Universidade Católica Portuguesa

Católica Lisbon School of Business & Economics

Banco Popular

Equity Research

João Miguel Martins Gonçalves, 152110322

Abstract

There are several valuation methods available for equity research; their suitability varies with each specific company's characteristics. The objective of this dissertation is to choose from the existing methods, the one which is more appropriate for Banco Popular, in order to come up with a recommendation target price. Finally I will compare my results with those obtained by Bankia in the equity research report published on the 2nd February 2012

Advisor: Prof. José Carlos Tudela Martins

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1. Executive summary

Spanish banks: Banco Popular

It's a tough road ahead

The macroeconomic scenario is unfavorable; recession's contagion is being felt in Spain, as the economy is facing defying obstacles. EBA urges banks to comply with capital requirements, while at the same time banks can't overlook the need to offer a stimulating flow of funding to the real side of the economy in order to promote economic growth.

Shrinking interest rate margins are affecting the main revenue driver of Banco Popular; labeled as a pure commercial bank it strives on the difference between its funding and lending rates, the net interest rate margin has achieved all-time lows since the 2008 crisis.

Non-performing loans are on the rise, with sector average reaching 7%, while real estate sector tops 12%, Spanish government urges banks to clean up their balance sheet and cover their construction exposure to restore confidence in the Spanish economy. Banks need to increase their provisioning efforts, dragging down their ROEs

Capital requirements make banks cautious in their lending activity, as they adopt more restrictive measures and lend less overall, while engaging in a deposit luring war. The sovereign crisis leads banks to ECB funding and less dependence on wholesale funding.

Recommendation:	**SELL**
Price Target FY12:	1,44€
Price (as of 13-Feb-2012):	3,56€

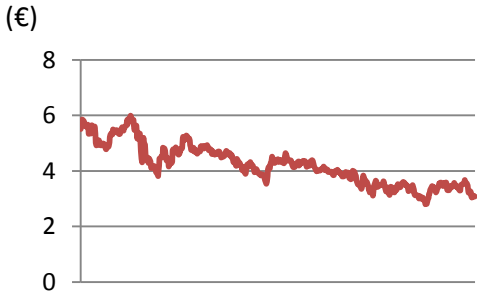


Figure 1. POP's price evolution Previous 2 years
Source: Bloomberg

52week range (€):	3,55-4,64
Market cap (€bn):	4,98
Outstanding shares (m)	1,4

2. Literature review

2.1. Valuation

Every valuation independently of the method used has one objective only, which, is to price an asset. According to *(Damodaran, 2006)* the price derives from the cash flows the asset is expected to generate in the future.

Valuations are not static, there are different methods which can be used and even though some are more appropriate than others depending on the asset in question, different approaches can be used to value the same asset. Valuations should yield similar results as all of them derive from the same financial valuation theories, (Young, Sullivan, Nokhasteh, & Holt, 1999) defend that every valuation approach is no more than the same underlying model expressed in a different way, however that is when similarities end and challenges arise.

Even if the models have the same financial background, assumptions are also determinant on the final outcome, the value of the asset is influenced by its future, however as history has showed us, the future is uncertain and even if some variables can be predicted with a fair amount of certainty others are left under analysts/investors liberty leaving room for informational and personal beliefs.

In light of different valuation outcomes (Koller, Goedhart, & Wessels, 2005) argue that the final valuation depends on the subjectivity of the assumptions considered, as well as, the way that expectations are managed by the analyst/investor, for instance changes in growth rate and/or expected cash flows in the terminal value can generate huge disparities, as the terminal value alone usually represents the lion's share of the valuation (Young, Sullivan, Nokhasteh, & Holt, 1999).

2.2. Choosing a valuation model

The nature of the company addressed to in this dissertation only allows for certain valuation approaches to be used with relevant and realistic results. When valuing a financial services firm one must take into account its inherent characteristics and understand that "even if the basic principles of valuation apply just as much for financial services as they do to other firms" (Adams & Rudolf, 2006), there are however a "few aspects related to these types of firms that can and most probably will affect how they are ultimately valued" (Damodaran, 2006).

Therefore valuation wise I will focus on the approaches referring to residual income (DuPont in particular) and to relative valuation, notwithstanding I find it both interesting and enriching to explain the preference on the above models in detriment to the other existing ones, highlighting the main differences and specifications that make DuPont and multiples the most appropriate choices.

It is globally accepted in finance that there are three main possible valuation approaches; Damodaran (2006) refers the following. Discounted cash flow, which, is a method that prices an asset by discounting future cash flows at a rate appropriate to their riskiness. Relative valuation that estimates an asset's value by comparing a common value driver with a relevant market priced peer group. Contingent claim valuation uses option pricing methods in order to value assets with options' characteristics.

Discounted Cash Flow Valuation	Relative Valuation	Contingent Claim Valuation
Equity Cash Flow	EV/EBITDA	Binomial
Dividend Discount Model	EV/EBIT	Black and Scholes
Free Cash Flow	Price/Earnings	
Capital Cash Flow	Price/Book Value	
Dynamic ROE	Price/Sales	

Table 1. Valuation approaches

Source: Damodaran (2006)

2.3. Relevant valuation models

2.3.1. Enterprise vs. Equity

"Valuing a bank is conceptually difficult" (Koller, Goedhart, & Wessels, 2005), banks pose numerous difficulties that make them impossible to value on an enterprise level, and even equity wise some adjustments need to be made to capture the right value when using FCFE.

The main aspects inherent to banks that make them different from other companies are according to (Damodaran, 2009), the regulatory constraints under which they operate, accounting rules, definition of debt and definition of reinvestment needs. Considering the disparities one is forced to put aside the traditional defined FCFF models.

In order to estimate CFs, items such as net capital expenditures and working capital are necessary; however, when it comes to CAPEX and unlike other companies, banks' revenues are not dependent on tangible assets.

Banks' main reinvestment target is in intangible assets such as human capital and brand name which are often categorized as operating expenses in financial statements; NWC is also of little to no significance.

Debt is considered a raw material for banks and is at best loosely defined, the raw material generates cash out flows much like ordinary debt, but if considered as debt banks would end up with huge debt ratios and consequently unrealistic low cost of capital.

At a simple and condensed first glance, which will later on this dissertation be developed, one is faced with characteristics that don't allow for the estimation of cash flows nor the calculation of cost of capital. Enterprise value is therefore put aside and equity value will be the only focus in this dissertation.

2.3.1.1. Dividend Discount Model

The DDM is the oldest valuation model, it measures the only tangible cash flow that is available to investors; it is simple and straightforward, therefore for a company which is in stable growth and that pays most of its earnings in dividends, it is a relevant model and it should present acceptable valuations in line with more generally used approaches.

DDM is a DCF method; it measures the present value of equity by discounting the expected cash dividends at a rate appropriate to the dividends' riskiness. According to (Foerster & Sapp, 2005) the necessary inputs are projections of future dividends, which, will be a consequence of the company's earnings growth and its payout ratio, and an appropriate discount rate, which in DDM's case is the cost of equity (Ke), both of these inputs must be determined taking into consideration the presently available information. The model takes the following formula, where dividends can alternatively be defined as earnings multiplied by payout ratio:

$$Equity's\ value = \sum_{t=1}^{t=n} \frac{DIV_t}{(1+K_e)^t} + \frac{DIV_{t+n}}{(1+K_e)^n(K_e-g)}$$

There is a detailed dividend forecast which according to (Dermine, 2009)can be up to five years, after which one adds the present value of the terminal value that corresponds to the future stream of dividends at that point growing constantly in perpetuity. (Dermine, 2009) also argues that the growth rate associated with the terminal value can't realistically surpass the growth of the economy plus inflation (GNP).

(Damodaran, 2006), stresses the limitations of the model, arguing that paying dividends is strictly a political decision and that companies in an initial phase or companies that choose to retain earnings in order to target investment opportunities don't pay dividends to its shareholders. One could argue that future dividends would reflect the investment opportunities and would therefore make up for the absence of present dividends, however there is no way to know for sure if the company will eventually distribute dividends in the future, as strengthening cash balances is also a major factor for some companies. There is also the case of companies that decide to

pay fixed dividends to its shareholders at the cost of debt or equity issue. It is obvious that one is undervaluing companies in the first case and overvaluing companies in the last case when using DDM, (Milicevic, 2009) adds “cash distribution is not necessarily tied to value generation”.

In cases where cash flow estimation is difficult or even impossible such as in banks, dividends are the only cash flow which can be estimated with some degree of precision, also (Farrell, 1985) argues that given fairly stable earning patterns, retention rates and returns on investment for banks DDM is an appropriate approach.

2.3.1.2. Free Cash Flow Equity

FCFE values a company’s equity by computing future cash flows to equity and discounting them at the expected cost of equity. Traditional CFE represent what is available for distribution to shareholders after capital expenditures and net working capital needs have been met, as well as, financial obligations.

$$FCFE = Net\ Income - (CAPEX - Depreciation) - \Delta noncash\ WC + (New\ Debt\ issues - Debt\ repaid)$$

(Damodaran, 2006) compares DDM with FCFE, renaming the latter “potential dividend model”, it means that if a company was to pay out to its shareholders all its cash flows after debt payment and reinvestment needs, both DDM (considering company doesn’t inflate dividends by borrowing) and FCFE methods would yield the same value for the company.

One can quickly realize that if CFE are not fully paid to shareholders as dividends, then the valuation using FCFE will present a higher figure than DDM as the discount rate is the same, and the only changing variable will be the numerator.

$$Value\ of\ Equity = \sum_{t=1}^{t=n} \frac{FCFE_t}{(1+K_e)^t} + \frac{FCFE_{t+n}}{(1+K_e)^n(K_e - g)}$$

When it comes to banks, reinvestment needs such as CAPEX and working capital are non-existent or negligible and debt can be defined loosely at best, however banks are

obliged to comply with certain capital ratios equity wise for regulatory reasons and for growth purposes as well, the need to achieve both of the previous can be used to define reinvestment, therefore FCFE to banks can still be calculated, however it will take a different formula.

$$FCFE = Net\ Income - Reinvestment\ in\ regulatory\ capital$$

2.3.1.3. Excess return model (RIM)

Excess return model is a "widely used theoretical framework for equity valuation based on accounting data" (Higgins, 2010), it measures the market value of equity by decomposing the latter into book value plus the value created by the company in the future.

Book value (invested capital) provides a starting point for the investor; according to (Ganguli, 2011) one bases their valuation on the book value which is recognized in the company's financial statements proceeding to assess the value not recognized, that is, premium over book value. The respective unrecognized value for the company is derived through the forecast of residual income. (Dermine, 2009) refers to the residual income as economic profit which stems from what the company creates in excess of the opportunity cost of shareholders' equity. (Goedhart & Haden, 2003)

$$Value\ of\ equity = Invested\ capital_{t=0} + PV\ of\ future\ economic\ profits$$

Adding to the above equation (Higgins, 2010) refers to vt which is considered to be value stemming from firm's intangibles, poorly measured by financial reports or factors inherent to the model mis-specification.

The book value of equity can be deceiving; however (Damodaran, 2002) considers it a reliable measure for banks for two reasons, depreciations are negligible given the asset's nature of banks and the accounting method for banks is marked up to market.

One can simply conclude that if there are no excess returns, then the future projects will only cover the cost of equity, according to (Feltham & Ohlson, 1996) in such a situation the market value of equity will converge to the equity capital invested, if

there are positive excess returns the market value of the company will be greater than its invested capital, and lower if the return is smaller than the required cost.

$$Excess\ equity\ return = \frac{ROE - k_E}{Invested\ capital}$$

As a forecasting model RIM valuation estimates yield errors, however according to (Penman & Sougiannis, 1998) on a finite horizon RIM produces more accurate forecasts than other equity valuation models such as the DDM and the FCFE.

2.3.1.4. DuPont

DuPont method measures equity performance, it was firstly suited for the average industrial/commercial company; however (Saunders & Anthony, 2000) adapted it for financial institutions. To reach a valuation estimate there are three inputs which must be calculated, demanded ROE, forecasted ROE and NAV. Usually the demanded ROE will come from the CAPM equation, adjusting the parameters concerning risk free, company's beta, equity risk premium and country risk premium if applicable. In order for one to measure actual ROE, DuPont method breaks it down into three distinct parameters, which are net profit margin (profitability), total asset turnover (efficiency) and equity multiplier (leverage).

$$\mathrm{ROE} = \mathrm{NPM} * \mathrm{TAT} * \mathrm{EM}$$

$$\mathrm{NPM} = \frac{\text{net income}}{\text{total revenue}}$$

$$\mathrm{TAT} = \frac{\text{total revenue}}{\text{total assets}}$$

$$\mathrm{EM} = \frac{\text{total assets}}{\text{total stockholders'equity}}$$

DuPont separates the stream of cash flows, which are estimated based on accounting information provided by the firm's financial statements, through future prediction of the latter one can obtain the forecasted ROE.

The net profit margin reflects what part of the total revenue is actual income for the company, after the operating costs, provisions and taxes have been deducted.

Comparing two similar banks with similar costs and revenues, the most conservative bank will in theory estimate larger provisions therefore, its net profit margin will be lower than that of the more aggressive bank that estimates fewer provisions.

Total revenue in the case of a commercial bank is mainly composed by the net interest income, which is its main revenue source plus all other operating revenue related activities, net fees and commissions contribute largely to the total revenue. Net interest income is the income attributed to the bank at the end of its exercise, after all the costs associated with its activity have been subtracted to its revenues.

The total asset turnover estimates the total revenue in terms of total assets. Assets are what generate profitability to the company, this ratio helps to understand how effectively and in what percentage the assets are being turned over into revenues. The quality of the assets is of extreme importance, sound loans with low probability of default will increase the bank's net income by reducing the need to provision as much when compared with doubtful assets

Equity multiplier is related with the company's leverage, according to this ratio the less leverage the highest ROE, all ratios remaining unaltered, banks according to nature of their business are naturally highly leveraged, what can partially explain their usually larger ROE when comparing with other companies.

Net profit margin multiplied by the total asset turnover will equal ROA, by multiplying the latter by the equity multiplier one will obtain the ROE.

Finally the last input necessary to calculate the bank's equity value is the net asset value, which will represent the bank's own funds corrected for any fact that today increases or decreases its value, therefore pension fund shortfalls, lack of provisions for default and unrealized capital gains/losses must be taken into account.

$$\text{NAV} = \text{Equity Book Value} + \text{Pension Fund Shortfall} + \text{Lack of Provisions for Default} + \text{Unrealized Capital Gains/Losses}$$

$$\text{Value of Equity} = \text{NAV} * \frac{\text{ROE Forecasted}}{\text{ROE Demanded}}$$

2.4. Cost of equity

2.4.1. CAPM

CAPM is the initial work of (Markowitz, 1959), being later developed by (Sharpe, 1964) and (Lintner, 1965), it relates the expected return of a security with its risk, according to (Fama & French, 2004) "CAPM offers powerful and intuitively pleasing predictions about how to measure risk".

In order to calculate the expected return one needs the following inputs; risk free rate, security's beta, equity risk premium and country risk premium if applicable.

$$E(R_i) = R_f + \beta_i\{E(R_m) - R_f\} + CRP$$

In CAPM the security is associated with a well-diversified portfolio, this way the risk associated with the asset (non-systematic risk) can be minimized; (Rosenberg & Rudd, 1983) add that capital markets will not reward residual risk as it can be cheaply diversified away.

If an investor has a portfolio composed by all the market's securities he will only by exposed to the market risk. The diversified investor will require a compensation for the risk free plus the asset's risk, which will be accounted by the asset's beta times the expected excess return of the market.

Despite its widespread usage, CAPM performs poorly empirically, (Fama & French, 2004) argue it might be a result of simplifying assumptions when formulating the model or even the existent difficulty of implementing valid tests, however this dissertation will not deepen into its flaws and will consider it an appropriate model for valuation purposes.

2.4.2. Risk Free

Risk free as pointed out by (Damodaran, 2006) is the difference between actual and expected return, therefore risk free can be broadly defined as an investment which has an expected return equal to the actual return it yields, however and according to (Brigham & Ehrhardt, 2008) a risk free asset exists only in theory, they defend that all financial instruments include at least one of the following risks; default, maturity, liquidity and inflation.

Taking into consideration the above and bearing in mind the possible limitations, the return for government bonds is generally accepted as a proxy for risk free rate, because of its default free nature, but in light of the present situation many governments don't issue risk free bonds as there is some default risk associated with it. However both German and U.S. zero coupon bonds are still widely accepted as risk free.

In order to exclude the uncertainty about reinvestment rates one should discount asset's cash flows at a government bond with equal maturity, usually when valuing an asset the horizon is long and the matching of maturities may be difficult to achieve, (Damodaran, 2006) considers that a 10 year government bond should offer a reasonable measure of risk free rate.

2.4.3. Beta

Beta is the risk parameter of an individual asset, according to (Fama & French, 2004) "the market beta of asset i, is the covariance of its return with the market return divided by the variance of the market return".

There is no available index for all equities; a broad index such as S&P 500 can be used as a proxy, (MacQueen, 1986) minimizes the extent of the benchmark suggesting that betas have to be measured against something and ultimately it is up to the user to decide which market proxy is the most appropriate.

(Rosenberg & Rudd, 1983) add “in all but a few cases, the application of the CAPM using betas calculated against a broad stock market index should provide a good working approximation of the risks of corporate investments”.

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

The above formula relates the asset’s volatility with that of the market, the beta is defined as a measure of exposure to systematic risk, meaning the risk that can’t be diversified away by acquiring a portfolio representative of the market.

There are alternative ways to calculate an asset’s beta. Through the method of similar, which, consists on weighted averaging the betas of the peer group, however the difficulty in establishing an appropriate comparison group as well as the eventuality of inexistent similar companies makes the results yielding from this method not very reliable.

One can also follow a Bayesian approach, this approach consists of two inputs, the average historical beta and the conservative prediction of beta, by giving weights to both inputs one reaches the value of the beta, (Rosenberg & Rudd, 1983) consider this a conservative stance as it minimizes the value of past information, drawing predictions towards the average.

Finally fundamental information which takes the company’s specifications into consideration and the beta it yields will usually outperform the one based upon historical market co-variability.

The market portfolio’s beta, also referred to as the conservative beta above is 1, an asset with a beta lower than 1 varies less than the market, while an asset with a beta higher than 1 behaves contrarily, (MacQueen, 1986) “higher beta portfolios will outperform low beta portfolios in bull markets, but will suffer proportionately greater losses during downturns”

2.4.4. Equity Risk Premium

ERP is generally defined as the amount investors demand in order to hold a portfolio of risky assets rather than risk free asset. (Cohen, 2009) explains there are three ways to estimate ERP, by taking into account historical premiums data, by surveying investors "for an estimate of the value that they believe reflects their investment behavior" (Graham & Harvey, 2008) and by using actual returns on assets as unbiased estimates in order to get a forward looking premium.

When accounting for ERP, country risk premium is a subject of little agreement literature wise, on the one hand there are various methods which add the extra risk whether through adjusting CFs or changing the discount factor, on the other hand some authors defend that country risks have low correlations between them and therefore can be diversified away.

(James & Koller, 2000) prefer the CFs approach in order to incorporate the country risk, it consists on estimating CFs according to differently weighted scenarios, the authors defend the use of CFs over discount rates because "diversifiable risk is better handed by the cash flows". The authors also add that risks depending on the nature of the industry may not apply equally, meaning they are idiosyncratic, and the fact that equity investments may carry lower yields then government ones.

Other authors such as (Goedhart & Haden, 2003) don't have a particular preferred method instead they argue that in the long term the cost of capital should not include the country risk premium, as economies mature over time, however according to the authors "it may make sense to incorporate some country risk premium when assessing returns on capital over shorter periods of time".

2.4.5. Ke

For the purpose of this dissertation and taking into account the valuation it involves the only cost of capital that will be necessary to estimate will be the cost of equity, as previously mentioned banks don't allow for a firm valuation, and the ultimate goal is to arrive at a recommended share price.

The model used in the dissertation to calculate the expected return for investors and the respective cost of equity for the company is the CAPM.

$$E(R_e) = R_f + \beta_i\{E(R_m) - R_f\} + CRP$$

On the above equation both R_f and $E(R_m) - R_f + CRP$ are common to the whole national market, while β_i is the only varying variable.

2.5. Relative valuation

Multiples are regarded as the simplest way to value a company. Each company has its own which are no more than a ratio between equity or enterprise values and a value driver which according to (Liu, Nissim, & Thomas, 2007) is usually either earnings or CFs.

The valuation of the asset in question can be obtained by multiplying the respective value driver with the average ratio of the stock price to the value driver of the comparable peer group.

When using relative valuation one values an asset based upon on how similar assets are priced by the market, in an efficient market and with a suitable and adequate peer group, one should obtain a price that reflects the asset's intrinsic value, according to (Damodaran, 2006) multiples will yield reliable values on the premise that markets correctly price assets.

The challenge lies on the suitability of the peer group. So that the final valuation can be meaningful, one must identify a group of companies that have similar growth and risk profile, regarding banks in particular (Dermine, 2009) advises to also take into account the business mix, for instance the concentration of activities on retail, private, corporate and investment banking.

Choosing the appropriate multiple is also critical, as (Lie & Lie, 2002) have showed depending on the firm's features some multiples yield better results in detriment of others, they have also defend that valuations are more accurate for financial companies then for non-financial, this is probably due to the fact that financial

companies have a greater amount of liquid assets, which, are easier to value. However, overall according to (Liu, Nissim, & Thomas, 2007) earnings are preferred over operational cash flows as the most accurate value driver, also the authors have reached the conclusion that forecasted value drivers rather than reported improve the performance of all multiples, when estimating an asset's price.

Given the simplicity inherent to multiples they are by far the most used valuation technique, however one can incur in several mistakes, in theory the market should value the companies fairly so choosing a sensible peer group should be the defining factor in the valuation's significance, however there aren't two companies alike, therefore (Liu, Nissim, & Thomas, 2007) state that multiples are a "quick and dirty" valuation and should be computed to complement more complex discounted cash flow valuations.

2.5.1. Enterprise vs. Equity multiples

Taking into consideration banks' characteristics, enterprise multiples are not applicable, these multiples' value drivers are CFs or enterprise values which cannot be computed for banks, therefore only equity multiples will be considered to value banks. Another reason defended by (Milicevic, 2009) which is not related to financial institutions is that mostly, an investor prefers using equity value multiples for market capitalization because the latter don't require adjustments for net debt and cash piles, although there might be situations when cash piles may have a significant weight.

Enterprise Multiples	Equity Multiples
EV/EBITDA	Price/Earnings
EV/EBIT	Price/Book Value
	Price/Sales

Table 2. Relative valuation multiples

Source: Damodaran (2006)

Under equity multiples the only relevant multiples are PER and PBV, as sales are a value driver that is inexistent in the banking sector.

2.5.1.1. PER

PER is the most widely used multiple according to (Liu, Nissim, & Thomas, 2007), it relates the market value of equity with the company's earnings. It is strictly related with three inputs, the expected growth in earnings, the payout ratio and the cost of equity.

$$PER = \frac{Pshare * \#shares}{Earnings}$$

By multiplying the average PER of the peer group by the company's earnings in question, one obtains its equity value, however one must take into account that some characteristics inherent to banks can influence its earnings, namely provisions for credit losses. Conservative banks will usually take larger provisions when comparing with more aggressive banks, therefore such banks will have higher PERs when comparing with the latter. Whenever earnings are negative PER will have no use, unless a systemic event has led to this situation and a corrected PER can be used instead, for the situation is only temporary and exceptional.

2.5.1.2. PBV

PBV is also a popular multiple for financial institutions, it is mainly driven by return on equity and cost of equity, one can extrapolate at a first condensed glance how the investments have fared taking into consideration the initial invested amount.

$$PBV = \frac{Pshare * \#shares}{Book\ value\ of\ equity}$$

There is a lot of literature support for this particular multiple, bank's assets are accounted marked to market and therefore according to (Damodaran, 2002) "the book equity is much more likely to track the market value of equity invested in existing assets"

3. Characteristics of banks

Banks are seldom regarded as the centerpiece of economy, being their core function to facilitate the allocation and deployment of economic resources.

First of all, for the purpose of this dissertation there is the need to distinguish between the two main types of banks which are commercial and investment banks.

Commercial banks focus on offering checking and savings accounts to its depositors while offering liquidity to its lenders through debit/credit cards, mortgage lending and commercial loans.

Investment banks business derives from the offer of financial advice to their clients concerning underwriting, fund management, consultancy, trading, mergers and acquisitions.

As described above the source of revenues differs depending on the nature of the bank, analytically and considering the respective income statements, commercial banks' lion share of revenues derives from interest income, while for investment banks fees and commissions represent the main value driver.

Banco Popular is a commercial bank, so it makes sense to consider only the reality inherent to commercial banking from here on after.

Commercial banks operate in two distinct markets; they acquire economic resources through deposits from its customers which then they lend at a greater rate than they borrow. Therefore value creation stems from the difference between the spread paid to the depositors and the spread received from the lenders, usually referred to as net interest rate.

In order for banks to bridge the gap between the needs of its borrowers and lenders they are exposed to three different kinds of risks, which are maturity, size and risk.

Maturity risk derives from the fact that the bank's liabilities which are predominantly composed by deposits don't have the same maturities as its loans, usually deposits have instant access or short maturities, and there is the constant need for the bank to refinance itself in order to maintain its liquidity. In an extreme event if the majority of

the bank's clients were to withdraw their funds, the bank could be faced with the inability to refund its customers, as their funds would be invested in long term loans. Notwithstanding banks are obliged to repay the funds to its customers if they wish to withdraw them, which leads to the other risk faced by banks, the risk itself.

Banks are portrayed as safe havens to deposit money, meaning that there is no risk associated with the funds, there is a rate the banks pay for the depositors money, and the depositor is able to withdraw the money whenever they want (some restrictions may apply). However when lending money there is some probability that the bank won't be repaid back and that the collateral offered won't be liquid enough to compensate for the loss, this is the case of the non-performing loan. Although the bank has the obligation to reward adequately its depositor the opposite does not happen and there is the chance that the bank won't be rewarded in accordance with the terms previously agreed.

Finally size is also an issue for banks; often banks need to pool deposits in order to meet the needs for loans, therefore committing different funds from deposits to the same loan, which, as previously mentioned is associated with a risk of non-performing loan.

Banks have particular features that make them unique from an operational and valuation standpoint, previously light was shed on banks singularities, these singularities lead to particularities which must be accounted for valuation purposes.

3.1. Regulation

Banks are subject to a set of guidelines imposed by governmental agencies given their importance on the real side of the economy, they must follow rules in terms of capital ratios and liquidity which will ultimately influence investment and growth prospects. Regulation exists so that banks don't compromise its service to the general public, so that they can provide a stable and positively economic impacting stimulus to the economy and so that crises like that of 2008 don't repeat themselves. However the existence of a strict, restrictive and ever changing regulation in order to meet current needs affects one's perceived risk of investing in the banking sector as well as the cash flows generated by it.

3.2. Accounting rules

3.2.1. Provisions

It has been previously referred to the active presence of banks both in borrowing and in lending, although they have the legal obligation to reward its depositors, it is globally accepted that banks have loan losses, in light of such, accounting wise banks are obliged to create provisions to cover the latter. Loan losses occur when debtors default and are not able to repay for the entirety of the principle and its respective interest, provisions take into account these possible outflows. Regarding the amount of provisions that will impact the profit of the bank, is of the bank's responsibility and stems from its loan assessment, while a more conservative bank will account for more provisions and greatly impact its profit, a more aggressive bank will account for fewer provisions.

3.2.2. Mark to market

When accounting for balance sheet items in the banking sector the majority of the latter (deposits, loans, derivatives, bonds) have an active market, being therefore registered under a mark to market practice, contrasting with acquisition cost minus depreciations practice. The value of the balance sheet items is observable which allows for a fair value accounting record according to market quotations.

3.3. Cash flow estimation

Considering banking activities both CAPEX and NWC are concepts that don't fit within the banks' business model.

The majority of a bank's balance sheet is composed of financial instruments, while the bank has fixed assets which mainly represent branches and headquarters, their significance in the balance sheet is borderline negligible, meaning that so are its physical reinvestment needs and depreciations. Bank's core business doesn't rely on physical property; therefore unlike industrial companies that incur in capital expenditures to create future benefits through physical asset acquisition/upgrades, banks seldom invest on brand name and human capital, the latter are not considered CAPEX but operating expenses under the bank's income statement. CAPEX needs exist

in the banking sector, but are very marginal and are not determinant reinvestment needs for future growth.

NWC can be broadly defined as current assets minus current liabilities; it usually encloses three major accounts, on the assets side of the balance sheet, accounts receivable and inventory and on the liabilities side of the balance sheet, accounts payable. These accounts are also present on the bank's balance sheet, but again and much like CAPEX they are meaningless and aren't a value driver for growth. If for calculation purposes one would consider current as the time frame for NWC, then a very significant portion of the balance sheet both from the assets side and liabilities side would fall under that category, yielding a value that isn't connected to reinvestment needs for future growth.

3.4. Debt

Debt is of difficult definition when it comes to banks, usually one would consider debt a financial instrument that involves the payment of a periodic interest and the principle. While for banks debt is also a financing choice, it is at the same time its raw material, which is transformed into more profitable products. Most of banks' liabilities are composed by customers' deposits which involve the payment of interest, however given the banks' nature, the payment of interests is part of its operational activity and is accounted on the financial statements as operational expenses.

4. Company presentation

Banco Popular, from here on after referred as "POP" is a Spanish banking group whose main business is commercial and retail banking with the focus to meet its customer needs, essentially small and medium enterprises (SME). It is the fifth largest financial group in Spain in terms of total assets and is composed by a controlling company (Banco Popular) and by two wholly owned foreign banks, Banco Popular Portugal and Totalbank, which operates in Florida US. Besides the countries the group targets it reinforces its international presence through its representative offices and operating staff all over the world.

Being commercial banking its main activity the group is dependent on direct contact with its customers and it commits itself with financial personalization throughout its 2203 branches of which 1967 are located in Spain. Furthermore it employs approximately 14000 people, of which 12234 are referent to Spain.

In the end of 2011 exercise POP recorded total assets of 131M€, a net interest income of 2087M€ and a net income attributable to the group of 480M€.

4.1. Shareholders structure

POP's shares are listed on the four Spanish Stock Exchanges as well as on the Lisbon Exchange, it represents a weight of 1,57% concerning capitalization of IBEX-35, which comprises the thirty five most liquid stocks in the Spanish market.

At the end of 2011 the bank's share capital was made up of 1,4M shares corresponding to 149.618 shareholders, of which around 146.000 were individual investors owning around 32% of the total capital, institutional holdings represented around 26% of total capital and the remaining 42% was attributed to shareholders directly, indirectly or habitually represented by the board of directors.

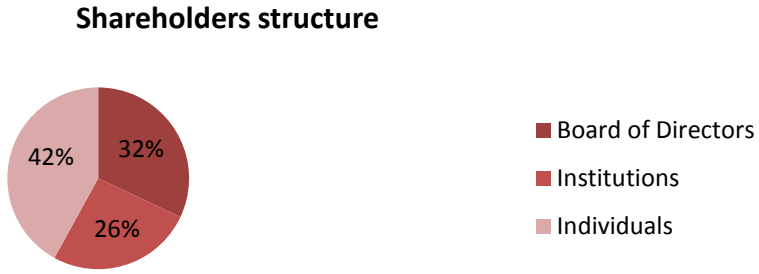


Figure 1. Shareholders structure

Source: Banco Popular's annual report

4.2. Business volume

POP is the 5th largest financial group in Spain asset wise, one of its strategy pillars concerns the strengthening of balance sheet soundness. Its assets have been growing steadily, but more importantly this growth has been based on restructuring the capacity to withstand the difficulties posed ahead.

Spain is the reference market for the group, 91% of the consolidated assets are derived from business conducted in Spain, while business conducted in Portugal only amounts to 8,4%, the marginal percentage left is attributed to the group's activities in the U.S. stemming from TotalBank.

The gross operating income of the group reinforces the importance of Spain, 94% of the latter is attributed to Spanish activities while the remaining 6% are attributed to Portugal and to the U.S.

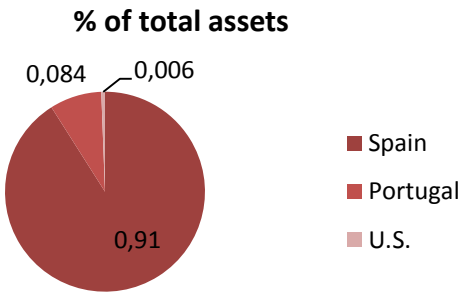


Figure 2. %of total assets by country
Source: Banco Popular's annual report

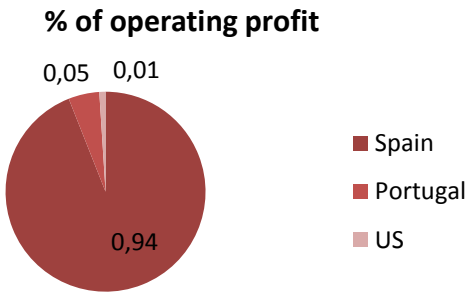


Figure 3. %of operating profit by county
Source: Banco Popular's annual report

The group is concentrated in four major business areas, commercial banking, institutional and markets, asset management and insurance activity. When it comes to the group's assets through business areas of activity, commercial banking represents 70% of total consolidated assets while institutional and markets area ("(i) raising of funds in the wholesale and inter-bank markets, (ii) treasury activity assigned to held-to-maturity, available for sale and trading portfolios, (iii) asset and liability hedging operations, (iv) management of tangible and intangible assets") correspond to approximately 30%.

Given the group's nature the lion's share of assets is attributable to lending to customers, although the demand for credit has been weak this item has increased. On the other side of the balance sheet customer deposits have also been increasing, which is in line with POP's objective to reduce its dependence on the wholesale market.

4.3. Profitability

ROE relates net income with investors' equity; it measures POP's efficiency at generating profits from shareholders' invested capital, while ROA measures the efficiency at generating profits from existent assets. Banks were usually characterized by a high ROE when comparing with the average industrial/commercial company; however they were hit the hardest by the 2008 crisis.

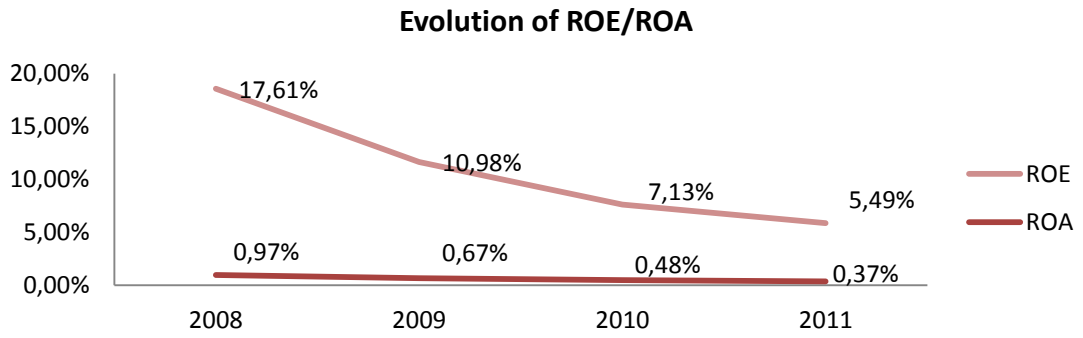


Figure 4. Evolution of ROA/ROE

Source: Banco Popular's annual report

The group's ROE has been decreasing significantly due to a gradual reduction of its net income throughout the period from 2008 to the present. Despite the negative variation on return on equity, POP still ranks amongst the most pre-provision profitable banks.

Concerning the group's ROA, a decrease has also been observed; again it is explained by a contraction of net income simultaneously with an asset base increase, resulting in fewer earnings generated in proportion with the available resources.

Despite a somewhat constant loans and deposits amount throughout time, both the income and cost derived from the latter have drastically decreased. Notwithstanding the net interest rate has managed to remain stable overtime, which will result in a similar net interest income year on year, except for 2011, when a significant drop has been observed in the net interest rate.

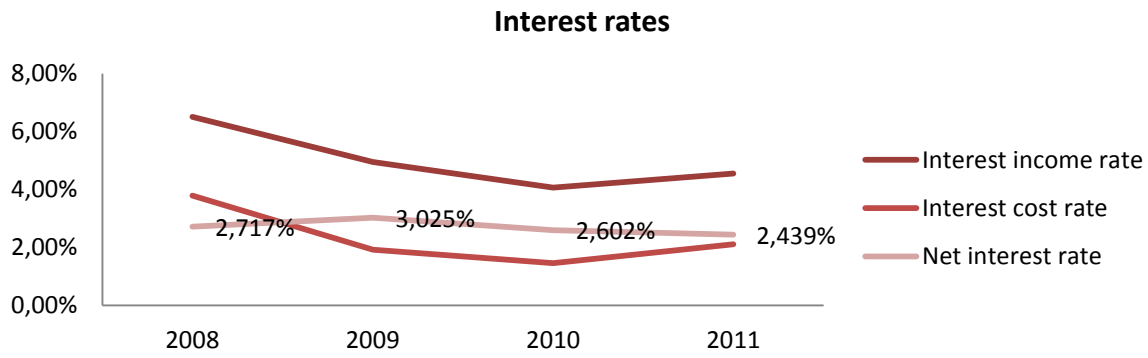


Figure 5. Interest rates' evolution

Source: Banco Popular's annual report

Net fees and commissions are becoming increasingly important as an income source for the bank, this item namely in the year of 2011 has been an important income driver for the bank representing about 23% of the entire bank's income.

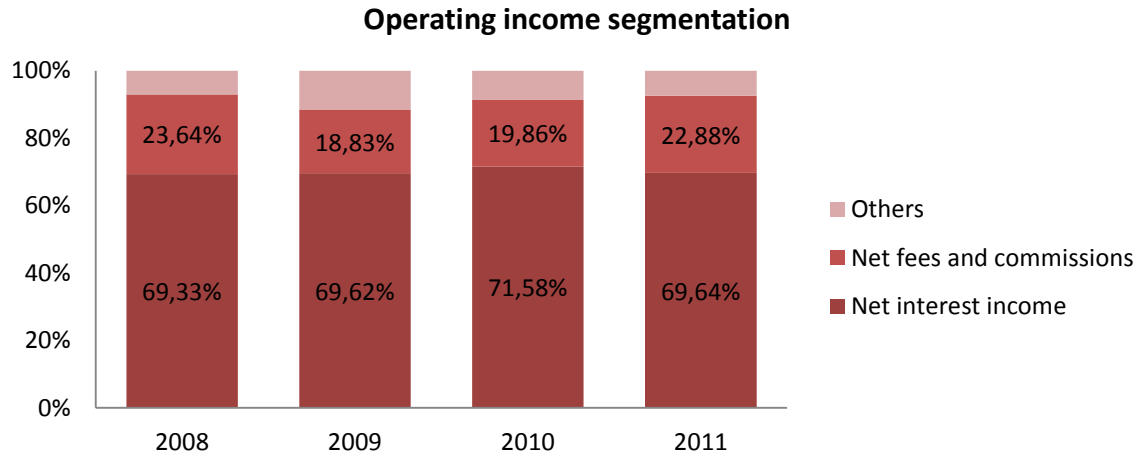


Figure 6. Operating income segmentation

Source: Banco Popular's annual report

The income detailed by nature reinforces the core activity of commercial banking, as activities related to lending to and borrowing from customers make up for the lion's share of income generated.

Regarding administrative expenses and depreciations, the bank derived from its employees and branches policy contraction has managed to slightly reduce the overall

costs despite the inflationary cost increasing pressure. The employees and branches decrease has managed to offset the accompanying inflation costs. In 2011 an increase was registered in other administrative expenses, stemming from informatics updates mostly.

Provisions for financial asset impairment have peaked in 2009 and have since then decreased, mainly due to an effort by the bank for the new additions to non-performing loans to be of better quality, with broader guarantees on transactions. Inversely provisions for property and other items are visibly on the rise, as a result of the aggravation of the inflated Spanish real estate sector, it is possible to realize the increase in the overall weight of total provisions that correspond to provisions related to property.

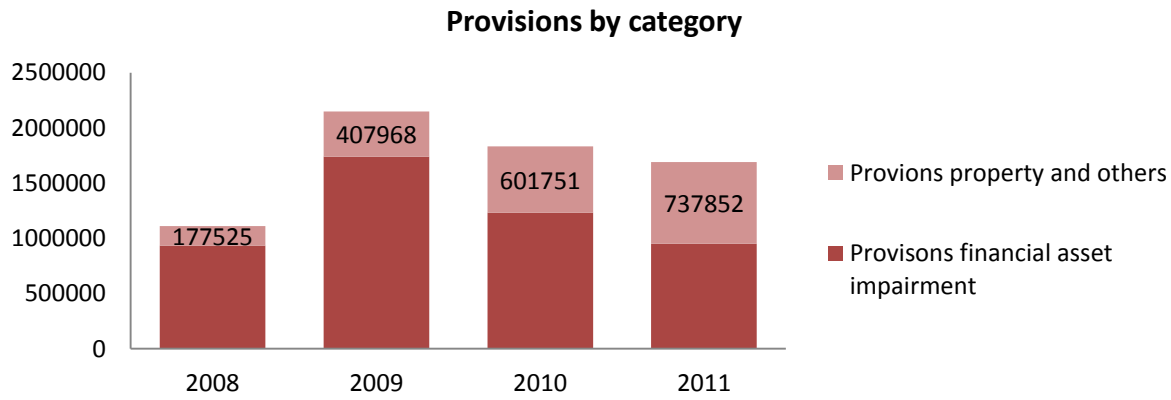


Figure 7. Provisions by category

Source: Banco Popular's annual report

The net income has been consistently dropping derived from two particular independent reasons, which have worked negatively to the group's attributed net income either jointly or individually. The two main reasons are the net interest rate fluctuation and present drop as well as the provisions the bank had to undertake.

4.4. Solvency

Solvency plays a major role in banks, equity is the buffer against losses and the European banking agency is urging banks to comply with mandatory levels as to mainly improve the quality, consistency and transparency of the capital base and increase the risk coverage. This need stems from the actual economic situation where a greater capacity for loss absorption is crucial given the uncertainty climate.

A key priority for POP has always been the reinforcement of capital without overlooking improvements of its market share, it primes for operational comfort above the minimum levels required by regulatory agencies.

Tier 1 capital ratio is defined by shareholders' equity plus retained earnings over the bank's risk weighted assets, RWA are the bank's assets multiplied by a coefficient that ranges from 0 to 1, being zero a riskless asset and 1 a very risky asset, therefore the greater the bank's RWA, the greater the equity needed to achieve the EBA demanded ratios.

In order to comply with the mandatory margins Banco Popular works on two fronts, it relies on earnings retention to increase its equity, and also performs an ongoing effort to improve its risk weighted assets' management by reducing its weight.

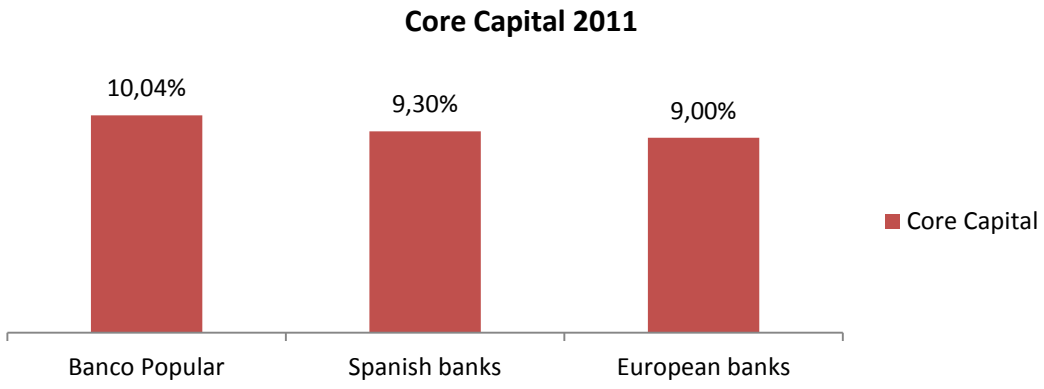


Figure 8. Core capital of different financial institutions (2011)

Source: Banco Popular's annual report

The group stands as one of the most capitalized banks both in Spain and in Europe without the injection of public capital.

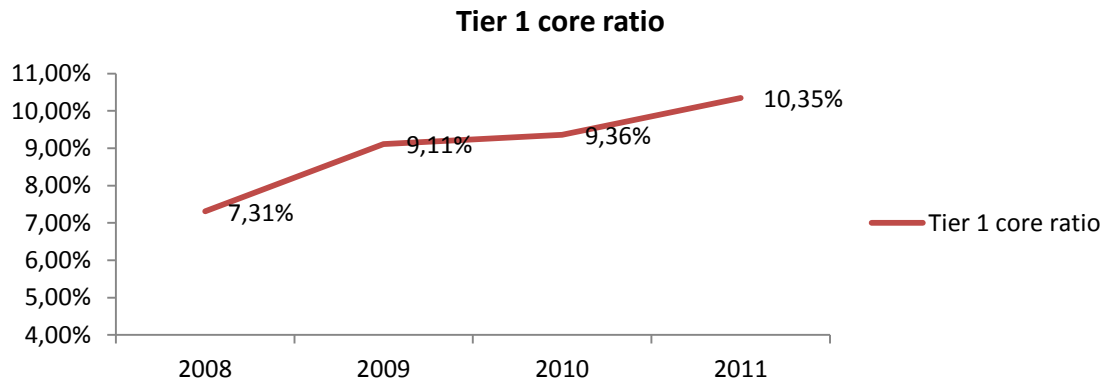


Figure 9. Tier core 1 evolution

Source: Banco Popular's annual report

From the above evolution it is evident the increase in tier 1 core ratio, derived both from the group's guidelines on capital reinforcement and the EBA's mandatory requirements

4.5. Efficiency

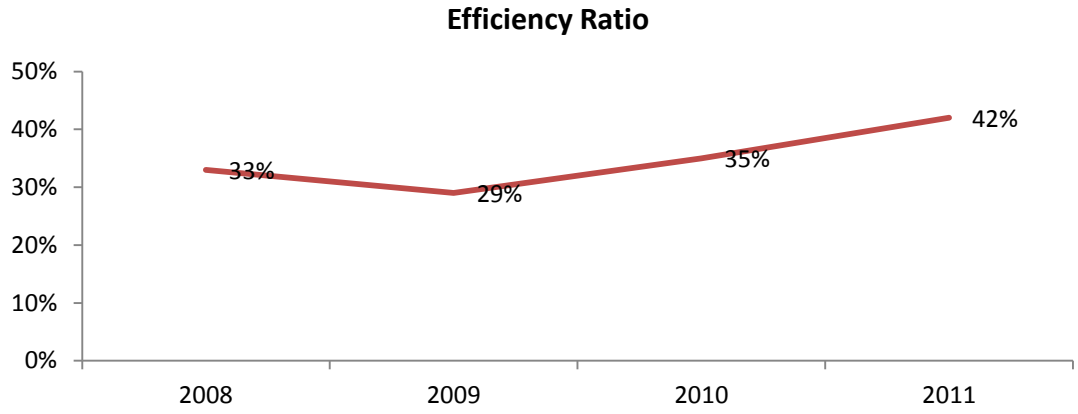


Figure 10. Efficiency ratio

Source: Banco Popular's annual report

The efficiency or commonly referred to cost to income ratio has been increasing, meaning that the bank now requires more income as a cost to generate the latter, the operating costs have been somewhat stable throughout the previous years, however

the operating profit has been decreasing. There are two main reasons for that; the increase in rates, worsened by the mismatch of maturities between the bank's assets and liabilities, and the impairments of wholesale and retail funding.

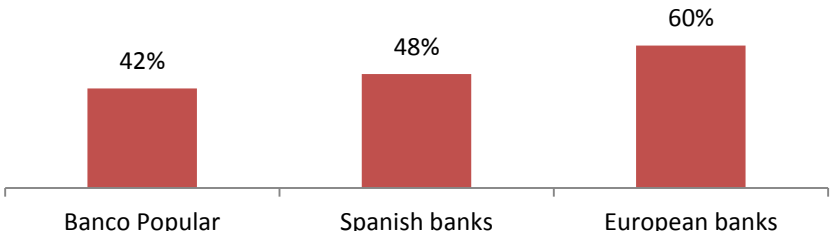
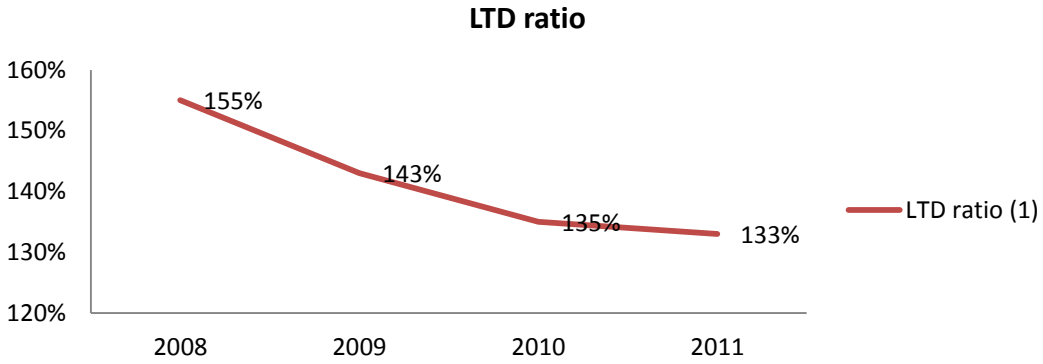


Figure 11. Efficiency ratio of different financial institutions (2011)

Source: Banco Popular's annual report

Notwithstanding the drop in the efficiency ratio, Banco Popular still ranks as one of the most efficient banks when comparing with the average Spanish and European bank.

4.6. Liquidity



(1) Loans: Total Loans to customers (net) – Other credits – Repos – Valuation adjustments of Repos – ICO credit lines - Securitisations; Deposits: Demand deposits + time deposits + other accounts and valuation adjustments + collection accounts (included in other financial liabilities) + commercial paper + Preferred shares

Figure 12. LTD ratio

Source: Banco Popular's annual report

In order to comply with major guidelines which point out for banks to decrease their LTD ratios so that liquidity can be increased, POP has managed to reduce the

difference between its loans and deposits (commercial gap), through increase in customer deposits and continued effort to decrease its dependence on the wholesale markets. Currently the group presents a LTD ratio of 1,335, the latter has improved drastically in the recent years which represents the commitment of POP on its deleveraging process.

4.7. Assets' quality

The non-performing loans of POP have been increasing, in line with the Spanish banking sector, the current economic situation has led both private and corporate entities to increase the default rate on their loans, the levels of doubtful loans over total risk are reaching industry maximums, which in turn sparkles loans provisions increases and ultimately reduces the company's net income

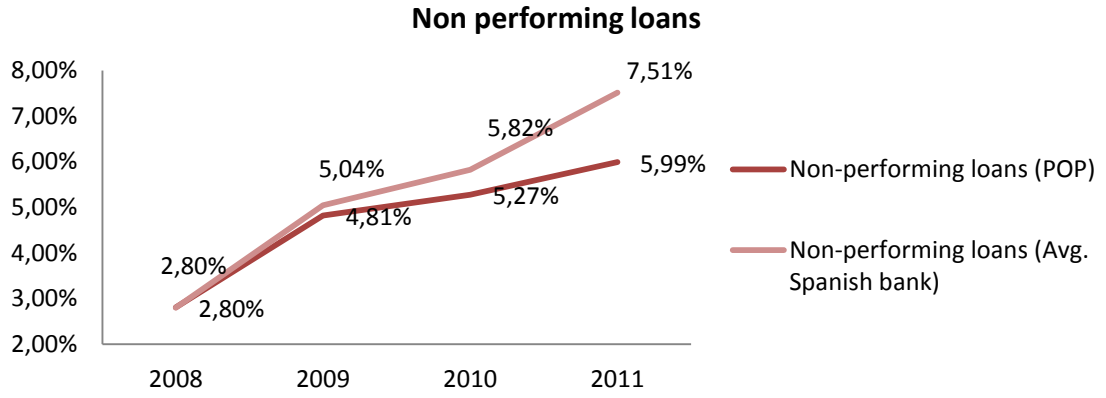


Figure 1 1. Non-performing loans

Source: Banco Popular's annual report

Regarding the risk weighted assets computed according to BIS requirements, POP has managed to decrease their weight, through "an ongoing effort to improve the management of RWA, by updating accounting processes and thereby reducing transitory balances, and by enhancing the guarantees and management systems for these guarantees"

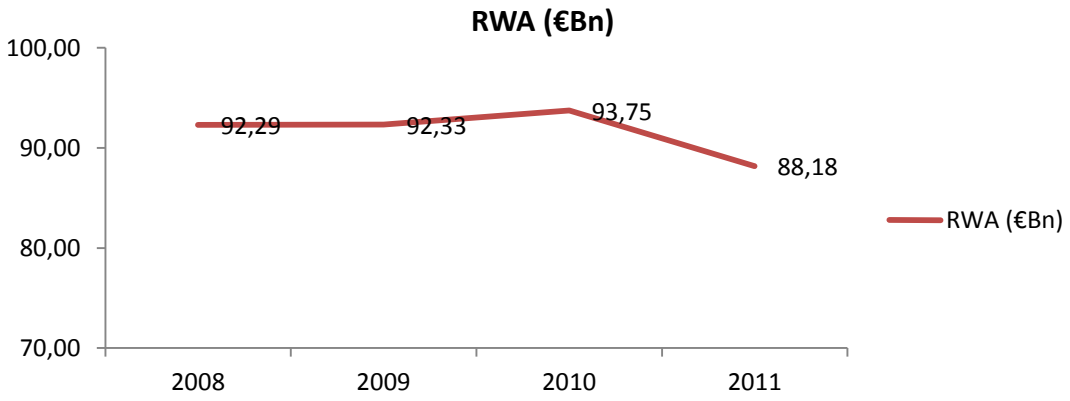


Figure 1 2. Risk weighted assets (€Bn)

Source: Banco Popular's annual report

5. Macroeconomic overview

Spain is the 4th largest economy in Europe and the 12th largest worldwide, it went through an expansionary boom period in the initial 00's, but currently, much like other peripheral economies in Europe, Spain is struggling with the aftermath of the 2008 crisis, which highlighted the structural weaknesses on its economy

Spain betted on a growth model largely dependent on domestic demand and on construction and property development activities, the disproportionate growth in the real estate sector in conjunction with the increase in credit granted to finance it, led to the current economic imbalances. The actual economic situation is characterized by several interconnected imbalances, the most severe consequences are its current account deficit, which has been increasing at a steady rate, the excessive growth of the real estate sector and finally the indebt ness of its private sector.

As a result of the above referred imbalances, taking into account the worldwide macroeconomic picture and the need for adjustment there has been a strong increase in unemployment in Spain as well a rapid increase in public debt fueled by the successive current account deficits of the Spanish economy.

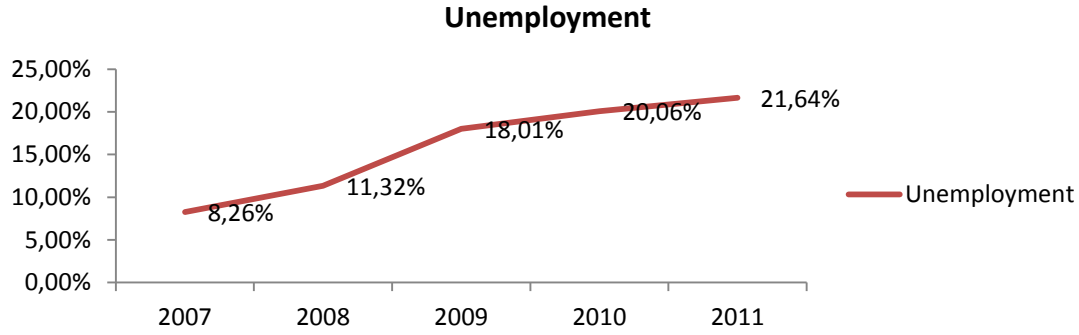


Figure 13. Spanish unemployment

Source: IMF

The unemployment evolution since the beginning of the crisis is staggering. In late 2007 the current unemployment rate stood at 8,3%, which at the time corresponded to 1834000 unemployed, four years fast forward and the unemployment stands at 24%, with an unemployment rate among younger workers (18-25) of around 41%.

Comparing with the Eurozone the increase in Spanish unemployment was 12% percentage point superior. Obviously, paired with an increase in unemployment comes higher costs and less revenues to the government, as only ¾ of the active population are contributing with tax revenues.

Another decisive factor is the drop in domestic demand, concerning housing in particular, the investment has decreased by 41%, while Spanish households reduced their savings rate to historical lows, at the same time their fixed capital investments achieved maximum levels.

There are three main reasons for the observed maximum investment in fixed capital. The ECB's monetary policy which; defined the reference interest rate at very low levels. The Spanish government's policy that; promoted housing acquisition in detriment of other viable alternatives, such as renting, and encouraged the acquisition of real estate assets instead of other investment assets and finally the advantages linked to a model of economic growth based on construction and property development, ranging from unemployment reduction, as it is a labor intensive activity, increase in housing value and creation of larger tax revenues.

During the pre-crisis expansion period, credit awarded to both the construction and real estate sector grew exponentially, culminating in the year of 2007, when the respective loans accounted for 45% of the then Spanish GDP.

The private debt now represents 2,2x the country's GDP, this level of indebtedness stemmed from cheap debt that was used for consumption credit and residential investment, inflating the latter. Considering that not all the Spanish private debt is tied up to domestic assets, there are still two thirds of it that are, which, corresponds to an approximate amount of 1,6trillion euros. Most of the respective debt is backed up by the deteriorating real estate sector, which, cast doubts on its repayment. In fact, according to the bank of Spain construction debt represents 400billion euros, of which, 176 are deemed questionable and 31,6 non-performing.

The successive downgrades of its public debt and the proximity of its 10y bond to the value of 7%, which prompted bailout requests from Portugal and Greece, has sparkled confidence worries regarding the ability for the Spanish government to single handily recover from the current economic situation.

Notwithstanding its adverse situation, Spain still ranks fairly well regarding its public debt as a percentage of GDP when comparing with other European countries, moreover its GDP appears to have somewhat stabilized and temporarily inversed the decreasing trend.

Measures

In order to counter the current adverse macroeconomic situation the Spanish government has approved in the beginning of 2012 several reforms, ranging from the labor market, to fiscal domain and to public sector management.

Considering the labor market a greater flexibility was given to companies to adapt to the situation of the Spanish economy, being the most significant measures the reduction of dismissal costs, in line with the decrease in the degree of permanent contract workers protection. In addition the Spanish government has signed an agreement with social agents in January 2012 with a 2year duration which, emphasizes wage moderation for the private sector, as well as usage of variable wage components tied up to firm specific variables.

In the fiscal domain a law has been implemented envisioning a constitutional reform of the national fiscal framework, imposing limits to public debt and deficit, it adds stricter information requirements and coercive methods both at a personal and public level in order to guarantee compliance with new fiscal targets.

“The Central Government may initiate all the necessary actions against the Regional Government that fail to comply with the agreed fiscal targets”

In order to finance its economy in the wholesale markets at reasonable prices, Spain needs to recover its economic efficiency and boost.

6. Regulation

The economic and financial crisis which began in 2007 severity was mainly attributed to the banking sector excess leverage and erosion of capital base and quality, banks were not able to absorb systemic trading and credit losses. As a consequence of the latter the market's confidence on the banks' solvency and liquidity was lost which led to a major contraction of liquidity and credit availability to the real side of the economy. Governments were forced to intervene injecting liquidity, capital support and guarantees to the banking sector at a cost for tax payers.

Taking into account the banking system's importance and realizing it constitutes the foundation for economic growth; the Basel Committee introduced the Basel accords, being Basel III the framework that currently sets the guidelines for financial intuitions to comply with today.

Basel III aims to strengthen the global capital and liquidity rules in order to promote a more resilient banking sector so that shocks arising from financial and economic stress can be absorbed more efficiently, reducing the risk of contagion from the financial sector to the real economy. Furthermore, it emphasis the improvement of risk management and governance, as well as, strengthen banking sector's transparency and disclosures.

In order to apply and supervise the necessary measures on 1st of January 2011 the European banking authority (EBA) was established. "The EBA will contribute to ensure a high quality, effective and consistent level of regulation and supervision in its areas of competence. It will also promote public values such as the stability of the financial system, the transparency of markets and financial products, and the protection of depositors and investors".

Furthermore EBA will also "work to prevent regulatory arbitrage and guarantee a level playing field, strengthen international supervisory coordination, and promote supervisory convergence. It will provide advice to the Union institutions in the areas of banking, payments and e-money regulation and supervision, and related corporate governance, auditing and financial reporting issues".

In light of the current situation, the European banking agency requires for major Spanish banks to raise their core tier 1 to 9% and to value general government debt instruments at market prices, these goals are to be achieved according to EBA until the end-June 2012.

7. Spanish banking sector

The Spanish banking sector was composed by two main kind of financial institutions, traditional banks and savings banks “cajas de ahorro”.

Banks have a national presence while cajas, alternatively defined as saving banks, usually have a rural character and have a comprehensive knowledge of its customer, there was reportedly one caja branch for every 1.900 people in Spain.

Caja banking system was virtually unregulated, for instance until very recently cajas were not obligated to reveal their loan to value ratios or the quality of their loans’ collateral, however they assumed a central role in the Spanish banking sector, accounting roughly to 48% of loans granted and about 46% of deposits attracted.

These financial institutions, during the expansionary phase have accumulated imbalance of several kinds. They had high risk concentration in activities related with construction and property development, being 41% of the total credit granted referent to acquisition and rehabilitation of housing, and were excessively dependent on wholesale financial markets.

The financial crisis and the latter sovereign debt crisis exposed cajas limitations. Given their individual low impact profile coupled with a somewhat limited capacity to raise capital, being its main source retained earnings; cajas latent flaws were exposed and represented a very delicate situation to the Spanish banking sector. In response to the latter, the Spanish government has decided to launch the FROB (fund for orderly restructuring of the banking sector) later in 2009, which aimed at conducting and overseeing integration processes between institutions (particularly cajas) and recapitalization plans. The Spanish government intention was for a less fragmented banking sector composed of financial institutions with broader choices for capital financing.

So far, as a result of FROB, the number of cajas has decreased drastically from 45 to 2 and cajas have transferred their activities from savings to commercial banking. The integration and optimization of resources is also visible in the number of people currently employed in the banking sector as well as in the number of available branches.

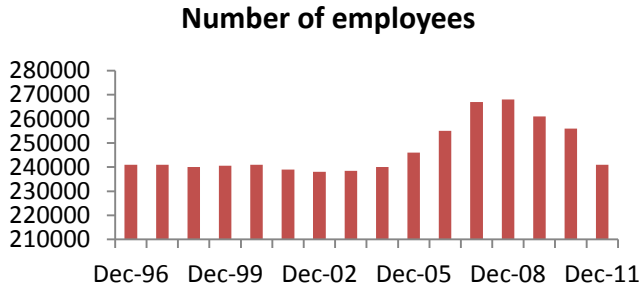


Figure 14. Number employees in the banking sector
Source:Bank of Spain

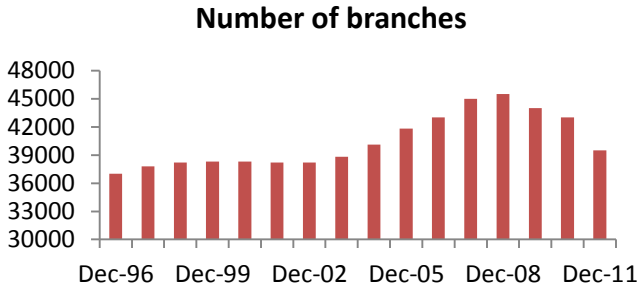


Figure 15. Number of branches in the banking sector
Source: Bank of Spain

Concerning core capital, the banking sector has significantly increased the capital of the highest quality, in an attempt to calm down the markets and to comply with the European requirements in the short run. A RDL (real decreto de ley) approved in February 2011 has ensured that all Spanish financial institutions are operating with core capital requirements of 8%.

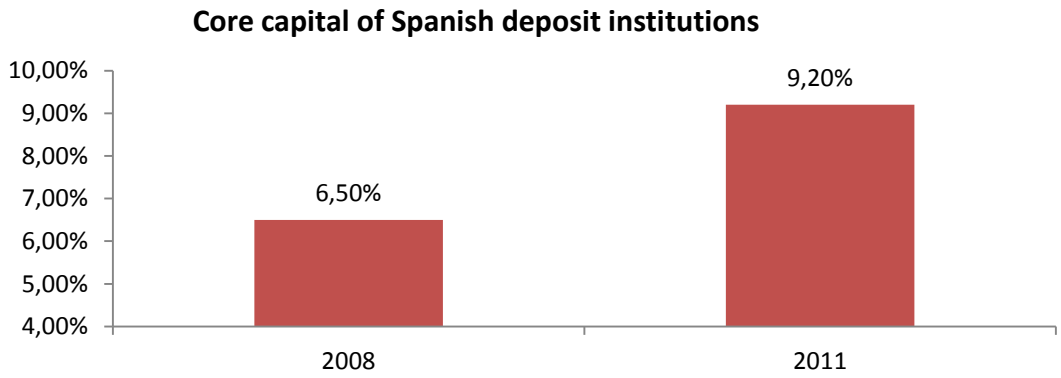


Figure 16. Core capital of Spanish deposit institutions

Source: Bank of Spain

In relation to the real estate sector, banks have provisioned since 2008 an amount equal to 112bn, the Spanish government urges Spanish financial institutions to disclose all significant information concerning exposures to construction and property developers, 54% of the latter sector was deemed problematic which sparkled macroeconomic tension and uncertainty. In order to restore confidence and clean-up banks' balance sheets, Spanish government has increased provisioning needs by

38billion euros given the deflationary real estate sector; to address the latter outflows; Spanish government previews core capital requirements of 15.58billion euros.

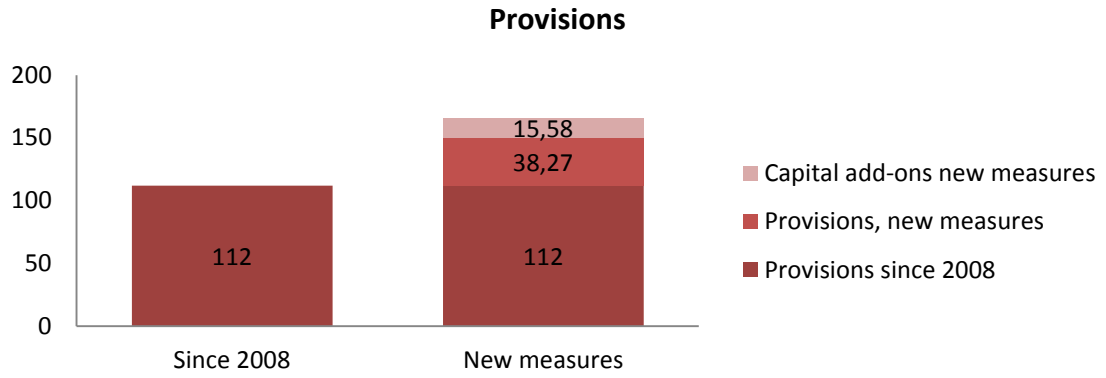


Figure 17. Provisions by Spanish banks (€)

Source: Bank of Spain

Increased provisions and capital add-ons will result in an increase in the levels of coverage of the problematic portfolio referent to the real estate sector.

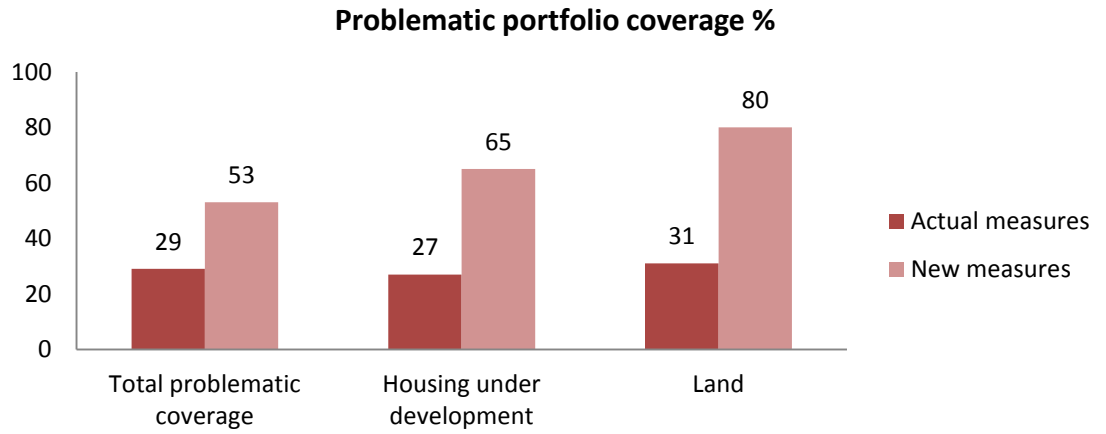


Figure 18. Problematic coverage (%)

Source: Bank of Spain

Given the financial volatility Spanish financial institutions have relied on the ECB's two 3y LTROs (long term refinancing operation) for some of their financing needs, increasing both the amount borrowed as well as the duration of the maturities. As a

result of ECB funding Spanish financial institutions have already covered the total of 2012 wholesale funding maturities and most of its 2013 needs if needed.

8. Valuation Methodology

The major objective of this dissertation is to calculate the value of POP's equity, in order to do so the concepts developed during the literature review in conjunction with the macroeconomic environment will be considered to reach the company's target price.

As previously referred estimating the value of a bank on an enterprise level is extremely complicated, the necessary cash flows which are usually tied to reinvestment and growth are not significant or meaningful and debt is loosely defined. Furthermore banks are influenced by regulatory frameworks that affect its growth and investment opportunities.

The literature review was conclusive concerning the appropriate approach to undertake for banks' valuation, that approach defends the utilization of equity valuation models. Among these, I will use the DuPont method and equity multiples. I won't be using the dividend discount model for the fact that this dissertation will engulf a period of economic uncertainty which doesn't allow for a stable earnings patterns, retention rates and returns on investments.

POP's main activity is in Spain, although the group is also present abroad, its exposure to Portugal is minimal and its exposure to the U.S. is marginal. The consolidated financial reports were considered, while regarding macroeconomic, financial and fiscal assumptions this dissertation will take into account those referent to Spain, as the presence and influence of the latter dwarves those of Portugal and the U.S.

9. Assumptions

General assumptions

9.1. Discount rate

To use DuPont valuation methodology it is necessary the calculation of several inputs that will ultimately indicate the appropriate discount rate, which, in this specific case will be the cost of equity.

9.1.1. Beta

The beta was obtained from Bloomberg, it corresponds to a 2year weekly beta; it was calculated considering the relation between the stock's return variation and that of the benchmark over a period of 2years and taking into account weekly returns. The beta is greater than 1, which indicates that POP's stock return over the referred period has varied greater than the benchmark.

9.1.2. Risk Free

The risk free rate considered was the average of the coupon of a 10year German government bond for the duration of 1year, given the fact that Banco Popular's major currency is the euro, and that German government bonds are widely recognized as default free.

9.1.3. Equity risk premium

The value of the equity risk premium assumed was in accordance with (Fernández, Aguirreamalloa, & Corres, 2011) which surveyed finance professors, analysts and managers, with the purpose to find the most commonly used equity risk premium, there was a total amount of 930 answers referent to the Spanish economy.

9.1.4 Country risk premium

Spain is suffering directly with the sovereign debt crisis, its current financing situation is precarious, and the IMF intervention is becoming a clearer hypothesis, with this in mind a country risk premium of some sort must be added to the cost of equity, POP is highly dependent on the Spanish market and will be greatly affected by its economic future outcome. The country risk premium assumed was that present in Damodaran's database of country risk premiums, however in the long term the CRP is expected to converge to 0.

	2012e	2013e	2014e	2015e	2016e	2017e	TV
Rf	2,1%	2,1%	2,1%	2,1%	2,1%	2,1%	2,1%
β	1,17	1,17	1,17	1,17	1,17	1,17	1,17
ERP(1)	5,9%	5,9%	5,9%	5,9%	5,9%	5,9%	5,9%
CRP	1,28%	1,28%	1,28%	1,28%			
Ke(2)	10,28%	10,28%	10,28%	9%	9%	9%	9%

(1) Obtained from (Fernández, Aguirreamalloa, & Corres, 2011)

(2) Ke = Rf + β*ERP + CRP

Table 3. Ke estimation of Banco Popular's Ke

	2012e	2013e	2014e	2015e	2016e	2017e	TV
GDP	-1,83%	1,25%	1,16%	1,66%	1,76%	1,84%	…
Inflation	1,89%	1,56%	1,63%	1,58%	1,54%	1,54%	…
Savings (1)	-0,88%	0,19%	1,77%	2,39%	3,35%	3,51%	…
Taxation(3)	30%	30%	30%	30%	30%	30%	…
Payout	10%	10%	10%	30%	30%	30%	

Table 4. Economic, fiscal and financial indicators

(1) Savings as percentage of GDP variation

Source: IMF, Bank of Spain, Banco Popular's annual report

9.2. Balance sheet

9.2.1. Deposits and loans

Banco Popular aims to reduce its LTD ratio, in order to be more financially stable. Credit shrinking is already present in the Spanish economy, and is expected to continue in the short term, meanwhile banks are engaging on a deposit luring war, both to reduce its wholesale dependence and to reduce its commercial gap, which will in turn reduce the LTD ratio.

The financial sector is undergoing a visible deleveraging process, Banco Popular has managed to significantly decrease its LTD ratio, and the trend will continue until the LTD ratio reaches a value of approximately 120%.

Concerning deposits, they are expected to follow the variation in gross national savings as a percentage of the Spanish GDP. Regarding the wholesale funding, ECB loans will cover the existent maturities and funding needs if necessary, while markets are reluctant. The increase in savings over GDP will not be sufficient to counterbalance the steep negative variation of the Spanish GDP, in fact deposits are only expected to meet the levels verified in 2011 in the year of 2014, after 2014 the expected macroeconomic overview indicates positive variations both in the Spanish GDP as well as in its saving over GDP, such a situation will allow for the bank's deposits to enlarge significantly from then on.

On the other hand, loans will only vary taking into account the Spanish GDP, lending contraction is a basilar stone for the bank's strategy, both in deleveraging and in credit wealth. Credit is shrinking on a national level and is only expected to recover to 2011 values on the year of 2014, much like deposits. The predicted GDP negative variation can in part be attributed to the necessary loan contraction of banks, in which POP also takes part.

Caption (000€)	2011	2012e	2013e	2014e	2015e	2016e	2017e
Loans	100741920	98902373	100138652	101295254	102963586	104779864	106712005
Variation	**100%**	-1,83%	1,25%	1,16%	1,65%	1,76%	1,84%
Deposits	118279831	117233676	117455823	119536970	122397837	126499257	130944584
Variation	**100%**	-0,88%	0,19%	1,77%	2,39%	3,35%	3,51%

Table 5. Deposits and loans evolution

9.2.2. Available-for-sale financial assets

Constituting a considerable amount of the assets' side of the balance sheet, this caption is composed by government debt securities, mostly Spanish government's and securities issued by private entities. Given its somewhat unpredictable evolution character, which can be observed in its latter years behavior, and upon further enquiry with the banking institution, this caption's evolution is predicted to remain flattish in the foreseeable future, however given its loan like characteristics; principle and interest payment, I expect this caption to vary according to the Spanish GDP.

Caption (000€)	2011	2012e	2013e	2014e	2015e	2016e	2017e
Available-for-sale financial assets	17974161	17645953	17866527	18072886	18370546	18694602	19039331
Variation	100%	-1,83%	1,25%	1,15%	1,65%	1,76%	1,84%

Table 6. Available for sale financial assets evolution

9.2.3. Tangible assets

The bank is starting a policy of efficiency and maximum usage of existing tangible assets, in line with the latter policy it intends to sell a fraction of own use buildings, mainly branches and other tangible asset denominated items, a policy also visible in the decrease of its employees. As a result, the item tangible assets in the balance sheet will diminish its value, not only derived from the depreciations, as the tangible assets are net of depreciations, but also due to the sale of the branches. The estimated decrease will be of 5% yearly until 2014, after such period, the tangible assets are expected to maintain its depreciation net value.

9.2.3.1. Reinsurance assets

Banco Popular offers insurance services to its clients, the bank discriminates tangible assets referent solely to the latter activity, it represents a somewhat marginal weight on the balance sheet and its future evolution goes in line with that applied to the tangible assets.

Caption (000€)	2011	2012e	2013e	2014e	2015e	2016e	2017e
Reinsurance assets	3033	2881	2737	2600	2600	2600	2600
Tangible assets	1734231	1647519	1565143	1486886	1486886	1486886	1486886
Variation		-5%	-5%	-5%	0%	0%	0%

Table 7. Tangible assets evolution

9.2.4. Non-current assets held for sale.

This caption in the balance sheet refers to purchased or foreclosed assets received by Banco Popular from its "borrowers or other debtors for the full or partial settlement of financial assets representing debt claims against the borrowers or other debtors". This item is exclusively composed by tangible fixed assets, stemming mostly from mortgage loans which have defaulted, its weight is previewed to increase as the Spanish government has advised the banks to increase their real estate provisioning, with the reasoning that both real estate developers and private individuals are expected to increase its default rate, an additional recommendation that adds to the existing increasing trend of this caption since the beginning of the 2008 crisis. After a period of asset increase, this caption is expected to decrease due to the housing market expected recovery, the bank will manage to sell its inventory houses.

Caption (000€)	2011	2012e	2013e	2014e	2015e	2016e	2017e
Non current assets held for sale	3601723	4141981	4763279	5477770	4656105	3957689	3364036
Variation	**100%**	15%	15%	15%	-15%	-15%	-15%

Table 8. Non current assets held for sale

9.2.5. Net asset value

Considering Banco Popular has already achieved a tier1 core capital of 10%, its solvency is going to meet EBA requirement regarding the achievement of a 9% core capital ratio by June 2012. With this premise in mind the caption capital reserves and retained earnings will increase taking into account the bank's net income minus the distributed dividends, which will yield the year's total equity.

Regarding valuation adjustments; these stem mostly from other financial assets at fair value through profit or loss, while minority interests stem from participation in equity stakes both of the latter captions are expected to maintain the same absolute value in the foreseeable future.

9.2.6. Other items

The value of captions with an individual weight under 1%, both on the assets and liabilities side, was considered constant in absolute value.

9.3. Income statement

9.3.1. Net interest margin

Net interest income is the main value driver of a commercial bank such as POP; therefore variations in the net interest margin will have noticeable consequences at the net income level. The latter year (2011) was characterized by an all-time low net interest margin since the beginning of the 2008 crisis, this margin will remain at current levels until at best 2014, a time when the Spanish economy will manage to surpass the levels of GDP verified today, and a time when some financial recovery is expected. After 2014 the net interest income is expected to increase to a superior margin

9.3.2. Fees and commissions

Fees and commissions represent an increasingly significant portion of the group's income. Commissions stem from asset related operations, that range from loans to asset management and financial advisory. This particular income statement item varies

with asset side items, mainly related to loans. In light of both the resources luring war and to the adverse economic conditions it is expected to decrease, varying taking into account its percentage in 2011 over total assets times each new year's predicted total assets.

Caption	2011	2012e	2013e	2014e	2015e	2016e	2017e
Net interes rate	2,44%	2,44%	2,44%	2,44%	3,02%	3,02%	3,02%
Commission perc.	0,524%	0,524%	0,524%	0,524%	0,590%	0,590%	0,590%

Table 9. Net interest income and commissions percentage evolution

Commissions as % of total assets

9.3.3. Administrative expenses

Concerning personnel expenses, they are expected to vary according to the Spanish inflation, given the majority of the workers being Spanish, but also due to the fact that Banco Popular is not increasing its workforce. Other general administrative expenses range from rent, communications, travel costs, are also expected to vary with inflation. The cost policy reflects the need to optimize the bank structure while maintaning the same amount of resources.

Caption (000€)	2011	2012e	2013e	2014e	2015e	2016e	2017e
Personnel expenses	778756	793498	805884	818996	831969	844798	857842
Other expenses	484209	493375	501077	509229	517295	525272	533382
Variation		1,89%	1,56%	1,63%	1,58%	1,54%	1,54%
Depreciations	106191	100881	95837	91046	91046	91046	91046
Variation		-5%	-5%	-5%	0%	0%	0%

Table 10. Expenses evolution

9.3.4. Provisions

In line with the demanded provisioning related to the real estate sector required by the Spanish central bank, POP will have to increase its latter provisions in excess of 30% for the year of 2012, with lighter increases in the year of 2013 and 2014, after which this item will start to decrease.

Caption (000€)	2011	2012e	2013e	2014e	2015e	2016e	2017e
Provision for property	737852	959208	1055128	1055128	844103	675282	540226
Variation	**100%**	30%	10%	0%	-20%	-20%	-20%

Table 11. Property provisioning evolution

9.4. NPLs

NPLs have undergone a steady increase since the 2008 financial crisis, despite the tighter credit restrictions; I predict this item will increase, however at a rate lower than provisions. With that being said, a 10% increase is expected for the year of 2012, value that will remain steady until 2014. After 2014 this ratio will decrease to more sustainable levels.

Caption	2011	2012e	2013e	2014e	2015e	2016e	2017e
NPLs	5,99%	6,59%	6,59%	6,59%	5,27%	4,22%	3,37%
Variation		10%	0%	0%	-20%	-20%	-20%

Table 12. NPLs evolution

9.5. Risk weighted assets

The bank has been improving its risk weighted assets management, its current risk aversion and more conservative measures, have allowed for this caption to decrease, a decrease that is likely to be maintained during the next few years. After which the bank will increase its RWA, also in line with its asset base increase

Caption (000€)	2011	2012e	2013e	2014e	2015e	2016e	2017e
RWA	88181225	88181225	88181225	88181225	92590286	97219801	102080791
Variation		0%	0%	0%	5%	5%	5%

Table 13 RWA evolution

10. DuPont valuation

Using the DuPont method I can break down Banco Popular's ROE into three distinct parameters, which then allows me to infer which of these parameters has contributed greatly to the ROE.

NPM is the result of the net income attributed to the bank divided by its total revenues; total revenues are in turn composed by both the net interest income and operating revenues which range from net fees and commissions to return on equity instruments.

TAT is the total revenue, previously defined, divided by the total assets on the balance sheet.

The latter parameters correspond to ROA when multiplied together.

Finally in order to achieve the forecasted ROE, the final parameter present on the equation is the equity multiplier, which consists of total assets over total stockholder's equity.

The other inputs needed to reach a share pricing are the demanded ROE (calculated previously) and the NAV.

NAV has been defined by the bank as its equity value, under the premise that the values referring to pension fund shortfalls, lack of provisions for default and unrealized capital gains/losses are accounted for in its financial statements.

Parameter	2008	Var.	2009	Var.	2010	Var.	2011	Var.	2012e
NPM	0,288	-34,3%	0,189	-8,1%	0,174	-7,9%	0,16	-63,8%	0,06
TAT	0,035	-5,4%	0,034	-16,7%	0,028	-12,3%	0,024	2,5%	0,024
EM	15,64	-2,1%	15,30	3,0%	15,77	-1,0%	15,60	-3,2%	15,11
ROE forecasted	14,9%	-39,2%	9,1%	-21,1%	7,2%	-20%	5,7%	-64,1%	2,1%

Table 14. DuPont parameters

Historically the parameters have been decreasing, in line with the global profitability decrease verified in financial institutions since the 2008 crisis.

Considering NPM a drastic decrease is verified when comparing the past year (2011) with the expected 2012 results, again the decrease is explained by the contraction in both loans and deposits in addition to an all-time low net interest rate, and by the provisions required for the real estate sector.

The composition of TAT; remains slightly altered, suggesting that the decrease in total revenue is compensated by the contraction of the balance sheet. The latter contraction is not verified equity wise, therefore EM decreases, as equity increases its overall balance sheet weight.

NAVt-1 (.000 €)	8388224
ROE forecasted 2012	2,1%
ROE demanded 2012	10,28%
#shares (.000)	1400830
Target price share (€)	1,2

Table 15. DuPont share price calculation 2012

Using the DuPont method the final price target for one share of Banco Popular is 1,2€

10.1. Sensitivity analysis

Variable	Target price share (€)
ROE forecasted	
3,1%	1,78
4,1%	2,36
5,1%	2,95
W/o CRP	1,37

Clearly in the DuPont method, ROE forecasted is the most defining factor. Therefore by varying the ROE forecasted, the results on the target price share will vary significantly. At the same time the demanded ROE deflates the target price share, by omitting the country risk premium attributed to Spain, there is an obvious increase from the target price when using CRP also as a discount factor.

11. Relative valuation

This dissertation has previously referred to before that multiples are often regarded as the most simplistic valuation method. Despite its simplicity, multiples take into account markets' expectations and beliefs, and given the premise that markets correctly price companies on average, multiples must be one valuation to consider.

The challenge for a relevant and correct valuation lies mainly on the choice of the appropriate peer group. Preferably one would compose its peer group of carbon copies of the company being valued, but in the absence of the latter and given each companies singularities, one must restrict some aspects.

Banco Popular is a Spanish group with its main activities located in Spain, its activity is purely commercial and it is a medium sized bank. To find an appropriate peer group, the previous were my main guidelines.

Firstly, the location influences the macroeconomic environment to which the bank is exposed to; this is a critical factor since banks will all be subject to the same financial measures and objectives, their clients will have the same background and environment.

Secondly, purely commercial banks have singular and different structures from other types of banks, their main value driver is net interest income and they rely mostly on retail business, both deposit and loan wise.

Thirdly size can in many occasions add synergies or waste resources, therefore considering size a determinant factor in a series of variables such as; market capitalization, earnings, balance sheet size, non-performing loans is a decisive factor as well.

Considering the three main assumptions for the peer group, the following banks were chosen.

Banesto Bank

Banesto (Banco Espanol de Credito), attracts deposits and offers commercial, retail and private banking services. The bank offers loans, lease, financing, insurance and personal banking services.

Activities in Spain represent for the totality of its net income, while commercial banking amounts roughly half of the latter, being the other contributors, corporate activities and financial services.

Bankinter

Bankinter provides retail and corporate banking services and financial services throughout Spain. It offers to its' clients mortgage loans, pension funds, life insurance, lease financing, credit cards, mutual funds and internet banking services.

Spain in the sole contributor to the bank's income, and the areas of retail and corporate banking represent the major value driver to its net income, insurance is decreasing its overall impact.

Sabadell

Sabadell is a Spanish financial group; its largest business line is in Spain where it performs mainly commercial banking activities, attracting deposits and offering commercial banking services. The group offers mortgage, consumer and building improvement loans, insurance and private banking services.

The bank operates branches mostly troughout Spain, but is also present in other markets. The vast majority of the bank's income stems from Spanish activities; being commercial banking the main value driver, followed by corporate banking and asset management.

CaixaBank

CaixaBank is an integrated financial group; it supports its business mainly on commercial banking, being the number one retail bank in Spain. It accepts deposits and offers banking services. It offers portfolio management service, insurance,

investments and strategy advice and other specialist financial services.Its net income stems from banking and insurance activities as well as investments.

Refer to exhibit 4 for further information on banks.

	PER2012e	PBV2012e
Weighted average	13,33	0,41
Average	15,73	0,40

Table 16. Estimated multiples for 2012

Source: Bloomberg

The multiples presented above are forward multiples, meaning they are expected to reflect the situation of the referred banks at year end, therefore can be considered to reflect future information.

By multiplying POP's predicted value drivers for 2012, namely earnings and book value for 2012, by the above presented multiples, one can find an approximate for the bank's target price share.

Book value 2012 (.000€)	8597927
Net income 2012 (.000€)	181548

Table 17. Banco Popular value drivers

Price target Wavg. PER	1,73
Price target Avg. PER	2,04
Price target Wavg PBV	2,50
Price target Avg. PBV	2,47

Table 18. Shrare price target using multiples

12. Comparison with investment bank

After having reached a recommended target price for POP following my methodology, I will now compare it with Bankia's recommended target price for POP.

Unfortunately I did not get access to the full equity research report due to the bank's policies, only to some estimated captions from the income statement, which only allow me to compare absolute estimated values between my work and that performed by Bankia.

	Bankia			Dissertation		
(M€)	**Dec 2011**	**12/12e**	**12/13e**	**Dec 2011**	**12/12e**	**12/13e**
Total revenue	2997	3235	3315	2997	3031	3064
Pre-provision profit	1627	1914	1957	1627	1643	1661
Earnings before tax	444	820	1032	444	256	263
Net profit	480	559	707	480	176	181
Rec. Share price(€)		4,21			1,44	

Table 19. Differences from Bankia to dissertation

The main difference regarding the estimates lies on the value of the provisions the bank will have to undergo. While I follow the recommendation by the Spanish central bank to increase the provisioning effort, Bankia's equity report keeps provisions at a constant level, in line with those verified in the year of 2011.

Bankia's more aggressive assumptions regarding provisions, lead to a net profit three times superior in 2012 and almost four times superior in 2013, when comparing with the net income I have obtained in those respective years.

The far superior net income estimated by Bankia will amount for far larger ROEs in the years under analysis, which clearly explain the discrepancy between their recommended target price and mine.

13. Conclusions

The sovereign debt crisis has achieved systemic proportions, insofar both the measures adopted at a country and union level haven't produced significant results to restore confidence in EU's ability to establish European governance, the so called European peripheric countries have already resorted to IMF aid, but still their ability to withstand the upcoming adverse conditions is questionable.

In the process of balance sheet restructuring and new consolidation operations credit to the real side of the economy has shrunk, and lending has deteriorated, with a sharp increase in NPLs since the 2008 crisis. In light of the current situation banks are more reluctant to lend and credit policies are tighter, ultimately the deposit luring war coupled with lending uncertainty has taken their toll on the net interest rate.

Regarding Spain in particular the worst expectations have been confirmed with unemployment and budget deficit continuing their upward increasing trend.

POP is on track to achieve EBA's requirements referent to core tier 1 capital due on Jun-12, also its deleveraging evolution effort is visible, which goes in line with the bank's priorities, both in terms of reducing wholesale dependence and reinforcing its balance sheet soundness.

However a determining factor in POP's valuation is the provisions it will have to undertake considering its exposure to the real estate sector, the Spanish government urges banks to increase their provisions relating to the construction sector, as it deems a greater percentage of the latter as doubtful, on the short term POP's ROE is expected to decrease. By increasing provisioning efforts and increasing balance sheet transparency, the Spanish government hopes that the international markets can regain confidence in its banking sector and in its economy as a whole, which will ultimately reduce Spanish financing costs.

Taking all of the above into consideration Spain is in a difficult situation, with bailout requests looming, it is still trying to assess the real extent of its construction sector toxicity.

I think the DuPont method is too penalizing for the bank, therefore I decide to average it out with the target price that stemmed from Wavg. PER forward multiples estimate; which is considered the most reliable multiple.

My final recommendation target price is 1,44€, it is a very conservative recommendation, that goes in line with conservative policies related with provisioning efforts, but also takes into account the current uncertainty regarding the banking sector, this target price is directed at more risk averse investors for the short medium term, that are not willing to withstand the drastic plunge in POP's share price in the short term.

Despite already accounting for much of the uncertainty the price is dependent on the macroeconomic scenario, many factors such as a possible bailout from IMF, the real extent of the construction sector, budget deficit evolution as well as unemployment rate can significantly alter the financial equilibrium and therefore the recommended share price.

14. Appendixes

Exhibit 1; highlights

Highlights										
(M€)	**31.12.08**	**31.12.09**	**31.12.10**	**31.12.11**	**31.12.12E**	**31.12.13E**	**31.12.14E**	**31.12.15E**	**31.12.16E**	**31.12.17E**
Business volume										
On-balance sheet total assets	110.376	129.290	130.140	130.926	129.199	130.923	132.406	134.331	135.778	137.469
On-balance sheet total liabilities	103.318	120.842	121.888	122.537	120.652	122.213	123.474	124.713	125.362	126.152
NAV (equity)	7.057	8.447	8.252	8.388	8.547	8.709	8.931	9.617	10.416	11.316
Solvency										
Total tier1 core capital	6.734	8.416	8.776	9.124	9.282	9.445	9.668	10.353	11.152	12.052
Tier 1 ratio	7,31%	9,11%	9,36%	10,35%	10,53%	10,71%	10,96%	11,18%	11,47%	11,81%
Leverage	15,64	15,30	15,77	15,61	15,12	15,03	14,82	13,97	13,04	12,15
Risk weighted assets	92.129	92.331	93.747	88.181	88.181	88.181	88.181	92.590	97.220	102.081
Risk management										

Non-performing loans	2,80%	4,81%	5,27%	5,99%	6,59%	6,59%	6,59%	5,27%	4,22%	3,37%

Highlights										
(M€)	**31.12.08**	**31.12.09**	**31.12.10**	**31.12.11**	**31.12.12E**	**31.12.13E**	**31.12.14E**	**31.12.15E**	**31.12.16E**	**31.12.17E**
Earnings										
Net interest income	2.535	2.822	2.431	2.086	2.045	2.068	2.094	2.780	2.857	2.938
Gross income	3.657	4.054	3.398	2.997	3.031	3.063	3.097	3.883	3.969	4.060
Profit before provisions	2.340	2.761	2.094	1.627	1.643	1.660	1.678	2.443	2.508	2.577
Profit before tax	1.461	1.073	779	444	256	263	358	1.403	1.637	1.841
Consolidated profit for the year	1.110	780	592	483	179	184	250	982	1.145	1.288
Profit attributed to the Group	1.052	766	590	479	175	181	247	978	1.142	1.285

Profitability and efficiency										
ROA	0,95%	0,59%	0,45%	0,37%	0,14%	0,14%	0,19%	0,73%	0,84%	0,94%
ROE	14,91%	9,07%	7,15%	5,72%	2,06%	2,08%	2,77%	10,18%	10,97%	11,36%
Efficiency ratio (%) (w/o depreciations)	33%	29%	36%	42%	42%	43%	43%	35%	35%	34%

Exhibit 2; balance sheet

Balance sheet (000€)										
	31.12.08	**31.12.09**	**31.12.10**	**31.12.11**	**31.12.12E**	**31.12.13E**	**31.12.14E**	**31.12.15E**	**31.12.16E**	**31.12.17E**
(M€)										
Assets										
Cash and balances with central banks	1859	3748	682	522	522	522	522	522	522	522
Financial assets held for trading	1334	1353	1231	1316	1309	1309	735	1309	1309	1309
Other financial assets at fair value through profit/loss	336	416	464	377	398	134	198	398	398	398
Available-for-sale financial assets	3760	13296	16570	17974	17645	17866	18072	18370	18694	19039
Loans and receivables	96606	102298	102087	100741	98902	100138	101295	102963	104779	106712
Adjustments to financial assets on macro-hedging	34			19						
Hedging derivatives	992	1469	1038	1092	1092	1092	1092	1092	1092	1092
Non-current assets held for sale	1660	2735	3100	3601	4141	4763	5477	4656	3957	3364
Equity stakes	32	56	168	595	595	595	595	595	595	595
Insurance contracts linked to pensions	182	173	161	141	134	127	121	127	134	140
Reinsurance assets	5566	2792	3530	3033	2881	2737	2600	2600	2600	2600
Tangible assets	1355	1806	1890	1734	1647	1565	1486	1486	1486	1486
Intangible assets	546	486	657	649	649	649	649	649	649	649
Tax assets	827	708	1025	1212	1212	1212	1212	1212	1212	1212
Other assets	840	735	1057	944	944	944	944	944	944	944
Total Assets	**110376**	**129290**	**130139**	**130925**	**129198**	**130923**	**132406**	**134330**	**135778**	**137468**

(M€) Liabilities	31.12.08	31.12.09	31.12.10	31.12.11	31.12.12E	31.12.13E	31.12.14E	31.12.15E	31.12.16E	31.12.17E
Financial liabilities held for trading	1.729	1.195	1.160	1.104	1.104	1.104	1.104	1.104	1.104	1.104
Other financial liabilities	134	104	128	93	93	93	93	93	93	93
Financial liabilities at amortised cost:	98.957	116.448	117.435	118.279	116.312	117.874	119.135	120.374	121.022	121.812
Deposits from credit institutions	14.263	23.899	12.649	25.330	23.934	25.330	25.330	24.306	21.861	19.257
Interbank deposits		5.710	4.608	3.496						
Deposits from other creditors	51.665	59.557	79.383	68.742	68.134	68.263	69.473	71.135	73.519	76.103
Debt certificates including bonds	30.208	30.333	21.850	20.448	20.448	20.448	20.448	20.448	20.448	20.448
Subordinated liabilities	1.616	1.820	2.381	2.834	2.870	2.908	2.959	3.559	4.269	5.080
Other financial liabilities	1.202	837	1.170	923	923	923	923	923	923	923
Tax liabilities	185.717	392.543	443.979	279.630	361.805	361.805	361.805	361.805	361.805	361.805
Other liabilities	490	553	522	513	513	513	513	513	513	513
Total Liabilities	**103.318**	**120.842**	**121.887**	**122.537**	**120.652**	**122.213**	**123.474**	**124.713**	**125.362**	**126.152**

(M€)	31.12.08	31.12.09	31.12.10	31.12.11	31.12.12E	31.12.13E	31.12.14E	31.12.15E	31.12.16E	31.12.17E
Equity										
Total Equity	6.734	8.415	8.775	9.124	9.282	9.445	9.667	10.352	11.152	12.052
Capital, reserves and retained earnings	5.989	7.849	8.352	8.712	9.124	9.282	9.445	9.667	10.352	11.152
Profit or loss for the period	1.052	766	590	479	175	180	246	978	1.142	1.285
Dividends paid and declared	- 307	- 199	- 167	- 68	- 17	- 18	- 24	- 29	- 34	- 38
Valuation adjustments	30	- 15	- 572	- 841	- 841	- 841	- 841	- 841	- 841	- 841
Minority interests	292	47	49	105	105	105	105	105	105	105
NAV	**7.057**	**8.447**	**8.252**	**8.388**	**8.546**	**8.709**	**8.931**	**9.616**	**10.416**	**11.316**
NAV + liabilities	**110376**	**129290**	**130139**	**130925**	**129198**	**130923**	**132406**	**134330**	**135778**	**137468**

Exhibit 3; income statement

Income statement										
	31.12.08	**31.12.09**	**31.12.10**	**31.12.11**	**31.12.12E**	**31.12.13E**	**31.12.14E**	**31.12.15E**	**31.12.16E**	**31.12.17E**
Interest and similar income	6.289	5.059	4.145	4.580	4.496	4.553	4.605	5.091	5.181	5.277
Interest expense and similar charges	3.753	2.236	1.713	2.493	2.452	2.485	2.511	2.311	2.324	2.339
Net interest income	**2.535**	**2.822**	**2.431**	**2.086**	**2.044**	**2.068**	**2.094**	**2.780**	**2.857**	**2.937**
Return on equity instruments	23	7	9	8	12	12	12	12	12	12
Share of results entities	14	8	46	46	26	26	26	26	26	26
Net fees and commissions	864	763	674	685	676	685	693	793	801	811
Gains or losses on financial asset /liabilities	74	35	145	81	164	164	164	164	164	164
Exchange differences (net)	54	48	53	47	51	51	51	51	51	51
Other operating profits	90	55	35	40	55	55	55	55	55	55
Gross operating profits	**3.656**	**4.054**	**3.397**	**2.996**	**3.031**	**3.063**	**3.097**	**3.883**	**3.969**	**4.059**

	31.12.08	31.12.09	31.12.10	31.12.11	31.12.12E	31.12.13E	31.12.14E	31.12.15E	31.12.16E	31.12.17E
Administrative expenses	1.215	1.188	1.206	1.262	1.286	1.306	1.328	1.349	1.370	1.391
...Personnel expenses	818	792	778	778	793	805	818	831	844	857
...Other general administrative expenses	397	396	428	484	493	501	509	517	525	533
Depreciation & amortization	100	104	96	106	100	95	91	91	91	91
Profit before provisions	**2.340**	**2.761**	**2.094**	**1.627**	**1.643**	**1.660**	**1.678**	**2.443**	**2.508**	**2.577**
Financial asset impairment losses (net)	934	1.738	1.232	952	857	771	694	624	624	624
Non financial asset impairment losses (net)	177	407	601	737	959	1.055	1.055	844	675	540
Gains/ (Losses) on assets held for sale (net)	233	458	517	506	428	428	428	428	428	428
Profit before tax	**1.461**	**1.072**	**778**	**444**	**256**	**263**	**357**	**1.403**	**1.636**	**1.841**
Income tax	390	292	206	- 39	76	78	107	420	491	552
Profit/ Loss from discontinued operations (net)	40	-	20	-						
Consolidated profit for the year	**1.110**	**780**	**592**	**483**	**179**	**184**	**250**	**982**	**1.145**	**1.288**
Profit/ Loss attributed to minority interests	58	14	2	4	3	3	3	3	3	3
Profit/ Loss attributed to controlling company	**1.052**	**766**	**590**	**479**	**175**	**180**	**246**	**978**	**1.142**	**1.285**

Exhibit 4, multiples

Multiples

		Market Cap(€m)	Total assets(€m)	Tier1 10(%)	Tier1 11(%)	ROE-10	ROE-11	PER 10	PER 11	P/B 10	P/B 11
Caixabank	Spain	19989	350471	8,9	12,8	6,14%	5,46%	11,21	12,7	0,84	0,74
Bankinter	Spain	2627	77101	7,31	9,23	5,84%	6,40%	12,99	12,5	0,76	0,73
Sabadell	Spain	5289	130167	9,36	9,94	6,96%	4,02%	9,22	17,26	0,66	0,69
Banesto	Spain	3293	141067	9,3	10,28	8,46%	2,31%	9,25	20,32	0,78	0,47

		PER 12 est	P/B 12 est
Caixabank	Spain	10,61	0,41
Bankinter	Spain	8,48	0,44
Sabadell	Spain	18,58	0,43
Banesto	Spain	25,24	0,33

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