

WORKING PAPER

DEPOSITOR DISCIPLINE DURING CRISIS: FLIGHT TO FAMILIARITY OR TRUST IN LOCAL AUTHORITIES?

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Depositor Discipline During Crisis: Flight to Familiarity or Trust in Local Authorities?¹

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Abstract: We analyze whether bank familiarity affects depositor behavior during financial crisis. Familiarity is measured by regional or local cues in the bank's name. Depositor behavior is measured by the depositor's sensitivity to observable bank risk (depositor discipline). Using 2001-2010 bank-level and region-level data for Russia, we find that depositors of familiar banks become less sensitive to bank risk during a financial crisis relative to depositors of unfamiliar banks. To validate that our results stem from a flight to familiarity during crisis and not from implicit guarantees from regional governments, we interact the variables of interest with measures of regional affinity and trust in local governments. The flight to familiarity effect is strongly confirmed in regions with strong regional affinity, while the effect is absent in regions with more trust in regional and local governments, lending support to the thesis that our results are driven a flight to familiarity rather than implicit guarantees.

Keywords: Market discipline, Bank, Personal deposit, Region, Russia, Flight to familiarity, Trust, Implicit guaranty, Regional authorities.

JEL: G21, G01, P2

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1. Introduction

We analyze whether bank familiarity affects depositor behavior during financial crisis. Consumer preference for locally produced and familiar goods has recently been shown for many products and services, ranging as widely as food (Carroll et al., 2013, O et al., 2015) and equity investments in pension plans (Brown, Pollet, and Weisbenner, 2015). The familiarity hypothesis was first introduced by Huberman (2001). He reports that shareholders of a Regional Bell Operating Company (RBOC) tend to live in the area it serves and that an RBOC's customers tend to hold its shares as opposed to other RBOCs' equity. He explains this finding by suggesting that agents naturally feel more favorable about and charitable toward what they are comfortable or familiar with, but finds it hard to disentangle familiarity from information asymmetries.

Ackert et al. (2005) analyze whether information asymmetries or familiarity underlie investors' predisposition to invest close to home (home bias). In a series of experiments in the US and Canada they find that just providing information about a firm's home base, holding other information asymmetries constant, is not sufficient to change investment behavior. Agents are not more inclined to invest in a company simply because it is located closer to home. Rather, participants need to know a firm's name and home base to be more inclined to invest. Participants, it turns out, have a higher perceived familiarity with those firms whose name and home base they know. Thus, perceived knowledge (familiarity) appears to be a key determinant of investment behavior in the explanation of home bias. Baltzer, Stolper and Walter (2011), study the effect of geographic proximity on individual investors' portfolio investment and find strong and consistent overinvestment in geographically close companies. Their results again explicitly reject the hypothesis of an information home-field advantage of local over non-local investors and find instead that households' preference for local equity turns out to be familiarity-driven. Bailey, Kumar and Ng (2012) study a host of behavioral biases of mutual fund investors and find that only familiarity bias is positively correlated with stock portfolio performance, suggesting that familiarity bias is one of the few biases, if not the only one, that is not necessarily detrimental to performance. Though intriguing, these studies seem less applicable to banking since most bank depositors only have one or at best a few bank accounts, leaving no room for trade-offs between concentration and diversification at the individual level for bank deposits, and especially so in the presence of explicit deposit insurance.

Boyle et al. (2011) theoretically predict and empirically support a flight to local familiarity especially during financial crises among individual investors, even if the familiar

assets are more risky. More specifically they predict that, when the aggregate level of ambiguity in the economy is large (like in times of crisis), investors increase concentration in the assets with which they are more familiar (flight to familiarity), even if these happen to be assets with a higher risk or lower expected return. Contrary to the individual diversification predictions from the familiarity bias literature, this risk- and crisis-related prediction can be seamlessly translated to the banking sector, because the empirical framework of depositor discipline fits this theoretical prediction particularly well: Boyle et al predict investors (depositors) will concentrate or remain in a familiar asset (deposit at a familiar bank) during crisis, even if this asset (familiar bank) has a higher risk (low bank capitalization, higher non performing loans ratio). This translates to the empirical prediction that during crisis familiar banks will experience reduced discipline from their depositors, where discipline is measured as the sensitivity of deposit growth (quantity discipline) and deposit rates (price discipline) to bank risk. Since the large majority of depositors still entrust their money to a close-by bank for practical reasons⁵ and since most local banks' brand names are well-established with depositors, the two classic measures of familiarity, closeness and name recognition, are inappropriate in a banking context. Therefore, we resort to defining familiarity in a new way based on comfortable and familiar cues in the bank's name. More specifically, if the bank's name contains verbal cues referring to its regional or geographical position, we assume a local household depositor of the same region feels more familiar with the bank. We elaborate on this in section 3.2.

We focus on Russia's regional deposit markets for three main reasons. Although the Russian banking market has an integrated set of core institutions, like bank regulation, bank supervision, bank taxation, deposit insurance and central bank policy, and a lot of common risks, like exchange rate risk or interbank market instability, Russia's retail banking markets exhibit strong regional segmentation. This is especially true for the retail deposit market. If we look beyond Moscow, the remaining banking competition is mostly regional, rather than federal. This strong regional segmentation of Russia's retail deposit markets, which is demonstrated later in this paper, provides us with a strong level of familiarity of household individuals with banks that are visibly related to the locality or the region, with all other relevant factors set constant. The second reason to focus on Russia is that its banking sector provides a natural experiment in the form of an exogenous financial crisis that elucidates the identification of the hypothesized flight to familiarity effect. Indeed the 2008-2009 crisis also severely hit the Russian economy, not because they had invested in the infamous securitized products that sparked the crisis, but directly because cash-strapped foreign banks suddenly withdrew their credit lines (an exogenous

⁵ Technological changes may change this pattern in the future.

sudden stop problem) and indirectly through the implosion of the oil price and the world economy, which severely dented the Russian economy and especially its banking sector. Finally, there is already strong empirical evidence of the existence of depositor discipline in emerging market economies like Turkey (see Önder i Özyildirim, 2008, and Disli et al., 2013), Argentina and Uruguay (Levy-Yeyati et al., 2010), Brazil (Oliveira et al. 2014) and a broader set of Latin American countries (Martinez Peria and Schmukler, 2001). There exists a lot of empirical evidence of depositor discipline in Russia's retail deposit market, making it a good environment to study changes in depositor discipline during crisis. Semenova (2007) and Karas et al. (2010, 2013) for example show that household depositors in Russia exert quantity discipline and, although weaker, price discipline on their banks. Peresetsky (2008) provides additional support for price discipline by Russian household depositors. Ungan et al (2008) find additional support for the idea of quantity discipline in a sample of large Russian banks.

Our paper ties in with the well-established literature on market discipline in banking and more specifically depositor discipline. Market discipline requires that depositors both have access to information on bank risk and anticipate bearing a cost in the event of bank insolvency. Investigating partially uninsured large deposits in the United States, Park and Peristiani (1998) demonstrated a negative relationship between thrifts' predicted probability of failure and the subsequent growth of their large uninsured deposits. They also demonstrate that the predicted probability of failure has an adverse effect on the growth and pricing of small insured deposits, although to a lesser extent than on larger and thus partially uninsured deposits. Others established empirical relations between U.S. institutions' cost of funds and lagged measures of depositor risk, like the capital-assets ratio, the variability and the magnitude of return on assets, loan quality, and exposure to junk bonds (Brewer and Mondschean, 1994; Hannan and Hanweck, 1988; Park and Peristiani, 1998).

Market discipline, though crucial for the efficient distribution of funds in the deposit market, is fragile and can be easily undermined, as household depositors suffer from high monitoring costs and are usually unsophisticated and sensitive to non-risk-related information available to them. Financial crisis may reduce market discipline (Berger and Turk-Ariss, 2015; Cubillas et al., 2012) because of crisis-related government intervention. The depositors may stop monitoring the reliability of their own banks and follow the information signals related to macroeconomic situation, other depositor behavior or even rumors (Hasan et al. 2013). Alternatively, in the absence of government bailouts of individual banks, the crisis may also function as wake-up call for household depositors, as shown by Karas, Pyle and Schoors (2010) for the Russian default in 1998. Another factor undermining market discipline is the set of

explicit guaranties provided by deposit insurance schemes. Peresetsky (2008) and Karas et al. (2013) show that the introduction of deposit insurance in 2004-2005 substantially reduced largely insured household depositors' sensitivity to bank risk relative to uninsured firm deposits.

In addition to explicit guaranties there may exist implicit guarantees that erode market discipline. In the Russian context there are two groups of banks that may be expected to enjoy such an implicit guaranty, namely state banks that are controlled and protected by the state⁶ and foreign banks, which may provide external support to their Russian daughters in case of financial difficulties. As these banks are considered to be under implicit protection of the state or the foreign financial institutions, retail depositors perceive them as more reliable and feel no need to monitor their financial conditions (Semenova, 2007). Since this interferes with our identification strategy, we exclude these banks from the sample.

Our empirical hypothesis is that in times of crisis depositors feel compelled to exert comparatively less discipline on banks that are familiar to them, measured as banks with local or regional references in their names. We hypothesize, that is, that depositors exhibit a flight to familiarity in times of crisis, by reducing the discipline exerted on familiar banks relative to the discipline exerted on non-familiar banks in the post crisis period. The alternative hypothesis is that banks with clear regional references in their name have strong ties with the regional government, rather than familiarity with depositors, and therefore enjoy some form of implicit guarantee from the local government, making retail depositors less sensitive to the risk of these banks when deciding to withdraw in response to the bank's deteriorated financial position. To disentangle these two hypotheses we interact our variables of interest with measures of trust in local governments and regional affinity. We find that our flight to familiarity effect is strongly present in regions with strong regional affinity, while the effect is rejected in regions with more trust in regional and local governments. This indicates our results are driven by familiarity and not by implicit guarantees from a trusted regional or local government.

This paper contributes to the literature in several ways. We extend the literature on familiarity bias by focusing on household depositor behavior in times of crisis and establishing a flight to familiarity of household depositors. We contribute to the market discipline literature by providing a new and important determinant of changes in market discipline during financial crisis, namely flight to familiarity. Finally, we also contribute to the deposit insurance literature,

⁶ As (Vernikov 2012) points out, the banks controlled by the state are not only those, where the government holds the major part of the ownership. Even if the representative of the government is in the Board of Directors or in any executive body, the government may be involved in the bank's decision-making.

by showing how the impact of deposit insurance on household depositor behavior is mediated by other factors like the familiarity of the bank.

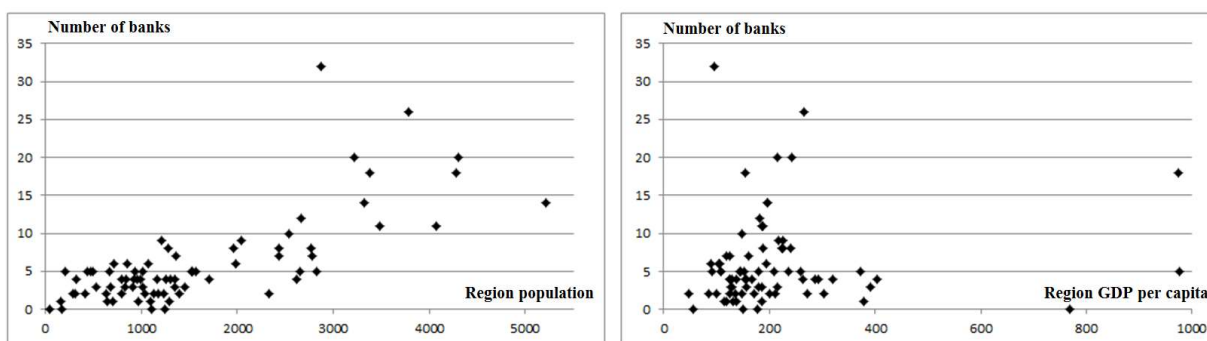
This remainder of the papers is organized as follows. In the next section we describe the Russian regional deposit market. Section 3 lays out the data and the empirical methodology. Section 4 presents the main results and section 5 a battery of robustness checks. The last section discusses the results and concludes.

2. Regional deposit markets in Russia

Figure 1 Cross-regional bank number diversification

a) Number of banks in the regions with different population (thousand people)

b) Number of banks in the regions with different GDP per capita (thousand Rubles)



Source: CBR regional data

Russia has a vast territory, consisting of more than 80 regions that differ by income, urbanization rates, spending habits, saving patterns, and many other factors. Therefore, it is not surprising that there exists a great deal of cross-regional variation in the size of regional deposit markets and the number and types of banks and bank branches operating in different Russian regions, leaving much space for region-specific competition.

Russia's regional deposit markets have been quite stable over the period of 2001-2010, but the number market participants varies considerably across regions. Figure A 1 in Appendix I shows the number of registered banks by Russian regions. Most banks are registered in the main cities Moscow and Saint Petersburg or the Moscow Region. If we exclude these three territories from the sample, we observe that densely populated regions, wealthier regions as measured by GDP per capita (see Figure 1 above) and highly-specialized regions—like, oil-producing regions or the agricultural regions in South-West of Russia remaining regions—have more registered banks per capita.

As Figure A 2 and Figure A 3 in Appendix I suggest, there is a great diversity in the number of bank branches operating in different regions. Indeed, a bank can be registered in one

region, yet have a vast branch network covering several other regions. Regions closer to Moscow in geographical or cultural sense tend to have fewer branches of credit organizations registered in the region, but more branches of banks registered outside the region. This can be explained by the fact that Moscow-based banks can easily provide financial services to these nearby regions. More distant regions—such as Far East—to the contrary rely more heavily on branches of local banks for the provision of their financial services. In those Asian regions the distances between cities are typically very large, rendering it more convenient for local large firms to cater financial services from local banks or even create their own banks. Regions with a substantial percentage of titular nationality – such as Republics– also tend to rely more heavily on their local banks for financial services. The largest regional retail network belongs to the state-controlled Sberbank that covers approximately one-half of the household deposit market in 2001-2010. The cross-regional diversity in the nature of regional deposit market competition is to some extent driven by differences in Sberbank’s participation in the regional deposit market (see Figure A 4 in Appendix I). Sberbank, which was the main Soviet household retail bank, indeed has an extensive branch coverage in most vast and rich regions of Central and Northern Russia, while its coverage of Russia’s eastern regions is relatively less extensive. Another important regional characteristic is the sheer size of the regional deposit market. Most deposits are concentrated in the European part of Russia. As Figure A 5 in Appendix I indicates, more than a half of Russian territory belongs to regions with a narrow deposit market. The largest markets are logically located in the richest and most populated regions and also exhibit the largest deposits per capita ratios (see Figure A 6 in Appendix I).

3. Methodology and Data

3.1. Flight to familiarity hypothesis

Our main hypothesis is that the flight to familiarity effect during crisis also applies to depositor behavior. To this purpose we employ concepts from the market discipline literature. Specifically we try to reject the hypothesis that depositors of familiar banks reduced their level of market discipline relative to depositors of unfamiliar banks during the 2008-2009 financial crisis (*flight to familiarity hypothesis*). To test our main hypothesis we estimate the following regressions for all banks, excluding government-owned, foreign and Moscow banks⁷ in the sample period 2000-2010:

⁷ Moscow banks often have numerous branches in other regions, so the changes in the deposit growth or changes in the market share are not purely regional.

$$\begin{aligned}
MD_{r,i,t} = & \beta_1 X_{r,i,t-1} + \beta_2 F_{r,i,t} + \beta_3 F_{r,i,t} X_{r,i,t-1} + \\
& + \beta_4 Crisis_t + \beta_5 Crisis_t X_{r,i,t-1} + \beta_6 F_{r,i,t} Crisis_t + \\
& + \beta_7 F_{r,i,t} Crisis_t X_{r,i,t-1} \\
& + \beta_8 Controls_{r,i,t} + \beta_t + \beta_r + \beta_i + \varepsilon_{r,i,t}
\end{aligned}$$

MD stands for the measure of market discipline at bank *i* in region *r* in quarter *t*. Our measures of *MD* are the household deposit rate (*IR*) for price discipline and the household deposit growth rate (*DG*) for quantity discipline. *F* is a binary proxy for bank familiarity explained in the next section. In the robustness check section, we replace it with *Fb*, which represents a broader definition of bank familiarity. *X* stands for a vector of bank fundamentals measuring bank riskiness. The bank fundamentals include capital adequacy, measured by capital to assets ratio (*CA*), and asset quality, measured by the share of non-performing loans (*NPL*). *Crisis* is a binary variable equal to one if quarter *t* belongs to 2008-2009 and zero otherwise, giving us four post crisis quarters in 2010. It controls explicitly for the effects of the financial crisis in Russia. As argued before this crisis struck the Russian banking sector in a very unexpected and exogenous way, making it a perfect testing ground for our hypothesis. We control for other bank characteristics—namely, liquidity, measured by liquid assets to total assets ratio (*LA*), bank size, measured by natural logarithm of bank total assets (*lnA*), and the deposits-to-assets ratio (*DA*)—since these variables can be expected to affect the price of deposits and deposit growth for other reasons than bank risk (*Controls*). We control for the timing of the bank's admission to the deposit insurance system by introducing a binary variable equal to 1 if bank *i* is accepted to DIS in quarter *t*, and 0 otherwise (*DIS*). On top of that we introduce quarter-year fixed effects as well as regional fixed effects and bank fixed effects in all specifications. For bank fundamentals we use the data from bank financial statements published by the Bank of Russia⁸. For the deposit insurance participation we check the dates of bank admittance at the webpage of the Deposit Insurance Agency⁹. If we reject the null hypothesis of $\beta_7 = 0$ in favor of $\beta_7 < 0$ for quantity discipline or $\beta_7 > 0$ for price discipline (opposite signs for *NPL*, since *NPL* is increasing in bank risk) we can conclude that depositors of familiar banks became less sensitive to bank risk relative to depositors of other banks during the banking crisis and hence reduced their level of market discipline relative to depositors of unfamiliar banks. If we cannot reject $\beta_7 < 0$ for quantity discipline or $\beta_7 > 0$ for price discipline), that is, we cannot reject the flight to familiarity hypothesis.

⁸ <http://www.cbr.ru>

⁹ <http://www.asv.org.ru>

Table 1. Expected coefficient signs

Independent variable	Estimate	Hypothesis/Comment	Expected sign price / quantity discipline
$X_{r,i,t-1}$	β_1	Safer banks enjoy lower interest rates (price discipline) and higher deposit growth (quantity discipline)	-/+
$F_{r,i,t}$	β_2	No expectation during normal times	?
$F_{r,i,t} X_{r,i,t-1}$	β_3	No expectation during normal times	?
$Crisis_t$	β_4	The crisis makes deposits more expensive and slows down deposit growth	+/-
$Crisis_t X_{r,i,t-1}$	β_5	The crisis may undermine opportunities and incentives for monitoring because macroeconomic factors become more important (Levy-Yeyati et al., 2010) or because deposit insurance limits are raised (Cubillas et al., 2012, Karas et al., 2013). Alternatively it could function as a wake-up call (see Martinez Peria and Schmukler, 2001, and Karas et al., 2010). The effect on market discipline is ambiguous.	??
$F_{r,i,t} Crisis_t$	β_6	Familiar banks may enjoy lower interest rates and higher deposit growth in crisis times, but this may be conditional on their fundamentals, so no clear expectation	?
$F_{r,i,t} Crisis_t X_{r,i,t-1}$	β_7	In response to the crisis, depositors of familiar bank become less sensitive to bank risk, relative to depositors of other banks. Familiar banks hence enjoy reduced market discipline in crisis times (flight to familiarity hypothesis)	+/- Reverse sign for NPL as $X_{r,i,t-1}$

3.2.Measuring familiarity: what's in a name?

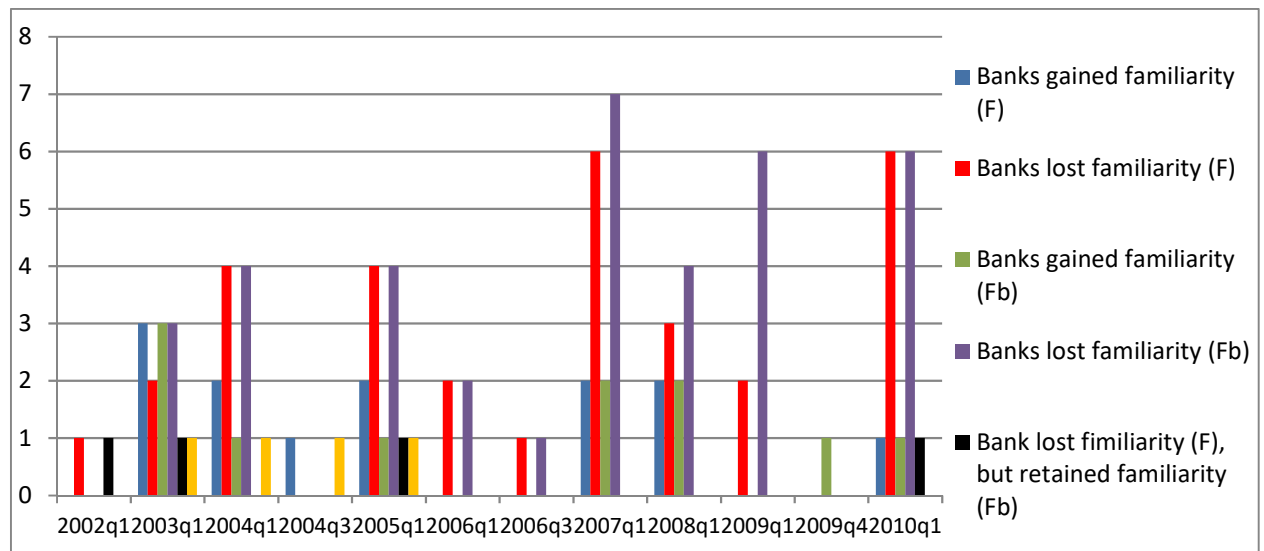
We introduce a straightforward proxy for depositor familiarity with a bank: if the bank's name contains verbal cues referring to its regional or geographical position, we assume a local household depositor of the same region feels more familiar with the bank. We introduce two degrees of familiarity. A bank is considered familiar to household depositors of a region in the narrow sense of familiarity (F) if the name contains the name of the region (e.g. Altay Bank), the name of a city in this region (e.g. Bank of Moscow) or a place in this city (e.g. "Okhotny Ryad"¹⁰ Bank). A bank is considered familiar to regional household depositors in the broad sense of familiarity (Fb) either if the bank satisfies the conditions for familiarity in the narrow sense or if the bank name includes verbal cues referring to regional characteristics or regional objects (e.g. Volga Bank named after the Volga river), to larger geographic areas (e.g. South-Eastern Bank) or to the word "region" (e.g. InvestRegion Bank).

To define familiarity in the eyes of depositors, we check for all Russian banks in the sample whether their names contain regional cues in the way described above (F and Fb). Some banks change their name several times during the sample period. For example Petrovsky

¹⁰ Metro stop in Moscow.

Narodny Bank (which is familiar in the broad sense according to criterion Fb) changed its name to MDM Bank Leningradskaya oblast' (which is familiar according to narrow definition, F) in 2002, before becoming Vefk Bank (which includes no regional cues and hence is unfamiliar) in June 2006, and finally returning to the name Petrovsky Bank (which is familiar in the broad sense according to criterion Fb) in August 2009. We trace all the changes in bank names in the sample period to arrive at a time-varying measure of bank familiarity in the narrow ($F_{r,i,t}$) and broad ($Fb_{r,i,t}$) sense. Since our bank level data are quarterly, we do this at a quarterly periodicity. To this purpose we used two databases of Russian bank profiles: *Allbanks.ru* and *BanksBD.spb.ru*. Figure 2 shows how the number of banks migrating from one category to another over time.

Figure 2. Number of banks changing the names over time



We observe that there is no evident government ownership dominance in the subgroup of familiar banks. Table 2 shows, that the distribution of state-owned bank observations and private bank observations is virtually the same among familiar and unfamiliar banks. Therefore, the effects that we consider in our regressions do not come directly from state ownership.

Table 2. State banks versus familiar banks

		State banks (>50% owned by the government)	
		0	1
F	0	65,972	1,817
	%	97.32	2.68
	1	14,101	613
	%	95.83	4.17
Fb	0	58,250	1,560
	%	97.39	2.61
	1	21,823	870
	%	96.17	3.83

3.3. Regional affinity versus trust in the regional government

Although our measure of familiarity does not measure government ownership by definition (they are excluded), depositors may still interpret regional cues in the bank's name as a signal of the strength of the bank's ties with the regional government. This introduces an identification problem. If we find a flight to familiarity effect in crisis times, it may really be driven by perceived implicit protection by the regional government in a crisis period. We address this identification problem by verifying whether the flight to familiarity effect is stronger in regions with more trust in the regional authorities or whether the flight to familiarity effect is possibly more pronounced in regions with more regional affinity. In the former case we cannot reject the alternative hypothesis that regional references in the bank's name capture perceived ties with the regional government and hence implicit guarantees, as local guarantees could only reduce discipline if depositors trust local governments. In the latter case the results are in line with the flight to familiarity hypothesis. We therefore introduce a proxy for trust in regional authorities (the alternative hypothesis) and a regional affinity index (validation of our main hypothesis).

We measure depositors' **trust in regional and local authorities** by the share of the region's population that believes the regional government deserves their trust (*GovTrust*). This share is calculated on the data coming from the results of the "Socio-economic changes monitoring" surveys¹¹ of Russian citizens, conducted regularly and nation-wide by the largest Russian companies for sociological research—WCIOM and Levada (approximately 2400 respondents, urban multi-stage stratified random sampling). The survey data is available for almost all the regions in Russia, but it is not provided in a panel dataset. We collect it manually from bi-monthly data. The question goes as follows: "In your opinion, to what degree do your region authorities deserve to be trusted?"¹². The possible answers are Fully deserve, Not fully deserve, Do not deserve and Cannot answer. GovTrust is defined as the ratio of respondents who answered "Fully deserve" over the total number of respondents who answered the question.¹³

Regional affinity captures to what extent citizens of a region positively identify themselves with and are emotionally attached to that region. Our **reginal affinity measure** is based on the wave 14 (2005) of the Russia Longitudinal Monitoring Survey (RLMS-HSE)¹⁴,

¹¹ For more details see <https://translate.yandex.com/translate?lang=ru-en&url=http://sophist.hse.ru/db/>

¹² In Russian: какой мере, на ваш взгляд, заслуживают доверия ваши областные (краевые, республиканские) органы власти? (Вполне заслуживают, не вполне заслуживают, не заслуживают, затрудняюсь ответить)

¹³ As the data is available till the first quarter of 2008, we use linear extrapolation to cover the last quarters of our sample. This problem is not present in our alternative measures of trust below

¹⁴ Conducted by National Research University "Higher School of Economics" and ООО "Demoscope" together with Carolina Population Center, University of North Carolina at Chapel Hill and the Institute of Sociology of the Federal

which is the series of nationally representative surveys of Russian households. The wave covers 12237 respondents. This is the only wave in the survey series, which includes the question allowing to create a proxy for regional affinity: “Meeting different people during our lives, we easily find a common language with some of them, we understand them. Others, though they close to us, are always strangers. If we talk about you, how often—often, sometimes or never, do you feel closeness, unity with the people I will now mention? How often could you say “we” about them?”¹⁵ One of the options is “The residents of your region”, the possible frequencies are Often, Sometimes, Never, and Cannot answer. Regional affinity (*RA*) is defined as the ratio of respondents that answer “Often” over the total number of respondents who answered the question.

As the period of the survey lies within the period of our study, we ensure the exogeneity of regional affinity by instrumenting it with the regionalism index employed in Schoors, Semenova, and Zubanov (2017). This regionalism index captures the exogenous historical roots of regionalism dating back to the early transition period or even the late Soviet period, using data provided by Berkowitz, Hoekstra, and Schoors (2014). We assume that depositors will have a stronger emotional attachment to their region (affinity) in regions with a more homogenous and stable population. We therefore include ethno-linguistic fractionalization in 1989 (*ELF89*) and inward migration between 1986 and 1990 (migration inflow per 10,000 inhabitants, 1986-90, *Migration86-90*) as components in the regionalism index. We also assume that historically less urbanized regions with a lower share of middleclass will also tend to have more regional affinity. We therefore include the regional share of urban population in 1996 (*Urban96*) and the regional share of white-collar workers in 1989 (*MidClass89*) as additional components in the regionalism index. Political and economic conservatism in the period of early transition may also have reinforced regionalism. Conservatism is proxied by the share of votes for Yeltsin in the first round of the 1996 presidential elections (*Vote4Yelt96*). Since a vote for Yeltsin in 1996 stood for support for economic and political reforms as opposed to a return to communism (the main contender in the election was the leader of the Russian Communist Party, G. Zyuganov), a higher vote for Yeltsin in 1996 measures a higher regional pro-market sentiment in 1996 and is presumable related to more openness and less regional affinity today. Higher past central government intervention in economic processes is also assumed to result into a lower degree of

Center of Theoretical and Applied Sociology of the Russian Academy of Sciences. (RLMS-HSE web sites: <http://www.cpc.unc.edu/projects/rlms-hse>, <http://www.hse.ru/org/hse/rlms>)

¹⁵ In Russian: Встречая в жизни разных людей, с одними мы легко находим общий язык, понимаем их. Иные же хоть и живут рядом, остаются всегда чужими. Если говорить о Вас, то как часто—часто, иногда или никогда Вы ощущаете близость, единство с людьми, которых я сейчас назову, о ком из них Вы могли бы сказать—«это мы»? (С жителями Вашего края, республики, области)

regionalism as the population became habituated to government help and control and started to believe less in the economic agency of the region itself. To measure this aspect we introduce the share of agriculture subsidies (*AgriSub95*) in the region budgets in 1995. The data on this measure is taken from Remington (2011). We perform a principal component analysis on the six factors mentioned above, construct the regionalism index as the first principal component and use it as an instrument for Regional affinity (*RA*),

Table 3. Share of familiar banks in sub-samples

Factor		<i>Mean</i>	<i>Obs</i>
<i>GovTrust</i>	<Median: low trust regions	0.2746	11287
	>Median: high trust regions	0.2814	11580
	<i>Difference</i>	-0.0069	
<i>RA</i>	>Median: high regional affinity	0.2443	6153
	<Median: low regional affinity	0.2943	5983
	<i>Difference</i>	-0.0501***	

Differences are significant at ***-1% level

We proceed by separating the sample by the median values of either regional affinity or trust in regional authorities. For the former we use both the regional affinity measure proper and the one instrumented by the regionalism index. Table 3 shows that the shares of familiar banks are lower in regions with high levels of regional affinity and a bit (but not statistically significantly) lower in the regions with low levels of trust in regional authorities.

We run our previous regressions separately for the subsamples provided in Table 3 to identify the mechanism behind the main result that banks with regional cues in their names benefit from reduced market discipline during crisis times. If we observe the deterioration of market discipline for familiar banks only in the regions with a higher degree of trust in local authorities, we cannot reject the alternative hypothesis that perceived ties with a trusted regional authority provide implicit support during crisis. If we, on the other hand, observe the deterioration of market discipline for familiar banks only in the regions with higher levels of regional affinity, we cannot reject that we have identified the flight to familiarity hypothesis.

Table 4. Descriptive statistics

<i>Variable</i>	<i>Description</i>	<i>Obs</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>Min</i>	<i>Max</i>
<i>IR</i>	Implicit deposit rate (Interest expenses on household deposits/Household deposits)	20580	0.026	0.033	0.000	0.486
<i>DG</i>	Household deposit growth rate	20279	0.186	0.731	-0.906	7.922
<i>F</i>	1–if bank has a name with regional cues in the narrow sense, 0–otherwise	23894	0.272	0.445	0.000	1.000
<i>Fb</i>	1–if bank has a name with regional cues in the broad sense, 0 – otherwise	23894	0.450	0.497	0.000	1.000
<i>CA</i>	Capital to total assets	21837	0.243	0.174	0.003	0.965
<i>NPL</i>	Non-performing loans to total loans	21793	0.021	0.049	0.000	0.621
<i>LA</i>	Liquid assets to total assets	21757	0.306	0.177	0.000	0.932
<i>DA</i>	Household deposits to total assets	18907	0.317	0.217	0.000	0.811
<i>LNA</i>	Ln(Total assets)	21837	6.131	1.947	-0.074	11.343
<i>DIS</i>	1–if bank is admitted to the deposit insurance system. 0 – otherwise	23934	0.666	0.472	0.000	1.000
<i>Crisis</i>	1–for 2008-2009. 0–otherwise	23935	0.267	0.210	0.000	0.931
<i>GovTrust</i>	Share of regional population that believe the regional authorities deserve to be trusted	12905	0.610	0.187	0.040	1.000
<i>RA</i>	Regional Affinity Index	12176	0.081	0.043	0.013	0.232

To eliminate the influence of outliers, we winsorize the sample by 1% from each tail. We exclude the observations with negative capital adequacy and liquidity ratios as those with mistakes. We exclude the Moscow banks from the sample as many of them operate outside Moscow, so it is impossible to apply regional characteristics for them. As mentioned before, state banks and foreign banks are also excluded. There are 698-704 banks remaining in our sample, depending on the model specification. Table 4 shows the descriptive statistics for the variables we use. All values are sensible and in the realm of the expected in the Russian context. In the narrow definition about 27% of bank quarter observations are labelled as “familiar”. In the broader less demanding definition that serves as a robustness check, this increases to 45%.

4. Results

4.1. Main hypothesis.

We start by comparing familiar and unfamiliar banks’ characteristics. Table 5 compares the banks with and without regional references during stable period and during the crisis and shows the t-test results for the equality of means.

Table 5. Familiar versus unfamiliar banks

Panel A							
<i>X</i>	<i>Familiar banks</i>			<i>Unfamiliar banks</i>			<i>Difference in means</i>
	<i>Obs</i>	<i>N of banks</i>	<i>Mean</i>	<i>Obs</i>	<i>N of banks</i>	<i>Mean</i>	
<i>IR</i>	5695	212	0.0251	14848	520	0.0262	-0.0011***
<i>DG</i>	5595	208	0.1696	14648	512	0.1916	-0.0220**
<i>CA</i>	5954	213	0.2210	15846	540	0.2513	-0.0303***
<i>NPL</i>	5946	213	0.0186	15810	539	0.0213	-0.0027***
<i>LA</i>	5947	213	0.3054	15773	540	0.3064	-0.0010
<i>DA</i>	5237	187	0.3462	13638	447	0.3063	-0.0398***
<i>LNA</i>	5954	213	6.1162	15846	540	6.1279	-0.0117
Panel B							
<i>X</i>	<i>F</i>	<i>No crisis</i>		<i>Crisis</i>			
		<i>Mean</i>	<i>Difference in means</i>	<i>Mean</i>	<i>Difference in means</i>		
<i>IR</i>	0	0.0266	0.0013**	0.0242	-0.0004		
	1	0.0252		0.0245			
<i>DG</i>	0	0.2159	0.0207*	0.0564	0.0483***		
	1	0.1952		0.0082			
<i>CA</i>	0	0.2563	0.0301***	0.2224	0.0349*		
	1	0.2262		0.1875			
<i>NPL</i>	0	0.0212	0.0027***	0.0224	0.0024**		
	1	0.0184		0.0200			
<i>LA</i>	0	0.3064	-0.0009	0.3063	0.0132**		
	1	0.3073		0.2931			
<i>DA</i>	0	0.3016	-0.0393***	0.3832	-0.0596***		
	1	0.3409		0.4428			
<i>LNA</i>	0	5.9171	-0.0145	7.3473	0.0263		
	1	5.9316		7.3210			
Panel C							
<i>X</i>	<i>Crisis</i>	<i>Familiar banks</i>		<i>Unfamiliar banks</i>			
		<i>Mean</i>	<i>Difference in means</i>	<i>Mean</i>	<i>Difference in means</i>		
<i>IR</i>	0	0.0252	0.0007	0.0266	0.0024***		
	1	0.0245		0.0242			
<i>DG</i>	0	0.1952	0.1870***	0.2159	0.1595***		
	1	0.0082		0.0564			
<i>CA</i>	0	0.2262	0.0386***	0.2563	0.0339***		
	1	0.1875		0.2224			
<i>NPL</i>	0	0.0184	-0.0016	0.0212	-0.0013		
	1	0.0200		0.0224			
<i>LA</i>	0	0.3073	0.0142**	0.3064	0.0001		
	1	0.2931		0.3063			
<i>DA</i>	0	0.3409	-0.1019***	0.3016	-0.0815***		
	1	0.4428		0.3832			
<i>LNA</i>	0	5.9316	-1.3894***	5.9171	-1.4302***		
	1	7.3210		7.3473			

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Considering the whole period of time under consideration, two types of banks do not differ in terms of bank size or liquidity. However, familiar banks show lower capital adequacy, while unfamiliar ones have higher credit risks. Interestingly, the familiar banks pay lower interest rates than those without regional cues in their name, but the latter gain higher average deposit growth rates (see Panel A). Panel B and Panel C show that, although there are many differences between familiar and unfamiliar banks, these tend to be economically small. In stable times, for example, deposit rates offered by familiar banks are on average 0,13% lower than

those of unfamiliar banks, while there was no longer a difference in deposit rates between familiar and unfamiliar banks during the crisis. All banks experienced lower deposit growth rates during the crisis, although familiar banks saw their deposit growth decrease somewhat more steeply on average. All banks suffered from the deterioration of capital adequacy during the crisis, while the share of non-performing loans was virtually unchanged.

We start with estimating the baseline regressions for market discipline and crisis effects (specification I and III). To test our main hypothesis we introduce the interactions between bank risk, familiarity and crisis, capturing the relative changes in risk sensitivity of depositors of familiar banks during the crisis quarters (specification II and IV). Next to quarter-year and region fixed effects, all regressions also include bank fixed effects, as suggested by the Hausman test.

Table 6. Market discipline and familiar bank names

<i>Variables</i>	MD=Interest Rate		MD=Deposit Growth	
	I	II	III	IV
<i>CA</i>	0.006 (0.008)	0.008 (0.009)	0.614*** (0.138)	0.489*** (0.148)
<i>Crisis*CA</i>	-0.021*** (0.007)	-0.024*** (0.007)	-0.275 (0.355)	-0.110 (0.406)
<i>F*CA</i>		-0.009 (0.013)		0.542* (0.278)
<i>Crisis*F*CA</i>		0.020 (0.014)		-1.111** (0.518)
<i>NPL</i>	0.021 (0.019)	0.028 (0.021)	-1.191*** (0.245)	-1.046*** (0.307)
<i>Crisis*NPL</i>	-0.089** (0.041)	-0.092** (0.045)	0.005 (0.950)	-0.538 (1.100)
<i>F*NPL</i>		-0.021 (0.044)		-0.530 (0.407)
<i>Crisis*F*NPL</i>		0.009 (0.068)		3.637** (1.839)
<i>LNA</i>	0.000 (0.001)	0.000 (0.001)	-0.026 (0.024)	-0.026 (0.024)
<i>LA</i>	-0.007 (0.005)	-0.007 (0.005)	-0.066 (0.089)	-0.079 (0.089)
<i>DA</i>	-0.006 (0.004)	-0.006 (0.004)	-0.952*** (0.077)	-0.961*** (0.078)
<i>DIS</i>	-0.053*** (0.005)	-0.053*** (0.005)	0.053 (0.076)	0.059 (0.076)
<i>Crisis</i>	0.005*** (0.002)	0.006*** (0.002)	-0.203*** (0.068)	-0.221*** (0.076)
<i>F</i>		-0.001 (0.004)		0.052 (0.090)
<i>Crisis*F</i>		-0.002 (0.002)		0.121 (0.082)
<i>Bank, time and region fixed effects</i>	Yes	Yes	Yes	Yes
<i>Constant</i>	0.075*** (0.009)	0.075*** (0.009)	0.312* (0.161)	0.297* (0.166)
<i>Observations</i>	18,092	18,060	18,242	18,210
<i>R²_w</i>	0.103	0.103	0.068	0.070
<i>Number of banks</i>	704	703	699	698

Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

Table 6 lays out our first results. First of all, our results suggest that there exists quite strong quantity discipline in the Russian market for household deposits. We find that banks with higher capital adequacy and with lower share of non-performing loans demonstrate higher deposit growth rates, consistent with the existence of quantity discipline. In line with (Karas et al. 2010) the price-based mechanism is much less pronounced for household depositors and appears only in crisis times, when the banks with lower capital adequacy have to pay higher interest rates.

During the periods of economic stability, regional cues in the bank name do not alleviate market discipline exerted by depositors. If anything, depositors of familiar banks are in fact more sensitive to the most important and relatively easily observable bank fundamental of bank capitalization before the financial crisis of 2008, as shown by the significantly positive double interaction coefficient ($F*CA$) in specification IV. There is no such difference between familiar and unfamiliar banks for price-based discipline though.

Now we turn our attention to the financial crisis of 2008 that can be adequately described as a pure exogenous shock to the Russian banking system. During the financial crisis all the banks offer higher interest rates, but suffer from lower deposit growth. The interest rate sensitivity to non performing (price market discipline) becomes generally weaker during the crisis, which is in line with a cross-country study by Cubillas et al. (2012). However the moral hazard effect with respect to the capital and credit risk sensitivity of deposit growth is clearly more pronounced for familiar banks, as hypothesized. Indeed, despite the fact that the capitalization of familiar banks is on average lower than that of other banks both before and after the crisis (see Table 5), the capital sensitivity of familiar banks' deposit growth essentially falls to zero in the crisis period, while unfamiliar banks retain the level of market discipline they had before the crisis. The same is true for the share of non-performing loans: the depositors of familiar banks become non-sensitive to the asset quality during the crisis. Hence at this point we cannot reject the flight to familiarity hypothesis. The challenge remains to disentangle the flight to familiarity effect from the alternative hypothesis of implicit guarantees by trusted regional authorities. This problem is addressed in the next section.

4.2. Implicit guarantees or flight to familiarity?

In this section we discuss our two competing hypotheses for the interpretation of the moral hazard effect during crisis time of banks with local references in their names. Table 7 shows the estimates of our full regression (specification II) for two sets of subsamples separately for price (first 6 columns) and quantitative (second 6 columns) market discipline. The first column in each pair shows the results for regions with above median trust in regional authorities (first pair of columns in each set of 6) or regional affinity (the rest two pairs), the second column in each pair deals with the results for the below median regions. In the regional affinity columns we show the results with pure regional affinity measure and the one instrumented with exogenous historical roots of regionalism (IV).

Our results provide clear support for the flight to familiarity hypothesis for quantitative market discipline. Indeed, during the crisis market discipline is severely undermined only for the familiar banks in regions with above median levels of regional affinity: depositors in regions that are strongly emotionally attached to their region become less sensitive to the observable risk—measured by both capital adequacy (for instrumented regional affinity) and loan portfolio quality (for both measures of regional affinity)—of familiar banks, relative to unfamiliar banks and to regions with less regional affinity.

This effect is absent in the columns where we split our sample in above or below the median levels of trust in local authorities. Moreover we even find the reverse result that in crisis times market discipline is more undermined in regions with above median levels of trust in local authorities for both asset quality and capital adequacy. The results imply, that is, that we cannot reject a flight to familiarity of household depositors in times of crisis, while we can reject the alternative hypothesis that our measure of familiarity really captures ties with the regional government and hence implicit subsidies.

Table 7. Implicit guaranties versus flight to familiarity

Variables	MD=Interest rate						MD=Deposit growth					
	GovTrust		RA		RA (IV regionalism)		GovTrust		RA		RA (IV regionalism)	
	>Median I	<Median II	>Median III	<Median IV	>Median V	<Median VI	>Median VII	<Median VIII	>Median IX	<Median X	>Median XI	<Median XII
CA	-0.010 (0.016)	0.024** (0.010)	0.009 (0.012)	-0.004 (0.010)	0.006 (0.015)	0.010 (0.007)	0.523*** (0.195)	0.582** (0.239)	0.683** (0.318)	0.648** (0.293)	0.434* (0.232)	0.559*** (0.178)
Crisis*CA	-0.028** (0.012)	-0.029*** (0.011)	-0.034*** (0.011)	-0.022 (0.014)	-0.024** (0.011)	-0.018* (0.010)	-0.114 (0.754)	-0.172 (0.383)	1.640 (1.361)	-0.822 (0.576)	0.444 (0.565)	-0.948** (0.395)
F*CA	-0.010 (0.016)	-0.008 (0.022)	-0.021 (0.014)	0.012 (0.028)	-0.003 (0.021)	-0.023* (0.014)	0.660 (0.435)	0.435 (0.449)	1.545*** (0.591)	0.050 (0.458)	0.654* (0.353)	0.317 (0.446)
Crisis*F*CA	0.036 (0.024)	0.005 (0.018)	-0.033 (0.030)	-0.004 (0.030)	0.021 (0.019)	-0.010 (0.024)	-0.525 (0.988)	-1.210* (0.677)	-2.200 (1.734)	0.008 (0.878)	-1.752*** (0.642)	1.086 (0.730)
NPL	0.026 (0.042)	0.044 (0.028)	0.025 (0.037)	-0.008 (0.020)	0.007 (0.026)	0.055 (0.038)	-0.867* (0.468)	-1.089*** (0.377)	-1.619*** (0.537)	-1.088** (0.539)	-0.685* (0.361)	-1.680*** (0.497)
Crisis*NPL	-0.165*** (0.058)	0.018 (0.057)	-0.015 (0.047)	-0.021 (0.065)	-0.111** (0.051)	-0.041 (0.057)	-0.270 (1.327)	-1.551 (1.968)	-2.283 (2.666)	2.306 (1.884)	-1.537 (1.552)	0.883 (1.495)
F*NPL	-0.061 (0.058)	-0.014 (0.064)	-0.019 (0.043)	-0.057 (0.038)	-0.048 (0.038)	0.021 (0.103)	-0.795 (0.667)	-0.479 (0.517)	-1.100* (0.586)	0.489 (0.589)	-0.364 (0.456)	-0.525 (0.595)
Crisis*F*NPL	0.099 (0.095)	-0.060 (0.081)	-0.132 (0.129)	-0.067 (0.146)	0.046 (0.080)	-0.055 (0.113)	0.941 (2.356)	5.179* (2.803)	10.363** (4.415)	-4.373 (3.473)	5.267** (2.352)	1.971 (2.589)
Crisis	0.007** (0.003)	0.002 (0.003)	0.009*** (0.003)	0.003 (0.003)	0.003 (0.002)	0.005** (0.002)	0.001 (0.116)	-0.149 (0.102)	-0.554** (0.246)	-0.266** (0.119)	-0.321*** (0.116)	0.069 (0.087)
F	-0.004 (0.007)	-0.000 (0.006)	0.003 (0.008)	-0.005 (0.005)	-0.003 (0.006)	0.003 (0.006)	-0.020 (0.148)	0.183 (0.141)	-0.129 (0.226)	0.133 (0.132)	-0.070 (0.114)	0.203 (0.152)
Crisis*F	-0.005 (0.003)	0.000 (0.004)	0.006 (0.006)	0.002 (0.005)	-0.001 (0.003)	0.001 (0.004)	0.076 (0.148)	0.051 (0.113)	0.377 (0.253)	0.056 (0.147)	0.170 (0.104)	-0.162 (0.113)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bank, time, region FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	0.098*** (0.016)	0.058*** (0.011)	0.077*** (0.017)	0.086*** (0.013)	0.073*** (0.014)	0.077*** (0.011)	0.340 (0.254)	0.409* (0.217)	0.786** (0.385)	0.281 (0.247)	0.157 (0.207)	0.958*** (0.239)
Observations	8,661	8,749	4,617	4,558	8,788	9,208	8,699	8,858	4,671	4,587	8,898	9,248
R ² _w	0.097	0.116	0.103	0.148	0.097	0.127	0.066	0.062	0.081	0.068	0.052	0.079
Number of banks	563	528	173	187	338	367	548	530	173	185	336	364

Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

5. Robustness checks

To assure the robustness of our results for quantitative market discipline, we repeat our main estimations for a broader definition of bank familiarity, now including also banks whose names refer to the city name, or the name of some local landmark or some more broad area (*Fb*). The results of the main estimations for this broader definition of familiarity are presented in the first column of Table 8, the rest of the columns shows the results for the regional affinity and trust in local government subsamples.

Table 8. Robustness check: broader definition of familiarity

Variables	MD=Deposit growth						
	Main regression	GovTrust		RA		RA (IV regionalism)	
		>Median I	<Median II	>Median III	<Median IV	>Median V	<Median VI
<i>CA</i>	0.557*** (0.171)	0.993** (0.445)	0.673* (0.365)	0.649* (0.355)	0.709* (0.372)	0.452* (0.268)	0.657*** (0.210)
<i>Crisis*CA</i>	0.252 (0.462)	-0.038 (0.680)	-0.670** (0.311)	1.968 (1.520)	-0.300 (0.354)	0.697 (0.684)	-0.566* (0.294)
<i>Fb*CA</i>	0.152 (0.236)	-0.390 (0.527)	-0.079 (0.501)	1.003* (0.548)	-0.089 (0.434)	0.333 (0.348)	-0.057 (0.318)
<i>Crisis*Fb*CA</i>	-1.466** (0.580)	-1.351 (0.970)	-0.923* (0.506)	-2.376 (1.596)	-1.111 (0.885)	-1.624** (0.750)	-1.083 (0.726)
<i>NPL</i>	-1.181*** (0.411)	-1.801** (0.808)	-1.553* (0.933)	-1.763** (0.717)	-1.704** (0.794)	-1.141* (0.672)	-1.376*** (0.519)
<i>Crisis*NPL</i>	-1.072 (1.361)	-0.451 (2.611)	1.694 (1.040)	-2.744 (3.059)	3.142 (2.443)	-1.594 (1.812)	-0.131 (1.883)
<i>Fb*NPL</i>	-0.021 (0.497)	0.476 (0.987)	0.203 (1.004)	-0.579 (0.770)	1.052 (0.884)	0.496 (0.708)	-0.963 (0.665)
<i>Crisis*Fb*NPL</i>	2.968* (1.734)	0.776 (3.028)	0.237 (2.383)	6.155 (4.180)	-4.683 (2.914)	3.896* (2.301)	1.390 (2.443)
<i>Crisis</i>	-0.281*** (0.083)	-0.276* (0.163)	0.046 (0.066)	-0.639** (0.276)	-0.373*** (0.094)	-0.362*** (0.135)	0.005 (0.081)
<i>Fb</i>	0.194* (0.107)	0.017 (0.164)	0.737 (0.570)	0.185 (0.253)	0.133 (0.162)	0.039 (0.142)	0.331** (0.160)
<i>Crisis*Fb</i>	0.201** (0.089)	0.207 (0.146)	0.144 (0.094)	0.458* (0.248)	0.281* (0.152)	0.183 (0.124)	0.182 (0.121)
<i>Controls</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Bank, time, region FE</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Constant</i>	0.235 (0.175)	0.767** (0.385)	0.302 (0.418)	0.651 (0.407)	0.314 (0.266)	0.128 (0.221)	0.879*** (0.248)
<i>Observations</i>	18,210	5,098	5,179	4,671	4,587	8,898	9,248
<i>R²_w</i>	0.070	0.074	0.065	0.080	0.070	0.051	0.080
<i>Number of banks</i>	698	474	483	173	185	336	364

Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

The results are close to those we got for the narrow definition of bank familiarity. They suggest strong quantity-based disciplining for all the banks in the stable times and the absence of any sensitivity to capital adequacy and asset quality during crisis quarters for familiar banks. The latter appears again only in regions with higher levels of regional affinity, not in the regions with higher trust in local authorities. The main hypothesis is confirmed for the instrumented measure

of regional affinity. Our second robustness check involves the exclusion of two additional large regions from the initial samples, namely the Moscow region (Moscow oblast') and the city of Saint-Petersburg. These two also have some banks (much less numerous compared to Moscow though), that have several offices in other regions, which may distort the regional component of our study. These results, presented in Table 9, generally support our earlier results for the pre-crisis and post-crisis period, as well as the regionalism hypothesis, if the instrumented regional affinity measure is considered.

Table 9. Robustness check: fewer regions

<i>Variables</i>	MD=Deposit growth						
	<i>Main regression</i>	<i>GovTrust</i>		<i>RA</i>		<i>RA (IV regionalism)</i>	
		<i>>Median I</i>	<i><Median II</i>	<i>>Median III</i>	<i><Median IV</i>	<i>>Median V</i>	<i><Median VI</i>
<i>CA</i>	0.450*** (0.159)	-0.009 (0.015)	0.024 (0.015)	0.572 (0.385)	0.578* (0.311)	0.410* (0.234)	0.528*** (0.203)
<i>Crisis*CA</i>	-0.097 (0.425)	-0.027** (0.011)	-0.010 (0.009)	1.383 (1.484)	-0.554 (0.759)	0.563 (0.597)	-1.051*** (0.373)
<i>F*CA</i>	0.622** (0.287)	-0.011 (0.014)	0.021 (0.036)	1.877*** (0.675)	0.246 (0.450)	0.699** (0.354)	0.382 (0.468)
<i>Crisis*F*CA</i>	-1.094** (0.537)	0.038 (0.023)	-0.052* (0.028)	-2.757 (2.150)	0.224 (0.973)	-1.870*** (0.671)	1.427* (0.731)
<i>NPL</i>	-0.936*** (0.309)	0.020 (0.037)	0.002 (0.046)	-1.277* (0.743)	-1.057** (0.447)	-0.677* (0.361)	-1.489*** (0.504)
<i>Crisis*NPL</i>	-0.737 (1.164)	-0.158*** (0.054)	0.010 (0.063)	-3.032 (2.946)	4.305 (3.069)	-1.851 (1.621)	1.378 (1.553)
<i>F*NPL</i>	-0.581 (0.414)	-0.055 (0.055)	0.011 (0.083)	-1.617** (0.748)	0.419 (0.515)	-0.336 (0.456)	-0.656 (0.611)
<i>Crisis*F*NPL</i>	3.872** (1.905)	0.149 (0.110)	-0.018 (0.108)	19.057 (11.660)	-2.717 (3.954)	5.728** (2.412)	0.596 (2.736)
<i>Crisis</i>	0.013 (0.062)	0.006** (0.003)	0.005* (0.003)	-0.258 (0.219)	-0.315** (0.140)	-0.341*** (0.119)	-0.114 (0.080)
<i>F</i>	0.057 (0.103)	-0.004 (0.006)	-0.011* (0.007)	-0.158 (0.291)	0.113 (0.172)	-0.077 (0.113)	0.279 (0.205)
<i>Crisis*F</i>	0.097 (0.085)	-0.006* (0.004)	0.008 (0.005)	0.467 (0.312)	-0.062 (0.160)	0.177* (0.106)	-0.229** (0.113)
<i>Controls</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Bank, time region</i>							
<i>FE</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Constant</i>	0.207 (0.160)	0.104*** (0.014)	0.075*** (0.018)	0.622 (0.386)	-0.031 (0.252)	0.136 (0.208)	0.526** (0.237)
<i>Observations</i>	16,621	9,511	3,912	3,515	4,154	8,667	7,890
<i>R²_w</i>	0.071	0.117	0.130	0.090	0.068	0.052	0.081
<i>Number of banks</i>	632	567	331	125	162	328	305

Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

For further robustness we reestimate our equation using the shorter sample excluding the post-crisis 2010 year, to clearly divide the pre-crisis and crisis periods. Table 10 shows the results for the hypotheses testing. They are the same as in the main body of the empirical study, and moreover the flight to familiarity hypothesis is also confirmed in case the regional affinity measure is not instrumented.

Table 10. Robustness check: without post-crisis period

<i>Variables</i>	MD=Deposit growth						
	<i>Main regression</i>	<i>GovTrust</i>		<i>RA</i>		<i>RA (regionalism)</i>	
		>Median <i>I</i>	<Median <i>II</i>	>Median <i>III</i>	<Median <i>IV</i>	>Median <i>V</i>	<Median <i>VI</i>
<i>CA</i>	0.489*** (0.148)	0.523*** (0.195)	0.582** (0.239)	0.683** (0.318)	0.648** (0.293)	0.434* (0.232)	0.559*** (0.178)
<i>Crisis*CA</i>	-0.110 (0.406)	-0.114 (0.754)	-0.172 (0.383)	1.640 (1.361)	-0.822 (0.576)	0.444 (0.565)	-0.948** (0.395)
<i>F*CA</i>	0.542* (0.278)	0.660 (0.435)	0.435 (0.449)	1.545*** (0.591)	0.050 (0.458)	0.654* (0.353)	0.317 (0.446)
<i>Crisis*F*CA</i>	-1.111** (0.518)	-0.525 (0.988)	-1.210* (0.677)	-2.200 (1.734)	0.008 (0.878)	-1.752*** (0.642)	1.086 (0.730)
<i>NPL</i>	-1.046*** (0.307)	-0.867* (0.468)	-1.089*** (0.377)	-1.619*** (0.537)	-1.088** (0.539)	-0.685* (0.361)	-1.680*** (0.497)
<i>Crisis*NPL</i>	-0.538 (1.100)	-0.270 (1.327)	-1.551 (1.968)	-2.283 (2.666)	2.306 (1.884)	-1.537 (1.552)	0.883 (1.495)
<i>F*NPL</i>	-0.530 (0.407)	-0.795 (0.667)	-0.479 (0.517)	-1.100* (0.586)	0.489 (0.589)	-0.364 (0.456)	-0.525 (0.595)
<i>Crisis*F*NPL</i>	3.637** (1.839)	0.941 (2.356)	5.179* (2.803)	10.363** (4.415)	-4.373 (3.473)	5.267** (2.352)	1.971 (2.589)
<i>Crisis</i>	-0.221*** (0.076)	0.001 (0.116)	-0.149 (0.102)	-0.554** (0.246)	-0.266** (0.119)	-0.321*** (0.116)	0.069 (0.087)
<i>F</i>	0.052 (0.090)	-0.020 (0.148)	0.183 (0.141)	-0.129 (0.226)	0.133 (0.132)	-0.070 (0.114)	0.203 (0.152)
<i>Crisis*F</i>	0.121 (0.082)	0.076 (0.148)	0.051 (0.113)	0.377 (0.253)	0.056 (0.147)	0.170 (0.104)	-0.162 (0.113)
<i>Controls</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Bank, time region fixed effects</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Constant</i>	0.297* (0.166)	0.340 (0.254)	0.409* (0.217)	0.786** (0.385)	0.281 (0.247)	0.157 (0.207)	0.958*** (0.239)
<i>Observations</i>	18,210	8,699	8,858	4,671	4,587	8,898	9,248
<i>R²_w</i>	0.070	0.066	0.062	0.081	0.068	0.052	0.079
<i>Number of banks</i>	698	548	530	173	185	336	364

Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

Finally to provide additional support to our results related to trust in local authorities, we use two alternative measures trust measures. The first measure we introduce is a less direct proxy for trust in regional authorities—the share of the region’s population that supports the actions and policy of the regional government (*GovSupport*). This share is calculated on the data coming from the results of the Courier surveys¹⁶ of Russian citizens, conducted regularly and nationwide by the largest Russian companies for sociological research—WCIOM and Levada (urban multi-stage stratified random sampling). The Courier data is not provided in a panel dataset, we collect it manually from monthly data. The question on attitudes versus local authorities is presented irregularly in one out of four questionnaires, but for each quarter in our sample we have at least one month, where the question was included. The question goes as follows: “Generally speaking, do you hold or not with the actions of the head of your region (republic

¹⁶ For more details see <https://translate.yandex.com/translate?lang=ru-en&url=http://sophist.hse.ru/db/>

president, mayor – for Moscow)?”¹⁷. As a second alternative measure of trust in local authorities we define a relative trust variable (*GovTrust_rel*). Using the same survey (“Socio-economic changes monitoring”) we use the responses on a question that asks specifically about trust in the federal government: “In your opinion, to what degree does the Russian federal government deserve to be trusted?”¹⁸. We calculate the difference between the share of respondents trusting local authorities and the share of respondents trusting federal authorities, proxying in this way the regional degree of trust in regional implicit guaranties relative to federally provided guaranties. The results for quantitative discipline presented in Table 11 again reject the alternative hypothesis.

Table 11 Robustness check: alternative measures of the trust in local authorities

<i>Variables</i>	MD=Deposit growth			
	<i>GovSupport</i>		<i>GovTrust_rel</i>	
	>Median I	<Median II	>Median III	<Median IV
<i>CA</i>	0.890** (0.362)	0.565* (0.316)	0.464** (0.234)	0.610*** (0.222)
<i>Crisis*CA</i>	-0.727 (0.603)	-0.957*** (0.369)	0.143 (0.684)	-0.228 (0.445)
<i>F*CA</i>	-0.365 (0.448)	0.200 (0.607)	0.924* (0.515)	0.230 (0.340)
<i>Crisis*F*CA</i>	0.440 (0.831)	-0.462 (0.521)	-0.829 (0.868)	0.226 (0.896)
<i>NPL</i>	-1.767*** (0.608)	-1.689** (0.838)	-1.514*** (0.556)	-0.799* (0.447)
<i>Crisis*NPL</i>	0.405 (2.511)	2.098** (0.976)	0.618 (1.784)	0.055 (1.289)
<i>F*NPL</i>	1.219 (0.761)	0.492 (0.906)	0.388 (0.645)	-0.938* (0.545)
<i>Crisis*F*NPL</i>	-0.028 (2.868)	-1.548 (3.324)	1.061 (2.653)	1.446 (2.655)
<i>Crisis</i>	-0.165 (0.160)	0.089 (0.071)	-0.247* (0.131)	-0.171** (0.078)
<i>F</i>	0.031 (0.127)	0.492 (0.386)	0.076 (0.117)	0.114 (0.120)
<i>Crisis*F</i>	-0.087 (0.129)	0.110 (0.100)	0.087 (0.142)	-0.051 (0.129)
<i>Controls</i>	Yes	Yes	Yes	Yes
<i>Bank, time and region</i>				
<i>fixed effects</i>	Yes	Yes	Yes	Yes
<i>Constant</i>	0.762** (0.375)	0.518 (0.345)	0.503 (0.312)	0.255 (0.193)
<i>Observations</i>	5,098	5,179	8,349	8,679
<i>R²_w</i>	0.073	0.064	0.084	0.065
<i>Number of banks</i>	474	483	615	580

Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

¹⁷ In Russian: вы в целом одобряете или не одобряете деятельность губернатора вашей области? (президента республики, в москве–мэра москвы)

¹⁸ In Russian: в какой мере, на ваш взгляд, заслуживает доверия правительство россии?

6. Discussion

We have set out to analyze whether depositors who hold deposits with familiar banks become less sensitive to bank risk during a crisis, as predicted by the model of Boyle et al. (2010). We measure bank familiarity by identifying regional or local cues in the bank's name. We measure depositor behavior by market discipline, which is the depositor's sensitivity to observable bank risk. Since we need an exogenous crisis and variation in bank familiarity, we use Russia as a testing ground for our hypothesis.

Using 2001-2010 bank-level and region-level data for Russia, we show evidence for quantitative disciplining for all the banks in the sample, while price-based discipline is, in line with the literature, much weaker or absent. We find that depositors of familiar banks become less sensitive to bank risk during a financial crisis, relative to depositors of unfamiliar banks. More specifically, familiar banks have a higher sensitivity to capital adequacy than unfamiliar banks in the pre-crisis period, but in the crisis period the capital sensitivity of familiar banks falls to zero, while unfamiliar banks retain the level of market discipline they had before the crisis. The sensitivity to credit risks, which is strong for all banks in stable times, disappears for familiar banks during the crisis as well.

We assure that our results are not driven by implicit guarantees or support from regional governments to banks with regional ties, but indeed by familiarity bias, by interacting our variables of interest with measures of trust in local governments and regional affinity. We find that our flight to familiarity effect cannot be rejected in regions characterized by strong regional affinity, while the effect is rejected in regions with more trust in regional or governments.

Our analysis had documented therefore that the fall in depositor discipline in the Russian banking sector in response to the financial crisis is not driven by implicit guarantees from regional governments, but rather by a behavioral bias that has been well established in other investment fields, namely the flight to familiarity during crisis. It would be interesting to verify in further research whether this contribution to the market discipline literature extends beyond the Russian banking market and whether familiar banks can strategically exploit this familiarity bias by taking on more risk in the immediate post-crisis period without paying a penalty in terms of less or more expensive deposit funding. Endogenising and simulating the effects of bank name decisions would be a first step in this direction, which we defer to future research.

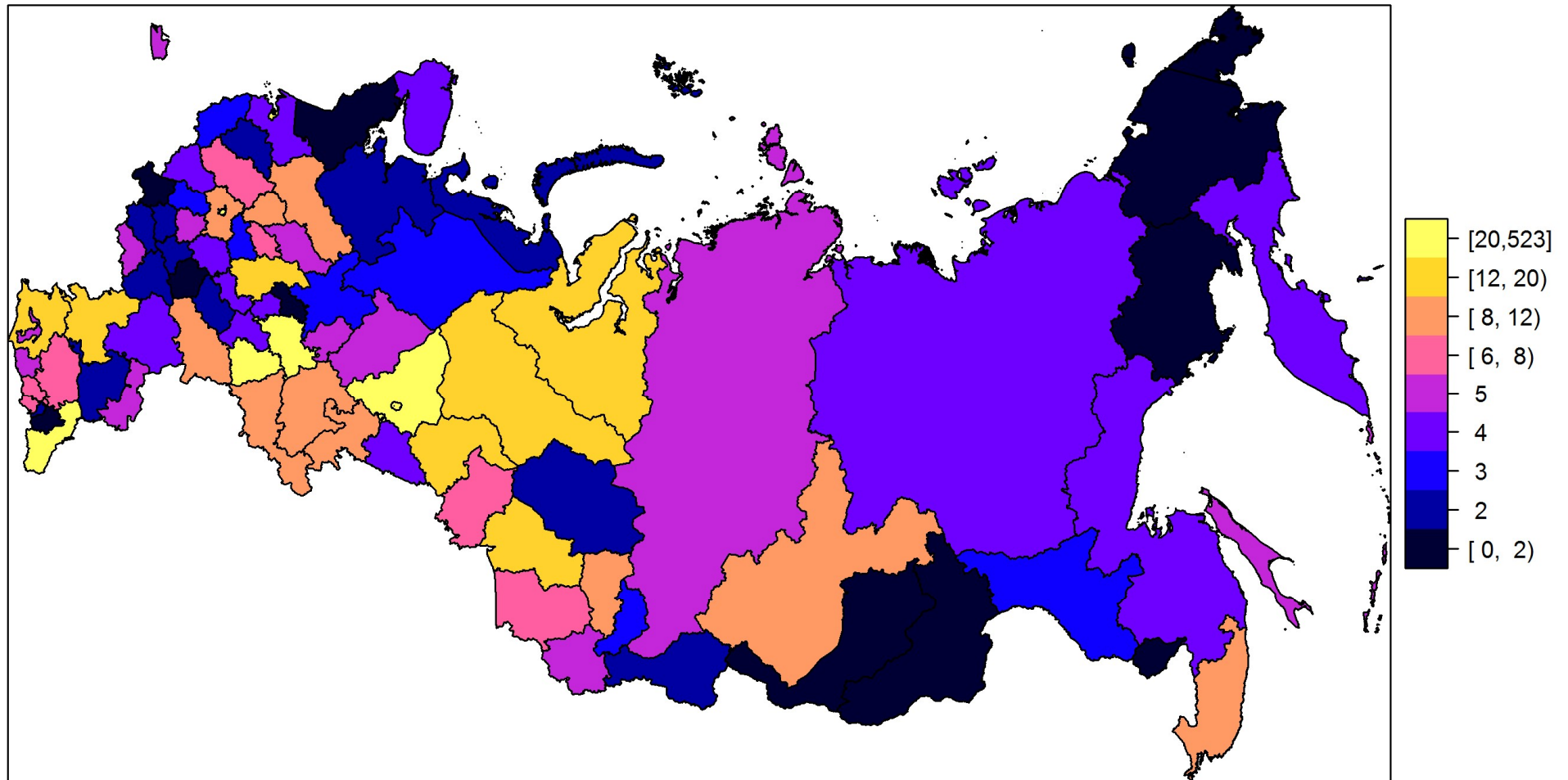
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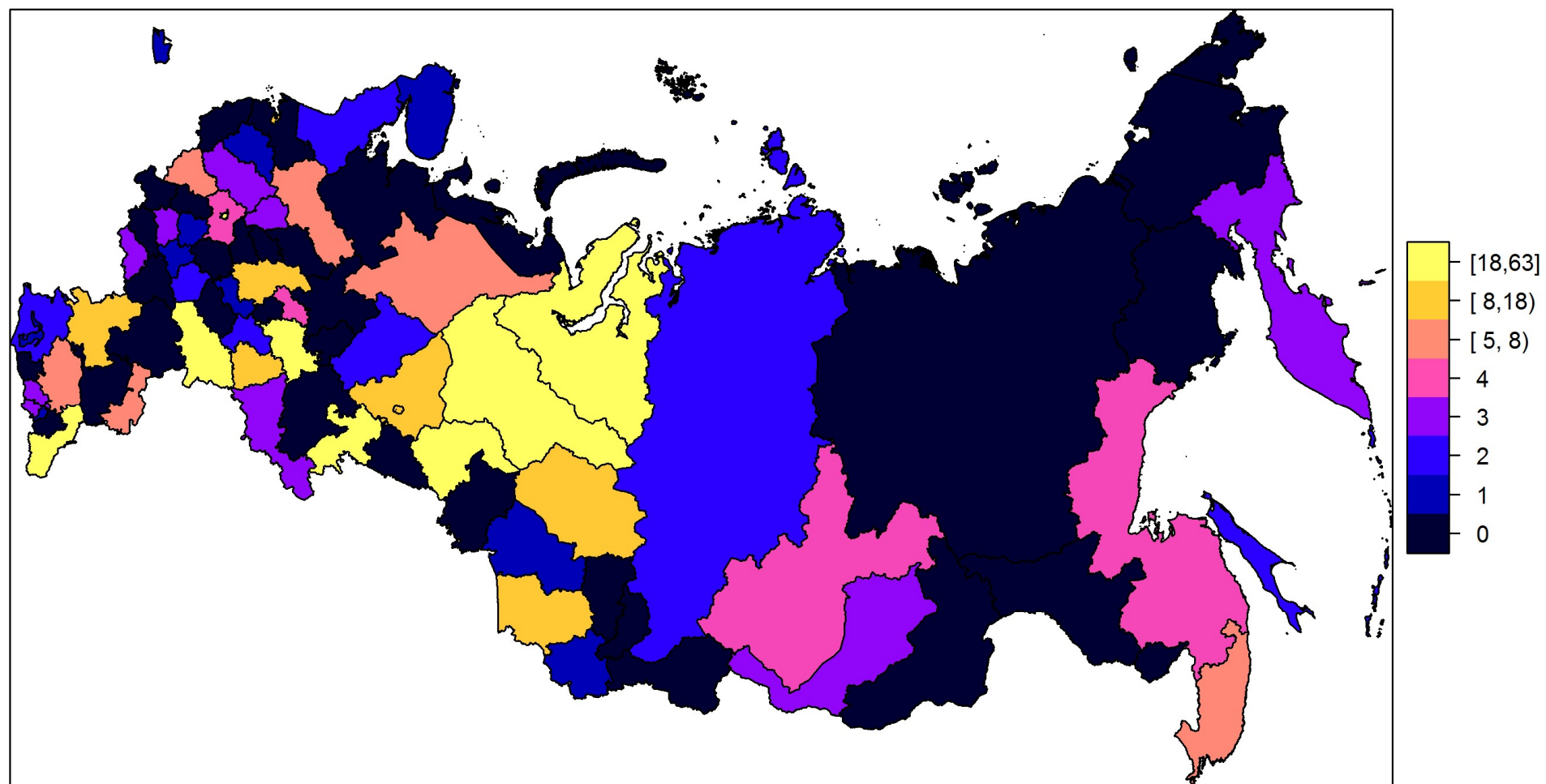
APPENDIX

Figure A 1 Number of banks, registered in the region, 2010



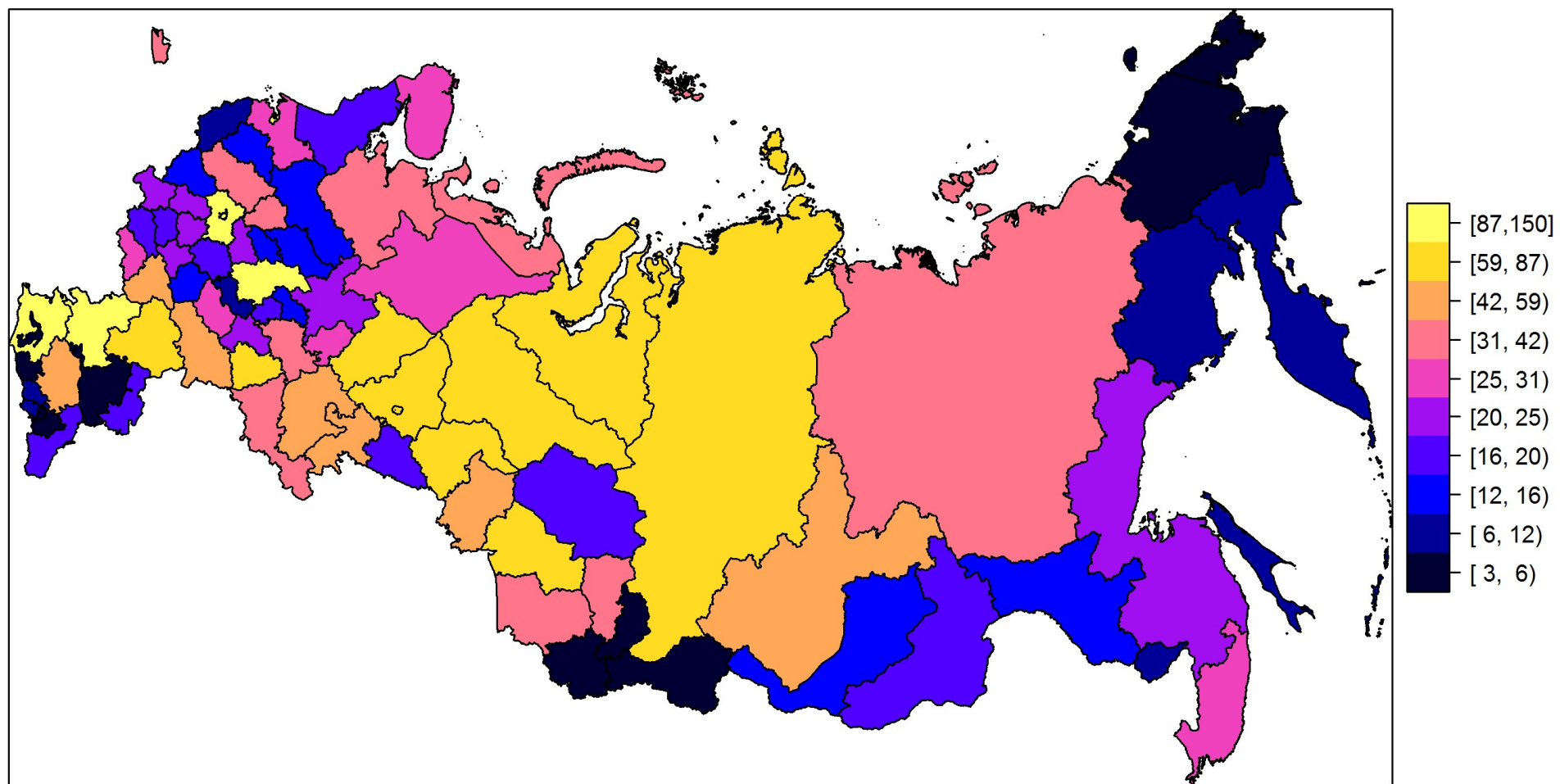
Source: CBR regional data

Figure A 2 Number of bank branches (head office of the bank is in the region), 2010



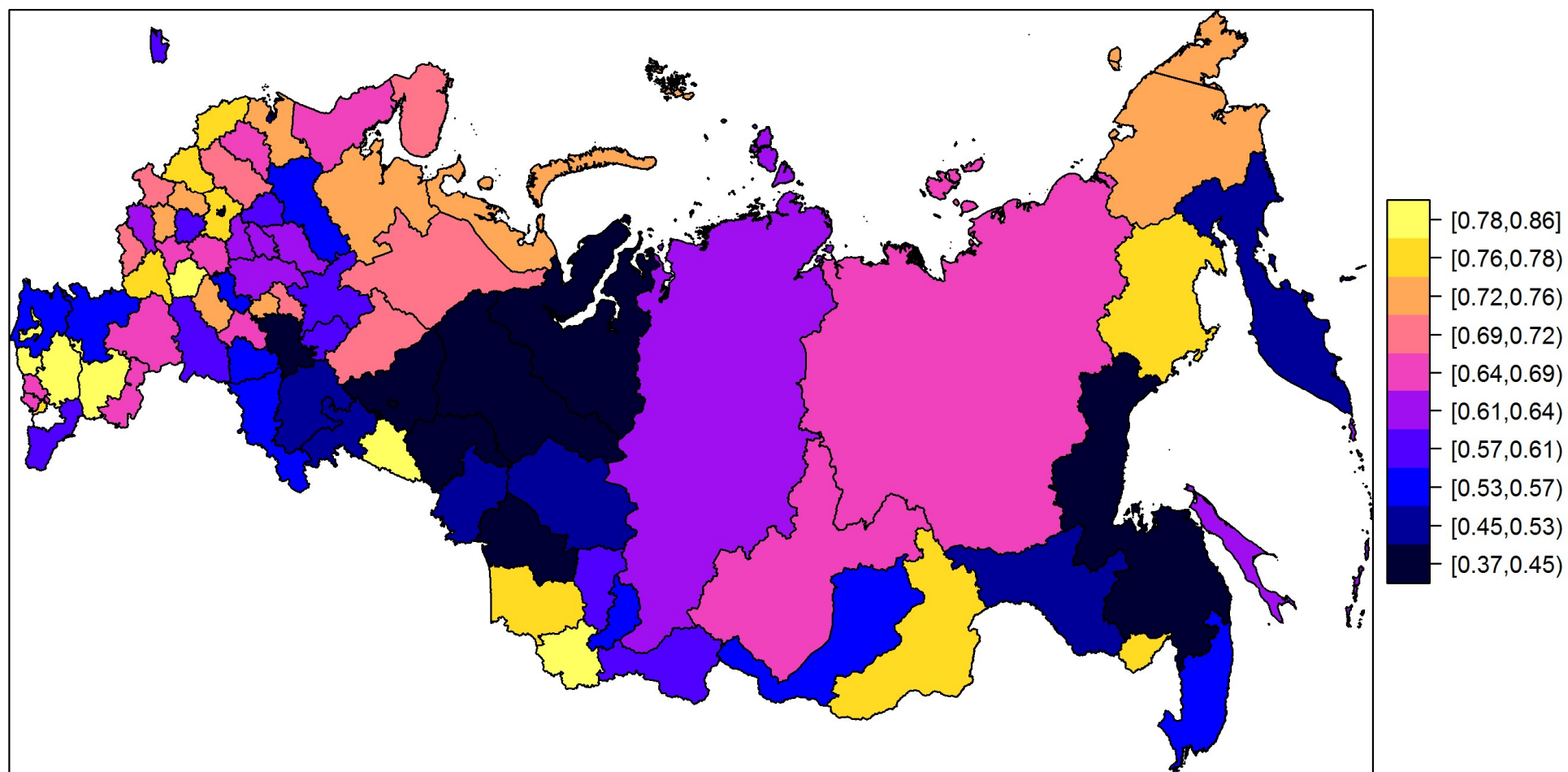
Source: CBR regional data

Figure A 3 Number of bank branches (head office of the bank is in other region), 2010



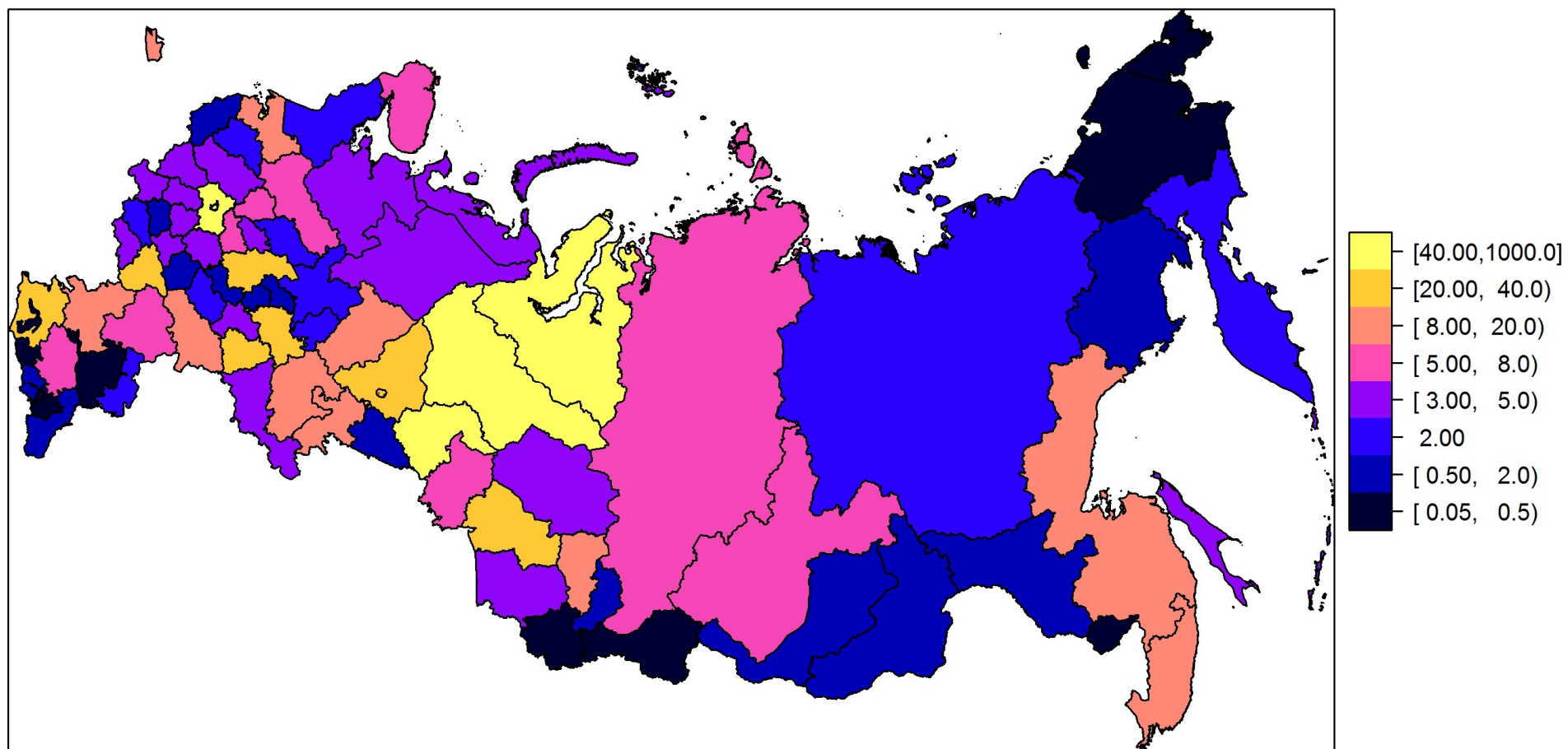
Source: CBR regional data

Figure A 4 Regional share of Sberbank, 2010



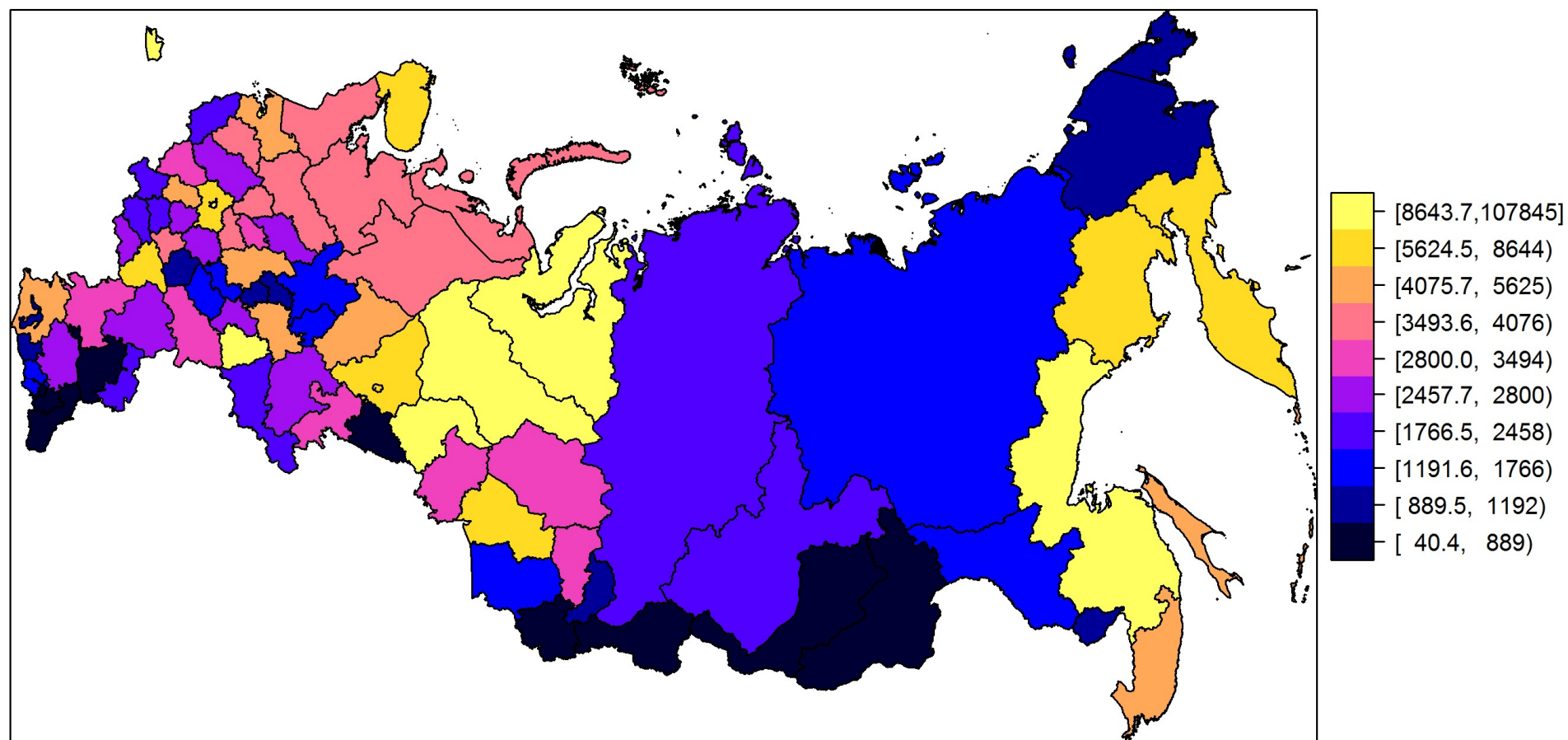
Source: Rosstat regional data

Figure A 5 Personal deposits, 2010 (trillion Rubles)



Source: CBR regional data

Figure A 6 Personal deposits per capita, 2010 (thousand Rubles)



Source: CBR regional data