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RESUMO/ABSTRACT

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JEL: G20, G21

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April 12, 2012

Abstract

This paper investigates the level of customer mobility in the Portuguese financial system based on new survey data. We find that customers deal, on average, with more than one bank, and own several financial products. The results show that 46.9 per cent of customers had never switched bank in the past and 92.4 per cent have no intention to switch in the next 24 months. We find that customer mobility is influenced by factors related with their social and economic condition and their level of financial activity. These same factors have an impact on the choice of the reasons for not switching bank in the future. Finally, we observe that these reasons have not only a financial nature but also a psychological nature, revealing the existence of important switching costs in the Portuguese financial system.

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1. Introduction

The growing competitiveness of the Portuguese financial system has been characterized by the recurrent use of price (interest rates and commissions) and non price instruments (advertising and branching network). As a result, there has been a shrink in the financial margins and an increase in the merger activity, and a major indicator of that is the fact that 80 per cent of the financial sector is controlled by only five financial groups.

In this context, the study of customer mobility in the Portuguese financial system has a great importance, since the effectiveness of the competitive instruments of the banks in attaining more market share depends considerably on this level of customer mobility. On one hand, with lower mobility the banks have less power to attract new customers from other banks but, on the other hand, they can more easily retain their customers. Besides, the level of customer mobility depends considerably on the switching costs (financial and psychological) the customers deal with when they have to decide whether to switch bank. This paper investigates the level of customer mobility in the Portuguese financial system, with a particular focus on the analysis of switching costs. We use new survey data using a sample of 500 individuals from the Azores region, in Portugal.

First, we investigate the percentage of individuals that own a current account and proceed to a characterization of the social and economic conditions of both the individual that own an account and of those that do not own an account. Our aim is to understand the reasons why some individuals do not have a banking relationship. As regards the individuals that have a banking relationship, we intend to study the reasons why they select their main bank, and the number of banks and financial products they have, as well as the satisfaction level with the main bank.

Second, we develop a regression analysis in order to understand which social and economic factors affect the level of customer mobility. We start with three models where the dependent variable is intended to capture the level of customer mobility, namely (1) the customer tenure at the main bank, (2) whether the customer has ever switched the main bank, and (3) whether the customer reports intention to switch bank in the next 24 months. As explanatory variables we use social and economic variables as well as indicators of customers' financial activity and satisfaction level. We then proceed to the analysis of the reasons why customers do not intend to switch bank in the future. We develop a model intended to predict which factors affect the choice of the reasons for not switching bank in the future.

We believe our paper has three important contributions. First, our data is based on a survey to banking customers, allowing us to collect information that would not be available if we were to use only information from banks. For instance, we are able to know the number of times a customer has switched bank in the past or even if he has intention to switch in the future. Other studies about customer mobility in the Portuguese financial system focus on the assessment of banks market power, as Pinho (2000) and Teixeira (2001) using information exclusively from the supply side of the financial relation. Second, our regression analysis aimed to study which factors affect the customers' mobility has some important differences with the analysis used in related literature that use the survey technique to collect data from international markets. Here, we include, in particular, the studies by Kiser (2002) that investigates the household mobility in the US financial system, and Barone and Quaranta (2008) that has a similar study for the Italian financial system. While these papers examine customer behavior only on the deposits market, we consider both the deposits and credit markets. Furthermore, we develop a new regression model intended to predict customer mobility

that assumes as dependent variable one measure of future mobility, contrary to Kiser (2002) and Barone and Quaranta (2008) that only use survey questions based on the customers' past behavior. Third, we develop an analysis of switching costs that, as far as we are concerned, has not been presented before, as we try to explain which factors have an impact on the choice of the reasons for not switching bank in the future.

The theoretical literature on switching costs in the banking industry is well developed since the seminal paper by Klemperer (1987). For an overview see Klemperer (1995) and Farrell and Klemperer (2006). These authors show that the existence of customer switching costs provides incumbents with significant market power and may induce entrants to price their products more aggressively than do existing firms. Switching costs induce a firm to face a tradeoff between lowering prices to attract new customers and raising prices to achieve rents from existing customers.

The literature also documents some important empirical models of switching costs in the financial system. Here we highlight three studies that report estimates of switching costs.² Using aggregated data, Kim *et. al.* (2003) estimate the magnitude of switching costs by deriving and then estimating a first-order condition, a market-share equation, and a supply equation under the assumption of Bertrand behavior. Their application of the procedure to Norwegian bank loans yields an estimate of 4.12 percent of the typical customer's loan, which seems quite substantial. Shy (2002), using data on prices and market shares, finds that the costs of switching deposits ranges from 0 to 11 percent for deposit customers of Finnish banks. Finally, Hannan and Adams (2011) employ information on bank deposit rates and area migration patterns to examine pricing relationships implied by switching costs. They argue that, because of the

² Other studies include Sharpe (1997), Kim, Kliger and Vale (2003), Clemes, Gan and Zheng (2007), and Clemes, Gan and Zheng (2010)

tradeoff between attracting new customers and exploiting old ones, banks offer higher deposit rates in areas experiencing more in-migration.

Several empirical studies address switching costs in other industries. Greenstein's (1993) investigates switching costs in federal computer procurement decisions, Knittel's (1997) examines customer switching costs as a possible explanation for AT&T's continuing high market share in the wake of long-distance deregulation, Elzinga and Mills (1998) analyze firm switching costs in the wholesale distribution of cigarettes and Wilson and Price (2010) demonstrates that, in the UK energy market, the ability of consumers to choose the best alternative supplier is limited even in a relatively simple and transparent market.

In a recent study about mergers and acquisitions in the banking sector, in Portugal, Carvalho (2007) reports the importance of switching costs for the exercise of banks market power. On the other hand, a descriptive analysis of switching costs can be found in a technical report by the Bank of Portugal (2009) and the European Commission (2007).

The paper is organized as follows. Section 2 presents the data and discusses the descriptive statistics. Section 3 develops and discusses three regression models to examine the determinants of customer mobility, while section 4 investigates the reasons why customers do not intend to switch bank in the future, and discusses a model to study the determinants of the choice of these reasons. Section 5 concludes.

2. Data and Descriptive Statistics

The data comes from a survey to 500 individuals from the Azores region, in Portugal, those being selected to ensure representativeness in terms of age and social and economic conditions. The questions were administered from October to December 2011.

The first part of the survey asks whether individuals have a current account and, if they do not have, what are the reasons for not having it. The results are reported in Table 1. We found that 3.2% of respondents do not have a current account. This value is below the one reported by the Bank of Portugal (2010), which shows that 11% of the Portuguese population does not have a bank account. These individuals have low qualifications levels and are mainly young and female. The reasons reported for not having an account are the lack of income (56.3%), the account of another member of the household being sufficient (25.0%) and the high costs of holding an account (18.8%).

(Insert Table 1)

We then focus on the individuals that have a current account (484 or 96.8% of the sample). Table 2 summarizes the results of their social and economic characterization and table 3 depicts the descriptive statistics of selected variables related with customers' social characterization and financial activity.

(Insert Table 2)

(Insert Table 3)

The results show that 58.5% of customers do not have an undergraduate degree, in line with the Portuguese level of education. Furthermore, most customers are in low income intervals, with a net monthly income of less than 1.201 euros. Customers have on average 41.2 years old, with a minimum of 18 and a maximum of 75 years old.

Next, we analyze the level of financial activity of the bank's customers and their level of satisfaction with the main bank. Table 4 summarizes these results.

(Insert Table 4)

Table 3 reveals that customers deal, on average, with 1.6 banks. In addition, table 4 shows that on the top reasons for choosing the main bank we find the family or friend recommendation, with 52.1% of respondents, followed by the favorable location, with 38.4%. In a level still important, but slightly below we have the customer service and better prices with 28.5 and 26.9%, respectively. These results are in line with the 2010 report of the Bank of Portugal about financial literacy.

The investigation on the number of products owned by each customer reveals some diversification, as the average number of products owned is 3.2, and this may be the outcome of cross selling marketing strategies conducted by banks over the last 10 to 15 years. The results of table 4 show that more than 50% of customers have, in addition to a current account, a savings account and a credit card. Also note the importance of mortgage loans, with 41.5% of customers reporting to have this type of product.

As regards the satisfaction level with the main bank, 43.6% of customers report to be satisfied, 33.5% very satisfied and 9.9% extremely satisfied, which suggest, on overall, fairly positive satisfactions levels.

3. Customer Mobility

In this section we focus our analysis on the factors determining customer mobility. Therefore, we use three regression models to predict (1) the customer tenure, (2) the probability of the customer ever switching bank, and (3) the probability of the customer to switch in the next 24 months.

Model 1 has the following specification:

$$Y = \text{years at main bank} = \beta_1 X + \beta_2 A + \epsilon \quad (1)$$

where the dependent variable is the number of years the customer has a current account in the main bank, X is a vector of variables related with the customers' social and economic characteristics, A is a vector of variables of customers' bank activity, and ϵ is the model's prediction error. Given the count nature of the dependent variable, model 1 is a Poisson model.

As in Kiser (2002), vector X of the social and economic characteristics includes variables related with age, education (whether the customer has an undergraduate degree), and net monthly income. On the other hand, vector A of customers' financial activity includes variables related with whether the customer holds a mortgage loan, the number of banks that he relates to and his level of satisfaction with the main bank.

We then develop model 2 using as dependent variable a more effective measure of customers' mobility, which is defined as follows:

$$\begin{cases} Y = 1 & \text{if reported switched bank at least once} \\ Y = 0 & \text{if reported never switched bank} \end{cases} \quad (2)$$

Finally, in order to use a proxy of future mobility, we estimate model 3 using the following dependent variable:

$$\begin{cases} Y = 1 \text{ if reported intention to switch in the next 24 months} \\ Y = 0 \text{ if reported no intention to switch in the next 24 months} \end{cases} \quad (3)$$

Both models 2 and 3 are estimated using a logit regression and in these models the vector of independent variables are the ones defined for model 1 above. The estimation results of models 1, 2 and 3 are depicted in Table 5.

(Insert Table 5)

Model 1 – Years at main bank

Before we discuss the regression results, it is worthwhile to analyze in more detail the dependent variable years at the main bank. Table 3 shows that this variable has an average of 17.1 and a median of 14 years. The minimum is one year and there is one customer that reported a maximum of 57 years at the main bank. The relative distribution of this variable, depicted in table 6, indicates an important dispersion of the results. Although most customers are on the interval from 0 to 5 years and 6 to 10 years, there is an important share of them with more than 30 years at the main bank.

(Insert Table 6)

The regression results for model 1 show that all age coefficients are positive and statistically significant and that the effect of age on tenure increases with age. Also, the coefficient associated with having an undergraduate degree reveals that customers with an undergraduate degree have less tenure, when compared with other customers. This result may suggest that less academic qualifications produces somehow inertia on the customer, increasing his time at the main bank. Besides, the results show that customers with a mortgage loan have more tenure than customers that do not have this product,

and this may come from the fact that this is a more complex product that requires a longer relationship with the bank, being important to increase customer's loyalty to the bank. We also note that customers dealing with more banks have less bank tenure. Finally, as expected, customers with higher satisfaction levels have a greater tenure when compared with customers with lower satisfaction levels. Satisfaction induces customers' loyalty with the bank.

Model 2 – Has ever switched main bank

Table 6 depicts the relative distribution of the number of times a customer has ever switched main bank in the past. It is interesting to observe that more than 50% of customers have switched bank at least once, with only 46.9% reporting never having switched bank.

The regression results of model 2 show that the probability of customers in the age category of 35 to 65 years old to switch bank is greater than customers in the age category of 18 to 34 years. Besides, customers above 65 years old do not have greater probability to switch bank than younger customers of the category 18 to 34 years old. This result suggests that older customers may be more loyal to the main bank and therefore have a higher probability of not switching the main bank. We also observe that customers with an undergraduate degree have a higher probability of switching bank and this may reveal that more education induces more mobility.

The coefficient associated with owning a mortgage loan did not reveal to be statistically significant, and this suggests that customers with this financial product do not exhibit a higher probability of switching bank than customers that do not have this

product. Finally, as expected, customers that deal with more banks have a higher probability of switching bank.

As regards the income variable, the results provide evidence that customers in the intermediate income categories from 601 to 1,800 euros have lower probability of switching bank when compared with customers in the category below 600 euros. Also note that customers with higher income levels, above 1,800 euros, exhibit less probability of switching bank, as the ones with lower income levels, below 600 euros. These results are in line with the ones of Kiser (2002) and Barone and Quaranta (2008).

Finally, as expected, customers with higher satisfaction levels have less probability of switching bank, when compared with customers with lower satisfaction levels.

Model 3 – Has intention to switch in the next 24 months

Model 3 represents one of the main contributions of our study as it uses as measure of mobility a dependent variable that is based on information about future mobility. Unlike the other measures, it evaluates whether the customer has intention to switch in the next 24 months. We should note that from the 484 customers of the survey, only 37 (7.6%) reported intention to switch bank in the next 24 months, as 447 (92.4%) did not reported this intention. These results induce a relatively low mobility in the financial sector, at least based on future expectations from customers.

The regression results, depicted in table 5, indicate that only three coefficients are statistically significant. First, customers with an undergraduate degree reveal higher probability of intention to switch bank, when compared with customers that do not have this degree. Second, customers that own a mortgage have less probability of intention to

switch bank, when compared with the ones that do not have this mortgage. This result may suggest that financial and psychological costs that arise from switching a mortgage from one bank to the other can be an important switching cost preventing bank mobility. Finally, as expected, more satisfied customers exhibit less probability of intention to switch.

4. Reasons not to switch bank in the future

In this section we focus our attention on the customers that reported no intention to switch bank in the next 24 months. We start by presenting the reasons for not switching bank and then we discuss the factors explaining the choice of these reasons using a regression analysis.

Table 7 depicts the relative distribution of the reported reasons for not switching bank in the next 24 months. On the top 3 reasons we find (1) too many problems to close the account or to transfer the credit to another bank, (2) the inconvenient to change direct debits or to transfer the salary to another bank, and (3) the uncertainty about the relation with another bank account manager. Note that although the first two reasons require some quantitative assessment of the costs involved in switching, the third reason has a more psychological nature, more subjective, related with the uncertainty about the new bank relation. Next, customers reported (4) some difficulty understanding which bank offers the best alternative, (5) the inconvenient of changing the bank location and (6) the perception that the main bank offers better prices.

(Insert Table 7)

Even though there is not much dispersion on the relative distribution of the reasons for not switching bank, we should point out the high percentage of some reasons with a more subjective nature, which reveals the importance of psychological costs as switching costs.

Having discussed the reasons for not switching bank in the next 24 months, we now develop a regression model aimed at analyzing which factors influence the probability of reporting each of these reasons. Thus, for each reason i point out in table 7, we

conduct a logit regression, designated as $4i$, where the dependent variable is defined as follows:

$$\begin{cases} Y = 1 \text{ if the customer reported no intention to switch due to reason } i \\ Y = 0 \text{ if the customer did not reported reason } i \end{cases} \quad (4)$$

Model $4i$ has therefore the following specification:

$$4i: \ln\left(\frac{P(Y=1)}{1-P(Y=1)}\right) = \beta_1 X + \beta_2 A + \epsilon \quad (5)$$

where X is the vector of social and economic variables and A is the vector of financial activity variables, already defined for models 1, 2 and 3. Table 8 depicts the regression results for models 4A to 4F.

(Insert Table 8)

As regards model 4A, the results show that the probability of customers reporting that do not intend to switch due to too many problems caused by closing the current account or transferring credits is higher for intermediate age levels, from 35 to 64 years old, when compared with the younger age interval, from 18 to 34 years old. This result may be explained by the fact that customers in this age level may have a more complex relation with the bank, being more difficult for them to change bank. Indeed, the positive and statistically coefficient associated with the variable “Owns a mortgage loan” shows that this type of customer is more likely to report this reason for not switching bank than customers that do not have a mortgage loan. Moreover, customers with higher income levels, in categories 1,201-1,800 euros and 1,801 euros or more, show greater probability of reporting not switching due to too many problems, when compared with customers in the lower income category, of less than 601 euros, and this may suggest the difficulty of high income level customers to switch due to the greater involvement with the bank.

On the other hand, the results of model 4B show that the probability of customers reporting as reason not to switch the inconvenient of changing the location of the main bank is greater for higher age levels, when compared with the lower age category. Also, this probability is lower for customers with greater income levels, when compared with customers in the lower income category.

The results of model 4C that considers as reason not to switch the customers' perception that the main bank offers better prices reveal that the probability of reporting this reason is lower for customers in the higher age category, of 65 or more years, when compared with the customer in the lower age category. This result may suggest the less importance given to price by older people, in opposition to location, as demonstrates the results of model 4B. It is interesting to observe that the probability of reporting the reason of model 4C is higher for customers that deal with more banks. Also, as far as the income variable is concerned, the probability of indicating not switching because the current bank offers better prices is higher for high income categories when compared with customers in the lowest income category.

As regards model 4D, that considers as dependent variable a binary variable that takes the value of one if the customer indicates no intention to switch because of the uncertainty associated with the relation with another bank or account manager, we verify that the probability of reporting this reasons is higher for higher age categories, when compared with the lowest age category, and this probability increases with age. This result is somehow as expected since it is reasonable to assume that older customers typically face higher psychological costs when considering switching bank.

Finally, the results for model 4F led us to conclude that the probability of reporting as reason not to switch the difficulty in understanding which banks offers the best

alternative is higher for customers with high income levels, above 1,201 euros, when compared with customers in the lowest age category.

Overall, the results of models 4A to 4F indicate that the choice of a particular reason for not switching bank depends on a set of social and economic factors characterizing the customers, as well as some factors related with their level of financial activity.

5. Conclusion

In order to investigate the level of customer mobility in the Portuguese financial system, we conducted a survey to 500 individuals from the Azores region. The growing competitiveness of the financial sector makes the study of customers' mobility very important since this mobility has a crucial impact on the effectiveness of banks price and non price instruments.

The results show that 96.8% of individuals have at least a current account, and the ones that do not have are mainly unemployed and with low income.

Then, from the individuals with at least a current account, we observe that about 65% have the high school or an undergraduate degree, with a net monthly income more concentrated on the interval from 601 to 1,200 euros. The results for customers' financial activity reveal that customers deal on average with 1.6 banks, although most customers concentrate the majority of their financial products in one main bank. The average of financial products owned is 3.2, and these are mainly a current account, a savings account, a credit card and a mortgage loan. Furthermore, the main reasons pointed out by customers to choose the main bank are the recommendation from family or friends, the location and the good relation with the account manager. Customers also report good satisfaction levels, with more than 85% of them indicating to be at least satisfied.

As far as customers' mobility is concerned, these have an average tenure in the main bank of 17.1 years and 46.9% reported had never switched bank in the past, with 35.1% of customers reporting to have switched only once. The results reveal a low level of expectation for future mobility since 92.4% of customers reported no intention to switch bank in the next 24 months.

The results of the regression models intended to study the factors determining customers' mobility reveal that the tenure at the main bank increases with age and is greater for customers with a mortgage loan, and lower for customers with more academic qualifications, in particular for the ones that have an undergraduate degree. Also, we find that there is a set of social and economic variables as well as variables related with the customers' financial activity that influence the probability of switching bank.

From the analysis of the reasons not to switch bank in the next 24 months, we highlight the fact that on the top of these reasons we find factors with a financial nature but also with a psychological nature, which suggests the importance of switching costs in the financial system. The top three reasons include too many problems to close the account or to transfer the loan to another bank, the inconvenient of changing direct debits or transferring the salary to another bank, and the uncertainty about the relation with another bank account manager. Furthermore, a regression analysis reveals that the choice of these reasons by the customers depends of several social and economic factors, as well as factors related with the customers' financial activity.

In parallel with the results above, we point out three main contributions of this paper. First, this is the first study about the Portuguese customer mobility in banking that uses a methodology based on a survey. Second, we develop a new regression model that uses as dependent variable a measure of future mobility, and third, we consider in our analysis both the deposit and the credit market.

This investigation represents an important contribution to the analysis of customer mobility in the Portuguese financial system, and this can be a useful tool for financial institutions as it can provide a point of reference for the most efficient use of price and

non-price instruments by banks in attaining a more competitive position in the market. Nevertheless, we believed this study can be extended to include a broader coverage in terms of data collected. Also, future research may consider important to provide a more detailed analysis of the psychological factors influencing the customer mobility and the perception of switching costs.

6. References

Bank of Portugal, (2010): “*Survey to the financial education of Portuguese population*”.

Technical report.

Bank of Portugal, (2009): “*Mobility in the retail banking sector in Portugal*”, Technical report.

Barone, R., and A. G. Quaranta (2008): “Banking competition, switching costs and customer vulnerability: the case of south Italy,” *The IUP Journal of Behavioral Finance*.

Clemes, M. D., Gan, C., and L. Y. Zheng, (2007): “Customer switching behavior in the New Zealand banking industry,” *Banks and Bank Systems*, 4, 50–64.

Clemes M. D., Gan, C., and D. Zhang, (2010): “Customer switching behavior in the Chinese retail banking industry,” *International Journal of Bank Marketing*, 28, 519–546.

Elzinga, K. G., and D. E. Mills. (1998): “Switching costs in the wholesale distribution of cigarettes,” *Southern Economic Journal*, 65, 282–293.

European Commission, (2007): “*Report on the retail banking sector inquiry*”, Commission Staff Working Document.

Farrell, J, and P. Klemperer (2007): “Coordination and lock-in: competition with switching costs and network effects,” in *Handbook of Industrial Organization*, ed. by M. Armstrong and R. Porter, vol. 3, chap. 31. Elsevier B.V.

Greenstein, S. M., (1993): “Did installed base give an incumbent any (measurable) advantages in federal computer procurement?,” *RAND Journal of Economics*, 24, 19–39.

Hannan, T. H. and R. M. Adams, (2011): “Consumer switching costs and firm pricing: evidence from bank pricing of deposit account,” *The Journal of Industrial Economics*, 59, 296–320.

Kim, M., Kliger, D., and B. Vale, (2003): “Estimating switching costs: the case of banking,” *Journal of Financial Intermediation*, 12, 25–56.

Kiser, E. K., (2002): “Predicting households switching behavior and switching costs at depository institutions,” *Review of Industrial Organization*, 20, 349–365.

Klemperer, P., (1995): “Competition when consumers have switching costs: an overview with applications to industrial organization, macroeconomics, and international trade,” *Review of Economic Studies*, 62, 515–539.

Klemperer, P., (1987): “The competitiveness of markets with switching costs,” *Rand Journal of Economics*, 18, 138–150.

- Knittel, C. R., (1997): “Interstate long distance rates: search costs, switching costs, and market power,” *Review of Industrial Organization*, 12, 519–536.
- Pinho, P., (2000): “The impact of deregulation on price and non-price competition in the Portuguese deposits market,” *Journal of Banking and Finance*, 24, 1515–1533.
- Sharpe, S. A., (1997): “The effect of customer switching costs on prices: a theory and its application to the bank deposit market,” *Review of Industrial Organization*, 12, 79–94.
- Shy, O. (2002): “A quick-and-easy method for estimating switching costs,” *International Journal of Industrial Organization*, 20, 71–87.
- Teixeira, J. C. A., (2001): “*Mobility and market power in the Portuguese financial system*”, Master dissertation, Nova School of Business and Economics, Portugal.
- Wilson, C. M., and C. W. Price, (2010): “Do consumers switch to the best supplier?,” *Oxford Economic Papers*, 62, 647–668.

Table 1 – Statistics for whether individuals have and account and reasons for not having it

		Observations	%
<i>Has current account?</i>			
Yes	✓	484	96.8%
No	✓	16	3.2%
	<i>Total</i>	500	100%
<i>Resons not to have an account:</i>			
High costs of holding account	✓	3	18.8%
Account from other person is sufficient	✓	4	25.0%
Does not has enough income that justifies account	✓	9	56.3%
	<i>Total</i>	16	100%

Table 2 – Social and economic statistics of individuals holding and account

		Observations	%
<i>Gender</i>			
Male	✓	236	48.8%
Female	✓	248	51.2%
	<i>Total</i>	484	100%
<i>Age</i>			
18 to 34		184	38.0%
35 to 49	✓	145	30.0%
50 to 64		102	21.1%
65+		53	11.0%
	<i>Total</i>	484	100%
<i>Education</i>			
Undergraduate degree		283	58.5%
No undergraduate degree		201	41.5%
	<i>Total</i>	484	100%
<i>Monthly income</i>			
Less than 601€		125	25.8%
601€ to 1,200€		192	39.7%
1,201€ to 1,800€		109	22.5%
1,801€+		58	12.0%
	<i>Total</i>	484	100%

Table 3 – Descriptive statistics of individuals holding and account

	Mean	Median	St. Dev.	Min.	Max.
Age	41.2	39.5	15.6	18	75
<i>N° of banks</i>	1.6	1.0	0.7	1	6
<i>Years at main bank</i>	17.1	14	12.9	1	57
<i>N° of products</i>	3.2	3.0	1.7	1	7

Table 4 – Financial activity statistics of individuals holding and account

	Observations	%
<i>Reasons to choose main bank</i>		
Family/friend recommendation	252	52.1%
Favorable location	186	38.4%
Good customer service	138	28.5%
Better prices	130	26.9%
Low maintenance costs	63	13.0%
Good online banking	34	7.0%
Bank financial reputation	96	19.8%
Required by employer	47	9.7%
Other	21	4.3%
<i>Financial products owned</i>		
Current account	484	100.0%
Savings account	280	57.9%
Credit card	245	50.6%
Authorized overdraft	132	27.3%
Mortgage loan	201	41.5%
Other loans	116	24.0%
Other financial products	68	14.0%
<i>Satisfaction level with main bank</i>		
Extremely satisfied	48	9.9%
Very satisfied	162	33.5%
Satisfied	211	43.6%
Insatisfied	49	10.1%
Very insatisfied	11	2.3%
Extremely insatisfied	3	0.6%
	<i>Total</i>	<i>484</i>
		<i>100%</i>

Table 5 – Customer mobility: regression results for models 1, 2 and 3^a

	Model 1		Model 2		Model 3	
	Y = Years at main bank		Y = 1 "if reported switched bank"		Y = 1 "if reported intention to switch in the next 24 months"	
	Estimate	Standard error	Estimate	Standard error	Estimate	Standard error
Constant	1.862***	0.046	-1.718***	0.356	-1.514***	0.583
Age 35-49	0.972***	0.041	0.723**	0.291	0.170	0.539
Age 50-64	1.565***	0.039	0.942***	0.313	-0.254	0.648
Age 65+	1.785***	0.041	0.541	0.384	-18.238	5,018.050
Undergraduate degree	-0.115***	0.032	0.578*	0.259	0.764*	0.452
Monthly income 601€-1,200€	0.056*	0.031	0.530*	0.272	0.710	0.474
Monthly income 1,201€-1,800€	0.010	0.042	0.964**	0.378	-0.180	0.832
Monthly income 1,801€+	0.061	0.052	0.668	0.513	-17.676	4,785.582
Owns mortgage loan	0.086***	0.031	0.424	0.276	-3.097***	0.854
No. of banks	-0.831***	0.018	0.479***	0.171	-0.038	0.313
Extremely/very satisfied	0.055**	0.025	-0.571***	0.221	-2.506***	0.561
Pseudo R squared	0.531		0.285		0.382	
Number of observations	484		484		484	

^a The significance level of the estimated parameters is represented by * (10%), ** (5%) and *** (1%) for two-tailed tests.

Table 6 – Relative distribution of years at main bank and number of times customers’ switched bank

<i>Years at main bank</i>			
0 to 5		100	20.7%
6 to 10		104	21.5%
11 to 15		55	11.4%
16 to 20		57	11.8%
21 to 25		45	9.3%
26 to 30		41	8.5%
>30		82	16.9%
	<i>Total</i>	484	100%
<i>N° of times switched main bank</i>			
Never switched bank	✓	227	46.9%
Switched once	✓	170	35.1%
Switched twice	✓	62	12.8%
Switched three times	✓	18	3.7%
Switched four times	✓	6	1.2%
Switched more than four times	✓	1	0.2%
	<i>Total</i>	484	100%

Table 7 – Relative distribution of reported reasons for not switching bank in the next 24 months

		Observations	%
<i>Intention to switch in the next 24 months?</i>			
Yes	✓	37	7,6%
No	✓	447	92,4%
	<i>Total</i>	484	100,0%
<i>Reasons not to switch</i>			
Inconvenient to change bank location		132	29,5%
Perception that main bank offers better prices	✓	114	25,5%
Uncertainty about relation with another bank account manager	✓	154	34,5%
Too many problems to close account or to transfer credit	✓	157	35,1%
Inconvenient to change direct debits or to transfer salary		157	35,1%
Difficult to understand which bank offers best alternative	✓	133	29,8%

Table 8 – Determinants of probability to report each reason not to switch bank in the next 24 months

Panel A – Models 4A to 4C^a

	Model 4A		Model 4B		Model 4C	
	Y = 1 "if reported too many problems to close account or to transfer credits"		Y = 1 "if reported inconvenient to change bank location"		Y = 1 "if reported perception that main bank has better prices"	
	Estimate	Standard error	Estimate	Standard error	Estimate	Standard error
Constant	-2.506***	0.555	-1.192***	0.449	-3.346***	0.503
Age 35-49	0.924**	0.406	0.877**	0.432	-0.249	0.363
Age 50-64	1.080**	0.471	3.009***	0.436	-0.539	0.373
Age 65+	0.590	0.715	3.757***	0.551	-2.371***	0.560
Undergraduate degree	0.129	0.395	-0.407	0.367	-0.088	0.322
Monthly income 601€-1,200€	0.037	0.533	-0.692*	0.371	0.861**	0.340
Monthly income 1,201€-1,800€	1.325**	0.584	-1.809***	0.539	0.830*	0.489
Monthly income 1,801€+	2.123***	0.712	-3.707***	0.914	1.103*	0.635
Owns mortgage loan	2.543***	0.398	-0.619*	0.364	-0.450	0.347
No. of banks	-0.206	0.209	-0.006	0.223	0.432*	0.203
Extremely/very satisfied	-1.842***	0.348	0.088	0.293	2.632***	0.324
Pseudo R squared	0.684		0.523		0.351	
Number of observations	447		447		447	

^a The significance level of the estimated parameters is represented by * (10%), ** (5%) and *** (1%) for two-tailed tests.

Panel B – Models 4D to 4F^a

	Model 4D		Model 4E		Model 4F	
	Y = 1 "if reported the uncertainty about the relation with another bank account manager"		Y = 1 "if reported inconvenient to change direct debit or transfer salary to another bank"		Y = 1 "if reported some difficulty understanding which bank offers the best alternative"	
	Estimate	Standard error	Estimate	Standard error	Estimate	Standard error
Constant	-1.527***	0.418	-1.901***	0.465	-0.517	0.376
Age 35-49	0.711*	0.373	-0.265	0.349	0.437	0.308
Age 50-64	2.342***	0.381	0.315	0.381	-0.565	0.366
Age 65+	3.248***	0.499	-2.047*	1.072	-0.565	0.492
Undergraduate degree	0.043	0.314	0.151	0.324	0.002	0.290
Monthly income 601€-1,200€	0.120	0.326	0.415	0.461	0.307	0.351
Monthly income 1,201€-1,800€	-1.055**	0.481	1.024*	0.533	1.052**	0.435
Monthly income 1,801€+	-0.777	0.591	0.963	0.617	1.291**	0.529
Owns mortgage loan	-0.939***	0.331	0.525	0.361	-0.045	0.321
No. of banks	0.042	0.192	0.073	0.184	-0.246	0.169
Extremely/very satisfied	0.462*	0.263	-1.325***	0.330	-1.329***	0.272
Pseudo R squared	0.423		0.255		0.244	
Number of observations	447		447		447	

^a The significance level of the estimated parameters is represented by * (10%), ** (5%) and *** (1%) for two-tailed tests.