

**INSTITUTIONAL IMAGE AND THE ROLE OF THE MANAGERS OF A MAJOR BRAZILIAN  
FINANCIAL INSTITUTION: ANALYSIS OF PERCEPTIONS OF HIGH INCOME CUSTOMERS**

**ABSTRACT**

The economic system has undergone profound transformations due to recurrent technological advances that have repercussions on the organizations. Additionally, there is a demand coming from an affluent social class that, demands a customized service. It is therefore important to develop a corporate strategy that includes differentiated products and services and a focus on the agility and reliability of the business, in accordance to the market. This paper analyses the dynamic of the high income customers perceptions regarding to the services provided by an Brazilian financial institution taking into account its institutional image and the role played by its managers. The selected model is based on a mixing of three constructs, namely the customer's evaluation of institutional operating characteristics, the quality of interaction between customers and managers and the propensity to indicated new customers to the bank. The study approach is quantitative by means of a survey followed by a factorial analysis for the selection of the indicators of each of the aforementioned constructs. A multiple regression model was then estimated, having the institutional image and manager's performance as predictors, using the OLS method and the ordinal logistic function. The results showed that the customers satisfaction and its propensity to indicate new customers to the bank is properly explained by two predictors as suggested by the model. Furthermore, it was identified a greater influence of the construct which depicts the managers performance. Such conclusions contain fundamental elements for the design of corporate strategies.

**Keywords:** Customer Relations; Banking Services; Institutional Image.

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## 1 INTRODUCTION

The financial market is undergoing major transformations, accentuated by acute financial crises and scenarios of uncertainty, increasing the demands of more transparent and ethical practices that affect both customers and bankers. Furthermore, the advances in information technology, the growth of international trade and the intense competition promoting mergers and acquisitions, as well as the concern for the welfare of society, and the attention given to the environment and social responsibility directly affect the banking sector, redefining purposes and re-dimensioning operational processes, oriented to corporate and social results (Xavier Jr. et al., 2014, Zavareh et al., 2012, Kamiab & Singaravelloo, 2017, Lee, 2016), as well as to new values of contemporary society (Almquist *et al.*, 2016).

In contemporary Brazil, there is a change in the income profile of the population in several regions, with new participants at the top of the economic pyramid, with impacts on the context and behavior of the individual as a customer, as well as promoting a greater demand for customized and directed attention to the segment of high income, indicating a new pattern of competitive intensity (Martins, *et al.* 2014).

The themes of customer structure, strategy, behavior, and customer loyalty in banking have often been addressed in the literature, both in the field of strategy theory and marketing, by academic authors, financial institutions, and consulting firms. Some recent contributions, such as the future role of banking (Nordea, 2017), bank capital structure (Gropp & Heider, 2010), retention (Haldane & May, 2011), customer profitability (Guibaud *et al.*, 2004), and credit risk (Silva *et al.*, 2004), 2016), the dimensions of service quality and customer satisfaction (Minb & Huu, 2016) and the role of the manager in the banking relationship (Neto & Marques, 2016), among other investigations.

Seeking to match the private competition, the financial institution, object of this research, whose name is not revealed because of corporate questions, identified the need to offer these customers differentiated products and services, ensuring personalized services, focused on security, agility and convenience. A pilot project was created within the scope of the institution, directed to the regional superintendencies, with the objective of performing personalized and differentiated service to the customers belonging to the "affluent niche", that is, the one that has a minimum investment amount of one million reais. Such project foresees a behavioral change in the relationship with this customers, as well as the adequacy of products and procedures to the new market standards and a new posture in the service together with the modern and effective negotiation techniques. The orientation of the relationship with the high-income customers is based on a clear positioning for this public, the optimization of the relationship with the customers

and the profitability of the portfolios, as discussed by Cohn *et al.* (2014).

In this context, this study aims to evaluate the perceptions of customers of this "niche", which was done through econometric estimations of a proposed model for this research, relying on the concept of the Net Promoter Score (NPS). The NPS is an evaluation method that seeks to measure the satisfaction and loyalty of consumers of any type of organization, focusing on calculating the degree of propensity to appoint a new customer from those who maintain a business relationship with the company. According to its creator, Fred Reichheld of Bain & Company's Loyalty Practice, the NPS aims to convert "most customers into promoters and few into detractors" (Reichheld 2006; 2011).

It should be noted, however, that the study is not limited to raising a customer satisfaction index, but to present and test a model that allows the identification of variables that explain customers perceptions about the institution and its managers, as well as quantify the likelihood of him becoming a detractor instead of being a promoter of the company's image. In other words, the dependent variable is the propensity to indicate the organization by a customer to other prospects, reflecting the degree of customer satisfaction with the institution, demonstrated by the scores obtained from a simple NPS-type question. The predictive variables are the intensity of the image and the confidence aroused by the financial institution, as well as the performance of its managers, according to perceptions of this same customer base. Data were obtained from a random sample of "affluent" customers.

## 2 LITERATURE REVIEW

Organizations are increasingly seeking the power to intervene in the customer's decision-making process, in a direct, favorable and supportive way to achieve a sustainable business. One way to achieve this attribute is to study consumer motivation. According to Fullerton (2013) the birth of researches on consumer motivation took place in the 1940s, with studies intensifying in the following decades assuming concepts, taxonomies and nomologies from various areas of knowledge. For Blackwell, Miniard and Engel (2011) consumer motivation represents the attempt to satisfy the physiological and psychological needs through the purchase and consumption of a product. Sousa et al. (2016) highlight the intense evolution of studies in the context of the areas of Neurosciences, from the mapping and evaluation of the brain in vivo, enabling the emergence, in the social sciences, of research fields called Neuromarketing, oriented to environmental perception and evaluation and rational or emotional decision making.

In the banking area focused on the private individual, the analysis of customer behavior is of

paramount importance for the design of corporate actions and strategies, especially since it is a complex service, in the perception of the customers. In this sense, management of the relationship with special customers, or high income ones, carried out through the managers, has evolved from the status of eventual competitive advantage to a latent need in companies. Thus, negotiations over time between these customers and banks have been oriented toward dense relationships, requiring continuous business and individual consulting interactions, approaching the intimacy of the individual customers (Peppers & Rogers, 2016).

For this, it is necessary to understand each individual in its peculiarities and different needs and requirements, going from the traditional marketing view, based on transactions, to the focus on the customers and advancing to the relationship between customers and companies. The structural and strategic alignment of financial institutions determine competitiveness in the sector (Rhee & Mehra, 2006). On the other hand, the most common situation is that the banking customers is simultaneously the customers of several banks, which requires the implementation of effective strategies, with the essential purpose that the customers maintains his preference for a certain institution (Cortiñas et al. 2010). Thus, relationship marketing seeks the development of perennial relationships between the companies and all the stakeholders involved, from consumers and distributors to their suppliers (Kumaret et al., 2010). According to George & Kumar (2014), the provision of banking services requires attributes such as reliability, responsiveness, fulfilling commitments, efficiency, privacy and security in relation to customers. Traditional marketing strategies can still be, and are, used to attract new customers, which depends on the stage of the company's positioning, while relationship marketing seeks to deepen the bond by bringing individuals who are already customers for the consolidation of loyalty. Lehtinen & Järvinen (2015) revisit classical authors and re-discuss the four intrinsic characteristics of the universe of services, which make up their peculiarity, being intangibility, variability, inseparability between production and consumption and perishability, applying them to innovations, including banking services. Strategic performance in these characteristics implies an increase in corporate competitiveness, as responses to the actions of developing long-term relationships between the company and its direct customers and other stakeholders.

In establishing the business relationship, the company makes the customer a series of promises, in the form of products and services, financial solutions, transfer of information, social contacts and new experiences, leading to future commitments and loyalty.

Studies on consumer behavior, particularly on the financial business sector, are aimed at segmenting the various markets, which in essence consists of

bringing together and characterizing groups of customers that share common traits. The actions aimed at such a public are based on the structure of market segmentation, when the segregation of different groups allows equal treatment among the niches, more effective and adequate to the standard of customer demands and expectations (Tavares, Afonso & Locatelli, 2012). In the banking market directed to the high-income niche, the main products demanded by the customers involve financial consultancy in applications, financing of ventures, insurance, credit cards and pension plans, which are created with significant frequency by the market. Because of the specificity and differentiation of the segment, it is often necessary to provide exclusive managers, qualified for the special service, who are willing to visit the customers at his or her place of work or residence.

The simple opening of a checking account establishes a set of transactions, such as transfers, deposits, investments, withdrawals and payments, which result in a relationship between the institution and the individual, unlike purchases of consumer goods, which, in order to be configured in a relationship, must occur successively over a significant period of time. Other peculiarities of bank consumers are the great diversity of customers and the strong governmental regulation of the sector, either through the supply of currency or by supervisory measures by competent bodies (Hoskinset et al., 2016).

Weber (1988) when referring to the American banking market of high-income individuals, object of the present study, explained the importance of knowing deeply the expectations of the consumers and offering products and services customized and adherent to such expectations, and warning that the conquest and maintenance of these customers are not a simple mission and are far from being based only on aspects related to rates or tariffs. Razaket et al., (2016) deepen the theme, but they conclude that, for high-income customers, satisfaction does not guarantee the loyalty of the banking customers. In short, the high-income customers of a financial institution demand elements such as solidity and security in the business, personalized service, long-term relationship and convenience for transactions, mainly through internet banking. It also demands agility in service, availability of the manager, good quality and low interest rates and administration of products and services, as well as other conveniences.

### 3 THEORETICAL MODEL

The adherence to the theoretical framework previously outlined permits to opt for the Net Promoter Score (NPS) as an adequate synthesis indicator to an evaluation of the degree of customer satisfaction with the services provided by the institution studied.

To determine the Net Promoter Score it suffice to formulate a simple question, as represented in Figure 1.

**Figure 1** - Graphical representation of the NPS question.



Source: Reichheld (2006).

The answer to this question allows companies to keep track of their index of detractor, neutral and promoter customers producing a clear average for the organization from the customer's point of view. According to Duarte (2012), the permanent calculation of the Net Promoter Score and the monitoring of its evolution, brings benefits to any type of organization in any context. It is a way to keep up with business evolution based on customer's feedback, from their propensity to refer others. The premise is that the preservation of customers promoters makes any company more solid in the long run, and the spread of corporate values is done spontaneously by satisfied customers.

Despite the NPS's ability to quantify perceptual satisfaction and customer propensity to refer an institution to its reference groups, the instrumentality is limited to understanding the aspects responsible for such positioning. Thus, in this study, only the idea of a simple question to quantify customers satisfaction is absorbed from the NPS, and is complemented by a causal model appropriate to the examination of the motivations.

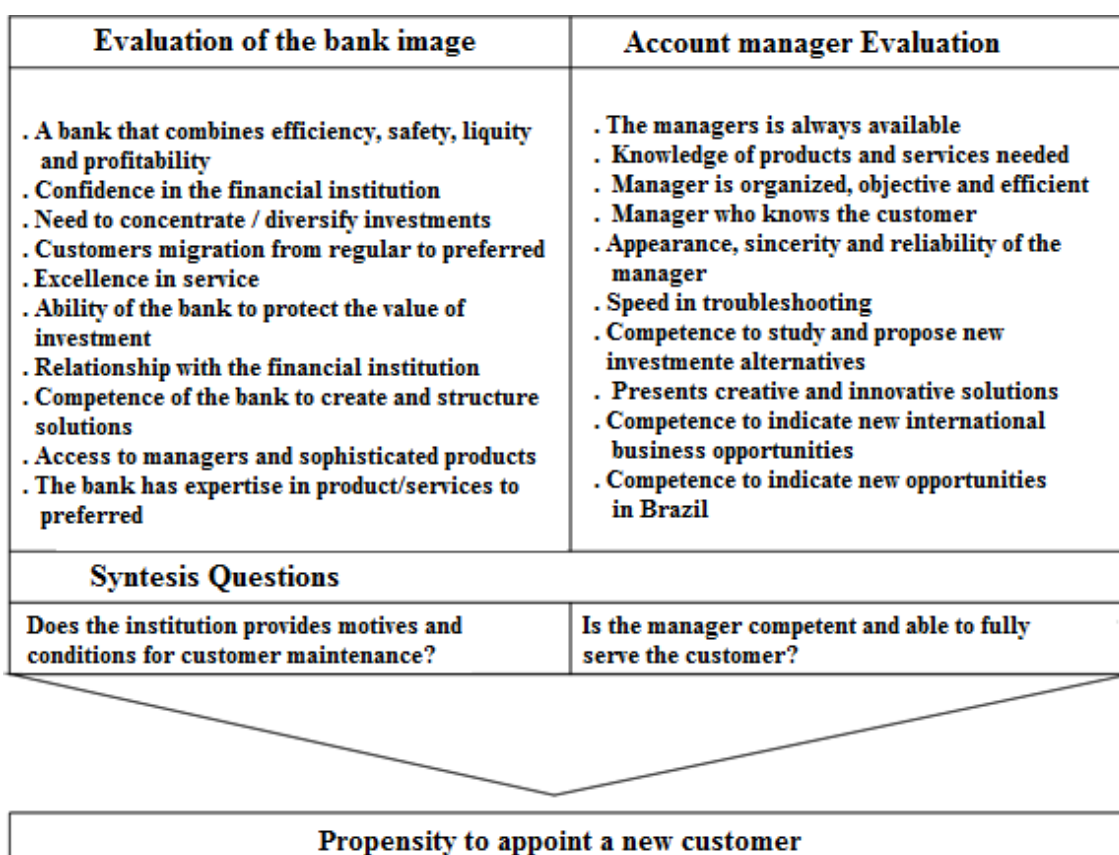
From the reference framework presented in section 2 and a restricted disclosure survey for Private

Banking customers in Brazil commissioned by the financial institution object of this study, two constructs emerged that are considered essential in relation to customers, in a logic of complementarity and mutual dependence: The institutional image and the relations with the account manager.

The institutional image encompasses aspects such as security, solidity, low operational risk, transparency and ethics in the relationship with customers, and an institution capable of offering more sophisticated services and products inherent to a private banking service in Brazil and abroad. The attributes of the account manager's evaluation portray the behaviors, skills and attitudes of the professional involved in meeting the demands and requests of products and services by the customers. If the customers feels secure and comfortable with the institution and is well served by the management body, there will be no reason to move to another financial institution and he can probably refer the Bank / Manager to their relationship group.

The questions that represent the indicators of each of the constructs that together make up the adopted model are detailed in Figure 2.

Figure 2 - Constructs of the analysis model



Source: Prepared by the authors.

In summary, the examination of the nomological chain that embodies the model that represents the three constructs: "Perception of Customers in Relation to the Institutional Image", "Perception of Customers in Relation to the Service of Account Managers" and the "Propensity to Indicate New Customers To the Bank" constitutes the essence and purpose of this study. In other words, the incursion carried out in the conceptual framework that deals with the theme in question allowed us to examine the dynamics underlying the process of evaluating the image of the institution through a model that consists essentially in the relationship among these three constructs.

The data survey, covering ten (10) questions/indicators for each one of the constructs and one (01) to portray the Bank's willingness to refer to potential customer, was done through the application of a structured questionnaire. However, in order to facilitate the answers to the questionnaire, a form of evaluation that was closer to the day to day life of the people was used, translated into a Likert scale of seven points, namely: 1 - I totally disagree; 2 - Partially disagree; 3 - Having to agree; 4 - Having to disagree; 5

- I neither agree nor disagree; 6 - I partially agree; 7 - I totally agree.

The questionnaire was answered by 203 customers in the high-income niche, and respondents received the questionnaire through emails or messages from WhatsApp containing the search link housed in Google Drive. The research was performed in the months of November and December 2015 and there were no data missing in the answers.

The procedure adopted in the research consisted in the development of a triangulation that is characterized by the use of different methodological treatments to examine a single question. In this aspect, it is emphasized that there is a high degree of agreement among the methodologists in relation to the assertion that this type of triangulation increases the validity of the research, besides providing a more comprehensive view regarding the phenomenon investigated.

In the present study, triangulation consisted of the use of two different statistical treatments using the same database, which, in turn, were extracted via forms applied to obtain the numerical values of the indicators that depict the constructs constituting the adopted model.

Initially, the average value of customer satisfaction (question derived from the NPS) was computed for each of the 203 customers, which depicts the variable to be explained (dependent). Then, factorial analysis was used to verify how many indicators, out of 10, were needed to explain each one of the constructs (satisfaction with the bank's image and satisfaction with the manager) in line with the responses of 203 customers. Identifying the factors that depict the various dimensions or attributes of the hypothetical constructs, which can not be measured directly, we calculated their means for each of the customers and these represent the metrics of the predictive (explanatory) variables of the model.

Then, the ordinary least squares (OLS) method was applied to estimate a customer satisfaction with the financial institution regression on the metrics of the two constructs used as explanatory variables, and the coefficients obtained reflect the influence of each factor on customer satisfaction.

The limitations resulting from the application of such statistical treatment to the data generated by using a Likert scale (ordinal) can not, of course, be ignored. Thus, a second adjustment of the data was additionally used by an ordinal logistic model considered more appropriate to the data obtained with the use of a Likert scale, which was used in the study. In

addition, the ordinal logistic model provides evidence about the likelihood of a new customer being indicated or not by former bank customers in this niche. In other words, the use of such a model allows us to identify the probability of customers being a detractor of the institution studied. Finally, a triangulation was performed to examine the consistency of the conclusions obtained.

#### 4 EMPIRICAL SECTION

After that, an analysis of the sample profile and a statistical treatment of the sample was carried out by means of a descriptive analysis of the data used to fit the model.

##### 4.1 Descriptive Analysis

As pointed out, information was obtained from a sample of 203 high-income customers, the majority of whom were men (65%). The majority of the interviewees are in the age group of 31 to 40 years of age (32.02%) and the group over 60 years of age has the lowest representation, with 10.84%. According to information in Table 1, customers over the age of 40 correspond to approximately 53% of respondents.

**Table 1** - Distribution of frequencies of the interviewees' age group

Age	Absolute Frequency	Relative Frequency
Up to Up to 30 years	30	14,78%
De 31 From 31 to 40 years old	65	32,02%
De Fr From 41 to 50 years old	44	21,67%
De 51 From 51 to 60 years	42	20,69%
Above 60 years	22	10,84%
Total	203	100,00%

Source: Research data, 2017

Data on the reasons why customers maintain business relationships with the financial institution are presented in Table 2. In addition to the average, the standard deviation and the coefficient of variation were calculated to make explicit the variability generated by each indicator of the construct.

The answers to Question 7, which involves the relationship between the customer's business activities and the personalized service provided by the bank to the

individual, were the most heterogeneous indicator of the construct, indicating that deviations from the average amount to 46.49% of it. This shows the variety in the use or not of the bank by the customers in its business activities. It also shows the possible unique nature of the customers, who does not have business activities that justify a relationship with a bank or, if he or she owns a company, may not concentrate all the demands on a single institution, either for safety or convenience.

**Table 2** - Perception of the image of the financial institution by customers

Indicators	Mean	Standard Deviation	Coefficient of Variation (%)
1. It is a private banking that efficiently combines the objectives of security, liquidity and profitability.	5.946	1.2594	21,18
2. I trust the financial institution, knowing that it is able to manage my resources efficiently, without having to follow these operations closely	5.335	1.6992	31,85
3. I need to diversify investments in a larger number of banks	4.468	2.0568	46,03
4. I was already a client of the institution and I was invited to have a personalized service	4.764	2.1717	45,59
5. The financial institution has an excellent service in Brazil	4.611	1.7495	37,94
6. The financial institution has the capacity to protect the value of my assets, preserving, at least, its purchasing power	5.596	1.484	26,52
7. I have a very strong relationship with the financial institution in my business activities	4.744	2.2056	46,49
8. The financial institution is responsible for structuring tailor-made resource management solutions for my needs	5.084	1.6464	32,39
9. I have access to the table, to the specialized managers and to the more sophisticated products so that I can follow and always give an opinion on the operations of resource management	4.892	1.8743	38,32
10. The financial institution has expertise in the products and services that I need	5.296	1.529	28,87

Source: Research data, 2017

The question that claims that the bank combines security, liquidity and profitability objectives was the one that presented more homogeneous perceptions, indicating that deviations from the average amount to 21.18% of it. It is observed that there is a general perception by the customers invited to answer

the questionnaire of this research that these benefits are associated to the bank, which motivates them to have reasons for their regular use, corroborating the market research that associates security with the brand of a financial institution.

**Table 3** - Perception of managers' performance by customers

Indicators	Mean	Standard Deviation	Coefficient of Variation (%)
1. It has availability whenever I need it.	5.606	1.6864	30,08%
2. It presents knowledge of the products and services they offer.	5.926	1.3495	22,77%
3. It has organization, objectivity and efficiency in service.	5.793	1.4612	25,22%
4. It knows the client's financial needs and proposes strategies to serve them	5.567	1.4723	26,45%
5. It shows transparency and sincerity in the relationship it maintains with the customer.	6.108	1.2056	19,74%
6. It provides speed in problem solving.	5.734	1.4753	25,73%
7. It has competence, in times of economic tension, to reallocate and / or revise my positions.	5.246	1.5885	30,28%
8. It presents creative and innovative solutions.	5.039	1.5474	30,71%
9. It has competence to prospect and present new business opportunities in the Brazilian environment.	5.103	1.6088	31,52%
10. It has competence to prospect and present new business opportunities in the international environment.	4.128	1.8112	43,88%

Source: Research data, 2017

Responses to Question 10 that refers to the competence of the account manager to prospect and present new business opportunities in the international environment was the most heterogeneous of the construct, indicating that, on average, deviations from the average amount to 43.88% of the value of this. This result is consistent with the reality of the financial institution that is the object of this study, since its distribution channel outside Brazil is still incipient and often even unknown by customers and account managers themselves. Thus, the disparity of responses is shown as a sign of this point of attention of the bank in question.

The fact that the account manager shows transparency and sincerity in the relationship he maintains with the customers is the most homogeneous

indicator of this construct, and indicates that the deviations from the average amount to 19.74% of the value of the latter. This attribute of trust in the relationship between the manager and the customer is of great importance, as it is not uncommon to come across opinions in the media that the supply of products by managers is only aimed at meeting goals defined by the corporation.

As already presented, in the form suggested by the Net Promoter Score, as it is sought, with a single question, to evaluate the services provided by an organization. In the present case, the synthesis question was: "with this personalized service would you indicate a new customer to the Bank?" The descriptive statistics of customer satisfaction are presented in Table 4.

**Table 4 - Level of customer satisfaction with the financial institution**

Mean *	Standard deviation	Coefficient of variation
5.961	1.4551	24,41%

Source: Research data, 2017

Note: \* Scale used from 1 to 7.

The average customer satisfaction score is around 6.0, which, normalized by the maximum possible score (7.0), provides a figure of 86% in relation to full satisfaction (100%).

#### 4.2 Factor analysis - selection of relevant indicators for each construct

The use of ten indicators to portray the construct "image of the institution" and eleven to represent the "satisfaction with the manager's service" was the result of the examination of the theoretical reference examined but represented, in the last instance, an interpretation of the authors. Thus, aiming not to damage the principle of parsimony so respected by the scientific method it was used a factorial analysis to allow to extract the least number of factors capable of explaining the maximum of the total variance existing in the set of initial variables. The application of this statistical technique showed that the "institutional image" could be significantly represented by only two indicators portrayed by questions 04 and 07 that group around a factor and manage to explain 68.65% of the total variance presented by the set of the 10 questions considered. By analogous procedure, it was concluded that for the "manager evaluation" construct, it was necessary to use all eleven questions in the questionnaire, which were grouped around a factor that explained 63.9% of the total variability of the data.

#### 4.3 The estimates of the adopted model

In order to identify the influence of each of the constructs (image of the financial institution and the performance of the manager), the following regression was estimated:

$$Y_t = \alpha + \beta_1 X_{1t} + \beta_2 X_{2t} + \epsilon_t$$

(t = 1, ..., 203) (1)

$Y_t$  - dependent variable that portrays customer satisfaction with the financial institution;

$X_{1t}$  - variable indicative of the perception of the institutional image;

$X_{2t}$  - variable that refers to the perception of the manager's performance.

$\alpha$  - regression line intercept, which indicates the mean value of the dependent variable when the independent variable equals zero;

$\beta_1$  - coefficient that indicates the intensity of the relationship between the institutional image and customer satisfaction with the bank;

$\beta_2$  - coefficient that indicates the intensity of the relationship between the manager's assessment and the bank's customer satisfaction;

$\epsilon_t$  - regression error term, or stochastic disturbance, indicating the difference between the observed value and the estimated value of the dependent variable;

$t$  - a particular customer.



The results of this estimation using the ordinary least squares method are shown in table 5, which contains the estimated coefficients and the main statistical tests. It can be seen that the coefficients for the two constructs are positive and statistically significant,

that is, the bank's image and the evaluation of its managers in the perception of customers positively impact the indicator of customer satisfaction, conditioning them to indicate the bank to the people in their relationship.

**Table 5 - Model estimates**

	Coefficients	Standard Deviation	t	Prob. Sig
Intercept	,685	,295	2,321	,021
Evaluation of Bank's image	,077	,038	2,022	,045
Evaluation of the managers	,901	,057	15,689	,000
R <sup>2</sup> = 0,627    R <sup>2</sup> adjusted = 0,623    F- Statistics = 168.15				

Source: Research data, 2017

It can be verified that the manager's evaluation exerts a greater effect on customer satisfaction, so that for each additional point conferred by the customers on the evaluation of the managers, the increase in the satisfaction indicator with the bank increases 0.90. This result shows how relevant is the training and qualification of specialized managers to meet the expectations of the highest-income customers, so that this niche market demands a skilled workforce, well

trained and prepared to face the challenges of serving a more sophisticated and demanding clientele.

As pointed out, the variables that make up the causal model are of the categorical ordinal politomic type. Thus, the use of ordinary least squares is not fully appropriate. According to analysts, it is advisable to adjust the model in non-linear cumulative probabilistic form (Long & Freese, 2001). It was chosen in this study by the adoption of the logit model:

$$\text{logit} = \ln \left[ \frac{P(Y \leq k|X)}{P(Y > k|X)} \right] = \alpha_k + \beta x_j \quad (j = 1, \dots, n; k = 1, \dots, k - 1) \quad (2)$$

Where  $\alpha_k$  represents the location parameter for  $k = 1, \dots, k - 1$  classes of the dependent variable,  $\beta$  is the vector of the regression coefficients and  $X_j$  is the matrix of the independent variable.

In the case of the Link function being Logit, taking the inverse of the Logit function, it is possible to define the generic function of the accumulated probability (logistic distribution function) of class  $k$ :

$$F(\alpha_k - \beta X_j) = P[Y \leq k] = \frac{1}{1 + e^{-(\alpha_k - \beta X_j)}}$$

Since the dependent variable has 7 classes, the model has 6 thresholds ( $\alpha_k$ ). The slope estimates (regression coefficients) are used to infer the significance of the independent variables on the probabilities of the classes of the dependent variable.

To test the significance of the adjusted model, we use the likelihood ratio test between the null model (without some independent variable) and the complete model (with all independent variables). If the adjusted model is not significant, it is not possible to predict the probability of each class of the dependent variable from the independent variables of the model.

The "Model Fitting Information" reveals that the adjusted model (Final) is significantly better than the null (intercept only) model ( $G^2(2) = 175.687$ ;  $p = 0.000$ ), and that at least one of the model independent variables significantly affects the probabilities of occurrence of the classes of the dependent variable. The model fits well to the data according to the Goodness-of-Fit information, because for these tests (Pearson and Deviance) it is necessary not to reject  $H_0$ . It is verified that this condition is met, since the probability of significance has a value higher than 5%.

The statistics "Pseudo R-square" presented in table 8 are moderate to low, in particular the McFadden statistic.

**Table 6 - Model fitting information**

Model Fitting	(-2 Log) Likelihood	Chi-Square	DF	<b>P. Sig.</b>
Intercept Only	368.261			
Final	200.348	167.912	2	0.000
Goodness-of-Fit		Chi-Square	DF	P. Sig.
Pearson		185.872	202	0.786
Deviance		131.861	202	1.000
Pseudo R Square	Estimates			
Cox and Snell	0.563			
Nagelkerke	0.600			
McFadden	0.299			

Source: Research data, 2017

Table 7 presents the estimates of the Threshold independent variables, their standard errors, the Wald and the regression coefficients associated with the statistic and the p-value of the test.

**Table 7 - Parameters estimates**

		Estimate	Standard Error	Wald	P.Sig.
Threshold	[NPS = 1]	4,295	,828	26,894	,000
	[NPS = 2]	5,442	,809	45,280	,000
	[NPS = 3]	6,312	,824	58,636	,000
	[NPS = 4]	7,214	,857	70,924	,000
	[NPS = 5]	8,994	,952	89,199	,000
	[NPS = 6]	10,813	1,049	106,164	,000
Location	Bank	,139	,085	2,693	,101
	Managers	1,820	,184	97,381	,000

Source: Research data, 2017

With the coefficients estimated, the relation can be written as:

$$\text{Ln} \left\{ \frac{P[Y \leq K]}{P[Y > K]} \right\} = \alpha k - (0.139 B + 1.820 G)$$

It was verified in the linear model that there is a positive relation between the propensity to indicate new customers and the perception of the customers of the institution image and the performance of the managers, being more remarkable the role of the

manager. These conclusions are maintained when using the logit model (Table 7).

However, the ordinal logit model does not allow for a direct relationship between the variables, but is formulated to quantify the Ln of the odds ratio, which in the present case reports the ratio between the

probability of not indicating and the probability of indicating a new customer to the bank. According to the results presented in Table 7, it is verified that when the customer's perception about the bank image increases from a point on the Likert scale, the Ln of the probability of observing a lower order class (not indication), relative to to a higher order class (display) reduces 0.139. The effect represented by the performance of the manager in the perception of the customers is more pronounced, being represented by the coefficient 1.82.

Given that the Logit function was employed, we can calculate the accumulated odds ratio using the

expression  $e^{-0.139}$ , obtaining the value 0.8702. That is, the odds of not indicating the institution's indication by current high-income customers decreases by 12.98% ( $0.8702 - 1.0$ ), when the variable considered is the bank's image. In the case of the variable considered to be the manager's performance, the odds ratio is  $-1.82 = 0.1620$ , so that the probability of not indicating a new customers in relation to the probability of indication reduces by 83.8% ( $0.1620 - 1.0$ ).

A final analysis consisted of detailing the predictive capacity of the model, which is presented in Table 8.

**Table 8 - Customer satisfaction predicted response category crosstabulation\***

		Predicted Response Category						Total
		1	2	3	5	6	7	
Customer Satisfaction	1	3	1	0	1	0	0	5
	2	0	1	0	4	0	0	5
	3	1	2	0	1	2	0	6
	4	0	0	0	7	1	1	9
	5	1	0	1	9	16	3	30
	6	0	0	0	7	18	20	45
	7	0	0	0	1	11	91	103
Total		5	4	1	30	48	115	203

Source: Research data, 2017

Notes: \* I totally disagree = 1, I partially disagree = 2, Having to disagree = 3, I do not agree or disagree = 4, Having to agree = 5, Partially agree = 6, Totally agree = 7.

Of the seven original classes only the four answer (neither agree nor disagree) is not provided by the model. The model correctly predicts 60% (3/5) of the "totally disagree" class. The percentage of correct predictions is 20% (1/5) for the "partially disagree" class, 0% for the "disagreeing" class. For the "having to agree" class the forecast was 30% (9/30), the forecast of 40% (18/45) was observed for the "partially agree" option, while for the "totally agree" class. The model correctly ranks  $3 + 1 + 0 + 9 + 18 + 91 = 104$  customers and the percentage of customers correctly classified by model is  $(122/203) \times 100 = 60\%$ . On the other hand, the percentage of correct proportional classification by chance is  $[(5/203)^2 + (5/203)^2 + (6/203)^2 + (9/203)^2 + (30/203)^2 + (45/203)^2 + (103/203)^2] \times 100 = 33.24\%$ . Thus, the model ranks reasonably better than the classification by chance.

In summary, both model estimates (multiple linear regression and logit ordinal regression) confirm the importance of the institution image variables and the role played by the managers in the satisfaction of the customers to determine whether or not new customers are indicated, and revealed that the performance of the

managers is the construct of greater importance as a predictive variable.

## 5 CONCLUSION

The purpose of this study was to identify the satisfaction of customers in the high income segment of a large Brazilian bank and also to analyze their propensity to indicate new customers to the institution. The data used were extracted through a survey with customers of bank branches in different regions of the country.

A model based on the Net Promoter Score was used to portray customer satisfaction from a single simple question. However, the study is broader, since it aimed to identify determinants of customer satisfaction and that are capable of exerting influence in the condition of the customers being detractor or divulger of the financial institution.

The factors were organized into two constructs titled "image strength" and "role of bank managers". To portray each of these constructs, questions were asked - measured on a Likert 7-point scale - that refer to the

different factors that may exert influence on customer satisfaction. Specifically, the image construct was the subject of 10 questions and the role of managers of 10 questions.

Factor analysis was applied to identify which indicators were, in fact, relevant to portray each of the two constructs, and then a model was set that places customer satisfaction (dependent variable) on the bank's image / security and of the role / performance of managers (independent variables).

The multiple regression analysis estimated by the OLS was used initially and the coefficients were statistically significant. The evaluation of managers emerged as the most important factor in explaining the customer's condition of becoming a promoter of the services provided by the financial institution.

Considering the use of an ordinal scale (Likert) we chose to estimate the same model by using an ordinal logistic function. This econometric specification, probably more adequate, allowed us to calculate the probability of a customer being a supporter instead of being detractor of the services provided by the financial institution. The results confirmed the importance of both the bank's image and the managers' performance, and that (the latter) is crucial for customer satisfaction.

These results are indicative that the skills, qualifications and training of managers should deserve a great deal of attention in the banks' corporate management and strategies. However, it is recommended that the model developed here be subject to further testing, involving the use of more extensive samples with application in other financial institutions.

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