Trust in Banks

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Abstract

Trust in banks is considered essential for an effective financial system, yet little is known about what determines trust in banks. Only a handful of single-country studies discuss the topic, so this paper aims to fill the gap by providing a cross-country analysis on the level and determinants of trust in banks. Using World Values Survey data covering 52 countries during the period 2010–2014, we observe large cross-country differences in trust in banks and confirm the influence of several sociodemographic indicators. Our main findings include: women tend to trust banks more than men; trust in banks tends to increase with income, but decrease with age and education; and access to television enhances trust, while internet access erodes trust. Additionally, religious, political, and economic values affect trust in banks. Notably, religious individuals tend to put greater trust in banks, but differences are observed across denominations. The holding of pro-market economic views is also associated with greater trust in banks.

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1. Introduction

"Put not your trust in money, but put your money in trust"

– Oliver Wendell Holmes, Sr.

The 2008 financial crisis caused by financial institutions reminded us that well-functioning banks play an important role in economic growth and highlighted the importance of trust in banks on the part of economic agents. Authorities have aimed to preserve trust through these troubled times with measures such as providing liquidity support to banks and assuring that robust deposit insurance schemes remain in place to stave off bank runs and safeguard financial stability.

However, trust in banks is also important in non-troubled times. It contributes to financial inclusion and financial stability and thus helps foster economic growth. Without trust, banks cannot attract depositors or find households willing to borrow money to finance their businesses and housing. In a nutshell, trust in banks is a fundamental ingredient in the effectiveness of the economy.

Surprisingly little has been written about what shapes trust in banks. Only a handful of studies provide single-country evidence on trust in banks (for the US, Sapienza and Zingales, 2012; for Spain, Carbo-Valverde, Maqui-Lopez, and Rodriguez-Fernandez, 2013; for the Netherlands, Jansen, Mosch, and van der Cruisjen, 2014; and for Austria, Knell and Stix, 2015). Notably, these studies tend to investigate the dynamics of trust in banks during troubled times.

This paper is thus a first attempt at a cross-country investigation of the level and determinants of trust in banks. To address this issue, we use the latest wave of the World Values Survey. It contains information on trust in banks for 52 countries during the period 2010–2014. The World Values Survey, which has been administered regularly since 1981, included a new question on confidence in banks in this latest wave. This addition allows us to investigate how individual and country characteristics contribute to trust in banks.

We provide a broad analysis to enhance the understanding of trust in banks, starting with a country-level analysis. We examine the level of trust in banks by country and provide information on the cross-country differences in trust in banks. We further study

the determinants of trust in banks at the individual level and examine the impact of sociodemographic characteristics such as gender, age, income, education, and access to information sources. We use the unique information provided by the World Values Survey on individual values to investigate the influence of religious, political, and economic values on trust in banks. Finally, we complete the analysis by investigating the determinants of relative trust in banks, defined as the difference between trust in banks and trust in institutions, to identify whether the tested determinants have a specific influence on trust in banks or affect trust in institutions in general.

Our discussion relates to three current strands of the literature. We start with the financial stability strand. Lack of trust in banks is a common determinant of bank runs, so the factors shaping confidence are a prime concern for bank regulators. However, trust in banks also fosters financial stability by enhancing financial inclusion, i.e. greater use of formal financial services creates a more stable deposit base for banks in troubled times (Han and Melecky, 2016).

The role of trust in the economy is the second strand of literature our analysis relates to. We supplement the investigation of the determinants of interpersonal trust (Alesina and La Ferrara, 2002; Bjornskov, 2006) and trust in institutions (Clausen, Kraay and Nyiri, 2011; Stevenson and Wolfers, 2011) by adding trust in banks to gain a better understanding of this dimension of economic confidence. We also consider whether the determinants of bank trust might somehow differ from other dimensions of confidence.

The third strand of literature incorporates the debate on the influence of religion on economic outcomes. Following Barro and McCleary (2002), there is a considerable body of literature on how religion shapes economic attitudes (Guiso, Sapienza, and Zingales, 2003; Kumar, Page, and Spalt, 2011). The impact of religion on trust in large organizations (La Porta et al., 1997) and the different views of religions on charging interest emphasize the potential influence of religious values on trust in banks. Our analysis contributes to the wider question of the impact of culture as the key force driving growth (Landes, 1998).

We do not focus on the influence of financial turmoil on trust in banks for two reasons. First, previous evidence consistently confirms that trust in banks sharply falls during troubled times (Stevenson and Wolfers, 2011; Sapienza and Zingales, 2012).

Moreover, our dataset, despite its extent, only provides information on trust in banks at a single point in time and thus offers no information on the evolution of trust in banks.

Given the contribution of trust in banks to financial stability, the implications of our study are far-reaching. This study should provide policymakers with insights into what determines trust in banks. While many factors discussed here relate to values that are hard to change in society, policymakers retain control over a number of potential determinants of trust in banks, including depositor protections and bank market structure.

The rest of the article is structured as follows. Section 2 reviews the related literature on the determinants of general trust and trust in banks. Section 3 provides measures of trust in banks at the country level. Section 4 presents the determinants of trust in banks. Section 5 displays the main estimations performed to explain trust in banks. Section 6 presents the estimations for relative trust in banks. Section 7 concludes.

2. Related literature

Trust can be defined as "a remarkably efficient lubricant to economics exchange that reduces complex realities far more quickly and economically than prediction, authority, or bargaining" (Powell, 1990; cited by Carbo-Valverde, Maqui-Lopez and Rodriguez-Fernandez, 2013). The role of trust in the economy has been stressed by Arrow (1972) : « Virtually every commercial transaction has within itself an element of trust, certainly any transaction conducted over a period of time. It can be plausibly argued that much of the economic backwardness in the world can be explained by the lack of mutual confidence ». North (1990, p.54) supports this view by claiming that "The inability of societies to develop effective, low-cost enforcement of contracts is the most important source of both historical stagnation and contemporary underdevelopment in the Third World."

Our focus here is on trust in banks which is hard to explicitly define since individuals can have various ways to define it when asked about their level of confidence in financial institutions. It combines the confidence of individuals in the stability of

financial institutions (and therefore also includes confidence in the deposit insurance scheme and in the supervisory authorities) but also their confidence in the honesty of bankers, and their political and/or religious perceptions of the role of banks in the economy.

A natural question which emerges is to know whether trust in banks is related to trust in money. Money is a social construction which favors transactions and which is based on trust as stressed by Ingham (2000, p.29): "the effectiveness of money as a store of value is based, to an important degree, on a commitment to a course of action that is based on trust that others will continue to accept our money." Therefore, as observed by Kaelberer (2007), "trust in money involves a risk in the sense that there exists no absolute guarantee that society will continue to accept money in future exchanges. » In a broader perspective on trust in money, Anjos (1999, p.684) mentions that « Trust in the stability of the relations of representativeness and convertibility between the assets that perform the functions of money is therefore a convention shared among those who decide to establish monetary contracts. »

These concepts of stability and convertibility make trust in money influenced by inflation eroding the value of money, and trust in authorities from the perspective of their efforts to preserve the value of money.

Trust in money has therefore similarities with trust in banks in the sense that this latter trust is also influenced by convertibility (of bank deposits) and by stability (to preserve in a broader sense the assets and liabilities of bank clients). It nonetheless differs from trust in banks on the fact that inflation does not exert the same impact on this latter dimension since banks can propose interest rates indexed on inflation, but also on the observation that banks can be widely developed in a country with low levels of trust in banks as will be shown in this study. The reason for this latter point is the multidimensional definition of trust in banks which is not limited to confidence in the stability of financial institutions but also includes elements like personal opinions on the honesty of bankers or the relevance of market economy.

Most recent studies on trust focus on general trust (i.e. interpersonal trust), and generally share the view that trust contributes to economic growth (Knack and Keefer, 1997) and financial development (Guiso, Sapienza, and Zingales, 2004).

We restrict our survey of this abundant literature to studies that provide relevant findings for our research question. These papers fall into two categories: studies on the determinants of general and institutional trust, and single-country studies on trust in banks.

The first category of relevant studies deals with determinants of general trust. They note that trust in banks can be influenced by the same factors as the other forms of trust in a society. In other words, a general distrust can erode trust in banks. They also identify sociodemographic characteristics and empirically test certain values variables.

Alesina and La Ferrara (2002) provide an investigation of the determinants of general trust with individual data for US for the period 1974–1994. They consider factors affecting the individual, both sociodemographic (age, gender, education, family attributes, income, race, and recent traumatic experiences) and cultural (religious beliefs). They also take into account the characteristics of the community in which the individual lives, particularly the degree of racial integration in the community and the crime rate. They find that the strongest factors that contribute to the deterioration of trust are those associated with recent traumatic experiences among members of groups that have historically been discriminated against, living in a racially mixed community, and lower economic success through lower income or education. Interestingly, they do not observe a significant influence of religious belief on trust.

Bjornskov (2007) extends the analysis of the determinants of general trust with a cross-country investigation using country-level data. The explained variable is the average level for general trust at the country level obtained from the World Values Survey waves of 1997 and 1999–2001. The set of potential determinants includes institutional variables (rule of law, monarchy), income variables (level and inequality), demographic variables (age structure, population size), and religion variables (the shares of Catholics, Protestants, Muslims, and people belonging to an Eastern religion such as Hinduism and Buddhism). Regarding religion, Bjornskov (2007) finds a positive association for trust with Eastern religion adherence and a negative one for Catholics and

Muslims. For the rest, few variables are significant, with a negative influence of income inequality on trust and no significant impact of income per capita.

Guiso, Sapienza, and Zingales (2003) provide a broad investigation into how religion affects economic outcomes. Using the World Values Survey waves, they test the relation between religion and a large set of variables measuring attitudes toward cooperation, legal rules, market economy, and thriftiness in individual-level estimations performed with country fixed effects. Religion is considered in terms of religiosity and religious denomination.

Religious people tend to be more trusting, regardless of whether they are passive believers with a religious upbringing or actively religious. Trust is high among Catholics and even more so among Protestants. Regarding the sociodemographic variables considered as control variables, the authors find that age, education, and income favor trust, while gender has no significant influence. The authors conclude that religiosity is associated with economic attitudes conducive to economic growth.

The second category of studies presented in this survey contains single-country studies on trust in banks. Knell and Stix (2015) investigate shifts in trust in banks for a sample of Austrian individuals from 2004 to 2009. Data come from a representative survey conducted by the Austrian National Bank every quarter among 2,000 individuals interviewed face-to-face, who are representative for the Austrian population aged 15 and over, while the authors restrict the sample to persons aged 18 or older. As an initial observation, they note that trust in banks deteriorated significantly during the financial crisis. They then examine the determinants of trust in banks by testing the potential influence of a large set of sociodemographic characteristics that might affect trust in banks. These characteristics include gender, age, education, marital situation, and employment status. They further consider subjective variables such as how survey respondents personally assess their financial situation and perceive inflation, as well as political preferences using strength of party affiliation from left to right.

The sociodemographic indicators reveal higher trust in banks among younger people, people with children, separated people, and women in some cases. Interestingly, the authors do not observe an influence from education. Looking at subjective factors, the more positively an individual appraises his or her financial situation and the greater the

confidence expressed in price stability, the higher the respondent's trust in banks. Regarding political preferences, Knell and Stix (2015) show higher trust in banks for people with strong attachments to either the main left or right party than people unconnected to a party or affiliated with some other party. Looking closer at those with the strongest main party attachments, greater trust in banks is shown for people with a right-wing orientation.

Sapienza and Zingales (2012) analyze the evolution of trust in the financial system for US households during the recent financial crisis. Data come from a survey conducted by Social Science Research Solutions on a representative sample of 1,034 households in December 2008. Respondents ranked their level of trust in various institutions and people from 1 to 5. The average response of 2.65 for trust in banks indicated that banks were perceived as more trustworthy than the stock market, the government, large corporations, or bankers, but less trustworthy than people in general. Respondents mentioned that their trust in banks had dropped in the three months preceding the survey.

To analyze conditions under which people might lose trust in banks, Jansen, Mosch, and van der Cruisjen (2014) use data on 2,500 Dutch households in 2010 and 2012. They come from two surveys, the first one held in July 2010, the second one in July 2012, These surveys are based on questionnaires sent to the members, all aged 16 or older, of an internet-based survey among the Dutch population. They propose eight hypothetical scenarios associated with the financial crisis and ask respondents if these scenarios, which include negative news, government intervention, lack of transparency, and governance issues, might erode their trust in banks. They first try to determine the type of event that hampers trust in banks. They then investigate if household characteristics such as age, education, and income, are reflected in an erosion of trust in banks. They find that trust in banks is strongly hampered by events such as the revelation of large bonuses for bankers, negative media reports, and opaque product information. Household characteristics generally do not influence reactions.

Carbo-Valverde, Maqui-Lopez, and Rodriguez-Fernandez (2013) examine how bank characteristics influence trust of customers in their bank in Spain. They use data from a nationally representative survey of 1,601 bank customers based on telephone

interviews done in January 2009. They consider variables associated with customer perception of characteristics of their bank such as effectiveness, sensitivity, and commitment. They include a set of sociodemographic characteristics (age, education, gender) to explain trust in banks, and find evidence that customer perception of bank characteristics influences the customer's level of trust in banks. Even so, their results overall do not support the influence of sociodemographic characteristics on trust in banks.

Stevenson and Wolfers (2011) provide an investigation of the evolution of trust in various forms of institutions, including banks in the US, from 1972 to 2010. They use data from a series of 35 annual Gallup surveys of trust in institutions that includes banks, the US Congress, big business, the US Supreme Court, and newspapers. These surveys were asked each year to around one or two thousand individuals. They examine the cyclicality of trust in these institutions by regressing trust measures on the unemployment rate. The overall unemployment rate exerts a significant and negative impact on trust measures that is particularly pronounced for trust in banks. This finding, they say, accords with the hypothesis of pro-cyclical confidence in institutions.

In summary, there are no cross-country studies investigating trust in banks and only a few studies on trust in banks that exist consider a single country and tend to focus on the evolution of trust in banks in troubled times. Moreover, as features specific to the country may affect the results, the evidence they provide on the influence of sociodemographic characteristics on trust in banks is limited. They do not investigate the influence of individual values on trust in banks.

3. Country measures of trust in banks

In this section, we document the level of trust in banks across the world based on data from the most recent wave of the World Values Survey. The survey, which provides a sample of people in 60 countries during the period 2010–2014, asks individuals about their perceptions of life and institutions. Each country is left with a representative

national sample of its population. Therefore, all people have been questioned including those with and without access to banks since the survey does not focus precisely on trust in banks and aims at being representative of all investigated countries. Six waves of this survey have been conducted since 1981. The most recent wave, which includes 258 survey items for 60 developed and developing countries, saw the addition of question V121. The question drew responses on trust in banks for 52 countries. It asks:

Could you tell me how much confidence you have in banks: Is it a great deal of confidence (1), quite a lot of confidence (2), not very much confidence (3) or none at all (4)?

We use these responses to create the variable *Trust in banks* in 52 countries for which we have available information for trust in banks. We have recoded the four answers so that 1 translates to lowest confidence in banks and 4 to highest confidence in banks.

We aggregate the answers of respondents for each country to provide a cross-country comparison of trust in banks. Table 1 displays the national mean values of trust in banks. We observe large differences across countries in trust in banks with values ranging from a low of 1.77 for Spain to a high of 3.24 for Uzbekistan.

A first glance at the values by country suggests that countries with high income per capita have lower trust in banks. After Spain, the countries with the lowest mean trust in banks are Germany (1.96) and the Netherlands (2.09). On the opposite tail of the distribution, we observe that Uzbekistan is joined in the high confidence group by Ghana (3.15) and China (3.05).

We further report information for trust in banks by considering differences in gender, age, income, and education, for each country in Table 2. This allows us to provide an initial view on the relation between individual characteristics and trust in banks.

For each country, we report the mean level of trust in banks for each criterion. Gender is considered by comparing male and female respondents and age by comparing respondents aged 40 or older and those younger than 40. Income is analyzed by comparing respondents in income decile groups of 5 or above to those in income groups

below 5 (based on respondent's self-reported level of income on a scale from 1 to 10 with 1 being the lowest income decile and 10 the highest income decile in the country). Finally, education is taken into account by comparing respondents with full secondary or tertiary education to other respondents.

For the majority of our survey countries (33 of 52 countries), we observe that women trust banks more than men. We also find that young people have higher trust in banks than older people in most countries (32 countries). Income seems clearly related to trust in banks; low-income individuals tend to trust banks more than those with high income in the vast majority of countries (46 countries). The impact of education is not very clear in this univariate analysis, however. Individuals with secondary and tertiary education trust more banks than the others in half of the countries, while the opposite result is observed in the other half.

The analysis of country means is completed with the average values for country groupings reported in Table 3. We gather countries based on four criteria: income, occurrence of a recent financial crisis, presence of explicit deposit insurance, and rule of law. This breakdown provides our initial look at the relation between country-level variables and trust in banks.

We rely on the OECD classification in designating income groups. The mean value of trust in banks tends to increase with decreasing income per capita and the mean level of trust in banks in high-income countries is significantly lower than in middle-income and low-income countries. This somewhat counter-intuitive association between income per capita and trust in banks may reflect to the impact of the recent financial crisis that hit developed countries particularly and likely damaged trust in banks.

To provide evidence for this interpretation, we display values for trust in banks by comparing countries that have suffered a recent financial crisis against those that did not. We take into account the occurrence of a financial crisis in the recent years based on the database of Laeven and Valencia (2012). The mean trust in banks is significantly higher in countries with no financial crisis (2.64) than in countries with a financial crisis (2.28), supporting the view that country levels of trust in banks are influenced by the occurrence of a recent financial crisis. This finding also tends to corroborate the interpretation that

the negative association between income per capita and trust in banks may reflect the impact of a recent financial crisis on trust in banks in high-income countries.

Relying on the information of Demirgüç-Kunt, Kane, and Laeven (2013), we consider whether the presence of an explicit deposit insurance scheme influences trust in banks. Notably, we find a significantly higher mean value of bank trust for countries without explicit deposit insurance schemes (2.76) than for those with explicit deposit insurance schemes (2.52). Again, given that an explicit deposit insurance scheme is intended to increase trust in banks by reducing the expected losses for depositors, this observation might seem surprising at first glance. However, such schemes also enhance moral hazard issues in the banking industry (Demirgüç-Kunt and Detragiache, 2002; Karas, Pyle and Schoors, 2013) and can thus contribute to the emergence of financial crises and harm trust in banks.

Finally, we compare the mean value of trust in banks for countries that differ according to a rule-of-law variable. We use the World Bank's rule-of-law indicator, which ranges from -2.5 to 2.5, comparing countries with a negative indicator values to those with positive ones. Interestingly, countries with a negative indicator tend to have significantly higher trust in banks than those with positive indicator values.

4. Determinants of trust in banks

In this section, we develop our hypotheses for the determinants of trust in banks. We consider four groups of factors that might potentially influence trust in banks: sociodemographic factors, religious values, political and economic values, and country-level variables.

4.1 Sociodemographic indicators

Our sociodemographic factor determinants are taken from former studies on trust generally and trust in banks specifically. For gender, we include a dummy variable equal to one if the individual is a female (*Female*). Marital situation is measured with a dummy

variable equal to one if the respondent is married (*Married*). *Age* is defined as the age of the respondent in years.

Education is accounted for by considering a dummy variable equal to one if the individual has secondary or tertiary education (*Education*). The variable *Income* measures the self-reported income decile of the respondent relative to incomes in the respondent's country ranging from the lowest decile (1) to the highest (10). The response is based on this statement:

On this card is an income scale on which 1 indicates the lowest income group and 10 the highest income group in your country. We would like to know in what group your household is.

Access to information is a major determinant influencing trust in institutions. Information access fosters the spread of information about the economy, financial crises, or financial scandals. We include three variables for access to information related to newspaper (*Newspaper*), television (*Television*), and the internet (*Internet*). They are based on responses to the statement:

People learn what is going on in this country and the world from various sources. For each of the following sources, please indicate whether you use it to obtain information daily, weekly, monthly, less than monthly or never.

Dummy variables are set equal to one if the respondent answers 1 for daily and zero otherwise.

4.2 Religious values

We take into account religious values by either accounting for religiosity or religious denominations. Religiosity is defined by the dummy variable *Religious*, and based on the question:

Could you tell me whether you are an active member, an inactive member or not a

member of a church or a religious organization?

The variable is equal to one if the respondent answers that he or she is an active member and zero otherwise.

Religious denomination is determined by the response to the question:

Do you belong to a religion or religious denomination? If yes, which one?

The World Values Survey offers roughly 50 possible options to this question. Most options drew very few responses (e.g. three responses for the "Sikh" option). To provide a relevant investigation of the influence of religion types on trust in banks, we have first gathered close religious denominations together to form wider religion groups. Various Protestant affiliations and Muslim affiliations were grouped.

We create seven dummy variables equal to one if the respondent declares that he or she belongs to one of the following religious denominations: *Catholic, Protestant, Orthodox, Muslim, Hindu, Buddhist, No religion. Protestant* is used as the omitted variable since we find particularly relevant to interpret the relation of the other religious denominations with trust in banks in line with the large literature investigating the relation between Protestantism and economic attitudes. These eight categories comprise the vast majority of respondents in the sample. All the other religious denominations with a small number of respondents are reported as *Other religion*. Religious denominations influence trust in banks mainly through two channels.

First, religious denomination can impact trust in society or its institutions. Putnam (1993) argues that hierarchical religions create vertical bonds of obligation in society that do not favor horizontal ties between people and thus discourage trust. La Porta et al. (1997) find evidence to support this view with a negative association between general trust and the dominance of a hierarchical religion in a country (hierarchical religions here are Catholicism, Orthodox Christianity, and Islam). Bjornskov (2007) builds on Max Weber's insight that general trust should be higher in non-hierarchical religions that promote a sense of individualized responsibility. Indeed, we expect to observe greater trust in society in general for these three religions relative to Protestantism and the major

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Asian religions (Hinduism and Buddhism). This can further influence trust in banks.

Second, religions differ in their views about charging and paying out interest that may color how believers view banking. Islam prohibits the charging of interest altogether, resulting in the emergence of financial institutions and instruments designed to comply with the financial principles of Islam.[1] Catholicism prohibited interest for centuries, and this view may still color attitudes of adherents toward banks. On the other hand, Protestantism has never held negative views on charging interest, so Protestants could see banks in a positive light. We therefore expect trust in banks generally to be lower among Catholics and Muslims.

4.3 Political and economic values

In accounting for the influence of political and economic values of individuals, we postulate that individuals with a positive attitude toward the market should trust banks more than those with anti-market sentiments. As the banking industry plays a critical role in modern market economies, opposition to the market is expected to be associated with rejection and distrust toward banks.

We employ four variables to account for political preferences of individuals. We include two variables on ecological preferences and the importance of helping society which proxy altruism, and two variables on importance of wealth and on preference for democracy which inform on the political perception of a democratic market economy.

Ecology is a dummy variable equal to one if the respondent shows ecological preferences and zero otherwise. This is based on the choice of response to the survey question:

> *Here are two statements people sometimes make when discussing the environment*
> *and economic growth. Which of them comes closer to your own point of view?*
> *-Protecting the environment should be given priority, even if it causes slower*
> *economic growth and some loss of jobs.*

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[1] All countries in the sample have banking industries that contain a majority of conventional banks that charge and pay interest. Only two countries (Iran and Sudan) have fully Islamic banking industries and they are not sample countries. As a consequence, trust in banks in all countries of the sample is mainly trust in conventional banks. Religious views on interest can, of course, still influence trust in banks.

-Economic growth and creating jobs should be the top priority, even if the environment suffers to some extent.

Ecology is equal to one if the respondent chooses the first statement, and zero if the respondent prefers the second statement.

Wealth measures importance of wealth for the respondent. It is based on the response on a scale from 1 to 6 to the statement:

It t is important to be rich, to have a lot of money and expensive things

We recode the answers such that 6 means very much for the respondent.

Help society measures importance to the respondent of helping society. It is based on the response on a scale of 1 to 6 to the statement:

It is important to do something for the good of society.

We recode the answers such that 6 means that the respondent gives most importance to helping society.

Democracy measures the preference of the respondent for democracy. It is an ordinal number from 1 to 10 with higher values for greater preference for democracy based on the question:

How important is it for you to live in a country that is governed democratically?

Economic values are accounted for by including three variables related to attitudes toward the market and the state in the economy. *Inequality* measures how much the respondent agrees on a scale from 1 to 10 (with 10 meaning full support) with the statement:

We need larger income differences as incentives for individual effort.

Government role considers the preference for the influence of government ownership in the economy. It is based on the respondent's agreement on a scale from 1 to 10 (with 10 meaning full agreement) with this statement about government ownership in the economy:

Government ownership of business and industry should be increased.

Competition harmful measures how negative the respondent is for increased competition in the economy. Rejection of competition is measured on a scale from 1 to 10 (with 10 meaning complete agreement with the statement):

Competition is harmful. It brings out the worst in people.

4.4 Country-level variables

In addition to the individual variables, we also include four country-level variables to examine the potential influence of country characteristics. We restrict the number of country-level variables as our dataset only includes data from 52 countries. In this setting, we are unable to include large number of country-level variables and must rely instead on variables available for the majority of the countries in our sample. We focus on four key country characteristics related to economic development and financial environment.

We take into account the level of income of the country by including the level of income per capita measured with *GDP per capita* from the World Development Indicators. We consider the occurrence of a financial crisis, since this event can impact the confidence in financial institutions. *Financial crisis* is a dummy variable equal to one if a country had a financial crisis in the recent years and zero otherwise. This dummy is based on the information from the Systemic Banking Crises Database of Laeven and Valencia (2012). We take into account the presence of a deposit insurance scheme, since such schemes are in place to support confidence in the banking system by reducing the likelihood of bank runs. *Deposit insurance* is a dummy variable equal to one if the country has a deposit insurance scheme and zero otherwise. This information is taken from Demirgüç-Kunt, Kane, and Laeven (2013).

We consider a measure of bank concentration since banking structure can influence the level of trust in banks through multiple channels. Higher bank concentration may reduce incentives for banks to promote their products and reduce trust in banks by allowing banks to charge higher prices and reduce access to credit. On the other hand, greater bank concentration could be perceived as positive for trust in banks. Individuals can have greater confidence in large financial institutions that are perceived as "too big to fail". *Bank concentration* is measured by the share of the assets of the five largest banks in total commercial banking assets of the country. Data are extracted from the Global Financial Development Database.

We stress here that no country-level measure of institutional quality (e.g. Rule of law) is included, because these measures are strongly correlated with income per capita. Country-level variables are considered as the mean of three years before the survey was conducted in a given country.

To complete the set of tested determinants, we include interpersonal trust in some specifications. This is based on the survey's general trust question:

Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?

We set the dummy variable *General trust* equal to one for a response of "most people can be trusted" and zero otherwise. This variable has been added to examine whether the general level of trust between individuals is associated with trust in banks. We perform estimations with and without this variable to check if its inclusion affects tested determinants of trust in banks.

Descriptive statistics for all variables used in our estimations appear in Table 4.

5. Results

This section presents the results on the determinants of trust in banks. We complement estimations performed using an ordered logit model with an analysis of marginal effects. We test the sensitivity of the results with logit model estimations.

5.1 Main estimations

To explain trust in banks, we employ an ordered logit model. The dependent variable is *Trust in banks*, a discrete variable with values between 1 and 4.[2]

We consider five specifications including different sets of explanatory variables to test the influence of the determinants and to control for the sensitivity of our results. Specification 1 only includes the main individual characteristics. Specifications 2 to 5 add various political and economic values. They may or may not include a general trust variable and account for religion either by religiosity or religious denomination.

Table 5 displays our main estimations. Country-level variables are included in all estimations. Table 6 provides the estimations with country dummy variables replacing country-level variables to check robustness of our findings.

Gender. We start our analysis by examining the impact of sociodemographic factors. Regarding the evidence that women trust banks more than men, Knell and Stix (2015) find supportive evidence in Austria, while Carbo-Valverde, Maqui-Lopez, and Rodriguez-Fernandez (2013) observe no gender effect on trust in banks in Spain. This finding comports with a large set of studies that confirm the impact of gender on financial decisions (e.g. Barber and Odean, 2001; Beck, Behr, and Güttler, 2013), and has important policy implications in light of recent studies on financial inclusion that show men tend to have more bank accounts than women (e.g. Allen et al., 2012). In countries with this gender effect, enhanced financial inclusion of women could contribute to higher level of trust in banks and thereby increase financial stability.

Age. Trust in banks decreases with age. This result is in accordance with what Knell and Stix (2015) observe for Austria.

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[2] We test and confirm that the cutoff points among different outcome categories are significantly different from each other.

Marital status. The variable *Married* is not significantly linked to trust in banks, so marital status likely is irrelevant to the issue of trust in banks.

Income. Individuals with higher income tend to have higher trust in banks. Even if income at the aggregate level does not contribute to higher trust in banks, income at the individual level matters. This can be explained by more frequent interactions with the bank or better bank-customer relationships with high-income clients. It can also result from the generally higher trust of people with higher income, which is in line with the finding of a positive association between income and trust by Guiso, Sapienza and Zingales (2004). Alesina and La Ferrara (2002) also find that lower economic success hampers trust.

Education. A higher level of education tends to deteriorate trust in banks. Notably, the coefficient of *Education* is negative in all specifications. While it is significant in all estimations with country dummy variables, it is only significant for one specification with country-specific variables. This result diverges from the observations for trust in single-country studies for Austria (Knell and Stix, 2015) and Spain (Carbo-Valverde, Maqui-Lopez, and Rodriguez-Fernandez, 2013). Neither study finds any relation between education and trust in banks. A possible explanation of this result is that better educated people have a clearer understanding of financial mechanisms and are more likely to become skeptical of banks.

Access to information. We observe that the influence of access to information differs strongly depending on type of access. Daily access to television enhances trust in banks, i.e. *Television* has a positive and significant coefficient in all estimations. Daily access to the internet, in contrast, has the opposite effect, i.e. *Internet* is negative in all estimations, with a significant coefficient only observed with the inclusion of country-specific variables. We find limited support for the positive influence of daily access to newspapers, i.e. the positive coefficient for *Newspaper* is only significant in two specifications with country dummy variables. These findings support the view that access to information can be beneficial or detrimental to trust in banks, depending on the means of access. Access to television or newspapers may foster trust in banks because financial institutions use these communication channels to provide information on their products and because authorities use these particular media to disseminate views that boost

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confidence in the financial system. Conversely, the negative influence of internet access suggests banks are less likely to favor this communication channel for promoting their products. Moreover, regulation of internet speech is lower than in more established media, making it a better platform for spreading negative sentiments or rumors about financial institutions.

Religion. Overall, our evidence supports the notion that religious values influence trust in banks.

Our first finding is that religiosity contributes to higher trust in banks, i.e. *Religious* has a positive and significant coefficient in all estimations. In other words, religious people tend to trust banks more than non-religious people. This parallels with the finding of Guiso, Sapienza, and Zingales (2003) that religious people tend to be more trusting. Religious people seem to trust more individuals or banks.

Our second finding concerns the impact of religious denomination on trust in banks. Recalling that the Protestant denomination is the omitted category, we detect a significantly negative coefficient for *No religion* in all estimations, i.e. atheists tend to have lower trust in banks than Protestants. Hindus, in contrast, appear to have higher trust in banks than Protestants, i.e. we find a significantly positive coefficient for *Hindu*.

We find support for lower trust in banks for Catholics and Orthodox people relative to Protestants, i.e. the coefficients for *Catholic* and *Orthodox* are negative and significant in the main estimations with country-specific variables. The coefficients are not significant in estimations with country dummy variables.

We obtain support for higher trust in banks for Buddhists than for Protestants, i.e. a significantly positive coefficient for *Buddhist* in the main estimations with country-specific variables. But again, the coefficients remain positive only to lose their significance in estimations with country dummy variables.

We find limited support that Muslims have higher trust in banks than Protestants, i.e. *Muslim* is not significant in specifications performed with country-specific variables, but positive and significant in specifications with country dummy variables.

Overall, we find evidence of differences across religious denominations in trust in banks. These differences correspond roughly with our predictions. Following the arguments from Putnam (1993) and evidence from La Porta et al. (1997) that hierarchical

religions depress trust in institutions, we expected differences between hierarchical religions (Catholicism, Orthodox Christianity, and Islam) and other religions concerning trust in banks. Therefore, the three hierarchical religions should be associated with lower trust in banks. Indeed, we find such evidence with lower trust in banks for both Christian hierarchical religions (Catholicism and Orthodox Christianity) relative to Protestantism. We also find that non-hierarchical Hinduism is associated with greater trust in banks. We do not observe, however, the expected reduction in trust in banks for Islam.

Different perceptions concerning the charging and paying interest among religions could have some influence but we do not observe evidence in line with this hypothesis – Muslims have about the same level of trust in banks as Protestants, despite the fact that Protestantism has never had a negative view on interest, while Islam still prohibits the charging and paying of interest.

Political and economic values. Our overarching conclusion is that political and economic values influence trust in banks. We find a positive and significant coefficient for *Wealth* and *Help society*, which means that individuals who place importance on wealth and helping society tend to trust banks more. Greater preference for democracy tends also to be positively associated with trust in banks, even if the positive coefficient of *Democracy* is only significant in estimations with country dummy variables. The only non-significant variable for political values is *Ecology*. We find no association between environment concerns and trust in banks.

The analysis of the relation between economic values and trust in banks supports the view that positive attitude toward the market is associated with higher trust in banks. In all estimations, we observe a significantly positive coefficient for *Inequality* and a negative one for *Competition harmful*, meaning that individuals who favor inequality and hard work are more trusting toward banks. In addition, the coefficient for *Government role* is negative in all estimations and significant in all but two specifications with country dummy variables, suggesting that individuals who prefer lower government ownership in the economy have a higher degree of trust in banks. These results indicate adherence to market-economy principles and economic liberalism contributes to higher trust in banks.

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Interpersonal trust. We conclude our analysis of individual determinants with interpersonal trust. Inclusion of a general trust variable does not influence the results for the tested determinants of trust in banks. We find a positive and significant coefficient for *General trust* in all estimations including this variable. In other words, people more likely to trust each other are also more likely to trust banks. Both findings are of interest because they show a positive association between interpersonal trust and trust in banks. However, both dimensions of trust do not necessarily share the same determinants.

Country-specific variables. The analysis of these variables shows that out of these variables only the occurrence of a financial crisis in the recent years significantly influences trust in banks. *Financial crisis* is negative in all estimations with a significant coefficient in three specifications. Therefore, the occurrence of a recent financial crisis has a negative impact on trust in banks, which is in line with the findings from Sapienza and Zingales (2012) in the US and Knell and Stix (2015) in Austria.

The estimated coefficients concerning the three other variables, *GDP per capita, Deposit insurance,* and *Bank concentration* are not significant. These results suggest that the existence of an explicit deposit insurance scheme, the level of bank concentration, and income per capita, do not influence trust in banks.

These findings complement the results observed in the univariate analysis on mean trust in banks by group of countries. Only the occurrence of a financial crisis has an impact when individual variables are taken into account.

5.2 Analysis of marginal effects

To determine the economic significance of our results, we compute the marginal effects following the ordered logit estimations. While the estimated coefficients reported in Table 5 indicate statistical significance and the sign of the effect, marginal effects indicate the magnitude of the effects as a percentage point change in probability of falling within a certain outcome category. For simplicity, we only report in Table 7 the marginal effects for positive trust in banks, i.e. answers including categories 3 and 4 for "quite a lot of confidence" and "great deal of confidence" in banks.[3] In case of dummy variables, the

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[3] Marginal effects for all four categories sum up to 0.

marginal effects are based on a change of one category and for other variables the marginal effects are based on a change of one standard deviation.

In the majority of cases, the marginal effects do not change significantly for different specifications. Let us consider the specification number 5 that includes all the individual variables as well as religious and country variables. We discuss only the variables for which estimated coefficients were significant in our main estimations. Among sociodemographic characteristics, being a woman increases the probability of a response in category 4 by 1.6 percentage points on average and in case of positive confidence in banks (both category 3 and 4) by 2.8 percentage points. The marginal effect is the same in case of accessing the information from television. The negative impact for internet in category 4 is slightly higher (1.7 percentage points). In the case of continuous variables, however, increasing income by one standard deviation increases the probability that the respondent will give a category 4 response by almost 1.9 percentage points, while increasing age by one standard deviation decreases the probability of high trust in banks by 1.3 percentage points.

Variables accounting for religious values exhibit higher marginal effects than sociodemographic ones. Being religious increases the average probability of response in category 4 by 5 percentage points. When analyzing different religions, the highest positive effect is found for Hindu (9.9 percentage points) and the largest negative effect for orthodox religion (-5.6 percentage points).

Out of political and economic values variables high level of general trust increases the probability of high trust in banks by 2.1 percentage points. Out of continuous variables the largest effect is observed for variable concerning inequality for which increasing by one standard deviation increases the probability of high trust by 1.5 percentage points.

Country-specific variables are represented by the significant coefficient for financial crisis. For respondents from countries with financial crisis the probability of high trust decreases by 4 percentage points on average. This magnitude is quite high when comparing it to the magnitudes for other variables and only religion variables exhibit higher marginal effects.

5.3 Estimations with logit model

As a robustness check, we run a logit model instead of the ordered logit one. The dependent variable in this case is the dummy variable *High trust in banks*, equal to one if the respondent has a great deal of confidence or quite a lot of confidence in banks, and zero if he has not very much confidence or none at all. We consider the same five specifications as in the main model and include country-level variables in all estimations. We display the results in Table 8. Overall, we observe the same findings when applying the logit model as the results for the ordered logit model.

For sociodemographic indicators, we still find that women and individuals with higher income or access to television trust banks more, while older people and individuals with access to internet trust less. We do not find support for the influence of education, which obtained very limited support in the estimations with country-level variables with the ordered logit model.

Regarding religious values, we show that religiosity fosters trust in banks. Overall the results for the impact of each religious denomination still hold true with the exceptions that the coefficients for *Catholic* and *Orthodox* are significantly negative and those for *Hindu* and *Buddhist* are significantly positive. However, we now observe a lack of significance for the negative coefficient of *No religion*. Hence, the finding that atheists trust banks less than Protestants does not remain valid when transforming trust in banks in a binary variable and applying a logit model.

For political and economic values, we obtain the same findings as with the ordered logit model. We find evidence for a positive and significant coefficient for *Wealth*, *Help Society*, and *Inequality*, while the coefficient for *Government role* and *Competition harmful* is significantly negative. *Ecology* and *Democracy* do not have significant coefficients. Moreover, we still find that general trust exerts a positive and significant impact on trust in banks.

The main conclusion about estimations performed with the logit model is that they generally corroborate the main findings obtained with the ordered logit model and thus strengthen the robustness of our conclusions.

6. Explaining relative trust in banks

So far we have examined only the determinants of trust in banks. A natural follow-up query is whether a determinant of trust in banks may in fact be a determinant of trust in institutions in general. Here, we extend our analysis by examining the determinants of trust in banks relative to trust in institutions.

To this end, we create the variable *Relative trust in banks*, defined as the difference between trust in banks and trust in courts. We consider trust in courts as a relevant indicator of general trust in institutions. The judicial system is a key element of institutions as shown by literature on quality of institutions using rule of law and measures for law enforcement, since it contributes to guarantee that the rules of society are respected. Alternatively, trust in government or in the Parliament could be misleading as political preferences can increase or decrease distrust toward these representatives. Trust in courts is based on the survey question:

Could you tell me how much confidence you have in courts: Is it a great deal of confidence (1), quite a lot of confidence (2), not very much confidence (3) or none at all (4)?

We recode these four answers so that 1 indicates lowest confidence in courts and 4 the highest confidence in courts.

We redo our estimations so that we consider *Relative trust in banks* as the new dependent variable. This ordinal variable ranges from -3 to 3. We perform estimations with an ordered logit model.

The objective of these estimations is to identify whether the tested determinants have the same influence on trust in banks and relative trust in banks. If a significant coefficient in estimations for trust in banks ceases to be significant when explaining relative trust in banks, it would indicate the determinant has an impact on trust in institutions in general, but not trust in banks specifically. Symmetrically, any significant

coefficient in the estimations for relative trust in banks would support the view that the tested determinant has a specific impact on trust in banks.

Table 9 displays our main estimations and includes country-level variables in all estimations. Table 10 provides the estimations with country dummy variables to check the sensitivity of the results to this specification. Our main conclusions are as follows.

First, the influence of sociodemographic indicators strongly differs when comparing relative trust in banks to trust in banks. Only one determinant, *Age*, has the same impact on trust in banks and on relative trust in banks. We observe again a significantly negative coefficient for *Age*, which means that older people are less trusting in banks in absolute terms but also in relative terms with regard to courts. Undoubtedly, there is distrust toward banks for older people. We find some evidence of a positive impact from income and being a woman, i.e. richer individuals and women have greater trust in banks generally and relative to courts. However, the positive coefficients are only significant in a few estimations. The same conclusion stands for internet access, i.e. *Internet* is always negative, but significant only once.

Daily access to television is not significant in explaining relative trust in banks, but positive for trust in banks. This suggests that this access favors trust in institutions as a whole, but not banks specifically. We also observe a negative coefficient for daily access to newspapers, which is significant in estimations with country dummy variables. This finding differs from the positive influence of daily access to newspaper when explaining trust in banks. It somewhat supports the view that daily access to newspapers erodes the confidence individuals in banks relative to institutions generally.

We observe no significant impact of education on relative trust in banks, even if it has a negative impact on trust in banks. In other words, education tends to hurt trust in banks in a manner similar to how it hurts trust in courts.

Second, religious values influence relative trust in banks. We show that religious values specifically influence trust in banks in the sense that banks are special public institutions for religious people. Interestingly we only observe significant coefficients for variables associated with religious values in the main estimations with country-level variables. The inclusion of country dummy variables leads to the lack of significance for religious values variables in explaining relative trust in banks.

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We still observe a positive influence of religiosity: *Religious* is significantly positive in the main estimations, i.e. religious people trust banks even more than courts.

In line with the main estimations, we find the impact of religious denominations on trust in banks to have significantly negative coefficients for *Muslim*, *Orthodox*, *No religion*, i.e. Muslims, Orthodox Christians, and atheists have lower trust in banks relative to institutions than Protestants.

These findings add to our former results on religious denominations and trust in banks. Atheists and Orthodox Christians are not only more distrustful of banks than Protestants, they also distrust banks more than institutions. The finding for Muslims is notable here as our earlier finding showed no lower trust in banks for Muslims and limited support for their greater trust in banks. Here, we observe that Muslims have lower trust in banks than in other institutions. This result accords with the expected negative view of Muslims toward interest-practicing banks.

Third, political values do not influence relative trust in banks with the exception of preference for democracy. *Wealth* and *Help society* are no more significant, which supports the view that they are associated with higher trust in institutions in general, but not in banks in particular. In a related vein, *Ecology* is still not significant, confirming that environmental views do not influence trust in banks. Only *Democracy* is significant (but with the opposite sign) compared to what was observed for trust in banks. Preference for democracy is associated with higher trust in banks and lower relative trust in banks. This finding is of interest as it suggests that people with a higher preference for democracy may be more trusting in general in institutions including banks, but at the same time they have a higher distrust toward banks.

Fourth, we observe a very similar impact of economic values for relative trust in banks and trust in banks. *Inequality* still has a positive and significant coefficient in all estimations, while the coefficients for *Government role* and *Competition* are negative and significant in several estimations. Overall, economic values exert a very similar influence on trust in banks and relative trust in banks. More simply, these values do not influence trust in institutions in general (including trust in banks), but they impact trust in banks. Individuals that hold values favoring a market economy and economic liberalism are more prone to trust banks in general and even relative to trust in courts.

Considering the influence of interpersonal trust, we observe a reversed sign for *General trust* when changing the dependent variable from trust in banks to relative trust in banks, i.e. trusting people trust more banks but less than other institutions as indicated by the negative and significant coefficient of *General trust*.

Fifth, the analysis of country-specific variables shows tantalizing results when explaining relative trust in banks in comparison to our observations for trust in banks. *Deposit insurance* and *Bank concentration* are still not significant, supporting the view that the presence of a deposit insurance scheme and the level of bank concentration do not matter for trust in banks or relative trust in banks.

However, we do note two key differences. First, *Financial crisis* is no longer significant when explaining relative trust in banks, although it was significantly negative for trust in banks. These results suggest that the occurrence of a recent financial crisis not only eroded trust in banks but also trust in institutions. The impact of a financial crisis should therefore be of prime concern for authorities seeking to maintain trust in national institutions. Second, we observe a negative and significant coefficient for *GDP per capita*, even if this variable was not significant in the estimations explaining trust in banks. Apparently, greater income per capita contributes to the reduction of trust in banks relative to trust in institutions.

In summary, the analysis of the determinants of relative trust in banks shows differences compared to factors determining trust in banks. We observe the same influence of age and to a lesser degree of income and gender on trust in banks and on relative trust in banks. In addition to finding a similar influence of economic values, we also find similar influences for religiosity on trust in banks and on relative trust in banks. Political values, however, do not exert the same impact. There is no overall influence of these values on relative trust in banks, which accords with the view that these values shape confidence in public institutions in general. In addition, the occurrence of a financial crisis does not impair relative trust in banks.

7. Conclusion

We investigate the level and determinants of trust in banks based on the latest wave of the World Values Survey to obtain several insightful results. We observe large cross-country differences in trust in banks. As a starting overview, we note that trust in banks is lower in countries that have recently experienced a financial crisis and in countries with higher income per capita.

Our results show that sociodemographic indicators and religious, political, and economic values shape trust in banks at the individual level. Women trust banks more than men, and trust in banks tends to increase with income and decrease with age and education. Different media channels for information exert different influences on trust in banks, notably a positive impact in the case of access to television and a negative impact in the case of internet access.

We identify evidence that indicates individuals that hold religious values have greater trust in banks and further that trust in banks varies across religious denominations. Hindus trust banks more than Protestants, while Catholics and Orthodox Christians tend to have lower trust in banks than Protestants. We observe that political values associated with importance of wealth and helping society favor trust in banks, while people who hold pro-market economic values show distinctly greater trust in banks. We find that people who are more trusting of each other also tend to trust banks more. At the country level, we find evidence that a financial crisis erodes trust in banks.

We perform additional estimations to examine the determinants of relative trust in banks through measures of trust in banks relative to trust in institutions. We identify the determinants with a specific impact on trust toward financial institutions and find that older and more religious people have a specific distrust of banks, while individuals that hold pro-market economic values in particular tend to trust banks.

Our study has some limitations related to the dataset. First, we only have a single point in time. Our results can therefore be influenced by the period of the survey and cannot inform on the evolution of trust in banks. Second, even if the sample of countries contains developed and developing countries, it is not exhaustive with 52 countries.

Third, only one question on trust in banks can be utilized. We cannot therefore test if the findings stand with alternative questions on confidence in banks.

Understanding what shapes trust in banks is crucial to designing effective policies to promote financial stability. Authorities seeking to foster the confidence of individuals in banks need to prevent financial crises, but also understand that depositor protection schemes and bank concentration per se do not play much of role in creating that confidence. Moreover, the promotion of pro-market economic values increases trust in banks, and as such should be promoted by authorities seeking to influence this dimension of confidence.

We provide useful insights contributing to the debate on the influence of culture. Our study brings additional evidence on the impact of religion on economic outcomes, since religion matters for trust in banks.

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Table 1.
Trust in banks by country

This table reports the descriptive statistics for trust in banks by country.

Country	Mean	S.D.	N	Country	Mean	S.D.	N
Algeria	2.38	1.04	1001	New Zealand	2.66	0.74	781
Armenia	2.60	0.95	1031	Nigeria	2.94	0.91	1759
Australia	2.34	0.80	1448	Pakistan	2.77	0.99	1148
Azerbaijan	2.64	0.98	1002	Palestine	2.15	0.91	926
Belarus	2.50	0.86	1519	Peru	2.25	0.91	1164
Chile	2.18	0.84	980	Philippines	3.00	0.80	1200
China	3.05	0.62	1975	Poland	2.37	0.75	894
Colombia	2.49	0.98	1496	Qatar	2.71	0.94	1045
Cyprus	2.72	0.87	990	Romania	2.23	0.90	1428
Ecuador	2.43	0.90	1201	Russia	2.23	0.87	2329
Egypt	2.53	1.02	1510	Rwanda	2.76	0.78	1527
Estonia	2.72	0.77	1506	Singapore	2.91	0.68	1971
Germany	1.96	0.80	2011	Slovenia	2.30	0.72	1041
Ghana	3.15	0.84	1552	South Korea	2.86	0.74	1197
Iraq	2.61	0.90	1090	Spain	1.77	0.75	1162
Japan	2.69	0.67	2158	Sweden	2.54	0.81	1185
Jordan	2.33	0.90	1135	Taiwan	2.91	0.58	1158
Kazakhstan	2.54	0.87	1500	Trinidad	2.54	0.86	962
Kuwait	2.75	1.03	1221	Tunisia	2.23	1.01	1026
Kyrgyzstan	2.81	0.92	1493	Turkey	2.25	0.97	1540
Lebanon	2.46	0.97	1144	Ukraine	2.09	0.82	1500
Libya	2.85	1.05	1977	USA	2.33	0.74	2177
Malaysia	3.03	0.75	1299	Uruguay	2.49	0.91	911
Mexico	2.40	0.97	1993	Uzbekistan	3.24	0.89	1398
Morocco	2.66	0.99	1078	Yemen	2.25	0.97	657
Netherlands	2.09	0.70	1796	Zimbabwe	2.90	0.91	1500

Table 2.
Trust in banks by country for different criteria

This table provides the mean level of trust in banks by country for four different criteria. *Gender* is considered by comparing male and female respondents. *Age* is considered by comparing respondents aged 40 years and those younger than 40 years. *Income* is considered by comparing respondents with incomes higher or equal to 5 vs. those with incomes lower than 5. *Education* is considered by comparing respondents with secondary or tertiary education vs. other respondents. The p-value is based on a two-sided test and gives the probability that the two means are equal.

	Gender			Age			Income			Education		
Country	Male	Female	p-value	Old	Young	p-value	High	Low	p-value	High	Low	p-value
Algeria	2.33	2.43	0.10	2.39	2.37	0.67	2.58	2.11	0.00	2.36	2.39	0.65
Armenia	2.50	2.65	0.01	2.46	2.81	0.00	2.76	2.45	0.00	2.59	2.61	0.77
Australia	2.33	2.35	0.63	2.33	2.37	0.38	2.39	2.24	0.00	2.34	2.28	0.17
Azerbaijan	2.66	2.62	0.56	2.62	2.66	0.45	2.59	2.79	0.00	2.67	2.56	0.14
Belarus	2.42	2.56	0.00	2.45	2.55	0.02	2.59	2.37	0.00	2.48	2.52	0.40
Chile	2.11	2.25	0.01	2.19	2.17	0.65	2.34	1.95	0.00	2.29	2.13	0.01
China	3.03	3.08	0.04	3.09	3.00	0.00	3.06	3.05	0.78	2.98	3.10	0.00
Colombia	2.50	2.48	0.67	2.50	2.49	0.86	2.54	2.42	0.02	2.49	2.50	0.89
Cyprus	2.66	2.77	0.06	2.68	2.76	0.16	2.76	2.61	0.02	2.70	2.74	0.51
Ecuador	2.45	2.42	0.65	2.39	2.47	0.14	2.48	2.36	0.04	2.46	2.42	0.52
Egypt	2.56	2.52	0.45	2.49	2.57	0.10	2.72	2.37	0.00	2.71	2.47	0.00
Estonia	2.65	2.77	0.00	2.71	2.74	0.51	2.79	2.66	0.00	2.66	2.79	0.00
Germany	1.89	2.03	0.00	1.93	2.02	0.02	1.99	1.92	0.05	1.89	2.00	0.00
Ghana	3.17	3.14	0.42	3.15	3.16	0.97	3.17	3.13	0.28	3.08	3.17	0.08
Iraq	2.65	2.57	0.17	2.54	2.65	0.04	2.71	2.37	0.00	2.77	2.53	0.00
Japan	2.64	2.74	0.00	2.69	2.67	0.52	2.70	2.67	0.39	2.67	2.72	0.12
Jordan	2.31	2.34	0.67	2.30	2.34	0.49	2.39	2.21	0.00	2.36	2.30	0.31
Kazakhstan	2.49	2.57	0.10	2.51	2.57	0.20	2.58	2.44	0.00	2.61	2.46	0.00
Kuwait	2.62	3.00	0.00	2.71	2.77	0.33	2.75	2.78	0.70	2.76	2.71	0.36
Kyrgyzstan	2.79	2.83	0.38	2.83	2.79	0.44	2.85	2.70	0.01	2.80	2.83	0.60
Lebanon	2.47	2.45	0.69	2.48	2.45	0.66	2.49	2.36	0.04	2.47	2.46	0.90

Libya	2.89	2.81	0.08	2.89	2.82	0.15	2.83	2.90	0.24	2.80	2.88	0.09
Malaysia	3.02	3.04	0.50	3.07	2.99	0.05	3.07	2.88	0.00	3.01	3.04	0.57
Mexico	2.43	2.37	0.19	2.29	2.47	0.00	2.45	2.38	0.10	2.47	2.36	0.02
Morocco	2.60	2.71	0.08	2.66	2.66	0.99	2.72	2.59	0.04	2.56	2.67	0.19
Netherlands	1.97	2.20	0.00	2.05	2.23	0.00	2.11	2.06	0.11	2.07	2.10	0.29
New Zealand	2.52	2.78	0.00	2.68	2.63	0.48	2.63	2.74	0.04	2.68	2.62	0.29
Nigeria	2.96	2.93	0.42	2.91	2.95	0.43	2.96	2.92	0.38	3.02	2.91	0.03
Pakistan	2.78	2.76	0.74	2.79	2.76	0.66	2.77	2.77	0.97	2.96	2.73	0.00
Palestine	2.14	2.16	0.77	2.11	2.18	0.26	2.18	2.11	0.28	2.18	2.11	0.23
Peru	2.25	2.26	0.86	2.20	2.30	0.06	2.34	2.11	0.00	2.39	2.17	0.00
Philippines	3.03	2.97	0.20	2.99	3.02	0.58	3.01	2.99	0.75	2.92	3.06	0.00
Poland	2.33	2.41	0.12	2.29	2.52	0.00	2.43	2.30	0.01	2.39	2.37	0.65
Qatar	2.78	2.66	0.05	2.72	2.71	0.80	2.74	2.50	0.01	2.73	2.68	0.46
Romania	2.20	2.26	0.22	2.20	2.30	0.04	2.32	2.09	0.00	2.27	2.20	0.12
Russia	2.18	2.28	0.01	2.14	2.38	0.00	2.39	2.09	0.00	2.26	2.21	0.16
Rwanda	2.75	2.77	0.55	2.78	2.75	0.49	2.74	2.79	0.26	2.92	2.69	0.00
Singapore	2.92	2.89	0.36	2.89	2.92	0.41	2.90	2.92	0.72	2.90	2.91	0.86
Slovenia	2.23	2.35	0.01	2.28	2.35	0.16	2.31	2.29	0.58	2.27	2.31	0.37
South Korea	2.78	2.94	0.00	2.91	2.79	0.00	2.87	2.84	0.63	2.83	2.99	0.01
Spain	1.73	1.82	0.03	1.81	1.73	0.07	1.79	1.75	0.33	1.75	1.78	0.51
Sweden	2.43	2.63	0.00	2.45	2.67	0.00	2.59	2.40	0.00	2.49	2.60	0.03
Taiwan	2.91	2.90	0.82	2.88	2.95	0.04	2.94	2.85	0.01	2.95	2.82	0.00
Trinidad and Tobago	2.59	2.51	0.13	2.56	2.52	0.43	2.56	2.51	0.40	2.49	2.55	0.39
Tunisia	2.14	2.35	0.00	2.22	2.24	0.73	2.37	1.97	0.00	2.27	2.22	0.50
Turkey	2.24	2.26	0.81	2.30	2.21	0.07	2.27	2.20	0.25	2.21	2.29	0.14
Ukraine	2.10	2.08	0.81	2.01	2.22	0.00	2.24	1.96	0.00	2.12	2.05	0.10
United States	2.26	2.40	0.00	2.32	2.36	0.23	2.37	2.24	0.00	2.33	2.34	0.86
Uruguay	2.44	2.53	0.15	2.53	2.43	0.10	2.58	2.39	0.00	2.56	2.47	0.19
Uzbekistan	3.26	3.23	0.50	3.21	3.26	0.27	3.26	3.16	0.12	3.09	3.27	0.01
Yemen	2.13	2.39	0.00	2.28	2.23	0.57	2.30	2.20	0.17	2.31	2.22	0.30
Zimbabwe	2.94	2.87	0.12	2.88	2.91	0.52	2.96	2.82	0.00	2.89	2.91	0.74

Table 3.
Trust in banks by country group

This table displays the mean trust in banks by group of countries based on the occurrence of a *financial crisis*, the presence of explicit *deposit insurance*, the level of *rule of law*, and the *income group* (definitions for these criteria are provided in the Appendix). The p-value is based on a two-sided test and gives the probability that the two means are equal.

	Mean		Mean
Financial crisis		**Income group**	
Financial crisis	2.28	High income: OECD	2.36
No financial crisis	2.64	High income: non-OECD	2.60
p-value	0.00	Upper middle income	2.53
Deposit insurance		Lower middle income	2.72
Deposit insurance	2.52	Low income	2.83
No Deposit insurance	2.76		
p-value	0.00		
Rule of law		**Income group dummy**	
Positive rule of law	2.46	High income	2.44
Negative rule of law	2.64	Low income	2.63
p-value	0.00	p-value	0.00

Table 4.
Descriptive statistics

This table provides descriptive statistics for the *country-level variables* and the *individual-level variables* used in the estimations. Definitions of all variables used are presented in the Appendix.

	N	Mean	Std. dev.
Country-level variables			
GDP per capita	50	16.015	18.162
Financial crisis	52	0.19	0.40
Deposit insurance	51	0.80	0.40
Rule of law	51	0.07	1.06
Individual-level variables			
Married	73819	0.63	0.48
Female	73988	0.53	0.50
Newspaper	70937	0.30	0.46
Television	71077	0.76	0.43
Internet	70563	0.32	0.47
Education	73311	0.44	0.50
Age	73909	42.29	16.73
Income	71425	4.90	2.08
Catholic	69366	0.18	0.39
Muslim	69366	0.30	0.46
No religion	69366	0.21	0.40
Orthodox	69366	0.10	0.30
Protestant	69366	0.11	0.31
Hindu	69366	0.01	0.09
Buddhist	69366	0.04	0.19
Religious	73382	0.16	0.37
Ecology	68497	0.50	0.50
Wealth	72015	3.19	1.53
Help society	68966	4.52	1.24
Democracy	72095	8.36	2.05
Inequality	71707	5.40	2.95
Government role	69647	5.61	2.79
Competition harmful	71592	3.76	2.55
General trust	71999	0.25	0.44

Table 5.
Determinants of trust in banks – main estimations

For these ordered logit model estimations, the dependent variable is the ordinal variable *Trust in banks*. *, **, *** denote an estimate significantly different from 0 at the 10%, 5%, or 1% level. Definitions of all variables used are presented in the Appendix.

	(1)	(2)	(3)	(4)	(5)
Individual level					
Married	0.041	0.043	0.039	0.042	0.037
	[0.041]	[0.042]	[0.041]	[0.042]	[0.041]
Female	0.102***	0.098***	0.098***	0.117***	0.116***
	[0.037]	[0.036]	[0.036]	[0.033]	[0.033]
Newspaper	0.087	0.096	0.096	0.064	0.065
	[0.063]	[0.062]	[0.063]	[0.059]	[0.060]
Television	0.084*	0.112***	0.117***	0.117***	0.122***
	[0.048]	[0.042]	[0.043]	[0.045]	[0.046]
Internet	-0.128**	-0.130***	-0.137***	-0.126***	-0.130***
	[0.057]	[0.049]	[0.049]	[0.047]	[0.047]
Education	-0.052	-0.074	-0.088	-0.076	-0.090*
	[0.061]	[0.057]	[0.058]	[0.052]	[0.052]
Age	-0.007***	-0.006***	-0.006***	-0.006***	-0.006***
	[0.002]	[0.002]	[0.002]	[0.002]	[0.002]
Income	0.091***	0.077***	0.075***	0.068***	0.066***
	[0.016]	[0.016]	[0.016]	[0.015]	[0.015]
Religious		0.339***	0.340***		
		[0.092]	[0.092]		
General trust			0.167***		0.152***
			[0.061]		[0.049]
Ecology		0.054	0.047	0.053	0.045
		[0.047]	[0.046]	[0.044]	[0.045]
Wealth		0.058***	0.058***	0.056***	0.056***
		[0.017]	[0.018]	[0.017]	[0.017]
Help society		0.050*	0.054**	0.061***	0.063***
		[0.026]	[0.026]	[0.021]	[0.022]
Democracy		0.016	0.015	0.013	0.012
		[0.011]	[0.011]	[0.012]	[0.012]
Inequality		0.039***	0.039***	0.039***	0.039***
		[0.011]	[0.011]	[0.012]	[0.012]
Government role		-0.020**	-0.019**	-0.022***	-0.021***
		[0.008]	[0.008]	[0.008]	[0.008]
Competition harmful		-0.021**	-0.020**	-0.020**	-0.020**
		[0.008]	[0.008]	[0.008]	[0.008]
Catholic				-0.296***	-0.288***
				[0.084]	[0.086]
Muslim				-0.178	-0.170
				[0.181]	[0.182]
No religion				-0.233**	-0.243**
				[0.099]	[0.095]
Orthodox				-0.472***	-0.467***
				[0.133]	[0.132]
Hindu				0.598***	0.617***
				[0.119]	[0.123]

Buddhist				0.447***	0.448***
				[0.127]	[0.126]
Other religion				-0.107	-0.092
				[0.117]	[0.118]
Country level					
GDP per capita	-0.004	-0.003	-0.004	-0.006	-0.007
	[0.004]	[0.004]	[0.004]	[0.005]	[0.005]
Bank concentration	0.001	0.002	0.002	0.002	0.002
	[0.004]	[0.004]	[0.004]	[0.004]	[0.004]
Deposit insurance	-0.264	-0.217	-0.194	-0.257	-0.230
	[0.209]	[0.191]	[0.183]	[0.230]	[0.229]
Financial crisis	-0.469*	-0.390*	-0.407**	-0.306	-0.317
	[0.244]	[0.203]	[0.204]	[0.218]	[0.218]
Observations	62,342	54,094	53,094	50,711	49,735
Pseudo R-squared	0.0169	0.0217	0.0221	0.0247	0.0250

Table 6.
Determinants of trust in banks – country dummy variables

For the ordered logit model estimations with country dummy variables presented here the dependent variable is the ordinal variable *Trust in banks*. *, **, *** denote an estimate significantly different from 0 at the 10%, 5%, or 1% level. Definitions of all variables used are presented in the Appendix.

	(1)	(2)	(3)	(4)	(5)
Individual level					
Married	-0.007	0.000	0.003	-0.003	-0.001
	[0.030]	[0.029]	[0.028]	[0.029]	[0.029]
Female	0.113***	0.100***	0.100***	0.102***	0.102***
	[0.031]	[0.030]	[0.030]	[0.030]	[0.030]
Newspaper	0.050*	0.046*	0.045	0.042	0.042
	[0.026]	[0.027]	[0.028]	[0.028]	[0.029]
Television	0.137***	0.124***	0.132***	0.120***	0.129***
	[0.034]	[0.036]	[0.036]	[0.038]	[0.039]
Internet	-0.015	-0.042	-0.043	-0.033	-0.034
	[0.028]	[0.030]	[0.030]	[0.031]	[0.031]
Education	-0.053*	-0.061**	-0.074**	-0.065**	-0.077**
	[0.031]	[0.031]	[0.032]	[0.033]	[0.034]
Age	-0.003***	-0.004***	-0.004***	-0.004***	-0.004***
	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]
Income	0.078***	0.071***	0.069***	0.067***	0.064***
	[0.012]	[0.011]	[0.012]	[0.011]	[0.011]
Religious		0.116***	0.104***		
		[0.037]	[0.038]		
General trust			0.149***		0.154***
			[0.034]		[0.031]
Ecology		0.009	0.003	0.011	0.005
		[0.031]	[0.032]	[0.033]	[0.033]
Wealth		0.023**	0.022**	0.024**	0.022**
		[0.011]	[0.011]	[0.011]	[0.011]
Help society		0.057***	0.058***	0.055***	0.055***
		[0.016]	[0.016]	[0.014]	[0.015]
Democracy		0.020**	0.020**	0.017*	0.017*
		[0.009]	[0.009]	[0.009]	[0.009]
Inequality		0.030***	0.030***	0.032***	0.032***
		[0.007]	[0.007]	[0.006]	[0.006]
Government role		-0.010	-0.009	-0.012*	-0.012*
		[0.008]	[0.008]	[0.007]	[0.007]
Competition harmful		-0.019***	-0.019***	-0.019***	-0.019***
		[0.006]	[0.006]	[0.006]	[0.006]
Catholic				0.058	0.064
				[0.041]	[0.039]
Muslim				0.323***	0.343***
				[0.104]	[0.103]
No religion				-0.167***	-0.161***
				[0.057]	[0.056]
Orthodox				-0.005	0.008
				[0.085]	[0.084]
Hindu				0.332***	0.351***
				[0.071]	[0.070]

Buddhist				0.055	0.070
				[0.079]	[0.079]
Other religion				-0.010	0.008
				[0.074]	[0.073]
Observations	64,958	56,466	55,363	53,082	52,001
Pseudo R-squared	0.0519	0.0524	0.0528	0.0569	0.0574

Table 7.
Determinants of trust in banks – marginal effects

Marginal effects for the main ordered logit model estimations reported in Table 5 are presented below in percentage points. For dummy variables, the marginal effects are based on change of one category. For other variables, the marginal effects are based on a change of one standard deviation. The dependent variable is the ordinal variable *Trust in banks*. Marginal effects are presented for *Trust in bank outcome* categories 3 (quite a lot) and 4 (a great deal). Definitions of all variables used are presented in the Appendix.

Model specification	(1)		(2)		(3)		(4)		(5)	
Trust in banks outcome	3	4	3	4	3	4	3	4	3	4
Individual level variables										
Married	0.4	0.5	0.4	0.6	0.4	0.5	0.4	0.6	0.4	0.5
Female	1.1	1.4	1	1.3	1	1.3	1.2	1.6	1.2	1.6
Newspaper	0.9	1.2	0.9	1.3	0.9	1.3	0.6	0.9	0.6	0.9
Television	0.9	1.1	1.1	1.5	1.2	1.6	1.2	1.5	1.2	1.6
Internet	-1.4	-1.7	-1.3	-1.7	-1.4	-1.8	-1.3	-1.7	-1.3	-1.7
Education	-0.5	-0.7	-0.7	-1	-0.9	-1.2	-0.8	-1	-0.9	-1.2
Age	-1.2	-1.5	-1.0	-1.3	-1.0	-1.4	-0.9	-1.3	-1.0	-1.3
Income	2.0	2.5	1.6	2.2	1.5	2.1	1.4	1.9	1.4	1.9
Religious			2.9	4.9	2.9	5				
General trust					1.5	2.3			1.4	2.1
Ecology			0.5	0.7	0.5	0.6	0.5	0.7	0.4	0.6
Wealth			0.9	1.2	0.9	1.2	0.9	1.2	0.9	1.2
Help society			0.6	0.8	0.7	0.9	0.7	1.0	0.8	1.0
Democracy			0.3	0.5	0.3	0.4	0.3	0.4	0.2	0.3
Inequality			1.1	1.6	1.1	1.6	1.2	1.5	1.1	1.5
Government role			-0.6	-0.8	-0.5	-0.7	-0.6	-0.8	-0.6	-0.8
Competition harmful			-0.5	-0.7	-0.5	-0.7	-0.5	-0.7	-0.5	-0.7
Catholic							-3.2	-3.7	-3.1	-3.7
Muslim							-1.8	-2.3	-1.7	-2.2
No religion							-2.5	-3	-2.6	-3.1
Orthodox							-5.6	-5.6	-5.5	-5.6
Hindu							3.6	9.5	3.6	9.9
Buddhist							3.3	6.8	3.2	6.8
Other religion							-1.1	-1.4	-1	-1.2
Country level variables										
GDP per capita	-0.7	-0.9	-0.6	-0.8	-0.7	-1.0	-1.2	-1.6	-1.3	-1.8
Bank concentration	0.2	0.3	0.4	0.5	0.3	0.4	0.3	0.5	0.3	0.4
Deposit insurance	-2.6	-3.7	-2	-3.1	-1.8	-2.7	-2.3	-3.6	-2.1	-3.2
Financial crisis	-5.7	-5.7	-4.4	-4.9	-4.6	-5.1	-3.4	-3.9	-3.5	-4

Table 8.
Determinants of trust in banks – logit model estimations

For these logit model estimations, the dependent variable is the dummy variable *High trust in banks*. *, **, *** denote an estimate significantly different from 0 at the 10%, 5%, or 1% level. Definitions of all variables used are presented in the Appendix.

	(1)	(2)	(3)	(4)	(5)
Individual level					
Married	0.048	0.052	0.048	0.057	0.053
	[0.045]	[0.047]	[0.046]	[0.049]	[0.048]
Female	0.115***	0.116***	0.117***	0.131***	0.131***
	[0.038]	[0.038]	[0.038]	[0.034]	[0.034]
Newspaper	0.097	0.106	0.106	0.074	0.074
	[0.066]	[0.067]	[0.068]	[0.061]	[0.063]
Television	0.073	0.100**	0.105**	0.117**	0.120**
	[0.049]	[0.044]	[0.045]	[0.050]	[0.051]
Internet	-0.111*	-0.115**	-0.123**	-0.121**	-0.126**
	[0.061]	[0.054]	[0.053]	[0.050]	[0.051]
Education	0.006	-0.018	-0.035	-0.022	-0.037
	[0.062]	[0.062]	[0.063]	[0.058]	[0.058]
Age	-0.006**	-0.005**	-0.005***	-0.005***	-0.005***
	[0.002]	[0.002]	[0.002]	[0.002]	[0.002]
Income	0.085***	0.073***	0.071***	0.067***	0.065***
	[0.017]	[0.016]	[0.016]	[0.015]	[0.015]
Religious		0.301***	0.301***		
		[0.094]	[0.093]		
General trust			0.203**		0.167***
			[0.080]		[0.060]
Ecology		0.056	0.048	0.056	0.048
		[0.053]	[0.052]	[0.049]	[0.049]
Wealth		0.064***	0.064***	0.068***	0.068***
		[0.020]	[0.020]	[0.019]	[0.019]
Help society		0.032	0.038	0.053***	0.056***
		[0.025]	[0.025]	[0.020]	[0.020]
Democracy		0.015	0.014	0.012	0.010
		[0.010]	[0.010]	[0.010]	[0.011]
Inequality		0.036***	0.036***	0.036***	0.036***
		[0.011]	[0.011]	[0.011]	[0.011]
Government role		-0.018**	-0.017**	-0.017**	-0.017**
		[0.007]	[0.007]	[0.008]	[0.008]
Competition harmful		-0.019**	-0.019**	-0.019**	-0.019**
		[0.008]	[0.008]	[0.008]	[0.008]
Catholic				-0.321***	-0.311***
				[0.087]	[0.088]
Muslim				-0.271	-0.261
				[0.171]	[0.171]
No religion				-0.178	-0.186
				[0.132]	[0.127]
Orthodox				-0.418***	-0.407***
				[0.143]	[0.141]

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Hindu				0.788***	0.820***
				[0.128]	[0.136]
Buddhist				0.754***	0.762***
				[0.168]	[0.168]
Other religion				-0.079	-0.060
				[0.126]	[0.126]
Country level					
GDP per capita	-0.005	-0.004	-0.005	-0.007	-0.008
	[0.005]	[0.005]	[0.004]	[0.006]	[0.006]
Bank concentration	0.000	0.002	0.001	0.002	0.002
	[0.004]	[0.004]	[0.004]	[0.004]	[0.004]
Deposit insurance	-0.283	-0.229	-0.205	-0.313	-0.288
	[0.235]	[0.223]	[0.212]	[0.254]	[0.248]
Financial crisis	-0.523**	-0.448**	-0.472**	-0.372	-0.385*
	[0.251]	[0.214]	[0.215]	[0.228]	[0.228]
Observations	62,342	54,094	53,094	50,711	49,735
Pseudo R-squared	0.0267	0.0321	0.0332	0.0389	0.0397

Table 9.
Determinants of relative trust in banks – main estimations

For these ordered logit model estimations, the dependent variable is the ordinal variable *Relative trust in banks*. *, **, *** denote an estimate significantly different from 0 at the 10%, 5%, or 1% level. Definitions of all variables used are presented in the Appendix.

	(1)	(2)	(3)	(4)	(5)
Individual level					
Married	-0.042	-0.031	-0.029	-0.013	-0.009
	[0.033]	[0.031]	[0.032]	[0.029]	[0.029]
Female	0.053*	0.043	0.041	0.043	0.042
	[0.032]	[0.032]	[0.033]	[0.029]	[0.030]
Newspaper	-0.041	-0.054	-0.049	-0.069	-0.065
	[0.051]	[0.050]	[0.051]	[0.045]	[0.046]
Television	-0.045	-0.009	-0.014	0.005	0.002
	[0.031]	[0.032]	[0.033]	[0.037]	[0.039]
Internet	-0.071	-0.046	-0.037	-0.070*	-0.063
	[0.046]	[0.042]	[0.043]	[0.040]	[0.040]
Education	0.015	0.024	0.030	-0.002	0.006
	[0.052]	[0.048]	[0.047]	[0.043]	[0.041]
Age	-0.004***	-0.004***	-0.004***	-0.005***	-0.005***
	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]
Income	0.010	0.005	0.007	0.007	0.009
	[0.011]	[0.011]	[0.011]	[0.010]	[0.010]
Religious		0.276***	0.271***		
		[0.068]	[0.067]		
General trust			-0.182***		-0.205***
			[0.048]		[0.050]
Ecology		-0.008	-0.001	-0.015	-0.007
		[0.044]	[0.044]	[0.049]	[0.048]
Wealth		-0.005	-0.005	0.007	0.008
		[0.017]	[0.017]	[0.016]	[0.016]
Help society		0.002	0.001	0.012	0.013
		[0.020]	[0.020]	[0.018]	[0.017]
Democracy		-0.028***	-0.027***	-0.031***	-0.031***
		[0.010]	[0.010]	[0.010]	[0.010]
Inequality		0.019*	0.018*	0.027***	0.026**
		[0.010]	[0.010]	[0.010]	[0.010]
Government role		-0.019***	-0.020***	-0.019***	-0.019***
		[0.007]	[0.007]	[0.006]	[0.006]
Competition harmful		-0.006	-0.005	-0.012*	-0.011*
		[0.007]	[0.006]	[0.006]	[0.006]
Catholic				0.083	0.075
				[0.080]	[0.078]
Muslim				-0.441***	-0.447***
				[0.163]	[0.166]
No religion				-0.129**	-0.114**
				[0.063]	[0.057]
Orthodox				-0.184*	-0.176*
				[0.106]	[0.099]
Hindu				-0.022	-0.043
				[0.214]	[0.218]

Buddhist				0.111	0.120
				[0.135]	[0.129]
Other religion				0.174	0.161
				[0.130]	[0.132]
Country level					
GDP per capita	-0.022***	-0.022***	-0.022***	-0.026***	-0.025***
	[0.003]	[0.003]	[0.003]	[0.004]	[0.004]
Bank concentration	-0.005	-0.005	-0.005	-0.004	-0.004
	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]
Deposit insurance	0.189	0.189	0.170	0.135	0.095
	[0.147]	[0.137]	[0.138]	[0.161]	[0.164]
Financial crisis	-0.090	-0.028	-0.002	0.019	0.043
	[0.181]	[0.147]	[0.145]	[0.155]	[0.155]
Observations	61,327	53,526	52,553	50,160	49,209
Pseudo R-squared	0.0218	0.0238	0.0247	0.0232	0.0242

Table 10.
Determinants of relative trust in banks – country dummy variables

Ordered logit model estimations with country dummy variables. Dependent variable is the ordinal variable *Relative Trust in banks*. *, **, *** denote an estimate significantly different from 0 at the 10%, 5%, or 1% level. Definitions of all variables used are presented in the Appendix.

	(1)	(2)	(3)	(4)	(5)
Individual level					
Married	-0.023	-0.020	-0.017	-0.014	-0.011
	[0.027]	[0.025]	[0.025]	[0.025]	[0.024]
Female	0.047	0.041	0.038	0.033	0.031
	[0.030]	[0.030]	[0.030]	[0.029]	[0.029]
Newspaper	-0.053***	-0.053**	-0.050**	-0.061***	-0.057***
	[0.020]	[0.022]	[0.022]	[0.023]	[0.022]
Television	0.011	0.018	0.010	0.014	0.008
	[0.026]	[0.026]	[0.027]	[0.027]	[0.028]
Internet	-0.035	-0.035	-0.030	-0.031	-0.026
	[0.035]	[0.035]	[0.035]	[0.034]	[0.034]
Education	-0.013	0.005	0.005	-0.009	-0.009
	[0.037]	[0.034]	[0.034]	[0.034]	[0.033]
Age	-0.003***	-0.002**	-0.002**	-0.002**	-0.002**
	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]
Income	0.017**	0.015*	0.018**	0.010	0.012
	[0.008]	[0.009]	[0.009]	[0.009]	[0.008]
Religious		-0.004	0.004		
		[0.038]	[0.038]		
General trust			-0.171***		-0.189***
			[0.038]		[0.032]
Ecology		-0.036	-0.034	-0.036	-0.033
		[0.035]	[0.035]	[0.037]	[0.037]
Wealth		0.007	0.008	0.010	0.012
		[0.010]	[0.010]	[0.010]	[0.010]
Help society		-0.008	-0.004	-0.008	-0.003
		[0.013]	[0.013]	[0.013]	[0.013]
Democracy		-0.020**	-0.019**	-0.022***	-0.021***
		[0.008]	[0.008]	[0.008]	[0.008]
Inequality		0.016***	0.015**	0.021***	0.021***
		[0.006]	[0.006]	[0.006]	[0.006]
Government role		-0.017***	-0.018***	-0.019***	-0.019***
		[0.006]	[0.006]	[0.006]	[0.006]
Competition harmful		-0.011**	-0.011**	-0.015***	-0.015***
		[0.005]	[0.005]	[0.005]	[0.005]
Catholic				0.036	0.026
				[0.042]	[0.041]
Muslim				0.084	0.074
				[0.108]	[0.108]
No religion				-0.028	-0.040
				[0.049]	[0.048]
Orthodox				0.028	0.017
				[0.084]	[0.082]
Hindu				-0.077	-0.103
				[0.067]	[0.066]

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Buddhist				0.075	0.059
				[0.089]	[0.090]
Other religion				0.031	0.011
				[0.069]	[0.068]
Observations	63,843	55,833	54,760	52,466	51,413
Pseudo R-squared	0.0444	0.0444	0.0455	0.0424	0.0435

Appendix. Definitions and sources of variables

Name	Definition and source
Dependent variables	
Trust in banks	Ordinal variable based on response to the question: *Could you tell me how much confidence you have in banks?* Scoring: *None at all* (1), *Not very much confidence* (2), *Quite a lot of confidence* (3), *A great deal of confidence* (4). Source: World Values Survey.
Relative trust in banks	Difference between *Trust in banks* and trust in courts defined as the ordinal variable based on the response to the question: *Could you tell me how much confidence you have in courts?* Scoring: *None at all* (1), *Not very much confidence* (2), *Quite a lot of confidence* (3), *A great deal of confidence* (4). Source: World Values Survey.
High trust in banks	Dummy variable equal to one if the respondent has *a great deal of confidence* or *quite a lot of confidence* in banks, and zero otherwise. Source: World Values Survey.
Country-level variables	
Bank concentration	Assets of five largest banks as a share of total commercial banking assets. Observations from first previous year have been used to fill in missing observations (Data for 2007–2013). The mean of three years before the survey year in each country has been used. Source: Global Financial Development Database (Bankscope, Bureau van Dijk)
GDP per capita	Gross domestic product divided by mid-year population. Data are in thousands of current US dollars. For Kuwait in 2013, the value from previous year is used. For all countries, the mean of three years before the survey year in each country has been used. Source: World Development Indicators.
Financial crisis	Dummy variable equal to 1 in case of financial crisis. Financial crisis identified based on Systemic Banking Crises Database: An Update by Fabian Valencia and Luc Laeven, available at https://www.imf.org/external/pubs/cat/longres.aspx?sk=26015.0 The observation of one year before the survey year in each country has been used.
Deposit insurance	Dummy variable equal to 1 if there is explicit deposit insurance in a given country. Data come from Demirgüç-Kunt, Kane and Laeven, (2013).
Rule of law	Reflects perceptions of the extent to which agents have confidence in and abide by the rules of society – in particular, the quality of contract enforcement, property rights, policing, the courts, and the likelihood of crime and violence. Ranges from -2.5 (weak) to 2.5 (strong). Source: The World Governance Indicators.
Income group	Dummy variable equal to one if the country is high income and to zero otherwise. Source: OECD.
Individual-level variables	
Gender	Dummy variable equal to one if the individual is a female and zero otherwise. Source: World Values Survey.
Married	Dummy variable equal to one if the individual is married and zero otherwise. Source: World Values Survey.
Age	Age in number of years. Source: World Values Survey.
Education	Dummy variable equal to one if the individual has secondary or tertiary education and zero otherwise. Source: World Values Survey.
Income	Self-reported level of income of the respondent relative to his country. It is based on the question: *On this card is an income scale on which 1 indicates the lowest income group and 10 the highest income group in your country.*

	We would like to know in what group your household is? The figure reported ranges from 1 for lowest decile to 10 for highest income decile. Source: World Values Survey.
Newspaper	Dummy variable equal to one if the individual answers "daily" to the statement: *People learn what is going on in this country and the world from various sources. For newspaper, please indicate whether you use it to obtain information daily, weekly, monthly, less than monthly or never.* Zero for any other response. Source: World Values Survey.
Television	Dummy variable equal to one if the individual answers "daily" to the statement: *People learn what is going on in this country and the world from various sources. For television, please indicate whether you use it to obtain information daily, weekly, monthly, less than monthly or never.* Zero for any other response. Source: World Values Survey.
Internet	Dummy variable equal to one if the individual answers "daily" to the statement: *People learn what is going on in this country and the world from various sources. For internet, please indicate whether you use it to obtain information daily, weekly, monthly, less than monthly or never.* Zero for any other response. Source: World Values Survey.
Religious	Dummy variable equal to one if the individual answers he is an active member to the question: *Could you tell me whether you are an active member, an inactive member or not a member of a church or a religious organization?* Zero otherwise. Source: World Values Survey.
Catholic	Dummy variable equal to one if individual declares he or she belongs to Catholic religion and zero otherwise. Source: World Values Survey.
Protestant	Dummy variable equal to one if the individual declares he or she belongs to Protestant religion and zero otherwise. Source: World Values Survey.
Orthodox	Dummy variable equal to one if the individual declares he or she belongs to Orthodox religion and zero otherwise. Source: World Values Survey.
Muslim	Dummy variable equal to one if the individual declares he or she belongs to Muslim religion and zero otherwise. Source: World Values Survey.
Hindu	Dummy variable equal to one if the individual declares he or she belongs to Hindu religion and zero otherwise. Source: World Values Survey.
Buddhist	Dummy variable equal to one if the individual declares he or she belongs to Buddhist religion and zero otherwise. Source: World Values Survey.
No religion	Dummy variable equal to one if the individual declares he or she does not belong to any religion and zero otherwise. Source: World Values Survey.
Other Religion	Dummy variable equal to one for all the other religious denominations with a small number of respondents. Source: World Values Survey.
Ecology	Dummy variable equal to one if the respondent shows ecological preferences and zero otherwise. The value is based on the following preference: *Here are two statements people sometimes make when discussing the environment and economic growth. Which of them comes closer to your own point of view?"* Ecology is equal to one if the respondent prefers the first statement: *Protecting the environment should be given priority, even if it causes slower economic growth and some loss of jobs*, and to zero if the respondent prefers the second statement: *Economic growth and creating jobs should be the top priority, even if the environment suffers to some extent.* Source: World Values Survey.
Wealth	Ordinal variable from 1 to 6 with higher values showing greater importance of wealth for the respondent. It is based on the response to the statement: *It is important to be rich, to have a lot of money and expensive things.* Responses range from 1 to 6 (we recode the answers so that 6 means highest agreement with statement). Source: World Values Survey.
Help society	Ordinal variable from 1 to 6 with 10 meaning full support for the position: *It is important to do something for the good of society.* Source: World Values

	Survey.
Democracy	Ordinal variable from 1 to 10 with higher values for greater preference for democracy based on the question: *How important is it for you to live in a country that is governed democratically?* Source: World Values Survey.
Inequality	Ordinal variable from 1 to 10 with 10 meaning full support for the position: *We need larger income differences as incentives for individual effort.* Source: World Values Survey.
Government role	Ordinal variable from 1 to 10 with 10 meaning full support for the position: *Government ownership of business and industry should be increased.* Source: World Values Survey.
Competition harmful	Ordinal variable from 1 to 10 with 10 meaning full support for the position: *Competition is harmful. It brings out the worst in people.* Source: World Values Survey.
General trust	Dummy variable equal to one if respondent answers: *Most people can be trusted* to the question: *Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?* Zero otherwise. Source: World Values Survey.