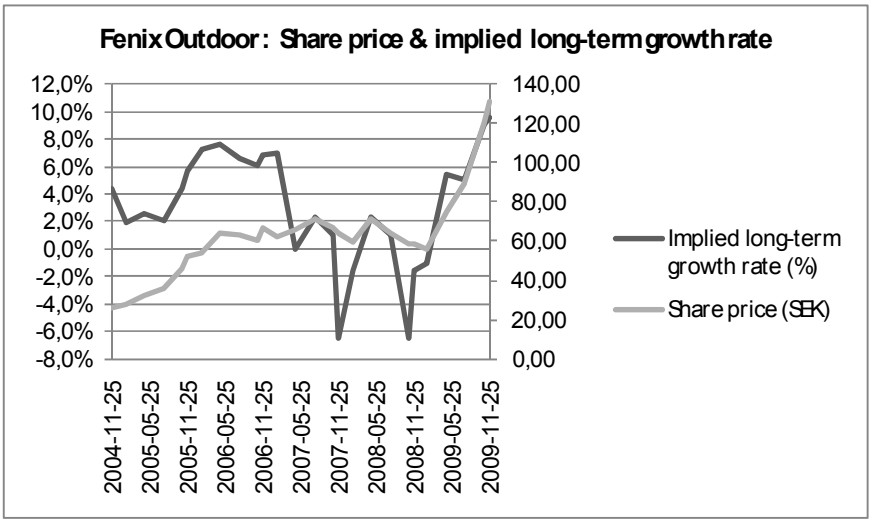

Figure 16 – Fenix Outdoor implied growth rate
Source: Calculations (share price: JCF, Excel Connect)

Fenix Outdoor has historically grown in earnings at a high pace. Yearly growth for the last five years is 34 percent, but this number is affected by a growth of 240 percent in 2005. Short-term forecasted growth of 3 percent annually is lower than the historical average. The current implied long-term growth rate is 9,6 percent. Compared to the 4 percent benchmark, this is a high value. Assuming the growth in EPS estimates of 3 percent annually is correct, the high long-term growth would mean that the share is over-priced.

Björn Borg

Björn Borg	04	05	06	07	08	09(e)	10(e)	11(e)	12(e)	13(e)	T
EPS	0,92	1,03	2,55	4,18	3,96	3,26	3,70	4,24	4,70	4,90	
Growth in EPS		12%	148%	64%	-5%	-18%	13%	15%	11%	4%	
4 year historical growth					330%						
Compound annual growth rate 4 years historically					44%						
4 year future estimated growth									19%		
5 year future estimated growth										24%	
Compound annual growth rate, explicit forecast period										4%	
Implied long-term growth rate											5,3%

Figure 17 – Björn Borg growth table
Source: Annual reports, DataStream

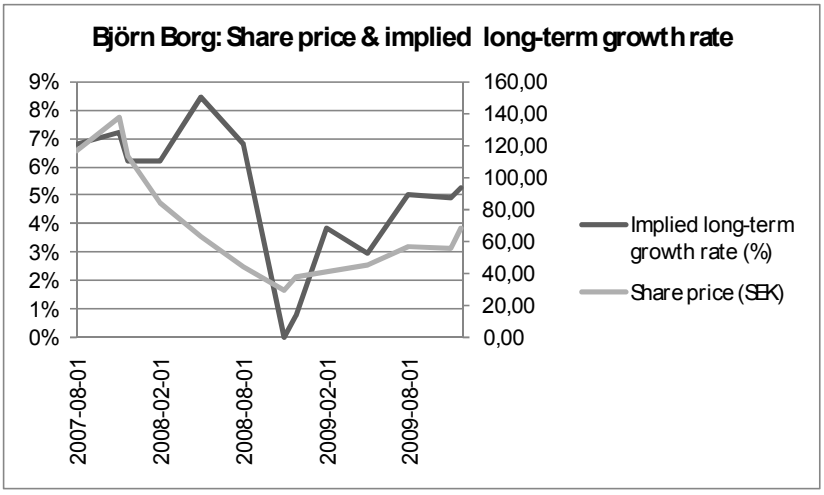

Figure 18 – Björn Borg implied growth rate
Source: Calculations (share price: JCF, Excel Connect)

Historic growth in Björn Borg has been high during the last four years. In total, the company's earnings have grown 330 percent, which is 44 percent on a yearly basis. However, there has been previous expansion on international markets during the last few years. The presence on some of these markets is not satisfactory in terms of bottom-line result. Therefore, the strategy is to exit these market and hence growth will slow down in the near- future. This means that the growth rate of 4 percent in EPS for the explicit forecast period seems reasonable, even in relation to previous growth.

The current implied long-term growth rate in Björn Borg of 5,3 percent is higher the 4 percent benchmark. If we assume EPS estimates to be reasonable, this might imply an over-pricing of the share.

RNB Retail and Brands

RNB Retail and Brands	05	06	07	08	09	10(e)	11(e)	12(e)	13(e)	14(e)	T
EPS	0,82	0,31	4,49	-1,11	-6,12	0,4	0,8	0,94	1,6	2	
Growth in EPS		-62%	1348%	-125%	-512%	107%	100%	18%	70%	25%	
4 year historical growth					-946%						
Compund annual growth rate 4 years historically					-71%						
4 year future estimated growth									126%		
5 year future est. growth										133%	
Compund annual growth rate, explicit forecast period										6%	
Implied long-term growth rate											1%

Figure 19 – RNB Retail and Brands growth table
Source: Annual reports, DataStream

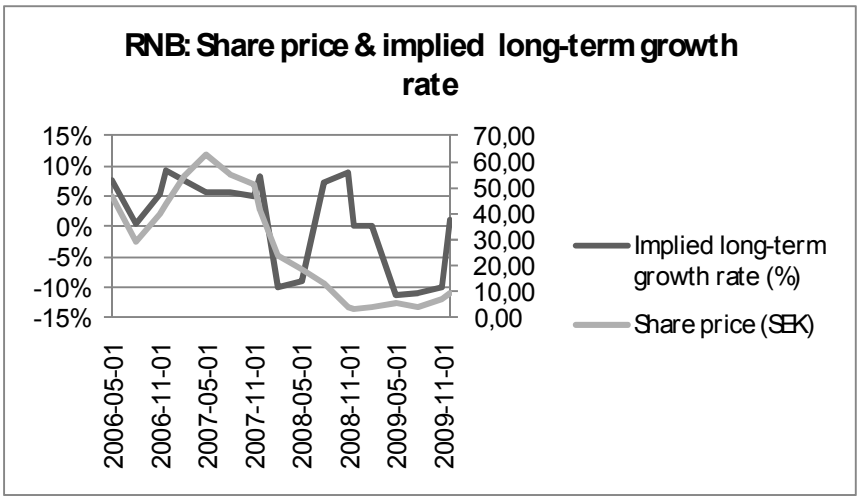

Figure 20 – RNB Retail and Brands implied growth rate
Source: Calculations (share price: JCF, Excel Connect)

From studying RNB's annual reports we have concluded that the company's EPS is not comparable over time. We base this conclusion on the fact that the company have changed its business model and made several divestments and could not be expected to yield the same EPS as historically. This discovery is reflected in the historical annual growth rate of -71 percent. The analysts are expecting the company's EPS grow by 6 percent yearly during the explicit forecast period. The current implied long-term growth rate is 1 percent, which is quite low and well below the 4 percent benchmark. This could imply an under-priced share, given that RNB will be able to meet up with growth expectations in the short-term forecast period. However, we would not like to draw that conclusion for RNB. Looking at the high growth rate of the explicit forecast period, the low implied long-term growth rate is rather an effect of considerably high values for the coming five years. This increases the value of building block two in accordance with the theory earlier described.

Odd Molly

Odd Molly	04	05	06	07	08	09(e)	10(e)	11(e)	12(e)	13(e)	T
EPS	-0,11	0,12	0,67	2,39	8,66	8,66	7,54	8,81	11,3	14,13	
Growth in EPS		-209%	458%	257%	262%	0%	-13%	17%	28%	25%	
4 year historical growth					966%						
Compund annual growth rate 4 years historically					198%						
4 year future estimated growth									30%		
5 year future estimated growth										63%	
Compund annual growth rate, explicit forecast period										10%	
Implied long-term growth rate											4,6%

Figure 21 – Odd Molly growth table
Source: Annual reports, DataStream

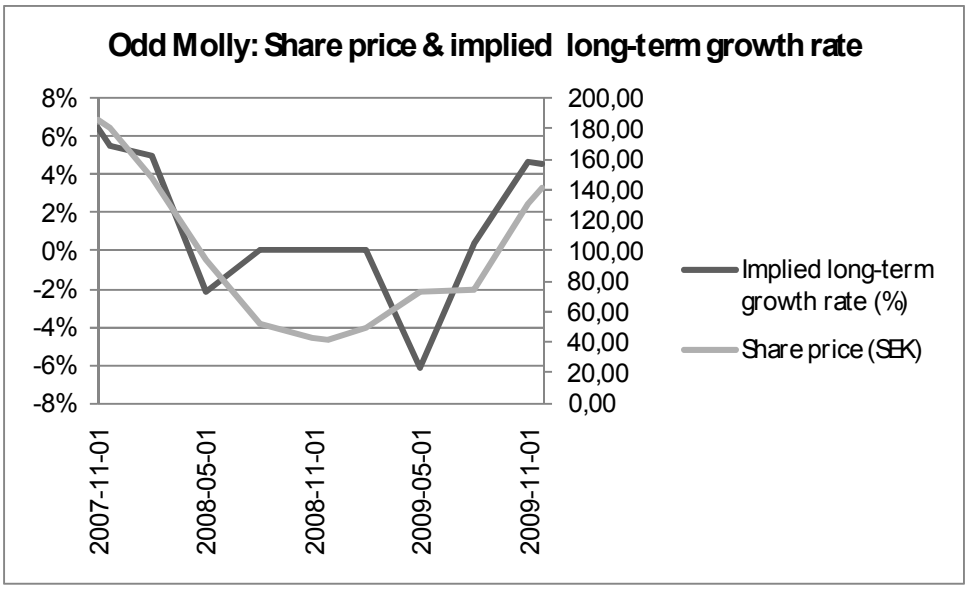

Figure 22 – Odd Molly implied growth rate
Source: Calculations (share price: JCF, Excel Connect)

Odd Molly has grown 966 percent at an earnings level during the last four years, corresponding to a yearly growth of 242 percent. At first glimpse, it seems like an exceptionally high growth figure but given that the company started in very small scale in 2002 and has since then become an internationally established company, the figures are not as surprising. Analysts expect the company to slow down its growth in EPS during the coming 5 years and the compound annual growth rate for the explicit forecast period is 10 percent. Thereafter, a long-term growth of 4,6 percent is priced in. This implied long-term growth is rather close to the benchmark of 4 percent and from that perspective the share can be regarded as fairly priced.

WeSC

WeSC	07	08	09(e)	10(e)	11(e)	12(e)	13(e)	T
EPS	0,64	4,65	4,83	5,28	6,86	8,575	10,72	
Growth in EPS		627%	4%	9%	30%	25%	25%	
1 year historical growth		627%						
1 year future estimated growth			4%					
5 year future estimated growth							122%	
Compund annual growth rate, explicit forecast period							18%	
Implied long-term growth rate								1,7%

Figure 23 – WeSC growth table
Source: Annual reports, DataStream

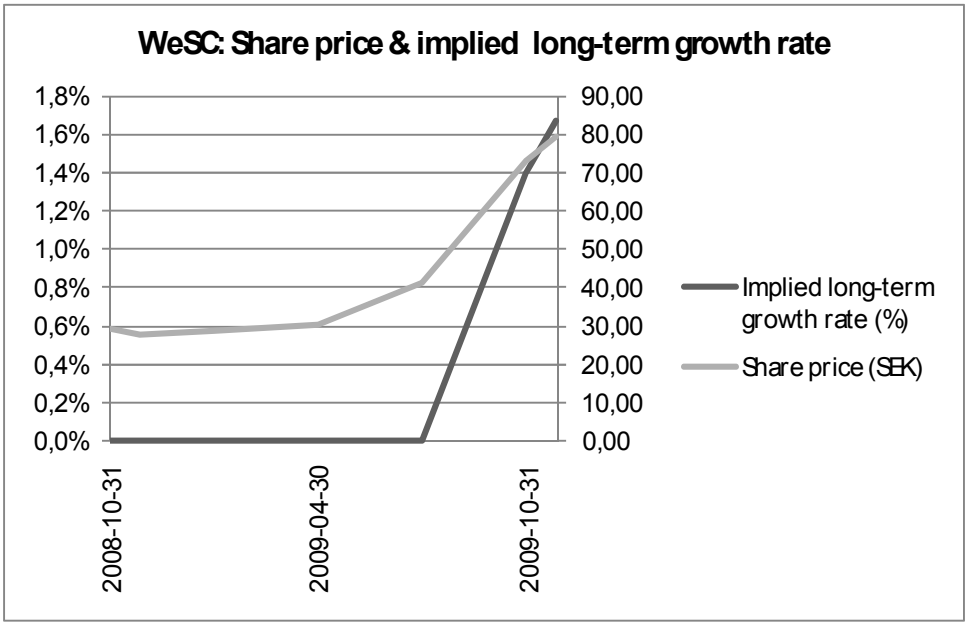

Figure 24 – WeSC implied growth rate
Source: Calculations (share price: JCF, Excel Connect)

Out of the seven companies studied, WeSC is the company most recently initiated on the stock market. Last year's growth in EPS was 627 percent and obviously that figure is not an average annual growth of the historical EPS since that is the sole figure. In the coming five years, the analysts do not expect the company to deliver anything near such a high growth in earnings as for the first listed year. They expect the company's EPS to grow at 18 percent yearly until it reaches steady state. In horizon, the priced-in long-term growth is 1,7 percent and given the assumption that the company will not cease to exist, the stock is under-priced, alternatively the analysts might be too optimistic concerning the near-term growth in EPS.

4.3 Sensitivity analysis

The results from the sensitivity analysis are presented in appendix 4. As earlier explained, the parameters changed are the EPS forecasts, the required rate of return and the horizon valuation.

EPS forecasts: As discussed in section 4.1.1., the EPS values used for the explicit forecast period are estimated forecasts made by analysts. Due to historical proof of analyst optimism, this value is of interest to include in the sensitivity analysis. However, reducing EPS values by 3 percent as suggested by Easton and Sommers[73], will have no visible impact on our outcomes. Instead, a 10 percent change in EPS estimates was made in the sensitivity analysis. A 10 percent decrease in EPS estimates will raise the implied long-term growth-rate for the period 2004-2009 to 4,5 percent, which is higher than the benchmark of 4 percent and the original value of 2,9 percent. An increase of EPS estimates of 10 percent would instead lower the growth rat, and the period's average will be 2,6 percent. The logic behind the changes in is that when EPS values are lower, the value of building block two in the RIV model will be lower. Building block three will then have to have a higher value, and hence the implied long-term growth rate will be higher.

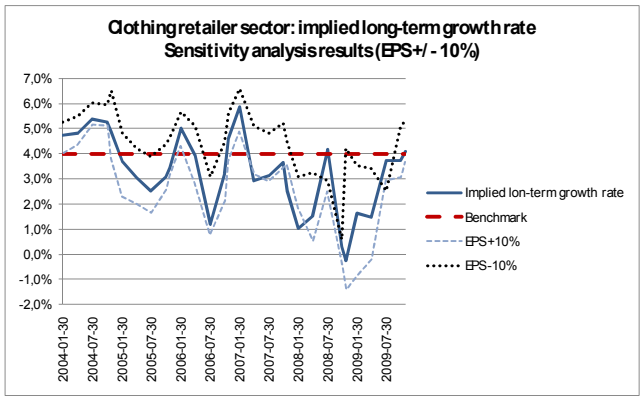

Figure 25 – Sensitivity analysis (EPS)
Source: Calculations

Required rate of return: Changes of the required rate of return up or down ten percent is the factor that has most impact in the sensitivity analysis. The logic is that as the required rate of return is lowered (r_e -10 percent), the value of the discounted EPS will be higher, and i.e. the value of building block two in the RIV model will be worth more. This means that in the reverse engineering, the value of building block three will have to be lower and hence the

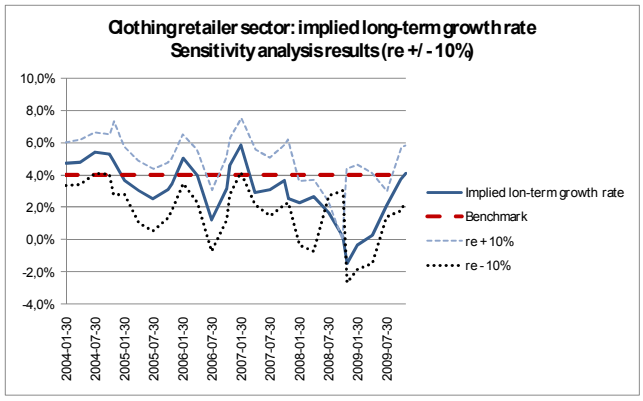

Figure 26 – Sensitivity analysis (r_e)
Source: Calculations

[73] Easton & Sommers (2007)

implied long-term growth rate will be lower. From the sensitivity analysis, we can state that with a 10 percent higher required rate of return, the long-term implicit growth rate in average for the period 2004-2009 will be 5,1 percent as compared to our 2,9 percent in the original study. This is well above the benchmark rate of 4 percent. Lowering the required rate of return 10 percent would result in an implied long-term growth rates of in average 1,7 percent for the period 2004-2009. This is below the 4 percent benchmark rate.

Horizon Valuation: The two different valuation types of the horizon, explained in 3.4., assesses the EPS_T differently, which is the main reason to the different values of the residual earnings in the horizon. When using the alternative valuation method as compared to Easton's, in general we obtain higher values of the *residual earnings* in the horizon. Hence, the implied long-term growth rates will have to be somewhat lower to compensate for the increased value of building block three. The average implied long-term growth rate for the period is 2,6 percent, i.e. 1,4 percent lower than the benchmark rate and 0,3 percent below the value we obtained from the original calculations.

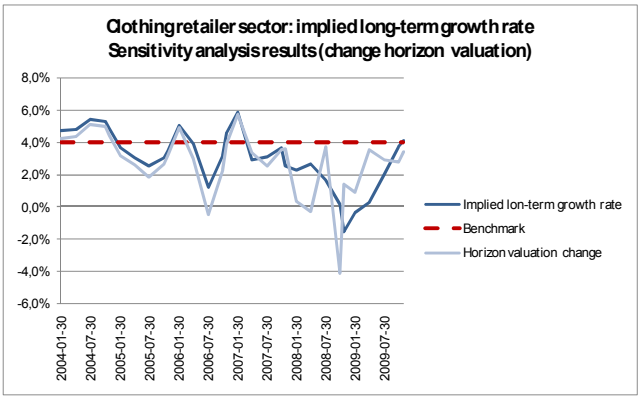

Figure 27 – Sensitivity analysis (horizon)
Source: Calculations

5. Conclusion & Summary

In this study it has been found that the average implied long-term growth rate for the Swedish clothing retailer sector between 2004 and 2009 is 2,9 percent. Our hypothesis, based on the initial belief of an expensive clothing sector with priced-in high growth, was that *the implied long-term growth rate, for the overall clothing retailer sector, will be higher than our approximated benchmark of 4 percent.* This means our hypothesis can not be confirmed. However, it should be emphasised that the standard deviation among results is rather high, i.e. that the implied long-term growth rate varies between firms as well as over the period of time.

As concluded, the long-term implied growth rate could was not higher than the benchmark of 4 percent. Rather the opposite was actually found as both the average for the period (2,9 percent) and the current (3,6 percent) was lower than the benchmark. We conclude that this

could have primarily two explanations: 1) that the shares are trading at a too low price, or 2) that the analysts' forecasts in short-term EPS could be set too high.

The first explanation is based on the idea of *market efficiency*. Assuming a long-term growth rate of 4 percent, the share prices should be higher, given that we assume analyst estimates for the explicit forecasting period to be correct and hence fundamental value to be higher than the share price. As we see no direct reason why the clothing retailers should be traded with a discount on the market, the levels at which they have been traded is not too high, but could even be too low. However, market inefficiency is not completely sufficient as an explanation, as this phenomena actually most times work in the opposite direction, i.e. that shares are traded at too high levels. Therefore we look at the second explanation.

The second explanation concerns *analyst optimism*, i.e. that the estimates of short-term EPS are too high. Through previous studies, it has been shown that analyst tend to give estimates that are higher than what is actually deserved. Easton and Summers found in a study 2007, that analyst optimism was approximately 3 percent. In our sensitivity analysis, a 3 percent change of EPS downwards gives a very small change in attained implied long-term growth rates. However, when decreasing the EPS forecast with 10 percent, the results were different. The implied long-term growth rates were now in average 4,5 percent for the period, compared to the original 2,9 percent. The new value is above our 4 percent benchmark growth rate. However, this does not mean that we can directly explain the low long-term implied growth rates with analyst optimism; this since it is only proven to be 3 percent in previous studies.

To sum up, neither of the two explanations can be proven, and we will only know for sure by looking back at results in earning as we enter the future.

What could be concluded however, is that the *bubble* that some predict can not be supported by this study. As described in the introduction, media and the popular press have been discussing whether shares within the clothing retailer sector are currently traded at a too high price and that priced-in growth expectations are not reasonable. This would in the end result in the build-up of a bubble. From this study, we can conclude however, that as long as we expect analyst estimates for the nearest five years to be somewhat reasonable (i.e. that possible analyst optimism is no more than 3 percent) we see no unreasonably high priced-in long-term growth. This means we see no build- up of a bubble and no over-priced shares at a

group level. However, on a firm-specific level we see some variations in reasonability of the implied-long term growth rates as well as the short-term growth rates.

The secondary purpose of this thesis was to further discover and explain the usage of the method of reverse engineering as an investment tool. Our judgement is that the method has worked rather well and that the results will work as a tool. This study discovered implied long-term growth rates, since that was the focus of media and financial analysts, and hence the underlying reason for our interest. However, with no preferences between solving for growth and required rate of return (which is the other factor one can solve for through reverse engineering of the RIV model) required rate of return might be preferable, since that figure is easier to interpret from a stock market perspective and hence easier to benchmark against other sectors or firms That stated, we would like to emphasise that solving for growth is just as legitimate, even though it has not historically been as popular.

5.1 Further studies

The method of reverse engineering is rather young, but has increased in terms of popularity along with the introduction of the Residual Income Valuation model on the market. Previously, the method of reverse engineering has primarily focused on solving for the required rate of return, r_e, and not for the implied long-term growth rate. It is nonetheless a legitimate procedure and recommended by several credible authors. We would like to see future academic work focusing on growth as the solved-for-parameter in the model. Increased number of works would increase its reliability as well as discover and solve possible difficulties and problems.

Furthermore, an interesting study would be to perform our calculations of implied long-term growth rates across different sectors. Multiple screening valuation is common within stock market analysis trading today, and calculations of growth like this could work as a tool for investments. Comparing how shares of the same sector trade could indicate whether a share is traded on the correct level or not relative to its peers.

We emphasise that several of the companies studied throughout our work are young. Only two out of seven have been listed for the full period from January 2004 until today. This means that if the same study was performed in for example five years time from now, the

results could be different due to the fact that the companies have matured (adjusted for cyclical differences of course). Our intuition is that such a study would also result in a lower standard deviation in the results, as the companies would have come closer together in terms of growth expectations.

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FINANCIAL REPORTS

Hennes&Mauritz: Interim- & Annual reports

KappAhl: Interim- & Annual reports

Fenix Outdoor: Interim- & Annual reports

RNB Retail and Brands: Interim- & Annual reports

Björn Borg: Interim- & Annual reports

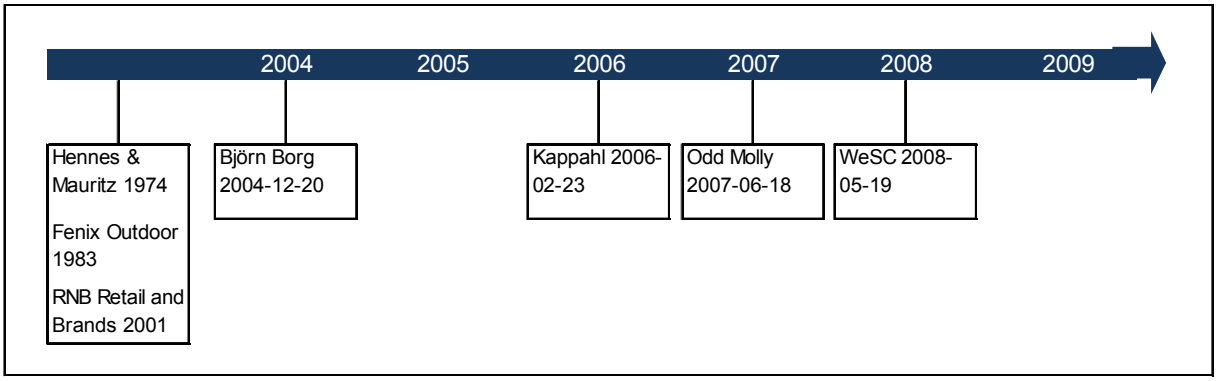
Odd Molly: Interim- & Annual reports

WeSC: Interim- & Annual reports

Appendix 1 – Firms Studied

The following companies are included in our examination: Hennes&Mauritz, KappAhl, Fenix Outdoor, Björn Borg, RNB Retail and Brand, Odd Molly, WeSC. The criteria for our choice of studies companies are stated in part 3.1.1.

The following timeline shows at what point in time the firma are listed, i.e. how far back we have been able to track data for the specific company. In part 3.1.2, the dates for examination are stated and the choice explained.



Hennes&Mauritz
Hennes&Mauritz is a global clothing retailer with more than 1800 stores in 34 different countries and employs over 73000 people. Its biggest market is Germany, followed by France, Great Britain, USA and Sweden. It was established in 1947 and has been listed on the Stockholm Stock Exchange since 1974. H&M is known for its fast fashion clothing offerings for women, men, teenagers and children at low prices. H&M also sell own-brand cosmetics, accessories and footwear. It does not own any factories but sources its goods from independent suppliers, mainly in Europe and Asia. The company has among the highest operating margins in the industry.

KappAhl
KappAhl is a leading Nordic fashion chain. Its main market is Sweden but the company is also present in Norway, Finland and Poland. KappAhl employs 4000 people and has 300 stores. It offers value-for-money fashion for the whole family but its target group is women in the age range 30-50 years. It was established in 1953 outside Gothenburg and listed on the OMX, Stockholm Stock Exchange since the 23rd of February 2006. The head office and distribution centre is found in Mölndal, outside Gothenburg.

Fenix Outdoor
Fenix is an international clothing retailer, specialized in outdoor products. The company is listed on the Stockholm Stock Exchange. The organization is divided in two parts: Brands and Retail. The first part, Brands, develops and sells clothes and equipment for outdoor life through the fully incorporated brands; Fjällräven, Tierra, Primus and Hanwag. Retail consists of Naturkompaniet which includes 27 stores selling outdoor equipment.

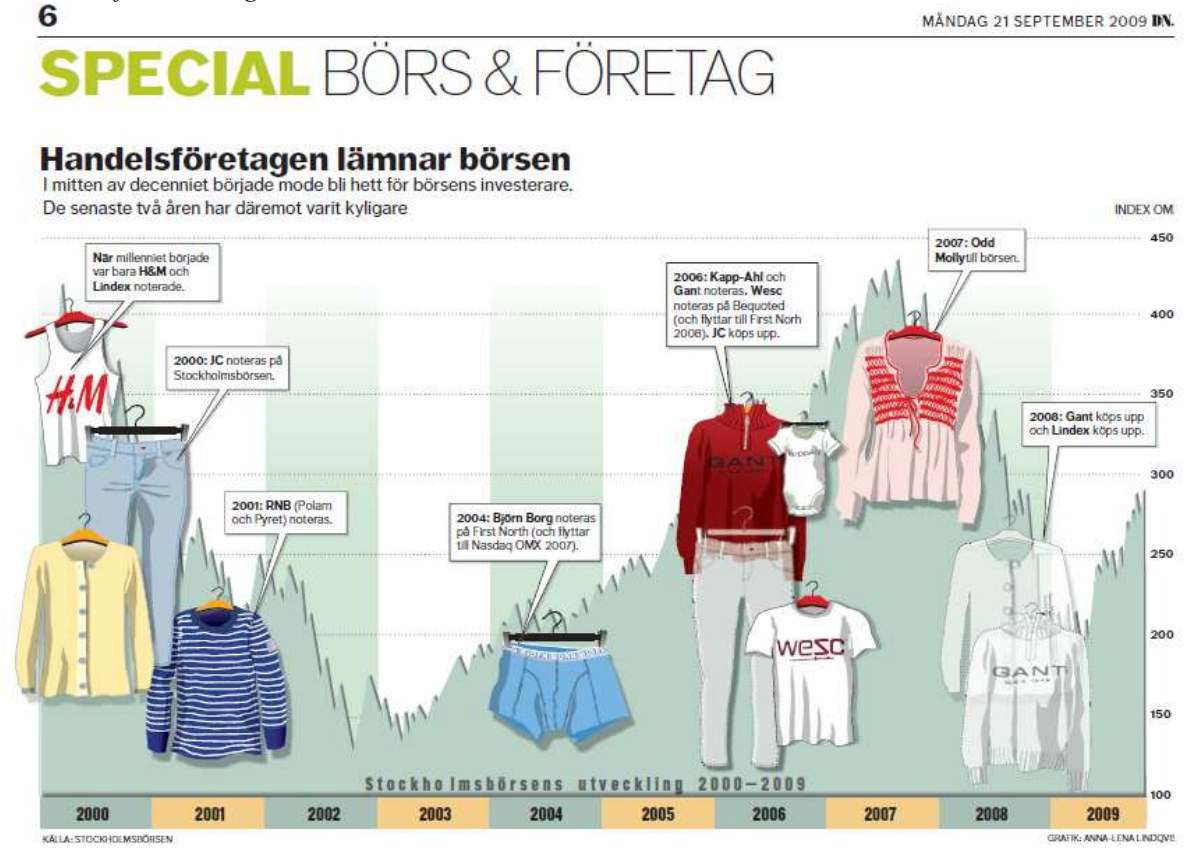
RNB
Retail and Brands sells clothing, accessories, jewellery and cosmetics mainly in Scandinavia. It was established in 2000. It consists of shops in several department stores and three store concepts, Brothers & Sisters, JC and Polarn O. Pyret. Polarn O. Pyret is fully integrated in RNB and the other store concepts offer a distribution platform for national and international brands. RNB has a total of 490 stores, 49 percent of these are franchise. The company has been listed on OMX, Stockholm Stock Exchange since 2001.

WeSC
WeSC is a clothing retailer within the segment street fashion. It was established in 1999 in Stockholm and sells in 22 countries. The largest markets are Sweden, USA, Denmark, Italy and Norway. WeSC has 14 concept stores and 2000 franchisees. Its first listing was on Bequoted 2007. The 19th of May2008 it moved to First North, OMX Nordic Exchange.

Odd Molly
Odd Molly was established in March 2002 and has since then experienced an aggressive growth in both turnover and geographic expansion. It designs, markets and sells fashion for women through franchisees. The clothes are sold in 1500 stores in 38 countries with the Swedish market representing 37 percent of revenues. The clothes are of high quality in the mid-price segment. The business model enables expansion with limited capital need and minimized warehousing. Since 2007, the company is listed on First North, OMX Nordic Exchange.

Björn Borg
The core business area for Björn Borg is high-quality underwear, originally influenced by the sporting heritage from professional tennis player Björn Borg. Other products offered are footwear, and through licensees also bags, fragrances and eyewear. The products are sold in 15 markets, the largest ones are Holland and Sweden. The company has been listed on First North, OMX Nordic Exchange since December 2004.

The following picture was published in Swedish newspaper DagensNyheter21 September, 2009. It gives an overview of the clothing retailers' actions on the Swedish stock market.



Appendix 2 - Input Data

Page 1(2)

Date	Share Price	BPS 0	BPS 1	BPS 2	BPS 3	BPS 4	BPS5	DPS 1	DPS 2	DPS 3	DPS 4	DPS 5	E(ri)	EPS1	EPS2	EPS3	EPS4	EPS5	g
Hennes & Mauritz																			
2004-01-30	181,00	24,28	28,62	33,61	39,26	46,00	52,74	3,36	3,81	4,52	5,20	6,63	0,09	7,70	8,80	10,17	11,94	13,37	4,7%
2004-04-30	187,00	26,00	30,01	34,73	38,69	44,91	51,47	4,77	5,39	6,15	6,47	6,82	0,10	8,78	10,11	10,11	12,69	13,37	4,8%
2004-07-30	197,50	22,07	25,90	30,61	36,22	42,52	48,50	4,87	5,31	5,82	5,98	5,83	0,09	8,70	10,02	11,43	12,28	11,81	5,4%
2004-11-01	210,00	24,03	27,74	32,47	38,05	44,52	50,50	4,98	5,24	5,83	6,03	5,83	0,09	8,69	9,97	11,41	12,50	11,81	5,3%
2004-11-25	212,50	24,03	27,61	32,10	37,49	43,75	49,56	5,05	5,41	5,90	6,29	6,00	0,09	8,63	9,90	11,29	12,55	11,81	5,3%
2005-02-01	229,50	26,84	30,30	34,66	39,95	46,29	52,10	5,18	5,54	5,99	6,21	6,00	0,09	8,64	9,90	11,28	12,55	11,81	5,5%
2005-04-29	245,50	28,82	30,94	33,66	37,54	40,29	43,85	8,05	8,80	9,51	11,00	11,50	0,08	10,17	11,52	13,39	13,75	15,06	3,5%
2005-08-01	276,00	23,96	26,22	29,01	33,01	36,47	42,17	8,56	9,50	9,97	12,36	11,50	0,08	10,82	12,29	13,97	15,82	17,20	2,9%
2005-11-01	260,00	27,03	29,25	31,92	35,76	38,67	41,90	8,74	9,72	10,57	14,66	16,26	0,08	10,96	12,39	14,41	17,57	19,49	1,7%
2005-11-25	258,00	27,03	29,20	31,93	35,42	36,94	38,66	8,80	9,78	10,94	16,16	18,35	0,08	10,97	12,51	14,43	17,68	20,08	1,3%
2006-02-01	278,50	31,33	33,43	36,14	39,33	40,85	42,57	8,81	9,66	11,04	16,16	18,35	0,09	10,91	12,37	14,23	17,68	20,08	2,8%
2006-05-01	279,50	33,40	35,26	37,54	40,55	45,89	49,79	10,79	12,21	13,48	12,50	13,00	0,09	12,65	14,49	16,49	17,84	16,90	4,5%
2006-08-01	264,00	26,47	28,44	30,62	33,57	38,70	44,63	10,62	12,18	13,47	12,04	12,71	0,09	12,59	14,36	16,42	17,17	18,64	3,1%
2006-11-01	312,00	29,48	31,32	33,57	36,47	39,69	43,42	10,81	12,26	13,72	14,61	16,04	0,09	12,65	14,51	16,62	17,83	19,77	3,5%
2006-11-24	324,50	29,48	31,47	33,94	36,85	40,07	43,80	10,62	12,02	13,68	14,61	16,04	0,09	12,61	14,49	16,59	17,83	19,77	3,7%
2007-02-01	376,50	33,57	35,16	37,34	40,00	43,25	47,00	10,99	12,27	13,82	14,50	15,90	0,09	12,58	14,45	16,48	17,75	19,65	5,1%
2007-05-01	446,50	36,74	38,97	41,56	44,43	47,46	51,19	13,35	15,22	17,19	18,63	18,00	0,09	15,58	17,81	20,06	21,66	21,73	5,5%
2007-08-01	387,00	29,50	31,77	34,53	37,55	40,98	45,84	13,77	15,83	18,18	18,77	19,50	0,09	16,04	18,59	21,20	22,20	24,36	4,1%
2007-11-01	422,00	33,57	35,73	38,46	41,32	44,55	48,36	14,00	16,28	18,83	20,89	23,34	0,09	16,16	19,01	21,69	24,12	27,15	3,8%
2007-11-23	398,50	33,57	35,72	38,43	41,31	44,54	48,35	14,01	16,31	18,82	20,89	23,34	0,09	16,16	19,02	21,70	24,12	27,15	3,3%
2008-02-01	360,50	38,78	40,98	43,69	46,54	49,76	53,72	14,04	16,35	18,90	21,39	23,34	0,10	16,24	19,06	21,75	24,61	27,30	3,7%
2008-05-01	356,00	42,06	45,07	48,36	52,27	59,20	63,30	16,34	18,68	20,69	20,62	23,60	0,10	19,35	21,97	24,60	27,55	27,70	3,6%
2008-08-01	318,50	32,94	35,89	39,05	42,78	49,80	54,15	16,19	18,53	20,54	20,54	25,21	0,10	19,14	21,69	24,27	27,56	29,56	1,4%
2008-10-31	276,00	37,25	39,99	42,90	46,22	52,37	56,56	15,80	17,46	19,33	20,33	24,06	0,09	18,54	20,37	22,65	26,48	28,25	-1,4%
2008-11-25	298,50	37,25	39,96	42,68	45,53	50,62	54,41	15,74	17,08	19,07	20,22	23,87	0,09	18,45	19,80	21,92	25,31	27,66	0,0%
2009-01-30	324,00	44,65	47,52	50,45	53,47	58,10	61,66	15,49	16,50	18,28	19,70	23,53	0,09	18,36	19,43	21,30	24,33	27,09	2,2%
2009-05-01	362,50	49,60	52,42	55,77	59,78	63,62	67,51	16,18	17,94	20,21	21,36	24,00	0,10	19,00	21,29	24,22	25,20	27,89	3,7%
2009-07-31	429,00	38,24	41,22	44,75	48,91	52,80	57,00	16,20	18,18	20,56	21,61	23,57	0,10	19,18	21,71	24,72	25,50	27,77	4,5%
2009-10-30	408,00	41,83	44,55	47,97	52,09	56,21	60,57	16,27	18,25	20,58	21,58	23,57	0,09	18,99	21,67	24,70	25,70	27,93	3,7%
2009-11-25	422,00	41,83	44,44	47,80	51,94	56,21	60,82	16,26	18,27	20,72	21,50	24,00	0,09	18,87	21,63	24,86	25,77	28,61	3,8%
Kappahl																			
2006-05-01	48,37	5,42	6,87	8,55	10,31	12,34	14,69	2,48	2,92	3,56	4,12	4,77	0,10	3,93	4,60	5,32	6,15	7,12	-4,0%
2006-08-01	42,72	3,77	5,13	6,74	8,41	10,28	12,39	2,48	2,90	3,39	3,80	4,27	0,10	3,84	4,51	5,06	5,68	6,37	-5,4%
2006-11-01	48,58	5,49	7,10	8,66	10,19	12,27	14,68	2,42	2,99	3,46	3,70	4,29	0,10	4,03	4,55	4,99	5,78	6,70	-2,3%
2006-11-24	51,10	5,49	7,10	8,66	10,19	12,27	14,68	2,42	2,99	3,46	3,70	4,29	0,10	4,03	4,55	4,99	5,78	6,70	-1,5%
2007-02-01	69,52	6,86	9,44	11,23	13,35	15,00	16,70	3,13	3,48	3,69	3,93	4,19	0,10	5,71	5,27	5,81	5,58	5,88	3,8%
2007-05-01	61,57	9,10	11,46	13,33	15,57	17,98	20,58	3,46	3,71	3,77	4,06	4,37	0,10	5,82	5,58	6,01	6,47	6,97	0,5%
2007-08-01	60,52	10,15	10,90	11,77	13,15	14,68	16,37	4,54	4,92	5,03	5,57	6,16	0,11	5,29	5,79	6,41	7,10	7,86	-3,3%
2007-11-01	65,13	11,85	12,45	13,04	13,93	14,89	15,92	5,36	5,88	6,06	6,51	6,99	0,10	5,96	6,47	6,95	7,47	8,02	-1,6%
2007-11-23	62,61	11,85	12,45	13,17	14,06	15,00	15,98	5,36	5,90	6,06	6,36	6,68	0,10	5,96	6,62	6,95	7,30	7,66	-1,9%
2008-02-01	49,20	13,62	14,21	14,88	15,49	16,14	16,83	5,16	5,48	5,94	6,33	6,74	0,11	5,75	6,15	6,55	6,98	7,43	-8,2%
2008-05-01	52,00	3,53	4,26	5,17	6,15	7,43	8,54	4,95	5,22	5,55	5,68	6,30	0,11	5,68	6,13	6,53	6,96	7,41	-4,6%
2008-08-01	41,10	5,26	6,18	7,02	7,92	8,86	9,82	4,94	5,10	5,25	5,44	5,63	0,11	5,86	5,94	6,15	6,37	6,59	extr
2008-10-31	28,50	7,08	7,90	8,91	10,33	11,92	13,70	4,39	4,58	5,10	5,71	6,39	0,10	5,21	5,59	6,52	7,30	8,17	extr
2008-11-25	28,60	7,08	7,86	8,85	10,27	11,86	13,64	4,39	4,58	5,10	5,71	6,39	0,10	5,17	5,57	6,52	7,30	8,17	extr
2009-01-30	28,10	9,75	10,52	11,72	12,96	14,36	15,92	3,81	3,84	4,42	4,96	5,57	0,10	4,58	5,04	5,66	6,36	7,14	1,0%
2009-05-01	30,40	4,18	5,83	7,24	8,52	10,37	12,69	2,56	3,14	3,59	5,19	6,49	0,11	4,21	4,55	4,87	7,04	8,80	-2,5%
2009-07-31	35,90	4,21	5,40	6,94	8,40	10,37	12,83	2,82	3,04	3,86	5,20	6,50	0,11	4,01	4,58	5,32	7,17	8,96	-1,2%
2009-10-30	56,25	5,06	6,59	8,35	10,09	11,96	13,98	3,49	4,23	4,71	5,07	5,46	0,11	5,02	5,99	6,45	6,95	7,48	-1,3%
2009-11-25	62,25	5,06	6,60	8,29	10,10	12,09	14,29	3,56	4,23	4,71	5,19	5,71	0,11	5,10	5,92	6,52	7,18	7,91	-0,4%
Fenix Outdoor																			
2004-11-25	25,90	15,35	17,75	19,48	22,29	25,41	28,96						0,11	2,40	1,73	2,81	3,12	3,55	4,4%
2005-02-01	28,00	14,77	16,17	16,90	18,71	20,73	23,07	1,00	1,00	1,00	1,10	1,21	0,10	2,40	1,73	2,81	3,12	3,55	1,9%
2005-04-29	32,50	15,67	17,07	18,17	20,08	22,27	24,78	1,00	1,00	1,00	1,10	1,21	0,10	2,40	2,10	2,91	3,29	3,72	2,6%
2005-08-01	36,30	15,53	17,65	20,00	22,60	25,22	27,94	1,00	1,10	1,21	1,33	1,38	0,10	3,12	3,45	3,81	3,95	4,10	2,1%
2005-11-01	45,60	16,68	19,00	21,64	24,51	27,48	30,61	1,00	1,10	1,21	1,33	1,40	0,10	3,32	3,74	4,08	4,30	4,53	4,4%
2005-11-25	52,00	16,68	19,00	21,64	24,51	27,48	30,61	1,00	1,10	1,21	1,33	1,40	0,10	3,32	3,74	4,08	4,30	4,53	5,6%
2006-02-01	53,75	17,12	19,36	22,16	25,19	28,16	31,17	1,00	1,10	1,21	1,33	1,35	0,10	3,24	3,90	4,24	4,30	4,36	7,2%
2006-05-01	63,75	18,50	21,19	24,01	26,79	29,64	32,55	1,65	1,85	2,00	2,05	2,10	0,11	4,34	4,67	4,78	4,89	5,01	7,6%
2006-08-01	63,25	17,68	21,02	24,41	27,74	31,13	34,57	1,65	1,85	2,00	2,03	2,07	0,11	4,99	5,24	5,33	5,42	5,51	6,6%
2006-11-01	60,00	19,16	22,25	25,45	28,59	31,78	35,04	1,65	1,85	2,00	2,04	2,07	0,11	4,74	5,05	5,14	5,23	5,32	6,1%
2006-11-24	67,00	19,16	22,16	25,34	28,47	31,66	34,92	1,65	1,85	2,00	2,04	2,08	0,11	4,65	5,03	5,13	5,23	5,34	6,9%
2007-02-01	62,00	19,82	22,82	26,00	29,13	32,32	35,58	1,65	1,85	2,00	2,04	2,08	0,11	4,65	5,03	5,13	5,23	5,34	7,0%
2008-05-01	71,50	26,08	30,74	35,86	41,35	47,27	53,66	2,50	2,75	3,00	3,24	3,49	0,12	7,16	7,87	8,49	9,16	9,88	2,3%
2008-08-01	64,25	25,60	30,32	35,36	40,57	46,06	51,85	2,50	2,75	3,00	3,16	3,33	0,12	7,22	7,79	8,21	8,65	9,12	1,0%
2008-10-31	59,00	29,28	33,75	38,51	43,55	48,95	54,72	2,50	2,75	3,00	3,21	3,44	0,11	6,97	7,51	8,04	8,61	9,21	-6,5%
2008-11-25	58,50	29,28	34,76	39,65	44,63	49,85	55,32	2,25	2,25	2,50	2,62	2,74	0,11	7,73	7,14	7,48	7,84	8,21	-1,6%
2009-01-30	56,00	31,47	36,95	41,84	46,82	52,03	57,50	2,25	2,25	2,50	2,62	2,74	0,11	7,73	7,14	7,48	7,84	8,21	-1,1%
2009-05-01	74,75	34,47	40,12	45,57	51,47	57,08	63,00	2,00	2,25	2,50	3,25	3,43	0,12	7,65	7,70	8,40	8,86	9,35	5,4%
2009-07-31	89,25	33,55	39,20	46,59	53,97	61,04	68,43	2,00	2,25	2,50	3,25	3,39	0,11	7,65	9,64	9,88	10,32	10,78	5,1%
2009-10-30	120,00	36,42	43,79	51,94	59,86	67,17	73,93	2,25	2,50	3,25	3,00	2,77	0,11	9,62	10,65	11,17	10,32	9,53	9,1%
2009-11-25	131,00	36,42	43,79	52,19	60,34	67,71	74,39	2,25	2,50	3,25	2,94	2,66	0,11	9,62	10,90	11,40	10,32	9,34	9,6%

Appendix 2 contd.

Page 2(2)

Date	Share Price	BPS 0	BPS 1	BPS 2	BPS 3	BPS 4	BPS5	DPS 1	DPS 2	DPS 3	DPS 4	DPS 5	E(ri)	EPS1	EPS2	EPS3	EPS4	EPS5	
Björn Borg																			
2007-08-01	117,00	10,82	13,53	16,89	20,82	25,48	31,01	1,25	1,68	2,05	2,43	2,89	0,11	3,96	5,04	5,98	7,10	8,42	6,8%
2007-11-01	137,25	12,24	15,28	18,94	23,22	28,29	34,31	1,27	1,68	2,05	2,43	2,88	0,11	4,31	5,34	6,33	7,50	8,89	7,2%
2007-11-23	113,50	12,24	15,29	18,99	23,30	28,40	34,42	1,27	1,68	2,05	2,42	2,86	0,11	4,32	5,38	6,36	7,52	8,89	6,2%
2008-02-01	84,50	13,70	16,54	19,45	23,01	27,39	32,80	1,35	1,40	1,75	2,16	2,66	0,11	4,19	4,31	5,31	6,54	8,06	6,2%
2008-05-01	63,00	14,77	17,82	21,42	24,96	28,44	31,86	1,45	1,80	1,77	1,74	1,71	0,12	4,50	5,40	5,31	5,22	5,13	8,5%
2008-08-01	44,70	13,75	16,62	19,70	22,82	25,91	28,98	1,47	1,58	1,50	1,49	1,47	0,12	4,34	4,66	4,62	4,58	4,54	6,8%
2008-10-31	30,10	15,30	17,97	20,59	23,48	26,67	30,19	1,38	1,35	1,49	1,64	1,81	0,11	4,05	3,97	4,38	4,83	5,33	extr
2008-11-25	38,40	15,30	18,09	20,60	23,35	26,36	29,65	1,40	1,30	1,42	1,55	1,70	0,11	4,19	3,81	4,17	4,56	5,00	0,8%
2009-01-30	41,40	16,51	19,30	21,81	24,56	27,57	30,87	1,40	1,30	1,42	1,55	1,70	0,11	4,19	3,81	4,17	4,56	5,00	3,8%
2009-05-01	45,00	17,68	19,84	22,21	25,13	28,65	32,91	1,01	1,15	1,33	1,61	1,94	0,12	3,17	3,52	4,25	5,13	6,20	3,0%
2009-07-31	56,75	16,58	18,81	21,30	24,31	27,79	31,80	1,33	1,58	1,69	1,95	2,25	0,11	3,56	4,07	4,70	5,43	6,27	5,0%
2009-10-30	56,00	17,80	19,89	22,09	24,82	28,06	31,92	1,25	1,40	1,55	1,84	2,19	0,11	3,34	3,60	4,28	5,09	6,05	4,9%
2009-11-25	68,50	17,80	15,73	13,99	12,93	11,75	10,53	5,33	5,44	5,30	5,88	6,13	0,11	3,26	3,70	4,24	4,70	4,90	5,3%
RNB Retail and Brands																			
2006-05-01	47,03	8,21	8,94	9,95	11,09	12,38	13,83	0,75	1,01	1,14	1,29	1,45	0,11	1,48	2,02	2,28	2,57	2,90	7,7%
2006-08-01	29,26	8,50	9,10	10,05	11,29	12,84	14,78	0,69	1,00	1,20	1,50	1,88	0,11	1,29	1,95	2,44	3,05	3,81	0,5%
2006-11-01	39,72	23,07	24,16	25,26	26,66	28,41	30,60	0,31	1,10	1,36	1,70	2,13	0,11	1,40	2,20	2,76	3,45	4,31	5,5%
2006-11-24	43,37	23,07	24,17	25,61	27,14	28,76	30,46	1,14	1,46	1,53	1,61	1,70	0,11	2,24	2,90	3,06	3,23	3,41	9,3%
2007-02-01	54,35	24,09	25,20	26,64	28,30	30,22	32,44	1,51	1,43	1,66	1,92	2,22	0,11	2,62	2,87	3,32	3,84	4,44	7,7%
2007-05-01	62,54	25,97	26,83	28,31	30,29	32,74	35,76	1,44	1,73	1,99	2,46	3,04	0,11	2,30	3,21	3,97	4,91	6,07	5,8%
2007-08-01	55,22	26,61	27,34	28,83	30,64	32,82	35,45	1,39	1,71	2,05	2,47	2,98	0,11	2,12	3,20	3,86	4,66	5,62	5,7%
2007-11-01	51,39	27,42	28,11	29,65	31,52	33,77	36,49	1,45	1,72	2,06	2,48	2,99	0,11	2,14	3,26	3,93	4,74	5,71	5,1%
2007-11-23	41,81	27,42	28,72	30,30	32,03	33,81	35,64	1,93	2,25	2,21	2,27	2,34	0,11	3,23	3,83	3,94	4,05	4,17	8,5%
2008-02-01	23,69	28,40	29,47	30,93	32,54	34,29	36,20	1,80	2,09	2,26	2,46	2,69	0,11	2,87	3,55	3,87	4,22	4,60	-10,0%
2008-05-01	18,26	26,07	26,04	27,16	28,67	30,56	32,92	0,77	1,01	1,46	1,83	2,28	0,12	0,74	2,13	2,97	3,71	4,64	-9,0%
2008-08-01	13,24	26,21	26,41	27,37	28,36	29,53	30,92	0,23	0,81	1,11	1,32	1,56	0,12	0,43	1,77	2,10	2,49	2,96	7,5%
2008-10-31	3,96	24,60	24,80	25,34	26,07	26,98	28,12	0,27	0,60	0,84	1,05	1,31	0,11	0,47	1,14	1,57	1,96	2,45	9,0%
2008-11-25	3,08	24,60	25,33	26,30	27,00	28,30	29,93	0,10	0,34	0,50	0,93	1,16	0,11	0,83	1,31	1,20	2,23	2,79	extr
2009-01-30	3,90	15,31	16,04	17,01	17,72	19,03	20,66	0,10	0,34	0,50	0,92	1,15	0,11	0,83	1,31	1,21	2,23	2,79	extr
2009-05-01	5,80	10,44	11,27	11,69	12,29	13,31	14,59	0,00	0,08	0,35	0,60	0,75	0,12	0,83	0,50	0,95	1,62	2,03	-11,2%
2009-07-31	4,39	9,79	8,56	8,87	9,31	10,23	11,37	0,00	0,07	0,33	0,69	0,86	0,11	-1,23	0,38	0,77	1,60	2,00	-11,0%
2009-10-30	7,05	9,38	7,73	7,98	8,33	9,07	9,99	0,00	0,14	0,41	0,86	1,08	0,11	-1,65	0,39	0,76	1,60	2,00	-10,0%
2009-11-25	9,30	9,38	9,78	10,43	11,14	12,35	13,86	0,00	0,15	0,23	0,39	0,49	0,11	0,40	0,80	0,94	1,60	2,00	1,0%
Odd Molly																			
2007-11-01	186,00	7,81	9,71	14,86	22,66	32,41	44,59	0,00	0,00	1,00	1,25	1,56	0,11	1,90	5,15	8,80	11,00	13,75	6,4%
2007-11-23	180,00	7,81	9,98	15,49	24,30	35,31	49,07	0,00	0,00	1,00	1,25	1,56	0,11	2,17	5,51	9,81	12,26	15,33	5,5%
2008-02-01	148,00	7,84	10,01	13,52	20,33	28,84	39,48	0,00	2,00	3,00	3,75	4,69	0,11	2,17	5,51	9,81	12,26	15,33	5,0%
2008-05-01	94,00	11,87	15,89	21,94	29,76	39,54	51,76	1,50	2,00	3,00	3,75	4,69	0,12	5,52	8,05	10,82	13,53	16,91	-2,1%
2008-08-01	52,00	12,00	17,56	24,21	32,25	42,04	53,98	1,50	2,00	2,50	3,05	3,71	0,12	7,06	8,65	10,54	12,84	15,65	extr
2008-10-31	43,00	15,16	20,77	26,59	33,67	42,34	52,97	1,50	2,00	2,50	3,06	3,75	0,11	7,11	7,82	9,58	11,74	14,38	extr
2008-11-25	42,00	15,16	21,17	26,87	33,61	41,70	51,40	1,50	2,00	2,50	3,00	3,60	0,11	7,51	7,70	9,24	11,09	13,31	extr
2009-01-30	50,00	16,50	22,51	28,21	34,95	43,04	52,74	1,50	2,00	2,50	3,00	3,60	0,11	7,51	7,70	9,24	11,09	13,31	extr
2009-05-01	73,00	20,83	26,49	31,18	37,62	49,21	63,69	3,00	3,00	3,00	0,00	0,00	0,12	8,66	7,69	9,44	11,59	14,49	-6,2%
2009-07-31	74,75	16,64	22,30	26,89	33,22	40,23	47,75	3,00	3,00	3,00	3,00	3,22	0,11	8,66	7,59	9,33	10,01	10,74	0,3%
2009-10-30	131,00	20,36	26,02	30,56	37,11	45,41	55,23	3,00	3,00	3,00	3,00	3,55	0,11	8,66	7,54	9,55	11,30	13,37	4,7%
2009-11-25	141,50	20,36	26,02	30,56	35,37	42,17	50,67	3,00	3,00	4,00	4,50	5,63	0,11	8,66	7,54	8,81	11,30	14,13	4,6%
WeSC																			
2008-10-31	29,30	14,18	17,51	21,70	26,44	31,80	37,87	1,25	1,50	1,70	1,92	2,17	0,11	4,58	5,69	6,44	7,28	8,24	extr
2008-11-25	27,52	14,18	17,51	21,70	26,77	32,91	40,34	1,25	1,50	1,82	2,20	2,66	0,11	4,58	5,69	6,89	8,34	10,09	extr
2009-01-30	28,85	15,88	19,43	23,92	29,08	35,02	41,85	1,25	1,50	1,72	1,98	2,28	0,11	4,80	5,99	6,89	7,92	9,11	extr
2009-05-01	30,45	16,29	21,81	25,25	29,51	34,70	41,07	0,00	1,25	1,50	1,89	2,32	0,12	5,52	4,69	5,76	7,07	8,69	extr
2009-07-31	41,28	17,22	20,33	24,31	28,81	34,41	41,05	1,25	1,50	2,00	2,11	2,50	0,11	4,36	5,48	6,50	7,71	9,14	extr
2009-10-30	73,00	19,29	22,96	27,57	32,85	39,40	47,20	1,25	1,50	2,00	2,13	2,54	0,11	4,92	6,11	7,28	8,67	10,34	1,4%
2009-11-25	79,50	19,29	22,87	26,65	31,51	38,09	45,68	1,25	1,50	2,00	2,00	3,13	0,11	4,83	5,28	6,86	8,58	10,72	1,7%

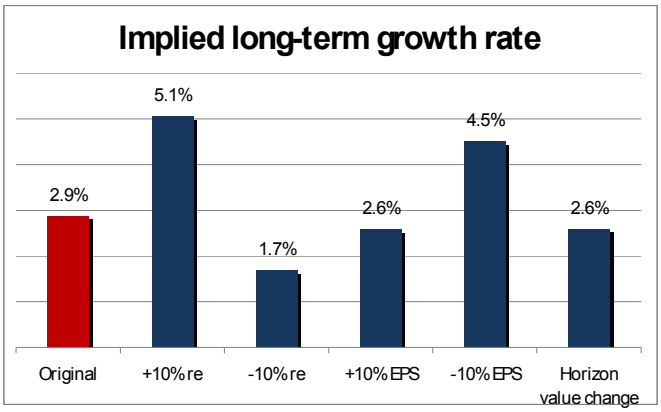
Appendix 3 – Implied growth rates

Implied growth rates								
Date	H&M	Kappahl	Fenix	Björn Borg	RnB	Odd Molly	WeSC	Sector average
2004-01-30	4,7%							**4,7%**
2004-04-30	4,8%							**4,8%**
2004-07-30	5,4%							**5,4%**
2004-11-01	5,3%							**5,3%**
2004-11-25	5,3%		4,4%					**4,8%**
2005-02-01	5,5%		1,9%					**3,7%**
2005-04-29	3,5%		2,6%					**3,0%**
2005-08-01	2,9%		2,1%					**2,5%**
2005-11-01	1,7%		4,4%					**3,1%**
2005-11-25	1,3%		5,6%					**3,5%**
2006-02-01	2,8%		7,2%					**5,0%**
2006-05-01	4,5%	-4,0%	7,6%		7,7%			**3,9%**
2006-08-01	3,1%	-5,4%	6,6%		0,5%			**1,2%**
2006-11-01	3,5%	-2,3%	6,1%		5,5%			**3,2%**
2006-11-24	3,7%	-1,5%	6,9%		9,3%			**4,6%**
2007-02-01	5,1%	3,8%	7,0%		7,7%			**5,9%**
2007-05-01	5,5%	0,5%	0,0%		5,8%			**2,9%**
2007-08-01	4,1%	-3,3%	2,3%	6,8%	5,7%			**3,1%**
2007-11-01	3,8%	-1,6%	1,0%	7,2%	5,1%	6,4%		**3,6%**
2007-11-23	3,3%	-1,9%	-6,5%	6,2%	8,5%	5,5%		**2,5%**
2008-02-01	3,7%	-8,2%	-1,6%	6,2%	-10,0%	5,0%		**-0,8%**
2008-05-01	3,6%	-4,6%	2,3%	8,5%	-9,0%	-2,1%		**-0,2%**
2008-08-01	1,4%	extr neg	1,0%	6,8%	7,5%	extr neg		**4,2%**
2008-10-31	-1,4%	extr neg	-6,5%	extr neg	8,9%	extr neg	extr neg	**0,3%**
2008-11-25	0,0%	extr neg	-1,6%	0,8%	extr neg	extr neg	extr neg	**-0,3%**
2009-01-30	2,2%	1,0%	-1,1%	3,8%	extr neg	extr neg	extr neg	**1,5%**
2009-05-01	3,7%	-2,5%	5,4%	3,0%	-11,2%	-6,2%	extr neg	**-1,3%**
2009-07-31	4,5%	-1,2%	5,1%	5,0%	-11,0%	0,3%	extr neg	**0,5%**
2009-10-30	3,7%	-1,3%	9,1%	4,9%	-10,0%	4,7%	1,4%	**1,8%**
2009-11-25	3,8%	-0,4%	9,6%	5,3%	1,0%	4,6%	1,7%	**3,6%**
Average	**3,5%**	**-2,1%**	**3,1%**	**5,4%**	**1,3%**	**2,3%**	**1,5%**	**2,9%**

Appendix 4 – Sensitivity Analysis Results

Clothing retailer sector: Summary implied long-term growth rate						
Date	Original	+10% re	-10% re	+10% EPS	-10% EPS	Horizon value change
30/01/2004	4.7%	6%	3%	4%	5%	4%
30/04/2004	4.8%	6%	3%	4%	6%	4%
30/07/2004	5.4%	7%	4%	5%	6%	5%
01/11/2004	5.3%	6%	4%	5%	6%	5%
25/11/2004	4.8%	7%	3%	4%	7%	4%
01/02/2005	3.7%	6%	3%	2%	5%	3%
29/04/2005	3.0%	5%	1%	2%	4%	3%
01/08/2005	2.5%	4%	1%	2%	4%	2%
01/11/2005	3.1%	5%	1%	3%	4%	3%
25/11/2005	3.5%	5%	2%	3%	5%	3%
01/02/2006	5.0%	7%	3%	4%	6%	5%
01/05/2006	3.9%	6%	2%	3%	5%	3%
01/08/2006	1.2%	3%	-1%	1%	3%	0%
01/11/2006	3.2%	5%	1%	2%	4%	2%
24/11/2006	4.6%	6%	3%	4%	6%	4%
01/02/2007	5.9%	8%	4%	5%	7%	6%
01/05/2007	2.9%	6%	2%	3%	5%	3%
01/08/2007	3.1%	5%	1%	3%	5%	3%
01/11/2007	3.6%	6%	2%	3%	5%	4%
23/11/2007	2.5%	6%	2%	4%	4%	4%
01/02/2008	-0.8%	4%	0%	2%	3%	0%
01/05/2008	-0.2%	4%	-1%	1%	3%	0%
01/08/2008	4.2%	2%	3%	2%	3%	4%
31/10/2008	0.4%	0%	3%	0%	1%	-1%
25/11/2008	-0.3%	4%	-3%	-1%	4%	1%
30/01/2009	1.5%	5%	-2%	-1%	4%	1%
01/05/2009	-1.3%	4%	-1%	0%	3%	4%
31/07/2009	0.5%	3%	1%	3%	3%	3%
30/10/2009	1.8%	6%	2%	3%	5%	3%
25/11/2009	3.6%	6%	2%	4%	5%	3%
Ave for period 2004-2009	**2.9%**	**5.1%**	**1.7%**	**2.6%**	**4.5%**	**2.6%**

The graph shows the long-term implied growth rates after the changes in sensitivity Analysis compared to the values attained from our original calculations.



Appendix 5 – Derivation of the Residual Income Valuation

We start off by defining the model:

$$V_0 = \sum_{t=1}^{T} \frac{E_0(DIV_t - N_t)}{(1 + r_e)^t} + \frac{E_0(V_T)}{(1 + r_e)^T}$$

where: V_0 = value of owners' equity
$E_0(DIV_t)$ = expected total dividend paid to the shareholders, given the information available at t=0
N_t = expected new issue
r_e = required rate of return on owners' equity (= cost of equity capital)

Given that the clean surplus relation of accounting holds, we can rewrite the model in terms of accounting data. The clean surplus relation of accounting assumes that the book value in a period is explained by earnings, dividends and capital contributions during that period. The above model can then be expressed as:

$$B_t = B_{t-1} + Earnings_t - DIV_t + N_t$$

where: Bt= Book value at the end of period t
Bt-1= Book value at the beginning of period t
$Earnings_t$= Earnings per share during period t

This is a strong assumption, but the important thing is that the relation holds in expectations, i.e. that potential error is equally likely to be positive or negative. We therefore conclude that the clean surplus relation is reasonable. The above formula can be rewritten as:

$$DIV_t - N_t = B_{t-1} + Earnings_t - B_t$$

The difference between the book return and the owners' required rate of return is referred to as residual income. Hence, the owners' required rate of return can also be included in the equation which will look as follows:

$$DIV_t - N_t = B_{t-1} - B_t + r_e * B_{t-1} + (Earnings_t - r_E * B_{t-1})$$

In accordance with the above formula, the original model can be stated as:

$$V_0 = B_0 + \sum_{t=1}^{T} \frac{E_0(Earnings_t - r_e * B_{t-1})}{(1 + r_e)^t} + \frac{E_0(V_T - B_T)}{(1 + r_e)^T}$$