LISBON SCHOOL OF ECONOMICS & MANAGEMENT
UNIVERSIDADE DE LISBOA

MASTER
IN FINANCE

MASTER'S FINAL WORK
PROJECT

EQUITY RESEARCH – BANKINTER S.A.

CARLOS MIGUEL RODRIGUES CONSTÂNCIO

FEBRUARY - 2018

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SUPERVISOR:
DR. FERNANDO MANUEL FÉLIX CARDOSO

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ABSTRACT

Bankinter S.A became the new competitor of the Portuguese banks, having acquired in April 2016 the operations of Barclays in Portugal.

This master's thesis aims to evaluate the bank at the date of the last revised accounts, before entering the Portuguese market and without considering the Portuguese operation. The 50-years-old Spanish bank only had operations in Spain and performed well during a time when the country was forced to call for a bailout package to save the banking system in 2012.

Firm valuations have been a very discussed topic, but have generated little consensus, especially at the level of financial firms. Due to the particularities of a financial firm it is difficult to apply the models that were developed to evaluate non-financial firms.

Throughout the thesis I present the most appropriate valuation models for Bankinter evaluation, I carry out an analysis of the firm and the industry and through the model of Simon Benninga I calculate the intrinsic value by the FCFE method.

At 31/12/2015 Bankinter was slightly undervalued, the market price was € 6.44 and the target price calculated was € 6.95, our recommendation is to "Buy".

Key words: Financial Firm Valuation, Free Cash Flow to Equity, Intrinsic Value, Bankinter.

RESUMO

O Bankinter S.A tornou-se o novo concorrente dos bancos portugueses, ao ter adquirido em abril de 2016 as operações da Barclays em Portugal.

A presente tese de mestrado tem como objetivo avaliar o banco à data das últimas contas auditadas, antes da entrada no mercado português e sem considerar as operações portuguesas. O banco espanhol, com 50 anos de existência, até à entrada no mercado português só operava em Espanha e teve uma boa performance durante uma época em que o país foi forçada a pedir um pacote de resgate para salvar o sistema bancário em 2012.

Avaliação de empresas têm sido um tema muito debatido, mas têm gerado pouco consenso, sobretudo ao nível das empresas financeiras. Devido às particularidades de uma empresa financeira é de difícil aplicabilidade os modelos que foram desenvolvidos para avaliar empresas não financeiras.

Ao longo da tese apresento os modelos de avaliação mais apropriados para avaliação ao Bankinter, realizo uma análise da empresa e do setor e através do modelo de Simon Benninga calculo o valor intrínseco pelo método dos fluxos de caixa descontados na ótica do investidor.

A 31 de dezembro de 2015 o Bankinter estava ligeiramente subavaliado, o preço de mercado era de 6,44€ e o preço alvo calculado foi de 6,95€, a nossa recomendação é de "Comprar".

Palavras-chave: Avaliação de Empresas Financeiras, Fluxos de Caixa Descontados na Ótica do Investidor, Valor Intrínseco, Bankinter.

ACHNOWLEDGMENTS

The conclusion of this Master Thesis Final Work is the result of an academic background filled with arduous work, dedication and quest for knowledge.

I must thank to my closest family for conceding me the opportunity to study the matters of my interest, for the chance to experience the Erasmus program and for always backing up my decisions during the last few years.

To my girlfriend for all the support and motivation during the last couple of years fill with professional and personal changes.

To all my friends, colleagues and Inferência Consultores de Negócios e Gestão lda. for the friendship and understanding at all moments.

And last, but not least, to my supervisor Prof. Fernando Manuel Félix Cardoso for never giving up on me and for their continuous support.

INDEX

LIST OF ABREVIATIONS

BS – Balance Sheet

CAPM – Capital Asset Pricing Model

CET1 – Common Equity Tier 1 Capital

DCF – Discounted Cash Flows

DDM – Dividend Discount Model

ECB – European Central Bank

FCFE – Free Cash Flow to Equity

g – Growth Rate

GDP – Gross Domestic Product

IBEX 35 – Spanish Exchange Index

K_e – Cost of Equity

M&A – Merger and Acquisition

R_f – Risk Free Rate

ROA – Return on Assets

ROE – Return on Equity

RWA – Risk Weighted Asset

TV – Terminal Value

INDEX OF FIGURES

INDEX OF TABLES

1. INTRODUTION

The financial crisis of 2007/2008 coupled with the bankruptcy of major financial firms worldwide elevated the concern for their valuation. Since the beginning of this financial crisis, three Portuguese financial firms were nationalized or declared insolvent (Coelho & Oliveira, 2015).

With this concern in mind the main purpose of this Master's Thesis Final Work is to perform a valuation to the most recent player in the Portuguese market, Bankinter, S.A.. The Spanish Bank listed in the IBEX 35 acquired in April 2016 the Barclays operation in Portugal. The valuation is going to be performed at December 2015, the moment of the last revised Annual Report prior to the acquisition and without considering the portuguese operations.

The valuation of a non-financial firm or financial firm is very complex process where the main goal is to determine the value of the firm. To estimate this value there are a wide range of models that help the analysts to determine the value of a business or an asset (Viebig et al, 2008).

However, this answer is not an objective one, according to Damodaran (2002) valuation cannot be an objective exercise, and any preconceptions and opinions that an analyst has will influence the result. Also, Damodaran (2009) states that in the case of the financial firms there are two key characteristics that the analyst must account for:

I. The cash flows to a financial firm cannot be easily estimated, because items like working capital, capex, and debt are not so easy to determine;

II. Financial firms operate under a regulatory framework that specify how fast they can prosper, their capitalization and their investment levels.

Through this project I am going to present some valuation models and determine the most suitable model to perform an equity research to Bankinter S.A.

2. LITERATURE REVIEW

2.1 Financial Firm Definition

For valuation purpose and the choice of the best suitable valuation model it is important to differentiate between non-financial firm and a financial firm.

According to Damodaran (2009) a financial firm is a firm that provides financial products and/or services to other companies or individuals. In this category, it is included commercial banks, investment banks, insurance companies and investment funds.

The banks, profits on the spread between the interest it pays and the interest it charges, amongst other financial services it offers (Damodaram, 2009).

The other firms that do not fit on the description above can be classified as non-financial firms.

2.2 Valuation Purpose

Firms, businesses or their assets can be valued for a different set of reasons (Hitchner, 2011). Consistent with Damodaran (2002), valuation plays an useful and important role in three relevant sections of the finance world.

I. Portfolio Management: Valuation can be critical to portfolio management consonant with the type of investor. For the passive investor valuation does

not have a key role, on the other hand, for the active invest valuation is critical, Damodaran (2002).

II. Merger and Acquisitions (M&A): Valuation has a central role for the buying and selling parts, both parts must access the fair value of the firm before bidding and accepting or rejecting the offer, Damodaran (2002). As stated by Fernandez (2007), the fair value can be different for the buyers and for the sellers.

III. Corporate Finance: In the words of Fernandez (2007), anyone involved in the business of corporate finance should understand the process of valuing a company, because this process helps identified the main sources of value creation and destruction of a firm.

2.3 Financial Service Firms Characteristics

Financial service firms differ from other firms in many dimensions, in a way that those differences can cause estimation issues in valuation, (Damodaran, 2009).

Because financial firms are heavily regulated in term of capital ratios, constrains over where they can invest and M&A, changes in the regulatory that governs this type of firms can affect their growth perspective and as consequence their value.

Because of financial service firms' activities, their assets tend to be financial instruments and they are record as a fair value in the balance sheets. Also, financial service firms' operations are characterized by extended periods of stable profitability interrupted by short periods of large losses.

For financial service firms' debt has a different meaning than for non-financial firms. While non-financial firms considered debt as a source of capital, for financial service firms debt is considered a raw material that can be molded into other products and sold at higher prices originating an economic profit.

While in non-financial firms the definition of capital expenditures and working capital can be easily estimated, for the financial service firms this task is much more complex. Financial service firms invest mainly in intangible assets like human capital and brand name that are often classified under operating expenses, therefore financial firms present very low level of depreciation. As for the working capital estimation, large portion of the financial firm balance sheet fall under one of this category. Changes in those values does not necessary mean an alteration of the reinvestment policy.

2.4 Valuation Methods

In general terms, there is a consensus in the finance world that there are four approaches to valuation. Along with Damodaran (2006) and Deev (2011) the valuation models can be separated in the following groups:

I. Discounted Cash Flow Valuation: This approach focuses on the conversion of expected future cash flows into their present value at a rate of return.
II. Relative Valuation: Estimates the value of an asset by comparing with similar assets relative with a common variable like cashflows, sales or earnings.
III. Liquidation and Accounting Valuation: Is built around the value of the existing assets of a firm, this method value the company from a static point of view and does not value potential earnings.

IV. Contingent Claim Valuation: Uses option pricing models to estimate the value of the asset.

Table I – Valuation Methods

Valuation Methods			
Discounted Cash Flows	**Relative Valuation**	**Liquidation and Accounting Valuation**	**Continget Claim Valuation**
Free Cash Flow to the Firm	Price Earning Ratio	Book Value	Black Scholes
Free Cash Flow to Equity	EV to EBITDA	Adjusted Book Value	Binomial Value
Dividend Discount Model	Equity Value	Liquidation Value	
Adjusted Present Value	Price to Sales	Substantial Value	
Economic Value Added	Price to Book Value		
	Other Multiples		

Source: Damodaran (2009) and Deev (2011)

In the words of Damodaran (2009), is better to value financial service firms using equity valuation models than using enterprise models. For Deev (2011) in general terms all the methods are applicable to financial service firms under certain conditions. Deev (2011) states that the Discounted Cash Flow methods present the best theoretical results, particularly the Free Cash Flow on Equity and the Dividend Discount Model.

Hence, this equity research is going to be centered over those two equity valuation methods, Free Cash Flow to Equity (FCFE) and the Dividend Discount Model (DDM).

2.4.1 Free Cash Flow to Equity

The FCFE is the amount of cash that it is available to be returned to the stockholder after all financial obligations are met, Damodaran (2002). This equity method discounts the expected cash available to the stockholders at a rate of return appropriate for the equity level of risk, the cost of equity, Damodaran (2009).

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

2) $Equity\ Value = \sum_{t=1}^{t=n} \frac{FCFE_n}{(1+K_e)^n} = \frac{FCFE_1}{(1+K_e)} + \frac{FCFE_2}{(1+K_e)^2} + \cdots + \frac{FCFE_n+TV_{n+1}}{(1+K_e)^n}$

3) $TV_{n+1} = \frac{FCFE_n \times (1+g)}{K_e - g}$

Where,

FCFE, is the free cash flow to equity,

K_e , is the cost of equity,

TV, is the terminal value,

g, is the grow rate the cash flow is expected to grow during terminal value.

4) $FCFE = Net\ Income + Depreciation - Net\ Capital\ Expenditures -$

$\Delta\ in\ non\ cash\ Working\ Capital - (Debt\ Repaid - New\ Debt\ Issued)$

For a non-financial firm, the FCFE calculation works smoothly, however for a financial firm, as mentioned before, the working capital and capital expenditures are hard to estimate. Damodaran (2009) suggestion is to adapt the FCFE accordingly to the reinvestments a financial firm does. Since financial firms must met certain levels of capital ratios it requires for an increase of regulatory capital to maintain their operations.

5) $FCFE_{Financial\ Firms} = Net\ Income - Reinvestment\ in\ Regulatory\ Capital$

Henceforth, to estimate the Reinvestment in Regulatory Capital two parameters must be defined. The Book Equity Ratio will determine the investment and the Profitability of the Activity will define the return of the new debt.

2.4.2 Dividend Discounted Model

The DDM is a method that values a stock based on the present value of the expected dividends on that stock.

According to Damodaran (2006), when investors buy a stock they are expecting to earn two type of cash flows, dividends and an expected cash flow for the selling of the stock. Since the expected selling price is determined by future dividends, the value of the stock is the present value of expected dividends through infinite.

6) $Value\ per\ Share\ of\ Stock = \sum_{t=1}^{t=\infty} \frac{E(DPS_t)}{(1+K_e)^t}$

Where,

E(DPS), is the expected dividend per share,

K_e, is the cost of equity.

Considering a firm that is expected to distribute dividends at a constant grow rate the value of the stock is the following, also known as Gordon Growth Model:

7) $Value\ per\ Share\ of\ Stock = \frac{DPS_1}{K_e - g}$

Where,

DPS_1, is the Dividend in the next period,

K_e , is the cost of equity,

g, growth rate.

Damodaran (2006) alerts for the fact that when estimating for the growth rate, g, to keep in mind that it cannot exceed the growth rate of the economy and it should keep up with the firm other measure performance. Otherwise, in the long-term dividends can excess earnings or on the other hand the payout ratio can tend to zero.

Subsequently, a more flexible model was developed in order to evaluate a higher growing firm, by assuming a two-step model. In this model, the firm can assume an unsustainable grow during a few years and then a stable grow rate.

8) $Value\ per\ Share\ of\ Stock = \sum_{t=1}^{t=n} \frac{DPS_t}{(1+K_e)^n} + \frac{DPS_{n+1}}{(K_e - g)(1+K_e)^n}$

Although it is considered an old-fashioned model, it has been used by analyst to valuate financial service firms, because solves the tough question about reinvestments in DCF.

2.5 The Parameters of DCF Valuation

2.5.1 Capital Asset Pricing Model (CAPM)

The CAPM describes how are assets are priced under equilibrium conditions, (Viebig et al, 2008). This model suggests that an investor invests in risky assets if he can expect to receive a premium over the risk-free rate to compensate for the risk he is assuming.

The model is based on a few assumptions:

I. Investor follow Markowitz's approach: Markets are perfect, the taxes and transaction costs are irrelevant and investors prefer low variance and high expected returns.

II. Risk-free asset: There is a risk-free asset available in the market.

III. Homogeneous expectations: The capital market line is the same for all investors.

9) $E(R_i) = R_f + \beta_i(\text{Market } Risk\ Premium)$

10) $Market\ Risk\ Premium = E(R_m) - R_f$

Where,

$E(R_i)$, is the expected return of the asset in equilibrium,

R_f, is the risk-free rate,

β_i, is the asset sensitivity to the market,

$E(R_m)$, is the expected return on the market portfolio.

The Market Risk Premium is the premium demanded by investors to invest in the market portfolio over the riskless asset. The market portfolio includes all the risky asset, consequently is very well diversified and only has systematic risk (cannot be eliminated), (Pinto, J. et al 2010).

2.5.2 Cost of Equity (K_e)

Estimating the K_e is fundamental for a several financial decisions, as capital budgeting, capital structure or valuation, (Bartholdy, J. & Peare, P., 2000).

The K_e is the rate of return that investors claim to invest in the equity of the firm, Damodaran (2015). According to (Viebig et al, 2008), the K_e must be estimated by applying risk factor models, the standard model is CAPM because requires few inputs.

11) $K_e = R_f + \beta_i(E(R_m) - R_f)$

As stated by Damodaran (2015), in emerging markets or during market crisis, the investor may demand an extra premium to invest in an asset in a certain country. The Country Risk Premium is added to the previous equation:

12) $$K_e = R_f + \beta_i\big(E(R_m) - R_f\big) + \text{CRP}$$

2.5.3 Risk Free Rate (R_f)

An investor when invest in an asset is expecting to make an expected return. When the actual return is always what the investor is expecting we are in the present of a risk free asset with a risk free rate of return, (Damodaran, 2008). In a more simplistic way, it is a rate of return with no risk involved. Also, a risk free investment must have returns that are uncorrelated with the market, across different scenarios.

There are two basic conditions an asset must fulfil to be considered a risk free investment:

I. No default risk

II. No reinvestment risk

In the light of the topic of this project, Damodaran (2008) states that using the 10 year bond rate as the R_f to all cash flows is a good practice in valuation.

2.5.4 Beta (β_i)

The β_i measures the sensitivity of the returns on asset to movements of the returns on the market portfolio or on other indices, (Viebig et al, 2008).

Fama & French (2004) described this movement as:

13) $$\beta_{iM} = \frac{cov(R_i, R_M)}{\sigma^2(R_M)}$$

The market beta of an asset is the covariance of the return between that asset and the market, divided by the variance of the market returns.

Consistent with Damodaran (2015), beta can be estimated by three approaches:

I. Historical Market Betas: by making a regression of the historical returns of an asset against an index or some other benchmark.
II. Fundamental Betas: An alternative way of estimation the beta by fundamentals decisions the firm has made, the type of business the firm is in, operating leverage and financial leverage.
III. Accounting betas: The final approach is to estimate the Beta by using the accounting earning instead of traded prices.

Consistent with Damodaran (2009), there are three notes to keep in mind when estimating betas to financial service firms:

I. Use bottom up betas: there is a huge probability that due to regulatory constrains (Basel) the firm has changed over the regression period.
II. Do not adjust for financial leverage: Financial firms are homogeneous in terms of capital structure, because of regulatory capital constrains, and as referred before it is hard to estimate debt in a financial firm
III. Adjust for regulatory and business risk: By using sector beta it should reflect a group of financial service firm where the financial firm that it is been evaluated belongs.

3. COMPANY PRESENTATION

3.1 History

Bankinter was founded in June 1965 through a joint venture by Banco de Santander and Bank of America with the main purpose of funding industrial investments. The bank was initially established as Banco Intercontinental Espanol, and their headquarters are located until the present day at Passeo de la Castellana of Madrid.

In 1972, the bank made the decision to be listed in the Stock exchange, by the time the transaction was completed, the bank increased their shareholders from 2 to 30.000.

The will to be listed in the Stock exchange is not different from the motivation of the current days:

I. Provides liquidity to shareholders
II. Assigns the investment a value
III. Prestige.

In the first years Bankinter experienced an exponential growth thanks to their special financial products, cash certificates and certificates of deposit, this increase in external resources was put at the service of small and medium enterprises.

After a severe economic crisis, that ended in 1985, Bankinter launched a Special Deposit with a yield between 14% and 16%, as a result their Customer Resources grew 70% in contrast with the 10% of other banks.

Bankinter launched a pioneer service in 1992, telephone banking, it was known as BKtel and the main goal was to distribute all their products through this channel, at that time

none of the Spanish bank offered this service. The bank also launched a new service in collaboration with companies named Bankinter Partnet, in which the company can execute a diversified set of operations through the intranet.

By the new millennium Bankinter was already offering their clients the opportunity to carry out their operations on the internet and in the early 2003 was introducing mobile banking, first with the SMS service and later in 2005 with a simplified webpage of the bankinter.com domain.

Since the bank creation it has implemented new services and innovative technology that contributes to a more pleasant experience in banking.

In 1995 the bank forged an alliance with Royal Bank of Scotland to create an Insurance company that sells policies by the phone. Fourteen year later the bank acquired the remain 50% of the business and is their unique owner.

In 2014 all the Spanish banks were subject of stress tests, Bankinter results granted the first place as the most creditworthy in Spain and one of the most stable in Europe.

3.2 Shareholder Structure

According to the 2015 Annual Report the bank has 898.866.154 shares with a par value of 0.30€. These shares were in the hands of 61.386 unique shareholders, of which 55.80% were residents in Spain.

Table II – Shareholder's owning more than 5%

Shareholder's Structure		
Name	Number of Shares	%
Carnival S.A	205 505 462	22.86%
Corporation Masaveu S.A	44 959 730	5.00%
Standard Life Investment (Holdings) Limited	47 451 105	5.28%

Source: Annual Report - 2015

3.3 Financial Indicators

The financial indicators show us the bank aptitude to deliver exceptional results even under adverse macroeconomic environment.

Against the trend of the sector, the bank delivered very interesting results, when the country was going to a very difficult crisis the bank presented a ROE of 3,98% and a ROA of 0,21% (2011).

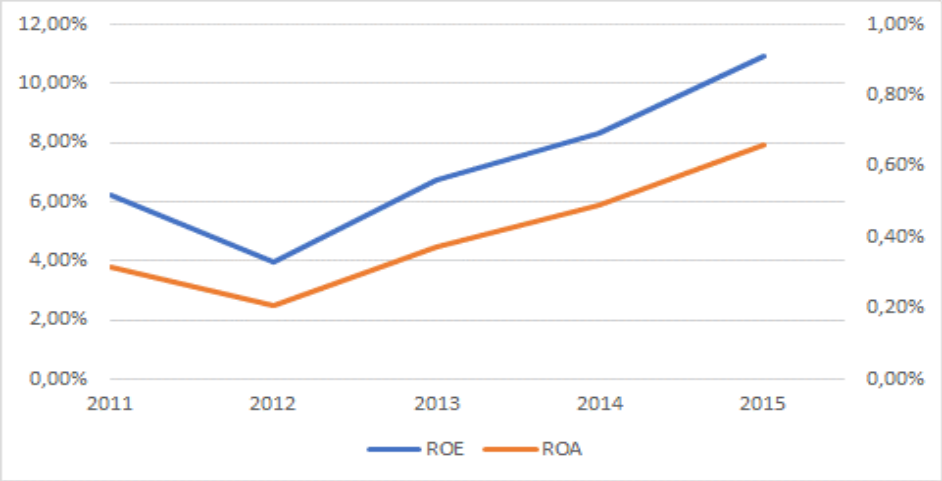

Figure 1 – ROE and ROA evolution

Source: Annual Reports – 2011 to 2015

The last two years, it has been a constant record breaking in terms of net profit, it was an increase of 32.5% from 2014 to 2015. This results was accomplish mainly due to customer's recurring business regardless of the oddly low rates.

The net interest income rose from 542.675.000€ (2011) to 869.453.000€ (2015), this represents a grow of 60% in 5 years. It is the result of a performing and profitable pool of credits and the ability to financing at low rate levels.

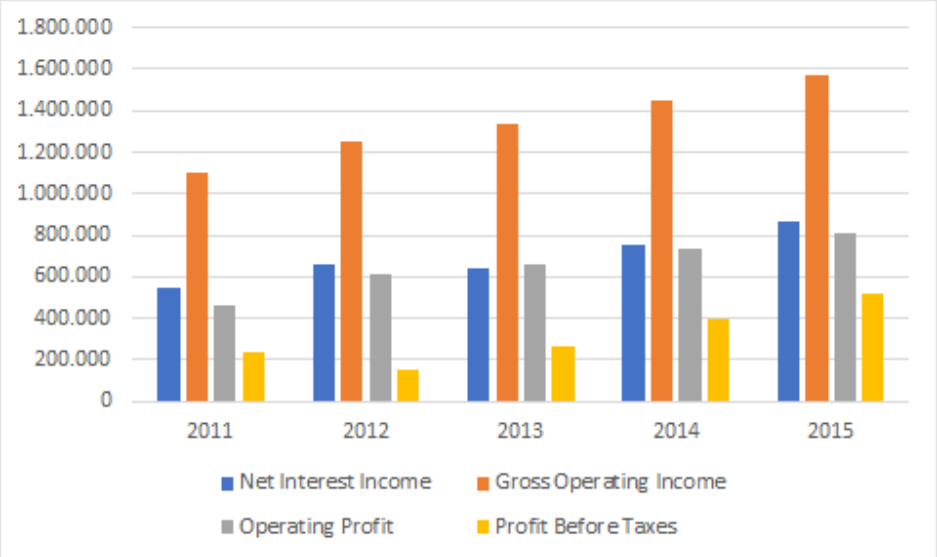

Figure 2 – Income statement (values in thousands of €)
Source: Annual Reports – 2011 to 2015

The increase of results from the net interest income to the gross operating income comes from three main sources of revenues: fees and commissions, trading and other income, where we can find the results from the insurance company the bank's own (Linea Directa).

The contribution to the gross operating profit from other sources of revenues was well distributed, in the year of 2013 the trading income was one third of the total of the gross income minus the net interest income.

The results from the insurance company represents almost the totality of the other income and contributed with a total of 218.725.000€ (income from insurance contracts

written minus expenses from insurance contracts written) in 1.568.815.000€ of gross operating income (2015).

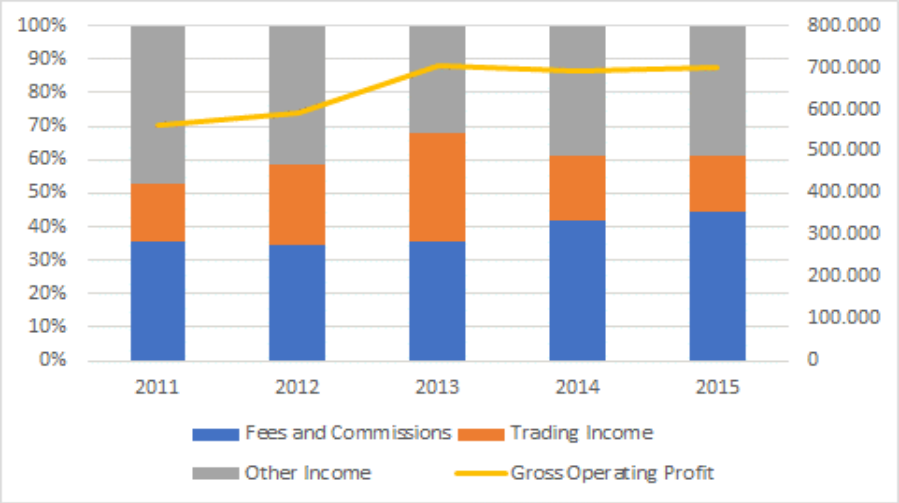

Figure 3 – Non-Interest Income detail (values in thousands of €)
Source: Annual Reports – 2011 to 2015

The reduction of the Loan to Deposit-Ratio from the year 2012 to 2013 had a direct impact in the net income interest of 2013. The 7% rose of customer funds and the 2% decrease of credit loans were the main factors for the 3,7% decrease of the net income interest.

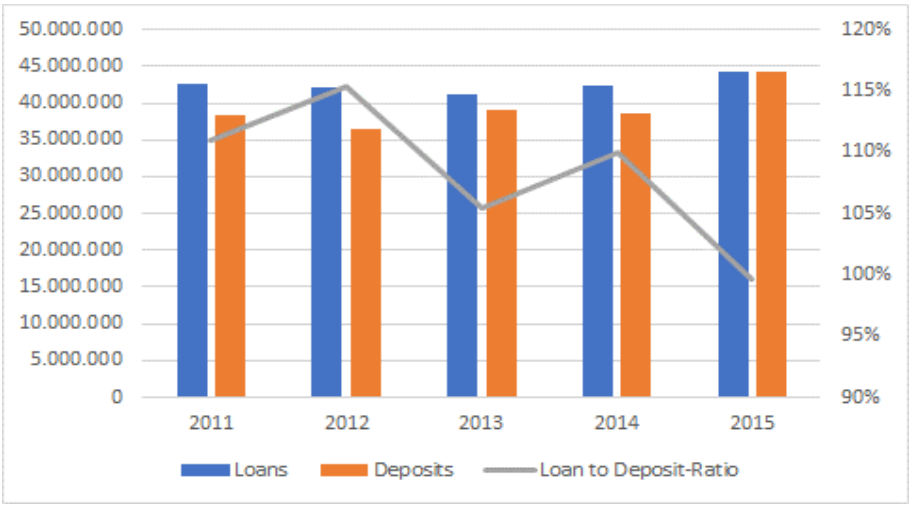

Figure 4 – Loan to Deposit Ratio Evolution (values in thousands of €)
Source: Annual Reports – 2011 to 2015

After the exceptional result obtained during the stress tests in 2014, the ECB notified the bank with the smallest minimum capital requirement of the Spanish Banks.

Bankinter had to have at least a CET1 of 8.75% and it had a ratio of 11,77%, this excess of capital enables the bank to distribute a dividend equal to 55% of results.

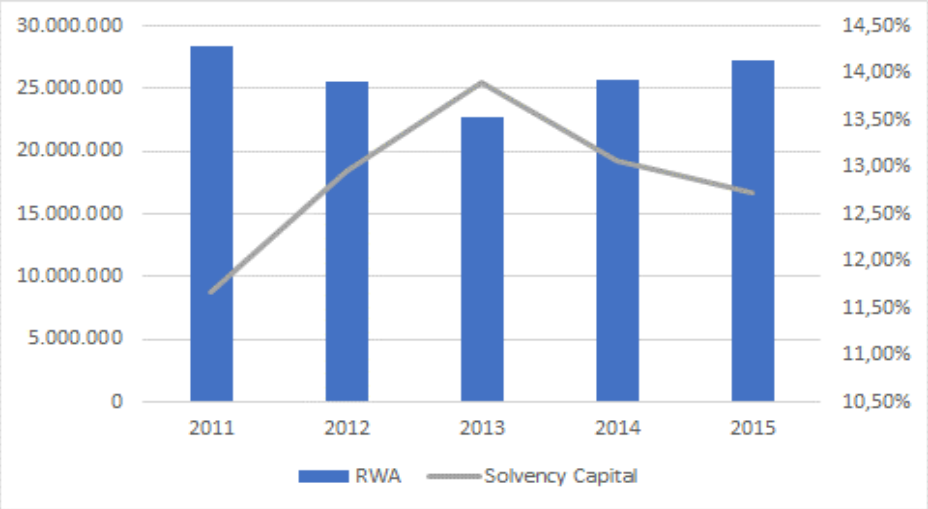

Figure 5 – Solvency capital and RWA evolution(values in thousands of €)

Source: Annual Reports – 2011 to 2015

In the end of 2015 the news about the acquisition of the Barclays operation in Portugal was released. Over the course of this work I will not study this operation, because the main objective is to know the bank prior to the expansion by acquisition.

By analyzing these results is clear that the bank did not suffer has much as the other Spanish banks, their non-performing loans ratio in 2015 was 4.1% that is less than the half of the average for the sector. As a result, the bank kept growing in credit volume and employees against the sector trend in Spain and Europe.

3.4 Sector Analysis

In 2007 – 2008 the United States of America was hitted by the so called Global Financial Crisis, it started in the subprime mortgage market and quickly spread to other regions of the globe. In Spain, the crisis was felt in 2008 and it was known as the Great Spanish Depression.

Even thought, the Spanish banking system had required their banks to have high capital rates it was not enough to contain the exposure to the real estate market.

Several countries asked assistance to the European funds and it started to exist an informal classification into two groups, core and peripheral.

Spain was in the peripheral group with Portugal, Ireland.

With tremendous loss of value in the economy and with negative growth, the country had to apply for an rescue package of 41 billion euros to save the banking system.

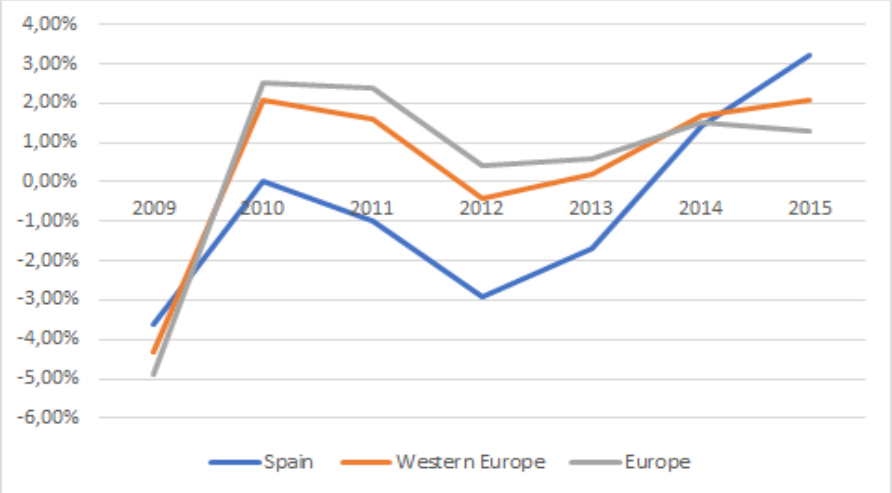

Figure 6 – GDP growth rate

Source: International Monetary Fund

Meanwhile the sovereign debt crisis was increasing the financing cost and had to be the ECB president to state that it would do anything to save the euro and approved the quantitative easing program in order to inject money into the Spanish economy (and others).

Also, to back up the economy and support the investment the reference interest rates reached historical low rate levels and the deposit rate reached negative values.

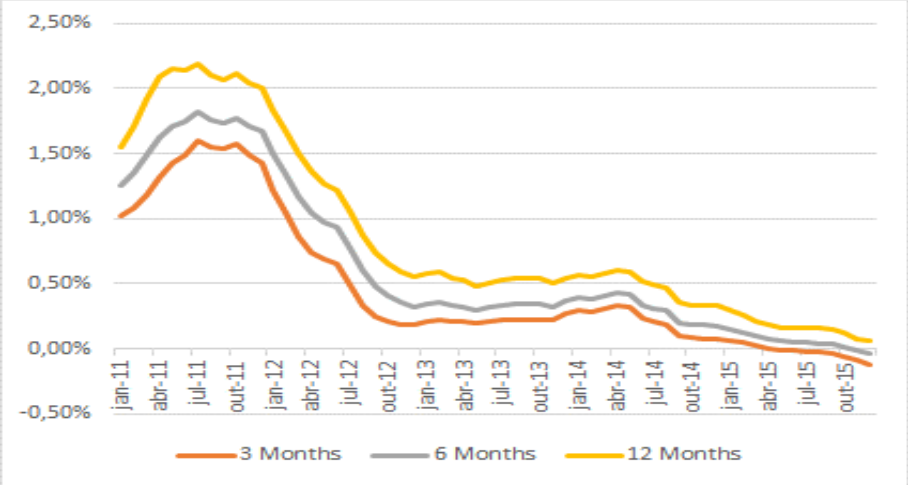

Figure 8 – Euribor Interest rates

Source: European Money Markets Institute

As result of all the economic crisis the unemployment rose 66% from January 2009 to February 2013, hitting a new record for the country. After 2008, Spain is the country with the worst unemployment rate or the second worst rate.

The unemployment in the youth generation (less than 25 years) presents values even more dramatics, 57% of this generation was unemployment in February 2013. The rate fell 13 percentage points by the end of 2015. As for the global unemployment it fell 7

percentage points, a decrease of 21% since the worst unemployment rate of the history of Spain was registered.

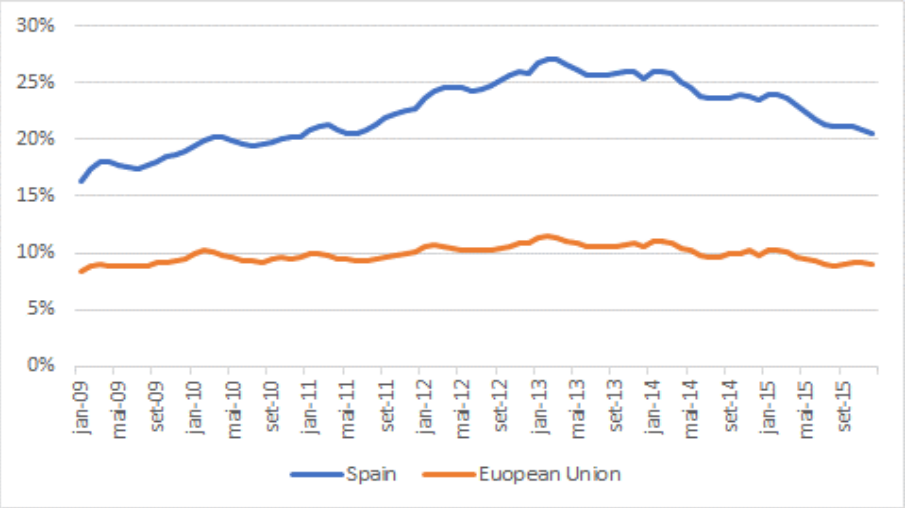

Figure 7 – Unemployment Evolution

Source: Eurostat

During the Global Economic Crisis, it was clear that that the banking regulatory system needed an update to prevent and address the problems arose.

In December 2010 the Basel Committee on Banking Supervision published their reforms, Basel III, these reforms will be gradually implemented until the beginning of 2019.

These measures intend to improve the banking sector with the ability to resist to economic and financial periods of stress, improve the bank's risk management and governance and to reinforce the bank's transparency.

The reforms in Basel III are changing the bank's capital, the bank's need to have more capital and the standards to qualify has instruments of Tier 1 Capital has tighten. In addition to the Common Equity Tier 1 Capital the conservation buffer must be set to 2.5% and it must have the same quality has the Common Equity Tier 1 Capital.

After the last years of difficulties and record of bad results, the solution to fulfill the capital requirements is issuing common equity.

Table III – Basel III Phases

Basel III - Phases	2013	2014	2015	2016	2017	2018	2019
Common Equity Tier 1	3,50%	4,00%	4,50%				
Capital Conservation Buffer				0,625%	1,25%	1,875%	2,50%
Tier 1 Capital	4,50%	5,50%	6,00%				
Total Capital	8,00%						
Total Capital plus Cons. Buffer	8,00%			8,625%	9,250%	9,875%	10,500%

Source: Bank for International Settlements website

4. VALUATION

4.1 Methodology

As stated during the literature review the Discounted Cash Flow methods are the ones that deliveries best theoretical results.

For the present valuation I am going to use the methodology that as stated in the Literature Review is the most suitable for financial firms, the Free Cash Flow to Equity. The application of this method to financial firms is a very challenging exercise in a way that the working capital and capital expenditures are very hard to estimate, so, I am going to adapt the FCFE according to the reinvestment the firm needs to meet their regulatory capital requirements.

The valuation is based on the historical data from 2011 to 2015 presented by Bankinter S.A. in their revised annual report. The forecasts are estimated for the following 4 years, (2016-2019) and are based on the Simon Benninga valuation model.

The pro forma model was built by adapting all items from the Bankinter S.A. balance sheet to the Simon Benninga balance sheet model. By considering some critical assumptions and matching the BS line items to the income statement items it was possible to calculate the net income results and build the FCFE.

In order to reach an equity value at 31/12/2015 the terminal value was calculated by using the Gordon growth method and all FCFE were discounted at the K_e.

As stated before, the valuation process is a very complex process and the results can be biased by the analyst opinion.

4.2 Assumptions and Results

The pro forma model takes into consideration the Simon Benninga assumptions, some of the most important ones are the items related with loans and deposits.

Taking into considerations the highly expansive monetary policy and the asset purchase program extended period by ECB is expected that the interest rates keep falling at least for one more year. After the expansive monetary policy is reduced is expected that those rates start rising. For 2016 it was estimated the same variation from 2014 to 2015, for 2017 to 2019 it was assumed an increase until it reached average historical rates.

Table IV – Interest Rates

Inputs	2016	2017	2018	2019
Interest Rate of Customer Loans	2,07%	2,35%	2,45%	2,55%
Interest Rate of Deposits	0,23%	0,48%	0,71%	0,94%

Regarding the growth rate of the those and other items it was assumed the weighted average of historical rate and the compound annual growth rate, for the growth rate of

deposits it was considered a more conservative rate and a 50% haircut was applied (3,255%).

Table V – Inputs

Inputs	2011	2012	2013	2014	2015	Average
	0%	10%	15%	25%	50%	
Assets						
Cash as a percentage of deposits	1,15%	1,74%	2,40%	0,95%	2,46%	2,00%
Trading Securities and Others	3,59%	3,73%	3,23%	3,52%	3,26%	3,37%
Grow Customer Loans (CAGR 2 Periods)						3,56%
Interest Rate of Customer Loans	2,96%	3,06%	2,70%	2,67%	2,35%	2,55%
Liabilities						
Customer Deposits	0,00%	-3,42%	17,82%	0,02%	13,06%	8,87%
Customer Deposits (CAGR 4 Periods)						6,51%
Interest Rate of Deposits	1,97%	1,94%	1,64%	1,02%	0,48%	0,94%
Mrketable Securities (CAGR 2 Periods)						4,97%
Interest over marketable Securities	2,58%	2,27%	1,97%	1,84%	1,29%	1,63%

As for the income statement, it was assumed that the Other Income Items had the same weigh over Interest Income of 2015. For the Personal Expenses and Other Expenses, it was assumed that it had the same weight over Net Interest income. The other items followed the same line of thoughts.

For the tax assumptions and dividends distribution, it was considered the same ratio of 2015.

Concerning the FCFE inputs, the risk free rate considered was the 10 year German zero coupon bond 0.629%.

Regarding the β_i calculation the debt to equity ratio was calculated by subtracting deposits to the debt and divided by equity, the unlevered Beta of the banking sector was provided by Damodaran's website and recurring to Damodaran's method the author calculated the levered beta. Concerning the state by Damodaran, advising not to adjust

for financial leverage, we decided to adjust because in Europe the national central banks can influence the bank regulatory capital, and therefore the capital of regional banks may not be as homogeneous as mentioned.

Finally, to reach the cost of equity, the author assumed the Country Risk Premium provided by Fernandez P. (2015).

Table VI – Cost of Equity

Beta	
Unlevered Beta	0,1800
D/E Ratio	453,66%
Tax Rate	27,75%
Levered Beta	0,77
CAPM	
Beta	0,77
Rf	0,63%
Rm	5,90%
Country Risk Premium	2,71%
Ke	7,88%

According to Damodaran, we decided to adapt the FCFE calculation to financial firms, as consequence we had to estimate the increase in regulatory capital. The risk weighted asset calculation it is a very complex process and requires a level of detail, related with the assets, that we do not have access. Therefore, we assumed that the asset variation was same as the RWA.

Table VII – Regulatory Capital

Regulatory Capital	2015	2016	2017	2018	2019
Total Assets	58.659.810	60.579.799	62.553.751	64.599.519	66.719.629
Ratio	46,43%	46,43%	46,43%	46,43%	46,43%
Risk Weighted Assets	27.238.576	28.130.119	29.046.720	29.996.668	30.981.138
Solvency Ratio	12,73%	12,73%	12,73%	12,73%	12,73%
Equity To Mantain Capital Ratio	3.467.471	3.580.964	3.697.647	3.818.576	3.943.899
Increase in Regulatory Capital		113.493	116.683	120.928	125.323

As mentioned the total capital with conservation buffer after 2019 is set to 10,5%, we decided to maintain the 2015 solvency ratio during the forecast because is above the capital regulatory requirements.

The source of capital to the increase in regulatory capital came from the retained earnings of the period.

For the growth rate in perpetuity we assumed the average GDP growth rate in Western Europe of the last two year (1,9%).

The number of shares outstanding were kept constant during the valuation.

The results are presented in the table below:

Table VIII – Valuation

Valuation FCFE	2016	2017	2018	2019
Net Income	384.996	459.419	494.360	531.140
Net Capital Expenditures				
Equity to Maintain Capital Levels	113.493	116.683	120.928	125.323
Terminal Value				6.912.225
FCFE+TV	271.503	342.735	373.432	7.318.042
Discounted Value	251.665	294.481	297.411	5.402.440
Equity Value at 31/12/2015	6.245.997			

Number of Shares	898.866.154
Value per Share at 31/12/2015	6,95 €

Taking into considerations all the assumptions made we reached an equity value at 31/12/2015 of 6.245.997.000€ which means that each share had a value of 6.95€.

The price target calculated is 5.9% above the traded market price at 31/12/2015.

4.3 Sensitivity Analysis

To perform the sensitivity analysis, we chose as the most important variables the Cost of Equity and the Growth Rate. In a *ceteris paribus scenario*, we can observe that an increase of 1,5% in the cost of equity reflects in a 20% decrease of the target price and a decrease of 1,5% reflects in a 34% increase of the target price.

Regarding the changes in the growth rate scenarios, the fluctuations are even bigger, an increase of 0.3% reflects in a 42% increase of the target price.

By analyzing the table below and with the idea in mind that all the assumptions made were result of the information available at the date and that the country is recovering well from the Great Spanish Recession we can conclude that the "Buy" recommendation is the best for this firm.

Table IX – Sensitivity Analysis

Sensitivity Analysis		Cost of Equity						
		6,38%	6,88%	7,38%	7,88%	8,38%	8,88%	9,38%
Growth Rate	1,60%	8,77 €	7,93 €	7,24 €	6,66 €	6,17 €	5,75 €	5,38 €
	1,70%	8,94 €	8,07 €	7,35 €	6,75 €	6,25 €	5,81 €	5,44 €
	1,80%	9,11 €	8,21 €	7,47 €	6,85 €	6,33 €	5,88 €	5,50 €
	1,90%	9,29 €	8,35 €	7,59 €	6,95 €	6,41 €	5,95 €	5,56 €
	2,00%	9,48 €	8,50 €	7,71 €	7,05 €	6,50 €	6,03 €	5,62 €
	2,10%	9,68 €	8,66 €	7,84 €	7,16 €	6,59 €	6,10 €	5,68 €
	2,20%	9,89 €	8,83 €	7,97 €	7,27 €	6,68 €	6,18 €	5,75 €

5. CONCLUSION

Bankinter has proven to be a very solid bank, with a superb credit risk management quality and an excellent ability to perform against adverse market conditions.

As forecasted it is expected an improvement of the economy in Europe, with Spain leading the race in terms of growth rate. The bank registered excellent results during the ECB stress tests, achieving one of the best results in Europe, which contributed to increase their reputation amongst the banking sector.

Concerning the Basel III framework, Bankinter maintains a solid CET1 capital ratio, well above the capital requirements for the fully implemented requirements in 2019.

For their first international experience they chose Portugal, and they are going to compete in a market like the one they already operate, many of their competitors are going to be Spanish financial firms.

Bankinter enters the Portuguese market as a very robust player, with the advantage of not had suffer has much has all the Portuguese banks, and with results well above average of the sector.

Relating to the valuation, we decided to apply the Simon Benning pro forma model, as so, we had to rearrange the items from the Annual Report BS, subsequently we applied the FCFE adaptation by Damodaran to reach the equity value. We can conclude that the financial firm is slightly undervalue and our recommendation is “Buy”.

Regarding future research, it would be interesting to evaluate the acquisition effect of the Barclays operation in Portugal and if the Bankinter performance and value improved with it.

6. BIBLIOGRAPHY

Academic Literature

Bartholdy, J. and Peare, P. (2000). Estimating Cost of Equity. Aarhus School of Business, 1-17.

Coelho, M. and de Oliveira, R. (2015). Mercados São Mesmo os Grandes Culpados da Crise?, 1st Ed. Lisbon: Europress.

Damodaran, A. (2002). Investment Valuation: Tools and Techniques for Determining the Value of Any Asset, 2nd Ed. New York: John Wiley & Sons.

Damodaran, A. (2006). Valuation Approaches and Metrics: A Survey of the Theory

and Evidence, Stern School of Business, 1-77.

Damodaran, A. (2008). What is the riskfree rate? A Search for the Basic Building Block, Stern School of Business.

Damodaran, A. (2009). Valuing Financial Service Firms.

Damodaran, A. (2015). Applied Corporate Finance, 4th Ed. New Jersey: John Wiley & Sons.

Deev, O. (2011). Methods of Bank Valuation: A Critical Overview. Masaryk University, 33-44.

Fama & French (2004), The Capital Asset Pricing Model: Theory and Evidence, The Journal of Economic Perspectives, Vol. 18, No. 3, 25-46.

Fernandez, P. (2015), Discount Rate (Risk-Free Rate and Market Risk Premium) used for 41 countries in 2015: a survey, ISESE Business School.

Fernandez, P. (2007). Company valuation methods. The most common errors in valuations, IESE Business School.

Hitchner, J. (2011). Financial Valuation, Aplications and Models, 3rd Ed. New Jersey: John Wiley & Sons.

Pinto, J., Henry, E., Robinson, T. and Stowe, J. (2010), Equity Asset Valuation Book, 2nd Ed. New Jersey: John Wiley & Sons.

Viebig, J., Poddig, T. and Varmaz, A. (2008). Equity Valuation: Models from Leading Investment Banks, Chichester: John Wiley & Sons.

Report

Bankinter, Integrated Report (2011, 2012, 2013, 2014 and 2015)

Web Sources

http://appsso.eurostat.ec.europa.eu

https://www.bankinter.pt/

http://www.bis.org

https://www.bloomberg.com

https://www.bportugal.pt/

https://www.emmi-benchmarks.eu

http://www.imf.org

http://pages.stern.nyu.edu/~adamodar/

7. APPENDIX

Table X – Bankinter Integrated Report 2011 - 2015

Balance Sheet	2011	2012	2013	2014	2015
Assets					
Cash on hand and on deposits at central banks	412.795	665.374	886.118	357.327	925.361
Trading portfolio	2.415.506	2.109.264	4.346.573	5.353.482	4.473.638
Other financial assets at fair value with changes to P&L account	31.377	39.860	18.158	49.473	57.209
Available for sale portfolio	4.776.069	6.132.471	2.483.171	3.013.813	3.530.153
Loans	47.167.367	44.751.950	42.607.050	44.006.522	45.479.314
Due from banks	1.779.395	1.093.728	1.182.216	1.113.441	850.451
Counterpart entities	2.782.673	1.515.635	110.559	0	0
Customer loans	42.605.299	42.059.716	41.196.451	42.446.723	44.182.634
Government entities	639.411	1.612.967	2.340.652	1.704.402	1.676.296
Private sector	41.965.888	40.446.749	38.855.799	40.742.322	42.506.338
Commercial bills	2.029.781	2.177.584	2.052.599	2.016.997	1.793.057
Secured loans	29.507.807	27.421.466	25.269.668	25.353.414	25.915.053
Other credit facilities	7.823.204	7.963.701	8.449.436	9.899.189	11.540.110
Personal loans	3.538.444	3.877.441	4.468.648	5.791.740	6.319.321
Credit lines	4.041.367	3.803.084	3.721.439	4.107.449	5.220.789
Other debtors	243.393	283.176	259.350	0	0
Leasing	900.607	807.586	796.605	968.590	985.139
Nonperforming loans	1.498.326	1.955.871	2.234.395	2.194.167	1.990.922
Loan loss allowances	-791.924	-969.401	-968.822	-958.193	-860.702
Other credit	998.087	1.089.894	1.021.918	1.268.158	1.142.758
Debt securities	0	82.871	117.825	446.357	446.230
Investment portfolio held to maturity	3.150.931	2.755.355	3.220.721	2.819.482	2.404.757
Hedge derivatives and macro-derivatives	130.114	155.219	84.481	148.213	160.073
Other assets available for sale	308.514	381.141	369.210	356.671	318.287
Associates	28.341	40.600	36.362	29.726	39.424
Reinsurance assets	9.068	6.716	4.571	3.720	3.231
Material assets	466.900	442.288	434.931	467.363	493.114
Intangible assets	338.040	317.537	300.703	282.327	266.693
Fiscal assets and others	256.403	368.113	343.613	444.857	508.556
Total Assets	**59.491.426**	**58.165.889**	**55.135.662**	**57.332.974**	**58.659.810**
Liabilities					
Trading portfolio	2.360.584	1.797.324	1.751.721	2.441.491	3.769.080
Financial liabilities at amortized costs	52.929.286	52.079.071	48.912.731	49.990.680	49.836.994
Due to banks	10.267.544	13.589.080	7.830.983	8.489.858	4.810.299
Counterpart entities	3.093.798	912.744	602.744	937.833	0
Customer deposits	25.505.317	24.631.869	29.021.538	29.028.297	32.820.399
Marketable debt securities	12.446.445	11.586.450	9.516.372	9.311.034	10.484.882
Subordinated debt	958.170	767.852	612.438	608.198	594.563
Other financial assets	658.012	591.077	1.328.656	1.615.461	1.126.850
Hedge derivatives and macro-derivatives	68.677	43.100	25.608	20.241	11.489
Insurance liabilities	642.782	618.286	607.794	614.780	630.983
Write-offs and provisions	64.122	48.200	53.753	88.236	95.868
Tax liabilities and others	338.980	348.812	380.511	534.103	517.219
Total Liabilities	**56.404.430**	**54.934.793**	**51.732.118**	**53.689.530**	**54.861.633**
Equity					
Valuation adjustments	-31.645	3.052	43.172	129.531	108.741
Equity	3.118.641	3.228.045	3.360.371	3.513.914	3.689.436
Total equity	**3.086.996**	**3.231.096**	**3.403.544**	**3.643.445**	**3.798.177**
Total equity and liabilities	**59.491.427**	**58.165.889**	**55.135.661**	**57.332.974**	**58.659.810**

Source: Annual Reports – 2011 to 2015

Table XI – Bankinter Balance Sheet (Simon Benninga)

Simon Benninga - Balance Sheet (Bankinter)	2011	2012	2013	2014	2015
Assets					
Cash	412.795	665.374	886.118	357.327	925.361
Trading account securities	2.576.997	2.304.343	4.449.212	5.551.168	4.690.920
Securities available for sales	5.112.925	6.554.212	2.888.742	3.400.209	3.887.863
Securities held to maturity	3.150.931	2.755.355	3.220.721	2.819.482	2.404.757
Customer Loans	42.605.299	42.059.716	41.196.451	42.446.723	44.182.634
Other Loans	4.562.068	2.692.234	1.410.599	1.559.798	1.296.681
Other Assests	265.470	374.830	348.184	448.577	511.788
Other Fixed Assests	804.940	759.826	735.634	749.689	759.808
Total Asset	**59.491.425**	**58.165.889**	**55.135.662**	**57.332.974**	**58.659.810**
Liabilities					
Banks Deposits	10.267.544	13.589.080	7.830.983	8.489.858	4.810.299
Customer Deposits	25.505.317	24.631.869	29.021.538	29.028.297	32.820.399
Marketable Debt Securities	12.446.445	11.586.450	9.516.372	9.311.034	10.484.882
Other Liabilities	8.185.125	5.127.394	5.363.226	6.860.341	6.746.053
Total Liabilities	**56.404.431**	**54.934.793**	**51.732.119**	**53.689.530**	**54.861.633**
Equity	**3.086.996**	**3.231.096**	**3.403.544**	**3.643.445**	**3.798.177**
Total Liabilities and Shareholder´s Equity	**59.491.428**	**58.165.889**	**55.135.662**	**57.332.974**	**58.659.810**

Table XII – Inputs (Forecast)

Inputs	2016F	2017F	2018F	2019F
Assets				
Cash as a percentage of deposits	2,50%	2,50%	2,50%	2,50%
Interest of Cash Balance	0,00%	0,00%	0,00%	0,00%
Grow/Interest on Trading Account Securities	3,37%	3,37%	3,37%	3,37%
Grow/Interest on Securities Available for sale	3,37%	3,37%	3,37%	3,37%
Grow/Interest on Securities Held to Maturity	3,37%	3,37%	3,37%	3,37%
Grow of Customer Loans	3,56%	3,56%	3,56%	3,56%
Interest of Customer Loans	2,07%	2,35%	2,45%	2,55%
Grow/Interest of Other Loans	0,00%	0,00%	0,00%	0,00%
Grow/Interest of Other Assets	0,00%	0,00%	0,00%	0,00%
Grow/Interest of Other Fixed Assets	0,00%	0,00%	0,00%	0,00%
Interest on Other Investments	1,00%	1,00%	1,00%	1,00%
Liabilities				
Grow of Bank Deposits	1,00%	1,00%	1,00%	1,00%
Interest of Bank Deposits	0,50%	0,50%	0,50%	0,50%
Grow of Customer Deposits	3,25%	3,25%	3,25%	3,25%
Interest of Customer Deposits	0,23%	0,48%	0,71%	0,94%
Grow of Marketable Debt Securities	4,97%	4,97%	4,97%	4,97%
Interest of Marketable Debt Securities	1,63%	1,63%	1,63%	1,63%
Grow of Other Liabilities	1,00%	1,00%	1,00%	1,00%
Interest of Other Liabilities	0,50%	0,50%	0,50%	0,50%
Interest on Other Loans	1,00%	1,00%	1,00%	1,00%
Income				
Fees and Commissions/Interest Income	24,14%	24,14%	24,14%	24,14%
Trading Income/Interest Income	9,28%	9,28%	9,28%	9,28%
Other Income/Interest Income	21,06%	21,06%	21,06%	21,06%
Personal Expenses/Net Interest Income	-45,25%	-45,25%	-45,25%	-45,25%
Other Expenses/Net Interest Income	-35,19%	-35,19%	-35,19%	-35,19%
Impairments	-0,42%	-0,42%	-0,42%	-0,42%
Provisions	-0,06%	-0,06%	-0,06%	-0,06%
Losses on Disposable Assets	0,00%	0,00%	0,00%	0,00%
Corporate Tax	-27,75%	-27,75%	-27,75%	-27,75%
Dividend Payout Ratio	55,00%	55,00%	55,00%	55,00%
Western Europe Growth Rate	1,90%	1,90%	1,90%	1,90%

Table XIII – Balance Sheet (Forecast)

Balance Sheet	2015R	2016F	2017F	2018F	2019F
Assets					
Cash	925.361	968.665	997.444	1.027.132	1.057.757
Trading Account Securities	4.690.920	4.848.955	5.012.314	5.181.177	5.355.729
Securities available for sales	3.887.863	4.018.844	4.154.237	4.294.192	4.438.862
Securities held to maturity	2.404.757	2.485.772	2.569.517	2.656.083	2.745.565
Customer Loans	44.182.634	45.755.942	47.385.274	49.072.626	50.820.063
Other Loans	1.296.681	1.296.681	1.296.681	1.296.681	1.296.681
Other Assests	511.788	511.788	511.788	511.788	511.788
Other Investments	0	0	0	0	0
Other Fixed Assests	821.461	821.461	821.461	821.461	821.461
Accumulated Depreciation	-61.653	-128.309	-194.964	-261.620	-328.276
Total Asset	**58.659.810**	**60.579.799**	**62.553.751**	**64.599.519**	**66.719.629**
Liabilities					
Banks Deposits	4.810.299	4.858.402	4.906.986	4.956.056	5.005.617
Customer Deposits	32.820.399	33.888.216	34.990.775	36.129.206	37.304.675
Other Products	0	42.746	44.218	37.608	22.092
Marketable Debt Securities	10.484.882	11.005.496	11.551.960	12.125.558	12.727.638
Other Liabilities	6.746.053	6.813.513	6.881.648	6.950.465	7.019.969
Total Liabilities	**54.861.633**	**56.608.374**	**58.375.588**	**60.198.893**	**62.079.991**
Equity	**3.643.445**	**3.643.445**	**3.643.445**	**3.643.445**	**3.643.445**
Accumulated retained earnings	**154.732**	**327.980**	**534.718**	**757.180**	**996.193**
Total Equity	**3.798.177**	**3.971.425**	**4.178.163**	**4.400.625**	**4.639.638**
Total Liabilities and Shareholder´s Equity	**58.659.810**	**60.579.799**	**62.553.751**	**64.599.519**	**66.719.629**

Table XIV – Income Statement (Forecast)

Income Statement	2015R	2016F	2017F	2018F	2019F
Interest Income					
Interest on Trading Account Securities		160.697	166.111	171.707	177.492
Interest on Securities available for sales		133.187	137.674	142.312	147.107
Interest on Securities held to maturity		82.380	85.155	88.024	90.990
Interest on Customer Loans		929.121	1.093.737	1.182.001	1.275.165
Total Interest Income	**1.283.765**	**1.305.385**	**1.482.678**	**1.584.045**	**1.690.753**
Interest Expense					
Interest on Banks Deposits		-24.172	-24.413	-24.658	-24.904
Interest on Customer Deposits		-75.651	-165.800	-252.070	-343.778
Interest on Other Products		-214	-435	-409	-298
Interest on Marketable Debt Securities		-175.026	-183.716	-192.839	-202.414
Interest on Other Liabilities		-33.899	-34.238	-34.580	-34.926
Total Interest Expense	**-414.311**	**-308.961**	**-408.602**	**-504.555**	**-606.320**
Net Interest Income	**869.454**	**996.425**	**1.074.076**	**1.079.490**	**1.084.433**
Non-Interest Income					
Net fees and commissions	309.873	315.091	357.886	382.354	408.111
Trading income	119.108	121.114	137.563	146.968	156.868
Other operating income/expenses	270.380	274.934	312.275	333.624	356.098
Total Non-Interest Income	**699.361**	**711.139**	**807.724**	**862.946**	**921.078**
Gross operating income	**1.568.815**	**1.707.564**	**1.881.799**	**1.942.436**	**2.005.511**
Personal Expenses	-393.459	-466.249	-502.584	-505.118	-507.431
Other Administrative Expenses	-305.941	-350.619	-377.943	-379.848	-381.588
Depreciation and Amortization	-61.653	-66.656	-66.656	-66.656	-66.656
Impairments	-189.592	-192.871	-199.546	-206.460	-213.619
Provisions	-25.254	-25.691	-26.580	-27.501	-28.455
Operating Profit	**592.915**	**605.478**	**708.490**	**756.854**	**807.763**
Gain/losses on disposals of assets	-72.585	-72.585	-72.585	-72.585	-72.585
Profit before taxes	**520.330**	**532.893**	**635.905**	**684.269**	**735.178**
Corporate income tax	-144.410	-147.897	-176.486	-189.909	-204.038
Net income	**375.920**	**384.996**	**459.419**	**494.360**	**531.140**
Dividends	206.756	211.748	252.680	271.898	292.127
Retained Earnings	**169.164**	**173.248**	**206.738**	**222.462**	**239.013**