

# A Guide to Russian Banks Data

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## Abstract

We construct a database on Russian banks in 4 steps and make part of it freely available.<sup>1</sup> Whenever possible we test consistency within and across different data sources.

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<sup>1</sup> The panel dataset resulting from the first two steps can be downloaded freely from <https://sites.google.com/site/alexeikaras1>. If you use that data, please cite us as: Karas, Alexei and Schoors, Koen J. L., A Guide to Russian Banks Data (August 13, 2010). Available at SSRN: <http://ssrn.com/paper=1658468>

## Step 1: non-time-varying (cross-sectional) data

We assign banks into three groups: those liquidated before 1.01.1999, after 1.01.1999 and those still in operation. Each group relies on (at least partially) different data sources and enjoys a different degree of data completeness. Table 1 details the (sometimes multiple) data sources for each variable per bank category.

**First**, we manually collect data on all banks that were liquidated after 1.01.1999 from quarterly reports “Kreditny’e organizatsii, po kotorym vnesena zapis’ v Knigu gosudarstvennoi registratsii o likvidatsii (Кредитные организации, по которым внесена запись в Книгу государственной регистрации о ликвидации)” available on Central Bank of Russia’s (CBR) website (ref. *lik99*).

### Problems:

- Bank 2895 shows up in both 2003q1 & 2003q2 reports, so one observation is removed
- 5 banks (389, 434, 1713, 3299 & 3414) oddly have *identical* registration and license withdrawal dates. Reason: all those banks went through the process of re-registration (“перерегистрация”) when they lost their old license and received a new one on the *same* day (<http://banksbd.spb.ru>). For those banks we treat their liquidation date as the date of license withdrawal (as reported by [www.banki.ru](http://www.banki.ru))
- CBR’s quarterly reports are *incomplete*. Individual files of several banks, also available on CBR’s website ([www.cbr.ru/credit](http://www.cbr.ru/credit)), state those banks were liquidated after 1.01.1999, yet they are not included in the quarterly reports. We manually add those missing banks to the database (sources: <http://banksbd.spb.ru> for license withdrawal dates & [www.cbr.ru/credit](http://www.cbr.ru/credit) for all the rest) and provide the list in Appendix 1 (ref. *lik99+*)

**Second**, we take the data on operating banks from the most recent list “Polnyi spisok kreditnykh organizatsiy (Полный список кредитных организаций)”, and complement it with license withdrawal dates from “Likvidatsionny’e meropriyatiya (Ликвидационные мероприятия)”, both lists available on CBR’s website (resp. ref. *ko* & *otz*).

**Third**, for banks liquidated before 1.01.1999 we take data from Mobile, our *only* data source for those banks. We can’t distinguish between bank/non-bank credit organizations here, and simply *assume* all 488 entities are banks. For Vneshekonombank and Mezhsudarstvennyi bank (964 & 2639) we also take data from Mobile. Those two banks have a special status and do not show up in any of the other data sources.

**Summary:** by now we have a complete list of credit organizations ever existed in Russia including their names, registration numbers, type, postal codes (except for banks liquidated after 1.01.1999)<sup>2</sup> and dates of registration, license withdrawal & liquidation.

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<sup>2</sup> We use postal codes as location identifiers. In contrast to addresses, city names etc., postal codes are numeric, and, thus, convenient to work with. In particular, it is common practice to report six-digit zip-codes at the beginning of any address, making it easy to detach this numeric information from the text following it (e.g. ‘Text to Columns’ transformation in Excel). Russian Post provides the correspondence between postal codes and geographical units of any level (<http://info.russianpost.ru/database/ops.html>).

Table 1: Summary of Step 1

Bank category	name	regn	nko	regist	revok	likvid	M&A vars	didate	zip6
<i>buried before 1.01.1999</i>	mob10	mob10	no NKOs	mob10	mob10	mob10	reorg98	N/A	mob10
				reorg98	reorg98				
<i>buried after 1.01.1999</i>	lik99 lik99+	lik99 lik99+	lik99 lik99+	lik99 lik99+	lik99 lik99+	lik99 lik99+	reorg99 reorg99+	reestr	mob10
				reorg99	reorg99				
				mob10	mob10	mob10			
<i>still alive</i>	ko	ko	ko	ko	otz	N/A	reorg, N/A	reestr	ko
				mob10	mob10				mob10
<u>Variable definitions:</u>									
name	Bank name								
regn	Bank registration number ( <i>unique bank identifier</i> ) <sup>3</sup>								
nko	Dummy = 1 for <i>non-bank</i> credit organizations								
regist	Date of registration (birth)								
revok	Date of license withdrawal (death)								
likvid	Date of liquidation (burial)								
M&A vars									
tar1 reorg1...	Registration numbers of acquired banks and respective acquisition dates								
merged	Dummy = 1 if a bank was liquidated as a result of a merger/acquisition								
didate	Date of acceptance to the Deposit Insurance System (missing for non-participants)								
zip6	Six-digit postal code (location identifier)								
<u>Sources:</u>									
1) CBR's website ( <a href="http://www.cbr.ru">www.cbr.ru</a> )									
lik99	CBR's quarterly reports "КО, по которым внесена запись в КГР о ликвидации"								
lik99+	Missing data added from individual bank files at <a href="http://www.cbr.ru/credit">www.cbr.ru/credit</a> , <a href="http://banksbd.spb.ru">http://banksbd.spb.ru</a>								
reorg98	Manually collected from <a href="http://www.banki.ru">www.banki.ru</a>								
reorg99	CBR's quarterly reports "КО, реорганизованные в форме присоединения/слияния"								
reorg99+	Empty (i.e. contains no mergers) based on <a href="http://www.banki.ru">www.banki.ru</a>								
ko	Most recent CBR's list "Полный список кредитных организаций"								
otz	Most recent CBR's list "Ликвидационные мероприятия" with license withdrawal dates								
2) Deposit Insurance Agency's website ( <a href="http://asv.org.ru">http://asv.org.ru</a> )									
reestr	List of current and former participants in the Deposit Insurance System								
3) Mobile Information Agency ( <a href="http://www.mobile.ru">www.mobile.ru</a> )									
mob10	Mobile database (2010 update)								
<u>Notes:</u>									
N/A	Not applicable								
Shaded cells	Primary data sources per bank category								

<sup>3</sup> Registration (license) numbers should always be used as *unique bank identifiers*. Here we add bank names for researcher's convenience only. We use the most recent bank names available and ignore the fact that some banks change their names over time.

**Fourth**, we manually collect data on all mergers and acquisitions after 1.01.1999 from quarterly reports “Kreditny’e organizatsii, reorganizovanny’e v forme prisoedineniya/sliyaniya (Кредитные организации, реорганизованные в форме присоединения/слияния)” available on CBR’s website (ref. *reorg99*).

All banks that disappear as a result of M&A after 1.01.1999 have their license withdrawal & liquidation dates coincide. We *assume* the same pattern should hold for M&A before 1999. Out of 161 banks liquidated between 1.10.1995<sup>4</sup> & 1.01.1999 we identify 28 banks that have their license withdrawal dates equal to their liquidation dates. For 24 banks we manually gather merger data from “Kniga pam’yati (Книга памяти)” at [www.banki.ru](http://www.banki.ru) (ref. *reorg98*). The remaining 4 banks disappeared for other reasons.

We merge the M&A data with the main database, both for acquiring banks and for targets. For acquiring banks we add a set of variables (*tar1 reorg1, tar2 reorg2...*) indicating registration numbers of all acquired banks and respective acquisition dates (in chronological order). For acquired banks a dummy variable *merged* equal to 1 indicates those banks were liquidated as a result of a merger.

Problems:

- 33 dead banks in the main database (from CBR’s quarterly liquidation reports) have *no* license withdrawal date. All those banks were liquidated as a result of a merger, so we use the merger date instead
- Oneximbank’s (2301) license withdrawal was subsequently cancelled by the CBR (<http://banksbd.spb.ru>). So, the license withdrawal date in the main database (from CBR’s quarterly liquidation reports) is wrong & is replaced with the merger date from *reorg99*
- Sevdorbank’s (3165) license withdrawal date contains a typo, and is replaced with the correct merger date from *reorg99* (confirmed by [www.banki.ru](http://www.banki.ru))
- Two banks (72, 1054) have wrong registration dates (from Mobile 2010). Those are replaced with registration dates from *reorg98* (confirmed by [www.cbr.ru/credit](http://www.cbr.ru/credit))

**Fifth**, we add dates of acceptance to the Deposit Insurance System from the most recent list “Reestr bankov-uchastnikov SSV (Реестр банков - участников ССВ)” for operating banks and “Banki, iskluchennyye iz systemy strakhovaniya (Банки, исключенные из системы страхования)” for dead banks (ref. *reestr*), both lists available on Deposit Insurance Agency’s website (<http://asv.org.ru>).

**Sixth**, for banks liquidated after 1.01.1999 we add postal codes from Mobile.

**Seventh**, Russian Post provides the correspondence between zip-codes and geographical units of any level in a data file “Etalonnyi Spravochnik Indeksov Ob’ektov Pochtovoi Svyazi (Эталонный справочник индексов объектов почтовой связи)” available at <http://info.russianpost.ru/database/ops.html> (ref. *PIdx12*). We merge that data file with the main database by zip-code. The resulting extra variable *region* indicates in which of the 83 federal subjects of Russia a bank is currently located (or was located at its death).

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<sup>4</sup> Earlier mergers are of little interest as we don’t have bank balance sheet information prior to 1995q4.

### Problems:

- Many postal codes reported by banks are missing from *PIndx12*. Luckily, however, the first three digits of the six-digit zip-code in almost all cases suffice to unambiguously identify the corresponding federal subject. So, we convert all 6-digit zip-codes into 3-digit ones (by removing the last three digits), and do all the actual merging based on those.<sup>5</sup>
- Even when reduced to 3 digits some zip-codes seem to be missing from *PIndx12*. We add those manually.

**Eighth**, we manually collect data on all banks changing location after 1.01.1999 from quarterly reports “Кредитные организации, изменившие свое место нахождения” available on CBR’s website (ref. *loc99*).<sup>6</sup> We add a set of variables (*reloc1 regionold1, reloc2 regionold2...*) indicating the date of each reported location change (in chronological order) and the region of bank’s residence prior to that date.

As a final step we assign bank names as value labels of *regn* and drop variable *name*.

The static version of the database is complete. It combines multiple data sources as detailed above. As a rough summary, data on banks liquidated before 1.01.1999 comes from Mobile, while data on all other banks comes from alternative data sources, primarily CBR. That allows us to test consistency between CBR and Mobile for those banks *not* liquidated before 1.01.1999. Specifically, we compare variables *regist, revok & likvid* from our combined database with the same variables from Mobile for banks either still in operation or liquidated after 1.01.1999.

Out of 2646 registration dates available in *both* databases only 14 differ. Of those 14 in 8 cases the difference is only a couple of days. Such differences are practically irrelevant as most bank-specific information, such as balance sheets & income statements, is available at monthly frequency at best. For 6 banks (936, 1442, 1540, 1568, 1691 & 1754), however, the two sources do report different *months* of registration.

Out of 1606 license withdrawal dates available in both databases only 11 differ. Again most differences are small and irrelevant, but for 4 banks (1125, 1761, 2878 & 3414) the two sources do report different *months* of license withdrawal.

We manually compare all those ambiguous cases (6 for *regist* & 4 for *revok*) to external sources ([www.cbr.ru/credit](http://www.cbr.ru/credit) & <http://banksbd.spb.ru>), and in all cases Mobile turns out to be wrong. So, no adjustments are needed.

Out of 1485 liquidation dates available in both databases 730 differ. Luckily, however, liquidation dates are hardly ever used for analysis, so we ignore the problem & make no adjustments.

Finally, although some Mobile zip-codes differ from those of the CBR both result in exactly the same *region* variable once matched with *PIndx12*. Thus, for practical purposes the differences are irrelevant.

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<sup>5</sup> There are three exceptions: postal codes starting with 140, 142 or 144 may be associated either with the Moscow region or with the city of Moscow. We leave those codes intact, and use all 6 digits in what follows.

<sup>6</sup> On problems with these reports see Appendix 2.

Figure 1 is a self-explanatory graph providing an overview of bank creation and bank destruction in Russia.

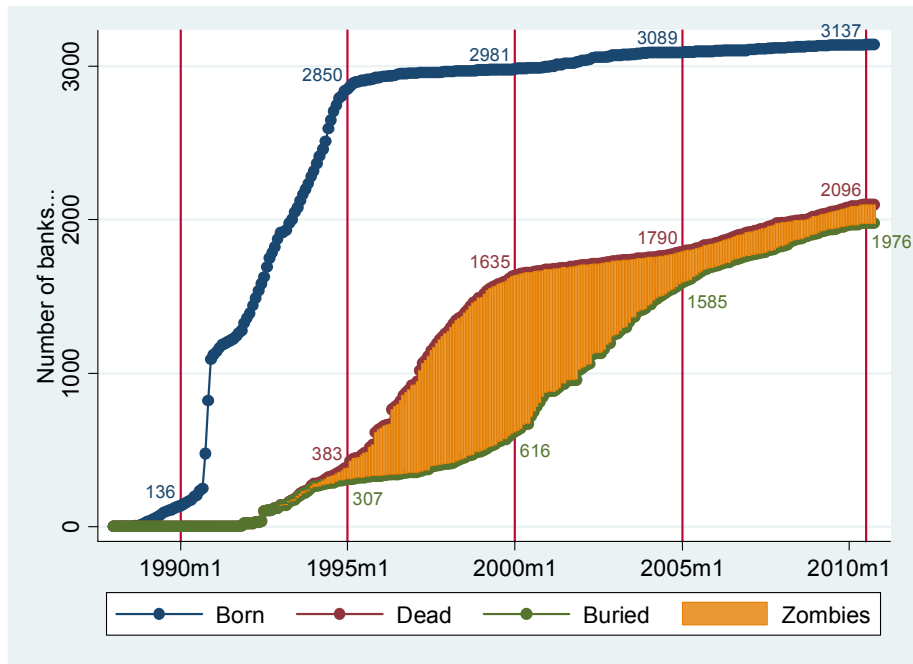


Figure 1: Bank creation & bank destruction in Russia

## Step 2: time-varying (panel) data

We convert the static (cross-sectional) data into a panel. The time dimension is monthly and spans the period from birth till burial for dead banks and from birth till 2010m10 for operating ones.

So far, variable *region* defined each bank's *most recent* location, and was, therefore, static. Using data on location changes we now make it dynamic. For each bank we replace the values of *region* with the values of *regionold1-2-3* prior to the dates of the respective location changes (*reloc1-2-3*).

We further add a variable *district* indicating in which of the 7 federal districts of Russia the respective federal subject, *region*, is located.<sup>7</sup>

We organize data on acquired (target) banks as illustrated by means of an example below (see Table 2). Bank 2275 acquired 4 banks in 2005m9. Up to that month the values of all its variables *tar1-6* are missing. As of 2005m10 variables *tar1-tar4* take values equal to the registration numbers of the 4 acquired banks (30, 409, 1898 & 2784). The values of *tar5-6* remain missing until after 2010m5 when 2 more banks are acquired. Hence, at any point in time the values of variables *tar1-6* provide a complete list of acquisitions made by the bank to date.

Table 2: M&A data organization (example of bank 2275)

regn	time	tar1	tar2	tar3	tar4	tar5	tar6
...							
2275	2005m8						
2275	2005m9						
2275	2005m10	30	409	1898	2784		
2275	2005m11	30	409	1898	2784		
...							
2275	2010m4	30	409	1898	2784		
2275	2010m5	30	409	1898	2784		
2275	2010m6	30	409	1898	2784	457	1667
2275	2010m7	30	409	1898	2784	457	1667

We add a dummy variable *state* equal to 1 for state-owned banks.

The lists of banks having the state as a majority shareholder are available at 5 points in time: 2000m10 (Kulakova, 2000), 2001m10 (Matovnikov, 2002), 2005m7 (Mamontov, 2005), 2006m1 (Vernikov, 2007) & 2009m7 (Vernikov, 2009)<sup>8</sup>. We fill in observations from other periods by first carrying those 5 ownership definitions *forward*. That is, banks

<sup>7</sup> Source: [www.russiamaps.newmail.ru](http://www.russiamaps.newmail.ru)

<sup>8</sup> To assure consistency with other sources from Vernikov (2009) we only take banks falling into one of his first 3 categories:

- 1) banks owned by federal executive authorities and CBR
- 2) banks owned by regional and municipal authorities
- 3) banks majority-owned by state-owned companies, state-owned banks and 'state corporations'

We also define a variable *vernikov* indicating which of the 3 above mentioned categories a bank belongs to.

reported to be state-owned in 2000m10 remain state-owned until 2001m10 when the next definition applies, and so on. We fill in the remaining observations (e.g. observations prior to 2000m10) by carrying the ownership definitions *backward*.

We add a dummy variable *foreign* equal to 1 for 100% foreign-owned banks. To identify such banks we use quarterly CBR reports “Spisok deistvuyuschikh kreditnykh organizatsiy so 100-protsentnym uchastiyem nerezidentov (Список действующих кредитных организаций со 100-процентным участием нерезидентов)” available from 1999q1.

To get foreign ownership definitions on a monthly basis we again carry the quarterly definitions *forward*. That is, banks reported to be 100% foreign-owned in 1999m1 remain foreign-owned until 1999m4 when the next definition applies, and so on. We code all observations prior to 1999m1 with a zero (i.e. non-foreign).

The monthly version of the panel is complete. To get a quarterly one we drop observations corresponding to the second and third month of each quarter.

Final note: monthly/quarterly observations refer to the *beginning* of the period, e.g. a bank’s location or ownership on the first day of the month/quarter.



### Step 3: Interfax

We purchase quarterly reports “Interfax-100 Analytical and Statistical Survey of the Banking System” from a Moscow-based information agency “Interfax” ([www.interfax.ru](http://www.interfax.ru)). Those reports start in 1999q1, arrive in Excel and for all Russian banks provide an extensive list of items from their financial statements as well as regulatory ratios.

*Warning for new users of Interfax:* to our deep regret Interfax is not a database, it is a customer-oriented report; it is designed to be *read*, not to be used as an input into some secondary analysis. It takes time, effort and *great care* to convert it into a usable dataset.

Problems & solutions:

- Each quarterly Excel-based report has one sheet for balance sheet (BS) items and another sheet for P&L items/regulatory ratios. In each sheet rows correspond to different banks while columns correspond to different variables. So, the first obvious task is for each quarterly report to merge the BS sheet with the P&L sheet by bank.

Merging by bank requires a unique bank identifier. In the notes to each report Interfax maintains that registration (license) numbers should be used as unique bank identifiers. Yet, Interfax makes it *impossible* to use those numbers for merging as only the BS but not the P&L sheet contains them!

An alternative would be to use bank names as bank identifiers. That doesn't work, however, as there are a number of banks with *exactly the same* names. Further:

- o BS and P&L sheets in 2004q1 have different names for the same bank (with size rank equal to 542); we manually replace name «БТФ» in P&L with «Фили» from BS

Another alternative is to use bank-specific size ranks (*Nakt*) present in both BS and P&L sheets. But those ranks contain errors!

- o All P&L sheets from 2003q1 through 2005q3 contain two observations with *Nakt* = 857 and none with *Nakt* = 858; we manually correct these typos replacing each second case of *Nakt* = 857 by 858
- o In 2007q4 one bank (*Nakt* = 191) is present in BS but not in P&L. We take that bank out and adjust *Nakt* to restore the correspondence between BS and P&L

*Conclusion:* the only safe way to go is to merge the BS and P&L sheets by *both* name and size rank (*Nakt*) and manually correct any identified inconsistencies.

- The next task is to stack quarterly reports on top of each other to have a panel dataset. Well, that's an even more challenging problem because:
  - o Interfax variables have no unique names; they are identified by a complex caption spread over multiple Excel cells
  - o The number of indicators changes over time as some get added to the database and some get removed
  - o Even if the number of indicators remains the same their order changesSo, the only seeming way to proceed is to manually assign unique names to *all* indicators in *all* quarterly reports (250 indicators \* 4 quarters \* 11 years = 11000

- cells to change), and then append one quarterly file to the other based on those unique names.<sup>9</sup> Appendix 3 presents the complete list of Interfax variables.
- After appending all the files it's prudent to check for duplicate observations. In 2007q3 two observations (Nakt=659, 660) are identical for all variables except bank name. Clearly, some copy-pasting went wrong in Excel. One observation is dropped.
  - Interfax splits variables into categories, such as claims of banks, claims of non-banks, issued debt securities etc. Within those categories Interfax just loves providing percentage figures instead of absolute figures (see Appendix 4 for all such cases). For example, Interfax provides an absolute figure for the total investment in equity. But then, instead of simply splitting it into components, i.e. equity of banks, non-banks and non-residents *in rubles*, it rather gives us the corresponding %-shares of banks, non-banks and non-residents in total equity. Obviously, such presentation facilitates immediate comparison across banks. Unfortunately, it also creates problems when you want to back-calculate the ruble figures from the percentages.
    - Suppose, for example, total equity investment is zero. Then the corresponding percentages can't be computed (division by zero) and Interfax understandably reports missing values. But multiplying a missing percentage by the total equity investment of zero in any software including Excel delivers a *missing* value (or an error). So, instead of getting the expected result that investment into equity of banks, non-banks and non-residents equals zero, we get missing values. *That can go easily unnoticed by an inexperienced Interfax user.*  
*Solution:* handle cases with a zero common denominator separately from those with a non-zero denominator. Appendix 6 presents some Stata code computing a set of commonly used bank-specific variables in this manner.
    - From a database manager prospective, however, percentages possess one useful feature – you can put them through a bunch of consistency tests to verify data reliability. In particular:
      - Test 1: percentages can't exist if the respective common denominator is zero or missing
      - Test 2: percentages should be bounded between 0 and 100
      - Test 3: the total of all %-shares within a category should equal 100
 We run those tests for all cases mentioned in Appendix 4 and report the results in Appendix 5. The outcome is rather comforting:  
 Test 1 is always passed  
 Test 2 is violated by only 15 banks (34 bank-quarters) for variable *kor* (correspondent accounts)  
 Test 3 is violated for variables *zs* (by many bank-quarters), *ras* (by 65 bank-quarters), *term* (by 1 bank-quarter) and *exp* (by many bank-quarters)  
*We don't have any explanation for these violations, and leave it up to the researcher to decide what to do with those observations. But just to recapitulate: the general outcome of the tests is quite reassuring.*

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<sup>9</sup> Some tricks to perform this task efficiently are available from the author on request.

- Having verified Interfax variables are fairly consistent within categories we now go one level higher and look across categories. We start with constructing six major liability items: claims of CBR, other banks, government, firms, individuals and issued debt securities (see Appendix 6 for details and Stata code<sup>10</sup>). The ratio of the sum of those items to total liabilities (*zs*) should be close to but never above 1, and, that's indeed, the case: 50% of all bank-quarters have this ratio in excess of 0.98, and 95% of bank-quarters in excess of 0.75. The maximum value is 1. Thus, the six items mentioned above represent the bulk of most banks' liabilities, and the unreported residual component (that we can call other liabilities) is fairly small. For the whole banking system in 2009q4 it represents only 3% of total liabilities (see Figure 2).

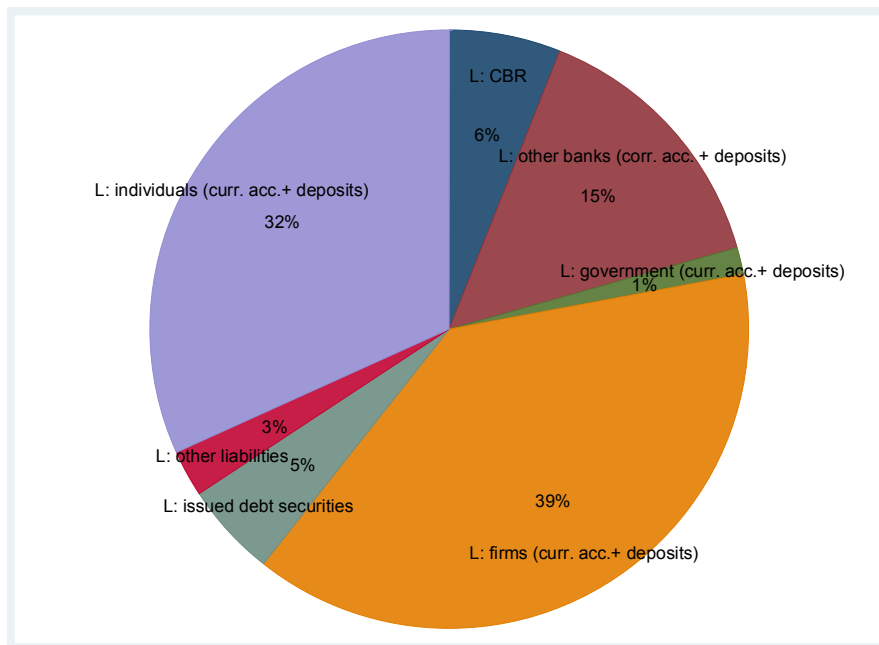


Figure 2: Banking system's liabilities in 2009q4

We now repeat the exercise for the asset side. One complication is that most asset items (including total assets themselves) can be reported either on a net or on a gross basis, that is, before or after deducting respective loss reserves.

We start with the following six mutually exclusive asset items on a net basis (see Appendix 6 for details and Stata code): government securities (*govsec*)<sup>11</sup>, non-government securities (*nongovsec*),<sup>12</sup> correspondent accounts (*kor*), required reserves (*for*), loans to banks (*kredbk*) and loans to non-banks (*krednbs*). We

<sup>10</sup> When constructing these items we try to exclusively rely on variables available for the *whole* period covered.

<sup>11</sup> As long as available we subtract government promissory notes (*gosveks*) from government securities (*goscb*) to avoid double counting as those notes are included in both *goscb* & *krednbs*. By 2007q3 *gosveks* is zero for all but 6 banks, and from 2007q4 Interfax stops reporting this variable.

<sup>12</sup> Non-government securities are only available since 2003q4.

would expect the ratio of the sum of those six items to net assets (*akt*) to be close to but never above 1, and that's close to be the case.

For only 176 bank-quarters is this ratio above 1 (for 75 bank-quarters above 1.01) with a maximum value of 1.25. The reason for this apparent mismatch is the complex methodology used by Interfax to adjust balance sheet totals to arrive at the net assets figure. Next to loan loss reserves a whole bunch of other items are deducted during that procedure making reported net assets occasionally smaller than even some distinct asset components.<sup>13</sup> Thus, ratios above 1 are, although seemingly counterintuitive, entirely possible.

50% of all bank-quarters have this ratio in excess of 0.88, and 95% of bank-quarters in excess of 0.55. Clearly, there are some important asset categories missing from the above mentioned list of six items. Two evident examples are fixed assets and vault cash. Still, we can conclude that the six items mentioned above represent the bulk of most banks' net assets, and the unreported residual component (that we can call other assets) is not too large. For the whole banking system in 2009q4 it represents only 9% of total net assets (see Figure 3).

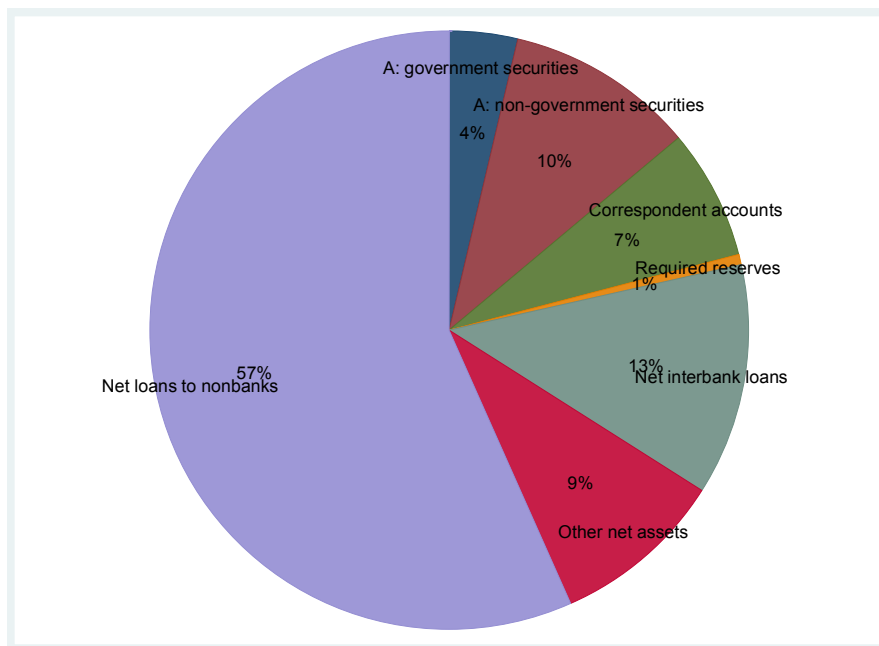


Figure 3: Banking system's net assets in 2009q4

Along the guidelines spelled out in Appendix 6 we repeat the exercise for gross assets and arrive at very similar conclusions (see Figure 4).

<sup>13</sup> One such example is bank 2832 in 2003q1 with net loans of Rb 2232 mln being above its net assets of Rb 2229 mln.

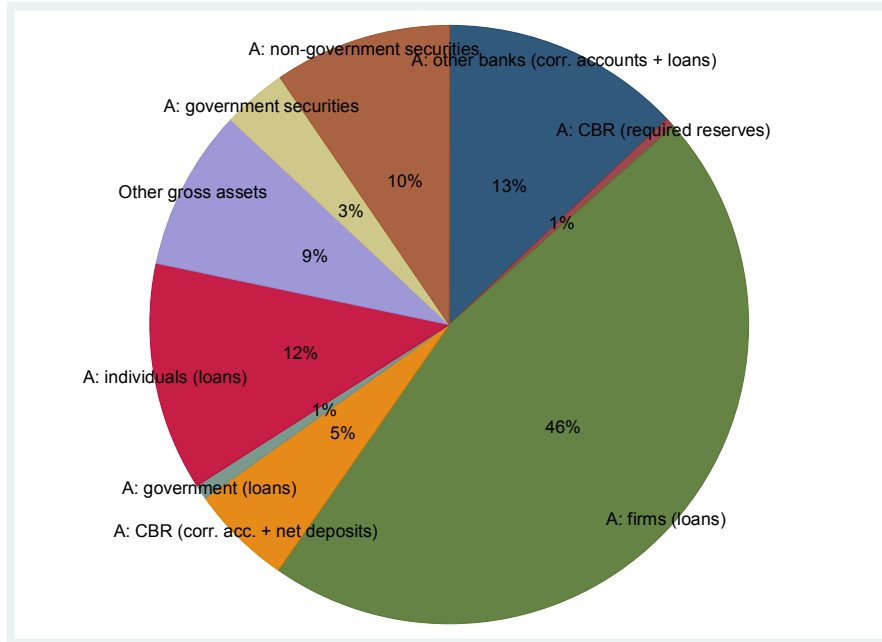


Figure 4: Banking system's gross assets in 2009q4

We merge Interfax data with the quarterly panel of Step 2 by *regn & time*.

## **Step 4: Mobile**

We merge Mobile 2010 data with the monthly panel of Step 2 by *regn & time*.

TO BE CONTINUED...

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Appendix 1: Liquidated banks missing from quarterly CBR reports

**N Registration number Registration date License withdrawal date Liquidation date**

1	36	27.12.1988	27.01.1997	18.06.2003
2	73	22.03.1989	31.07.1997	10.06.2003
3	329	28.06.1990	23.03.1999	18.06.2003
4	363	06.08.1990	05.01.1996	27.06.2003
5	615	26.10.1990	07.04.1997	26.06.2003
6	648	31.10.1990	02.09.1996	30.06.2003
7	1201	14.12.1990	25.12.1997	20.06.2003
8	1285	25.12.1990	06.12.1996	24.06.2003
9	1449	24.12.1991	02.07.1999	18.03.2004
10	1453	23.04.1991	24.03.1995	27.06.2003
11	1454	25.04.1991	17.02.1995	28.06.2003
12	1622	14.11.1991	20.02.1995	27.06.2003
13	1775	16.04.1992	19.04.1999	28.06.2003
14	1944	04.06.1992	06.11.1997	18.03.2004
15	2020	11.08.1992	20.02.1995	22.03.2004
16	2059	08.09.1992	22.04.1998	28.06.2003
17	2112	18.09.1992	05.09.1996	18.06.2003
18	2196	10.12.1992	23.03.1999	21.06.2003
19	2318	28.04.1993	31.07.1997	17.06.2003
20	2376	10.06.1993	16.08.1994	28.06.2003
21	2502	21.09.1993	28.11.1998	28.06.2003
22	2727	04.03.1994	22.01.1998	27.06.2003
23	2785	07.04.1994	09.04.1999	28.06.2003
24	2882	10.06.1994	11.03.1999	21.06.2003
25	3067-K	01.09.1994	07.09.2000	28.06.2003
26	3155	14.11.1994	30.06.1999	22.03.2004
27	3160	14.11.1994	13.05.1997	27.06.2003
28	3193	30.12.1994	18.11.1999	18.06.2003



Appendix 2: Inconsistencies in CBR reports on location changes

Registration number	Old address (before location change)	New address (after location change)	Date of location change
2593	119146, г. Москва, ул. 3-я Фрунзенская, 12	119146, Московская обл., г. Талдом, ул. Калязинская, 41	16.03.2000
2593	141900, Московская область, г. Талдом, ул. Калязинская, 41	119019, г. Москва, Кремлевская набережная, д. 1, стр. 2	27.10.2008
2929	236006, г. Калининград, наб. Баграмяна, 4	236006, г. Москва, 1-й Николощеповский пер., 6, стр. 1	2.10.2000
2959	350058, г. Краснодар, ул. Старокубанская, 114а	350000, г. Москва, Нижний Сусальный пер., 5, корп. 1	12.02.2001
603	433000, Ульяновская область, г. Инза, ул. Заводская, 4	433000, Ульяновская область, г. Инза, ул. Заводская, 4	30.09.02
2145	129223, г. Москва, Проспект Мира, ВВЦ, стр.115	129223, Московская область, г. Пушкино, ул. 2-я Домбровская, , 25	09.02.1999
1068	673382, Читинская обл., Шилкинский р-н, п. Первомайский, ул. Забайкальская, 12	673382, г. Санкт-Петербург, Загородный пр-т, 18/2	6.05.2000
558	160035, Вологодская область, г. Вологда, ул. Ленина, 10	160035, г. Санкт-Петербург, Большой просп. В.О., 9/6, лит. "а"	31.10.01

It seems odd that a bank moving to another city (or even region) reports its postal code to remain the same. Also cases of banks reporting exactly the same new address as the old one appear suspicious. Examples are provided above. We check all such cases manually and conclude that all the errors occur in the column with new addresses. Old addresses, fortunately, seem to contain no errors.

### Appendix 3: Variable names and labels for Interfax

Variable label	Variable name
Rank by assets	nakt
Bank name	name
City	city
Registration number (bank identifier)	regn
Assets	akt
Assets growth, %	gakt
Capital	sobkap
Rank by capital	nsobkap
Capital growth, %	gsobkap
Before-tax profit	pribdonal
Rank by before-tax profit	npribdonal
After-tax profit	nerasprib
Rank by after-tax profit	nnerasprib
Liabilities of individuals	sredfl
Rank by liabilities of individuals	nsredfl
Growth of liabilities of individuals, %	gsredfl
Deposits of individuals	depchast
Rank by deposits of individuals	ndepchast
Growth of deposits of individuals, %	gdepchast
Share of deposits with maturity up to 90 days in deposits of individuals, %	sdepchast90
Share of deposits with maturity 90 to 180 days in deposits of individuals, %	sdepchast180
Share of deposits with maturity 181 to 365 days in deposits of individuals, %	sdepchast365
Share of deposits with maturity from 1 to 3 years in deposits of individuals, %	sdepchast3
Share of deposits with maturity over 3 years in deposits of individuals, %	sdepchastlong
Current accounts of individuals	raschast
Ruble-denominated deposits of individuals	depchastrub
Growth of ruble-denominated deposits of individuals, %	gdepchastrub
Dollar-denominated deposits of individuals	depchastval
Growth of dollar-denominated deposits of individuals, %	gdepchastval
Share of deposits of individuals in liabilities, %	depchast_zs
Share of liabilities of individuals in liabilities, %	sredfl_zs
Deposits of individuals-to-capital ratio (N11)	n11
Government securities	goscb
Rank by government securities	ngoscb
Growth of government securities, %	ggoscb
Ruble-denominated government securities	goscbrub
Growth of ruble-denominated government securities, %	ggoscbrub
Dollar-denominated government securities	goscbval
Growth of dollar-denominated government securities, %	ggoscbval
Share of government securities in assets, %	goscb_akt
Federal bonds	gosoblig
Growth of federal bonds	ggosoblig
Promissory notes issued or guaranteed by government	gosveks
Securities issued by regions and municipalities	regcb
CBR bonds	cbrcb
Foreign government bonds	ingoscb
Non-government Securities	negoscb
Rank by non-government securities	nnegoscb
Growth of non-government securities, %	gnegoscb
Share of non-government securities in assets, %	negoscb_akt

Investment in equity	equity
Share of domestic banks in equity portfolio, %	seqbkr
Share of domestic non-banks in equity portfolio, %	seqppr
Share of non-residents in equity portfolio, %	seqnr
Investment in bonds	do
Share of domestic banks in bonds portfolio, %	sdobkr
Share of domestic non-banks in bonds portfolio, %	sdoppr
Share of non-residents in bonds portfolio, %	sdonr
Correspondent accounts	kor
Share of CBR in correspondent accounts, %	skorcbr
Share of Russian banks in correspondent accounts, %	skorrus
Share of foreign banks in correspondent accounts, %	skorin
Required reserves	for
Net interbank loans	kredbk
Share of deposits with CBR in interbank loans, %	skredbkabr
Share of domestic banks in interbank loans, %	skredbkru
Share of foreign banks in interbank loans, %	skredbkfn
Share of interbank loans in assets, %	mbk_akt2
Net investments into marketable debt of banks	bkeb
Net loans to nonbanks	krednbs
Growth of net loans to nonbanks, %	gkrednbs
Share of net loans to nonbanks in assets, %	krednbs_akt
Loans to domestic nonbanks	krednbsr
Share of federal government in loans to domestic nonbanks, %	skrednbsrfg
Share of regional and local governments in loans to domestic nonbanks, %	skrednbsrrg
Share of firms and individual entrepreneurs in loans to domestic nonbanks, %	skrednbsrpp
Share of individuals in loans to domestic nonbanks, %	skrednbsrhh
Loans to foreign nonbanks	krednbsnr
Reserves for loans to and promissory notes issued by nonbanks	reskredveks
Non-performing loans	prosnbs
Loans to individuals	kredfl
Rank by loans to individuals	nkredfl
Growth of loans to individuals, %	gkredfl
Share of loans overdraw in loans to individuals, %	skredflver
Share of loans with maturity up to 90 days in loans to individuals, %	skredfl90
Share of loans with maturity from 90 to 180 days in loans to individuals, %	skredfl180
Share of loans with maturity from 181 days to 1 year in loans to individuals, %	skredfl365
Share of loans with maturity from 1 to 3 years in loans to individuals, %	skredfl3
Share of loans with maturity over 3 years in loans to individuals, %	skredflong
Share of overdue loans in loans to individuals, %	skredflpros
Non-performing loans to domestic nonbanks	prosnbsr
Growth of non-performing loans to domestic nonbanks, %	gprosnbsr
Share of non-performing loans in loans to federal government, %	pros_krednbsrfg
Share of non-performing loans in loans to regional and local governments, %	pros_krednbsrrg
Share of non-performing loans in loans to firms and individual entrepreneurs, %	pros_krednbsrpp
Share of non-performing loans in loans to individuals, %	pros_krednbsrhh
Non-performing loans to foreign nonbanks	prosnbsnr
Growth of non-performing loans to foreign nonbanks, %	gprosnbsnr
Share of non-performing loans in loans to foreign firms, %	pros_krednbsnrpp
Share of non-performing loans in loans to foreign individuals, %	pros_krednbsnrhh
Investments into promissory notes	veks
Rank by investments into promissory notes	nveks
Share of promissory notes in assets, %	veks_akt

Share of promissory notes in loans, %	veks_kred
Share of government in promissory notes, %	sveksgov
Share of banks in promissory notes, %	sveksbk
Share of other issuers in promissory notes, %	sveksproch
Debit turnover of promissory notes	obveks
Turnover of promissory notes issued by government	obveksgov
Turnover of promissory notes issued by banks	obveksbk
Turnover of promissory notes issued by others	obveksproch
Interbank loans	mbk
Rank by interbank loans	nmbk
Share of interbank loans in assets, %	mbk_akt
Share of loans to foreign banks in interbank loans, %	smbknr
Share of loans to foreign banks with maturity of less than 1 week in IL, %	smbknr7
Share of loans to foreign banks with maturity of 1 week to 1 year in IL, %	smbknr365
Share of loans to foreign banks with maturity of more than 1 year in IL, %	smbknlrlong
Share of nonperforming loans to foreign banks in interbank loans, %	smbknrpros
Share of loans to domestic banks in interbank loans, %	smbkr
Share of loans to domestic banks with maturity of less than 1 week in IL, %	smbkr7
Share of loans to domestic banks with maturity of 1 week to 1 year in IL, %	smbkr365
Share of loans to domestic banks with maturity of more than 1 year in IL, %	smbkrlong
Share of nonperforming loans to domestic banks in interbank loans, %	smbkrpros
Assets denominated in foreign currency	valakt
Share of foreign-currency-denominated assets in total assets, %	val_akt
Share of foreign-currency-denominated assets in loans to nonbanks, %	val_krednbs
Share of foreign-currency-denominated assets in claims on banks, %	val_kredbk
Share of foreign-currency-denominated assets in nonbanks' debt securities, %	val_cbnbs
Share of foreign-currency-denominated assets in other assets, %	val_proch
Claims on non-residents, total	aktnr
Rank on claims on non-residents	naktnr
Growth of claims on non-residents, %	gaktnr
Claims on non-residents: loans to non-banking sector	krednbsnr2
Claims on non-residents: interbank loans and correspondent accounts	kormbknr
Share of non-residents in assets, %	nr_akt
Share of non-residents in loans to non-banking sector, %	nr_krednbs
Share of non-residents in interbank loans and correspondent accounts, %	nr_kormbk
Liabilities	zs
Rank on liabilities	nzs
Growth of liabilities, %	gzs
Share of current and correspondent accounts in liabilities, %	szstekkor
Share of term deposits with maturity of less than 90 days in liabilities, %	szsdep90
Share of term deposits with maturity of 90 days to 1 year in liabilities, %	szsdep365
Share of term deposits with maturity of more than 1 year in liabilities, %	szsdeplong
Share of debt securities with maturity of less than 90 days in liabilities, %	szsdebt90
Share of debt securities with maturity of 90 days to 1 year in liabilities, %	szsdebt365
Share of debt securities with maturity of more than 1 year in liabilities, %	szsdebtlong
Share of overdue liabilities in liabilities, %	szspros
Share of liabilities with uncertain term to maturity in liabilities, %	szsneopr
Claims of banks	zsbk
Share of correspondent accounts in claims of banks, %	zsbkkor
Share of correspondent accounts of domestic banks in claims of banks, %	zsbkkorrus
Share of correspondent accounts of foreign banks in claims of banks, %	zsbkkorin
Share of interbank deposits in claims of banks, %	zsbkdep
Share of deposits from CBR in claims of banks, %	zsbkdepceb

Share of interbank deposits of domestic banks in claims of banks, %	szsbkdeprus
Share of interbank deposits of foreign banks in claims of banks, %	szsbkdepin
Share of interbank deposits in liabilities, %	depbk_zs
Claims of nonbanking sector	zsnbs
Settlement accounts	ras
Share of government in settlement accounts, %	srasgov
Share of domestic firms in settlement accounts, %	srasppr
Share of domestic individuals in settlement accounts, %	srashhr
Share of foreign firms in settlement accounts, %	srasppnr
Share of foreign individuals in settlement accounts, %	srashhnr
Term deposits	term
Share of government in term deposits, %	stermgov
Share of domestic firms in term deposits, %	stermppr
Share of domestic individuals in term deposits, %	stermhhr
Share of foreign firms in term deposits, %	stermppnr
Share of foreign individuals in term deposits, %	stermhhr
Debt securities issued	cb
Rank on debt securities issued	ncb
Issued ruble-denominated promissory notes outstanding	veksrub
Turnover on issued ruble-denominated promissory notes	obveksrub
Issued foreign-currency-denominated promissory notes outstanding	veksval
Turnover on issued foreign currency-denominated promissory notes	obveksval
Issued promissory notes outstanding	zsveks
Certificates of deposit issued	certdep
Certificates of savings issued	certsber
Bonds issued	oblig
Share of debt securities in liabilities, %	cb_zs
Liabilities denominated in foreign currency	valzs
Share of foreign-currency-denominated liabilities in liabilities, %	val_zs
Share of foreign-currency-denominated liabilities in deposits of nonbanks, %	val_zsnbs
Share of foreign-currency-denominated liabilities in claims of banks, %	val_zsbk
Share of foreign-currency-denominated liabilities in issued debt securities, %	val_cb
Share of foreign-currency-denominated liabilities in other liabilities, %	val_zsproch
Total claims of nonresidents	zsnr
Growth of claims of non-residents, %	gzsnr
Claims of nonresidents: deposits from nonbankig sector	zsnbsnr
Claims of nonresidents: investment and special accounts	zsisnr
Claims of nonresidents: interbank deposits	zsbknr
Share of nonresidents in liabilities, %	nr_zs
Share of nonresidents in claims of nonbanking sector, %	nr_zsnbs
Share of nonresidents in interbank deposits, %	nr_zsbk
Ruble-denominated interbank loans: balance	mbkrub
Ruble-denominated interbank deposits: balance	depbkub
Ruble-denominated interbank loans: turnover	obmbkrub
Ruble-denominated interbank deposits: turnover	obdepbkub
Foreign-currency-denominated interbank loans: balance	mbkval
Foreign-currency-denominated interbank deposits: balance	depbkval
Foreign-currency-denominated interbank loans: turnover	obmbkval
Foreign-currency-denominated interbank deposits: turnover	obdepbkval
Profit before tax	pribdonal2
Profit after tax	nerasprib2
Net interest margin	nim
Net re-evaluation of assets	pereoc

Net provisions for losses	llp
Net income from other sources, total	netproch
Personnel expenses	persexp
Profit before provisions for losses and asset re-evaluation	pribdopereocllp
Interest income	doh
Share of loans to customers in interest income, %	sdohnbs
Share of interbank loans in interest income, %	sdohbk
Share of debt securities in interest income, %	sdohcb
Share of other sources in interest income, %	sdohproch
Interest expenses	rash
Share of customer accounts in interest expenses, %	srashnbs
Share of interbank deposits in interest expenses, %	srashbk
Share of debt securities in interest expenses, %	srashcb
Share of other sources in interest expenses, %	srashproch
Interest received on loans and deposits	inc
Share of government in interest income, %	sincgov
Share of CBR in interest income, %	sincebr
Share of domestic banks in interest income, %	sincbkr
Share of foreign banks in interest income, %	sincbknr
Share of firms owned by federal government in interest income, %	sincppfg
Share of firms owned by local governments in interest income, %	sincpprg
Share of domestic private non-banking firms in interest income, %	sincppr
Share of foreign non-banking firms in interest income, %	sincppnr
Share of individual entrepreneurs in interest income, %	sincent
Share of individuals in interest income, %	sinchh
Share of others in interest income, %	sincproch
Interest paid on accounts, loans and deposits	exp
Share of government in interest expenses, %	sexpgov
Share of CBR in interest expenses, %	sexpcbr
Share of domestic banks in interest expenses, %	sexpbkr
Share of foreign banks in interest expenses, %	sexpbknr
Share of firms owned by federal government in interest expenses, %	sexpppfg
Share of firms owned by local governments in interest expenses, %	sexppprg
Share of domestic private non-banking firms in interest expenses, %	sexpppr
Share of foreign non-banking firms in interest expenses, %	sexpppnr
Share of individuals in interest expenses, %	sexphh
Capital adequacy ratio (N1)	n1
Quick liquidity ratio (N2)	n2
Current liquidity ratio (N3)	n3
Long-term liquidity ratio (N4)	n4
General liquidity ratio (N5)	n5
Large-risks-to-capital ratio (N7)	n7
Owner-related-credit-risks-to-capital ratio (N9.1)	n91
Insider-related-credit-risks-to-capital ratio (N10.1)	n101
Investment-to-shares-to-capital ratio (N12)	n12
Issued-promissory-notes-to-capital ratio (N13)	n13
Payment cards	plastcard

Appendix 4: Percentage variables in Interfax

Label	Variable	Percentage variables										
Deposits of individuals	depchast	sdepchast90	sdepchast180	sdepchast365	sdepchast3	sdepchastlong						
Investment in equity	equity	seqbkr	seqppr	seqnr								
Investment in bonds	do	sdobkr	sdoppr	sdonr								
Correspondent accounts	kor	skorcbr	skorus	skorin								
Net interbank loans	kredbk	skredbkabr	skredbkus	skredbkin								
Loans to domestic nonbanks	krednbsr	skrednbsrfg	skrednbsrsg	skrednbsrpp	skrednbsrhh							
Loans to individuals	kredfl	skredflower	skredfl90	skredfl180	skredfl365	skredfl3	skredflong	skredflpros				
Investments into promissory notes	veks	sveksgov	sveksbk	sveksproch								
Interbank loans	mbk	smbknr	smbknr7	smbknr365	smbknrlong	smbknrpros	smbkr	smbkr7	smbkr365	smbkrlong	smbkrpros	
Liabilities	zs	szstekkor	szsdep90	szsdep365	szsdeplong	szsdebt90	szsdebt365	szsdebtlong	szspros	szsneopr		
Claims of banks	zsbk	szsbkkor	szsbkkorus	szsbkkorin	szsbkdep	szsbkdepabr	szsbkdeprus	szsbkdepin				
Settlement accounts	ras	srasgov	srasppr	srashhr	srasppnr	srashhnr						
Term deposits	term	sterngov	sternppr	sternhhr	sternppnr	sternhhnr						
Interest income	doh	sdohnbs	sdohbkr	sdohcb	sdohproch							
Interest expenses	rash	srashnbs	srashbk	srashcb	srashproch							
Interest received on loans and deposits	inc	sincgov	sincabr	sincbkr	sincbknr	sincppfg	sincpprg	sincppr	sincppnr	sincent	sinchh	sincproch
Interest paid on accounts, loans and deposits	exp	sexpgov	sexpabr	sexpbkr	sexpbknr	sexppfg	sexpprg	sexppr	sexppnr	sexphh		

## Appendix 5: Consistency tests

<b>How to interpret these tests: example of Deposits of individuals (depchast)</b>					
<b>Test 1:</b> if depchast is zero/missing all sdepchast* should also be missing, i.e. have 'count' of 0					
<b>Test 2:</b> all sdepchast* should have a minimum of 0 and a maximum of 100					
<b>Test 3:</b> Ssdepchast (sum of all sdepchast*) should always be (at least approximately) 100					
depchast			depchast: positive	depchast: zero/missing	Total
Count	depchast		47638	4689	52327
Count	sdepchast90		14909	0	14909
Count	sdepchast180		14909	0	14909
Count	sdepchast365		14909	0	14909
Count	sdepchast3		14909	0	14909
Count	sdepchastlong		14909	0	14909
Count	Ssdepchast		14909	0	14909
Mean	Ssdepchast		100		100
Min	Ssdepchast		99.99		99.99
Max	Ssdepchast		100		100
Min	sdepchast90		0		0
Min	sdepchast180		0		0
Min	sdepchast365		0		0
Min	sdepchast3		0		0
Min	sdepchastlong		0		0
Max	sdepchast90		100		100
Max	sdepchast180		100		100
Max	sdepchast365		100		100
Max	sdepchast3		100		100
Max	sdepchastlong		100		100
Tests: OK					
equity			equity: positive	equity: zero/missing	Total
Count	equity		14778	12193	26971
Count	seqbkr		14778	0	14778
Count	seqppr		14778	0	14778
Count	seqnr		14778	0	14778
Count	Ssequity		14778	0	14778
Mean	Ssequity		100		100
Min	Ssequity		100		100
Max	Ssequity		100		100
Min	seqbkr		0		0
Min	seqppr		0		0
Min	seqnr		0		0
Max	seqbkr		100		100
Max	seqppr		100		100
Max	seqnr		100		100
Tests: OK					
do			do: positive	do: zero/missing	Total
Count	do		9402	17569	26971
Count	sdobkr		9402	0	9402
Count	sdoppr		9402	0	9402
Count	sdonr		9402	0	9402
Count	Ssdo		9402	0	9402
Mean	Ssdo		100		100
Min	Ssdo		100		100
Max	Ssdo		100		100
Min	sdobkr		0		0
Min	sdoppr		0		0
Min	sdonr		0		0
Max	sdobkr		100		100



Max	sdoppr		100		100
Max	sdonr		100		100
Tests: OK					
kor			kor: positive	kor: zero/missing	Total
Count	kor		52234	93	52327
Count	skorebr		52234	0	52234
Count	skorrus		52234	0	52234
Count	skorin		52234	0	52234
Count	Sskor		52234	0	52234
Mean	Sskor		100		100
Min	Sskor		100		100
Max	Sskor		100		100
Min	skorebr		0		0
Min	skorrus		-106.67		-106.67
Min	skorin		0		0
Max	skorebr		101.16		101.16
Max	skorrus		100		100
Max	skorin		186.67		186.67
Test 2: not OK					
kredbk		kredbk: negative	kredbk: positive	kredbk: zero/missing	Total
Count	kredbk	44	36243	16038	52325
Count	skredbkabr	34	36243	891	37168
Count	skredbkkrus	34	36243	891	37168
Count	skredbkkin	34	36243	891	37168
Count	Sskredbk	34	36243	891	37168
Mean	Sskredbk	100	100	100	100
Min	Sskredbk	100	100	100	100
Max	Sskredbk	100	100	100	100
Min	skredbkabr	0	0	0	0
Min	skredbkkrus	100	0	0	0
Min	skredbkkin	0	0	0	0
Max	skredbkabr	0	100	0	100
Max	skredbkkrus	100	100	100	100
Max	skredbkkin	0	100	100	100
Tests: OK (kredbk represents <i>net</i> loans, while skredbk* refer to <i>gross</i> loans; therefore, even if kredbk is negative or zero, skredbk* may still exist)					
krednbsr			krednbsr: positive	krednbsr: zero/missing	Total
Count	krednbsr		50996	1331	52327
Count	skrednbsrfg		50996	0	50996
Count	skrednbsrfg		50996	0	50996
Count	skrednbsrpp		50996	0	50996
Count	skrednbsrhh		50996	0	50996
Count	Sskrednbsr		50996	0	50996
Mean	Sskrednbsr		100		100
Min	Sskrednbsr		100		100
Max	Sskrednbsr		100		100
Min	skrednbsrfg		0		0
Min	skrednbsrfg		0		0
Min	skrednbsrpp		0		0
Min	skrednbsrhh		0		0
Max	skrednbsrfg		100		100
Max	skrednbsrfg		100		100
Max	skrednbsrpp		100		100
Max	skrednbsrhh		100		100
Tests: OK					

kredfl			kredfl: positive	kredfl: zero/missing	Total
Count	kredfl		15241	404	15645
Count	skredflover		15241	0	15241
Count	skredfl90		15241	0	15241
Count	skredfl180		15241	0	15241
Count	skredfl365		15241	0	15241
Count	skredfl3		15241	0	15241
Count	skredfllong		15241	0	15241
Count	skredflpros		15241	0	15241
Count	Sskredfl		15241	0	15241
Mean	Sskredfl		100		100
Min	Sskredfl		100		100
Max	Sskredfl		100		100
Min	skredflover		0		0
Min	skredfl90		0		0
Min	skredfl180		0		0
Min	skredfl365		0		0
Min	skredfl3		0		0
Min	skredfllong		0		0
Min	skredflpros		0		0
Max	skredflover		100		100
Max	skredfl90		100		100
Max	skredfl180		100		100
Max	skredfl365		100		100
Max	skredfl3		100		100
Max	skredfllong		100		100
Max	skredflpros		100		100
Tests: OK					
veks			veks: positive	veks: zero/missing	Total
Count	veks		35056	17271	52327
Count	sveksgov		35056	0	35056
Count	sveksbk		35056	0	35056
Count	sveksproch		35056	0	35056
Count	Ssveks		35056	0	35056
Mean	Ssveks		100		100
Min	Ssveks		100		100
Max	Ssveks		100		100
Min	sveksgov		0		0
Min	sveksbk		0		0
Min	sveksproch		0		0
Max	sveksgov		100		100
Max	sveksbk		100		100
Max	sveksproch		100		100
Tests: OK					
mbk			mbk: positive	mbk: zero/missing	Total
Count	mbk		31533	20794	52327
Count	smbknr		31533	0	31533
Count	smbknr7		31533	0	31533
Count	smbknr365		31533	0	31533
Count	smbknrlong		31533	0	31533
Count	smbknrpros		31533	0	31533
Count	smbkr		31533	0	31533
Count	smbkr7		31533	0	31533
Count	smbkr365		31533	0	31533
Count	smbkrlong		31533	0	31533
Count	smbkrpros		31533	0	31533
Count	Ssmbk		31533	0	31533

Mean	Ssmbk		200		200
Min	Ssmbk		200		200
Max	Ssmbk		200		200
Min	smbknr		0		0
Min	smbknr7		0		0
Min	smbknr365		0		0
Min	smbknrlong		0		0
Min	smbknrpros		0		0
Min	smbkr		0		0
Min	smbkr7		0		0
Min	smbkr365		0		0
Min	smbkrlong		0		0
Min	smbkrpros		0		0
Max	smbknr		100		100
Max	smbknr7		100		100
Max	smbknr365		100		100
Max	smbknrlong		100		100
Max	smbknrpros		100		100
Max	smbkr		100		100
Max	smbkr7		100		100
Max	smbkr365		100		100
Max	smbkrlong		100		100
Max	smbkrpros		100		100
Tests: OK (Ssmbk correctly equals 200; see variable definitions in Appendix 3A)					
zs			zs: positive	zs: zero/missing	Total
Count	zs		52252	75	52327
Count	zsstekkor		52252	0	52252
Count	zsdep90		52252	0	52252
Count	zsdep365		52252	0	52252
Count	zsdeplong		52252	0	52252
Count	zsdebt90		52252	0	52252
Count	zsdebt365		52252	0	52252
Count	zsdebtlong		52252	0	52252
Count	zspros		52252	0	52252
Count	zsneopr		52252	0	52252
Count	Szs		52252	0	52252
Mean	Szs		98.84		98.84
Min	Szs		12.63		12.63
Max	Szs		194.28		194.28
Min	zsstekkor		0		0
Min	zsdep90		0		0
Min	zsdep365		0		0
Min	zsdeplong		0		0
Min	zsdebt90		0		0
Min	zsdebt365		0		0
Min	zsdebtlong		0		0
Min	zspros		0		0
Min	zsneopr		0		0
Max	zsstekkor		100		100
Max	zsdep90		100		100
Max	zsdep365		98.43		98.43
Max	zsdeplong		99.83		99.83
Max	zsdebt90		99.85		99.85
Max	zsdebt365		99.09		99.09
Max	zsdebtlong		99.24		99.24
Max	zspros		99.87		99.87
Max	zsneopr		100		100
Test 3: not OK					

zsbk			zsbk: positive	zsbk: zero/missing	Total
Count	zsbk		33415	18912	52327
Count	szsbkkor		33415	0	33415
Count	szsbkkorrus		33415	0	33415
Count	szsbkkorin		33415	0	33415
Count	szsbkdep		33415	0	33415
Count	szsbkdepcbr		33415	0	33415
Count	szsbkdeprus		33415	0	33415
Count	szsbkdepin		33415	0	33415
Count	Szsbk		33415	0	33415
Mean	Szsbk		200		200
Min	Szsbk		200		200
Max	Szsbk		200		200
Min	szsbkkor		0		0
Min	szsbkkorrus		0		0
Min	szsbkkorin		0		0
Min	szsbkdep		0		0
Min	szsbkdepcbr		0		0
Min	szsbkdeprus		0		0
Min	szsbkdepin		0		0
Max	szsbkkor		100		100
Max	szsbkkorrus		100		100
Max	szsbkkorin		100		100
Max	szsbkdep		100		100
Max	szsbkdepcbr		100		100
Max	szsbkdeprus		100		100
Max	szsbkdepin		100		100
Tests: OK (Szsbk correctly equals 200; see variable definitions in Appendix 3A)					
ras			ras: positive	ras: zero/missing	Total
Count	ras		51660	667	52327
Count	srasgov		51660	0	51660
Count	srasppr		51660	0	51660
Count	srashhr		51660	0	51660
Count	srasppnr		51660	0	51660
Count	srashhnr		51660	0	51660
Count	Ssras		51660	0	51660
Mean	Ssras		99.99		99.99
Min	Ssras		29.93		29.93
Max	Ssras		100		100
Min	srasgov		0		0
Min	srasppr		0		0
Min	srashhr		0		0
Min	srasppnr		0		0
Min	srashhnr		0		0
Max	srasgov		100		100
Max	srasppr		100		100
Max	srashhr		100		100
Max	srasppnr		100		100
Max	srashhnr		77.9		77.9
Test 3: not OK					
term			term: positive	term: zero/missing	Total
Count	term		48818	3509	52327
Count	stermgov		48818	0	48818
Count	stermppr		48818	0	48818
Count	stermhhr		48818	0	48818
Count	stermppnr		48818	0	48818

Count	sternihnr		48818	0	48818
Count	Ssterm		48818	0	48818
Mean	Ssterm		100		100
Min	Ssterm		80.2		80.2
Max	Ssterm		100		100
Min	sterngov		0		0
Min	sternppr		0		0
Min	sternihnr		0		0
Min	sternppnr		0		0
Min	sternihnr		0		0
Max	sterngov		100		100
Max	sternppr		100		100
Max	sternihnr		100		100
Max	sternppnr		100		100
Max	sternihnr		100		100
Test 3: not OK					
doh			doh: positive	doh: zero/missing	Total
Count	doh		51351	623	51974
Count	sdohnbs		51351	0	51351
Count	sdohbk		51351	0	51351
Count	sdohcb		51351	0	51351
Count	sdohproch		51351	0	51351
Count	Ssdoh		51351	0	51351
Mean	Ssdoh		100		100
Min	Ssdoh		100		100
Max	Ssdoh		100		100
Min	sdohnbs		0		0
Min	sdohbk		0		0
Min	sdohcb		0		0
Min	sdohproch		0		0
Max	sdohnbs		100		100
Max	sdohbk		100		100
Max	sdohcb		100		100
Max	sdohproch		99.91		99.91
Tests: OK					
rash			rash: positive	rash: zero/missing	Total
Count	rash		49369	2406	51775
Count	srashnbs		49369	0	49369
Count	srashbk		49369	0	49369
Count	srashcb		49369	0	49369
Count	srashproch		49369	0	49369
Count	Ssrash		49369	0	49369
Mean	Ssrash		100		100
Min	Ssrash		100		100
Max	Ssrash		100		100
Min	srashnbs		0		0
Min	srashbk		0		0
Min	srashcb		0		0
Min	srashproch		0		0
Max	srashnbs		100		100
Max	srashbk		100		100
Max	srashcb		100		100
Max	srashproch		100		100
Tests: OK					
inc			inc: positive	inc: zero/missing	Total
Count	inc		51231	743	51974

Count	sincgov		51231	0	51231
Count	sincbcr		51231	0	51231
Count	sincbkr		51231	0	51231
Count	sincbknr		51231	0	51231
Count	sincppfg		51231	0	51231
Count	sincpprg		51231	0	51231
Count	sincppr		51231	0	51231
Count	sincppnr		51231	0	51231
Count	sincent		51231	0	51231
Count	sinchh		51231	0	51231
Count	sincproch		5876	0	5876
Count	Ssinc		5876	0	5876
Mean	Ssinc		100		100
Min	Ssinc		100		100
Max	Ssinc		100		100
Min	sincgov		0		0
Min	sincbcr		0		0
Min	sincbkr		0		0
Min	sincbknr		0		0
Min	sincppfg		0		0
Min	sincpprg		0		0
Min	sincppr		0		0
Min	sincppnr		0		0
Min	sincent		0		0
Min	sinchh		0		0
Min	sincproch		0		0
Max	sincgov		100		100
Max	sincbcr		100		100
Max	sincbkr		100		100
Max	sincbknr		100		100
Max	sincppfg		100		100
Max	sincpprg		100		100
Max	sincppr		100		100
Max	sincppnr		89.52		89.52
Max	sincent		100		100
Max	sinchh		100		100
Max	sincproch		51.41		51.41
Tests: OK					
exp			exp: positive	exp: zero/missing	Total
Count	exp		48993	2727	51720
Count	sexpgov		48993	0	48993
Count	sexpcbr		48993	0	48993
Count	sexpbkr		48993	0	48993
Count	sexpbknr		48993	0	48993
Count	sexpppfg		48993	0	48993
Count	sexppprg		48993	0	48993
Count	sexpppr		48993	0	48993
Count	sexppnr		48993	0	48993
Count	sexphh		48993	0	48993
Count	Ssexp		48993	0	48993
Mean	Ssexp		99.78		99.78
Min	Ssexp		0		0
Max	Ssexp		100		100
Min	sexpgov		0		0
Min	sexpcbr		0		0
Min	sexpbkr		0		0
Min	sexpbknr		0		0
Min	sexpppfg		0		0

Min	sexppprg		0		0
Min	sexpppr		0		0
Min	sexppnr		0		0
Min	sexphh		0		0
Max	sexpgov		100		100
Max	sexpcbr		100		100
Max	sexpbkr		100		100
Max	sexpbknr		100		100
Max	sexppfg		100		100
Max	sexpprg		100		100
Max	sexpppr		100		100
Max	sexppnr		100		100
Max	sexphh		100		100
Test 3: not OK					

### Appendix 6: Interfax Structure (with Stata code)

		Variable		Stata code	Label
1	2	3	4	5	6
la var	g	depobr	=	cond(zsbk==0,0, szsbkdepobr/100*zsbk)	"L: CBR"
la var	g	depbk	=	zsbk-depobr	"L: other banks (corr. acc. + deposits)"
la var	g	depgov	=	cond(ras==0,0, srasgov/100*ras)+cond(term==0,0, stermgov/100*term)	"L: government (curr. acc.+ deposits)"
la var	g	depfirm	=	cond(ras==0,0, (srasppr+srasppnr)/100*ras)+cond(term==0,0, (stermppr+stermppnr)/100*term)	"L: firms (curr. acc.+ deposits)"
la var	g	depind	=	cond(ras==0,0, (srashhr+srashnr)/100*ras)+cond(term==0,0, (stermhhr+stermhnr)/100*term)	"L: individuals (curr. acc.+ deposits)"
la var	g	debt	=	cb	"L: issued debt securities"
la var	g	othliab	=	zs-(depobr+depbk+depgov+depfirm+depind+debt)	"L: other liabilities"
la var	g	loancbr	=	cond(kor==0,0, skorobr/100*kor)+cond(kredbk<=0,0, skredbkobr/100*kredbk)	"A: CBR (corr. acc. + net deposits)"
la var	g	rr	=	for	"A: CBR (required reserves)"
la var	g	loanbk	=	cond(kor==0,0, (skorus+skorin)/100*kor)+mbk+cond(veks==0,0, sveksbk/100*veks)	"A: other banks (corr. accounts + loans)"
la var	g	loangov	=	cond(krednbsr==0,0, (skrednbsrfg+skrednbsrrg)/100*krednbsr)	"A: government (loans)"
la var	g	loanfirm	=	cond(krednbsr==0,0, skrednbsrpp/100*krednbsr)+krednbsnr	"A: firms (loans)"
la var	g	loanind	=	cond(krednbsr==0,0, skrednbsrhh/100*krednbsr)	"A: individuals (loans)"
la var	g	govsec	=	cond(gosveks<., goscb-gosveks, goscb)	"A: government securities"
la var	g	nongovsec	=	cond(negoscb<., ingoscb+negoscb, 0)	"A: non-government securities"
la var	g	assets	=	akt+reskredveks	"Gross assets (net assets + LLR)"
la var	g	net	=	govsec+nongovsec+kor+for+kredbk+krednbs	"Test: net assets"
la var	g	othnet	=	akt-net	"Other net assets"
la var	g	gross	=	govsec+nongovsec+loancbr+rr+loanbk+loangov+loanfirm+loanind	"Test: gross assets"
la var	g	othgross	=	assets-gross	"Other gross assets"
Note: promissory notes are included in loans and excluded from securities					

Suggestion for BOFIT researchers: with *ifax.dta* loaded into Stata one can *directly* copy-paste columns 2-5 (shaded area) from Word into Stata's Do-file editor and run it to generate all the variables. To also add labels delete columns 2, 4-5, copy-paste the remaining columns 1, 3 & 6 into Stata's Do-file editor and run it. (You can access a Word-version of this paper at <https://sites.google.com/site/alexeikaras1>)