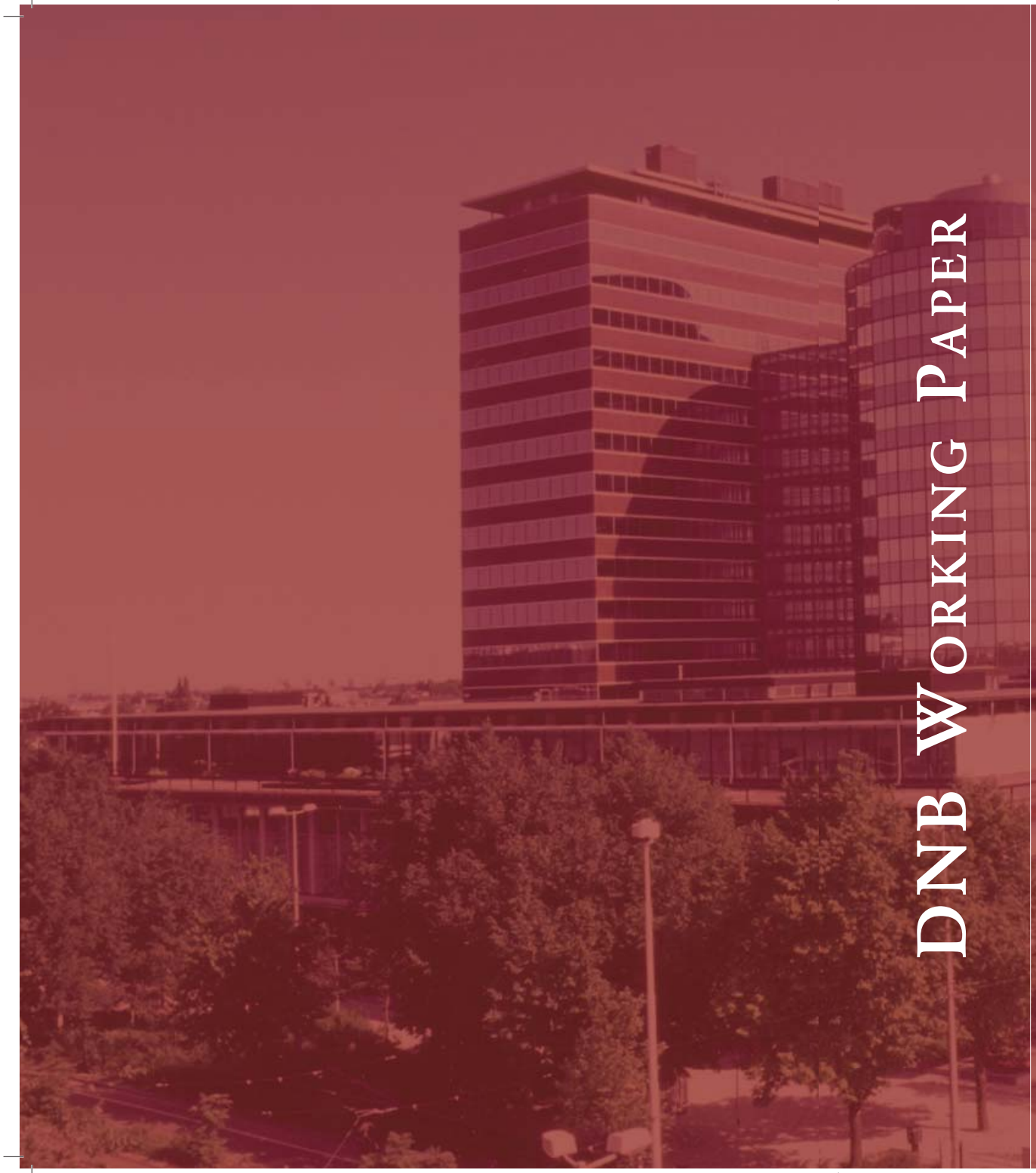

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De Nederlandsche Bank
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* Views expressed are those of the authors and do not necessarily reflect official positions of De Nederlandsche Bank.

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Trust and Financial Crisis Experiences[1]

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Abstract

Using eight annual surveys from the Netherlands between 2006 and 2013, we examine whether financial crisis experiences affect trust in banks, trust in the banking supervisor, and generalized trust. Adverse experiences during the financial crisis do not only directly lower trust in banks, but also have a negative effect on generalized trust. Customers of a bank that ran into problems have less trust in banks than respondents without this experience. Our results also indicate that respondents who were customer of a bank that failed have a significantly stronger decline of generalized trust than respondents without this experience. Personal financial crisis experiences do not have a significant effect on trust in the banking supervisor.

JEL-codes: D10, D84, E58

Keywords: trust, bank bailout, bank failure, financial crisis, households, survey data

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1. Introduction

Since the financial crisis started in 2007, the general public's trust in the financial system has strongly declined. In a July 2012 survey, Sapienza and Zingales find that only 21% of Americans trust the financial system, which is the lowest level of trust documented since early 2009.[5] A 2012 poll by Gallup shows that trust in financial institutions is especially low in Europe. In seven EU countries less than 30% of the people trust banks or financial institutions, far below the median of 55% in a sample of 135 countries. Trust is the lowest among Greeks, where only 13% trust financial institutions. But also among Germans trust is low: only 38% have trust in their financial institutions.[6]

Our paper contributes to the literature on trust by documenting the role of negative experiences with the financial sector during the crisis. First, using annual surveys among Dutch households, we study the effect of being a customer at a bank which ran into difficulties on trust in financial institutions, such as banks and the banking supervisor. For policymakers, it is important to understand which factors are related to shifts in trust in financial institutions. A sudden decline of trust in the financial sector may, for instance, threaten financial stability due to the increased likelihood of bank runs. Likewise, it may hamper financial intermediation.

Despite its importance, there is, so far, only limited research on the drivers of trust in financial institutions. Stevenson and Wolfers (2011) document how trust in a number of public institutions, including banks, has fallen sharply during the Great Recession, and point to rising unemployment as one possible factor for this development. Using data from various surveys, Guiso (2010) points to fraud, such as the Madoff case, as a reason for the collapse of trust. Knell and Stix (2009) identify subjective variables, such as individuals' assessment of their current and future financial positions, as important drivers of trust. Carbó-Valverde, Maqui-López and Ródriguez-Fernández (2013) find that trust is strongly affected by perceptions of several performance characteristics and attributes of banks. Ehrmann, Soudan and Stracca (2013) find that most of the fall of trust in the European Central Bank can be explained by pre-crisis determinants.

[5] Source: http://www.financialtrustindex.org/resultswave15.htm. URL last accessed 4 July 2013.
[6] Source: http://www.gallup.com/poll/162602/european-countries-lead-world-distrust-banks.aspx. URL last accessed 4 July 2013.

Second, we analyse whether the crisis experiences affect generalized trust. Generalized trust refers to cases in which there is no direct relationship between the person who trust and others. This form of trust can be contrasted with particularized trust, which arises when people are in direct contact with each other. Generalized trust, as a form of social capital, is regarded as crucial for the functioning of market economies (Arrow 1972, Alesina and Ferrara 2002, Putnam 1993, Fukuyama 1995). Most studies focus on cross-country comparison and measure generalized trust as the share of a population answering yes to the following question from the World Values Survey: 'In general, do you think that most people can be trusted, or can't you be too careful in dealing with people?'[7]

Several studies find evidence of a positive relationship between trust and economic performance. Using data from the World Values Survey for 29 market economies, Knack and Keefer (1997) find that trust positively correlates with economic performance. The theoretical model and data analysis of Zak and Knack (2001) suggest that low trust-environments lead to lower rates of investment. For U.S. states, Dincer and Ulaner (2010) find that a ten percentage point increase in trust increases GDP growth by half a percentage point.[8]

Generalized trust is also related to other important variables, such as the quality of the government and corruption (see Horvath (2013) and Bjørnskov and Méon (2013) for further evidence and discussions of the literature). Recently, Sagnier (2013) finds that higher trust is correlated with lower macroeconomic volatility in a cross section of countries. Liang and Lim (2013) find that trust is an important determinant of a range of financial choices made by households, such as how much debt to take on, and whether or not to file for bankruptcy.

As far as we know, generalized trust has not been related directly to financial crisis experiences before. A number of studies have examined the determinants of generalized trust. Bjørnskov (2007) considers various potential determinants of cross-country differences in trust. He concludes that income inequality is the most important determinant of generalized trust. Gustavsson and Jordahl (2008), using

[7] For further background, see Banfield (1958), La Porta et al. (1997), Uslaner (2002, 2013) or Bjørnskov (2007), and references therein.

[8] Some studies reach more qualified conclusions on the relationship between trust and performance. Roth (2009) argues that increasing trust may be detrimental for economic performance when trust starts from a high level. Dearmon and Grier (2011) find that promoting investment through institutional reform is less effective when levels of trust are high.

individual panel data from Swedish counties, also find that income inequality is an important driver of generalized trust. They also find that the proportion of foreign born within a geographical region is negatively related to trust. Based on data for U.S. localities, Alesina and Ferrara (2002) reach a similar conclusion. They also find that low trust is related to recent traumatic experiences, such as illness or divorce. Interesting for our study is their finding that financial misfortune is most closely associated with low trust.

We proceed as follows. First, using eight annual surveys on trust among Dutch households, we analyze the development of four different trust measures: (1) trust in other people (generalized trust), (2) how often one considers the possibility of a bank failing, (3) the liquidity of one's own bank compared to banks in general, and (4) trust in the banking supervisor.

We study the effect of personal crisis experiences on trust by relating our trust measures to a number of tumultuous events in the Dutch financial sector in recent years. During the financial crisis, two banks in the Netherlands failed: Icesave in October 2008 and DSB Bank in October 2009. Furthermore, two bank/insurance conglomerates (ING and SNS REAAL) received capital support from the government in 2008, while the Dutch part of Fortis/ABN AMRO was nationalized in the same year. Using survey data described in Van der Cruijsen et al. (2012), we measure whether respondents were customer at these banks. On February 1st 2013 SNS REAAL, which includes the ASN Bank, SNS Bank and RegioBank, was nationalized. To measure the impact of this event, we added questions to the 2013 questionnaire.

Overall, we find that adverse experiences during the financial crisis do not only directly affect trust in banks, but also have a negative effect on generalized trust. First, during the financial crisis trust in others, banks and the banking supervisor declined. Second, people who were customer of a bank that ran into difficulties during the crisis are more likely to have lost trust in others and trust in banks. Third, the decline of trust in the banking supervisor is not significantly related to direct crisis experiences.

The rest of this paper is structured as follows. Section 2 presents the methodology and data. Section 3 shows the development of our trust measures over time, while section 4 examines their relationship with crisis experiences. Section 5 concludes.

2. Methodology and data

Annual survey data

The analysis mainly builds on a number of annual surveys on trust which were submitted to members of the CentERpanel, a representative sample of the Dutch population. We combine these surveys with background variables available from the annual Dutch Household Survey (DHS), which also uses the CentERpanel. The DHS, formerly known as the CentER Savings Survey, is a panel study initiated in 1993 by CentERdata, a research institute affiliated to Tilburg University. Among other things, the DHS provides data on income, housing, mortgages, loans, and personal characteristics.[9] Appendix 1 lists the relevant questions used in this research. The questions were submitted between early 2006 to early 2013 to the 2,500 members of the panel. In the questionnaire for the 2010 wave, we added some additional questions on crisis experience. In the questionnaire for the 2013 wave, we included a set of additional questions on respondents' crisis experiences with respect to the nationalisation of SNS REAAL.

One potential concern regarding our data source is that participants may be aware that the survey is affiliated to De Nederlandsche Bank (DNB) (i.e. the supervisor of financial institutions). However, in practice, all contacts with the survey participants are handled by CentERdata and it is not mentioned in our questionnaire that DNB has commissioned it. So, it seems more likely that participants associate the survey with the University of Tilburg rather than DNB.

Dependent variables

This paper connects the experience of respondents who were customer of an institution that either failed or had to be bailed out during the financial crisis to developments in trust. We construct four different measures of trust, which are all binary variables. We use the outcomes to the survey question "*Generally speaking would you say that most people can be trusted or that you cannot be too careful in dealing with*

[9] Information on the DHS is available at http://www.centerdata.nl/en/TopMenu/Projecten/DNB_household_study/index.html. URL last accessed on 21 March 2012. See also Teppa and Vis (2012). The DHS has been used in several recent papers such as Van Rooij et al. (2011; 2012) and Van der Cruijsen et al. (2012). Using DHS data, Mosch and Prast (2008) find that individuals with higher levels of trust in institutions also have greater confidence in the economy.

people?" to construct our generalized trust variable (*trust in other people*). This question is very similar to the World Values Survey (WVS) question which is generally used to construct a measure of generalized trust. It is 1 for respondents who find that most people are to be trusted, and 0 for respondents who believe that one cannot be careful enough.

The variables *thought about bank failure* and *view on bank liquidity* measure trust in banks.[10] *Thought about bank failure* is based on the answers to the question: "During the past year have you ever thought about the possibility that banks in the Netherlands might go bankrupt?" It is 1 for respondents who answered "now and then" or "very often", and 0 for respondents who answered "never" or "not often". To construct the variable *view on bank liquidity*, we use the outcomes of two questions: (1) "At the moment, do you trust that the bank(s) at which you have deposits is (are) able to repay these deposits at all times?" and (2) "In general, do you trust that banks in the Netherlands are able to repay deposits at all times?" Answers were recoded such that respondents score from 1 (no, completely not) to 5 (yes, completely) on each question. Then we subtracted the score on question 2 from the score on question 1. For respondents who find the liquidity of their own bank better than the liquidity of banks in general the outcome is larger than 0. In that case the variable *view on bank liquidity* is 1, and else it is 0.

Our final trust measure is *trust in banking supervisor*. It uses the answers to the survey question "How much trust do you have in De Nederlandsche Bank?" *Trust in banking supervisor* is 1 for respondents who answered "a lot of trust" or "pretty much trust" and 0 for respondents who answered "not so much trust" and "absolutely no trust".

Variables for crisis experience

Using the 2010 and 2013 survey outcomes, we construct three crisis variables: *year after bailout, year after bankruptcy*, and *bailout in 2013*. In 2010 we asked the respondents whether they were a customer of a bank which went bankrupt or received government support in the three years preceding the survey. In

[10] Respondents who answered "I don't know" are not included in the analyses.

2013 we asked respondents whether they had savings at ASN Bank, SNS Bank, and/or RegioBank, which were all part of SNS REAAL which was nationalized in 2013. Appendix 1 lists the relevant questions.

Year after bailout is a dummy that is 1 for respondents who were customer of a bank that was bailed out in the previous year, and 0 else. In 2009 *year after bailout* is 1 for 44% of the respondents. Similarly, *year after bankruptcy* is a dummy that is 1 for respondents who were customer of a bank that went bankrupt in the previous year, and 0 else. In 2009 *year after bankruptcy* was 1 for 4% of the respondents and in 2010 it was 1 for 7% of the respondents. *Bailout in 2013* is a dummy that is 1 in 2013 for respondents who were customer of ASN Bank, SNS Bank, and/or RegioBank, and 0 else. *Bailout in 2013* is 1 for 14% of the respondents.

Control variables

We analyze the effects of adverse crisis experiences while controlling for a set of other factors. We have a rich set of background characteristics from the DHS, which we use to construct control variables. We include: *age* (measured using 3 categories), *male, income, education, house owner, handles finance*. For *age*, we use three 0-1 dummy variables: i) *younger than 35*, ii) *between 45 and 64*, iii) *older than 65*. The baseline category are respondents between 35 and 44. *Male* is a dummy that is one if the respondent is male. *Income* is the gross monthly household income category, which ranges from 1 (500 euro or less) to 12 (7,500 euro or more). *Education* is a dummy that is 1 for respondents who successfully completed higher vocational education and/or university education, and 0 otherwise. *Handles finance* is a dummy variable that is 1 for respondents responsible for the household's financial affairs and 0 otherwise, while *house owner* is a rough proxy for the level of wealth; it is 1 for respondents owning a house, and 0 otherwise.

Regression specification and selection of sample period

We analyze the effects of crisis experiences by estimating random effects probit regressions using the four trust measures as dependent variables. We run two sets of regressions by distinguish two time

periods: 2006-2012 to analyze the effect of the first set of crisis experiences and 2013 to analyze the effect of the most recent crisis event. We study the direct effect of crisis experiences on trust. For instance, we study how trust measured in 2009 is affected by the experience of the bankruptcy of the respondent's bank in 2008.

We also ran panel regressions for the period 2006 to 2013, with qualitatively similar findings. However, we prefer running the two sets of regressions separately. There is a substantial degree of panel attrition between the surveys on crisis experiences in 2010 and 2013, leading to a loss of about 800 out of 2000 observations. This raises a concern about the representativeness of the sample. We especially lose a large portion of the individuals who report having experienced a bankruptcy. Thus, we would have to draw conclusions on a relatively small set of individuals with this type of crisis experience.

3. Trust in others, banks and the banking supervisor

Trust in other people

The top-left panel of Figure 1 shows the share of people who find that most other people are to be trusted. It is based on the outcomes of the survey question: "Generally speaking would you say that most people can be trusted or that you cannot be too careful in dealing with people?" Since the outbreak of the crisis, trust in others decreased; the share of respondents trusting other people declined from 70% in 2009 to 65% in 2010. In 2013, generalized trust returned to its pre-crisis level of 69%.

(Insert Figure 1 about here)

Trust in banks

Due to the financial crisis public trust in financial institutions declined too. The top right panel of Figure 1 shows the mean response to the question: "During the past year have you ever thought about the possibility that banks in the Netherlands might go bankrupt?" which is measured on a scale between 1

(never) and 4 (quite often). People have started to think more frequently about the possibility of bankruptcy of banks. The increase was especially strong after the first years of the crisis when several banks in the Netherlands either failed or were bailed out.

The bottom left panel summarizes trust in the liquidity of one's own bank compared to banks in general. For the whole period respondents, on average, trust their own bank more than banks in general. However, there is significant variation over time. After the start of the crisis, relative trust in one's own bank increased. This is because trust in the liquidity of banks in general declined more than trust in the liquidity of one's own bank. However, more recently trust in the liquidity of one's own bank declined more than trust in the liquidity of banks in general.

Trust in the banking supervisor

The bottom right panel of Figure 1 shows the average response to the question: "How much trust do you have in De Nederlandsche Bank?", measured on a scale between 1 (low trust) and 4 (high trust). It used to be the case that the Dutch banking supervisor was highly trusted by the public. Between 2006 and 2008 trust in DNB was high and stable. However, after the bankruptcy of Icesave (October 2008) and DSB (October 2009) trust in the banking supervisor declined sharply. In 2012 trust in DNB increased somewhat, but this was reversed after the nationalisation of SNS REAAL in 2013.

4. Explaining trust: regression results

2008 and 2009 crisis experiences

First, we analyze to what extent the experiences of respondents during the early crisis had an impact on our trust measures. Table 1 shows average marginal effects based on random effects probit regressions using four different trust measures as dependent variable: *trust in other people* (column 1), *thought about bank failure* (column 2), *view on bank liquidity* (column 3), and *trust in banking supervisor* (column 4).

(Insert Table 1 about here)

As to our main variables of interest, we find that crisis experiences matter for trust in other people and trust in banks. Respondents who were customer of a bank that was bailed out are less positive about the relative liquidity position of their own bank than respondents without this experience. Likewise, respondents who were customer of a bank that failed are less likely to trust other people and are more likely to have considered the possibility of a bank failure.

Even though trust in DNB declined sharply after the 2008 and 2009 crisis events, we do not find a significant relationship between direct crisis experiences and trust in the banking supervisor. This implies that the decline in trust did not differ significantly between people with direct crisis experiences (bail out or bankruptcy of their bank) and people without such experiences.

Turning to the control variables, we see that respondents aged over 65 are less likely to trust other people. The findings of previous studies on the relationship between age and trust are mixed. For example, Hooghe et al. (2009) show that older people are more likely to trust people, while Kaasa and Parts (2008) find no significant effect. We find that older people are also more likely to consider the possibility of a bank failure. In addition, they are more positive about the relative liquidity position of their bank and more likely to trust the banking supervisor.

Females have a higher level of generalized trust than males. Previous evidence on the relationship between gender and generalized trust is mixed. While some cross-country studies find that females have a lower level of trust in others than males (e.g. Van Oorschot et al., 2006, Alesina and La Ferrara, 2002), others find the opposite (e.g. Hooghe et al., 2009) or no gender effect (e.g. Kaasa and Parts, 2008). Gender is not significantly related to trust in banks and trust in the banking supervisor. Compared to poorer people, richer people are more likely to trust the banking supervisor and other people. The latter findings is in line with the outcomes of previous research (e.g. Van Oorschot et al., 2006, Alesina and La Ferrara, 2002). Trust in the banking supervisor and other people is also relatively high for (1) house-owners in comparison to people who do not own a house, (2) more educated respondents in comparison

to less educated respondents (which is a well-established finding in the literature, see Hooghe et al., 2012), and (3) respondents who take care of household finances in comparison to other respondents. However, more educated people are more likely to consider the possibility of bank failure than less educated people and house owners are less positive about the relative liquidity position of their bank than people who don't own a house.

2013 crisis experience

We also examine whether the recent crisis experience, i.e., the nationalisation of ASN Bank, SNS Bank and RegioBank, had an effect on trust. Table 2 shows average marginal effects based on probit regressions with the four different trust measures as dependent variable: *trust in other people* (column 1), *thought about bank failure* (column 2), *view on bank liquidity* (column 3), and *trust in banking supervisor* (column 4).

(Insert Table 2 about here)

This more recent crisis experience also significantly affected trust. The results are in line with those presented in table 1. Again, respondents who were customers of a bank that was bailed out are less positive about the relative liquidity position of their own bank than respondents without this experience. Again, there is no significant relationship between the crisis experience and trust in the banking supervisor. In line with the findings reported in Table 1, generalized trust is not significantly affected by the experience of a bail out.[11]

The outcomes on the covariates generally confirm the findings reported in Table 1. In addition, they show that in 2013 males were significantly less likely to think about the possibility of a bank failure than females. The same holds for respondents who handle their household's finances in comparison to respondents who don't. Furthermore, the outcomes show that better educated respondents and

[11] As explained in section 2, we prefer estimating separate regressions for the 2006-2012 period and for 2013. However, we have also estimated the models for the 2006-2013 period. Appendix B reports the results. The findings are comparable to those presented in tables 1 and 2.

respondents in charge of household finances are more positive about the relative liquidity position of their bank than less educated respondents and respondent who are not responsible for handling the household's finances.

5. Conclusions

Using eight years of survey data from the Netherlands, we examine whether their financial crisis experiences affected respondents' trust in banks and the banking supervisor, as well as generalized trust. Our results suggest that customers of a bank that was bailed out are less positive about the relative liquidity position of their own bank than customers without this experience; in addition, they are more likely to have considered the possibility of bank failure than respondents without this experience. Customers of a bank that failed are also more likely to consider the possibility of a bank failure. In addition, our results suggest that even though trust in the banking supervisor declined after the start of the financial crisis, personal financial crisis experiences do not have an additional effect on trust in the banking supervisor. In contrast, generalized trust is affected by respondents' crisis experiences: respondents who were customer of a bank that failed indicate a significantly stronger decline of generalized trust than respondents without this experience.

Our findings therefore suggest that negative crisis experiences have at least two detrimental effects. First, they reduce trust in the financial sector thereby threating financial stability due to the increased likelihood of bank runs and possibly undermining financial intermediation. Second, they reduce generalized trust, which may reduce economic growth.

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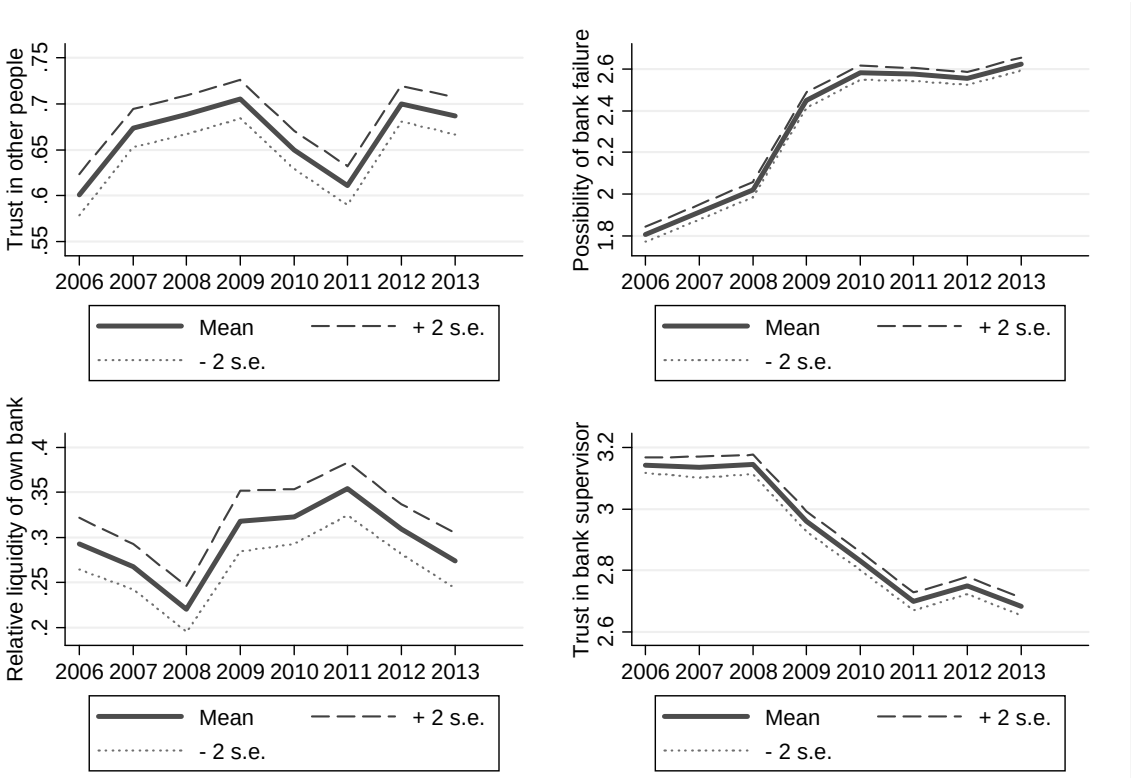
Figure 1. Trust before and during the financial crisis



Source: DNB surveys using the CentERpanel

Note: This figure shows average levels of trust for each year between 2006 and 2013. The top left panel summarizes whether respondents have trust in other people (measured on a 0,1 scale). The top right panel shows how often respondents consider the possibility of a bank failing, measured on a scale between 1 (never) and 4 (quite often). The bottom left panel summarizes trust in the liquidity of one's own bank compared to banks in general, where positive values indicate more trust in one's own bank. The bottom right panel summarizes trust in the banking supervisor, measured on a scale between 1(low trust) and 4 (high trust). The data is based on annual surveys among the Dutch public in the spring of each year. Data for 2007 on the possibility of a bank failure is not available.

Table 1. Crisis experiences and trust (2006-2012)

	(1) **Trust in other people**	(2) **Thought about bank failure**	(3) **View on bank liquidity**	(4) **Trust in banking supervisor**
Crisis experiences				
Year after bailout	-0.01	0.01	-0.13***	0.01
	(0.03)	(0.03)	(0.03)	(0.02)
Year after bankruptcy	-0.10***	0.10**	-0.05	-0.01
	(0.04)	(0.04)	(0.04)	(0.03)
Covariates				
Age				
- *Younger than 35*	-0.03	-0.04	0.02	-0.02
	(0.03)	(0.03)	(0.02)	(0.02)
- *Between 45 and 64*	-0.02	0.01	-0.00	0.01
	(0.02)	(0.02)	(0.02)	(0.02)
- *Older than 65*	-0.05*	0.06**	0.09***	0.02
	(0.03)	(0.03)	(0.02)	(0.02)
Male	-0.09***	-0.01	-0.01	0.01
	(0.03)	(0.02)	(0.01)	(0.01)
Income	0.02***	0.00	0.00	0.01***
	(0.00)	(0.00)	(0.00)	(0.00)
Education	0.17***	0.05**	0.01	0.05***
	(0.03)	(0.02)	(0.01)	(0.01)
Home-owner	0.08***	0.03	-0.04**	0.03*
	(0.03)	(0.02)	(0.01)	(0.02)
Handles finances	0.05**	-0.01	0.02	0.05***
	(0.02)	(0.02)	(0.01)	(0.01)
Observations	9968	8589	9727	9964
Number individuals	2066	2053	2055	2066
Avg. obs per individual	4.8	4.2	4.7	4.8
Log-likelihood	-4361.4	-5051.4	-5609.3	-4405.8
Chi-squared	284.9	781.4	131.8	563.1
p-value	0.00	0.00	0.00	0.00

Notes: Average marginal effects based on random effects probit regressions with robust standard errors in parentheses. Dependent variables are binary dummies indicating whether the respondent trusts other people (column 1), has considered the possibility of a bank failure (column 2), thinks her own bank has better liquidity than banks in general (column 3), and trusts the banking supervisor (column 4). Estimations include the covariates as described in Section 2, as well as dummies for the years 2006 to 2012. The reference individual is a female, aged between 35 and 44, who has not successfully completed higher vocational or university education, does not own a home, and does not handle the household's finances. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.*

Table 2. Crisis experiences and trust (2013)

	(1) **Trust in other people**	(2) **Thought about bank failure**	(3) **View on bank liquidity**	(4) **Trust in banking supervisor**
Crisis experiences				
Bailout in 2013	0.00	0.05	-0.08***	0.02
	(0.03)	(0.03)	(0.03)	(0.03)
Covariates				
Age				
- Younger than 35	0.04	-0.14***	0.04	-0.04
	(0.04)	(0.05)	(0.04)	(0.04)
- Between 45 and 64	0.03	-0.04	0.04	-0.07**
	(0.03)	(0.04)	(0.03)	(0.04)
- Older than 65	-0.01	-0.07*	0.08**	-0.02
	(0.04)	(0.04)	(0.03)	(0.04)
Male	-0.04*	-0.03	0.01	-0.01
	(0.02)	(0.02)	(0.02)	(0.02)
Income	0.01**	0.00	0.00	0.02***
	(0.00)	(0.00)	(0.00)	(0.00)
Education	0.14***	0.06**	0.05**	0.07***
	(0.02)	(0.02)	(0.02)	(0.02)
Home-owner	0.06*	0.03	-0.01	0.03
	(0.03)	(0.03)	(0.03)	(0.03)
Handles finances	0.04*	-0.06**	0.06**	0.06***
	(0.02)	(0.02)	(0.02)	(0.02)
Observations	2009	1956	1937	2009
Pseudo R^2	0.04	0.02	0.02	0.04
Log-likelihood	-1198.1	-1249.5	-1132.3	-1242.6
Chi-squared	89.0	46.8	39.4	83.1
p-value	0.00	0.00	0.00	0.00

Notes: Average marginal effects based on probit regressions with robust standard errors in parentheses. Dependent variables are binary dummies indicating whether the respondent trusts other people (column 1), has considered the possibility of a bank failure (column 2), thinks her own bank has better liquidity than banks in general (column 3), and trusts the banking supervisor (column 4). Estimations include the full set of covariates as described in Section 2. The reference individual is a female, aged between 35 and 44, who has not successfully completed higher vocational or university education, does not own a home, and does not handle the household's finances. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Appendix 1. Survey questions

A. The 2010 questionnaire[12]

In the first part of this questionnaire you will first be asked a few questions about trust in general and then a few questions about trust in financial institutions. In the second part of this questionnaire you will be asked questions on banking supervision. In this questionnaire you can't scroll back to the previous question.

Q1

Generally speaking would you say that most people can be trusted or that you cannot be too careful in dealing with people?

- o to be trusted
- o one cannot be careful enough

Q2

How much trust do you have in…

	A lot of trust	Pretty much trust	Not so much trust	Absolutely no trust
De Nederlandsche Bank				
…				

Q3

At the moment, do you trust that the bank(s) at which you have deposits is (are) able to repay these deposits at all times?

[12] Q1, Q2, Q3, Q4 and Q4a are standard trust questions, which are asked every year. Q27 and Q28 are questions which were only asked in 2010 to measure crisis experiences.

- o yes, completely
- o yes, predominantly
- o neutral
- o no, predominantly not
- o no, completely not
- o I don’t know/no opinion

Q4

In general, do you trust that banks in the Netherlands are able to repay deposits at all times?

- o yes, completely
- o yes, predominantly
- o neutral
- o no, predominantly not
- o no, completely not
- o I don’t know/no opinion

Q4a

During the past year have you ever thought about the possibility that banks in the Netherlands might go bankrupt?

- o no, never
- o no, not often
- o yes, now and then
- o yes, very often
- o I don’t know/no opinion

…

Q27

During the past 3 years did a bank at which you were customer go bankrupt?

- yes, DSB
- yes, Icesave
- yes, other…
- no

Q28

During the past 3 years did a bank at which you were customer survive with the help of government support?

- yes
- no
- I don't know

…

B. The 2013 questionnaire[13]

…

Q13

Did you have money at a savings account of a Dutch bank at the moment that this bank was nationalized in 2013 by the Dutch government?

∘ yes

∘ no

∘ I don't know

if q13=1

Q14

At which Dutch bank(s) did you have money on a savings account at the moment that this bank was (these banks were) nationalized in 2013 by the government? [*more than one answer is possible*]

∘ ASN Bank

∘ SNS Bank

∘ RegioBank

∘ Other

if q14_4=1

Q14and

Which bank(s)?

…

[13] These questions were included to measure recent crisis experiences.

Appendix 2. Random effects probit regressions for 2006 – 2013

	(1) **Trust in other people**	(2) **Thought about bank failure**	(3) **View on bank liquidity**	(4) **Trust in banking supervisor**
Crisis experiences				
Year after bailout	-0.01	-0.02	-0.12***	0.02
	(0.03)	(0.04)	(0.03)	(0.03)
Bailout in 2013	-0.03	0.06	-0.06	0.02
	(0.04)	(0.05)	(0.04)	(0.03)
Year after bankruptcy	-0.07*	0.04	-0.04	-0.04
	(0.04)	(0.05)	(0.04)	(0.03)
Covariates				
Age				
- *Younger than 35*	0.01	-0.09**	0.02	-0.05**
	(0.03)	(0.03)	(0.03)	(0.02)
- *Between 45 and 64*	-0.01	-0.01	0.01	-0.02
	(0.03)	(0.03)	(0.02)	(0.02)
- *Older than 65*	-0.04	0.02	0.08***	-0.02
	(0.03)	(0.03)	(0.02)	(0.02)
Male	-0.11***	-0.01	-0.01	-0.00
	(0.03)	(0.03)	(0.02)	(0.02)
Income	0.02***	0.00	0.00	0.01***
	(0.01)	(0.01)	(0.00)	(0.00)
Education	0.13***	0.06**	0.01	0.04*
	(0.03)	(0.03)	(0.02)	(0.02)
Home-owner	0.09***	0.02	-0.03	0.03
	(0.03)	(0.03)	(0.02)	(0.02)
Handles finances	0.06**	-0.03	0.03*	0.07***
	(0.03)	(0.03)	(0.02)	(0.02)
Observations	8377	7400	8208	8373
Number individuals	1286	1285	1285	1286
Avg. obs per individual	6.5	5.8	6.4	6.5
Log-likelihood	-3440.4	-4265.4	-4662.7	-3640.3
Chi-squared	186.6	619.5	98.3	508.4
p-value	0.00	0.00	0.00	0.00

Notes: Average marginal effects based on random effects probit regressions with robust standard errors in parentheses. Dependent variables are binary dummies indicating whether the respondent trusts other people (column 1), has considered the possibility of a bank failure (column 2), thinks her own bank has better liquidity than banks in general (column 3), and trusts the banking supervisor (column 4). Estimations include the covariates as described in Section 2, as well as dummies for the years 2006 to 2013. The reference individual is a female, aged between 35 and 44, who has not successfully completed higher vocational or university education, does not own a home, and does not handle the household's finances. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.*

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