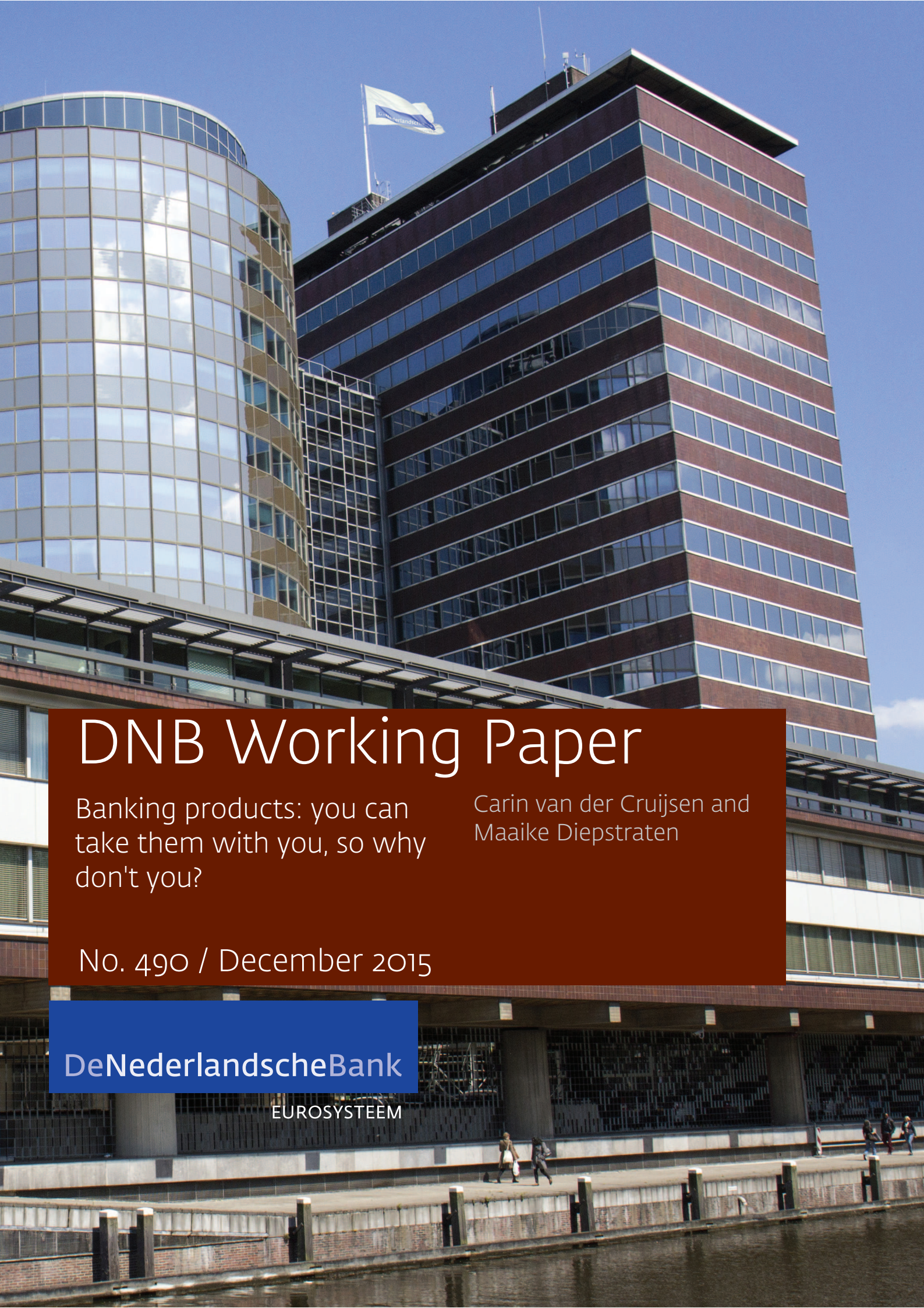

DNB Working Paper

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No. 490 / December 2015

DeNederlandscheBank

EUROSYSTEEM

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* Views expressed are those of the authors and do not necessarily reflect official positions of De Nederlandsche Bank.

Working Paper No. 490

December 2015

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Banking products: you *can* take them with you, so why don't you? *

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17 December 2015

Abstract

Policymakers around the world call for more competition in the banking sector. One barrier to achieving this goal is consumer inertia. Despite its policy relevance, there is surprisingly little known about consumers' bank switching behaviour. By applying the switching costs typology developed by Burnham et al. (2003), we show that switching costs differ across banking products and therefore we posit that banking products should be studied separately. We show that the propensity to switch varies across banking products (i.e. main current account, savings account, mortgage loan and revolving credit). We find that the bank-customer relationship explains the propensity to switch main current and savings accounts best, while the switching experience is the most important explanatory factor for the propensity to switch mortgage loans. We also report on perceived switching barriers and we test the effectiveness of policy initiatives to ease switching banks for current accounts. We find that the propensity to switch can be increased by introducing account number portability, whereas more knowledge of the switching service has no significant effect. Lastly we find that it will be especially difficult for foreign banks to attract customers.

Keywords: Banking products, switching behaviour, barriers, inertia, household survey, financial literacy, psychological factors, solidarity, bank competition, policy initiatives.
JEL classifications: D14, G21.

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1. Introduction

Policymakers frequently call for more competition in the banking sector to increase the stability and efficiency of banking services. See for example the Global Financial Development Report 2013 (Worldbank, 2013), the Australian government response (2015) to the Financial System Inquiry (Murray et al., 2014) and the annual report of De Nederlandsche Bank (DNB, 2015a). To stimulate competition, barriers to entry need to be lowered to attract new players. One of the conditions for banks to enter the market successfully is that they should be able to attract customers. However, in many developed countries only a small proportion of consumers switches banks in a given year. The UK Competition and Markets Authority concludes in 2015 that almost 60% of account holders had not changed their main personal accounts provider in the past ten years. A report on Canada published by EY in 2013 states that 71% of Canadians have had their primary relationship for more than a decade. The Netherlands Authority for Consumers and Markets (2014) finds that 73% of current account holders over eighteen are still at the same bank as where they opened these accounts. The European Commission (2013) also reports a low mobility of consumers within Europe: around 10% of payment account users switched accounts in 2011.

Research has mostly focused on either the relationship between firms and banks (e.g. Ongena & Smith, 2001; Ioannidou & Ongena, 2010) or on consumers and non-banks (e.g. Giulietti et al., 2005; Yang, 2014). Only a few studies discuss consumer bank switching behaviour (e.g. Kiser, 2002; Chakravarty et al., 2004; Brunetti et al., 2015). All of these studies use broad and general measurements of switching as they research switching the main bank. No more detailed analysis is available, even though consumers hold different banking products with distinct characteristics. By applying the switching costs typology of Burnham et al. (2003) we demonstrate that switching costs differ across products. Given the importance of switching costs in financial decision making[1] and especially in homogenous markets (Klemperer, 1987), we argue that it is important to research banking products separately. Our study focuses on current accounts, savings accounts, mortgage loans and revolving credit as these products are most commonly held by consumers. At the same time this approach allows us to differentiate between consumers' assets and liabilities. Our research question is: *Does the propensity to switch and the main explanatory factors depend on the banking product?*

Our paper makes the following contributions. By using insights from studies in different fields[2] and combining these with our own insights, we build a conceptual model incorporating a broad range of factors that may affect consumers' propensity to switch banks in the coming year. We empirically test the significance of these factors for each banking product separately. We find

[1] Consumers weigh perceived costs and benefits before deciding (Stigler, 1961; Hauser & Wernerfelt, 1990; Jones, Mothersbaugh and Beatty, 2000).

[2] E.g. the car insurance industry (Antón et al., 2007), landline telecom, home insurance, electricity industry (Gamble et al., 2009; Ek and Söderholm, 2008) and the banking sector (i.e. Kiser, 2002).

that the propensity to switch depends on the type of product. The propensity to switch is the highest for consumers' main savings accounts. We also find that the factors explaining the propensity to switch best depend on the banking product. Differences among consumers in the propensity to switch their main current account are best explained by differences in the strength of the bank-customer relationship and socio-psychological factors. The bank-customer relationship is also the most important factor for the propensity to switch main savings accounts. In contrast, switching experiences play the most important role in explaining variation in the propensity to switch mortgage loans. So one of the key insights of our study is that it is important to study banking products separately. In addition, we provide detailed insight into the factors withholding consumers from switching. Satisfaction with the current situation is the main factor. The general perception that switching is a hassle, that there is nothing to gain, and the absence of account number portability are also withholding a substantial proportion of bank customers from actually switching. Regarding the effectiveness of policies to ease switching, we find that the propensity to switch main current accounts can be increased by introducing account number portability, whereas more knowledge of the switching service has no significant effect. A vignette study shows that more emphasis on the Deposit Guarantee Scheme (DGS) moderately increases the propensity to switch savings accounts and that it is especially difficult for foreign banks to attract savings in the Netherlands.

We research bank switching behaviour of consumers in the Netherlands. First of all, the Netherlands is a natural case to study this topic as the Dutch banking sector is large in comparison with the economy, and it is one of the most concentrated banking sectors in Europe (DNB, 2015b). In addition, the Netherlands has a high level of consumer inertia (Netherlands Authority for Consumers and Markets, 2014), and it was the first country to introduce a special service to lower switching barriers.

The remainder of the paper is organized as follows. Section 2 provides an overview of our contribution to the literature and presents our conceptual model. Section 3 describes the situation in the Netherlands and the data we use. Section 4 outlines the propensity to switch for each banking product and the factors involved in switching. Section 5 tests the empirical model, Section 6 discusses barriers to switching, Section 7 examines the effectiveness of policies to increase switching and Section 8 presents our conclusions.

2. Literature

Although consumers hold different banking products with distinct characteristics, previous studies examining bank switching behaviour focus on the main bank. Kiser (2002) uses data from a monthly telephone survey among 500 US households to gain insight into switching costs and switching behaviour in the banking sector. She finds that geographic stability is an important

factor for having a long-term relationship with the main bank, that switchers are more likely to be "shoppers" who compare prices, and that there is a cohort effect rather than an age effect involved in switching. Chakravarty et al. (2004) address consumers' propensity to switch and find that personal characteristics are important in explaining switching intentions. They also document that the variables responsiveness, empathy, reliability and relationship duration are significantly negatively related to the propensity to switch, while having experienced problems with the bank positively impacts the propensity to switch. A more recent paper from Brunetti et al. (2015) relates the bank-customer relationship to actual switching behaviour using Italian data from 2006-2012. The results show that having a relationship with only one bank reduces the propensity to switch. In addition, the authors find that having more services with the main bank reduces the propensity to switch. Using Japanese data, Inakura and Shimizutani (2010) investigate the relationship between deposit insurance and bank switching. They report that respondents who had no knowledge of the change in the deposit insurance cap were less likely to actually switch and also more likely to not consider switching.

Given the importance of switching costs in financial decision making (Stigler, 1961; Hauser & Wernerfelt, 1990; Jones, Mothersbaugh & Beatty, 2000), we consider differences in switching costs across banking products. In his seminal work Klemperer (1987) distinguishes between three types of switching costs: transaction costs, learning costs, and artificial or contractual costs. In line with Klemperer (1987, 1995) others (e.g. Burnham et al., 2003; Jones et al., 2002) stress the multidimensional nature of switching costs. Burnham et al. (2003, p.110) define switching costs as "the onetime costs that customers associate with the process of switching from one provider to another". They group switching costs into i) procedural switching costs, ii) financial switching costs and iii) relational switching costs, where all categories include multiple dimensions. Procedural switching costs consist of economic risk costs, evaluation costs, learning costs and setup costs. The first dimension captures uncertainty about the new provider and hence includes accepting the potential for a negative outcome if customers are not adequately informed about the new provider. Evaluation costs include the time and effort spent in gathering information about alternatives and evaluating them. Learning costs occur after the switch has taken place and involve the time and effort spent in acquiring the skills and knowledge needed to use the product or service. Setup costs are costs involved in initiating a new relationship, for example filling in application forms. Financial switching costs consist of benefit-loss costs and monetary-loss costs. The first refer to the loss of benefits when the relationship is terminated. Monetary-loss costs include the one-time financial outlays when switching providers, other than outlays used to buy the product. The relationship with the incumbent firm is included in personal relationship loss costs and brand-relationship loss costs. The former refers to breaking the bond

with the staff members of the firm with whom the customer interacts, while the latter refers to breaking the bond with the brand or company itself.[3]

Switching costs differ across banking products (see Table A.1 in Appendix A). The table shows the different dimensions of switching costs for current accounts, savings accounts, mortgage loans and revolving credit based on the framework developed by Burnham et al. (2003). To give an example, evaluation costs include the time and effort spent on acquiring information about the bank as well as product characteristics. For current accounts this includes learning about the costs associated with having an account and the applicable interest rates. Evaluation costs increase with opacity and complexity, resulting in a longer list of evaluation costs for mortgage loans. Consumers need to familiarise themselves with the type of mortgage loans on offer, their size, the applicable advisory fees and interest rates, the monthly repayments and other conditions such as interest penalties in case of early redemption.

Because of the differences in switching costs across products, it is important to examine banking products separately and we expect to find differences in the propensity to switch. We expect that the propensity to switch will be the largest for savings accounts as new accounts are quickly opened, often without costs, and savings are easily transferred to the new account. Consumers who already have more than one savings account, may just transfer their savings to an existing account. We expect that the propensity to switch the main current account will be lower as it is less easy to switch. Current accounts are often linked to other banking products and if one switches one needs to inform others about the new account number. We also expect the propensity to switch mortgage loans to be lower, mainly because of the high evaluation and monetary costs involved. Hypothesis 1 is formulated in line with our expectation that the propensity to switch depends on the banking product.

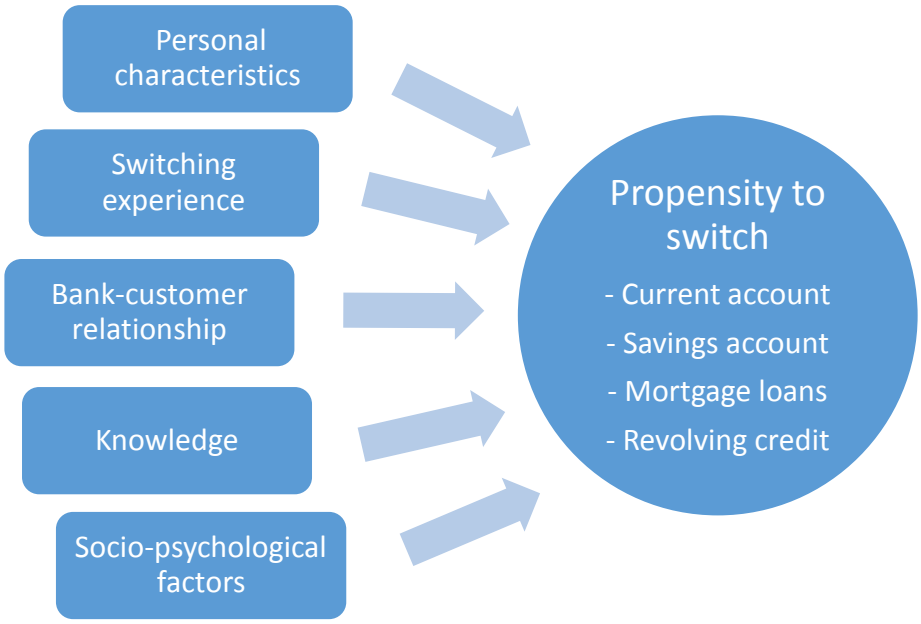
Hypothesis 1 (H1): *The propensity to switch depends on the banking product.*

We also test whether the main factors related to the propensity to switch depend on the banking product. To build a conceptual model, we use findings from research on household switching in the banking sector as well as insights from switching in other sectors and socio-psychological models. Antón et al. (2007) focus on switching intentions in the car-insurance industry. They find that the perception of unfair prices and experience of anger incidents have more capacity to explain switching intentions than quality and the organisation's commitment.

[3] The typology used is close to the switching costs typology outlined by Jones et al. (2002). Economic risk costs are similar to Jones et al.'s (2002) uncertainty costs, evaluation costs to pre-switching search and evaluation costs, learning costs to post-switching behavioural and cognitive costs, setup costs to setup costs, benefit loss costs to lost performance costs and personal and brand relationship loss costs to sunk costs. In addition, setup costs are close to Klemperer's (1987, 1995) transaction costs, learning costs to learning costs and benefit loss costs to artificial costs.

Focusing on the electricity market, Ek and Söderholm (2008) show that income and education levels positively impact the intention to switch. Moreover, they show that perceptions about the behaviour of others, social descriptive norms, have an effect on switching intentions. Gamble et al. (2009) study attitudes towards switching within three deregulated markets in Sweden characterised by a homogenous product: electricity, landline telecom, and home insurance. They find that loyalty has a negative effect on the attitude towards switching. The literature on switching emphasises the role of personal characteristics, the bank-customer relationship, knowledge and psychological variables in explaining switching behaviour. This is why we investigate the role of these variables to explain switching behaviour for each banking product. More general, there are various socio-psychological models that aim to explain behaviour. Factors that matter for behavioural intentions include social norms, perceived behavioural control and emotions (e.g. Ajzen, 1991; Triandis, 1977). Figure 1 shows our conceptual model.

Figure 1. Conceptual model



3. Data

3.1 Situation in the Netherlands

This study focuses on the Netherlands as it provides a natural case to study bank switching behaviour. The Dutch banking sector is large in comparison with the economy as a whole and at the same time it is one of the most concentrated banking sectors in Europe. Only four countries

(Greece, Estonia, Lithuania and Finland) have more concentrated banking systems (DNB, 2015b). The current structure is rooted in the mergers and acquisitions wave of the 1980s, which culminated in fewer but larger banks. Nowadays, these large banks benefit from economies of scale and implicit bail-out guarantees, which gives them an advantage over small banks. DNB, one of the two banking supervisors in the Netherlands, argues for more competition.

As in other European countries there is a large degree of consumer inertia (Netherlands Authority for Consumers and Markets, 2014), despite the lively debate on this topic.[4] In April 2015, a resolution put forward by two Dutch politicians was adopted to investigate ways of easing and facilitating switching on the premise that competition will increase if switching is made easier. At the same time Rutger Bregman, a correspondent at a Dutch news website, initiated what he called the "National I'm switching my bank week" where he encouraged people to switch banks as he found that little had changed since the outbreak of the banking crisis.

However, a stumbling block withholding people from switching banks is the time and effort it takes to arrange the switch. To alleviate this burden, the Netherlands in 2004 was the first country to instigate a "switching service" to facilitate switching current accounts. Specifically, it ensures that payments are transferred automatically to the new account for a period of 13 months, and it verifies that direct debits are paid from the new bank account. It also provides an overview of all transferred transactions. Consumers still need to inform others about the new account numbers.

3.2 Survey data

We conducted a survey among the CentERpanel, a representative sample of the Dutch speaking population in the Netherlands in June 2015 to gain detailed insight into switching propensities for different banking products. The survey was sent out to 2,693 members of the CentERpanel and completely filled in by 2,194 respondents, which represents an 81.5% response rate.[5,6,7] Background information on the respondents can be found in the annual DNB Household Survey (DHS), which is filled in by the CentERpanel and exists for more than two decades.[8] CentERdata, a research institute affiliated to Tilburg University, manages the CentERpanel.[9]

[4] Note that there are also various other barriers to entry in the Dutch market (Netherlands Authority for Consumers and Markets, 2014).
[5] The questionnaire is available on request.
[6] For more information on the CentERpanel, see Teppa and Vis (2012) and http://www.centerdata.nl/en/projects-by-centerdata/origins-of-the-centerpanel. URL last accessed on 10 December 2015.
[7] For some questions the response rate is higher (up to 83.1%) because there are 44 panellists who partly filled in the questionnaire.
[8] Information on the DHS is available at http://www.centerdata.nl/en/projects-by-centerdata/dnb-household-survey-dhs. URL last accessed on 10 December 2015.
[9] Previous researchers and policymakers have used the CentERpanel to ask questions on a broad range of topics. For example, Hurd et al. (2011) investigate stock market expectations, Von Gaudecker (2014) examines households' portfolio diversification, Georgarakos et al. (2014) research the impact of social interactions on debt and Van der Cruijsen et al. (2012) study the impact of crisis experiences on savings behaviour.

4. Survey outcomes

4.1 The propensity to switch by banking product

We find that the propensity to switch in the coming year indeed depends on the product in question. Depending on whether they held the relevant product, we asked survey participants: *"What is the propensity that you will switch within the next twelve months with your main [current account/savings account/mortgage loan/revolving credit]?"* Table 1 shows that the average propensity to switch is the lowest for main revolving credits and mortgage loans (6%), slightly higher for main current accounts (7%) and the highest for main savings accounts (10%), indicating differences between consumers' assets and liabilities. Our findings seem valid given the differences in switching costs (see Section 2). The share of respondents reporting a propensity to switch of at least 50% is also the highest for savings accounts: 11%. The share of respondents who will definitely not switch is high; it ranges from 62% for savings accounts to 74% for main revolving credits. For each banking product, we find that the proportion of consumers who definitely intend to switch is below 1%.

Table 1. Propensity to switch in the next twelve months

	Average switching propensity (in %)	Percentage of respondents who report a switching propensity of… …0%.	…100%.	…≥50%.	Number of respondents
Main current account	6.8	67.1	0.8	6.7	2206
Main savings account	10.2	62.1	0.7	11.4	1996
Main mortgage loan	6.4	73.5	0.6	7.2	1140
Main revolving credit	5.7	74.3	0.5	5.8	191

Source: CentERpanel, June 2015.

The data supports Hypothesis 1, which states that the propensity to switch depends on the banking product. Based on t-tests, we find that the propensity to switch savings accounts is significantly higher than that for current accounts, mortgage loans and revolving credits (all p=0.00). Focusing on individuals, paired t-tests show that respondents report a significantly higher propensity to switch their main savings accounts than their main current accounts (p=0.00) and main mortgage loans (p=0.00).[10] The propensity to switch main current accounts is also significantly higher than that for switching main mortgage loan accounts (p=0.06).

[10] Paired t-tests compare for the same individual the propensity to switch with one product with the propensity to switch with another product. Consequently the sample is restricted to respondents who have both banking products that are compared.

4.2 Potential factors related to switching

We also collected information about the switching experience, the bank-customer relationship, financial knowledge and socio-psychological factors. Appendix B includes a description of the variables that we constructed and summary statistics.

For all banking products, we find that the vast majority of respondents has never switched banks, a substantial proportion switched longer than a year ago, and only a small proportion report recent switching activities. For revolving credit, we find the highest proportion of respondents without switching experience (73%), whereas the proportion of respondents reporting switching experience is the highest for mortgage loans (44%).

Many respondents report having a strong bank-customer relationship. The strongest bond is being felt with banks where main current or savings accounts are held. We also find that 43% of respondents bank with one bank only, and that 9% of respondents contacted their bank to file a complaint during the past three years.

A substantial proportion of bank customers is not fully aware of the costs and benefits of banking products. 48% of the 2,185 respondents with a current account do not know by heart how much it costs to have a current account including payment cards, and 52% of 188 respondents do not know how much interest they pay on their main revolving credit. Knowledge of the costs of main mortgage loans is better. 79% of 1,130 respondents with mortgage loans are aware of the interest rate they pay on these loans. Knowledge of financial benefits is also low. 35% of 1,976 savers do not know by heart the interest rate they receive over their main savings account. 69% of respondents know that savings up to EUR 100,000 are guaranteed by the DGS. 41% of respondents have not heard of the switching service and 30% of respondents have heard of it, but do not know what it entails.

As far as socio-psychological variables are concerned, about 50% of our respondents perceive switching as unpleasant. 46% of respondents find it difficult to switch. Almost one in five respondents believes that they would not be able to switch if they would want to. In addition, we find that only a small proportion of consumers believes that others whom they want to resemble switch every now and then, and that people who are important to them think they should switch. The propensity to switch may also differ between people who jointly own a banking product and those who do not. We find that shared ownership is the lowest for main current accounts (52% of respondents) and the highest for the main mortgage loans (77% of respondents).

5. Propensity to switch: regressions

5.1 Methodology

We research the decision to switch banks for each product separately to test whether our theoretical model as described in Section 2 fits all four banking products. It also allows us to assess which factors affect switching propensities most for each product. Table 2 shows the estimated coefficients of Tobit regressions using four different switching measures as dependent variable: *switching propensity*$_C$ (column 1), *switching propensity*$_S$ (column 2), s*witching propensity*$_M$ (column 3), and *switching propensity*$_R$ (column 4). These are the reported propensities (expressed as a percentage) to switch banks within the next twelve months for current accounts (C), savings accounts (S), mortgage loans (M), and revolving credits (R). Scores for these dependent variables range between 0 and 100. A large proportion of the observations is at the 0 boundary. Therefore these are corner solution variables and we use the Tobit model.[11]

We relate the propensity to switch to the factors contained in our conceptual model. The vector X captures personal characteristics: gender, age, income, education, degree of urbanisation and whether the account holder is responsible for household finances. Second, the vector E includes both recent and non-recent switching experience with the particular banking product *p*, as well as switching experience with other banking products. Third, the vector B captures to what extent respondents feel a bond with the bank providing their product, the number of banks they bank with and whether they have filed a complaint in the past three years. Fourth, we include a vector K with product specific knowledge variables. Fifth, the vector SP includes socio-psychological variables that measure perceived control, social norms, the extent to which consumers perceive switching as unpleasant, and whether or not the product is jointly owned. We therefore postulate that

$$switching\ propensity \begin{cases} switching\ propensity_{ip}^{*} & if\ 0 < switching\ propensity_{ip}^{*} < 100 \\ 0 & if\ switching\ propensity_{ip}^{*} \leq 0 \\ 100 & if\ switching\ propensity_{ip}^{*} \geq 100 \end{cases} \quad (1)$$

where $switching\ propensity_{ip}^{*}$ is the latent variable:

$$switching\ propensity_{ip}^{*} = \beta_1 X_i + \beta_2 E_{ip} + \beta_3 B_{ip} + \beta_4 K_{ip} + \beta_5 SP_{ip} + e_{ip} \quad (2)$$

[11] Wooldridge (2002) argues that it makes sense to call the model that fits this type of data well a *corner solution model*. However, in practice the term *censored regression model* is used more often. Wooldridge (2002) argues that a suited method to use for a corner solution dependent variable is the Tobit model (Papalia & Di Iorio, 2001). In general, most of our findings are robust with respect to the chosen method. As robustness tests we have estimated (1) Tobit regressions with log-transformed dependent variables, and (2) fractional response logit models. The detailed results of the robustness analyses are available on request.

In these equations, *i* denotes the individual and *p* the product. A description of all dependent and independent variables is included in Appendix B.

5.2 Results

Overall, we find that for current accounts, savings accounts and mortgage loans a wide range of variables from all five factors is significant and the model provides a better fit than an intercept-only model (F-test, p=0.00), see Table 2. However, the regression model of credit is not significant (F-test, p=0.40) so we will not discuss its outcomes here. We also find that both the sign and significance level of different variables depend on the banking product in question.

Personal characteristics

The propensity to switch is significantly related to various socio-economic variables. First of all, the age of the respondent is a relevant factor for the propensity to switch banking products. People aged over 65 have a lower propensity to switch their current account, saving account and mortgage loan provider than people aged between 35 and 44, which is the reference group. People between 55 and 64 are also less likely to switch their savings and mortgage loans than people in the 35-44 reference group. People in the youngest age bracket (34 and below) are more likely to switch their mortgage loan provider than people in the reference group. This finding is intuitive as younger people are more likely to benefit from financial gains offered by switching than older people. Age has a strong effect. The predicted propensity to switch the current accounts is 9.1% for people between 35 and 44 and 4.7% for people in the highest age bracket.

The level of education also matters for the propensity to switch. People with higher education are more likely to switch their current accounts and savings accounts than people with low education. The opposite holds for the propensity to switch mortgage loans. Income is positively related to the reported propensity to switch the main mortgage loan provider. This finding is intuitive as the financial benefits of switching are likely to be higher for people with larger mortgage loans, and the amounts that consumers are eligible for positively relates to their income level. The predicted propensity to switch is 4.1% for people in the lowest income bracket and 11.0% for people in the highest income bracket. Consumers living in urbanised regions are more likely to switch their current accounts than consumers in rural areas. One explanation may be that some people find it important to have a physical bank branch nearby, and in smaller towns the choice is often limited to one.

We neither find a significant gender effect nor a significant difference between people who are responsible for household finances and those who are not.

Table 2. Propensity to switch by banking product: baseline regressions

	Current account	Savings account	Mortgage loan	Revolving credit
Male	0.42	-1.15	2.06	1.91
	(2.13)	(2.39)	(4.11)	(9.66)
34 and below	-0.20	-1.51	12.68*	-17.40
	(3.50)	(3.94)	(6.67)	(18.93)
Between 45 and 54	1.54	-0.34	3.04	1.48
	(3.09)	(3.37)	(5.02)	(13.85)
Between 55 and 64	-3.88	-9.40***	-12.91***	-28.41**
	(3.08)	(3.36)	(4.97)	(12.63)
65 and over	-15.24***	-19.27***	-14.41***	-13.34
	(2.99)	(3.27)	(5.16)	(12.61)
Education	4.97**	4.68**	-6.85*	-2.30
	(2.11)	(2.34)	(3.75)	(8.17)
Income	-0.22	0.38	2.21***	-2.56
	(0.40)	(0.44)	(0.78)	(1.83)
City	1.55**	0.95	1.14	6.51*
	(0.75)	(0.81)	(1.36)	(3.36)
Responsible for finances	1.69	0.76	0.61	23.43**
	(2.14)	(2.44)	(4.05)	(10.17)
Recent switching experience$_p$	47.16**	23.88***	-12.33	10.66
	(18.81)	(5.80)	(13.30)	(14.53)
Older switching experience$_p$	2.38	9.73***	16.12***	13.91
	(2.45)	(2.63)	(3.86)	(9.32)
Other switching experience$_p$	4.03*	-1.42	8.62**	-6.28
	(2.40)	(2.63)	(3.53)	(8.19)
Bond with bank$_p$	-7.08***	-7.91***	-4.39***	-1.32
	(0.99)	(1.04)	(1.52)	(3.64)
Number of banks	0.89	3.89***	2.00	5.18
	(1.02)	(1.15)	(1.79)	(5.10)
Complaint	15.31***	17.40***	0.00	10.11
	(3.44)	(3.86)	(5.54)	(12.87)
Knowledge$_p$	-1.73	9.11***	1.51	1.65
	(2.04)	(2.50)	(4.67)	(8.59)
Knowledge other$_p$	8.07*	-9.61**	-20.80***	8.48
	(4.29)	(4.61)	(7.80)	(14.56)
Knowledge of switching service	0.32			
	(1.25)			
*Knowledge of switching service * Recent switching Experience*$_{\text{current account}}$	-22.14***			
	(7.88)			
Knowledge of Deposit Guarantee Scheme		5.31*		
		(2.77)		
Perceived control	5.66***	4.31***	2.24	4.79
	(1.24)	(1.32)	(2.27)	(4.50)
Unpleasant	-0.74	-0.18	-3.43*	5.26
	(1.13)	(1.20)	(1.92)	(4.19)
Social norms prescriptive	5.85***	2.27	0.80	1.57
	(1.44)	(1.54)	(2.24)	(5.79)
Social norms descriptive	1.74	2.22	-0.56	0.63
	(1.24)	(1.37)	(2.07)	(4.41)
Shared$_p$	2.06	1.49	-3.70	19.43*
	(1.99)	(2.24)	(4.19)	(9.85)
Constant	-43.12***	-34.30***	-26.95*	-104.28***
	(9.01)	(9.69)	(15.45)	(38.16)
Observations	2089	1892	1088	181
Model significance	0.00	0.00	0.00	0.40
Log-likelihood	-3960.98	-4098.31	-1777.05	-289.24

Note: This table reports parameter estimates for Tobit regressions. Robust standard errors in parentheses. Variables with subscript *p* vary per regression. Subscript *p* indicates the banking product. *** p<0.01, ** p<0.05, * p<0.1.

Switching experience

Respondents with switching experience report a higher switching propensity than respondents without this experience. The predicted propensity of switching main savings accounts in the coming year is 20.9% for consumers with recent experience, whereas it is 9.9% for consumers who did not switch these accounts in the past year. Regarding main current accounts, we also find that consumers who switched less than a year ago report a higher propensity to switch in the coming year. This effect is stronger for people unfamiliar with the switching service. For mortgage loans it is not the recent experience that counts, but the experience of having switched a year or longer ago. This is intuitive given the maturity of mortgage loans and the switching penalty. The effect is again positive: experienced consumers report a higher propensity to switch.

Experience in switching other banking products also matters for current accounts and mortgage loans; consumers who have switched other banking products have a higher propensity to switch than consumers who have not done so.

Bank-customer relationship

Our next key finding is that there is a negative relationship between the strength of the loyalty between customers and their banks and the propensity to switch. Consumers who feel a strong bond with their bank report a significantly lower propensity to switch than respondents who feel a weak bond or no bond at all. The *bond with bank*$_p$ variable is significant in all regressions. To illustrate the strength of the effect, the predicted propensity to switch their main current account for consumers who feel no bond at all with the bank where they hold of their main current account is 12.2%, whereas it is only 3.6% for consumers who feel a very strong bond.

We furthermore find a positive relationship between the number of bank-customer relationships and the reported propensity to switch main savings accounts. For example, the predicted propensity to switch is 8.9% for customers of one bank, and 11.7% for customers of three banks. Lastly, consumers who contacted their bank in the past three years to file a complaint report a significantly higher propensity to switch for main current accounts and savings accounts than consumers without complaints. To illustrate this, the predicted propensity to switch main savings accounts is 17.0% for those who filed a complaint and 9.6% for those who did not.

Knowledge

Table 2 also shows the relevance of knowledge of banking products. The propensity to switch their main savings accounts is higher for consumers who know by heart the interest rate they currently receive than for consumers who have no idea of the interest rate that they are receiving. The predicted propensity to switch is 11.5% for the first group and 8.3% for the second group. Knowledge of the DGS is positively related to the propensity to switch main savings accounts.

Compared to the effects of other variables in the model, this effect is rather small. The difference in the predicted switching probability is 1.9 percentage points. Knowledge of other banking products has a mixed effect on the propensity to switch. The effect is positive for the main current account but negative for the main savings account and mortgage loan.

Socio-psychological factors

The propensity to switch is also related to socio-psychological factors. Consumers who agree with the statement *"If I want, I can switch to another bank"* are more likely to switch their main current account than consumers who disagree with this statement. The same holds for savings accounts and the effect is substantial. For example, with respect to current accounts we find that people who strongly agree with this statement have a predicted propensity to switch of 9.1%, while the predicted propensity to switch for people who strongly disagree with this statement is 3.3%. We also find that consumers who agree with the statement that switching is unpleasant are less likely to switch their main mortgage provider than consumers who disagree with this statement. Social prescriptive norms significantly affect the propensity to switch the current accounts. The predicted propensity is 5.8% for consumers who do not believe at all that people who are important to them think that they should switch and 14.5% for consumers who instead strongly believe that others think they should switch. Perceptions of the behaviour of people who one wants to resemble do not significantly matter. Lastly, we find that the propensity to switch is the same for people with joint banking products and single users.

5.3 Robustness

As a robustness test we add background variables distilled from DNB's annual Household Survey. The number of observations is substantially lower in these cases because these background characteristics are not available for all participants in our survey. The regression results are available on request.

We find a positive relationship between the degree of risk aversion and the propensity to switch. This holds for all banking products. For revolving credit the model turns significant if we add the variables risk aversion and self-assessed knowledge. Consumers who believe that their financial knowledge is adequate are less likely to switch their main revolving credit than consumers who perceive their knowledge to be poor.

The propensity to switch main savings accounts is positively related to the balance on the main savings account. A variable that measures to what extent people save with the goal to generate interest income is not significantly related to the propensity to switch the savings account. The value of the mortgage loan has a positive but insignificant sign if included in the regression with the mortgage switching propensity. We do not find a significant effect on the

propensity to switch of a year-on-year change in the trust in one's own bank compared to other banks. Regarding the main current account, there is no significant difference in the propensity to switch between consumers with a mortgage and/or a savings account and consumers without these accounts.

5.4 Main factors by banking product

This section tests whether the main factors related to the propensity to switch depend on the banking product. We analyse the five factors of our conceptual model: i) personal characteristics, ii) switching experience, iii) the bank-customer relationship, iv) knowledge and v) socio-psychological factors. To examine the importance of each factor, we regress switching propensities on the variables belonging to each factor separately and measure the relative quality of the models by assessing Akaike's Information Criterion (AIC, Akaike, 1974). The results are presented in Appendix C.

The most important factors related to switching propensities depend on the banking product. The bank-customer relationship is most important in explaining variation in the propensity to switch current accounts, followed by socio-psychological factors. The bank-customer relationship is also most important in explaining the propensity to switch savings accounts. Switching experience is the second most important for this product. Focusing on mortgage accounts, we find that switching experience is most important factor and that personal characteristics are the second most import factor in explaining switching propensities. Consequently, we find differences in the most important factors across banking products.[12]

6. Discussion of barriers

Figure 2 gives an overview of potential factors withholding customers from switching. The figure shows the answers to the question "*There can be different factors withholding you from switching. How important are the factors below?*"

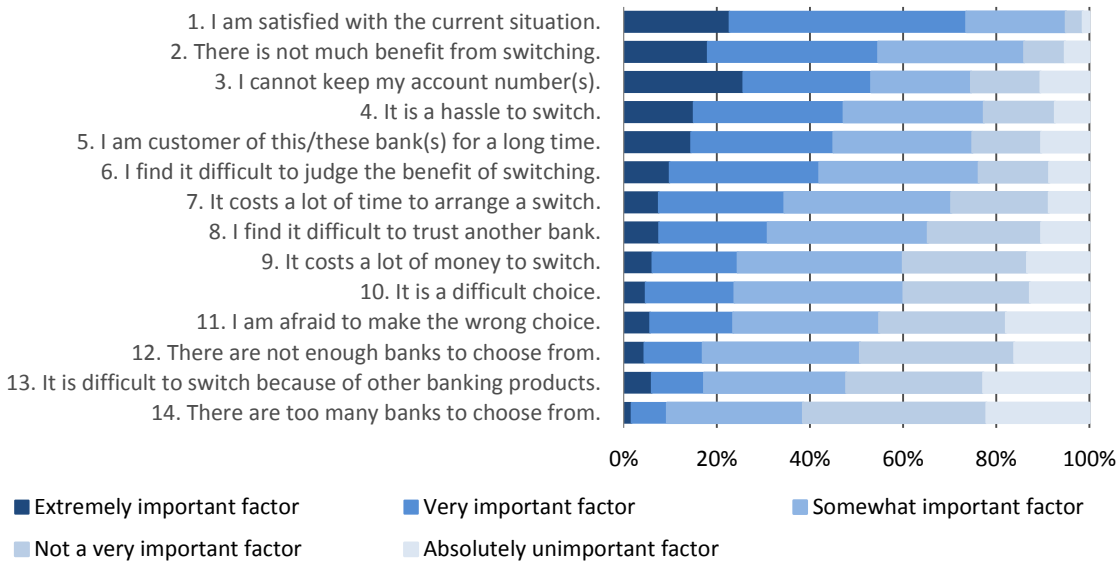
We find that for three out of four respondents satisfaction with the current situation is a very or extremely important factor that withholds them from switching. Other relationship characteristics, like having a long-standing relationship with their current bank and finding it difficult to trust another bank also withhold a substantial group of respondents from switching. A large number of respondents also mention that there is not much to be gained from switching.

The outcomes also indicate important practical barriers. About half of the respondents state that the absence of account number portability withholds them from switching. A significant

[12] We do not discuss the outcomes for the propensity to switch for the main revolving credit as all models presented in Table C.4 in Appendix C are insignificant.

proportion of respondents also finds switching a hassle and believes that it costs a lot of time and money. It is a difficult choice and people are afraid of making the wrong decision.

Figure 2. Barriers to switching



Source: CentERpanel, June 2015.
Note: the figure shows the response shares to the question *"There can be different factors that withhold you from switching. How important are the following factors?"* Factors are ranked based on the average answer.

Table D.1 in Appendix D looks at differences in the importance of barriers between respondents who will definitely not switch (*switching propensity*$_{ip}$ = 0) and respondents who are considering switching in the coming year (*switching propensity*$_{ip}$ > 0). Regarding all products, we find that for respondents who are considering switching, their relationship with their bank is a less important barrier than it is for respondents who will definitely stay with their current bank. Respondents considering switching their current accounts find the absence of account number portability, lack of time and not enough banks to choose from more important barriers than respondents who will definitely not switch their current accounts. The same holds for savings accounts. We clearly find that respondents who report a positive propensity to switch their main mortgage loans (*switching propensity*$_{iM}$ > 0) perceive the long relationship less a barrier than other respondents (*switching propensity*$_{iM}$ = 0) do.

7. Effectiveness of policies

7.1 Attracting foreign banks

Six out of ten respondents indicate that they are not willing to switch to a foreign bank.[13] This is a further indication that psychological factors play a role. A vignette study confirms that it will be more difficult for foreign banks than for domestic banks to attract new customers.

Respondents indicate the propensity to switch to a new entrant that offers a higher interest rate for savings. Depending on the vignette the new entrant was either a Dutch or a foreign bank and the accompanying text included the line "*If the bank goes bankrupt, you will get your money back.*" or not. Table 3 shows that consumers are significantly less likely to switch to a foreign bank than to a Dutch bank. This does not change if the text referring to the DGS is included.

Table 3. Home bias in bank switching behaviour

	Deposit insurance text	Certainly not	Probably not	neutral	Probably yes	Certainly yes	Mean score	N
Dutch bank	no	8%	25%	33%	28%	7%	3	564
Foreign bank	no	26%	39%	21%	13%	1%	2.2	577
Difference		-18%	-15%	12%	15%	6%	0.8***	
Dutch bank	yes	7%	21%	27%	35%	10%	3.2	536
Foreign bank	yes	22%	31%	23%	19%	5%	2.5	522
difference		-15%	-11%	5%	16%	5%	0.7***	

Source: CentERpanel, June 2015.
Note: The table shows the outcomes of four vignettes. Respondents were randomly assigned to one of these. The question was: "*Suppose you have a savings account with a balance of EUR 25,000 at a Dutch bank. You receive 1% interest on your savings (EUR 250 per year). A new [Dutch/foreign] bank, Bank B, enters the market and offers 2% interest (EUR 500 per year). [If the bank goes bankrupt, you will get your money back.] Would you switch?*" N = number of respondents. *** p<0.01.

7.2 The Deposit Guarantee Scheme

Table 3 shows that respondents who got the vignettes with the text "*If the bank goes bankrupt, you will get your money back.*" report a significantly higher propensity to switch banks with their savings than respondents who were presented with the vignettes without this text. The effect is small but significant (p<0.01).

[13] Previous studies have shown that consumers prefer domestic products. For more information on this topic, see Siamagka & Balabanis (2015).

7.3 Increasing knowledge of the switching service

A "switching service" was created in the Netherlands in 2004 to make current account switching easier. The service ensures that payments are automatically transferred to the new account for 13 months after the switch and that direct debits are paid from the new bank account. It also provides an overview of all transferred transactions.[14] However, not all consumers are aware of the switching service. We found that informing customers about the switching service on average will not significantly increase the switching propensity, see Table 4.[15]

Table 4. Effectiveness of improving knowledge and reducing hassle

	Average switching propensity (in %)	Percentage of respondents who report a switching propensity of…			
		…0%.	…100%.	…≥50%.	N
All respondents					
Current situation	6.8	67.1	0.8	6.7	2206
In case of account number portability	13.3***	58.1	2.3	13.7	2205
People unaware of the switching service					
Current situation	5.8	70.4	0.6	5.6	895
After explanation of switching service	7.0	66.4	0.6	6.1	895
After explanation and account number portability	10.7***	62.9	1.3	10.8	895
People unaware of the content of the switching service					
Current situation	8.0	60.9	0.6	8.3	654
After explanation of switching service	8.9	56.9	0.5	8.4	654
After explanation and account number portability	15.8***	48.9	1.8	15.0	654
People aware of the content of the switching service					
Current situation	7.0	68.9	1.4	6.7	657
In case of account number portability	14.4***	60.7	4.1	16.2	656

Source: CentERpanel, June 2015.
Note: This table shows the propensity that someone will switch within twelve months with their main current account before and afer explaining the switching service was explained to them. It also shows the effect of account number portability on the propensity to switch. N = the number of respondents. We have tested whether the difference in switching probablity is significant. *** p<0.01.

[14] Although the switching service provides a framework to facilitate switching, customers need to inform third parties about their new account numbers.
[15] The question was: *"The switching service entails that the first thirteen months after switching to another bank, payments are automatically redirected to your new current account. Payments based on direct debit will be directly withdrawn from your new account. In addition, your statement of account includes an overview of all redirected transactions. You also have to arrange some things yourself, for example applying for a debit card, credit card and online banking at the new bank and informing people and companies that pay money into your account about your new account number. You indicated a likelihood of switching within 12 months with your **main** current account of x%. What is the likelihood that you will switch within 12 months with your **main** current account now that you know (more) about the switching service? Fill in a percentage between 0 and 100 (0% = "I will certainly not switch" and 100% = "I will certainly switch")."*

7.4 Reducing the hassle: account number portability

Although the switching service eases switching, customers still have to inform third parties of their new account number. Account number portability means that account holders can take their current account numbers with them to the new bank. Although account number portability would only eliminate a small part of all switching costs presented in Table A.1 in Appendix A, Table 4 reveals that the average propensity to switch significantly increases if portability is made possible. The effect of account number portability is the strongest for respondents who are aware of what the switching service provides.[16] More research is needed to evaluate whether consumer benefits of account number portability outweigh the costs involved due to technical complexity and to what extent consumers' attitudes are likely to change if they have to pay these costs.

8. Conclusions

Policymakers argue for more competition in the banking sector to improve the stability and efficiency of banking services. However, many European countries are experiencing consumer inertia, which imposes a barrier for new entrants. Despite its relevance, little is known about consumers' switching behaviour.

This paper provides detailed insight into consumers' bank switching behaviour. Our research focuses on the Netherlands, a country characterised by a large financial sector, consumer inertia and policy initiatives to reduce this. By conducting a survey among a representative panel of consumers, we retrieve a unique dataset that enables us to study switching intentions, barriers to switching, and the effectiveness of policy initiatives.

We contribute to the existing literature in several ways. By applying the switching costs typology developed by Burnham et al. (2003), we document differences in switching costs across banking products. We argue that it is important to study switching behaviour for current accounts, savings accounts, mortgage loans and revolving credit separately. We show that the propensity to switch differs across products and is the highest for main savings accounts. Factors that explain the propensity to switch best depend on the banking products in question. Consumers' differences in the propensity to switch their main current accounts are best explained by differences in the strength of the bank-customer relationship and socio-psychological factors. The bank-customer relationship is also the most important factor for the propensity to switch their main savings accounts. In contrast, switching experiences play the most important role explaining variations in the propensity to switch mortgage loans. Consequently, one of our key findings is that it is

[16] The question was formulated as follows: "*Currently, if you want to switch your current account you can't keep your current account number. Account number portability means that bank customers can keep their current account number when they switch banks. You indicated a likelihood of switching within 12 months your **main** current account of x%. What is the likelihood that you will switch within 12 months your **main** current account if you were able to keep the account number? Fill in a percentage between 0 and 100 (0% = "I will certainly not switch" and 100% = "I will certainly switch")*."

important to study banking products separately. We also find that a large proportion of respondents is content with the current situation, which is withholding them from switching. The perceptions that switching is a hassle, that there is nothing to gain, and the absence of account number portability are also withholding a substantial proportion of respondents from actually switching. Finally, our findings can give guidance to policymakers aiming to reduce consumer inertia. Our research indicates that a policy aimed at increasing knowledge of the switching service will not have a significant effect on switching propensity. The introduction of account number portability seems a more promising policy avenue. Regarding savings accounts, we find that a stronger emphasis on the DGS may result in a moderately higher propensity to switch. In addition, we find that it will be especially difficult to stimulate consumers to switch to foreign banks.

We will leave it to future research to provide insight into time patterns and to what extent various events can affect switching behaviour. We also welcome studies that include non-banks in the analysis, given the rise of non-banks executing banking activities, e.g. credit unions providing loans and technology companies providing payment services. It would also be interesting to analyse the gap between switching propensities and actual switching behaviour.

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Appendix A. The different dimensions of switching costs by banking product

Table A.1 The different dimensions of switching costs by banking product (I/II)

	Current account	Savings account	Mortgage loan	Revolving credit
Economic risk costs	• Bank default • Services • Customer friendliness	• Bank default • Services • Customer friendliness	• Bank default • Services • Customer friendliness	• Bank default • Services • Customer friendliness
Evaluation costs	• Comparing costs of holding a current account • Comparing interest rates on current accounts • Getting information on location and opening hours of the bank • Comparing types of current account	• Comparing costs of holding a savings account • Comparing interest rates on savings accounts • Getting information on location and opening hours of the bank • Comparing types of savings account	• Comparing costs of holding a mortgage loan • Comparing interest rates on mortgage loans • Getting information on location and opening hours of the bank • Comparing types of mortgage loans • Learning about conditions (e.g. borrowing capacity, payments, penalties in case of early repayments)	• Learning about interest rates • Learning about repayments • Learning about penalties is case of failing to repay • Getting information on location and opening hours of the bank • Comparing types of revolving credit • Learning about conditions (e.g. borrowing capacity, payments, penalties)
Learning costs	• Learning to use new format of electronic banking • Learning to transfer money • Learning new PIN • Learning new account number • Informing others about the new account number	• Learning to use new format of electronic banking • Learning to transfer money	• Learning to use new format of electronic banking • Learning to make payments	• Learning to use new format of electronic banking • Learning to make payments
Setup costs	• Closing and opening account	• Closing and opening account	• Closing and opening account • Time and effort involved in meeting with the bank	• Closing and opening account

Note: We applied the framework developed by Burnham et al. (2003) to the four banking products examined in this paper.

Table A.1 The different dimensions of switching costs by banking product (II/II)

Benefit loss costs	• Discounts for having multiple products or a long relationship • When products are linked, switching implies switching with other products as well	• Discounts for having multiple products or a long relationship • When products are linked, switching implies switching with other products as well	• Discounts for having multiple products or a long relationship • When products are linked, switching implies switching with other products as well	• Discounts for having multiple products or a long relationship • When products are linked, switching implies switching with other products as well
Monetary loss costs		• Penalty when terminating the existing contract before maturity	• Penalty when terminating the existing contract before maturity • Advisory fees	
Personal relationship loss costs	• Relationship with bank staff	• Relationship with bank staff	• Relationship with bank staff	• Relationship with bank staff
Brand relationship loss costs	• Bond with the brand	• Bond with the brand	• Bond with the brand	• Bond with the brand

Note: We applied the framework developed by Burnham et al. (2003) to the four banking products examined in this paper.

Appendix B. Propensity to switch: description of variables

Table B.1 Description of variables (I/III)

Variable	Description	Mean	Sd	Min	Max	N
Dependent variables						
Switching propensity$_C$	Propensity to switch within the next twelve months with main current account (%).	6.82	16.73	0	100	2206
Switching propensity$_S$	Propensity to switch within the next twelve months with main savings account (%).	10.23	20.05	0	100	1996
Switching propensity$_M$	Propensity to switch within the next twelve months with main mortgage loan (%).	6.41	17.11	0	100	1140
Switching propensity$_R$	Propensity to switch within the next twelve months with main revolving credit (%).	5.70	16.84	0	100	191
Personal characteristics (X)						
Male	Binary dummy (1 = male, 0 = female).	0.52	0.50	0	1	2238
34 and below	Binary dummy (1 = 34 or below, 0 = else).	0.11	0.32	0	1	2238
Between 35 and 44	Binary dummy (1 = between 35 and 44, 0 = else).	0.18	0.38	0	1	2238
Between 45 and 54	Binary dummy (1 = between 45 and 54, 0 = else).	0.17	0.37	0	1	2238
Between 55 and 64	Binary dummy (1 = between 55 and 64, 0 = else).	0.21	0.41	0	1	2238
65 and over	Binary dummy (1 = 65 or older, 0 = else).	0.33	0.47	0	1	2238
Education	Successful completion of higher vocational education and/or university education. Binary dummy (1 = graduate level diploma, 0 = else).	0.37	0.48	0	1	2237
Income	Classification of gross monthly personal income in euros (1 = 500 or less, 2 = 501-1000, 3 = 1001-1500, 4 = 1501-2000, 5 = 2001-2500, 6 = 2501-3000, 7 = 3001-3500, 8 = 3501-4000, 9 = 4001-4500, 10 = 4501-5000, 11 = 5001-7500, 12 = 7500 or more).	4.95	2.80	1	12	2168
City	Degree of urbanisation of respondent's residence based on the address density (1= not urbanised, 2 = little urbanised, 3 = moderately urbanised, 4 = strongly urbanised, 5 = very strongly urbanized).	2.93	1.31	1	5	2212
Responsible for finances	Whether or not respondent is responsible for the household's financial affairs. Binary dummy (1 = responsible for financial affairs, 0 = else).	0.66	0.47	0	1	2238
Switching experience (E)						
Recent switching experience$_C$	Binary dummy (1 = switched main current account less than one year ago, 0 = else).	0.02	0.15	0	1	2213
Older switching experience$_C$	Binary dummy (1 = switched main current account at least one year ago, 0 = else).	0.28	0.45	0	1	2213
Other switching experience$_C$	Binary dummy (1 = switching experience with main savings account, mortgage loan or revolving credit, 0 = else).	0.45	0.50	0	1	2238
Recent switching experience$_S$	Binary dummy (1 = switched main savings account less than one year ago, 0 = else).	0.04	0.19	0	1	2002
Older switching experience$_S$	Binary dummy (1 = switched main savings account at least one year ago, 0 = else).	0.36	0.48	0	1	2002
Other switching experience$_S$	Binary dummy (1 = switch experience with main current account, mortgage loan or revolving credit, 0 = else).	0.41	0.49	0	1	2238

Note: This table describes the variables used in the regressions reported in Table 2. The mean, standard deviation (sd), minimum (min), maximum (max) and number of observations (N) for DHS variables are based on the data available for the respondents of our additional June 2015 survey.

Table B.1 Description of variables (II/III)

Variable	Description	Mean	Sd	Min	Max	N
Recent switching experience$_M$	Binary dummy (1 = switched main mortgage less than one year ago, 0 = else).	0.02	0.14	0	1	1142
Older switching experience$_M$	Binary dummy (1 = switched main mortgage at least one year ago, 0 = else).	0.42	0.49	0	1	1142
Other switching experience$_M$	Binary dummy (1 = switching experience with main current account, savings account or revolving credit, 0 = else).	0.31	0.46	0	1	2238
Recent switching experience$_R$	Binary dummy (1 = switched main revolving credit less than one year ago, 0 = else).	0.03	0.16	0	1	191
Older switching experience$_R$	Binary dummy (1 = switched main revolving credit at least one year ago, 0 = else).	0.25	0.43	0	1	191
Other switching experience$_R$	Binary dummy (1 = switching experience with main current account, savings account or mortgage loan, 0 = else).	0.49	0.50	0	1	2238
Bank-customer relationship (B)						
Bond with bank$_C$	Extent to which one feels a bond with the bank of one's main current account (1= no bond at all, 2 = poor bond, 3 = some bond, 4 = strong bond, 5 = very strong bond).	2.99	1.05	1	5	2212
Bond with bank$_S$	Extent to which one feels a bond with the bank of one's main savings account (1= no bond at all, 2 = poor bond, 3 = some bond, 4 = strong bond, 5 = very strong bond).	2.94	1.05	1	5	2001
Bond with bank$_M$	Extent to which one feels a bond with the bank of one's main mortgage loan (1= no bond at all, 2 = poor bond, 3 = some bond, 4 = strong bond, 5 = very strong bond).	2.83	1.15	1	5	1142
Bond with bank$_R$	Extent to which one feels a bond with the bank of one's main revolving credit (1= no bond at all, 2 = poor bond, 3 = some bond, 4 = strong bond, 5 = very strong bond).	2.78	1.16	1	5	191
Number of banks	Number of banks of which one is customer (1 = 1, 2 = 2, 3 = 3, 4 = 4, 5 = 5 or more).	1.86	0.94	1	5	2220
Complaint	Binary dummy (1=contacted the bank to file a complaint during the last 3 years, 0=else)	0.09	0.28	0	1	2193
Knowledge (K)						
Knowledge$_C$	Binary dummy (1 = knows the costs of main current account, 0 = else).	0.52	0.50	0	1	2185
Knowledge$_S$	Binary dummy (1 = knows the interest rate on main savings account, 0 = else).	0.65	0.48	0	1	1976
Knowledge$_M$	Binary dummy (1 = knows the interest rate on main mortgage loan, 0 = else).	0.79	0.41	0	1	1130
Knowledge$_R$	Binary dummy (1 = knows the interest rate on main revolving credit, 0 = else).	0.48	0.50	0	1	188
Knowledge other$_C$	Average score on other knowledge questions than the current account questions.	0.42	0.27	0	1	2238
Knowledge other$_S$	Average score on other knowledge questions than the savings account questions.	0.31	0.25	0	1	2238
Knowledge other$_M$	Average score on other knowledge questions than the mortgage loan question.	0.42	0.26	0	1	2238
Knowledge other$_R$	Average score on other knowledge questions than the revolving credit question.	0.49	0.30	0	1	2238
Knowledge of switching service	Extent to which one is familiar with the switching service (1 = not heard of it, 2 = heard of it but no knowledge of content, 3 = heard of it and knowledge of content).	1.89	0.83	1	3	2215
*Knowledge of switching service * Recent switch experience*$_C$	Interaction term.	0.06	0.39	0	3	2206
Knowledge of Deposit Guarantee Scheme	Binary dummy (1 = knows the DGS, 0 = else).	0.69	0.46	0	1	2193

Note: This table describes the variables used in the regressions reported in Table 2. The mean, standard deviation (sd), minimum (min), maximum (max) and number of observations (N) for DHS variables are based on the data available for the respondents of our additional June 2015 survey.

Table B.1 Description of variables (III/III)

Variable	Description	Mean	Sd	Min	Max	N
Socio-psychological factors (SP)						
Perceived control	"If I want, I can switch to another bank" (1=completely disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = completely agree).	4.04	0.90	1	5	2191
Unpleasant	"Switching to another bank is unpleasant" (1=completely disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = completely agree).	3.49	0.92	1	5	2191
Social norms prescriptive	"I believe that most people that are important to me think that I should switch to another bank" (1=completely disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = completely agree).	1.89	0,89	1	5	2191
Social norms descriptive	"People that I would like to resemble switch banks every now and then" (1=completely disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = completely agree).	2.00	0.96	1	5	2191
$Shared_C$	Binary dummy (1 = shares current account, 0 = else).	0.52	0.50	0	1	2214
$Shared_S$	Binary dummy (1 = shares savings account, 0 = else).	0.56	0.50	0	1	2003
$Shared_M$	Binary dummy (1 = shares mortgage with, 0 = else).	0.77	0.42	0	1	1142
$Shared_R$	Binary dummy (1 = shares revolving credit, 0 = else).	0.58	0.49	0	1	191

Note: This table describes the variables used in the regressions reported in Table 2. The mean, standard deviation (sd), minimum (min), maximum (max) and number of observations (N) for DHS variables are based on the data available for the respondents of our additional June 2015 survey.

Appendix C. The importance of model elements

Table C.1 Propensity to switch main current account

	(1)	(2)	(3)	(4)	(5)
Male	2.48				
	(2.26)				
34 and below	-1.11				
	(3.60)				
Between 45 and 54	3.38				
	(3.30)				
Between 55 and 64	-2.53				
	(3.28)				
65 and over	-14.75***				
	(3.13)				
Education	7.65***				
	(2.21)				
Income	0.18				
	(0.41)				
City	1.48*				
	(0.78)				
Responsible for finances	1.52				
	(2.25)				
Recent switching experience$_C$		-1.66			
		(6.64)			
Older switch experience$_C$		4.08			
		(2.59)			
Other switching experience$_C$		9.15***			
		(2.44)			
Bond with bank$_C$			-8.31***		
			(1.02)		
Number of banks			3.40***		
			(0.96)		
Complaints			17.51***		
			(3.56)		
Knowledge$_P$				-2.60	
				(2.15)	
Knowledge other$_C$				10.03**	
				(4.10)	
Knowledge of switching service				1.35	
				(1.32)	
*Knowledge of switching service * Recent switching experience*$_C$				-1.54	
				(2.56)	
Perceived control					7.54***
					(1.26)
Unpleasant					-1.32
					(1.18)
Social norms prescriptive					6.54***
					(1.47)
Social norms descriptive					2.01
					(1.29)
Shared$_C$					0.37
					(1.95)
Constant	-24.44***	-23.95***	-1.65	-24.21***	-61.00***
	(3.90)	(1.86)	(3.64)	(3.06)	(7.89)
Observations	2089	2089	2089	2089	2089
Model significance	0.00	0.00	0.00	0.07	0.00
Log-likelihood	-4061.77	-4082.65	-4031.55	-4094.97	-4057.41
Akaike's Information Criterion	8145.54	8175.29	8073.11	8201.93	8128.82
Ranking	3	4	1	5	2

Note: Table reports parameter estimates for Tobit regressions. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table C.2 Propensity to switch main savings account

	(1)	(2)	(3)	(4)	(5)
Male	1.82				
	(2.56)				
34 and below	-1.58				
	(4.02)				
Between 45 and 54	3.75				
	(3.68)				
Between 55 and 64	-5.78				
	(3.68)				
65 and over	-16.30***				
	(3.46)				
Education	10.34***				
	(2.49)				
Income	0.92*				
	(0.48)				
City	1.28				
	(0.86)				
Responsible for finances	1.32				
	(2.55)				
Recent switching experiences		39.86***			
		(6.11)			
Older switching experiences		15.81***			
		(2.79)			
Other switching experiences		0.08			
		(2.79)			
Bond with banks			-9.15***		
			(1.08)		
Number of banks			7.37***		
			(1.07)		
Complaints			20.13***		
			(3.81)		
Knowledges				5.40**	
				(2.71)	
Knowledge others				1.54	
				(4.93)	
Knowledge of Deposit Guarantee Scheme				9.30***	
				(2.85)	
Perceived control					7.60***
					(1.39)
Unpleasant					-0.87
					(1.29)
Social norms prescriptive					2.55
					(1.68)
Social norms descriptive					3.66**
					(1.50)
Shareds					-0.54
					(2.25)
Constant	-22.69***	-21.32***	-2.76	-25.22***	-54.13***
	(4.52)	(1.78)	(4.22)	(2.73)	(8.48)
Observations	1892	1892	1892	1892	1892
Model significance	0.00	0.00	0.00	0.00	0.00
Log-likelihood	-4218.45	-4221.66	-4168.03	-4252.16	-4240.62
Akaike's Information Criterion	8458.90	8453.32	8346.06	8514.33	8495.24
Ranking	3	2	1	5	4

Note: Table reports parameter estimates for Tobit regressions. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table C.3 Propensity to switch main mortgage loan

	(1)	(2)	(3)	(4)	(5)
Male	0.81				
	(4.18)				
34 and below	5.32				
	(6.58)				
Between 45 and 54	3.44				
	(5.19)				
Between 55 and 64	-13.23**				
	(5.14)				
65 and over	-16.86***				
	(5.17)				
Education	-4.74				
	(3.86)				
Income	2.51***				
	(0.81)				
City	1.57				
	(1.39)				
Responsible for finances	-2.27				
	(3.98)				
Recent switching experience$_M$		-14.36			
		(14.42)			
Older switching experience$_M$		14.82***			
		(3.87)			
Other switching experience$_M$		10.66***			
		(3.62)			
Bond with bank$_M$			-6.67***		
			(1.58)		
Number of banks			2.50		
			(1.75)		
Complaints			-0.95		
			(5.82)		
Knowledge$_M$				1.74	
				(4.88)	
Knowledge other$_M$				-13.94*	
				(7.54)	
Perceived control					3.14
					(2.23)
Unpleasant					-4.08**
					(2.02)
Social norms prescriptive					-0.03
					(2.37)
Social norms descriptive					0.87
					(2.18)
Shared$_M$					-1.88
					(4.25)
Constant	-38.98***	-39.40***	-16.13**	-24.88***	-28.61**
	(7.24)	(3.62)	(6.79)	(4.49)	(12.89)
Observations	1088	1088	1088	1088	1088
Model significance	0.00	0.00	0.00	0.15	0.26
Log-likelihood	-1808.92	-1811.02	-1817.97	-1828.25	-1826.22
Akaike's Information Criterion	3639.85	3632.05	3645.93	3664.49	3666.44
Ranking	2	1	3	4	5

Note: Table reports parameter estimates for Tobit regressions. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table C.4 Propensity to switch main revolving credit

	(1)	(2)	(3)	(4)	(5)
Male	1.46				
	(10.08)				
34 and below	-4.79				
	(19.44)				
Between 45 and 54	3.55				
	(14.56)				
Between 55 and 64	-25.65**				
	(12.96)				
65 and over	-13.02				
	(12.30)				
Education	-2.44				
	(8.63)				
Income	-2.43				
	(1.72)				
City	3.71				
	(2.82)				
Responsible for finances	15.92				
	(9.73)				
Recent switching experience$_R$		20.92			
		(14.24)			
Older switching experience$_R$		16.67			
		(11.01)			
Other switching experience$_R$		-0.26			
		(9.26)			
Bond with bank$_R$			-1.81		
			(3.82)		
Number of banks			7.28		
			(5.76)		
Complaints			0.67		
			(12.10)		
Knowledge$_R$				0.96	
				(8.54)	
Knowledge other$_R$				20.01	
				(16.50)	
Perceived control					1.70
					(4.49)
Unpleasant					2.63
					(4.40)
Social norms prescriptive					5.71
					(5.84)
Social norms descriptive					-0.34
					(4.85)
Shared$_C$					17.42**
					(8.81)
Constant	-27.33*	-34.40***	-38.03*	-40.09***	-64.99**
	(16.41)	(8.90)	(20.40)	(11.91)	(28.60)
Observations	181	181	181	181	181
Model significance	0.31	0.27	0.44	0.44	0.35
Log-likelihood	-297.24	-302.04	-302.06	-302.75	-300.68
Akaike's Information Criterion	616.48	614.09	614.12	613.51	615.36
Ranking	5	2	3	1	4

Note: Table reports parameter estimates for Tobit regressions. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Appendix D. Barriers to switching

Table D.1 Barriers to switching: results for different groups of respondents

	CURRENT ACCOUNT					SAVINGS ACCOUNT					MORTGAGE LOAN					REVOLVING CREDIT				
	Switching propensity$_{iCA}$=0		*Switching propensity*$_{iCA}$>0			*Switching propensity*$_{iS}$=0		*Switching propensity*$_{iS}$>0			*Switching propensity*$_{iM}$=0		*Switching propensity*$_{iM}$>0			*Switching propensity*$_{iC}$=0		*Switching propensity*$_{iC}$>0		
	Mean	N	Mean		N	Mean	N	Mean		N	Mean	N	Mean		N	Mean	N	Mean		N
Satisfaction	4.0	1,461	3.6	***	718	4.0	1,226	3.7	***	744	3.9	828	3.8	*	299	3.9	140	3.688		48
Difficult	2.7	1,461	2.8		718	2.7	1,226	2.8		744	2.7	828	2.7		299	2.6	140	2.813		48
Time	3.0	1,461	3.2	***	718	3.0	1,226	3.2	***	744	3.1	828	3.1		299	2.8	140	3.083		48
Costs	2.8	1,461	2.8		718	2.8	1,226	2.8		744	2.8	828	2.8		299	2.7	140	2.646		48
Not enough banks	2.5	1,461	2.6	***	718	2.5	1,226	2.7	***	744	2.6	828	2.5		299	2.6	140	2.417		48
Too many banks	2.3	1,461	2.2	**	718	2.3	1,226	2.2		744	2.2	828	2.2		299	2.2	140	2.167		48
Hassle	3.2	1,461	3.5	***	718	3.2	1,226	3.5	***	744	3.4	828	3.4		299	3.1	140	3.458	**	48
Regret aversion	2.7	1,461	2.6		718	2.7	1,226	2.7		744	2.6	828	2.6		299	2.5	140	2.563		48
Low benefit	3.6	1,461	3.4	***	718	3.6	1,226	3.5		744	3.6	828	3.5		299	3.3	140	3.250		48
Long relationship	3.4	1,460	2.8	***	717	3.5	1,225	2.9	***	744	3.3	827	2.8	***	299	3.4	140	3.042	**	48
Benefit unclear	3.2	1,460	3.2		717	3.2	1,225	3.2		744	3.2	827	3.1		299	3.1	140	3.292		48
Trust difficult	3.0	1,460	2.9		717	2.9	1,225	2.9		744	2.9	827	2.8		299	2.9	140	2.979		48
Number portability	3.4	1,460	3.6	***	717	3.4	1,225	3.6	***	744	3.5	827	3.3		299	3.2	140	3.708	**	48
Other products	2.5	1,460	2.5		717	2.5	1,225	2.5		744	2.6	827	2.6		299	2.7	140	2.750		48

Source: CentERpanel, June 2015.
Note: We refer to Figure 2 for a complete description of the barriers. N = the number of respondents. We tested whether differences in mean scores are signficant. *** p<0.01, ** p<0.05, * p<0.1.

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