Equity Valuation:

Koninklijke Ahold NV

Bernardo Gaspar Ferreira

Tutor: Dr. José Carlos Tudela Martins

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Koninklijke Ahold NV

COMPANY REPORT

Company Description:

Ahold is an international retailing group based in the Netherlands with strong consumer brands in Europe and the United States. By 2012, the company had more than 3,000 stores, serving a trade area of around 80 million people and with a current number of circa 225,000 employees.

Ahold US offer is highly distinctive, preserving market share and margin:

- For the past six years, the American food retail industry has been exposed to a more intense and competitive market. More brands and more stores are opening creating a more saturated market. Despite this seismic shift in the competitive environment, Ahold held its market share

- This is related with the fact that Ahold US stores are targeted to a more specific target with a strong food focus and good price/quality relation. Ahold´s offers "quality food for the masses" and Wal-Mart and other discounters are not seen as competitors

Ahold Netherlands is still dominating market share while providing a barrier to new entrants:

- The Dutch operations contribute with more than 30% of overall sales, having a 35% market share. Being the market leader enables the firm to have a better negotiating power reporting an outstanding margin of almost 6%

Unique cash generator:

- While Ahold´s competitors have been reporting operating cash of 6%, the company has a historically 9,3% of operating cash due to soaring margins, decrease in working capital and higher depreciations.

Distinctive growth opportunities:

- At the moment, the company is mostly determined in improving growth rates by increasing stores profitability (organic growth). But at a later stage, the US operations have all the necessary conditions to spread from the east to the west coast. The same situation happens in the Dutch market, where Belgium and surrounding countries are also viable options. Both of these expansions wouldn´t have currency, language or cultural barriers.
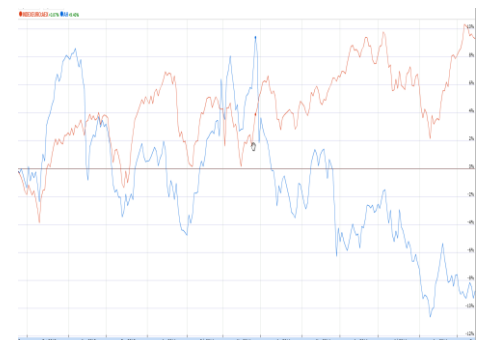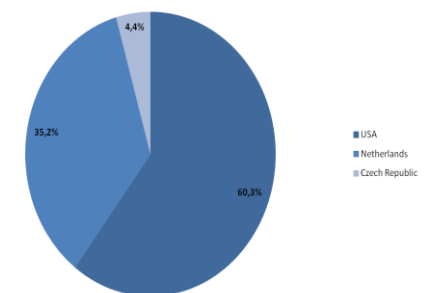
Ahold

Food Retail
Recomendation:BUY
September 2014

Koninklijke Ahold NV	
Price Target	€ 18,85
Current Price (4th July)	€ 13,87
Potential	36%

Stock Ticker	MAS: AH
52W Low/High (€)	12,39 - 15,50
Average Volume Trading	2,73 M
Current Market Cap	11,49 B
# Shares	854,37 M

Source: Bloomberg, Google Finance

Ahold´s 2013 Revenue Breakdown by Geography

USA 60,3%
Netherlands 35,2%
Czech Republic 4,4%

Ahold   AEX Index

Source: Google Finance

(€ millions)	2014e	2015e	2016e	2017e	2018e	2019e
Revenues	33.109	33.878	34.935	36.297	38.108	38.972
EBITDA	2.372	2.382	2.427	2.481	2.609	2.629
EBITDA margin	7,16%	7,03%	6,95%	6,84%	6,85%	6,74%
EBIT	1.444	1.478	1.484	1.498	1.581	1.582
Net Profit	944	1.017	1.035	1.058	1.132	1.144
Total Assets	14193	14773	15378	15700	16432	17020
Free Cash Flow	1.056	840	1.055	1.069	928	1.109

Abstract

The present dissertation aims to value the Dutch retailer group, Koninklijke Ahold NV (Ahold), implementing the theory of equity valuation. An efficient combination between theory and practice should be implemented throughout the valuation in order to obtain the most accurate result that can be complied with reality. This paper starts to introduce which different frameworks are available, explaining afterwards, which are the most relevant for the valuation of the referred company. Ahold was valued as the sum of parts of the different business geographies in which the company currently operates, using the Discounted Cash Flow approach and the Multiples valuation. Lastly, the results are compared with an investment bank research note where the divergences will be analyzed and explained.

i. Table of Contents

1. Introduction

"A postulate of sounds investing is that an investor does not pay more for an asset than it is worth"

(Damodaran, 2010)

What is value?

Today, valuation is a financial analytical skill critical tool to determine the launch of a new product, enter a strategic partnership or acquire another company since it will determine how the company´s resources are allocated. The allocation of these resources will be a major driver of a company´s overall performance. Thus, the ability of performing a correct, efficient and credible valuation has been a skill not only designed for finance specialists, but also for general managers since it will be a vital factor in the company´s resource-allocation decisions. (Luehrman, 1997)

What is it used for?

As mentioned previously, value is unquestionably a useful process to determine the true value of a company; nonetheless, there are several purposes of doing so:

Value public companies: Compare the value of the stock obtained from the valuation with the current market value and therefore recommend the purchase, holding or selling of the stocks.

Initial Public Offering: Determine the fair value of a private company, which is willing to go public.

Mergers & Acquisitions: Advisory to clients (Buy and Sell side)

Resource-Allocation Decisions: How is the company creating value (drivers) and how should it allocate its resources.

The topic of this dissertation will focus mainly on the first topic mentioned previously where a final recommendation will be made based on a comparison between the fair value of the shares with their current market value. To perform such valuation, a deep

comprehension of how the company is creating value and which are their drivers will have to be understood.

2. Literature Review

2.1 Valuation Methodologies

Valuation can be treated as the heart of finance. While, in corporate finance, it is analyzed how to increase firm value through investments, financing and dividend decisions, in asset management, analysts try to identify firms that are trading for less than their true value in order to obtain a profitable investment. Comprehending what determines and how to estimate the value of a firm seems to be a prerequisite for executing sensible decisions (Damodaran, 2006).

Given the importance of valuation, it would have been thought that countless different studies and researches have been made identifying the most efficient method when determining the true value of a firm. However, there are several different methods to value a firm using very different assumptions about the fundamentals that determine value. Even though all models have their specific characteristics, it is possible to segment them in four different approaches (Damodaran, 2006):
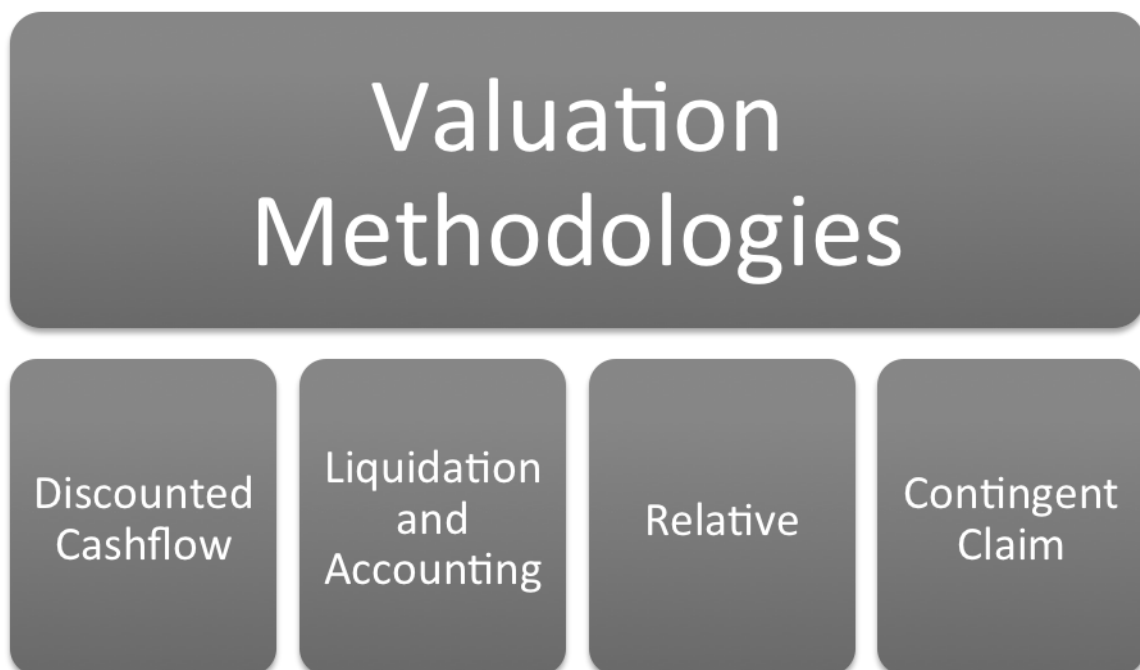
Table 1: Valuation Methodologies

2.2 Discounted Cash Flow Approach

In a cash flow valuation, the value of an asset is the present value of its expected future cash flows, discounted back at a rate that reflects the riskiness of these cash flows (Damodaran, A., 2006). According to the same author, this approach is the most recognized one and gets the most play in academia, coming with the best theoretical credentials. "Additionally, the value of an asset is not what someone perceives it to be worth but it is a function of the expected cash flows on that asset".

2.2.1 Residual Valuation- Excess Returns

There are three residual income models for equity valuation that always yield the same value as the discounted cash flow valuation models: Economic Profit, Economic Value Added and Cash Value Added (Fernández, 2003). Although it is stated in the previous paper that Economic Profit and EVA are different, only the latter will be analyzed as (Copeland et al., 2000) contradict the previous statement, arguing that both measures are equal.

Many companies consider that EVA, Economic Profit or CVA are better indicators of a manager´s performance than earnings because they "refine" earnings with the quantity and risk of the capital required to obtain them (Fernández, 2003).

2.2.1.1 Economic Value Added

The economic value added (EVA) is a measure of the surplus value created by an investment or a portfolio of investments. It is computed as the product of the "excess return" made on an investment or investments and the capital invested in that investment or investments (Damodaran, 2006).

The basic objective of EVA is to create an operating measure of periodic performance that is consistent with discounted cash flow (DCF) valuation and highly correlated with current market value (O´Byrne, 1999).

EVA = (Return on Capital Invested – Cost of Capital) * (Capital Invested)

    = After-tax operating income – (Cost of Capital) * (Capital Invested)

The EVA is a development of the NPV formula, where the NPV of a project is the present value of the economic value added by that project over its life:

$$NPV= \sum_{t=1}^{t=n} \frac{EVA_t}{(1+k_c)^t}$$

Where:

$EVA_t = Economic\ value\ added\ by\ the\ project\ in\ yeat\ t$

$n = Life\ of\ the\ project\ in\ years$

$k_c = Cost\ of\ capital$

2.2.1.2 Cash Value Added

(Fernández, 2003)

As an alternative to the EVA, the Boston Consulting Group has proposed other residual income valuation method: the cash value added method, which can be defined as the following:

$$CVA_t = NOPAT_t + Dep_t - ED - (D_0 + Ebv_0)WACC$$

Where:

ED = Annuity that, when capitalized at the WACC, the assets´value will accrue at the end of their service life

2.2.2 Adjusted Present Value

The APV model is identical to the enterprise DCF model as it discounts free cash flows to estimate the value of operations in order to obtain the enterprise value, once non-

operating assets are added. Consequently, the equity value is retrieved from deducting the value of debt from the enterprise value. The major difference between these models is that the APV separates the value of operations into two components: the value of operations as if the company was entirely equity-financed and the value of the tax benefit arising from debt financing (Copeland et al., 2005). While in the conventional approach, where the effects of debt financing are captured in the discount rate, the APV approach attempts to estimate the expected dollar value of debt benefits and costs separately from the value of the operating assets (Damodaran, 2006). Therefore, the value of the business according to the APV approach will be the following:

Value of Business = Value of business with 100% equity financing + Present value of Expected Tax Benefits of Debt – Expected Bankruptcy Costs

The traditional DCF approach has been the most common approach used and taught by business schools and textbooks but only due to its standardization, not because it´s the best performer (Luehrman, 1997). According to the same author, there is a simple reason why APV should be chosen over WACC which is related with the fact that APV always works when WACC does, and sometimes when WACC doesn´t, because it requires fewer restrictive assumptions. General managers will understand that APV´s strengths lies in the added managerially relevant information it can provide. This approach will support managers interpret not only how much an asset is worth but also where the value is coming from.

2.2.2.1 Tax Shields

The debt tax shields has stimulated decades of debate regarding firm valuation and the cost of capital. While Modigliani and Miller argued in 1963 that the tax benefits of debt increases firm value and decreases the cost of using capital debt, DeAngelo and Masulis proposed in 1980 that the financial distress costs of debt offset at least some of the tax benefits (Kemsley and Nissim, 2002).

But the debate has not been only related to its benefits but also on how the tax shields should be calculated. Fernandez (2006) on his paper entitled "The Correct Value of Tax Shields: An Analysis of 23 Theories" states that there exists 23 different ways to correctly evaluate tax shields, being the most common:

Modigliani & Miller, 1963: "the value of tax shields for perpetuities in a world without costs of leverage is equal to the tax rate times the value of debt (DT). The value of tax shields, according to their third proposition, is obtained by discounting the present value of the tax savings due to interest payments of a risk-free debt at the risk-free rate".

Myers, 1974 & Luerhman, 1997: these authors stated that the value of tax shields is equal to the present value of tax savings discounted at the cost of debt.

Harris and Pringle, 1985 & Kaplan and Ruback, 1995: these authors propose discounting these tax savings at the cost of capital for the unlevered firm.

Fernández (2004) on his paper "The Value of Tax Shields is Not Equal to the Present Value of Tax Shields", states that "there is no consensus in the existing literature regarding the correct way to compute the value of tax shields", yet he shows a consistent way to estimate the value of the tax savings is not by "thinking of them as the present value of a set of cash flows, but as the difference between the present values of two different sets of cash flows: flows to the unlevered firm and flows to the levered firm".

On the other hand, Cooper and Nyborg (2005) "The value of tax shields is equal to the present value of tax shields" contradict Booth (2002) and Fernández (2004 a and b) – both defend PVTS is computed from subtracting the value of unlevered firm from the value of levered firm and that the present value effect of the tax saving on debt cannot be calculated as simply the present value of the tax shields associated with interest-affirming "how inconsistent application can lead to errors that are subtle but large and that the use of incorrect formulas can result in an estimate of PVTS that is double its correct value". These authors show that the value of the debt tax savings is the present value of the tax savings from interest.

In summary, there isn´t still a consensus in the existing literature regarding the optimal way to calculate the value of tax shields, therefore, each company should evaluate its tax shields according to the specific characteristics of the company.

2.2.2.2 Bankruptcy Costs

As it has been seen before, there isn´t a consensus way to calculate the value of tax shields, and neither there is with bankruptcy costs.

According to Damodaran (2006), the calculation of bankruptcy costs is the third and last step of the adjusted present value approach. This step is crucial to evaluate the effect of the given level of debt on the default risk of the firm and on expected bankruptcy costs.

PV of Expected Bankruptcy Costs = (Probability of Bankruptcy) (PV of Bankruptcy Costs)

The issue is related with the fact that neither the probability of bankruptcy nor the bankruptcy cost can be estimated directly. According to the same author, there are two basic ways in which the probability of bankruptcy can be estimated indirectly. The first one is to use bond rating as a reference since the companies with better ratings will consequently have a less probability of bankruptcy. The other way is through statistical approach to estimate the probability of default, based upon the firm´s observable characteristics, at each level of debt.

Yet, costs of distress span far beyond the conventional costs of bankruptcy and liquidation since research that has been looking at this subject has concluded that direct costs of bankruptcy are very small, relative to the firm value. The awareness that the company is in distress can cause serious damage to its operations, as its major stakeholders (customers, suppliers, employees, etc.) can react negatively and consequently make the perception of distress into a reality. In the same paper, it is stated that the magnitude of these costs can range from 10-25% of firm value.

Even though, nowadays the average and generally accepted number to estimate bankruptcy costs is around 20% of the value of the firm, this assumption was highly

opposed by Miller, Merton H. in 1977 on his paper "Debt and Taxes", defending that this figure makes no sense since was derived from a study given to small businesses, mostly proprietorships and typically undergoing liquidation rather than reorganization. Additionally, Miller states that the only study he has knowledge about where costs of bankruptcy were being evaluated for large, publicly-held corporations is that of Jerold Warner (1977) "Bankruptcy Costs: Some Evidence", where a sample of eleven railroads that filed in bankruptcy between 1930 and 1955 were averaging 5.3 percent of the market value as bankruptcy costs.

2.2.3 Free Cash Flow

2.2.3.1 Free Cash Flow for the Firm

Also known as FCFF, it´s an indicator of the firm´s profitability after all expenses and reinvestments have been subtracted. This firm valuation approach, unlike the following models that will be discussed, values the firm rather than equity.

FCFF = EBIT (1 − t) + Depreciation − CAPEX − Changes in Net Working Capital

Where:

$$t = Tax\ Rate$$

$$CAPEX = Capital\ Expenditures$$

The advantage of using firm valuation approach instead of valuing the equity solely is that cash flows relating to debt do not have to be considered explicitly since the FCFF is a pre-debt cash flow while they have to be taken into account in estimating FCFE. In situations, where the leverage is expected to shift significantly over time, this is a significant saving, since estimating new debt issues and debt repayments when leverage is changing can become increasingly difficult as time goes through (Damodaran, 2006).

Despite the mentioned advantage, the value of equity obtained from the firm valuation and equity valuation methods should be the same if assumptions about financial leverage are made consistently.

In order to obtain the value of the firm, it is necessary to discount the expected FCFF at the weighted average cost of capital, also known as WACC, which is a calculation of a firm´s cost of capital derived from different sources (equity, debt and hybrid). Finally, to reach the equity value of the firm its is required to deduct from the value of the firm non-equity claims:

$$Equity\ Value = \sum_{t=1}^{n} \frac{FCFF_t}{(1+WACC)^t} - Non\ Equity\ Claims$$

2.2.3.2 FCFE

As stated by Damodaran (1994), FCFE is a measure of free cash flow to equity that captures the cash flow left over all reinvestment needs and debt payments:

FCFE = Net Income + Depreciation – CAPEX – Change in non-cash Working Capital – (New Debt Issued – Debt repayments)

According to Buffett, investors should focus more on this approach, as he calls "owner´s earnings", which can be defined to be cash flows left over after capital expenditures and working capital needs, a measure of free cash flow to equity that ignores cash flows from debt.

Regarding this approach, it is necessary to discount the FCFE at the required rate of return expected by shareholders (cost of equity) in order to reach the value of the firm´s equity:

$$Equity\ Value = \sum_{t=1}^{n} \frac{FCFE_t}{(1+Kc)^t}$$

2.2.3.3 Capital Cash Flow

Ruback (2000), presents an alternative method for valuing risky cash flows: the capital cash flow method since the cash flows include all of the cash available to capital providers, including the interest tax shields. The discount rate is the same expected return on assets that is used in the before-tax valuation. Because the benefit of tax deductible is included in the cash flows, the discount rate does not change when leverage changes.

Although this method treats interest tax shields differently when compared with Free Cash Flow, the two methods are algebraically equivalent. The main advantage of Capital Cash Flow is its simplicity since the interest tax shields are included in the cash flows, which will consequently be less prone to error.

2.2.3.4 Dividend Discount Model

DDM is an approach used to value the price of a certain stock by using predicted dividends and discounting them back to present value. The logical of this procedure is that if the value obtained from DDM is lower than what the shares are currently trading in secondary markets, then the stock is overvalued.

Damodaran (2006) states that when investors buy stocks in publicly traded companies, they generally expect to get two types of cash flows- dividends during the holding period and the expected price at the end of the holding period. Since this expected price is itself determined by future dividends, the value of a stock is the present value of dividends through infinity:

Value per share of stock $= \sum_{t=1}^{t=\infty} \frac{E(DPS_t)}{(1+k_e)^t}$

Where:

$E(DPS_t) = Expected\ dividends\ per\ share\ in\ period\ t$

$$k_e = Cost\ of\ equity$$

The main attractions are its simplicity and its intuitive logic since dividends represent the only cash flow from the firm that is tangible to investors. Also that the use of this model requires fewer assumptions to forecast dividends than when compared to forecasted free cash flows, which requires assumptions about capex, depreciation and working capital. On the other side, this model has also some negative points as many firms choose to hold back cash instead of paying it to stockholders or simply not distribute dividends at all.

2.2.4 Cost of Equity

The notion that riskier investments should return higher expected returns when compared to safer investments, in order to be considered good investments, is quite intuitive. Therefore, the expected return on any investment should be the sum of the risk-free rate with an extra return reflecting the risk exposure. According to Damodaran (1999), there are four models available to measure risk: (1): The CAPM, (2): Arbitrage pricing model, (3): Multi-factor model and (4): Proxy model. I will give major focus on the CAPM model throughout this dissertation since it´s the most common used model in the academic community and investment banking.

Even though Fama and Frech (2004) defend on their paper "The Capital Asset Pricing Model: Theory and Evidence" that there are some empirical problems involved in the CAPM model that will consequently invalidate its use in applications- mostly related with variables like size, various price ratios and momentum- the CAPM model is still one of the most used approaches to measure risk.

The general idea behind CAPM is that investors have to be compensated in two ways: time value of money and risk. Time value of money will be correlated with the risk-free rate while the risk will be measured by the other half of the CAPM formula. In order to obtain the expected return, CAPM is composed by three different variables: risk-free rate, beta of the security and an expected market return:

$$K_e = Rf + \beta_L\ (Rm - Rf)$$

2.2.4.1 Risk-Free Rate

Damodaran (2008)

It is usually assumed as an easy task, in corporate finance and valuation, to calculate the risk-free rate in order to give more focus and attention into the risk variables of the CAPM formula. But is the risk-free rate that simple to obtain?

Firstly, it´s important to clarify the meaning of a risk-free asset. Risk in finance is viewed in terms of the variance in actual returns around the expected return. Thus, for an investment to be risk-free, then the actual returns should always be equal to the expected return. There are two major requirements for an investment to be considered risk-free:

(1): There can be no default risk: This constraint automatically excluded "any security issued by a private firm, since even the largest and safest firms have some probability of default risk". Thus, only governments can meet this condition due to their ability of printing money and consequently meet their debt obligations, at least in nominal values.

(2): No reinvestment risk: A 5-year treasury bond is not risk-free since the coupons on that bond will be reinvested at rates that cannot be predicted today. Therefore, only zero coupon bonds can be considered risk-free as there is no possibility of reinvestment since there are no coupon payments.

In summary, only zero coupon government bonds can be considered risk-free rate securities.

2.2.4.2 Levered Beta

(Aswath Damodaran "Estimating Risk Parameters")

The betas that are present in the CAPM model are a measure of volatility, or systematic risk in comparison to the market and have two specific characteristics:

(1): They measure risk added on to a diversified portfolio, rather than total risk. Therefore, it is feasible for an investment to be high risk, in terms of individual risk, but to be low risk, when compared to the market risk.

(2): They measure the relative risk of an asset and therefore are standardized around one.

The beta for an asset can be calculated by "regressing the returns on any asset against returns on an index representing the market portfolio, over a reasonable period":

$$R_j = a + bR_M$$

Where:

$R_j = Return\ on\ investment\ j$

b = Levered beta

$R_M = Return\ on\ the\ market\ index$

Although, the estimation of the beta seems fairly simple and linear, there are some issues that should be mentioned:

Choice of Market Index: There aren´t any indices that have the ability to measure or even come close to the market portfolio. Thus, there are equity markets and fixed income market indices that measure the returns on subsets of securities in each market. In order to choose which indices will give the best beta estimate, it is suggested to pass through a "market portfolio" test: indices with a higher number of securities should provide better estimates than indices with fewer and indices that are market-weighted should yield better estimates than indices that are not. A good example of an indice with such characteristics is the S&P 500, which includes the market weighted of the 500 largest firms.

Choice of Time Period: The main idea behind the choice of time period is related with the fact that the goal is to estimate the best beta for the future with available past data. With this said, the more we go back further in time, we get the advantage of

having more observations in the regression but on the other side, the company may have changed its fundamental characteristics.

Choice of Return Interval: Shorter return intervals raise the number of observations in the regression for any given time period but securities that do not trade on a continuous basis, the beta estimated can be affected. The lack of trading problem can be solved through the use of longer return intervals or using short return interval returns and then adjusting these betas for the extent of the non-trading.

2.2.4.3 Equity Risk Premium

The risk premium is the last variable to measure the cost of equity in the CAPM model. It can be defined as the excess return that a security or the overall stock market provides over a risk-free rate. According to Damodaran (2013), there are three basic approaches to estimate equity risk premiums:

(1): Survey approach: Investors and managers are asked to assess the risk-premium and the implied approach, where a forward-looking estimate of the premium is estimated using either current equity prices or risk premiums in non-equity markets.

(2): Historical return approach: The premium is based upon how well equities have performed in the past

(3): Implied approach: Future cash flows or observed bond default spreads are used to estimate the current equity risk-premium.

2.2.5 Cost of Debt

The last key input necessary to measure the weighted average cost of capital (WACC) of a company is the cost of debt. According to Cooper & Davydenko (2007), existing methods often overlook the possibility of default, which will possibly cause significant errors in WACC estimated. It is also mentioned that little research attention has been made on this subject.

The authors suggest the following formula to calculate the cost of debt:

Cost of Debt = Promise yield – Yield equivalent of expected default loss

Copeland et al. (2005) recommends that during the calculation of the cost of debt, one should separate non-investment-grade companies from investment-grade companies (debt rate at BBB or better). For the latter, yield to maturity is a suitable proxy while for the companies with below investment-grade debt it is suggested to use APV on the unlevered cost of equity rather than the WACC to value the company. Since Ahold has its debt rated with BBB or better (investment-grade), the yield to maturity will be used to measure the cost of debt of this company, according to the following formula.

$$Price = \frac{Coupon}{(1+YTM)} + \frac{Coupon}{(1+YTM)^2} + \cdots + \frac{Face+Coupon}{(1+YTM)^N}$$

2.2.6 Terminal Growth Rate

The value of a company is determined by the sum of the present value of cash flow during explicit forecast period with the present value of cash flow after explicit forecast period. The second term, also known, as continuing value, it´s the value of the company´s expected cash flow after the explicit period has been calculated. This will eliminate the need of forecasting in detail the company´s cash flows over an extended period, considering that that company is on a steady state and therefore the growth rate is constant. Since this continuing value will be a very determinant factor for the company´s final value, the estimation of the growth rate is crucial for a correct valuation.

Copeland et al., (2005), suggests the following formula when using the enterprise DCF model:

$$Continuing\ value = \frac{NOPLAT_{T+1}\left(1-\frac{g}{ROIC}\right)}{WACC-g}$$

Where:

$NOPLAT_{T+1}$ = *The normalized level of NOPLAT in the first year after the explicit period*

g = The expected growth rate in NOPLAT in perpetuity

ROIC = The expected growth rate of return on new investment

2.3 Asset Based

When valuing a business, it can be argued that the value of a business is the sum of the values of the individual assets owned by the business. In a going concern valuation, there has to be precise judgments on existing investments and expected future investments in order to obtain a precise valuation. Contrarily, in an asset-based valuation, there is a major focus on the assets in place and its separate evaluation. For companies with lucrative growth opportunities, asset-based valuations will yield lower values than going concern valuations.

2.3.1 Book Value Based Valuation- Accounting

As stated by Daniels (1934), income statements would provide a measure of the true earnings potential of a firm while the balance sheet would yield a reliable estimate of the value of the assets and equity in the firm.

The previous thought was challenged by Damodaran (2006) as it affirms that a possible book value to be a reasonable proxy for the true value of a business will depend in the current stage of life cycle that the company is facing. According to the second author, companies facing significant growth opportunities where they can generate excess returns, book values will be much lower from its true value as growth opportunities are not being considered into the valuation. Oppositely, mature firms that are facing low growth opportunities with predominantly fixed assets, the book value of the assets may yield a reasonable measure of the true value of these firms.

2.3.2 Liquidation

The second type of asset-based valuation is the liquidation valuation, where the valuation is based with the assumption that "the assets have to be sold now. In theory, this should be equal to the value obtained from the discounted cash flow valuations of

individual assets but the urgency to liquidate those assets quickly may result in a discount on the value" (Damodaran, A., 2006).

It is possible to make a straightforward comparison between liquidation valuation with book value of assets and discounted cash flow value. "While it is not unusual to see analysts assume that liquidation value will be a precise percentage of book value and that the latter operates as a proxy for abandonment value in many firms" (Berger, Ofek and Swary, 1996), the relationship between liquidation and discounted cash flow value is more difficult to discern.

It is logical to believe that liquidation value should reflect a lower value than discounted cash flow as the first approach will not reflect the value of expected growth potential, contrarily to the second one. Furthermore and already stated previously, the urgency associated with the liquidation of the assets will possibly have a negative impact on the proceeds since there will be a potentially discount given to the buyer (Damodaran, A., 2006).

2.4 Relative Valuation

In relative valuation, also known as multiples approach, an asset is valued based upon how similar assets are prices in the market. Per example, a house buyer will decide how much he is willing to offer for a certain house, after analyzing at what prices similar houses were negotiated in the same neighborhood (Damodaran, A., 2006). Additionally, while in discounted cash flow the intrinsic value of an asset is estimated based upon its capacity to generate cash flows in the future, in relative valuation, a judgment will be made according to how much an asset is worth by looking at what the market is paying for similar assets.

According to the same paper, there are three crucial steps in relative valuation: (1) finding comparable assets that are priced by the market, (2) scaling the market prices to a common variable (3) and adjusting for differences across assets.

Although, agreeing that the multiples approach can be a very useful and simple valuation tool, Goedhart et al,. (2005), believe that multiples are often misunderstood

and, even more often, misapplied, suggesting that the utilization of industry average is somehow biased as companies even though belonging to the same industry and peer group, can have drastically different expected growth rates, returns on invested capital and capital structures. Additionally, different multiples can suggest conflicting conclusions: on this situation, the Best Buy vs Circuit City 'example is given, explaining that when both companies are measured using its respective enterprise value multiples Best Buy trades at a premium (6.3 versus 4.4) but at a discount according to their P/E ratios (13.8 versus 22.3). The last issue regarding this method of valuation is related with the fact that different multiples are meaningful in different contexts.

Despite the previous limitations mentioned by Goedhart et al (2005), Schreiner and Spremann (2007), have made an empirical study where they affirm that there is a direct proportionality between market values and multiples. On their study, a dataset of 600 European firms was used with a comprehensive list of multiples for the ten-year period from 1996 to 2005 with the cross-sectional analysis assuming correlation between market values and its multiples.

Therefore, being conscious about some of the limitations of this valuation approach but also with the awareness of its advantages, this valuation tool will be used on this dissertation to obtain the value of Ahold.

2.4.1 Equity vs Enterprise Multiples

As it was mentioned previously, relative valuation it´s a very simple and practical valuation tool used to value companies but there are several multiples than can be used. These multiples, according to Suozzo et al. (2001) should be divided into two different groups:

Enterprise multiples: reflect the value of the entire enterprise, relative to a statistic that relates to the entire enterprise, such as sales or EBIT. The most relevant enterprise multiples are: EV/Sales, EV/EBITDA, EV/EBIT, EV/NOPLAT, EV/FCFF and EV/Invested Capital.

Equity multiples: expresses the value of shareholders ´claims on the assets and cash flow of the business. The most relevant equity multiples are: Price/Earnings, Price/Cash Earnings, Price/Book Value, Price/Earnings Growth and Dividend Yield.

2.4.2 Peer Group

In order to evaluate a company using multiples, a peer group should be strictly chosen to avoid significant discrepancies between its multiples value and its fair value. Often, companies disclose its major competitors on its annual report but many of them opt to not do so, which will impose the following question: How to choose a peer group? The main scheme behind choosing the right peer group is selecting companies whose underlying characteristics are similar to the company you are evaluating, such as, production methodology, distribution channels, research & development, growth prospects and ROIC (Koller at al., 2010).

2.5 Contingent Claim

"Over the past decades, theoretical and computational advances have allowed finance practitioners to adapt financial option pricing techniques to the valuation of investment decisions, so-called real options. Option pricing methods are superior to traditional DCF approaches because they explicitly capture the value of flexibility" (Copeland et al., 2005)

Because it handles simple contingencies better than standard DCF models, option-pricing theory has been regarded as a promising approach to valuing business opportunities since the mid-1970s. However, real businesses are much more complicated than simple puts and calls. Just setting up the valuation problem, never mind solving it, can be daunting. As a result option pricing has not yet been widely used as a tool for valuation opportunities (Luerhman, T., 1997).

The discounted cash flow model operates as a basic framework for most analysis. In investment analysis, for instance, the conventional view is that the net present value of the project is the measure of the value that it will add to the firm taking it. In recent

years, this framework has come under some fire for failing to consider the options that are embedded in each of these actions. For instance, the net present value of the project does not capture the values of the options to delay, expand or abandon a project (Damodaran, A., 2005).

However, despite the obvious advantages of the real options valuation approach, this method will not be used to evaluate Ahold, since contingent claim valuation is very useful for valuing specific situations where a company has a future option (Damodaran, A., 2006), which is not the case. Additionally, option valuation is considered one of the most complex valuation frameworks (Richardson, Mark., 2009)

There are several different models utilized throughout the contingent valuation approach, such as: Black-Scholes, Binomial model, Monte Carlo or The Greeks but since any of these methods will be used on this dissertation due to the reasons explained previously, I will not explain them individually.

2.6 Summary of Valuation Approaches

Table 2 reflects what was argued previously by several different authors regarding the existing valuation approaches and each of its models. There are other countless methods to evaluate companies but according with what I have read, I believe that the ones mentioned in table 2 reflect the most used in academia and investment banks.

Discounted Cash Flow		Asset Based	Relative		Contingent Claim
Equity	Firm		Equity	Firm	
FCFE	Excess Returns	Book Value	Price/ Earnings	EV/ Sales	Black-Scholes
DDM	APV	Liquidation	Price/ Cash Earnings	EV/ EBITDA	Binomial
	FCFF		Price/ Book Value	EV/ EBIT	Monte Carlo
	CCF		Price/ Earnings Growth	EV/ FCFF	The Greeks
			Dividend Yield	EV/ Invested Capital	

Table 2: Valuation Approaches and its Methods

2.7 Emerging Markets

There are some characteristics that are common between emerging markets and consequently affect the valuation of its firms, such as: currency volatility, country risk, unreliable market measures, information gaps and accounting differences, corporate governance and discontinuous risk. These specific characteristics will impose more challenges to analysts that will have to value emerging markets than those who have to value developed market companies (Damodaran, 2009).

Thus, some adjustments have to be made when valuing a company on emerging markets but according to Ahold´s 2013 annual report there are only three major markets in which the company is operating: USA, The Netherlands and Czech Republic.

According to FTSE Group[1], developed countries have to meet a certain criteria under the following categories: 1) High income economies, 2) Market and Regulatory EMG, 3) Custody and Settlement, 4) Dealing Landscape, 5) Derivatives and 6) Size of Market.

Not only FTSE Group but MSCI, S&P, DOW and Russell, recognize the USA and the Netherlands as developed markets in 2012 and since Czech Republic´s net sales only represent circa 5% of total net sales of 2013, the valuation of Ahold will be performed as the company only operates in developed countries.

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[1] FTSE Group is a British provider of stock market indices and associated data services, wholly owned by the London Stock Exchange.

3. Ahold Valuation

3.1 Company Introduction

Ahold is an international retailing group based in the Netherlands with strong consumer brands in Europe and the United States. By 2012, the company had 3,074 stores, serving a trade area of around 80 million people and with a current number of circa 225,000 employees.

3.2 Brief History

In 1887, Albert Heijn opened a small grocery store in Oostzaan, The Netherlands. The grocery grew through the first half of the 20th century and in 1948 went public on the Amsterdam Stock Exchange. By 1970, the company was already the largest grocery store in the Netherlands and started expanding its business into different segments: liquor, health and beauty care. In 1973, the holding company replaced its name to "Ahold," an abbreviation of "Alber Heijn holding".

In the mid-1970s, Ahold started its international expansion by acquiring companies in Spain and the United States. At that time and until 2000, the growth was accelerated through acquisitions in Latin America, Central Europe and Asia. A few years later, the company decided to divest all its operations that were not achieving a sustainable position in the market which lead to the exit of the Latin American and Asian market; Europe and the United States were now the core markets.

During 2011, Dick Boer who was announced as CEO of the Ahold, reported a new phase of its growth strategy which were based on six different pillars: increasing customer loyalty, broadening offering, expanding geographic reach, simplicity, responsible retailing and the people performance.

3.3 Organizational Relations
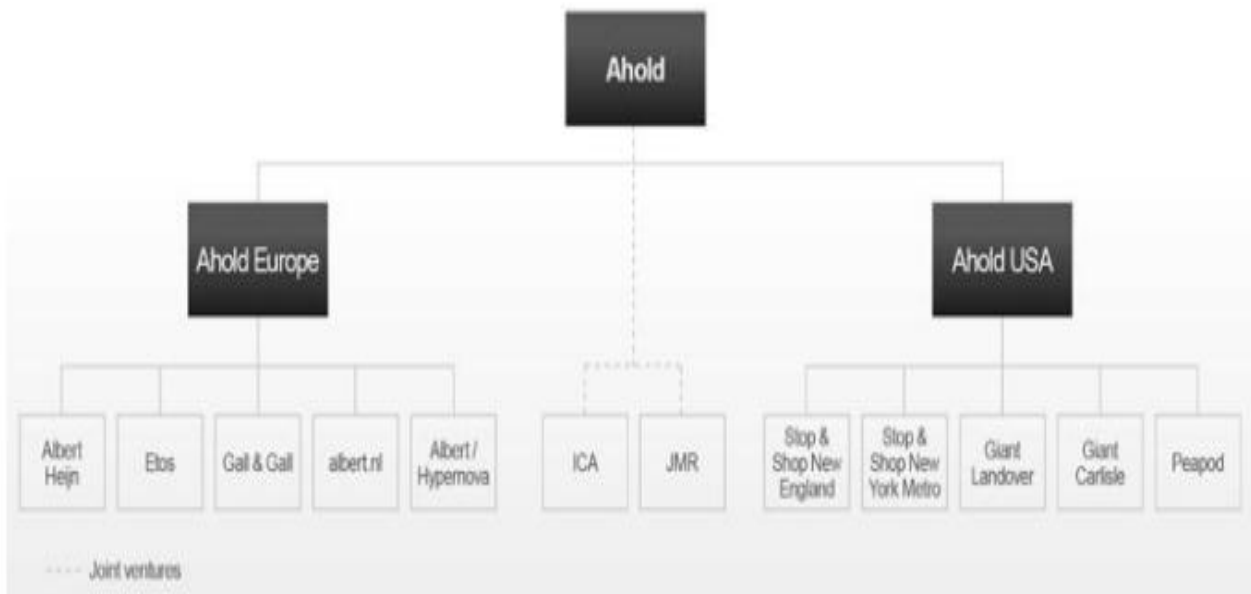
Chart 1: Ahold´s Organizational Chart, *Ahold Annual Report*

The company operates its business from two continental platforms: Ahold Europe and Ahold USA, each of them led by a COO, which reports to Ahold´s CEO.

Ahold Europe includes Albert Heijn in the Netherlands and Belgium; Etos, Gall & Gall, and albert.nl in the Netherlands and Albert in Czech Republic.

Ahold USA is settled into four different divisions: Giant Carlisle, Giant Landover, Stop & Shop New England and Stop & Shop New York Metro.

Finally, Ahold has 60 percent interest in ICA AB (ICA) and a 49 percent in Jerónimo Martins in Portugal. In March of 2013, Ahold successfully divested its stake in ICA for €2 5 billion to focus on its core business, maintaining the joint venture with Jerónimo Martins.

Today, Ahold is mainly concentrating its operations in two main regions: Europe and United States.

3.4 Ahold Europe

Albert Heijn: Established in 1887 by Albert Heijn, it's the leading food retailer in the Netherlands with its mission being "to make the ordinary affordable and the extraordinary attainable" for customers. Albert Heijn has more than 930 stores throughout the Netherlands and Belgium operating in three different formats: the neighborhood grocery store, the larger version as a hypermarket and also as a "to go" convenience store.

Etos: Established in 1918 but only joining Ahold in 1973, Etos solely operates in the Netherlands and it's considered one of the largest drugstore chains in the country, offering a wide selection of health and beauty, body care and baby care products at affordable prices.

Gail & Gali: Operating in the Netherlands, this brand is the leading wine and liquor retailer with an extensive range of quality products, a high-quality service and expert advice.

bol.com: Having a customer data base of more than three million people, this is the number one online retailer in the Netherlands and has a growing presence in Belgium. It offers non-food products delivered direct to people's homes. Currently, employs 400 people and it has opened 700 pick-up points to give customers an alternative way to obtain their orders. Established in 1999, joined Ahold in 2012.

Albert: One of the best-known brands in food retail in the Czech Republic and Slovakia[2] with a focus on fresh products, friendly staff and good value.

Pingo Doce: Ahold currently holds a joint venture with one of the largest supermarket chain operating in Portugal that started back in 1992. Pingo Doce has a very similar business strategy when compared to Ahold due to its public target and its product offering. Pingo Doce guarantees low prices and good service, with a focus on healthy fresh meals.

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[2] In 2013, Ahold reached an agreement to sell its Slovakian business, only remaining with the Czech Republican operations in the East Europe

3.5 Ahold USA

Giant-Carlisle: Operating in Connecticut, Massachusetts, New Jersey and New York, this brand operates in the supermarkets and superstores format.

Martin´s: Belongs to the Giant Carlisle division, which was settled in 1923. It distinguished itself with an extensive selection level and value for the money. At the end of 2012, Giant Carlisle operated 200 supermarkets under the name Giant Food Stores and Martin´s Food Markets and 100 fuel stations, while employing more than 32,000 people.

Stop & Shop: Organized into two different divisions: Stop & Shop New England and Stop & Shop New York Metro, this brand operates with superstores, full-service pharmacies and conventional supermarkets with a total number of employees around 64,000 and approximately 400 stores and 100 gas stations. It is also known for being technology driven, giving the opportunity to its customers to shop through smart phones and Internet.

Giant-Landover: Currently with 170 supermarkets and 14 fuel stations, the brand is focusing on strengthening its own-brand offerings and placing a strong focus on its fresh variety and thriving customer loyalty programs. 21,000 people are employed by Giant-Landover.

Peapod: Last brand to join Ahold in 2000, its business is mainly focused in online grocery ordering and delivery. The brand is currently serving customers from twelve different states and sales have been growing.

3.6 Ahold´s Strategy

Vision: "To offer better choice value, and a better life to all of our stakeholders- our customers, associates, suppliers, shareholders, and the communities we serve- every day"

3.6.1 Ahold´s Future Strategy

In November 2011, Dick Boer, Ahold´s CEO appointed in the same year, declared that the company would go through a new phase of growth strategy, "Reshaping Retail", which was based on six essential pillars.

According to the company´s 2011 annual report, the first three pillars are focused to create growth while the latter three on how growth will be enabled.

- Increasing customer loyalty: customer loyalty initiatives will generate between one and two percent to identical sales growth and the ability to retain most of the customers and gaining new ones is essential for the success of this business.

- Broadening our offering: Ahold´s business is growing by their ability to correspond to customer´s changing needs. Online sales are expected to grow to €1,5 billion by 2016, different formats of stores are being developed to serve customers' needs with the opening of at least 150 convenience stores in Europe by 2016 and finally, a better selection of products available is being analyzed in order to maximize client needs, with new innovative and own-brand products.

- Expanding our geographic reach: besides the opening of 60 new stores in Belgium, the firm is looking for new geographic opportunities where it is possible to achieve sustainable profitable growth.

- Simplicity: this pillar is defined by the ability of lowering costs, decreasing risks and working more efficiently. The company has launched a €350 million cost savings program (2012-2014) in order to create more value for clients.

- Responsible retailing: the source of the products being sold to customers, the impact on the environment, communities served and people employed are critical factors to achieve a clear and ambitious corporate responsibility.

- People performance: the last pillar is based on the attraction and development of the best talent in the industry to help the company achieve its growth ambitions.

With this new strategy implemented, the company would be able to benefit from changing customer behavior and retail trends and remain its competitiveness and sustainability.

4. Competitive Environment

4.1 United States of America

As mentioned previously, the US operations are critical for Ahold´s results as they represent more than 60% of total revenues for the company. Thus, in order to understand what is driving the firm´s sales, a careful analysis about its competitors and how Ahold´s positions itself in the market should be done.

For the past years, Ahold has been faced with a very competitive environment where the company is up against the rise of Target, Trader Joe´s, Whole Foods, the discounters, clubs and mainly, Wal-Mart. Yet, they have been able to defend and raise their local market shares due to its distinctive retail offering.

There have been some seismic shifts throughout the 286 US metropolitan stores where Ahold currently operates from 2008 to 2013, mainly:

The number of competitor chains has risen, in average, from 15 per market to 17. (Appendix 1)

For the same period, the average number of stores has increased from 151 to 164 in each local market. (Appendix 2)

New entrants have managed to gather 7,7% of market share in the local markets that Ahold operates. Consequently, among the incumbents there have been some variations between winners and losers. (Appendix 3)

With this said, it would be expected for Ahold to considerably drop its market share throughout this five years period due to this large shift in the competitive environment. Surprisingly, and analyzing both Appendixes 4 and 5, it is possible to observe that Ahold did not lose any market share to its competitors between 2008 and 2013, even gaining an irrelevant percentage. [3]

4.1.1 How Ahold does it

The ability to maintain market share while the overall market is being raided by new competitors is not by offering the cheapest price and compete with big retailers, such as Wal-Mart, but to have the right price to match retail offer. Ahold´s goal is not to compete with the discounters on price but to offer something distinct to attract new customers. In this case, the company´s distinctive offer is "quality food for the masses". For instance, while Ahold´s message is "we love food", Wal-Mart´s message is related with their cheap prices "we sell products cheaply". These different messages will automatically separate the target consumer of each company.

The way Ahold tries to differentiate from its main competitors in the discount segment is easily seen by the way that stores are settled:

The stores feel very food focused: In Ahold stores, the customer is faced with a large range of fresh and quality food, while its competitors (e.g. Wal-Mart, Tesco) offer bigger stores with less food focus.

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[3] The analysis is slightly skewed as not all of the regions are equal in size or presence by Ahold

While most products are pre-packed with less appealing range, Ahold enables customers to feel and smell the products giving a more fresh feeling.

The bakery, deli and other counters have more appealing offerings when compared to Wal-Mart and discounters.

Ahold offers a mix between branded and own label products, which enables the differentiation between target customers. Its loyalty card program is essential for customer engagement.

At Ahold stores, customers have the feeling they are shopping at a local mini market with a personalized service with employees available to help at any time while at Wal-Mart it feels like shopping at a big warehouse without any type of assistance.

4.1.2 Comparison between Ahold in USA vs Wal-Mart (pictures)

Pictures of different stores of Ahold in the American market

Pictures of different stores of Wal-Mart in the American market
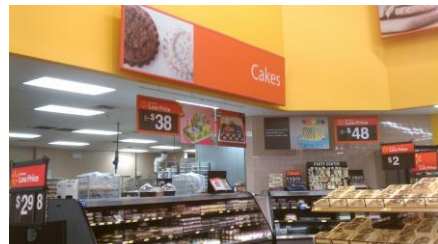
4.1.3 USA- Possibilities of infill acquisitions and further expansion into other territories

Forecasting the company´s expansion and acquisition strategy could be seen as a challenging task, taking into consideration that the provided information on the company´s annual reports barely refers its future strategy. Still, Ahold is very well positioned to improve the growth rates registered in the past few years, since Ahold´s US operations are mainly concentrated on the east seaboard of the country which enables the firm to expand through the opening of new stores in neighbor areas that rely on the same supply chain and central management. These expansion possibilities would be:

Low risk: currency and sovereign risk would maintain the same, which would enable the company to use the same business formats that have been successful in other locations.

Low cost: With the existence of a settled supply chain, there is no need to create a new one, which consequently reduces costs with the opening of new stores.

Limitless: As seen before, Ahold and Wal-Mart can co-exist since they target different customers, meaning that there is no limit restriction regarding locations where Ahold can expand.

Unlike the European market, the American market facilitates expansion through acquisitions, with the market being very fragmented with lots of smaller and regional players as it is shown in graph 1. These smaller local players provide Ahold more opportunities to make strategic acquisitions, gain market share, without enlarging the industry.

Graph 1: Average market share in food retailing (2nd to 5th), *PlanetRetail*

4.2 Europe- Netherlands

Even though, the United States has almost twenty times the population of the Netherlands, one can identify some similarities between the American and the Dutch food retailer market:

Both contain specialist-localized players (e.i. Redner´s Markets and Jumbo Supermarkten).

Bigger international players are present in both markets, stealing significant market share from local players.

Ahold has been a dominant player in both markets with growing market shares for the past years. In the Netherlands, Albert Heijn has increased its market share from 21% to 31% from 2006 to 2012

Both have experienced a consolidation of their markets over the last few years, as it can be seen on graph 2.

Netherlands market share
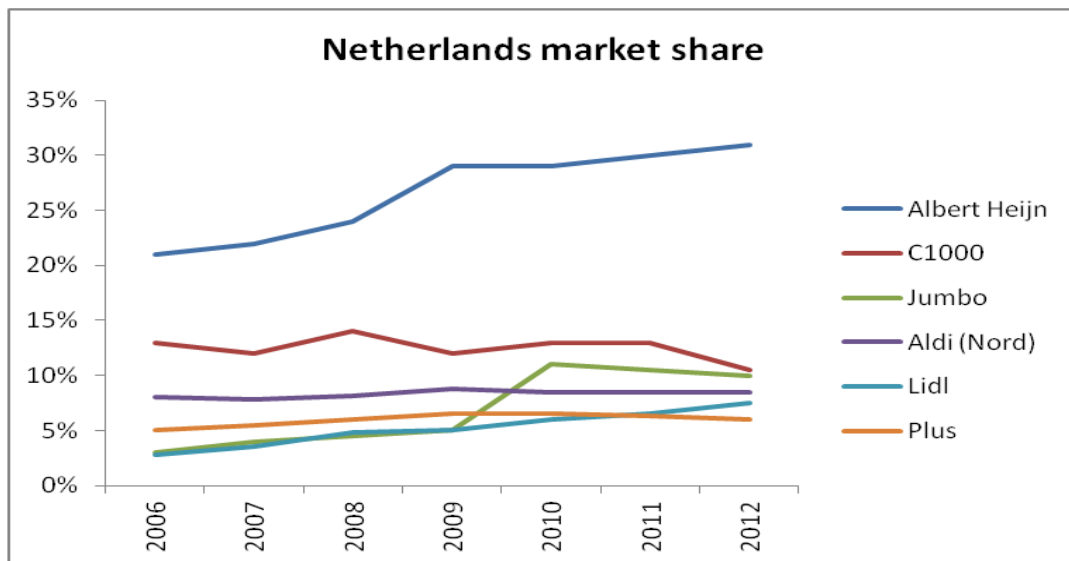
Graph 2: Ahold´s market share in the Netherlands vs. its competitors, *PlanetRetail*

Notwithstanding, Ahold, more specifically Albert Heijn, has been achieving an outstanding performance when it comes to increasing market share. However, the discounters should be taken into account: discounters have been improving their market share (especially Lidl, which increased its market share from 3% in 2006 to 8% in 2012) and have been extracting significant market share from the industry.

Therefore, the major question that should be asked is the following: Can Ahold cope with the discounters continuing to improve their market share and their offering? My point of view relies on the fact that Ahold has all the necessary conditions to continue its successful path for the next years, for the following reasons:

This situation is not unfamiliar for Ahold. In the United States, the industry has been through the same pattern that is being registered at the moment in the Netherlands and Ahold has managed not only to survive but also to gain some market share with increasing revenues. Ahold has been able to co-exist with Wal-Mart, creating a kind of duopolies in many regions. With this said, there is no reason to believe why Ahold can´t use the same strategy in the Netherlands where they co-exist and complement with the discounters.

The Netherlands is a relatively small market, reducing its competitiveness. Contrarily to the United Kingdom, there aren´t big players established (e.g. equivalent to Sainsbury´s) that can discontinue its growing pattern.

Ahold has been implementing the same strategies as it did in the United States:

Differentiate: Distinguish from the discounters by creating sections in their stores for better quality fresh food.

Price hygiene: Decrease own label prices and promote them heavily. Even if customers don´t buy those products, they will have the idea that Ahold is practicing low and fair pricing.

In summary, Ahold has the potential to follow the previous trend seen in the east coast of the United States, assembling an increased segmented market, majorly controlled by duopolies between value and better quality retailers. With all the points mentioned before, Ahold will extract some market share from the more middle ground retailers and impose its dominant position in the market.

Before proceeding to Ahold´s valuation there is a crucial step understanding in which market conditions is the company operating to comprehend the prospects for the future. According to Ahold´s 2013 annual report, the firm operates in three different areas: The Netherlands (Belgium and Germany are also included), United States of America and Czech Republic; the latter only representing 2% of total underlying operating margin, with The Netherlands representing 42.7% and USA with 55.3%. Therefore, a macroeconomic look will not be made for Czech Republic as it would be irrelevant if a significant change would happen in this country since its contribution for the company´s overall results is very low.

5. Macroeconomic Scenario

As Ahold operates in the Retail/ Fast Moving Consumer Goods, it is important to identify which macroeconomic indicators can directly affect the firm´s operations and its growth prospects. Related to this specific industry in both countries (the Netherlands and USA) a few economic indicators were identified that will impact the company´s processes which will consequently influence financial results:

Consumer Confidence: Measures consumer´s attitudes towards current and future economic conditions. It´s a relevant indicator to the economy as consumer spending drives circa 70% of economic growth; low consumer confidence will impact negatively consumption and the economy will slow further.

Consumer Price Index Economic Indicator: The CPI can be defined as a measurement of prices of mostly everything available to acquire, from 80,000 different consumer items. Therefore, deflation occurs when this index decreases in value and inflation occurs when the value is increased. The CPI indicator is extremely important and used by Federal government to adjust or implement new economic regulations in order to control inflation.

Unemployment Rate: As the name suggests, reflects the amount of people currently jobless. There are some specific rules to determine if someone is considered or not unemployed, as in order to be considered unemployed you have to be without a job but also be actively looking for one in the past four weeks. Besides being a lagging indicator- measure the effect of economic events- it´s a powerful confirmation indicator of what other indicators have previously showed. Once again, this will be a very useful tool for the Federal Reserve to evaluate the economy´s health before determining which monetary policies will be applied.

Gross Domestic Product: GDP measures the country´s growth, which describes how quick the economy is growing. Emergent economies will have a positive impact in consumer spending.

The Interest Rate Economic Indicator: Reflects the percent charged for the lending of money. This percent charged will influence how consumers are willing to take bank

loans that will consequently affect consumer spending. Other things being equal, low-interest rates will incentive consumers to ask for more bank loans.

Crude Oil Prices Economic Indicator: This is the least obvious indicator on how it can have impact on the retail industry as we have seen how the previous ones influence mainly consumer spending. Crude oil prices measure the spot price of various barrels of oil. This indicator does not have the same impact as the previous ones have on the consumer´s perspective but it mostly impacts the firm´s operations, such as, cost of manufacturing, transportation and utilities that rise along with the cost of crude oil, which will consequently affect the company to increase prices to absorb those higher costs.

United States Economic Forecasts	Last	Q3	Q4	2015	2020	2030
Unemployment Rate	6,10%	6%	5,90%	6%	5,60%	5,70%
GDP Annual Growth Rate	2,50%	1,80%	2,31%	2,32%	2,72%	2,72%
Consumer Confidence	84,6	83,14	83,19	83,13	89,36	93,61
Retail Sales YoY	5%	4,11%	4,33%	4,26%	4,15%	4,15%
Consumer Price Index CPI	237,9	241	243	255	355	500
Food Inflation	2,43%	1,92%	2,00%	1,68%	2,02%	1,52%
Government Bond 10Y	2,61%	2,80%	2,90%	3,50%	4,20%	4,00%
Interest Rate	0,25%	0,25%	0,25%	0,75%	3%	5%

Table 3: United States Economic Forecast, *Trading Economics*

The Netherlands Economic Forecasts	Last	Q3	Q4	2015	2020	2030
Unemployment Rate	8,20%	8%	7,90%	8%	8,10%	8,30%
GDP Annual Growth Rate	0,90%	-0,90%	-0,90%	0,65%	2,80%	2,78%
Consumer Confidence	-6	4,19	9,34	9,74	28,35	29,7
Retail Sales YoY	-2%	0,68%	1,20%	0,83%	3,99%	3,98%
Consumer Price Index CPI	116,57	118	117	195	269	502
Food Inflation	-0,29%	-1,24%	-1,76%	-0,88%	-1,06%	-0,96%
Government Bond 10Y	1,24%	0,91%	0,79%	0,99%	1,36%	1,67%
Interest Rate	0,05%	0,25%	0,25%	0,11%	1%	2%

Table 4: The Netherlands Economic Forecast, *Trading Economics*

Retail sales growth, 2014-15 forecasts
(real % change per year)

Source: The Economist Intelligence Unit
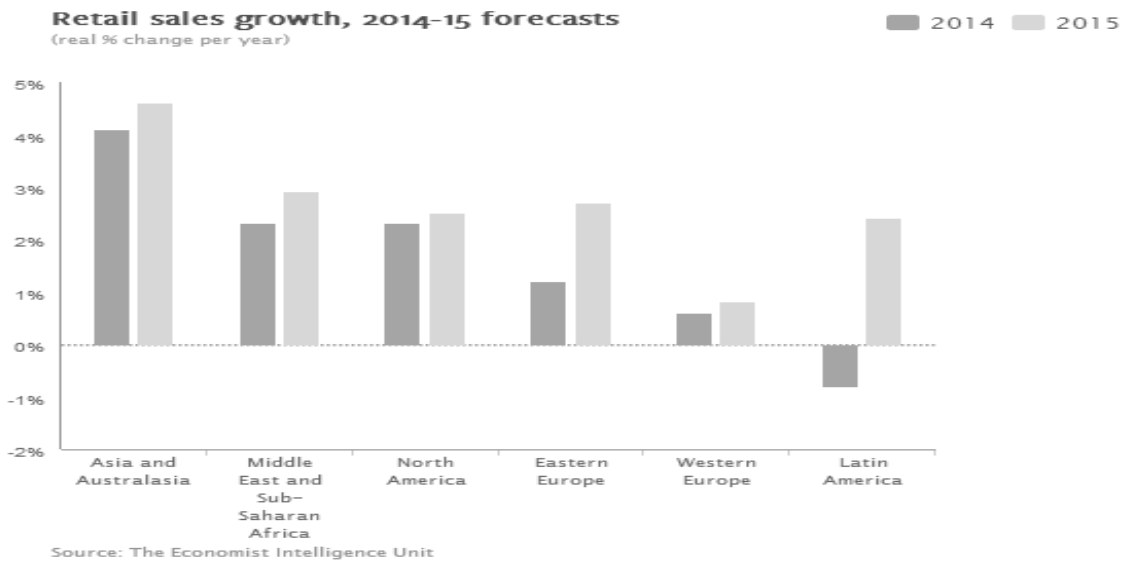
Graph 3: USA FMCG (Fast Moving Consumer Goods) Market Forecast 2014-2015, *The Economist Intelligence Unit*

6. Risks

There are some potential risks that can potentially affect Ahold´s valuation. These risks can be grouped in two different segments, namely, Systematic risk and Unsystematic risk.

6.1 Systematic Risk

Describes the risk that is implicit or exposed to the entire market or an integrated market segment. Also known as undiversifiable risk, affects the entire market and not such a specific stock or industry. This type of risk is quite inconceivable to predict and to not be exposed to it; hedging and an efficient asset allocation strategy are viable solutions to overcome this issue. Thus, the food retail industry can be exposed to the following risks:

Prevailing economic conditions: In each of the countries that Ahold operates, food retail spending is entirely correlated with current economic conditions. Therefore, any unpredictable degradation or enhancement of the prevailing macroeconomic

conditions in each of the countries will have a direct impact in the growth assumptions tested on those operations.

New entrants: All different business units belonging to Ahold are exposed to new entrants either at a local/regional level (i.e. a new supermarket opening locally to an incumbent) or national level (a new entrant penetrating a whole market).

6.2 Unsystematic Risk

Also known as specific risk reflects the risk that is unique to an individual company and does not affect the market as a whole. With this said, Ahold has reported on its annual report some of its specific risks:

- Risk that price will not increase as expected: The potential risk of deflation or low levels of inflation can mitigate the rise of prices that will consequently reduce future net sales.

- Pension plan funding: Ahold has a number of defined benefits pension plans covering a large number of employees in Europe and the United States. As it is stated in the company´s 2013 Annual Report "a decrease in equity returns or interest rates may negatively affect the funding ratios of Ahold´s pension funds, which can lead to a higher pension charges and contributions payables". There are several key risk drivers related to this pension plan funding, such as: Insolvency or bankruptcy of Multi-employer plan participants, decreasing interest rates, poor stock performance, changing pension laws and increasing US healthcare costs.

- Excess Cash: Ahold can be motivated to make a large value destructive acquisition due to large amounts of cash on its balance sheet

- Currency: More than half of the profits are derived from the United States. Even though the company has some currency hedging derivatives, a dollar appreciation can be a noteworthy upside risk.

7. Valuation

Under equity valuation, one of the most critical exercises is the efficient forecasting of the several accounting items that will have a direct impact on the final valuation of the company. Therefore, I will separate the different accounts and make a clear explanation of the assumptions and calculations made.

7.1 Revenues

The forecasting of revenues is without any doubt the most important step to perform an accurate value of the firm, not only for being the rubric with the most impact on the net income, but also because many any other rubrics will be determined as a percentage of future sales.

As it was mentioned previously, Ahold operates in three different geographies (USA, The Netherlands and Czech Republic), with various business units growing at different levels of rate.

Ahold has not established any specific goals in terms of growth for the explicit different business units but has stated in their annual report of 2013 the following targets:

- Add 1-2% to sales growth through their customer initiatives

- Triple online food sales to €1.5 billion

- Open a minimum of 150 convenience stores in Europe by 2016

- Open 50 supermarkets in Belgium by 2016

I had intentions to forecast revenues for each separate business unit but due to the lack of information in the firm´s annual reports, the estimation of revenues will be allocated to each geographic area as a whole, as revenues are not described for each business unit, neither prospects of growth are given. Despite the fact that there are

different growth perspectives for each business unit (bol.com will naturally have higher growth perspectives due to its online operations than when compared to a more mature business unit, such as, Albert Heijn), a computed weighted average growth rate for each geographic area will be made. This weighted average was mostly based on growth of the number of stores of each business unit, according to the data provided for each business unit in the recent annual reports.

The general perspectives given by the board members throughout the recent annual report are the following:

"We responded to this environment by investing in our value proposition to ensure that our offering remained attractive to our customers while managing the balance between sales and margins."

"Cautious consumer spending put volume growth under pressure and combined with low inflation, resulted in only modest sales growth. However, we grew our market share in the United States and the Netherlands, and maintained our share in the Czech Republic."

"In an environment of modest top-line growth, cost control is extremely important and remains an integral part of our strategy. The cost savings we achieved from our Simplicity program enabled us to continue to invest in our competitive positions in both the United States and the Netherlands. At the same time, our businesses benefited from optimized store processes and improved sourcing."

Taking into consideration the previous statements, one can identify that the firm has been able to grow its market share on the most important two markets throughout this challenging economic period with low inflation and poor customer financial power. Additionally, Ahold has been able to invest on its value proposition, which will be a critical factor to increase future sales and market share.
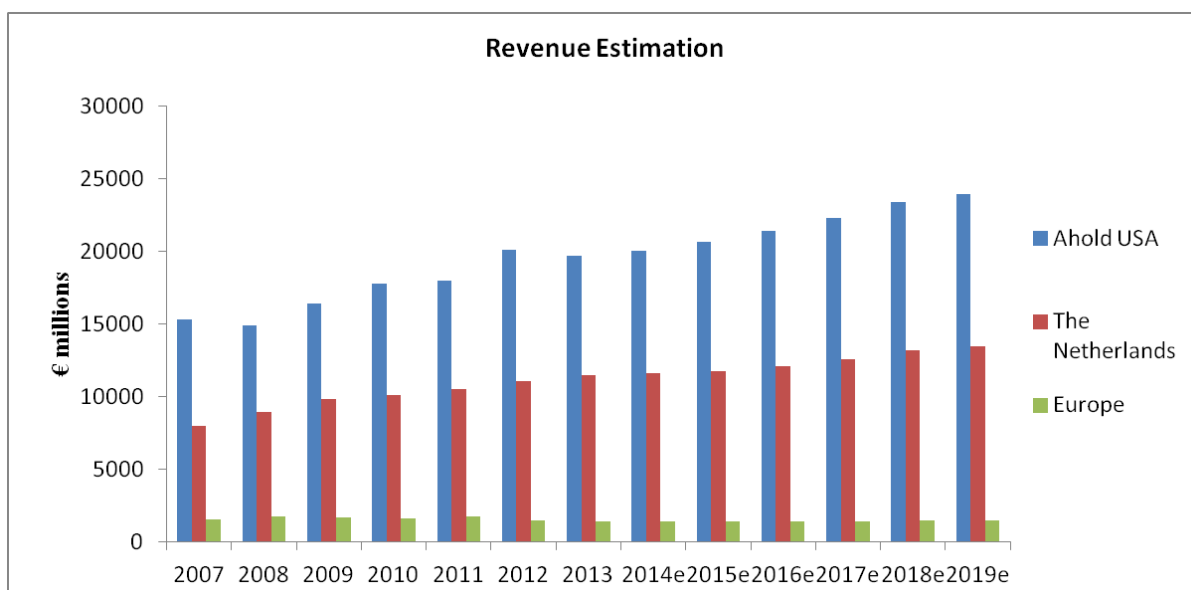
Graph 4: Ahold Revenue Estimation, *Ahold Annual Reports and Own Projections*

Forecasted Revenue (€ million)	2014	2015	2016	2017	2018	2019
USA	20.070	20.672	21.420	22.277	23.391	23.975
The Netherlands	11.609	11.783	12.078	12.561	13.229	13.494
Czech Republic	1.431	1.423	1.438	1.459	1.488	1.503

Table 5: Ahold Revenue Estimation, Ahold and Own Projections

Forecasted # stores	2014	2015	2016	2017	2018	2019
USA	771	775	779	782	786	790
The Netherlands	2.077	2.097	2.118	2.139	2.161	2.182
Czech Republic	281	278	276	273	270	267

Table 6: Ahold Forecasted Number of Stores, Ahold and Own Projections

Average Revenue per Store (€ million)	2014	2015	2016	2017	2018	2019
USA	25,5	25,9	26,6	27,4	28,3	29,6
The Netherlands	5,5	5,5	5,6	5,6	5,8	6,1
Czech Republic	5,1	5,1	5,2	5,3	5,4	5,6

Table 7: Ahold Average Revenue per Store, Own Calculations

Throughout this dissertation, my thesis will defend that sales estimation were mostly supported by organic growth (like for like[4] growth). This was not officially stated by Ahold board of directors but according to the company´s 2013 annual report, the firm is committed in improving average revenues per store through a highly promoted customer's loyalty program, stores improvement and a wider product supply to its customers.

Forecasted revenues were computed assuming certain growth rates (see Appendix 9) according to past data (compound annual growth rate and market share) and future economic perspectives (see Appendix 8) adjusted to each geography.

Forecasted number of stores took into consideration two different variables: 1) store growth rate for the past six years, 2) assumed organic growth. Therefore, as it is possible to observe in table 5, the forecasted average revenue per store will increase throughout the explicit period. This is explained by the growth of forecasted revenues which is not followed by the same growth of forecasted stores.

7.2 Cost of Goods Sold

For the past few years, the cost of goods sold as a percentage of total sales has not had had significant changes, reaching 69,4% in 2009 and 70,6% in 2012. Since Ahold negotiates its prices with its suppliers and producers on a very regular basis, I find it quite impossible to predict the COGS of all Ahold´s different items; therefore I decided that the most suitable alternative would be to perform an average of the last years (2008-2013) and use as an assumption for the valuation of this company.

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[4] Measure of growth in sales, adjusted for new or divested businesses. One of the most used indicator by retailers to evaluate perfomance
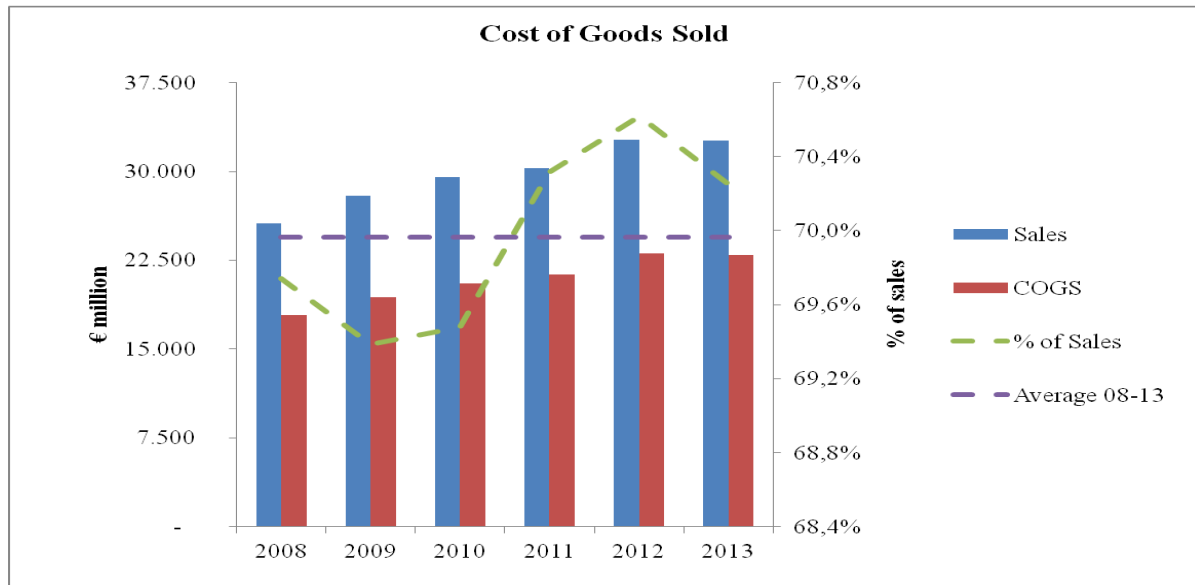
Cost of Goods Sold

Graph 5: Cost of Goods Sold, *Ahold Annual Reports and Own Calculations*

7.3 General Expenses

General expenses are made up of several different items but its main drivers are definitely the "labor costs" and "other operational expenses":

Labor Costs: entirely correlated with total sales; total sales are linked with the higher amount of stores which will result in an increase of total workers. With this said, "Labor costs" will be forecasted separately from all the other rubrics

- "Other operational expenses" have had a little variation on the last five years, with a CAGR of just 1,5%. This rubric comprises outsourcing costs, property or equipment rental charges, water & energy, maintenance work and so on. Given the small variance throughout the most recent years, I will assume that it will grow at the average of the past years.

- "Rent income and expense": New stores will naturally open as sales increase year by year that will consequently also increase costs with renting. According to my calculations, expenses related with rents and sales have been increasing

at a very close rate. Thus, I will maintain the growth rate of this type of operating cost for the forecast of future years.

- "Impairment losses and reversals": Due to the lack of public information available, forecasting impairments and reversals can be a very challenging since it is never mentioned on their annual reports on what type of assets the company is registering impairments. With the exception of the year of 2013, where Ahold registered a record number of impairments with € 83 million due to the exit from New Hampshire, I computed the average of the last year and will use this number as a constant throughout the following years.

- "Write-down of intangible assets" & "Gains on the sale of assets": Insignificant item for the valuation of the company due to its low relevance, unpredictability and information/data provided.

It is also important to mention that the company has been committed to reducing total costs which made management board to implement a cost savings program which has the goal to save over €600 million from 2012 to 2014. At the end of 2013, €480 million were delivered in savings; therefore, in order to achieve the previous target of €600 million by the end of 2014, an assumption was made that Ahold would save €120 million by the end of this year.
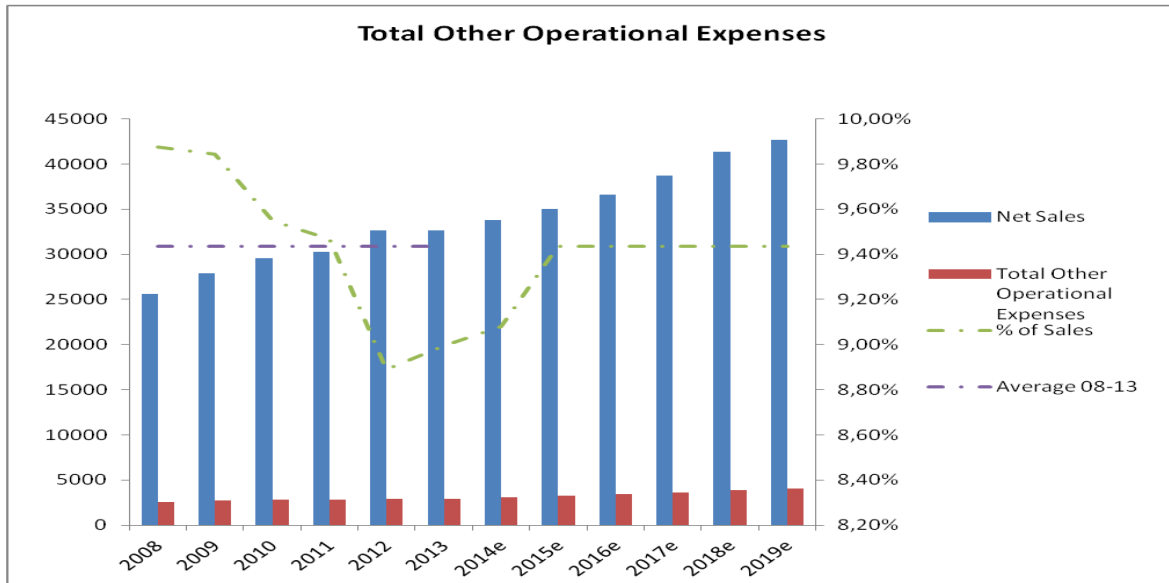
Graph 6: Total Other Operational Expenses, *Ahold Annual Reports and Own Projections*

7.3.1 Labor Costs

As mentioned previously, labor costs were computed as a percentage of net sales. The inflation rates were not taken into account since total net sales already have this macroeconomic factor incorporated into it.
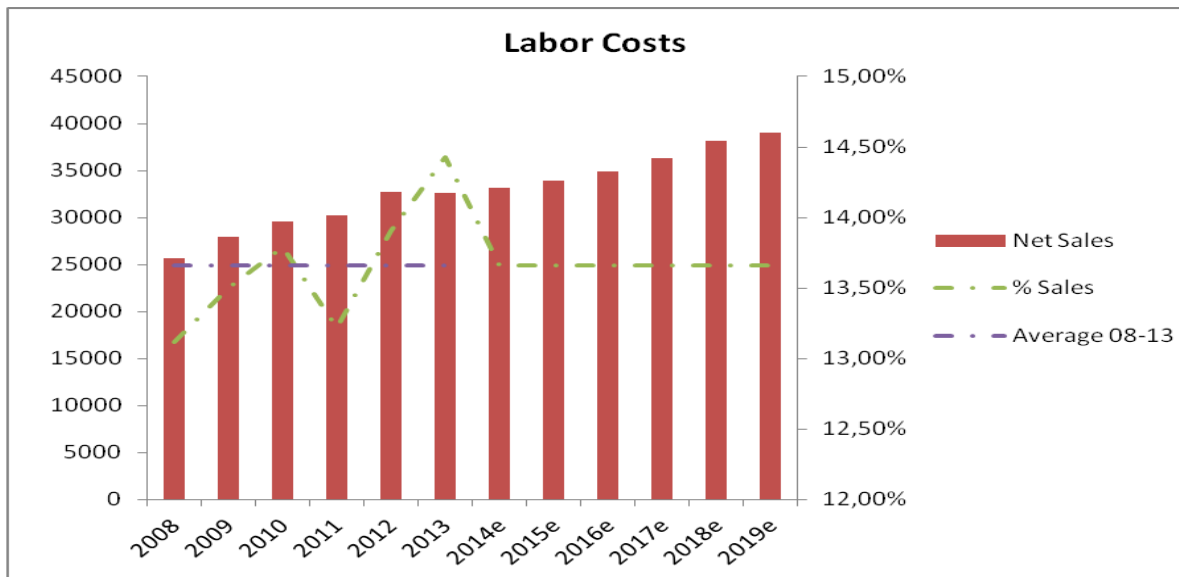
Graph 7: Labor Costs, *Ahold Annual Reports and Own Projections*

7.4 Capex & Depreciation

On the last five years, the company´s investments were mainly related to the construction, remodeling and expansion of stores and supply chain and IT infrastructure improvements. With the exception of the year of 2012, where an extra € 1 billion was invested besides the regular capex for the acquisition of bol.com and 15 Genuardi´s stores, the regular capex has maintained stable as a percentage of net sales.

Therefore, I assumed that throughout 2014, the regular capex as a percentage of sales would be of 3% since it is a number that fits according to what was registered on the past few years and no future significant investment or acquisitions are expected in the near future. According to the company´s previous annual reports, sales growth will be based on organic growth rather than through new acquisitions. Regarding the acquisition capex and taking into consideration the lack of information and data about the future strategy of the company concerning new acquisitions, I assumed that Ahold would have two moments to invest in acquisition capex: 1) during 2015 with an investment of €200 million; 2) during 2018 with an investment of €200 million. I believe that the firm will not invest in the current year, waiting for the year of 2015 with better economic perspectives. The acquisition capex projections were assumed looking at past patterns and for the fact that extra investments would have to be made regularly to support growing sales and to potentially open new stores.
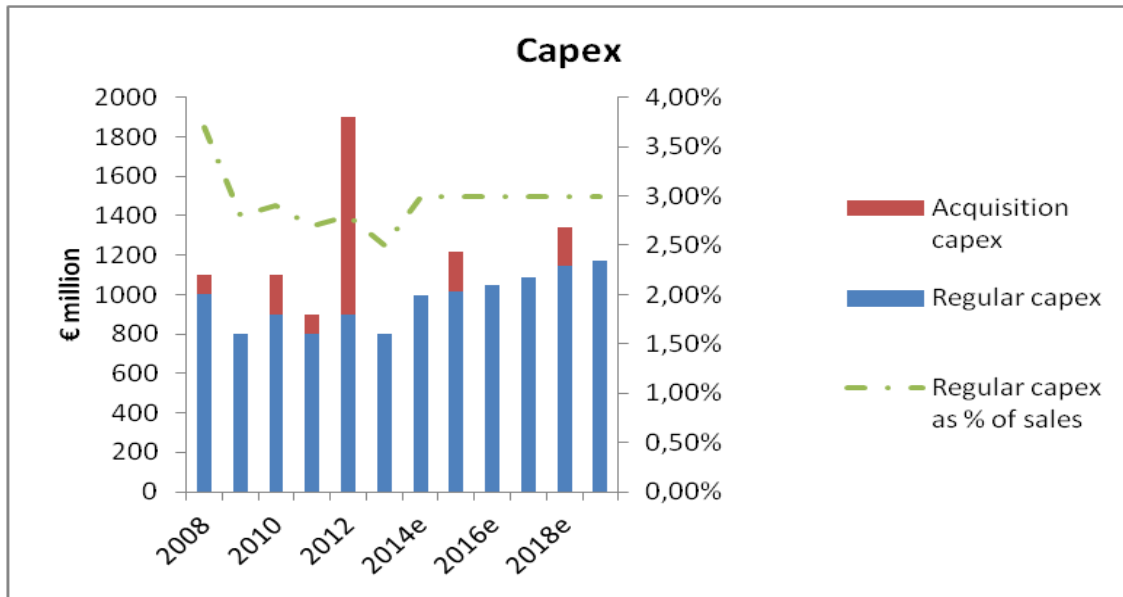
Graph 8: Capital Expenditure, *Ahold Annual Reports and Own Projections*

According to the data provided by Ahold, its administration board intends to open around 150 new stores in Europe by 2016. This number confirms the fact that the company´s revenues growth is mostly based organic growth rather than stores expansion since net sales have had a CAGR of 5,32% while stores expansion of only 1,68%. Thus, it is not expected to have significant investments on Buildings, as the opening of 150 in Europe new stores suggests a slightly over 2% CAGR, which is in line with the company´s historic trends.

While, the European operations have been running very smoothly for the past few years, the American market registered in 2013 a decrease in sales, which made the company restructure some of its business model in the United States. Some unprofitable stores will be closed, and Ahold will exit New Hampshire market, as the stores have not been achieving the required performance goals after several years of investment. However, the online business has been accomplishing superior progress levels, which has made the company, invest on the opening of new pick-up points. 112 new pick-up points were opened in 2013 for a total of 120.

7.5 Working Capital

Working capital represents the variation between non-financial items of current assets and current liabilities, namely, accounts receivables and inventories on the assets side and accounts payable on the liabilities´ side.

€ million	Historical						Projected					
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Assets												
Accounts receivables	744	700	772	751	793	665	637	614	597	585	579	559
Inventories	1319	1209	1331	1466	1492	1450	1466	1500	1547	1607	1687	1726
Other current assets	107	175	209	175	155	98	98	100	103	107	113	115
Total current assets	**2170**	**2084**	**2312**	**2392**	**2440**	**2213**	**2201**	**2214**	**2247**	**2300**	**2379**	**2399**
Liabilities												
Accounts payable	2284	2137	2323	2436	2667	2387	2413	2469	2546	2646	2778	2841
Other current liabilities	1005	1031	1138	1141	1134	1157	1175	1202	1239	1288	1352	1383
Total current liabilities	**3289**	**3168**	**3461**	**3577**	**3801**	**3544**	**3588**	**3671**	**3786**	**3933**	**4130**	**4223**
Working Capital Drivers												
Revenue	25648	27925	29530	30271	32682	32615	33109	33878	34935	36297	38108	38972
Revenue growth	-	8,88%	5,75%	2,51%	7,96%	-0,21%	1,51%	2,32%	3,12%	3,90%	4,99%	2,27%
AR/Revenue ratio	2,90%	2,51%	2,61%	2,48%	2,43%	2,04%	1,92%	1,81%	1,71%	1,61%	1,52%	1,43%
COGS growth	-	8,32%	5,89%	3,74%	8,43%	-0,72%	1,10%	2,32%	3,12%	3,90%	4,99%	2,27%

Table 8: Working Capital, *Ahold Annual Reports and Own Projections*

To forecast the previous items, four different drivers (Net income, Net income growth, Accounts receivables/Net income, COGS growth) were used as input that would be used along with data from previous years as well with the average Days Receivables Outstanding, Days Payables Outstanding and Days Sale of Inventories.

	Historical						Projected					
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Days Receivable Outstanding	10,6	9,1	9,5	9,1	8,9	7,4	7,0	6,6	6,2	5,9	5,5	5,2
Days Payable Outstanding	46,6	40,3	41,3	41,8	42,2	38,0	38,0	38,0	38,0	38,0	38,0	38,0
Days Sale of Inventories	26,9	22,8	23,7	25,1	23,6	23,1	23,1	23,1	23,1	23,1	23,1	23,1

Table 9: Ahold´s Past and Forecasted DRO, DPO & DSI, *Ahold´s Annual Reports and Own Calculations*

The formulas used to calculate DRO, DPO and DSI are attached in appendix 13. It is worth mentioning that the reason DPO and DSI are kept constant throughout the explicit period is that both items are dependent from the variable "Cost of goods sold", which in turn was maintained as a constant percentage of "Revenues" throughout the explicit period.

7.6 Debt and Interest Payment

The firm relies on cash provided from operating activities as the major source of liquidity but debt is another crucial financial instrument to maintain efficient liquidity levels. According to the company´s annual report from last year, Ahold holds circa € 1.3 billion in long-term debt; of these total, € 22 million will mature in 2014, € 400 million from 2015-2018 and € 900 million after 2018.

As a strategy for the future, Ahold pretends to invest in growth, reducing its debt and return cash to shareholders, resulting in a more efficient capital structure. With this said, and assuming that the company has no short-term investments that would result in the need of extra debt, I will assume that the company will use its free cash flows to repay its entire long-term debt, according to the maturities of each loan.

Regarding the short-term debt, the number is quite insignificant when compared with the long-term debt since it only represents 3% of the total amount, reducing its preponderance for the valuation of the company. Assuming that the short term has barely had any growth for the past few years, I will assume that the €42 million that the company has on short-term debt will be sufficient to satisfy short-term operations and therefore will be maintained throughout my forecast. Once again, due to its food retailing business model, Ahold has the ability to collect from clients on a much shorter period when compared to the payments made to its suppliers, discarding the need for short-term borrowings.

If we look at the company´s historic loan structure, we can observe that the firm finances itself mainly with long-term bonds from several different currencies -hedging

measure- and that short term financing is almost inexistent. The retail industry permits such financing policies, as companies operating in this industry tend to have enough cash to finance its short-term operations. Long-term debt is usually issued to finance new investments, such as, acquisitions or construction, remodeling and expansion of stores. Following my theory, that the company will mainly increase sales through organic growth by gathering new customers, improving quality of stores and maintaining its loyal customers, no new long-term debt will be necessary to finance new acquisitions.

As mentioned before, the short-term debt is quite insignificant when compared with the long-term debt since it only represents 3% of the total amount. Therefore to project the interest bearing liabilities, I decided to compare the evolution of the long-term debt with interest paid. From 2008 to 2013, the long-term debt has been decreasing on an average of 9.5%, while the interest paid has also been decreasing by 8.3%. Obviously, that there is a correlation between these two variables since as long-term debt decreases, the interest that the firm will have to pay will automatically decrease as well.
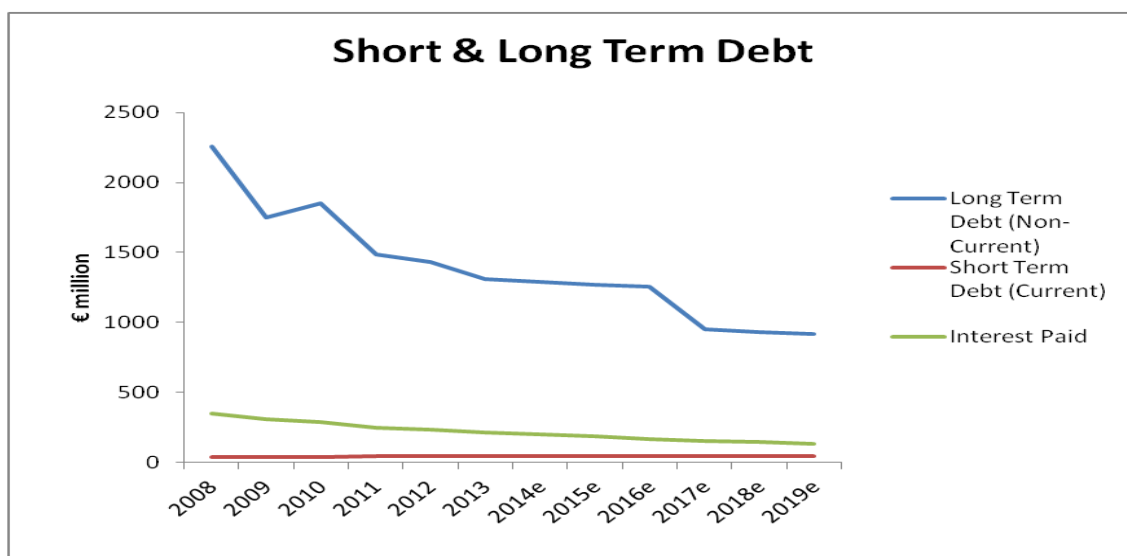
Graph 9: Bank Debt Evolution, *Ahold Annual Reports and Own Projections*

7.7 Discontinued Operations

A discontinued operation is an element of the firm that either has been disposed of or graded as held for sale and could have a significant impact on the company´s operations. However, no information is given on any of the previous annual reports about Ahold´s perspectives about the impact that its subsidiaries can have in the future. Therefore, I will assume that the impact of discontinued operations will be nil on my forecasts.

7.8 Corporate Tax & Deferred Taxes

Dutch companies are subject to a 25% corporate tax on its overall profits. This number can be reduced up to 20% for taxable amounts up to €200.000 which is not the situation observed in Ahold since the company reaches profits before income of over €1 billion.

As in many other companies, Ahold has registered on its balance sheet some deferred taxes (both on the assets and liabilities) for which any type of information is given, regarding the date that they are expected to be received and paid.

 Firstly, I decided to approach this situation with two different scenarios:

(1): In order to simplify the forecast of the valuation, both deferred taxes on the asset and liabilities side would be erased through the year of 2014 and maintained nil throughout the entire forecast. Thus, €411 million would be received from "Deferred tax assets", while €123 million and €97 million would be paid from "Deferred tax liabilities" and "Income tax payables", respectively.

(2): The alternative approach would be to maintain these accounts constant with the same values from 2013. This would mean that Ahold would not pay neither receive any differed taxes throughout my explicit period forecast.

Yet, I believe that both of the two previous scenarios are extreme situations that would be very uncommon to happen in real life events. Therefore, a different approach was used to forecast these accounts throughout my valuation. An average was calculated for the past six years of each item´s relative value and then maintained for the explicit period.

€million	2008	2009	2010	2011	2012	2013
Deferred tax assets	358	429	410	394	512	411
Total non-current assets	8108	8399	9121	9393	9644	8463
% of non-current assets	4,42%	5,11%	4,50%	4,19%	5,31%	4,86%
Average %	4,73%					

€million	2014e	2015e	2016e	2017e	2018e	2019e
Total non-current assets	9008	9845	10780	11320	12376	12918
Deferred tax assets	426	466	510	535	585	611

Table 10: Deferred Tax Assets Forecast, Ahold´s *Annual Reports and Own Calculations*

€million	2008	2009	2010	2011	2012	2013
Deferred tax liabilities	115	173	177	199	98	123
Total non-current liabilities	4663	4295	4546	4290	4901	4357
% of non-current liabilities	2,47%	4,03%	3,89%	4,64%	2,00%	2,82%
Average %	3,31%					

€million	2014e	2015e	2016e	2017e	2018e	2019e
Total non-current liabilities	4431	4389	4346	3987	3933	3869
Deferred tax liabilities	147	145	144	132	130	128

Table 11: Deferred Tax Liabilities Forecast, Ahold´s *Annual Reports and Own Calculations*

€million	2008	2009	2010	2011	2012	2013
Income taxes payable	101	141	243	136	134	97
Total current liabilities	4037	3884	3849	4478	4293	4045
% of current liabilities	2,50%	3,63%	6,31%	3,04%	3,12%	2,40%
Average %	3,50%					

€million	2014e	2015e	2016e	2017e	2018e	2019e
Total current liabilities	4230	4292	4392	4532	4732	4821
Income taxes payable	148	150	154	159	166	169

Table 12: Deferred Tax Liabilities Forecast, Ahold´s *Annual Reports and Own Calculations*

Regarding the item "Income taxes receivables", I did not see any added value for the valuation of the company of forecasting it due to its irrelevant low figure of €11 million in 2013. Thus, I assumed that Ahold received this value in 2014 in order to clear this account.

7.9 Dividends & Share Buyback

For the past three years, Ahold has been able to grow its dividend given to shareholders by 6% per year which seems quite a low percentage if we take into account that in the year of 2009 the dividend was valued at € 0,23 and in 2013 grew to €0,47 per share (CAGR of 15%). Forecasting dividends is not an easy task since there are many factors affecting the management board decision. Instead of forecasting the dividend as a percentage of the share price (dividend yield), a 6% growth rate was maintained every year from 2014 when compared to the previous dividend, since it is impossible to accurately forecast what will be the share price at each year.

Euros (€)	Historical		Projected					
	2012	2013	2014e	2015e	2016e	2017e	2018e	2019e
Dividend per common share	0,44	0,47	0,50	0,53	0,56	0,59	0,63	0,67
Total Number of Shares	1.072.000.000	1.072.000.000	957.496.183	957.496.183	957.496.183	957.496.183	957.496.183	957.496.183
Dividends paid on common shares	415.000.000	457.000.000	477.024.598	505.646.074	535.984.839	568.143.929	602.232.565	638.366.519
Share buyback (volume)		500.000.000	1.500.000.000					
Forecast stock price adjus at market prem		12,58	13,10	14,34	15,69	17,17	18,79	20,57
# shares repurchased			114.503.817	-	-	-	-	-

Table 13: Dividends and Other Related Stock Information, *Ahold Annual Reports and Own Calculations*

Share buyback, also known as share repurchase, is the re-acquisition by a company of its own shares. It consists on an exchange of cash (given by the company to shareholders) for a reduction in the number of shares outstanding. Usually share buyback operations are used when the company´s management believes that the shares are undervalued which by repurchasing shares will automatically reduce the number of shares outstanding and consequently increase earnings per share, raising

the market value of the remaining shares. On this specific case, the company entered in a share buyback program of €500 million in 2012 but decided to extend this number to €2 billion which should be completed by the end of 2014.

7.10 Joint Venture

As mentioned previously, Ahold has been Jerónimo´s Martins partner for more than 20 years when both formed a joint venture in 1992. Pingo Doce is one of the major supermarket chains in Portugal, where Ahold holds 49% stake and Jerónimo Martins the other 51%, as the following picture suggests.

Picture 1: Jerónimo Martins Sales divided by Business Areas, *Jerónimo Martins 2013 Annual Report*

As Pingo Doce is not a public company, it becomes more challenging to calculate the net present value of Ahold´s participation in this supermarket´s chain. Looking at past Ahold´s annual reports it becomes quite unclear to understand how much are Pingo Doce operations providing in terms of income since this number was merged with the other joint venture "ICA" which was only divested last year. Therefore, I decided to analyze Jerónimo Martins annual reports and even though it does not provide net income figures of Pingo Doce[5], EBITDA records are available for the past few years.

€ million	Historical						Projected					
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Sales	2404	2598	2856	2990	3063	3181	3333	3492	3659	3834	4017	4209
% EBITDA Margin	6,70%	7,10%	6,70%	6,60%	5,60%	5,75%	6,41%	6,41%	6,41%	6,41%	6,41%	6,41%
EBITDA	161	184	191	197	171	183	214	224	235	246	257	270
Net Income Forecast							101	105	110	116	121	127
Ahold´s Participation Income (49%)							49	52	54	57	59	62

Table 14: Pingo Doce´s Net Income Forecast, *Jerónimo Martins´ Annual Reports and Own Calculations*

Forecasting sales for Pingo Doce was based on the CAGR of the past six years (+4,8%) which seems a reasonable number looking at the growth that Pingo Doce has been having in Portugal recently. EBITDA was computed through an average of the past EBITDA margin levels.

€ million	Historical					
	2008	2009	2010	2011	2012	2013
EBITDA	458	518	614	709	721	772
Net Income	176	223	300	357	366	393
Net Income/ EBITDA	38,42%	43,09%	48,80%	50,38%	50,83%	50,84%
Average	47,06%					

Table 15: Jerónimo Martins´ Net Income/ EBITDA Ratio, *Jerónimo Martins´Annual Reports and Own Calculations*

Table 15 was created to support the calculations with Net Income values of Pingo Doce that should be accounted in Ahold´s Income statement. Since Pingo Doce´s Net income figures are

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[5] Jerónimo Martins only provides net income results as a consolidated statement of all different operations

not available, I had to find a comparable to find an adequate Net income/ EBITDA ratio and there couldn´t be a better comparable company than the owner of Pingo Doce itself- Jerónimo Martins.

8. DCF Assumptions & Valuation

8.1 Cost of Capital- WACC

Every company is financed by two different components: debt and equity. Lenders and equity holders will require a specific return on the funds and capital that they have supplied to the company. The weighted average of this specific return is called the cost of capital, which represents the investor´s opportunity cost of investing in a certain company.

With this said, and in order to compute the WACC rate, it is necessary to calculate the cost of equity (Ke) and cost of debt (Kd).

8.2 Cost of Equity

As mentioned previously, the cost of equity is the rate of return required by shareholders. This rate of return is a cost for the company´s point of view because if the company is unable to give any return or a lower than the required by the shareholders, this will make them sell their investments that will consequently drop the share price. Essentially, theoretically the cost of equity is what costs the company to maintain its share price. Following the CAPM (capital asset pricing model) approach, the cost of equity contains three different variables:

Rf (Risk- Free Rate): The interest rate of the U.S. Treasury Bills and a Dutch government bond will be used to evaluate the American and Dutch operations.

ß (Beta): In order to calculate this variable, a regression was made between Ahold´s stock monthly returns against the index SP&500 and Euronext Amsterdam.

(Rm- Rf): Equity Market Risk Premium: This variable represents the extra risk taken by the investor to invest in the stock market over the risk-free rate. Again, the American and Dutch markets were separated to identify the specific risks of each market.

Bloomberg terminals were used in order to obtain all previous information.

8.3 Cost of Debt

Cost of debt reflects the current market rate that the company is paying on its debt and it´s computed using two variables: the risk-free rate and a credit risk. While the credit risk refers to the risk that the company will default on any type of credit by being unable to make required payments, the risk-free rate will be the same as the one used on cost of equity.

The credit risk is given to each company, according to its interest coverage ratio (interest expense divided by EBIT). By adding the credit risk rate to the risk-free rate, the pre-tax cost of borrowing will be obtained. The table used to obtain interest rate levels is available on the appendixes.

According to Ahold´s 2013 Annual Report, the company is currently classified as a "BBB" credit rating with a spread of 2,00%.

WACC Calculation	USA	Netherlands	Czech Republic
Rf	2,3%	1,8%	1,2%
Market Premium	7,8%	9,4%	11,7%
Beta	0,93	0,94	0,36
Cost of Equity	9,5%	10,7%	5,4%
Cost of Debt	7,8%	7,8%	7,8%
Tax Rate	35,0%	25,0%	19,0%
D(%)	38,1%	38,1%	38,1%
E(%)	61,9%	61,9%	61,9%
WACC	**6,8%**	**7,9%**	**5,7%**

Table 16: WACC for each Geographic Operation, *Bloomberg*

All previous numbers that were used to compute each geographic Wacc were extracted from Bloomberg and are presented in appendix.

8.4 Valuation

Sum of Parts	2014	2015	2016	2017	2018	2019
EBIT*(1-T)	1083	1109	1113	1124	1185	1186
Changes in payables	26	56	77	99	132	63
Changes in receivable	28	22	17	12	6	21
Changes in inventories	-16	-34	-47	-60	-80	-38
Capex	-993	-1216	-1048	-1089	-1343	-1169
Depreciation, Amortizations & Provisions	928	904	943	983	1028	1047
Free Cash Flow to the Firm	1056	840	1055	1069	928	1109

Table 17: Ahold´s Free Cash Flow to the Firm (€ millions), *Own Calculations and Ahold´s Annual Reports*

Table 17 shows how the free cash flow to the firm from each year of the explicit period was computed and its terminal value. These free cash flows were discounted at the WACC rate (explained on the previous section), and the perpetual growth rate chosen for the computation of the terminal value were the following: USA (2,5%), the Netherlands (2%) and Czech Republic (1,5%). These growth rates are in line with the estimated inflation rate and its specific geographic GDP future projections (Appendix 8).

Enterprise Value	19.034.254.522
Interest Bearing Liabilities	1.488.000.000
Excess Cash	-506.000.000
Equity Value	18.052.254.522
# Shares	957.496.183
Price p/ share	18,85

Table 18: Ahold´s DCF Valuation, *Own Calculations and Bloomberg*

In order to arrive at Ahold´s equity value, we first must deduct the firm´s net debt [6]and excess cash[7]. Minority interests were not considered since they are inexistent in Ahold´s capital structure. From this figure we divide it by the total number of shares, obtaining a final share price of €18,85.

It should be taken into account that the company announced last year a €2 billion share buyback program (of those €2 billion, €1,5 billion will be used during the current year), which will consequently reduce the number of total shares.

# shares 2013	1.072.000.000
2014 share buyback (€)	1.500.000.000
Expected Share Price	13,10
Repurchased Shares	114.503.817
2014 Outstanding Shares	957.496.183

Table 19: 2014 Outstanding Shares, *Own Calculations and Bloomberg*

8.5 Sensitivity Analysis

The goal of performing a sensitivity analysis is to determine how contrasting values of an independent variable will have influence on the final target price per share of the firm. By creating several different scenarios, it is easier to understand how a variation of a specific variable, ceteris paribus, will influence negatively or positively the final value of equity of the firm and its share price. In particular, I decided to test five different variables, which I believe are the most appropriate according to the firm´s business model: (1) Cost of goods sold, (2) Volume of sales, (3) Cost of equity, (4) Terminal growth rate and (5) Cost of Debt.

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[6] Interest bearing liabilties refers to debts that the company has to pay interest to finance even

[7] Excess cash refers to the additional amount of cash beyond what a company normally need to have on hand
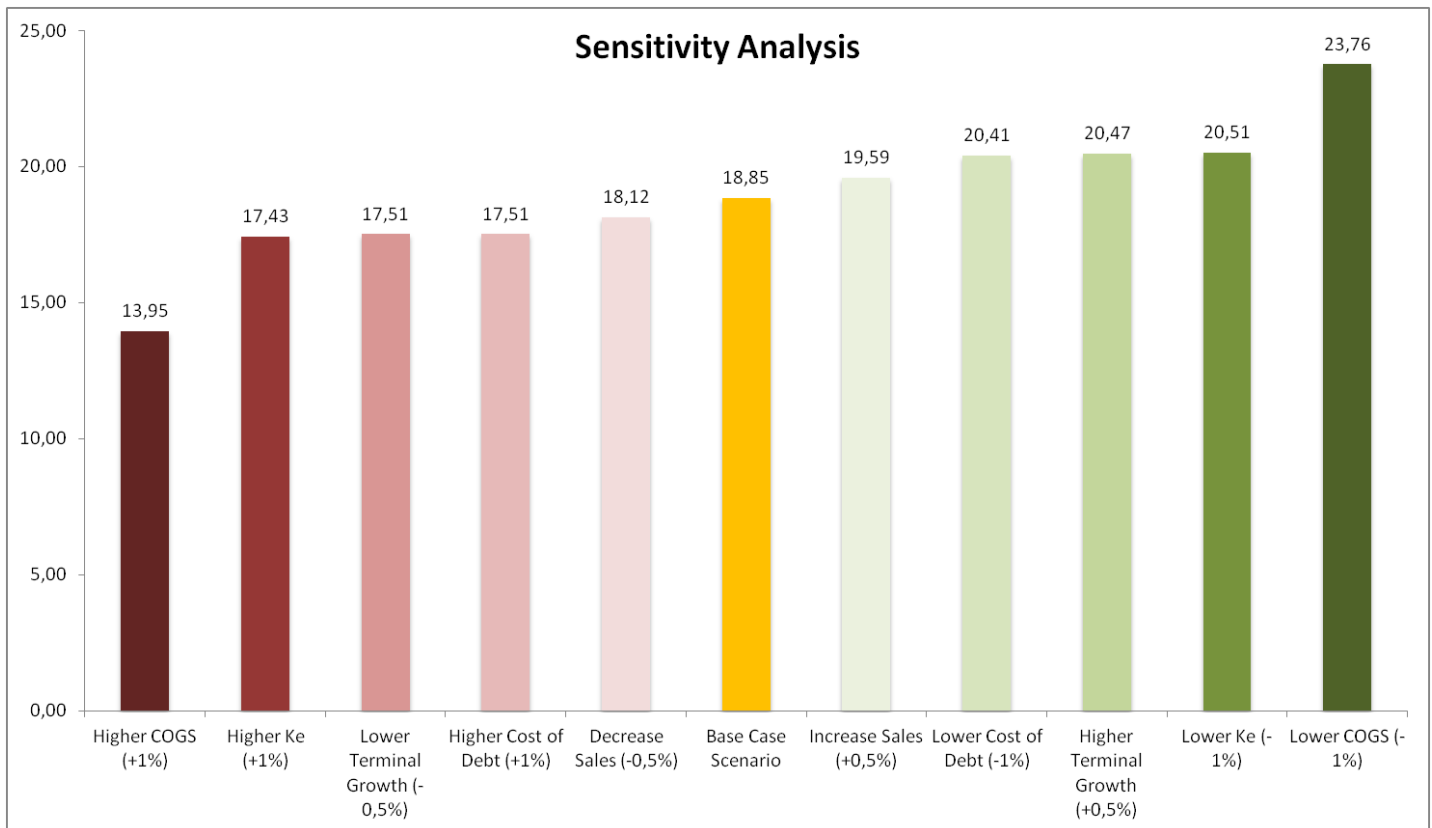
Graph 10: Sensitivity Analysis, *Own Calculations*

Not surprisingly, the cost of goods sold is of extremely importance for the valuation of Ahold. A decrease in COGS of just 1% will increase Ahold´s price target of €18, 85 (Base case scenario) to €23,76 resulting in an increase of 26%. This justifies the amount of time that retail companies spend planning on their pricing strategies as a way to maximize results.

The growth rate assumed for the terminal value is another driver that I would like to take into consideration since a slight deviation from adding an extra 0,5% to the growth rate on the terminal value will increase €1,62 to the stock price target (+9%).

9. Multiples Valuation

9.1 Peer Group Presentation

In consonance with what was argued on the Literature Review, the multiples valuation is one of the most used approaches in the investment banking industry due to its simplicity and practicality. However, some of the time must be allocated to the choice of which companies will form the peer group. A peer group formed by companies that are not considered true comparables can jeopardize the final valuation of the company being analyzed.

Hence, the search for which companies would form Ahold´s peer group was not an easy and simple task. A group of 30 comparable companies operating in the same industry was chosen from Bloomberg´s Relative Valuation and afterwards five different criteria (Market Cap, EBITDA/ Margin 3Y, 5Y Average Adj ROE, Sales, P/E and Debt to Equity) were chosen to select the companies that would be included in the peer group. Ten companies with the most similarities to Ahold were chosen to be included in the peer group.

It is important to mention that I automatically excluded companies that were not operating in any of Ahold´s geographic operations. There were a few public Brazilians companies operating in the food retail industry with similar financial indicators as Ahold but I believe it would not make any sense to include them in the peer group since they would not be considered competitors and macroeconomic drivers would be distinct as well as growth perspectives.

Name	Market Cap	EBITDA Margin 3Y	5Yr Avg Adj ROE	Sales	P/E	Debt to Equity
	M€	%	%	%	Number	%
Koninklijke Ahold NV	**13.41 B**	**6.66%**	**17.36%**	**32.72 B**	**16.20**	**52.93%**
Delhaize Group	5.16 B	5.44%	9.78%	21.50 B	27.97	55.12%
Empire Co Ltd	4.01 B	4.85%	10.85%	13.96 B	17.63	67.72%
Loblaw Companies	12.30 B	6.52%	11.75%	23.67 B	20.54	118.05%
Safeway Inc	6.28 B	4.75%	10.45%	29.08 B	32.58	71.37%
Sainsbury	7.12 B	6.66%	9.43%	28.40 B	9.22	49.20%
Staples Inc	7.66 B	8.07%	12.25%	24.38 B	10.11	32.42%
Sysco Corp	14.88 B	5.42%	28.71%	34.27 B	17.62	60.45%
Tesco PLC	27.42 B	7.58%	18.38%	77.14 B	18.42	68.29%
Weston Ltd	6.79 B	7.21%	9.95%	24.55 B	18.13	112.17%
WM Morrison Supermarkets	5.66 B	7.17%	12.31%	20.84 B	N.A.	64.64%

Table 20: Peer Group Characteristics, *Bloomberg*

Name	P/E	EV/EBITDA	EV/Revenues
Koninklijke Ahold NV	16,2	6,22	0,4
Delhaize Group	27,97	7,42	0,32
Empire Co Ltd	17,63	7,03	0,48
Loblaw Companies	20,54	9,17	0,75
Safeway Inc	32,58	6,63	0,26
Sainsbury	9,22	4,69	0,29
Staples Inc	10,11	5,93	0,39
Sysco Corp	17,62	9,44	0,54
Tesco PLC	18,42	5,95	0,42
Weston Ltd	18,13	7,78	0,84
WM Morrison Supermarkets	N.A.	3,95	0,39
Average	**16,47**	**6,34**	**0,41**

Table 21: Peer Group Multiples, *Bloomberg*

Comparing Ahold´s multiples values with the ones obtained after averaging the peer group, the company is well inserted with the peer group chosen as all three multiples are reaching similar values.

Be aware that as suggested by Baker and Ruback (1999), the harmonic mean was used instead of the arithmetic, as the first one has better econometric properties.

	P/E	EV/EBITDA	EV/Revenues
Harmonic Mean	16,47	6,34	0,41
Denominator (€M)	944,37	2371,79	33109,01
Equity Value (€M)	15554,09	14488,32	12998,19
# Shares (€M)	957,50	957,50	957,50
Price per share	**16,24**	**15,13**	**13,58**
Average	**14,98**		

Table 22: Multiples Valuation, *Bloomberg and Own Calculations*

Where, Equity Value= Enterprise Value – Interest Bearing Liabilities – Excess Cash[8]

Analyzing the multiples valuation, it seems that Ahold´s shares are currently being traded at an underrated level (14,98 vs 13,87[9]). The justification for this fact has to do with the excessive forward P/E multiple that suggests that Ahold´s share should be trading at €16,24 (17% price increase). Comparing my DCF valuation with the average of these three multiples, my target price for Ahold´s share is €4,99 higher (+36%). This could be the consequence of using peer multiples of last year, where companies are still recovering from the economic crisis. Since 2008 that the company has been growing its sales between 3-5% in the USA and the Netherlands, except for 2013 where sales decreased in the American operations and maintained constant in the Netherlands. According to my forecasts, Ahold will overcome the poor results registered last year, achieving growth rates attained in the past which explains my higher target value of the stock when compared with the average multiples valuation.

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[8] Excess Cash was extracted from Bloomberg (€-506 million)
[9] Ahold´s share value at 4th July 2014

Mar 03, 2006 - Jul 04, 2014 +4.3 (44.93%)

Graph 11: Ahold stock performance, *Google Finance*

Mar 03, 2006 - Jul 04, 2014
●INDEXEURO:AEX +35.27% ●INDEXSP:.INX +53.97% ●AH +44.92%

Graph 12: Ahold stock performance vs. SP&500 and AEX-Index, *Google Finance*

Since the peak of the economic crisis that hit the entire economy in general in 2008 that Ahold´s stock has been recovering from its lowest point in mid-October of €7,28 per share. Comparing my valuation with the actual stock price - €13,87 on 4th July 2014- I predict that Ahold´s stock has an 36% upside potential. Measuring Ahold´s stock performance with the S&P500 index and AEX index, one can assert that the company´s stock has been following the overall market returns, returning a positive return of 45% since 2006, which is in between the returns provided by S&P500 (54%) and AEX (35%).

10. Comparison with Research Note

The research note chosen to compare with my valuation was issued by Bank of America Merrill Lynch on the 21st August 2014. Bank of America Merrill Lynch is the corporate and investment banking of Bank of America, which provides services in M&A, equity and debt capital markets and other investment banking operations.

The research note published by this bank already incorporates Ahold´s annual reports from the year of 2013. Bank of America established a price target of €15,00 with a recommendation to "Buy", since at that time the report was issued, Ahold´s share was trading at €13,16.

A comparison between Bank of America Merrill Lynch´s research note and my own valuation will be explained subsequently where the fundamental differences and similarities will be highlighted.

Stock Data

Price (Common / ADR)	EUR13.16 / US$17.45
Price Objective	EUR15.00 / US$20.20
Date Established	21-Nov-2013 / 7-Jan-2014
Investment Opinion	A-1-7 / A-1-7
Volatility Risk	LOW / LOW
52-Week Range	EUR12.00-EUR14.72
Market Value (mn)	EUR11,635
Shares Outstanding (mn)	884.1 / 884.1
Average Daily Volume	2,473,928
BofAML Ticker / Exchange	AHODF / ENA
BofAML Ticker / Exchange	AHOND / OTU
Bloomberg / Reuters	AH NA / AHLN.AS
ROE (2014E)	11.8%
Net Dbt to Eqty (Dec-2013A)	8.1%
Est. 5-Yr EPS / DPS Growth	10.0% / 4.5%
Free Float	76.3%

Table 23: Bank of America Merrill Lynch´s Stock Data of Ahold

10.1 Bank of America Merrill Lynch Forecast

iQprofile[SM] Ahold

Key Income Statement Data (Dec)	2012A	2013A	2014E	2015E	2016E
(EUR Millions)					
Sales	32,682	32,615	32,141	32,986	33,907
EBITDA Adjusted	2,229	2,206	2,075	2,164	2,250
Depreciation & Amortization	(817)	(825)	(811)	(832)	(854)
EBIT Adjusted	1,412	1,381	1,265	1,333	1,396
Net Interest & Other Income	(208)	(291)	(212)	(204)	(195)
Tax Expense / Benefit	(267)	(153)	(230)	(271)	(300)
Net Income (Adjusted)	921	807	817	870	916
Average Fully Diluted Shares Outstanding	1,100	1,072	935	872	872
Key Cash Flow Statement Data					
Net Income (Reported)	915	2,537	595	870	916
Depreciation & Amortization	817	825	811	832	854
Change in Working Capital	139	39.0	(6.76)	12.1	13.1
Deferred Taxation Charge	156	28.0	0	0	0
Other CFO	(140)	(1,604)	183	(12.0)	(15.0)
Cash Flow from Operations	**1,887**	**1,825**	**1,582**	**1,702**	**1,768**
Capital Expenditure	(910)	(811)	(900)	(920)	(940)
(Acquisition) / Disposal of Investments	(701)	(9.00)	0	0	0
Other CFI	(386)	1,974	(406)	(345)	(408)
Cash Flow from Investing	**(1,997)**	**1,154**	**(1,306)**	**(1,265)**	**(1,348)**
Share Issue / (Repurchase)	(277)	(768)	(2,232)	0	0
Cost of Dividends Paid	(415)	(457)	(416)	(355)	(418)
Increase (decrease) debt	(435)	(225)	(100)	(100)	(100)
Other CFF	727	(848)	416	355	418
Cash Flow from Financing	**(400)**	**(2,298)**	**(2,332)**	**(100)**	**(100)**
Total Cash Flow (CFO + CFI + CFF)	**(510)**	**681**	**(2,055)**	**337**	**321**
FX and other changes to cash	(196)	(71.0)	0	0	0
Change in Cash	(706)	610	(2,055)	337	321
Change in Net Debt	271	(835)	1,955	(437)	(421)
Net Debt	1,360	525	2,480	2,044	1,623
Key Balance Sheet Data					
Property, Plant & Equipment	6,603	6,255	8,999	9,390	9,799
Goodwill	769	837	833	833	833
Other Intangibles	800	726	730	730	730
Other Non-Current Assets	1,984	1,084	1,056	1,056	1,056
Trade Receivables	636	549	541	555	571
Cash & Equivalents	1,886	2,496	441	777	1,098
Other Current Assets	1,894	3,195	3,149	3,231	3,322
Total Assets	14,572	15,142	15,748	16,573	17,408
Long-Term Debt	3,107	2,873	2,773	2,673	2,573
Other Non-Current Liabilities	3,513	3,214	3,150	3,208	3,270
Short-Term Debt	139	148	148	148	148
Other Current Liabilities	2,667	2,387	2,352	2,414	2,482
Total Liabilities	9,426	8,622	8,423	8,443	8,473
Total Equity	5,146	6,520	7,325	8,130	8,935
Total Equity & Liabilities	14,572	15,142	15,748	16,573	17,408
Business Performance*					
Return On Capital Employed	8.79%	9.44%	7.45%	6.50%	5.58%
Return On Equity	16.8%	13.8%	11.8%	11.3%	10.7%
Operating Margin	4.09%	3.80%	3.77%	4.04%	4.12%
Free Cash Flow (MM)	977	1,014	682	782	828
Quality of Earnings*					
Cash Realization Ratio	2.05x	2.26x	1.94x	1.96x	1.93x
Asset Replacement Ratio	1.11x	0.98x	1.11x	1.11x	1.10x
Tax Rate	23.7%	16.1%	23.0%	24.0%	25.0%
Net Debt/Equity	26.4%	8.05%	33.9%	25.1%	18.2%
Interest Cover	6.03x	6.14x	5.93x	6.46x	7.02x

* For full definitions of *iQmethod*[SM] measures, see page 5.

Table 24: Bank of America Merrill Lynch´s Forecast

i. Revenues: Revenue estimation is on average 3% superior when compared with Bank of America´s (BofA) research note. The main explication is related with the decrease they forecasted in sales from 2013 to 2014, which in my opinion is quite unreasonable. Ahold had a decrease in sales from 2012 to 2013 mainly due to the recession of 0,3% registered in the Euro zone but according to the economic forecasts GDP will grow almost 1% in 2014.

ii. EBITDA: Regarding EBITDA, the spread is more notorious than when compared with revenues. For 2014, the dissertation is reaching 14% higher EBITDA values than BofA forecast, decreasing this percentage to 8% by 2016. It becomes relatively vague to understand the reasons for this larger difference since it is not discriminated on their note the values of expenses neither costs of goods sold.

iii. Capex and D&A: Throughout this dissertation, I have defended that Ahold will mainly grow through organic growth, this is, by investing in customer relationship, increase a wider and better range of products and through customer loyalty programs. Yet, the company will still have to acquire/ expand its number of stores in some local areas to take advantage of growth opportunities. Therefore, I decreased on average the forecast of acquisition capex but maintained the regular capex necessary to support growing sales. BofA thought, comes in line with the one in this dissertation in terms of rising levels of capex. Depreciation and Amortization have also very similar growing rate figures to the ones presented on this dissertation. The values are slightly different due to the higher capex on the first year registered on this dissertation when compared to BofA; this higher value will automatically impact depreciation values.

iv. Free Cash Flow: While projected FCF on this dissertation reach values similar or close to past reported figures, BofA decreased the FCF from 2013 to 2014 in more than 30%, increasing the same account the next year by 15%. Ahold´s historically FCF has been relatively stable, making me believe than my approach is more reasonable than the one defended by BofA.
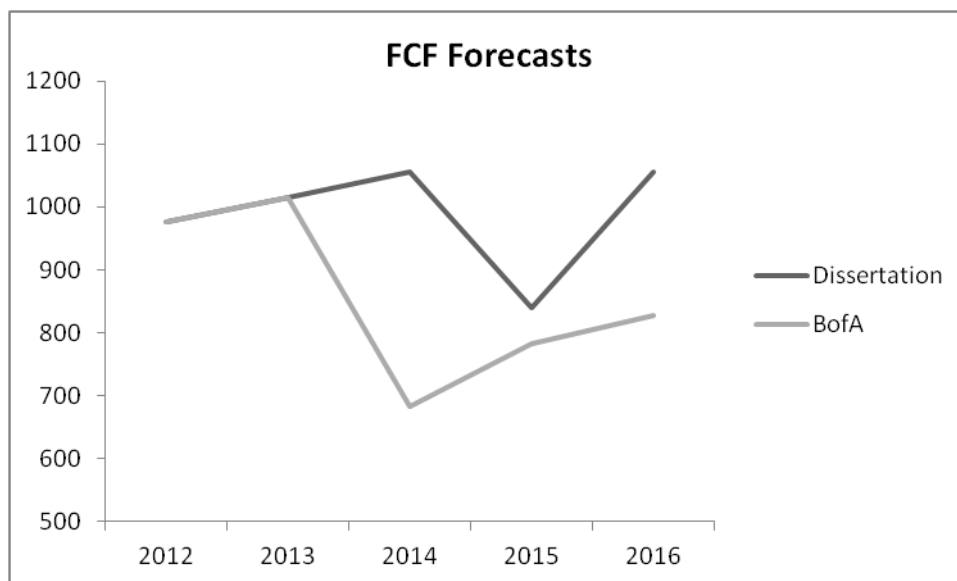
FCF Forecasts

Graph 13: FCF Forecast Comparison, BofA Research Note and Own Calculations

10.2 BofA Valuation Considerations

i)   DCF Valuation: BofA uses the same valuation approach as the one used throughout this dissertation, the Discounted Cash Flow method. It would have been non-sense to use other approach as the company is financed by both equity and debt with relatively constant debt levels during the explicit period.

ii) Explicit Period: The research note only forecasts free cash flows until the year of 2016 which in my opinion is a very short period due to macroeconomic factors. As in many other industries, retail companies felt for the last couple years a stagnation of their sales or even a slight decrease due to the recent economic crisis. Therefore, I believe that the explicit period should be at least 5 years in order to observe the first couple years where companies would start to reach minimal growth levels and afterwards where they would reach growing levels registered in the past.

iii) WACC: BofA refers on their research note that they have used a WACC of 8% without giving any specifics of how this value was computed. Looking back at this dissertation, the Netherlands has its WACC rate valued at 7,9% that

is totally in line with the research note. Yet, Ahold has most of its revenues registered from outside the Netherlands which turns the valuation slightly inaccurate since the WACC is not representing a weighted average of the company´s sales. This problem was issued in this dissertation by valuating the company through a sum of parts where each geography would have its specific WACC.

iv) Terminal Growth Rate: While BofA assigned an overall terminal growth rate for the company, I decided to separate by geographies and give specific growth rates. Unless, BofA computed a weighted average of the terminal growth rate according to the net sales of each geographic operation, it is complete non-sense to attribute a terminal growth rate for the company in general since the United States, the Netherlands and Czech Republic have different economic perspectives for the future. Regarding the terminal growth rate, there is one more point where I have to disagree with the analysis made by BofA: the attributed growing rate. Taking into consideration that GDP growth is expected to be around 2,5% from 2014 to 2019 in the United States and 1,5% in the Eurozone, I find it slightly pessimistic to attribute a terminal growth rate of 1% to the overall company. Being realistic that the food retail industry is very saturated with high levels of competition, I gave the same terminal growth rate to the Netherlands and Czech Republic operations but increased this number by 0,5% to the American business, which has a significant impact on the final target price of the stock due to the fact that sales in the United States represent 61% of total sales.

11. Conclusion

The most indisputable conclusion of evaluating companies is that there is not a unique method. There are several different methods, approaches, contemplations and assumptions that can be applied requiring just an appropriate logic thinking. Several authors had studied countless different approaches which are described at the beginning of this dissertation, but still there is no consensus between the academic community and the investment banking industry.

Given the nature of Ahold´s capital structure and the specifics of its business model, the most appropriate model would be the Discounted Cash Flow where future cash flows are estimated and discounted to give their present values. Oppositely to the Bank of America Merrill Lynch research note (which also applied the DCF approach), the sum of parts was utilized to separate and evaluate the different geographic operations of Ahold. The investment bank opted to evaluate the firm as a whole which in my opinion is a wrong approach since the specifics of each geography are not being incorporated into the valuation.

In addition to the DCF approach, the multiples valuation was also exploited to observe the differences from two different valuations. Although evaluating the share price at a lower price than the one obtained with the DCF method, it still values the share at a higher target than the current share price.

Another circumstance that should be mentioned is Ahold´s negligent valuation implemented by such a distinguished investment bank, Bank of America Merrill Lynch. While comparing my valuation with their research note, I was expecting more detailed and vigorous data and information. It was surprising that the explicit period was composed of just three years, the chosen WACC rate was a complete round number (8,0%) without any kind of detail and explanation and the terminal growth rate had no reasoning behind it.

Lastly, I would like to point out that even though Ahold is a public company and most of the financial information is included on their annual reports, there is some data not being discriminated which can influence the accuracy of the overall valuation. This was

specifically felt in two situations: 1) Valuation of the joint venture with Jerónimo Martins, 2) Evolution of sales by business unit (brands).

Appendix
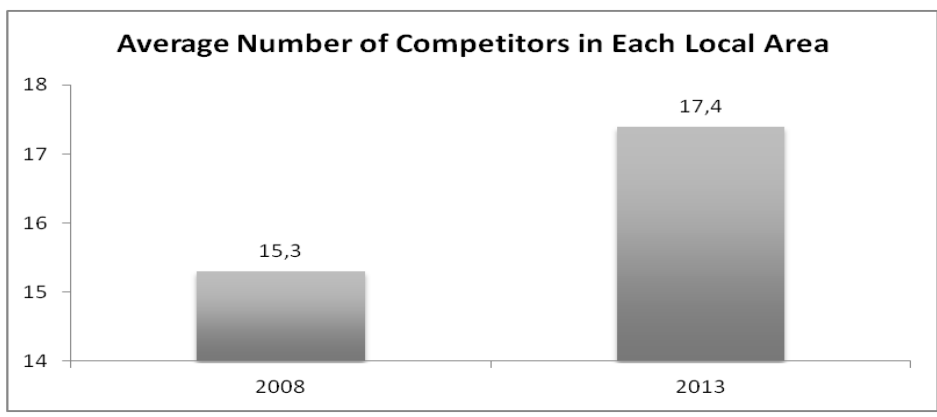
Appendix 1: Average Number of Competitors in each Local Area (USA), *PlanetRetail*
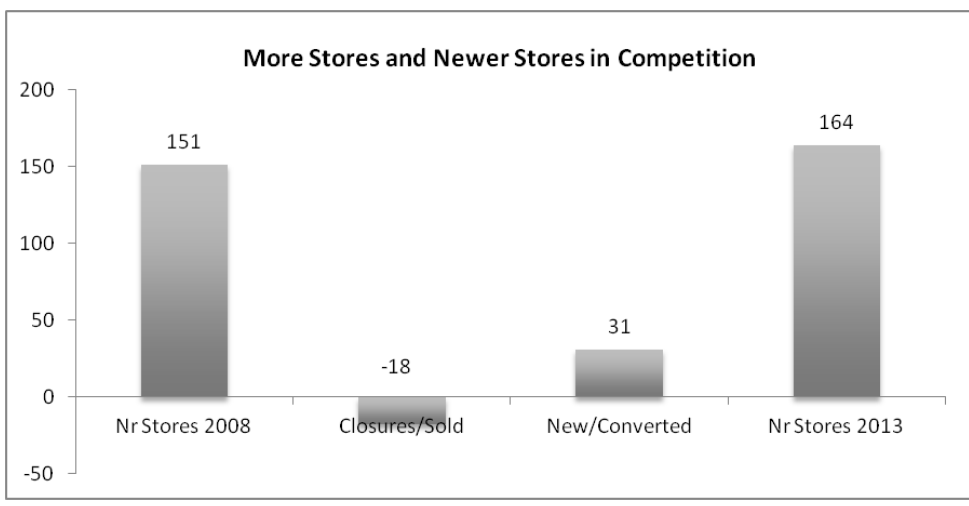
Appendix 2: Average Number of Stores between 2008 and 2013 in each Local Area (USA), *PlanetRetail*
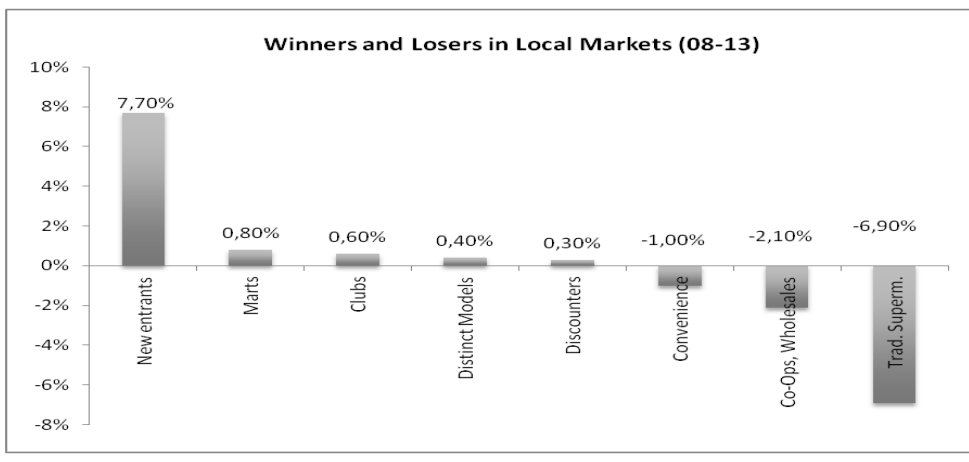
Appendix 3: Local Market Share Changes 2008-2013 (USA), *PlanetRetail*

Appendix 4 & 5: Ahold´s Local Market Share in Different Locations (2008 & 2012), *PlanetRetail*
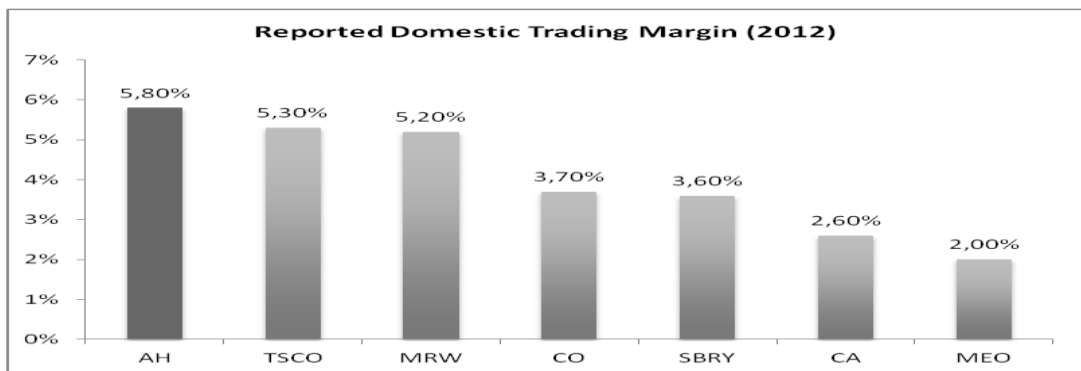
Appendix 6: Ahold holds the higher domestic trading margin amongst its competitors (USA), *PlanetRetail*

Albert Heijn Netherlands Market Share
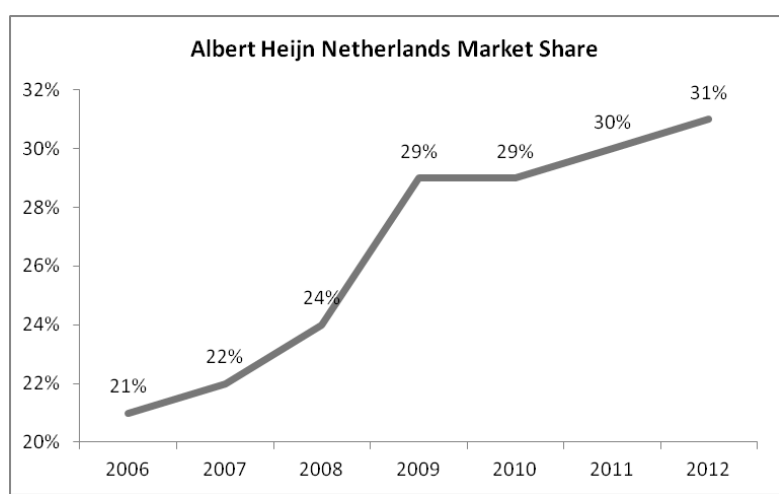
Appendix 7: Albert Heijn´s Market Share since 2006 in the Netherlands, *PlanetRetail*

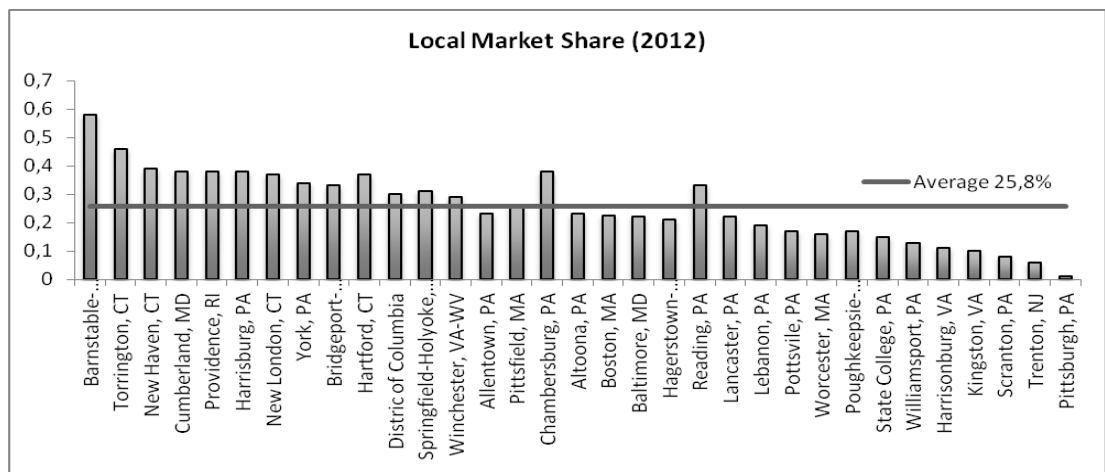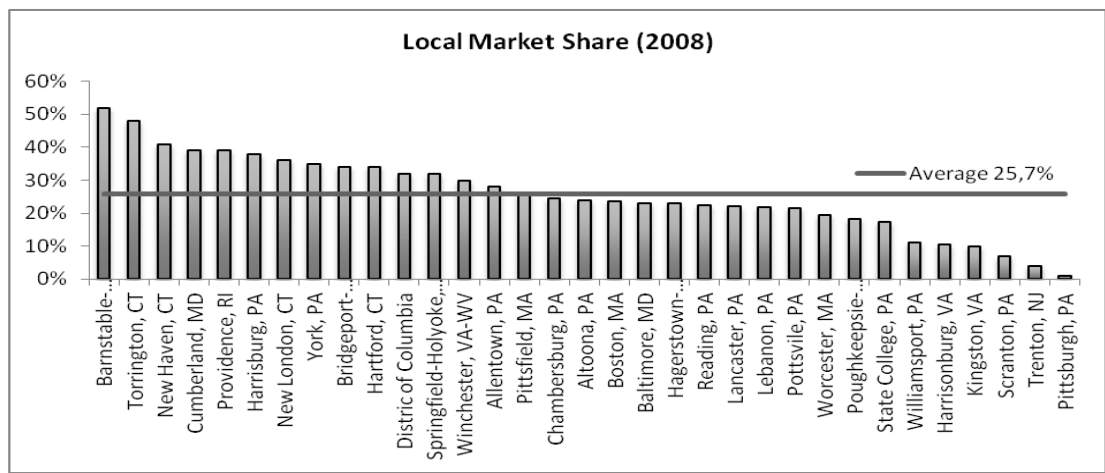| (% change)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
US										
Real GDP growth	-2.8	2.5	1.6	2.3	2.2	2.2	3.2	2.5	2.4	2.6
Inflation	-0.3	1.6	3.1	2.1	1.5	2.0	2.3	2.3	2.3	2.5
Canada										
Real GDP growth	-2.7	3.4	2.5	1.7	2.0	2.1	2.3	2.6	2.4	2.2
Inflation	0.3	1.8	2.9	1.5	1.0	1.8	2.3	2.3	2.2	2.0
GDP growth										
Euro area		-4.3	1.9	1.7	-0.6	-0.3	0.9	1.3	1.6	1.5	1.7
EU28		-4.5	2.0	1.7	-0.3	0.2	1.4	1.7	1.8	1.8	1.9
EU15		-4.5	2.0	1.6	-0.4	0.1	1.4	1.6	1.6	1.6	1.6
New members[a]		-3.7	2.3	3.2	0.8	1.1	2.5	3.0	3.5	3.7	4.0
Consumer price inflation										
Euro area		0.2	1.6	2.7	2.5	1.4	0.8	1.3	1.5	1.6	1.7
EU28		0.7	1.9	2.7	2.6	1.5	0.8	1.3	1.6	1.7	1.8
EU15		0.6	1.9	3.0	2.5	1.5	0.8	1.3	1.5	1.7	1.7
New members[a]		3.2	2.9	3.9	3.7	1.6	0.6	1.9	2.5	2.7	2.8

Appendix 8: World Economic Forecast, *The Economist Intelligence Unit (20th August, 2014)*

Forecasted Growth Levels	2014	2015	2016	2017	2018	2019
USA	2,0%	3,0%	3,6%	4,0%	5,0%	1,5%
The Netherlands	1,0%	1,5%	2,5%	4,0%	5,3%	1,0%
Europe	-1,0%	-0,5%	1,0%	1,5%	2,0%	1,0%

Appendix 9: Forecasted Growth Rates by each Geography, *Own Calculations*
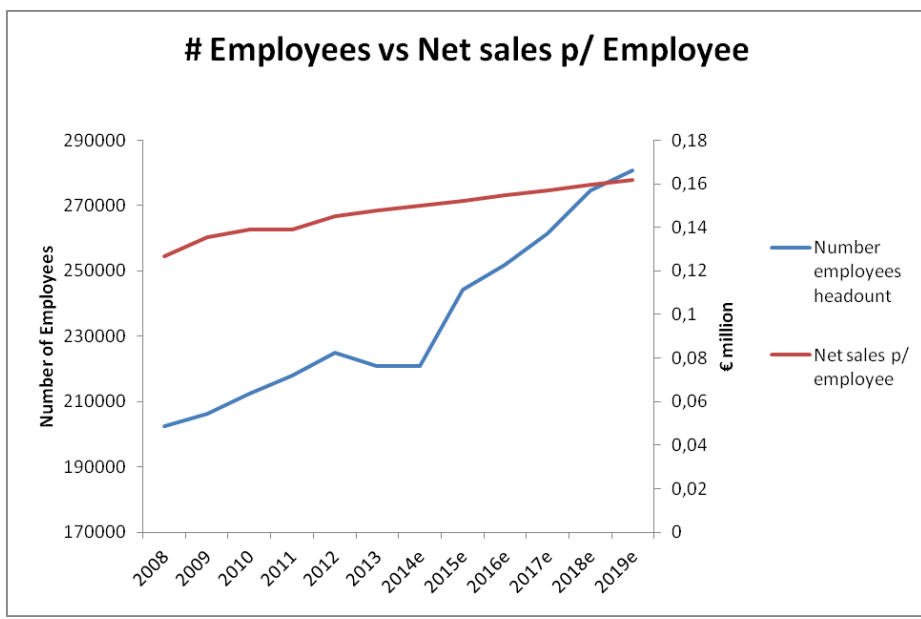
Appendix 10: Ahold´s Forecast of Number of Employees & Net Sales p/ employee, *Ahold´s Annual Reports and Own Calculation*
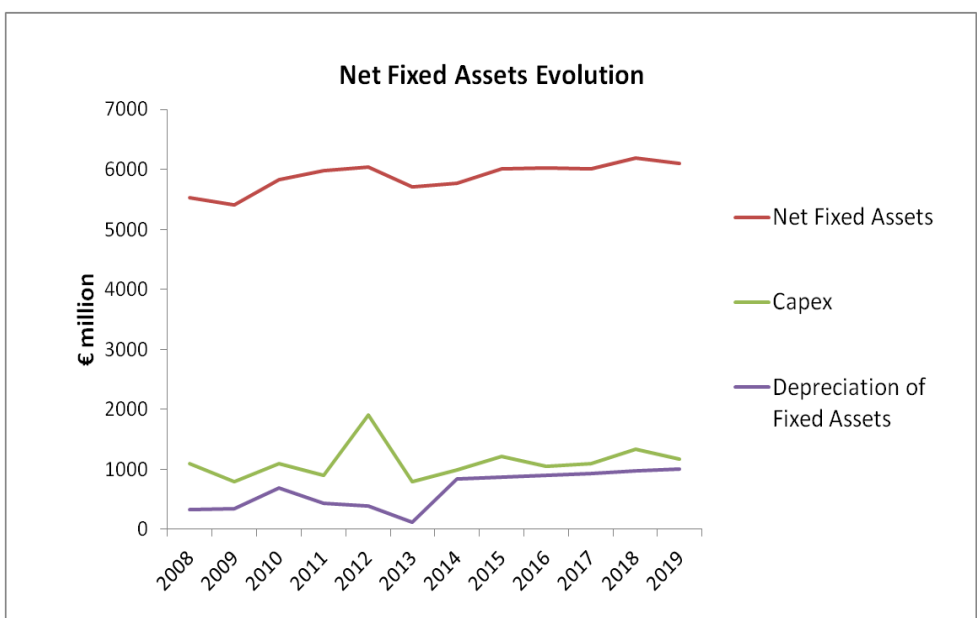
Appendix 11: Evolution of Net Fixed Assets, *Ahold´s Annual Reports and Own Calculations*

# Stores USA	2008	2009	2010	2011	2012	2013	CAGR
Stop & Shop New England	381	381	217	217	219	215	-0,23%
Stop & Shop New York Metro			175	183	184	182	0,99%
Giant Landover	182	180	179	173	171	170	-1,13%
Giant Carlisle	148	152	180	183	198	200	5,15%
Total Ahold USA	**711**	**713**	**751**	**756**	**772**	**767**	**1,27%**
Weighted Average Ahold USA							1,26%

# Stores The Netherlands	2008	2009	2010	2011	2012	2013	CAGR
Albert Heijn: the Netherlands					818	849	
Albert Heijn: Belgium	823	835	843	856	11	19	
Albert Heijn to go: the Netherlands					59	59	
Albert Heijn to go: Germany					3	5	
Albert Heijn Combined	823	835	843	856	891	932	2,09%
Etos	506	518	523	536	538	538	1,03%
Gall & Gall	532	539	548	554	567	586	1,62%
Total The Netherlands	**1861**	**1892**	**1914**	**1946**	**1996**	**2056**	**1,67%**
Weighted Average Ahold Nether.							1,68%

# Stores Czech Republic	2008	2009	2010	2011	2012	2013	CAGR
Albert	300	278	279	280	282	284	-0,91%

Appendix 12: Ahold´s number of stores since 2008, *Ahold´s Annual Reports*

Formulas	
DRO	(Trade Receivables / Sales) * 365
DPO	(Trade Payables/ Cost of goods sold) * 365
DSI	(Average Inventory/ Cost of goods sold) * 365

Appendix 13: Formulas used to calculate DRO, DPO & DSI

Interest coverage ratio			
>	≤ to	Rating is	Spread is
8.50	100000	Aaa/AAA	0.40%
6.5	8.499999	Aa2/AA	0.70%
5.5	6.499999	A1/A+	0.85%
4.25	5.499999	A2/A	1.00%
3	4.249999	A3/A-	1.30%
2.5	2.999999	Baa2/BBB	2.00%
2.25	2.49999	Ba1/BB+	3.00%
2	2.2499999	Ba2/BB	4.00%
1.75	1.999999	B1/B+	5.50%
1.5	1.749999	B2/B	6.50%
1.25	1.499999	B3/B-	7.25%
0.8	1.249999	Caa/CCC	8.75%
0.65	0.799999	Ca2/CC	9.50%
0.2	0.649999	C2/C	10.50%
-100000	0.199999	D2/D	12.00%

Appendix 14: Credit Ratings & Default Spreads for Non-Financial Firms with Market Cap over €5 billion,

Damodaran

Net Sales (€ million)	Historical						Projected					
	2008	2009	2010	2011	2012	2013	2014e	2015e	2016e	2017e	2018e	2019e
Netherlands	9.029	9.843	10.087	10.506	11.054	11.494	11.609	11.783	12.078	12.561	13.229	13.494
USA	14.919	16.399	17.783	18.026	20.112	19.676	20.070	20.672	21.420	22.277	23.391	23.975
Europe	1.774	1.683	1.660	1.739	1.675	1.445	1.431	1.423	1.438	1.459	1.488	1.503
Total Net Sales	25.648	27.925	29.530	30.271	32.682	32.615	33.109	33.878	34.935	36.297	38.108	38.972
Cost of Goods Sold	17.887	19.376	20.517	21.285	23.079	22.912	23.165	23.703	24.442	25.395	26.662	27.267
Gross Profit	7.761	8.549	9.013	8.986	9.603	9.703	9.944	10.175	10.493	10.902	11.446	11.706
Total Expenses	5.898	6.520	6.892	6.867	7.450	7.639	7.573	7.794	8.066	8.420	8.837	9.077
Labor Costs	3.365	3.771	4.072	4.001	4.544	4.705	4.619	4.784	4.999	5.295	5.651	5.830
Other Operational Expenses	2.129	2.229	2.324	2.367	2.284	2.334	2.370	2.407	2.444	2.482	2.520	2.559
Write-down of intangible assets under development	-	-	-	-	92	8	-	-	-	-	-	-
Rent income and expense- net	437	488	483	486	514	537	556	575	595	616	638	660
Impairment losses and reversals- net	13	39	27	25	37	83	28	28	28	28	28	28
Gains on the sale of assets- net	- 46	- 7	- 14	- 12	- 21	- 28	-	-	-	-	-	-
EBITDA	1.863	2.029	2.121	2.119	2.153	2.064	2.372	2.382	2.427	2.481	2.609	2.629
Depreciations & Amortizations	661	732	785	772	817	825	856	888	922	956	992	1.030
Provisions							72	15	21	27	36	17
EBIT (Operating Income)	1.202	1.297	1.336	1.347	1.336	1.239	1.444	1.478	1.484	1.498	1.581	1.582
Net Financial Expenses	213	283	259	316	208	291	207	191	176	163	151	139
Profit Before Income Tax	989	1.014	1.077	1.031	1.128	948	1.237	1.287	1.308	1.335	1.430	1.442
Income Tax Expense	226	148	271	140	267	153	342	322	327	334	357	361
Share income of joint ventures	-106	-124	-57	-141	-8	-10	-49	-52	-54	-57	-59	-62
Income from Continuing Operations	869	990	863	1.032	869	805	944	1.017	1.035	1.058	1.132	1.144
Profit/Loss from Income from Discontinued Operations	195	-78	-10	-15	46	1732	0	0	0	0	0	0
Profit for the Period	1.064	912	853	1.017	915	2.537	944	1.017	1.035	1.058	1.132	1.144

Appendix 15: Ahold´s Forecasted Income Statement, *Ahold´s Annual Report and Own Calculations*

€ million	Projected					
	2014	2015	2016	2017	2018	2019
Operating Income (EBIT)	1444	1478	1484	1498	1581	1582
Adjustments for:						
Depreciation, amortization, write-downs and impairments	884	916	950	985	1021	1058
Gains on the sale of assets/ disposal groups held for sale	0	0	0	0	0	0
Share-based compensation expenses	45	47	50	52	55	58
Operating cash flows before changes in operating assets and liabilities	2283	2347	2384	2430	2546	2582
Changes in working capital:						
Changes in inventories	-16	-34	-47	-60	-80	-38
Changes in receivables and other current assets	28	22	17	12	6	21
Changes in payables and other current liabilities	26	56	77	99	132	63
Changes in other non-current assets, other non-current liabilities and provisions	81	25	31	37	47	28
Pension plan contributions	-119	-2	-2	-19	-3	-3
Other	18	25	34	44	59	28
Cash generated from operations	2302	2439	2494	2544	2707	2680
Income taxes paid- net	-342	-322	-327	-334	-357	-361
Operating cash flows from continuing operations	1959	2117	2167	2211	2349	2320
Operating cash flows from discontinued operations	0	0	0	0	0	0
Net cash from operating activities	**1959**	**2117**	**2167**	**2211**	**2349**	**2320**
Purchase of non-current assets	-993	-1216	-1048	-1089	-1343	-1169
Dividends received from joint ventures	49	52	54	57	59	62
Interest received	16	16	16	16	16	16
Other	0	0	0	0	0	0
Investing cash flows from continuing operations	-928	-1148	-978	-1016	-1267	-1091
Investing cash flows from discontinued operations	0	0	0	0	0	0
Net cash from investing activities	**-928**	**-1148**	**-978**	**-1016**	**-1267**	**-1091**
Interest paid	-199	-183	-169	-155	-143	-132
Repayment of loans	-17	-17	-17	-305	-17	-18
Repayment of finance lease liabilities	13	-22	-16	-12	-9	-7
Dividends paid on common shares	-477	-506	-536	-568	-602	-638
Share buyback	-1.500	0	0	0	0	0
Other (Deferred taxes)	71	-43	-49	-42	-59	-31
Financing cash flows from continuing operations	-2110	-771	-787	-1083	-831	-826
Financing cash flows from discontinued operations						
Net cash from financing activities	**-2110**	**-771**	**-787**	**-1083**	**-831**	**-826**
Net cash from operating, investing and financing activities (Net Increase in Cash)	**-1078**	**198**	**402**	**111**	**251**	**403**

Appendix 16: Ahold´s Forecasted Cash Flow Statement, *Ahold´s Annual Report and Own Calculations*

Name	Market Cap		EBITDA Margin 3Y		5Yr Avg Adj ROE		Sales		P/E		Debt to Equity	
	M€	Similar	%	Similar	%	Similar	%	Similar	Number	Similar	%	Similar
Koninklijke Ahold NV	**13.41 B**		**6.66%**		**17.36%**		**32.72 B**		**16.20**		**52.93%**	
Alimentation Couche	11.12 B	Yes	3.63%	No	20.51%	Yes	28.42 B	Yes	20.40	Yes	74.33%	No
Carrefour SA	20.55 B	Yes	6.25%	Yes	5.59%	No	74.30 B	No	20.72	Yes	164.49%	No
Casino Guichard	9.80 B	Yes	6.83%	Yes	7.23%	No	48.64 B	Yes	6.53	No	72.22%	Yes
Costco Wholesale Corporation	49.30 B	No	3.74%	No	13.70%	Yes	107.89 B	No	25.19	No	47.49%	Yes
Delhaize Group	5.16 B	Yes	5.44%	Yes	9.78%	Yes	21.50 B	Yes	27.97	No	55.12%	Yes
Empire Co Ltd	4.01 B	Yes	4.85%	Yes	10.85%	Yes	13.96 B	No	17.63	Yes	67.72%	Yes
Finatis SA	492.15 M	No	6.30%	Yes	-14,85%	No	49.31 B	Yes	6.23	No	135.12%	No
Fonciere Euris	608.57 M	No	6.77%	Yes	-4,62%	No	49.31 B	Yes	6.50	No	133.12%	No
Jeronimo Martins	7.70 B	Yes	6.87%	Yes	32.04%	No	11.83 B	No	20.10	Yes	42.09%	Yes
Kroger CO	16.17 B	Yes	4.10%	Yes	27.24%	No	74.15 B	No	15.55	Yes	209.64%	No
Loblaw Companies	12.30 B	Yes	6.52%	Yes	11.75%	Yes	23.67 B	Yes	20.54	Yes	118.05%	No
Magnit	14.93 B	Yes	9.71%	No	25.07%	Yes	13.71 B	No	20.67	Yes	58.47%	Yes
Metcash	1.60 B	No	3.15%	No	17.76%	Yes	9.98 B	No	8.90	Yes	54.72%	Yes
Metro AG	9.40 B	Yes	5.27%	Yes	7.07%	No	65.04 B	No	24.83	Yes	123.96%	No
Publix Super Markets	8.23 B	Yes	9.65%	No	18.73%	Yes	21.95 B	Yes	6.96	No	1.58%	No
Safeway Inc	6.28 B	Yes	4.75%	Yes	10.45%	Yes	29.08 B	Yes	32.58	No	71.37%	Yes
Sainsbury	7.12 B	Yes	6.66%	Yes	9.43%	Yes	28.40 B	Yes	9.22	Yes	49.20%	Yes
Sonae	2.64 B	No	10.75%	No	12.38%	Yes	5.16 B	No	8.20	Yes	83.65%	No
Staples Inc	7.66 B	Yes	8.07%	Yes	12.25%	Yes	24.38 B	Yes	10.11	Yes	32.42%	Yes
Supervalu Inc	1.25 B	No	3.08%	No	N.A.	No	12.85 B	No	25.11	Yes	N.A.	No
Sysco Corp	14.88 B	Yes	5.42%	Yes	28.71%	No	34.27 B	Yes	17.62	Yes	60.45%	Yes
Target Corporation	37.29 B	No	9.68%	No	17.90%	Yes	72.60 B	No	18.59	Yes	106.58%	No
Tesco PLC	27.42 B	Yes	7.58%	Yes	18.38%	Yes	77.14 B	No	18.42	Yes	68.29%	Yes
The Kroger Co	22.47 B	Yes	4.10%	Yes	27.24%	No	96.62 B	No	15.55	Yes	210.70%	No
Wal-Mart Stores	247.03 B	No	7.67%	Yes	21.74%	Yes	469.16 B	No	15.72	Yes	66.23%	Yes
Weston Ltd	6.79 B	Yes	7.21%	Yes	9.95%	Yes	24.55 B	Yes	18.13	Yes	112.17%	No
Whole Foods Market	16.17 B	Yes	8.91%	Yes	12.45%	Yes	10.00 B	No	33.00	No	0.81%	No
WM Morrison Supermarkets	5.66 B	Yes	7.17%	Yes	12.31%	Yes	20.84 B	Yes	N.A.	No	64.64%	Yes
Woolworths	30.60 B	No	7.80%	Yes	28.02%	No	43.86 B	Yes	19.01	Yes	47.09%	Yes
X 5 Retail Group	2.64 B	No	7.11%	Yes	9.49%	Yes	12.63 B	No	14.27	Yes	142.05%	No

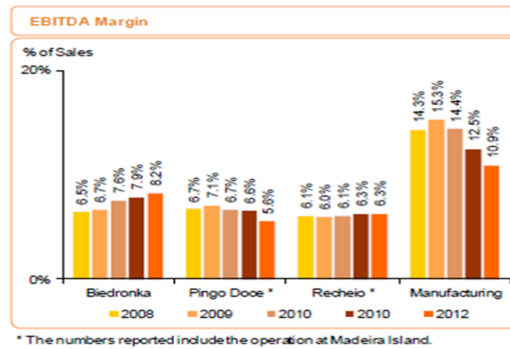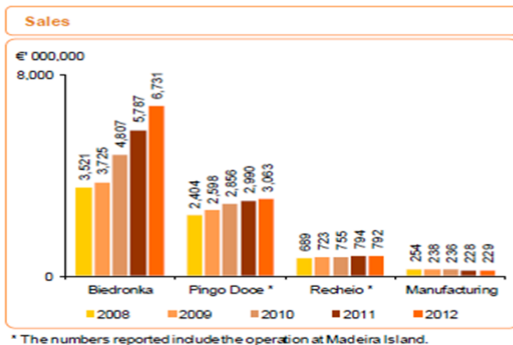Appendix 17: Peer Group Definition, *Own Calculations and Bloomberg*

Appendix 18: Auxiliary Data Required to Compute Weighted Average Cost of Capital (WACC), *Bloomberg*
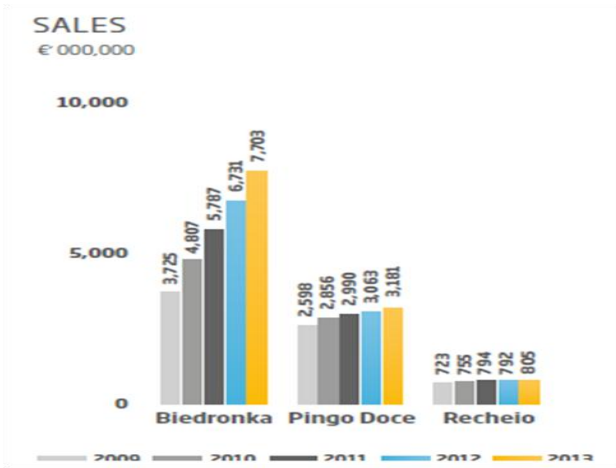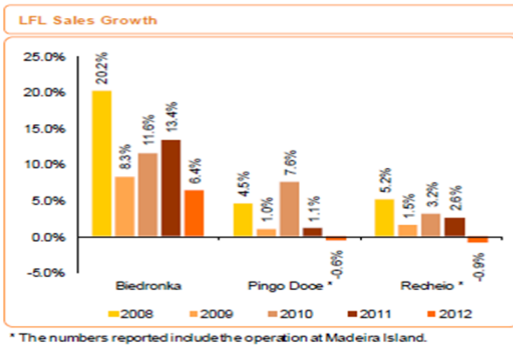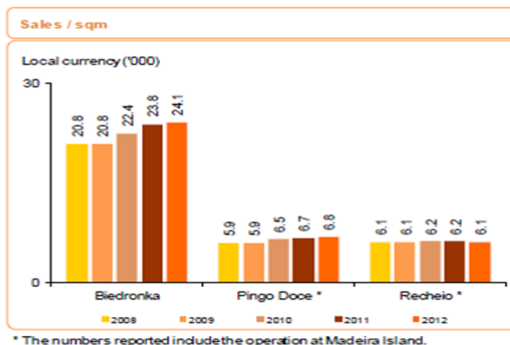
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