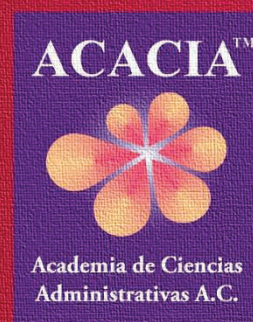


GESTIÓN SOCIAL

ORGANIZACIONES HUMANAS PARA UNA SOCIEDAD GLOBAL INCLUYENTE



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ÍNDICE

Introducción

Capítulo 1. Administración de Operaciones	3
Capítulo 2. Administración de la Educación	213
Capítulo 3. Administración Estratégica.....	917
Capítulo 4. Administración del Conocimiento	1189
Capítulo 5. Administración del Desarrollo Regional y Sustentabilidad	1641
Capítulo 6. Administración Pública.....	2251
Capítulo 7. Asuntos Sociales, Culturales y Filosóficos de la Capítulo Administración	2699
Capítulo 8. Finanzas y Economía.....	2997
Capítulo 9. Gestión de la Innovación y la Tecnología.....	3261
Capítulo 10. Ingeniería y Gestión de Sistemas.....	3557
Capítulo 11. Liderazgo, Capital Humano y Comportamiento Organizacional	3757
Capítulo 12. Mercadotecnia	4609
Capítulo 13. Métodos de Investigación	5115
Capítulo 14. Pequeñas y Medianas Empresas.....	5335
Capítulo 15. Procesos de Cambio y Desarrollo Organizacional	5935
Capítulo 16. Teorías de la Organización	6259
Capítulo 17. Contabilidad, Auditoría y Fiscal.....	6495
Capítulo 18. Aspectos Legales en los Negocios.....	6867
Capítulo 19. Estudios de Género	7557
Capítulo 20. Emprendimiento, Creación e Incubación de Empresas.....	7931

Brand Equity Value: consumer based approach versus financial approach: A Case study using a Portuguese Bank.

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Abstract

This study aimed to determine the brand equity value (BEV, hereinafter) of the “Banco BPI” from the costumers and financial perspective, based on 250 surveys to BPI customers to determine the BEV in the customers’ perspective and the application of EVA method to determine the BEV in the financial perspective. Respondents showed a positive perception on the various dimensions of the perceived brand value. However, the dimension that had the highest average was the notoriety and the lowest was the overall evaluation of the brand. The BVE in the financial perspective was obtained by using EVA method via different possible scenarios for the growth of the invested capital and results and by comparison with the value of the company, using benchmark variables (of “Millenium BCP” bank, another Portuguese bank). Thus, positive results were obtained in both perspectives, concluding that the brand “Banco BPI” has an overall positive value.

Keywords: Brand Equity Value, Bank sector and Economic Value Added Method.

Introduction

Recently, the management of the banking brand assumed an important and pertinent role. Currently it is one of the main concerns of banks' top managers (Santos, 2009). VanausdeIn (2003) stated that the evolution of the financial system and the pressure to achieve short-term results led banks to squander the meaning of their brands, ie ignored the relationship they established with their clients. He also defended that nowadays banks must give emphasis to its brand so that the customers if espelhem in it (VanausdeIn, 2003). The evolution of technology and the media have changed the mentality and training of people. In the past, bank managers had considered the brand loyalty of customers as an acquired fact. Currently, the reality is well distinct, if the services provided do not correspond to the customers' expectations; they migrate to other bank (Szmigin & Carrigan, 2001). The customer retention rate is considered an indicator of profitability, in this way is crucial for banks ensure the brand loyalty of customers (Veloutsou, Daskou & Daskou, 2004). The value of a firm is strongly affected by type of assets it owns as especially by intangible ones (Damodaran, 2009). And brand equity is one one these intangible assets. As intangible asset, brand equity is not easy measure. It can be measured the perceived value of a brand from the consumer perspective or you can estimate it financial value as added value (premium price) in comparison to other products/services.

The financial sector in Portugal is experiencing an unprecedented crisis. These are uncertain times for investment in the sector. Investors, institutions manager and CEOs, government, regulatory authorities and other stackholders need to assess the economic and financial condition of financial institutions and determine their potential value which depends on tangible and intangible assets. In this sense is relevant to evaluate the value of the brand equity as other intangible assets that organizations may have and must increase their total value. In this context, being Banco BPI one of the most important banks in the Portuguese financial sector, we set up the following research question: What is the perceived and financial value of the BPI brand?

In this paper is intended to evaluate brand value of “Banco BPI”, one of the banks of the Portuguese financial system, by the consumers’ perception, appealing to the Aaker model (1991) and by the financial perspective using the EVA model (as suggested by per Damodaran (2006)). Based on the literature review on brand equity concepts and models for brand value valuation in the consumer’s perception and the financial viewpoint, this case study was developed in two stages. In the first one it was calculated the perceived value of “Bank BPI” brand (in the consumer perception), using the model proposed by Aaker (1991). In the second stage it was sought to determine the Bank BPI brand value in the financial perspective, following the methodology proposed by Damodaran (2006). In this methodology, to calculate the brand value we have to compare the value of the company to the value of a company’s benchmark through the application of the Economic Value Added (EVA®) method (as company’s benchmark it should be chosen company with a generic mark or without brand of the same sector of activity and with similar productive structure and dimension. However, as it was not found, we decided to select its closest competitor, the Millennium BCP bank).

This work intends to help investors; bank’s managers and other stakeholders have more knowledge about the value of the BPI brand. The aim is to provide input to investors, management board, marketeers, financial analysts and other stakeholders to adopt suitable and informed investment and management policies.

This paper is organised in two sections. In the first one it is presented the literature review on brand and brand equity concepts and brand valuation methods in the consumer’s perspectives and the financial perspective. In second section, the case study is presented, starting for introducing briefly the bank under analysis, followed by the description of the used methodology to determine the consumers’ perceived value of the banking brand and the method to calculate the brand financial value ending with the data and results analysis. It concludes with the main conclusions, limitations and suggestions for future research.

Literature Review

Brand and Brand Equity Value

The brand is not only one strategical asset, if centered in the enterprise vision, is also the main source of competitive advantage of a company (Aaker, 1991; Papasolomou & Vontris, 2006). The brand value is expressed by the strength of the brand (Aaker, 2002) and relates with the market value, ie how much do consumers pay for your assets. The creation of a strong brand is a good strategy to distinguish a product from the other competitors. The brands highlight intangible qualities of the products, usually based on attributes of experience, reliability, quality and perceived security, gifted by its products and marketing programs (Schocker, Srivastava & Ruerkert, 1994).

The brand equity is the set of assets and liabilities related to a brand and its respective name and symbol, which add or subtract to the value provided by a product or service (Aaker, 1991). Yoo, Donthu and Lee (2000) defined brand equity as as the added value associated with the brand name, perceived by the consumer, after the comparison with another identical unnamed product. A brand with strong brand equity reveals that its consumers have high positive and strong associations (Yoo et al., 2000).

According to Keller (1993), Customer Based Brand Equity (CBBE) translates in the consequences that the brand awareness of the brand instils in customers' reactions derived from executed marketing actions. Riezebos (1995) stated that the concept of brand equity has a dual perspective: (a) the owner (financial valuation); and (b) the consumer, Brand Added Value (BAV).

According to Aaker (2002), the perceived quality is a form of association that is established with the brand and that influences other associations in numerous contexts. Also argues that it influences particularly the profitability. The perceptions concerning the quality can be persuaded by the needs, experiences and moments of each consumer. Perceived quality is like customer's subjective perception of global primacy or excellence of the product or service as compared to the alternative options of the market that customer knows (Zeithaml 1998; Yoo et al., 2000). Thus, the

perceived quality persuade the customer's intent to consume a particular brand (Veloutsou et al., 2004).

Brand loyalty of the customer is the most important indicator of the brand value. The brand value is supported in the amount of loyal customers. In the market there are customers who purchase a brand for the price, that acquire the product because they admit it is better and yet they do because they generate a relationship with the brand (Aaker, 2002). When a consumer purchases a product or service of a brand in a routine form or resists to the change is being faithful to the brand, which results in an addition to brand value (Keller, 1993; Kohli & Leuthesser, 2001; Abreu, 2012). Consumer brand loyalty results from recall and brand image, depending on the brand increases customer loyalty to the brand reduces the customer's vulnerability to the actions of competing brands (Aaker, 1991).

Keller (1993) asserted that brand awareness is related with the possibility of in diverse situations, the consumer to identify the brand, tying it to name, logo or other associations. That is, it consists of the recognition (attended notoriety) and performance of recall (spontaneous notoriety) of the brand. In this case, consumers are not able to link the brand to the product, the recall advantages are negligible (Kohli & Leuthesser, 2001).

Brand associations is everything what the customer links to the brand, namely, images, product attributes, situations, organizational associations, brand personality and symbols (Aaker, 2002). For Yoo et al. (2000) brand associations consists of numerous ideas, facts, episodes, experiences that establish the consistency of brand awareness. When brand associations (organization, product, native country and personality of the mark) is powerful, beneficial and exclusive in the mind of the consumer, the image of the brand is positive (Keller, 1993).

The overall assessment of the brand is important in competitive terms as conveys a distinct credibility (Alden, Steenkamp & Batra, 1999). For Cheng, Blankson, Wu and Chen (2005), the international brand is the brand equity development process of a company that relies on positive attitudes of the brand guiding them to the target customer overseas.

Brand Equity Value in the Financial Perspective

In order to find out the most appropriate model to determine the value of the brand in the financial perspective, we proceeded to the approach of the various models of business valuation, and in particular to assess intangible assets like brand, the variables necessary for implement these models.

The valuation at historical cost in the evaluation perspective of the brand, assumes as the costs and expenses contribute to building brand value and how to reflect the actual expenses in the future value (Salinas & Ambler, 2009; Seddon, 2015). This approach is justified with the fact that all the marketing expenditures and advertising will contribute to make solid the name of the brand in the market, and consequently, its value. For this fact it must be capitalized these expenditures (Damodaran, 2006). According to Damodaran (2006), it is necessary to determine the length of amortization of expenses related to brand based on the time it is expected that the benefits of these expenses are deferred. In the next stage, it was collected data on annual expenses with brand to the time horizon of the depreciation period. Then, using the straight repayment pattern to calculate the annual amount to amortize year's expenses in subsequent years; as a result it should be able to estimate the total amortization of expenses with brand in the current year (to be treated as depreciation) and the unamortized lot of previous years' expenses, which at this moment will be treated as assets, ie brand value. This methodology measures the invested capital in the brand name but that does not reflect its current value because it uses only capitalized historical costs for the current moment (Damodaran, 2006; Salinas & Ambler, 2009; Seddon, 2015).

The brand valuation method through the use of relative valuation models uses market indicators (multiples), such as the enterprise value to sales ratio (EV / net sales) or the enterprise value ratio to a another company's market indicator (Damodaran, 2006) in comparison with a similar competing company, of the same activity sector that has similar generic products or services. In this approach, the brand value will be then the difference between the multiples of the company with brand to be evaluated and the multiple of the generic company multiplied by the

market ratio of the company with a brand to be valuated. This indicator can be based on the operating results, the turnover (net sales) or the book value of capital. This methodology is relatively simple to apply, but assumes that both companies are publicly traded and the company's value is the market value of companies (Damodaran, 2006). One of the limitations of this methodology is to identify a company who produces generic similar products or services and dimension to the company with brand to evaluate, on the other hand, when considering itself the market value of companies, the errors of evaluation by the market also will be reflected in the brand evaluation (Damodaran, 2006).

In the perspective of the brand evaluation the boarding of Discounted Cash Flow (DCF) intends to isolate the effect of the brand value in cash flows of the company being used the comparison with companies of generic brand. This methodology estimates the cash flow of the company's brand to be evaluated and the value that would be allocated if they were identical to the generic brand structure. While this approach seems simple and intuitive, the difficulty is in finding companies with similar size and structure producing identical products generic (unbranded) (Damodaran, 2006). To overcome this problem, Damodaran (2006) recommends the use of three possible approaches: (1) the generic operating margin approach: replace the operating margin of the branded company by the company in the same business area, leaving all other variables model for the company brand. Brand value is the difference between the value of the company by the DCF method with brand and the company's value to brand, but using the generic company's operating margin; (2) the return of generic capital approach: it replaces the return on company's capital by the generic company assuming this way that the power of the brand is reflected in higher capital returns; and (3) return on general excess approach: replace the excess returns achieved by the company branded by the generic company. In all of these approaches are considered two assumptions: (1) the generic company exists and we have access to its financial documents, even though both companies are unlisted; and (2) the brand is the only reason for the difference in margins, capital return and excess return between these two companies, ignoring the impact of other intangible

assets in the company's value (Damodaran, 2006), and this may be a limitation and criticism of the model.

The Economic Value Added (EVA®) method was created by Stewart (1991) and measures the economic profit of the company and support of an integrated financial management and variable remuneration system. Janssen (2005) argued that the EVA encompasses the productivity of all factors used for the business. EVA can be calculated through the difference between the Net Operating Profit After Taxes (NOPAT) and the weighted average cost of invested capital (Jalbert & Landry, 2003; Rangel, 2008). When the return generated for the use of the net assets exceeds the capital cost, EVA is positive and has value creation (Stewart, 1991; Young, 1997; Chen & Dodd, 2001; Rangel, 2008). EVA differs from traditional methods to assign high emphasis on creating value for shareholders and consider the full costs of invested capital (equity and borrowed funds) (Jalbert & Landry, 2003; Janssen, 2005; To sound, 2014). The difficulty in NOPAT calculation is one of the limitations of EVA, since it requires 160 adjustments to the financial statements performed according to generally accepted accounting principles (Weissenrieder, 1997; Cagle, Jr. & Fulmer, 2003; Jalbert & Landry, 2003). For Young (1997), the key number of adjustments depends on the company and sector of activity. There are companies for which is expendable to perform adjustments.

According to Barbullushi (2015), to calculate the EVA of a bank we have to take into account some specific aspects. The banks, in particular, can not use any financial ratio to estimate their financial soundness. The most important dimensions of the financial assessment of a bank are the profitability and risk. The bank's capital includes assets and excluded reserves from capital such as reserves of losses to loans. In calculation of capital the long-term debt is also included. The capital is calculated according to the specific characteristics of different sectors. Overall, it is impossible to implement the complete model of the EVA due to the difficulty in calculating the cost of capital across economies (Barbullushi, 2015). Valez-Pereira (2000, cited by Barbullushi, 2015), adapted the formula of EVA to the banking sector as follows (equation 1):

$$EVA_t = NOPAT_t - WACC \times IC_{t-1} \quad (1)$$

Where: EVA_t = Economic Value Added of year t; $NOPAT_t$ = Net Operating Profit After Taxes of year t; $WACC$ = Weighted Average Cost of Capital; and IC_{t-1} = Invested Capital in the beginning of the year (t-1).

Barbullushi (2015) justified the adjustment because the NOPAT of the current year use the balance of the capital in the beginning of that year. The invested capital for financial companies such as banks is the equity capital, provisions and capitalized financial results (Barbullushi, 2015). Carreta, Farina, Fiordelisi and Shwiser (2006) also had defended this formula of calculation of EVA mentioning that this is determined by the product of difference of return on invested capital with the product's cost of capital and invested capital at beginning of period (t-1). These authors also suggested several accounting adjustments to NOPAT in order to obtain values closer economic value, such as, consider research and development costs, operating expenses, loan loss reserves, taxes, restructuring expenses and risk reserves.

The basic form of WACC calculation is adapted to banks, which considered the WACC equivalent to Cost of Equity (K_e) (Barbullushi, 2015). According to Carreta et al., (2006), invested capital cannot not be measured through the total asset, consequently, the cost of invested capital is not calculated through the WACC. In a non financial company the application of the WACC is accurate; however, in the financial sector it is an error to apply it. Thus, in the financial sector the cost of invested capital should be measured by the cost of equity, which is calculated using the Capital Asset Pricing Model (CAPM), since it considers the expected return of investors (Carreta et al., 2006). Neves (2002) defines cost of equity as the required return by shareholders, being the CAPM the most widely used model for calculating the cost of equity. The CAPM, developed by Sharpe, Lintner and Treynor, is a general equilibrium model of the capital market which derive relationships that allow us to estimate the expected return for a security (R_e) as a function of the expected rate of return for the capital market (R_m) in function of the expected market return (Pinho & Soares, 2008). To compute the CAPM is necessary to estimate the risk free rate, the risk premium of equity (difference between expected market return and risk

free rate) and the coefficient beta (Carreta et al., 2006). According to Pinho and Soares (2008), the expected return on a portfolio or a security is calculated using the following formula (equation 2):

$$R_e = R_f + \beta \cdot (R_m - R_f) \quad (2)$$

Where: R_e = Expected Return on the portfolio or security; R_f = Risk Free Rate; R_m = Expected Market Return; and β = Beta of the portfolio or security.

In this context, the cost of equity is calculated using the equation (2), being R_e substituted for K_e . The cost of capital formula is the best approach of the required rate of return for the shareholders. The financial performance assessment should not use only financial indicators from accounting data as these do not reflect the risk (Barbullushi, 2015). Barbullushi (2015) shown that the majority of the enclosed banks in his research had exhibited negative EVA, even though they had profits. EVA is often used as an indicator to improve the business performance of an enterprise; nevertheless this is also useful for comparing the value of several companies (Kan & Ohno, 2012; Barbullushi, 2015). Thereby, notwithstanding the finding a negative EVA does not mean that the company is ruining since that is not on a continuous basis (Kan & Ohno, 2012). In the perspective of the brand valuation the use of the EVA methodology assumes that the excess income earned by the company can be attributed to the brand, and in this case, the brand value can be calculated as the difference between the estimated value of the company and the book value the capital invested in the company (Damodaran, 2006).

The Brand Value of Banco Bpi – The Case Study

This case study was developed in two phases: (i) the determination of the perceived brand value in the customer's perspective; and (ii) financial brand value, using the EVA method, following the methodology suggested by Damodaran (2006). However before describing the methodology followed in each phase and presenting the results, we start by doing a short description of the financial institution under analysis.

"Banco BPI", a short presentation

The *Banco BPI, S.A.*, open capital company is hosted in the Porto City (north of Portugal). This has as its mission granting a service of excellence, providing the needs of the market, responding with independence, effectiveness, transparency and dedication, with the primary aim of creating value for customers, employees, shareholders and society (Banco BPI, 2014a). BPI group is led by Banco BPI, which focuses on the business and retail banking activities and providing investment banking services as well as in asset management and life and non-life insurance (Banco BPI, 2014b).

In last the three years Banco BPI was the only Portuguese bank with positive earnings. It owns the best capital ratios of the system, the best credit risk indicators of the Iberian Peninsula and an appropriate coverage of pension liabilities. Among the listed banks was the only one that did not issue guaranteed debt by the state to manage liquidity (Banco BPI, 2014c). Figure 1 shows current logo of Banco BPI.



Figure 1 - Logo of BPI bank

Source: Banco BPI (2014d).

The logo contains an orange flower and the predominant colors are blue (symbolizes the experience) and the color-of-orange (it symbolizes the harmony) (Banco BPI,

2014d). The orange and the orange blossom symbolize the hospitality, cordiality, commitment and the sense of service, invoking for the Portuguese Discoveries. The name of the orange, throughout the Mediterranean basin, still is confused with Portugal (Banco BPI, 2014d).

Study Design

The objective of this work emerges from the following starting research question: “What is the perceived value of the brand *Banco BPI* by customers and in financial terms?”.

In the customers’ perspective it was intended to understand the value that the customers confer to this brand having into consideration the explanatory dimensions of brand equity: perceived quality, brand awareness, brand loyalty, brand associations and global brand evaluation. In consequence, it was applied the conceptual model of Aaker (1991). To address the proposed goal in the customer perspective we took the hypothesis if customers have a positive perception relatively: to the brand BPI value (H1); to perceived quality (H2); to brand loyalty (H3); to brand awareness (H4); to brand associations (H5); and to the global brand assessment (H6). Still sets the hypothesis of brand value is positively correlated with each brand dimensions (H7).

Based on these dimensions and with the purpose to reply to the research hypotheses on customer perspective, we applied surveys by questionnaire to BPI customers. Throughout the analysis to decide the rejection of the null hypothesis we assumed a significance level of 5% and a precision error of 6%. Since there is already a questionnaire that has been tested by Santos (2009), it was asked permission for its use in the present survey. Questionnaires were distributed in the first half of 2015, after that authorization. In this survey a scale of Likert of 5 points was used. By this way is assumed that an average of over 3 reveals a positive perception of customers. After the collection of the questionnaires was elaborated a database and proceeded to collected data treatment by applying the Statistical Package for Social Sciences (SPSS). An exploratory and inferential descriptive analysis as well as an exploratory factor analysis was employed. The accuracy of the mediation method

it was examined through the Alpha Cronbach analyzing the internal reliability of the data. It was observed that the coefficient of each of these dimensions measured in this survey has a high reliability. Cronbach's Alpha coefficient of the global model (all dimensions) was 0.97, revealing an excellent internal consistency.

Initially, we calculated the descriptive measures such as location measures or central tendency (mean, median and mode) and dispersion (sample variance and standard deviation) of the variables gender, age, education level, place of residence, occupation and number of years as customers who have Banco BPI as main bank. To test the research hypotheses, it was calculated the average of responses per respondent, in order to verify if customers had a positive perception regarding the brand and each dimension of the brand. To find out the "Total Brand Value", it was calculated it by averaging the means of each dimension. Yet, to test the research hypotheses we analyzed the possibility of applying parametric tests to variables. To test the seventh research hypothesis was essential to check the correlation between brand value and other variables. Afterward the exploratory descriptive and inferential analysis, it was performed multivariate analysis based on the exploratory factor analysis. This analysis is essential to check whether it is recommended by the Kaiser-Meyer-Olkin (KMO) and sphericity (Bartlett test) the mode (Maroco, 2003).

To answer the second part of the objective of this research (determination of brand value in the financial perspective) we applied the method of EVA, following the methodology of Damodaran (2006). In the first step we identified a company similar to what it was intended to assess its brand value, which had supplied services or generic products of similar size and in the same sector of activity (Bank Millennium BCP, one of the main competitors). In the second step we picked up the accounting and financial information of the company to evaluate and of benchmark company (generic company). In the third step it proceeded to the necessary adjustments to determine the model variables, NOPAT, the Ke and the IC. Then, it was found the value of the company resulting from the sum of invested capital at the beginning of the year plus the total Market Value Added (MVA). To determine the value of the brand itself subtracted from the branded company's value using its accounting indicators and EVA method, the value of the company but using one of EVA model's

variable (invested capital or cost of capital or net profit operating after taxes) of benchmark company. To determine the current value of future EVA, were defined assumptions about the EVA growth rate of the company under analysis and assume that this is a growing perpetuity at this growth rate.

For the determination of weighted average cost and since the measure concerns a financial institution which invested capital is considered the economic capital (capital plus reserves and the capitalized financial income), we used the cost of equity. To determine this cost, the CAPM model was applied for which data were collected to determine the beta coefficient of company shares to evaluate and benchmark. In the selection of benchmark was considered the fact of Banco BPI shares being listed on the Euronext Lisbon stock exchange and belong to the PSI 20 index (BPI Bank, 2014d), so we selected another quoted bank belonging to this index. Thus, given the above requirements we had chosen the Millennium BCP Bank.

To implement the described methodology and for branded company under valuation, Bank BPI, and for the benchmark company, it had been collected accounting, financial and non-financial data from the management reports of the last five years (2010 to 2014), obtained from the web pages of these banks (Banco BPI, 2011, 2012, 2013, 2014e, 2015; Millennium BCP, 2011, 2012, 2013, 2014, 2015a). From these reports one determined the NOPAT and invested capital. To determine the cost of capital we retrieved from Euronext Lisbon (2015th, 2015b, 2015c) and European Money Markets Institute (EMMI) (2015) web pages, respectively, the stocks' and index closing prices on a daily basis (Banco BPI, Millennium BCP and the PSI 20) and Euribor - 3 months, also on a daily basis, for the timeframe 2009-2014.

The treatment of such data was performed through spreadsheets (Microsoft Office Excel®). It was applied the linear regression by the ordinary least squares method to determine the beta coefficient using as dependent variable (Y) the daily stocks return and as independent variable (X) the PSI 20 index daily return. To test the model statistical significance it was used F-test statistics that has a F-Snedecor distribution with p and $(n-p-1)$ degrees (Maroco, 2003), for a level of significance of 5%, which corresponds to a range of 95% confidence.

The perceived value of “Banco BPI” brand, in the customer’s perspective

Sample characterisation

For this research, 250 surveys were applied by a questionnaire distributed in the municipality of Braga, through a convenience sample. According to the collected data, 68.4% of respondents are residents in Braga County. As for gender, 56.80% of respondents were female and the remaining 43.20% were males. According to age, 47.20% of the respondents aged between 30 and 50 years, 33.60% were younger than 30 years and only 19.20% had more than 50 years. With regard to qualifications, 34.00% of respondents had secondary education, 30.40% the 9th grade, 26.80% were graduates, 8.40% had graduate/Masters/MBA degree and only 0.40% had other qualification than those mentioned (excluding PhD). Therefore, it was found that none of respondents were PhD.

Regarding the residence it was observed that the majority of respondents live in rural areas (66.80%) and only 33.20% live in urban areas. Yet it was found that 52.80% of respondents were employed person; 14.00% were unemployed, 13.60% were students, 6.00% had another occupation that was not mentioned and only 3.20% worked in the public sector. Another question was related to number of years the respondents were BPI clients and is their main bank. We have noticed that 30.40% of respondents were clients of between 6-10 years; 27.20% were customers for over 15 years; 21.60% were customers between 1 to 5 years; 17.60% were customers between 11-15 years and the remaining 3.20% were customers only 1 year ago.

Descriptive and inferential analysis

Table 1 was built with the aim to analyze the research hypotheses that was intended to ascertain whether the inquired customers have positive perception relatively to Banco BPI brand, as well as relatively to each one of the brand value dimensions.

Table 1

Descriptive statistics on Brand Dimensions

	Average	Standard Deviation
Perceived Quality	4,20	0,76
This brand has quality	4,36	0,79
This brand fully meets my needs	4,12	0,92
This brand is the best in its category	4,04	0,87
The probability of this brand to be reliable is very high	4,32	0,85
I can always count on the consistent high quality of this brand	4,18	0,87
Brand Loyalty	4,01	0,93
I consider myself loyal to this brand	3,87	1,01
If this brand has the products and services needed I do not resort to another	3,97	1,00
This brand is always my first choice	3,85	1,24
It would recommend this brand	4,36	0,92
Brand Awareness	4,36	0,71
I recognize the image of this brand	4,48	0,70
I can distinguish this brand from the remaining	4,38	0,80
I know well this brand	4,22	0,88
Brand Associations	4,22	0,83
It occurs to me easily some characteristics of this brand	4,02	1,05
I remember easily the symbol or logo of this brand	4,40	0,85
I find it easy to visualize this brand	4,41	0,80
I think easily in this brand	4,04	1,03
Global Brand Evaluation	3,90	0,93
Makes sense to buy products and services of this brand instead of buying other brands even when the services are similar	3,88	0,90
Even if another brand has the same characteristics I prefer to buy this	3,87	1,02
If there is another brand as good as this, I would rather choose this	3,91	1,02
Even if another brand is no different it seems more appropriate to choose this	3,92	1,04
Total Value of Brand	4,14	0,74

Source: Own elaboration through the analysis of the survey results in SPSS.

The total brand value was calculated by the mean average of the five dimensions under analysis. The observed value was 4.14 (S.D.¹= 0.74), indicating that the customers have positive perception relatively to the total brand value. However, they have a more positive perception regarding the brand awareness and less positive, although greater than 3, with respect to overall assessment of the brand.

To validate the research hypotheses previously formulated we applied the Student t-test to each dimension and overall brand value, being observed test values below 0.001 (at a 5% significance level), thus the six research hypotheses are validated. Ascertaining that customers had a positive perception regarding the Banco BPI brand value (H1 is valid), the perceived quality (H2 is valid), the brand loyalty (H3 is valid), the notoriety (H4 is valid), the brand associations (H5 is valid) and overall assessment of brand (H6 is valid).

With the aim of verify the weight of each dimension of the total brand value and analyze the correlation between dimensions we applied the Pearson correlation coefficient, for a 1% significance level, whereby it was observed that all variables have positive correlations and are statistically significant with the total brand value and the perceived quality that shows a stronger correlation (0.927), followed by the overall assessment of brand (0.917) and loyalty brand (0.910). These are the dimensions with greater weight in determining brand value, not to mention the reputation and brand associations that are also strong because they have a good correlation coefficient. Thus, it was concluded that the brand value is positively correlated with various model dimensions, whereby the seventh and last research hypothesis is validated.

Exploratory factor analysis

In multivariate analysis based on the exploratory factor analysis, we identified the factors that seek to explain the correlation between the dimensions of brand value. To assess whether the factor analysis could be implemented it was used the KMO criteria, noticing a KMO approximately equal to 0.962. According to Maroco (2003), it is an excellent indicator and recommends the application of factor analysis.

¹ S.D. is the standard deviation.

Bartlett's test showed a test value of less than 0.001, just lower than the significance level of 5%, so it rejects the null hypothesis inferring the existence of correlation between the variables. According to the rule of eigenvalues greater than 1 (Maroco, 2003), it was found that the brand value can be explained by two latent factors that explain 72.90% of the total variability (component 1 explains 64.80% and component 2 explains 8.10% of the total variability). Through the scree plot graph we confirmed the retention of two factors.

Taking into consideration the indicator MSA was found that this was more than 0.5 in all variables (all are useful in defining factors). Verifying that brand loyalty and overall assessment the brand had more weight in the component 1 and the reputation and brand associations in the component 2, the perceived quality was similar in both components. The component 1 was named by customer loyalty, as it is related to the trust and loyalty that customers have at Banco BPI and the component 2 by product quality and service because it is related to the knowledge of the bank's characteristics. The perceived quality has a similar weight in both components, so that both relate to what customers expect from the bank.

The Brand equity value of “Banco BPI” in the financial perspective

Financial indicators of “Banco BPI” and its benchmark

BPI Group operates in two main markets which are Portugal, where it has a strong competitive position; and Angola, which registered a strong and sustained growth. Through participation in Banco Fomento de Angola (BFA) has a market leadership position (BPI Bank, 2014d). The Portuguese Investment Bank in Iberia develops investment banking activities, stocks, Corporate Finance and Private Banking.

Millennium BCP is the largest private bank in Portugal, has about 2.3 million customers. This bank has a strategy of innovation, dynamism and financial strength. It highlighted a leader in many areas of financial business in the Portuguese market and a reference institution at international level (Millennium BCP, 2015b). The BCP Group, in addition to the consolidated position in the Portuguese market, it is also an

institution of reference in Europe and Africa, due to its banking operations in Poland, Switzerland, Angola and Mozambique. This bank still labors with Macao through its on-shore branch, which aims to be an international business platform (Millennium BCP, 2015b, 2015c).

Comparing the evolution of financial indicators of both banks it was observed that customer loans decreased over the years (2010-2014). For this time frame, it was also detected an increase in customer deposits. The banking product of Banco BPI declined constantly every year except 2011 to 2012. The banking product of Millennium BCP decreased from 2010 to 2013, with an increase from 2013 to 2014. Regarding the Core Tier ratio there was an increase from 2010 to 2013 in both banks, however, the BPI's ratio has been constantly higher than of Millennium BCP.

Calculation of "Banco BPI" and "Millennium BCP" Beta coefficient and their cost of capital

To calculate the cost of equity of the companies under analysis is employed the CAPM model and calculated the beta coefficient of the stock of these companies through the simple linear regression model by the ordinary least squares method. For this purpose, it was extracted the daily closing prices from 2009 to 2014 for stocks of both banks and the PSI 20 index. After these procedures, we obtained a beta coefficient of 1.3812 for the Banco BPI stocks (market risk in excess of 1); and a beta of 1.587 for Millennium BCP stocks, higher than the Banco BPI market risk. The CAPM was calculated based on the literature review of Carreta et al (2006) and Pinho and Soares (2008). As a proxy for risk-free interest rate (R_f) – the risk-free return - we used the daily average yield of 3-month Euribor (making split of the annual nominal rate per day, using the calendar year) for the time horizon 2009-2014 and the market risk premium (the difference between the market return and the risk-free return) for each stock.

The (daily) risk-free interest rate obtained was 0.0020% and the risk premium was -0.0210%. To compute the stocks return and the PSI 20 return was determined the logarithm of the daily change on the stocks closing price and the PSI 20 over the years. The average market return (R_m) was estimated by the average returns of the PSI 20 we found a value of -0.0190%. The cost of equity of Banco BPI was -0.0270% and -0.0314% for Millennium BCP. The encountered negative rates may be justified by the fact that the Portuguese stock market is in recession due to the financial crisis that has taken place worldwide since 2008, and which was aggravated in Portugal by the sovereign debt crisis.

Determination of EVA for the period 2010 to 2014

For the calculation of EVA, in the period of 2010 to 2014, were initially made adjustments to the accounting and financial data to determine the NOPAT each year. As we are analyzing financial companies, the invested capital is the economic capital of the companies. After these adjustments, the EVA was determined by the difference between NOPAT and the cost of economic capital, as referred by Damodaran (2006) methodology.

The determination of EVA of Banco BPI in each year during the period of 2010 to 2014, we have as basis the accounting and financial data of it. the NOPAT was calculated by adding the operating earnings (subtraction of the structural costs to banking product) plus provisions and amortizations, subtracting the marginal income taxes. For the calculation of invested capital (economic capital) was added to shareholders' equity depreciation, provisions and deferred tax liabilities net of deferred tax assets.

In the determination of EVA of "Banco BPI" in each year, in the period of 2010 the 2014, were had as base the data accounting and financial of this. The NOPAT was calculated through the somatório of the operational results (subtraction of the banking product and the costs of structure) and of the provisionses and amortizations, having deducted itself the taxes on profits. For the calculation of invested capital (capital economic) the proper capital of the shareholders was added to it depreciations, the provisionses and the liabilities for taxes differed deduced from the assets for differed

taxes. To determine the EVA of Banco Millennium BCP, in each year for the period 2010 to 2014 we had into consideration the accounting and financial data. We started by the computation of the NOPAT as the sum of operating income, provisions, amortization, depreciation and impairment and subtracted-taxes on profits. For the calculation of invested capital (economic capital) was added to equity shareholders of the depreciation, provisions, goodwill and deferred tax liabilities net of deferred tax assets.

The cost of capital of each company was calculated by the product of return on equity capital for each company and invested capital for the beginning of year during the period under analysis. We compare Banco BPI's annual EVA with the Millennium BCP' ones for the period of 2010 to 2014 (see table 2 below). In table 2, it exhibits the descriptive statistics related to comparative EVA. As it is shown in table 2, the EVA for Bank BPI was regularly positive throughout the 5 years under analysis, nevertheless, it has being decreasing to an average rate of 10.39%, except of 2011 for 2012 that suffered an significant increase, due to the strong growth of operating income in 2012 to 2011 period and the decrease in invested capital in this period. As stated in the literature review, it was accomplished through Carvalho (2014) statements that over the years there has been value creation in this bank, however, this value creation is decreasing. BCP's EVA has constantly been negative, contrary to what was found with Banco BPI. According to Kan and Ohno (2012), it turns out because EVA is often used as an indicator to improve the business performance of an enterprise and is useful in comparing the value of several companies. According to Carvalho (2014), BCP has not created value in the past five years, even when the operating results were positive.

Table 2

Comparison of EVA for both banks (Values in Thousand of Euros)

Designation	Year				
	2010	2011	2012	2013	2014
EVA BPI	430 447	231 296	813 390	450 087	248 691
EVA BCP	-461 616	-3 741 031	-3 464 120	-440 097	-1 520 843
Comparason of EVA	892 063	3 972 327	4 277 510	890 184	1 769 534
Minimum	890 184		Average		2 360 323
Maximum	4 277 510		Standard Deviation		1 653 806

Source: Own elaboration through given calculations having as base of Banco BPI (2011, 2012, 2013, 2014e, 2015), Millennium BCP (2011, 2012, 2013, 2014, 2015a), EMMI (2015) and Euronext (2015a, 2015b, 2015c).

Comparing both EVA we found that BPI had an EVA higher than the BCP during the reported period, and this difference increased in 2012 and is lower in 2010. Banco BPI had an EVA higher than BCP with an average of 2,360,323 thousands of euros (S.D. 1.653.806).

The Brand Equity Value of “Banco BPI”

To calculate the value of the brand, according to Damodaran methodology (2006), we defined three expected scenarios for the growth rate of NOPAT (g) and invested capital for Banco BPI: (a) scenario 1 ($g = -10\%$), considering that the growth rate observed in the last five years for the EVA will remain in the future; (b) scenario 2 ($g = -5\%$) it was considered a slightly more optimistic scenario which assumed a negative growth rate of only 5%; and (c) Scenario 3 ($g = 5\%$) was assumed a more optimistic growth rate. The company's value in each scenario was calculated using the EVA method, assuming a perpetuity growing geometrically to determine the MVA. Thus, the value of the current company (2014) is the capital invested at the beginning of 2014 plus the MVA. In each of these scenarios we had compared the enterprise value calculated with the growth rate of this scenario, with the value of the company calculated using NOPAT benchmark company (Millennium BCP) and the other variables values of for calculating the Banco BPI's enterprise value by EVA method.

The difference between these two values is the value of the Banco BPI brand. This procedure was repeated, but considering the amount of banco BPI with the Millennium BCP's capital invested in the beginning of 2014.

Through the estimate of total value of Banco BPI in each of the three considered scenarios and the current cost of capital calculated using the CAPM model, as well as the brand value, as was described in the methodology above, calculated by the difference between the company's total value and the company's total value using benchmark company's NOPAT or instead the invested capital, was observed that for scenario 1 and taking into account the Banco BPI's 2014 NOPAT and invested capital at the beginning of this year, the Banco BPI's Total value was 6,483,618 thousand euros and brand value calculated from the comparison of the Millennium BCP's NOPAT was 17,741,429 thousand euros. The Banco BPI's Brand value when calculated on Millennium BCP's invested capital, leaving all other variables in the model with Banco BPI indicators was 1,154,995 thousand euros. In relation to Scenario 2, the total value of Banco BPI, now considering the growth rate of only -5%, increased to 8,990,833 thousand euros keeping everything else constant in the model of Banco BPI, with brand value between 35 579. 337 thousand euros, with the Millennium BCP's NOPAT and 1,558,136 thousand euros with Millennium BCP's invested capital. In scenario 3, the Banco BPI total value was 34,239,434 thousand euros and the brand value between 35,190,337 thousand euros and 36,348,405 thousand euros. The lowest value found was associated with scenario 1 using the Millennium BCP invested capital as benchmark and the maximum value was associated with scenario 3, also with invested capital of Millennium BCP.

The procedures of brand value calculation turned to repeat for the three scenarios, but assuming a required rate of return by the shareholders of 1%. For scenario 1, taking the NOPAT and invested capital at the beginning of 2014 of Banco BPI, with the cost of capital of 1% per year and the negative growth rate of 10%, the Banco BPI total value by EVA method was 5,878,258 thousand euros. In this case, using the Millennium BCP's NOPAT, the Banco BPI's brand value was also lower being of 16,084,955 thousand euros and 1,047,156 thousand euros using the capital invested. The analyses for the remaining scenarios were similar, showing that the

brand value ranged from a minimum of 959,893 thousand euros (scenario 2 using the invested capital of Milleniun BCP) and the maximum value of 45,385,497 thousand euros (in scenario 3 also using invested capital of Milleniun BCP for computing brand value). Table 3 shows the brand value “Banco BPI”, in 2014, as it was previously describe for each considered scenario.

Table 3

Total Brand value of Banco BPI considering three scenarios and the current cost of capital and 1% required rate of return

(Values in Thousand of Euros)

Ke current			
Scenario 1 (g= -10%)	Current Data	With BCP NOPAT	With BCP IC
EV	6 483 618	-11 257 811	5 328 622
Brand Value		17 741 429	1 154 995
Scenario 2 (g= -5%)	Current Data	With BCP NOPAT	With BCP IC
EV	8 990 833	-26 588 505	7 832 697
Brand Value		35 579 337	1 158 136
Scenario 3 (g= 5%)	Current Data	With BCP NOPAT	With BCP IC
EV	34 239 434	-950 903	-2 108 971
Brand Value		35 190 337	36 348 405
Ke 1%			
Scenario 1 (g= -10%)	Current Data	With BCP NOPAT	With BCP IC
EV	5 878 258	-10 206 696	4 831 102
Brand Value		16 084 955	1 047 156
Scenario 2 (g= -5%)	Current Data	With BCP NOPAT	With BCP IC
EV	7 451 837	-22 037 247	6 491 943
Brand Value		29 489 083	959 893
Scenario 3 (g = 5%)	Current Data	With BCP NOPAT	With BCP IC
EV	43 030 780	-1 490 813	-2 354 717
Brand Value		44 521 593	45 385 497

Notes: K_s – cost of capital; g- growth rate; EV – Enterprise Value; NOPAT – Net operating earnings after taxes; IC – Invested Capital.

Source: Prepared by using calculations based on data from Banco BPI (2015n) e Millennium BCP (2015c).

Additionally, we developed a sensitivity analysis to brand value considering the change on growth rate and required rate of returns by shareholders between 15% and 15% (with changes of 0.25%). In sensitivity analysis considered the brand value

as the difference of the Banco BPI total value and the value of the bank but using the Millenium BCP's NOPAT, leaving all other Banco BPI variables in model, there was a maximum of 1,062,502,043 thousands of euros (associated with a growth rate of -0.25% and a return required by the shareholder 15%) and a minimum of -8759698129 thousand euros (associated with a growth rate of 0% and a return required by the shareholder 15%) with a mean -52,026,088 thousand euros and the standard deviation of 616 108 644 thousand euros. It should be noted that this analysis showed that for growth rates above, -0.25% maximum and 0% at least for these growth rates the brand value was more or less bigger the return required by shareholders.

Conclusion and Suggestions for Future Research

Starting from Aaker (1991) model, testing a set of research hypotheses (7 in total) whereby it was found that BPI customers show a positive perception relating to brand value, and each of the dimensions of Brand Value (perceived quality, brand loyalty, brand awareness, brand associations, global brand evaluation). Finally, it was recognized that the brand value is positively correlated with each of its dimenions. With exploratory factor analysis, were extracted two components, component 1 (customer loyalty) is related to the trust and loyalty that customers have for with Banco BPI and component 2 (quality of product or service) is related to knowledge the bank's characteristics.

Over the time period studied there were positive EVA results for Banco BPI, concluding that there was always creating value in this company but this creation of value is decreasing, since the EVA despite being always positive, it has been declining. Banco BPI's EVA is on average much higher than that of Millennium BCP. To calculate brand value we defined three expected scenarios for the growth rate of earnings (g) and invested capital for Banco BPI. Where it was found in all scenarios, when only used Banco BPI indicators the company's value was higher than when it introduced of Millennium BCP indicators, so the brand value Banco BPI proved to be

frequently positive. As were observed positive results in both perspectives, as expected, we conclude that the Banco BPI brand has an overall positive value.

Throughout the research we faced with some limitations, particularly in the calculation of EVA to determine the NOPAT is unable to identify the costs of research and development, capitalization amortization and goodwill (Banco BPI). The fact that the research is based on information from the financial reports is another one of limitations that can be pointed.

To determine the brand value also could have used commercial methods, such as inter-brand and brand DNA. Yet it would be appropriate to make a comparison of the value of the brand from the perspective of customers and the larger financial BPI desk of Porto and the biggest desk BPI Lisbon, insofar as these cities have a highest population density. Also, it is suggested the same study but performed by applying the Monte Carlo method and the comparison of models for such as Price to Sales since both companies are listed.

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