Banks' Offshoring, Tax Evasion, and Performance:
Evidence from Moscow Administrative Data.

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Abstract

We utilize information about Russian bank volume of transactions and end-of-month balances in correspondent accounts in foreign countries banks' to construct a novel measure of bank offshoring activity. This dataset is based on official banks' reports to the Russian Central Bank. To measure tax evasion we use income-hiding indicator developed by Braguinsky and Mityakov (2013), which is based on the discrepancy between reported incomes and car values of banks' employees. We document a positive relation between bank offshoring activities and tax evasion, especially when tax evasion is measured among bank top management. We then combine these measures with the information from bank balance sheets over the period 2000-2003 to analyze the impact of offshoring activity and tax evasion on various bank performance measures. We find that commercial banks, which conduct more offshoring or tax evasion activity, report lower accounting profit and are less actively involved in traditional financial intermediation, such and business lending and deposit-taking. We also find a robust link between bank closures, money laundering charges, criminal cases against top managers (measured during 2000-2013) and degree of offshoring activity. The later finding suggests a critical role of the regulatory discipline in limiting banks' illegal activities.

This draft: December 6, 2014

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1. Introduction

The intricate web of incentives, conditions, channels and legal loopholes that allow different forms of fraud and illegal activities in banking and undermine banks' exposure to the market and regulatory disciplines represents a relevant research topic from the scholarly, regulatory and bank management perspectives. However, systemic empirical studies in this area are extremely rare as fraudulent bank activities are generally unobservable before the fraudulent bank fails. Not surprisingly, most of the available evidence to date comes from isolated cases and clinical studies[2].

At the same time, better understanding of the fraudulent banks' incentives and behaviors should help to detect specific reasons for the market and regulatory discipline failures, especially in the banking markets with low financial transparency and high information asymmetries.

In this study, we attempt to open the "black box" by examining coexistence and interconnectedness among different types of fraudulent activities in actively operating banks, including offshoring, tax evasion, accounting misreporting, and money laundering in a large sample of Moscow-based private Russian banks which we trace over the fourteen year period, from 2000 to 2013.

By combining a number of unique, individual-level and bank-level datasets, we are able to construct a broad set of fraud measures for private Russian banks headquartered in Moscow and to relate these measures to bank performance and long-term survival outcomes, including closures due to accounting fraud and money laundering chargers.

Our first measure comes from banks' reports to the Central Bank over the years 2000-2003. Namely, we utilize information about monthly volume of transactions and end-of-month balances in banks' correspondent accounts in offshore zones. Central Bank provides a list of which countries and localities are considered offshore zones. This list is further subdivided into three tiers with higher tiers corresponding to less information disclosure to regulators and more favorable tax regime for the banks.[3]

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[2] For the discussion of types and specific case studies of fraud in failed financial institutions see, for example, Gup (1994), Erickson et al. (2010), Herring (2004), Osthaus (1976).

[3] For example, group 1 offshore jurisdictions include countries Switzerland, Singapore, and Hong-Kong,

To measure offshoring for each bank we calculate annual volume of transactions (or mean end-of-month balances) from all of this bank's accounts with banks in offshore countries from a particular tier. To account for potential scale effect we normalize this number by total annual volume of transactions (total mean end-of-month balances) from this bank's correspondent accounts in all foreign countries.

Our tax evasion measure is taken from the recent studies of Braguinsky and Mityakov (2013) and Braguinsky, Mityakov, and Liskovich (2014), which is based on the discrepancy between bank employees' incomes officially reported to the Moscow tax authorities and the market values of their privately owned cars.

Finally, in one of robustness checks we use the third measure of bank illegal activities constructed from the information about criminal cases being brought against banks' top managers. This list was at some point posted on Russian Central Bank website, but was subsequently pulled over due to the pressure from the banking community.

Our results are as follows. First, we document a robust positive relation between the measures of offshore activity and tax evasion. The effect is not only statistically but also economically significant: a one standard deviation increase in offshoring activity is associated with around 10 percent increase in tax evasion activity. The effects are even stronger if we measure tax evasion using only reported incomes and car values of top managers of the banks.

Since tax evasion is measured on the basis of the discrepancy between reported incomes and market values of cars owned by bank employees we further look at the relation between reported incomes, car values and tax evasion separately. We find the negative relation between reported incomes (averaged over bank employees) and offshoring activity, with mean car values not differing much across banks. We argue that this pattern is probably due to the common labor market for bank employees in Moscow. Offshoring activity is just one possible business model for banks. Thus, banks competing for the same employees on the marketplace have to offer the similar actual wages regardless of their business model. At the same time compensation of those employees,

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whereas group 3 countries include countries like Aruba, Nauru, and Vanuatu). The full list is contained in Appendix A.1.

particularly the fraction of hidden earnings, does differ across banks depending on the degree of offshoring activity conducted by a given bank.

Second, we further study the link between bank business model and profitability on the one hand and offshoring activity and tax evasion on the other. We find that banks that engage more in offshoring and tax evasion have lower reported profitability. For a one standard deviation increase in offshoring return on assets is lower by xx percentage points (mean return on assets in those years was percentage points). Such banks also have a different business model: they attract fewer deposits and have a smaller amount of earning assets as a fraction of total assets. Thus, it looks like that banks conducting offshoring and consistently evading taxes seem to earn their profits and attract funds outside of core financial intermediation activities. We conjecture that these patterns might be indicative of some grey-area schemes like money laundering which were quite widespread in Russia at the time.

To probe further this conjecture we study the link between offshoring and long-term outcomes of bank survival. We find that banks which conduct more offshoring activities in the early period (2000-2003) during which our offshoring measure can be calculated, have higher chances to be subsequently closed down. They also are more likely to have money laundering charges being brought against them. Finally, their top managers are more likely to be convicted on criminal charges. We show that these patterns are not driven by bank closures in early years (2004-2006), if anything the effect becomes stronger once we add later years (2006-2013) in the analysis.

The contribution of this paper is as follows. First, we construct a novel measure of Russian bank offshore activity. Second, we show that this measure is closely related to a prior measure of tax evasion used in the literature. Third, we find that there is a robust relation between offshoring and tax evasion and bank financial intermediation activity and profitability. Finally, we show that offshoring activity and tax evasion have lasting effects on subsequent bank survival.

Most importantly, this paper provides complementary evidence on offshoring activities of Russia banks as a mechanism for tax evasion of domestic companies, which was analyzed in a series of recent papers on corporate transparency in Russia. Mironov (2013) document considerable tunneling of funds from legitimate Russian companies to

short-lived shell companies to evade taxes. For lack of data the author hypothesized that those shell companies transfer funds to offshore zones through corrupt banks. Braguinsky and Mityakov (in press) among other things showed that there is close connection between tax evasion in Russian companies and such tunneling. Implicitly corrupt domestic banks are behind the scenes in all such illegal schemes. ***[Russian news papers' anecdotal evidence references here?]***

The present paper provides first hard evidence on suspicious activities of such corrupt banks. It shows that banks engaged in offshoring, are banks in name only. These "banks" do not attract deposits or give out loans, they have lower reported profitability. At the same time their employees actual salaries (while underreported to a larger degree) seem to be on par with salaries of employees of more transparent banks. On the bright side Central Bank seems to be aware of those schemes, as such banks are more likely to be closed down and their top managers might face criminal investigation initiated by the regulator.

The rest of the paper is organized as follows. Section 2 describes institutional background. Section 3 describes data-sources and construction of variables used in the analysis. Section 4 contains results. Section 5 provides robustness checks (to be completed). Section 6 concludes.

2. Background

2.1. A snapshot of the Russian banking system: 2000 to 2013 development indicators.

Table 1 presents a number of key development indicators for the Russian banking system during the sample period, including year-end 2000, 2003 and 2013 macro-level data. By the end of 2000, the country's banking sector has fully recovered from the 1998 financial crisis and was growing very fast in terms of both, total and relative, asset size since then. As reported in Table 1, its total assets size expanded from only $84 billion in 2000 to $1,753 billion in 2013, equivalent to about 24% average annualized growth rate. Furthermore, the ratio of bank assets to GDP increased from only 33% in 2000 to 86% in 2013. At the same time, the number of active commercial banks was gradually decreasing in the last decade and dropped by about one third: from 1,277 banks in 2003 to 859 in

2013. Notably, these exits were driven mostly by the regulator-initiated involuntarily bank closures rather than by the mergers and acquisitions activity.

[Table 1]

For the purpose of our study, we also report two additional structural characteristics of this banking sector across time: the share of banks with a license for transactions in foreign currency and the share of Moscow-headquartered banks. The share of Moscow banks in this banking sector remains surprisingly stable; they account for about one half of the total number of banks during the whole period. The share of banks with a foreign operations license is slightly increasing, from 58% in 2000 to 64% in 2003 and further to 68% in 2013.

The lower part of Table 1 describes the assets and liabilities structure of the country's banking sector. During our sample period, the share of the aggregate-level business loans in the banking sector assets portfolio increased from 34% in 2000 to 43% in 2003. It remains at comparable level (39%) as of the end of 2013. The sizeable increase in the total loan portfolio, from only 46% in 2000 to 71% in 2013 should be attributed to the explosive growth of loans to households in the recent decade (not reported in the Table 1)[4]. On the liabilities side of the aggregate-level balance sheet, the total customer deposits fund more than one half of the asset portfolio during the sample period years. There is also a noticeable increase in the share of household deposit funds as they grow from 19% in 2000 to 28% in 2003 and remain at about that same level (or 29%) by the end of 2013.

2.2. Banks' suspicious operations and regulatory discipline in offshores-oriented economy

Although the macro-level evidence of robust growth and financial deepening in the Russian banking sector provides an optimistic assessment it hides a number of country-level risks and challenges, including deep offshorization of the Russian economy. Indeed, since the early years of the country's bumpy transition to the market economy, a sizeable

[4] In 2013, the system-wide household loans to asset ratio reached 17%. For comparison, the CBR did not even report this number in 1999 official statistics as it did not exceed 1% at that time. The remaining gap between total loans and business loans is covered with loans to banks and other less sizeable types of loans like loans to the government entities.

share of the domestically generated profits and assets settles down in foreign offshore jurisdiction on an annual basis.

Although the exact magnitude of these such capital flows is difficult to estimate, there is a commonly shared understanding among external and internal regulatory agencies that these flows are sizable compared to the country's economy. For example, the UK-based Tax Justice Network, which issues Financial Secrecy Index for the global tax havens, estimates the total capital outflows from Russia to foreign offshores during the 1990 to 2010 period at about $800 billon. As for the reverse (or inward) capital flows, the IMF data show that Cyprus, Netherlands, BVI, Bermuda, and the Bahamas (all being tax havens) are consistently in the top ten list as the sources for investment to Russia. In other words, offshore jurisdictions also remain the main source of the foreign direct investment in Russia suggesting the prevalence of the capital rounding schemas through offshore intermediation.

Official Russian government statistics broadly support the above international estimates. By the end of 2013, the British Virgin Islands jurisdiction topped the list of countries with the largest cumulative *outward* investment from Russia, with a 33.9% share out of the total of $176.4 billion invested by Russian firms and individuals outside of the country. Cyprus was on the second position, with a 18.7% share, followed by the Netherlands, with a 13.2% share. Switzerland, Luxembourg and Bermudas (collectively) add another 9.9% of the Russian capital accumulated abroad. Taken together, these six tax havens alone account for 75.7% of accumulated outward Russian's foreign investment. These are, of course, only official numbers that cover only legal capital outflows. The *inward* investments stock, from the global offshore centers to the Russian economy is also substantial: Cyprus, Netherlands, Luxemburg and Ireland collectively account for 53.8% of the $384 billion of the total *inward* foreign investment accumulated in Russia by the end of 2013. For comparison, total inward foreign investment from Germany, France, USA, and Japan account for only 14.2% of total; China accounts for another 8.4%.

The flow estimates of offshore operations remain large as well. As noted by the President Putin in his annual parliament speech in 2013, the Russian export through offshores in 2012 accounted for more than $110 billion or about one fifth of all export;

$25 billion (or one half of Russian investment abroad in that year) also went through offshore zones. At about the same period, the Chairman of the Central Bank of Russia announced illegal (and untaxed) capital flight at about $49 billion a year or at 2.5% of the country's GDP. Finally, by the Russian Audit Chamber estimations, the total import-export transactions through offshore zones in 2013 accounted for about one third of total and continue to increase.

Clearly, a substantial part of offshore operations of this scope and scale should involve a banking industry as an intermediary and the over-exposure of some banks to the operations with offshore jurisdictions has long been recognized as a pervasive problem by the Central Bank of Russia. Indeed, its first anti-offshore warning statement was issued as early as 1994. Several years later, in 1999, the regulator set forth a series of guidelines and recommendations that targeted suspicious transactions through foreign offshore centers. These regulatory changes made it costly for banks to promote offshore flows and to transfer their own funds to affiliated offshores through the fake zero interest rate loan contracts or through buying affiliated offshore firms' promissory notes.

In 2003, the regulator followed up with revised comprehensive list of foreign offshores and imposed a strict mandatory requirement for banks to build up loss reserve for up to 100% of all such operations (see Appendix A.1 for details). Such loss reserve was calculated on the basis of transaction volume or end-of the month balances in offshore accounts, whatever is larger. Since 2004 the regulator was also very active in closing banks involved in illegal foreign offshoring, money laundering and accounting fraud activities. Although offshorization and semi-legal capital flights remain an issue in the Russia economy (for example, the most recent project of the de-offshorization law with a new initiatives on increasing taxes for offshore-active Russian businesses was proposed as late as October 2014), the number of banks that are heavily involved in the promotion of suspicious operations has been reduced drastically due to the decade-long regulatory efforts to clean the banking system from the quasi-bank institutions that are not involved in any actual financial intermediation activities and do not comply with the money laundering and financial reporting requirements.

3. Data

3.1. Sample

Our empirical analyses of the relationships between bank offshoring and tax evasion activities and its financial performance and long-term survival outcomes covers two distinct periods in the Russian banking system evolution. The first period, from 2000 to 2003, is a period of a generally lax regulation of offshore operations in Russia during which a relatively large number of banks was engaged in offshoring without facing a risks of a bank license revocation. Notably, this period allows us to observe the actual volume of banks' inward and outward offshore operations by each offshore jurisdiction.

For the second (follow-up) period, from 2004 to 2013, following the stricter Central Bank of Russia regulations and due to the proprietary data availability issues, we cannot observe banks' foreign offshore activities and employee-level tax evasion practices. However, we can trace and observe banks' short-term and long-term survival outcomes and to relate them to the banks' suspicious operations in the previous, i.e. 2000 to 2003, period.

Our 2000 to 2003 study sample includes banks that meet the following five criteria: (1) domestically-owned; (2) private; (3) headquartered in Moscow; (4) non-missing year-end financial performance data; (4) full year monthly foreign transactions data; (6) non-missing tax evasion measure for at least ten bank employees that we can aggregate at a bank level. Following the above sample selection criteria, we are able to construct a slightly unbalanced study sample for a maximum of 1,464 usable bank-year observations. Our raw data include a set of variables for 420 banks in 2000, 434 banks in 2001, 448 banks in 2002, and 436 banks in 2003. As of the end of 2003, 436 sample banks accounted for 69.9% of all Moscow-headquartered banks in terms of bank number and for 35.8% of assets controlled by all private domestic Russian banks.

For the post-2003 period, from 2004 to 2013, we use officially disclosed Central Bank of Russia announcements for banks' voluntarily and involuntarily liquidations and are able to trace each sample bank survival outcome, including a list of specific reasons for its closure, by year.

3.2 Measuring bank-level offshoring activity

Our data on offshoring activity are constructed on the basis of mandatory bank reports to the Central Bank of Russia. As part of those reports bank provide information about all of their correspondent account in other banks, including banks in foreign countries. Central Bank collects information both on the monthly ending balances as well as monthly volume of transactions by each correspondent account.

To measure the degree of offshoring we utilize the list of offshore zones published by the Central Bank in 2003. This list contains three groups of countries in the order of less financial disclosure and, therefore, higher loss reserve requirements for offshore operations. The full list of countries is available in the Appendix A.1.

We construct a measure of offshoring intensity of a given Russian bank in a given year with offshores from a particular group by taking the annual volume of transactions this bank does through its correspondent accounts in the countries from such offshore group, normalized by the total annual volume of transactions this bank does through its correspondent account in all foreign countries. Namely, denote $OFV_{i,j,t}$ annual amount of transactions of a Russian bank *i* through its correspondent accounts in (foreign) bank j in year *t*. Then we define year t intensity of bank i offshoring activity with offshores in group k as:

$$OF_{i,t}^{(k)} = \sum_{\substack{j \text{ is located in} \\ \text{group } k \text{ offshore}}} OFV_{i,j,t} \Bigg/ \sum_{\substack{j \text{ is located in} \\ \text{anycountry}}} OFV_{i,j,t}$$

Thus this measure indicates for a given Russian bank what fraction of total annual flows through foreign countries occurs via offshore zones. We also construct the similar measure using (annual averages of) end-of-month balances (a stock variable) rather than volume of transactions (flow variable).

3.3. Measuring employee-level tax evasion.

Our tax evasion measure is based on a measure of hidden earnings developed by Braguinsky and Mityakov (2013). This measure is constructed by contrasting reported incomes of a given bank employees with the values of their cars and it builds on the simple premise that it is possible to hide one's income but it is impossible to hide a car. Braguinsky and Mityakov (2013) use individual-level data on employees of foreign-

owned firms in Russia to estimate the functional form of the relation between income, which in those companies is unlikely to be falsified, and car values. Then they impose this functional form for the employees of domestically-owned Russian firms to infer tax evasion at the individual level. (See Appendix A.2 for more details on this measure.)

Mironov (2014) showed that this tax evasion measure is highly (negatively) related to reported profitability of firms. Braguinsky and Mityakov (2013) also document the close relation between this tax evasion measure and measure of Russian businesses' asset tunneling through shell companies developed by Mironov (2013). In this paper we further document how this tax evasion measure is correlated with offshoring measure of banks introduced in this paper as well as measure of bank profitability and financial intermediation activity.

3.4. Bank survival outcomes and criminal charges against top managers.

Our final measure of a bank's illegal operations is based on the bank survival and criminal charges outcomes that we trace over the ten-year period, from 2004 to 2013. All bank survival outcomes are obtained from the Central Bank of Russia official disclosures of bank licenses revocation cases. Each announcement states the specific date and the number of specific reasons for bank involuntarily closure. More specifically, if a bank closure case involves money laundering, suspicious bank operations and/or accounting fraud and misreporting – all these will be explicitly outlined in the regulatory memorandum.

In addition, to detect the most severe cases of violations related to fraudulent bank activities, we use Central Bank of Russia "black list" of criminal charges against selected bank managers that were charged with administrative and criminal charges for involvement in the illegal banking operations. This list was publicly available on the Central Bank of Russia website (being removed later to comply with the new privacy law requirements) and covers a period from January 2005 to October 2011. We aggregate the information from this list at a bank level and use it as an additional dummy indicator for a fraudulent bank. Notably, 38 out of 49 banks on this list had headquarters in Moscow.

3.5. Bank business model and financial performance variables

We obtain the list of the key bank-level financial variables from the BankRate agency. These data are annual and cover 2000-2003 period. Overall, this earlier period of the Russian banking sector development is characterized with a relatively low level of banks' financial disclosure. From the limited set of the BankRate disclosed data, we were able to construct six bank-level measures that capture bank size, financial intermediation activity, profitability and risk profile. We measure bank size with the natural logarithm of the gross assets in thousands of rubles. Financial intermediation activity and bank business model is captures with the Business Loans and Household Deposits ratios to the bank net assets.

Given the overall lax disclosure standards in the late 90s- early 2000s years in the Russian banking sector, we utilize a relatively rich dataset for the bank-level control variables. To compile the sample of Moscow-headquartered banks, we also use the Central Bank of Russia registries of active and licensed banks.

3.6. Descriptive statistics

In Table 3 we provide summary statistics for all study variables defined in this section, including Offshoring and Tax evasion variables (Panel A), bank financial characteristics (Panel B), and bank long term outcomes (Panel C).

[Table 3]

4. Results

4.1. Offshoring and Tax evasion.

We start with studying the relation between offshoring measure calculated from monthly bank reports to the Central Bank and tax evasion calculated by Braguinsky and Mityakov (2013) from individual level data on reported incomes and car values of bank employees. As we argued above offshoring activity might be closely related to semi- or outright illegal schemes. Thus, banks which conduct a lot of offshoring activity might be more likely to pay their employees through similar grey or illegal schemes as well. In this section we probe this conjecture. To study this link we consider the following empirical specification:

$$TE_{i,t} = \alpha + \beta OF_{i,t} + \gamma X_{i,t} + \phi_t + \varepsilon_{i,t} \quad (2)$$

where $OF_{i,t}$ is offshoring activity of bank i in year t, $TE_{i,t}$ is tax evasion measure. $X_{i,t}$ are additional bank level controls. To control for the possible economies of scope (e.g. in fraud detection) we always include bank size (log of net assets) in the regression. In some specifications we also control for the intensity of bank interaction with foreign banks measured as total annual volume (total end-of-month balance) on bank correspondent accounts in all foreign countries. Table 4 contains estimation results of specification (2).

In specifications (1)-(4) we look at the separate effects of offshoring activity through accounts in three different tiers of offshores as defined by the Central Bank list. We find that there is a robust negative relation between tax evasion measure and offshoring through tier 2 and 3 offshore zones. This is not surprising since tier 1 offshore zones mostly include some developed countries and localities like Switzerland, Hong-Kong, Singapore which do provide somewhat beneficial disclosure regime but are unlikely to tolerate egregious grey schemes. For this matter in later analysis we drop tier 1 offshore zones and focus our analysis on measure of offshoring, which combines offshore zones 2 and 3.

In specifications (5)-(8) we re-estimate specification (2) using total offshoring through countries from tiers 2 and 3. The coefficients are not only statistically significant but also imply the effects of sizeable magnitudes. An increase in offshoring activity by one standard deviation (0.23) is associated with an increase in tax evasion measure by 0.15, which is around eight percent of a standard deviation of tax evasion measure.

Our tax evasion measure is defined on the basis of the discrepancy between reported earnings and car values[5]. In table 5 we look at how individual components of tax evasion measure: mean reported incomes and mean car values of bank employees in a given year depend on our measure of offshoring. Namely we estimate the following specifications:

$$\log Income_{i,t} = \alpha + \beta OF_{i,t} + \gamma X_{i,t} + \phi_t + \varepsilon_{i,t} \quad (3a)$$

$$\log Car_{i,t} = \alpha + \beta OF_{i,t} + \gamma X_{i,t} + \phi_t + \varepsilon_{i,t} \quad (3b)$$

[5] Braguinsky and Mityakov (2013) calculate transparency measure as the difference between log of reported earnings and (income elasticity of demand adjusted) log of car values: logIncome-1/λ∗logCar. We invert this measure to measure tax evasion: Tax evasion=1/λlogCar-logIncome.

where logIncome and logCar are calculated averages over all employees of a given bank *i* in year *t*.

Estimates in Table 5 indicate that banks conducting more offshoring activity indeed seem to report smaller earnings for their employees (column (2)). At the same time evidence from car values seem to indicate that actual earnings do not seem to differ much with degree of offshoring activity (column (3)).

We re-estimate specifications (3a) and (3b) but now calculating tax evasion, mean reported incomes and car values on the subsample of top 10 percent of bank's employees. We find that the effects increase in magnitudes for reported incomes An increase in offshoring by one standard deviation associated with a decrease in reported earnings of all employees by 14 percent on average, but incomes of top employees actually are lower by 22 percent. Again we find no significant pattern in car values, although coefficient for car values is positive for top management it is not statistically of economically significant.

We argue that these patterns could indicate that actual earnings in banks seem to be quite similar (controlling for bank size) regardless of offshoring activity. Offshoring is just one of possible business models of a bank. Employees of different banks might have differing reported earnings due to the difference in bank preferred business model. However, since employees are being hired on the common (Moscow) local labor market, their actual mean wages (as proxied by the same mean car values) are similar in different banks (controlling for bank size).

Thus, there seems to be quite significant (both in statistic and economic sense) relation between offshoring activity of banks and tax evasion of their employees. This relation is stronger for tax evasion measured among the top management. However, offshoring activity seems to be associated with different reported earnings but there seem to be no effect on actual earnings of bank employees depending on degree of offshoring.

4.2 Offshoring, Tax Evasion, and Profitability.

In this section we examine the link between offshoring, tax evasion and various measures of bank performance and financial intermediate activity.

We start by analyzing the impact of offshoring and tax evasion on bank's reported profitability. We measure profitability as return on assets measured as the ratio of pre-tax

reported profits to net assets expressed in percentage terms. Namely, we consider the following regression equation:

$$ROA_{i,t}=\alpha+\beta OF_{i,t}+\tau \mathrm{FT}_{i,t}\,(+\gamma TE_{i,t}) + \delta X_{i,t}+f_{i,t}+\varepsilon_{i,t} \qquad (5)$$

Here $ROA_{i,t}$ is return on assets of bank i in year t in percentage points. $OF_{i,t}$ is a measure of offshoring activity (from offshore zones in tiers 2 and 3). In all specifications we control for the intensity of total transactions with foreign banks $FT_{i,t}$ measured as the (log of) total annual volume of transactions through all foreign correspondent account of a given bank[6]. $TE_{i,t}$ is a tax evasion measure. $X_{i,t}$ Are various characteristics of the bank, which might affect profitability. Among those we include (log of) bank gross assets to control for possible economies of scale; bank reliance on retail depositors (proxied by fraction of household deposits in total liabilities), bank financial intermediation activity (measure by fraction of earning assets in total bank net assets), bank lending activity to businesses, etc. $f_{i,t}$ are year fixed effects.

We first estimate specification (5) by OLS using the sample of all banks licensed to conduct activity through correspondent accounts in foreign banks. We find that banks, which conduct more foreign transactions activity through offshores, seem to consistently underperform (as measured by the reported return on assets) the banks, which use non-offshore zones for their transactions with foreign countries (specification 1). A one standard deviation increase in offshoring activity is associated with 5 basis points decrease in reported profitability (0.23*0.22)[7]. The implied effect though not statistically significant still implies economic effect of similar (albeit a bit smaller) magnitudes (specification 2).

However, it could be argued that the main reason to report lower return on asset than actual is to save on profit tax. Hence, such incentives to misreport profits would be absent if profits are already negative. Moreover, reporting negative profits instead of positive ones also might not be optimal since that would raise a flag for the regulator that the bank might become insolvent in the future. In specifications 3 and 4 we restrict the sample only to observations with positive return on assets and indeed find even stronger

[6] We report the results for offshoring measure calculated from monthly volumes of transactions through banks correspondent accounts, the results are similar for end-of-month balances based offshoring measure.
[7] Mean profitability in those years was 84 basis points with a standard deviation of 200 basis points.

relation between offshoring and reported return on assets. In those specifications a one standard deviation increase in offshoring is associated with around 0.1 percentage point (10 basis points) decrease in reported return on assets. Mean return on assets was around 0.8 percentage point at that time.

The effect of tax evasion is quite small in the whole sample but is quite pronounced once we restrict attention to observations with positive return on assets. Estimated coefficients imply that an increase in tax evasion by one standard deviation (1.9) is associated with a decrease in reported return on assets by 0.1 percentage points.

However, estimating equation (5) by simple OLS might be biased since return on assets, offshoring and tax evasion might be jointly determined. To address this possibility we re-estimate (5) using one-year lags of offshoring, tax evasion and all other explanatory variables as instruments for contemporaneous values (a la Arellano and Bond approach). The results are presented in Table 6a. The effects implied by the coefficients are about the same (mostly larger) size than in OLS specification, though they are less precisely estimated statistically, due to naturally smaller sample size resulting from using lagged variables. Still offshoring remains statistically significant in the specifications for positive return on assets.

We also employ another instrumental variables approach based on geographical differences in regulatory oversight. Since we consider Moscow banks, regulators that are bank specific (like regional Central Bank office) are common for all banks in our sample. Thus, we use a regulatory institution that is non-bank specific, but for which we can find variation across Moscow banks. Namely we use the fact that different banks depending on their location of their headquarters report their profits and salaries of their employees to different local tax offices. Thus, we use tax office dummies to which different banks report to as an instrument for tax evasion and offshoring.[8]

Table 6c contains estimation results. If anything the estimates presented in Table 6c suggest even larger magnitudes than both OLS and Arellano-Bond instruments. Point estimates for offshoring and tax evasion scores imply the effects that are twice as large as those in Arellano Bond, and three times as large as those in OLS specifications.

[8] This is the same instrumental variables approach used for all Russian companies in the study of tunneling of funds through shell companies by Mironov (2013).

Statistically estimates for offshoring fraction are less precisely estimated than in OLS. However, coefficients on tax evasion remain statistically significant. This suggests that tax office dummies are likely to be better instrument for bank tax evasion than for offshoring.[9]

Overall we conclude that there seems to be a negative relation between bank offshoring activity, tax evasion on the one hand and its reported profitability on the other. Next we study the relation between other measures of bank performance and offshoring and tax evasion activities.

4.2 Offshoring, Tax evasion and Bank Business Model.

We also look at the relation between tax evasion and other bank performance characteristics. Namely we are interested in how bank financial intermediation activity and business model differ depending on degree of offshoring and tax evasion through wage contracts offered at respective banks. Namely, we consider the following empirical specification:

$$BP_{i,t}=\alpha+\beta OF_{i,t}+\tau \mathrm{FT}_{i,t}\,(+\gamma TE_{i,t})\,+\,\delta X_{i,t}+f_{i,t}+\varepsilon_{i,t} \qquad (6)$$

where *BP* is chosen bank performance measure. As before we include size X in all regression to control for possible economies of scale and other heterogeneity related to size. We conduct pooled OLS estimation as well as treat all explanatory variables as endogenous using one-year lags of those variables as instruments. Estimation results are presented in Table 7.

We find that controlling for size of net assets the banks that engage less in offshoring activities hold a larger fraction of their portfolios in loans to businesses, attract more deposits (relative to their size), they also have higher earning to total assets ratios. Estimated coefficients, which are statistically significant at 1 percent, suggest that an increase in offshoring by one standard deviation translates into 2 percentage points lower amounts of business loans as a fraction of net assets. (Mean fraction in our sample is 27 percentage points with standard deviation of 20 percentage points). Similar increase in offshoring imply a 1.3 percentage points decrease in deposits as a fraction of net assets

[9] Although under-identification and weak identification statistics presented at the bottom of Table 6c indicate that tax office dummies seems to be valid instruments for offshoring as well as for tax evasion.

(mean is 12 percentage points and standard deviation 11.5 percentage points). Finally, the effects for earning assets is similar in magnitude to the one for business loans.

We again use two instrumental variables approaches: one year lags of endogenous variables (Arellano-Bond), and dummies for tax offices, to which banks report. Estimated coefficients remain statistically significant and imply even larger effects in the IV specifications.

Tax evasion also has sizeable and statistically significant effects (especially in IV specifications). Estimated coefficients suggest that business loans (as a percentage of assets) decrease by 3 percentage points, deposits are lower by 1.5 percentage points and earnings assets are lower by 2 percentage points when tax evasion is increased by one standard deviation (1.9).

Overall our results indicate that banks which engage more in offshoring activities and evade taxes conduct less of financial intermediation activity: they finance smaller share of their assets with deposit and they rely more on non-lending operations. They also have lower earnings assets as a fraction of total assets suggesting that a larger share of their earning may be coming from undeclared grey area. In the next section we investigate this conjecture in more detail.

4.3 Tax fraud vs bank long-term survival, bank closures due to accounting fraud, and money laundering.

In this section we study the relation between banks' offshoring activity and tax evasion and longer term bank outcomes. Namely, we are interested to find out whether offshoring and tax evasion, which we measure in 2000-2003, is a significant predictor of subsequent bank failures and legal action of the regulator in a more recent period 2004-2013.

In particular, we have information about bank closures and the reasons for those announced by the Central Bank. Out of more than 400 banks, which we observed over 2000-2003, 40 percent were closed by 2013 (or 168 banks). Out of those 54 were closed due to accounting charges and 51 due to money laundering (some banks were charged with both so in total 96 banks had either of those charges brought against them). This

constitutes around 20 percent of total number of banks in 2003 and account for more than 50 percent of bank closures. In particularly egregious cases, Central Bank also brought about a criminal investigation against top management after bank closures. This happened in 33 cases.[10]

To analyze the relation between offshoring, tax evasion and a particular long-term bank outcome we consider the following empirical specification:

$$Fate_i = \alpha + \beta MOF_i (+ \gamma MTE_i) + \delta MX_i + \varepsilon_i \quad (7)$$

where $Fate_i$ is a dummy variable indicating long-term fate of the bank, whether it was closed, whether charges of money laundering or accounting fraud were brought up against the bank or whether the Central Bank initiated a criminal prosecution case against some of the top managers sometime over the period 2004-2013. MOF_i, MTE_i, and MX_i are offshoring, tax evasion, and other bank level controls (in particular size) respectively, averaged over the period 2000-2003. We estimate (7) by probit on a cross section of banks and report marginal effects in Table 8.

Our estimates suggest that banks that conduct more offshoring activity are more likely to be subsequently closed down (Panels A and C). Estimated coefficients imply that for a one standard deviation increase in offshoring activity probability to be closed down increases by 0.11, which is a considerable effect given that mean survival probability is around 0.57 with a standard deviation of 0.49. The effect for tax evasion is somewhat less precisely estimated, it is significant at 10 percent level only when tax evasion is included by itself (Panel B). However, implied magnitudes are considerable in both specifications where tax evasion is included (Panels B and C). A similar one standard deviation increase in tax evasion is associated with an increase in probability of bank closure by around 0.05.

Banks more actively engaging in offshoring are also more likely to have money laundering charges being brought against them: probability of such charges is higher by 0.07 for the similar one standard deviation increase in offshoring activity, whereas mean probability of those charges is 0.13 with a standard deviation of 0.33. The coefficient of

[10] The list of the bank and top managers was published on the Central Bank website but was eventually removed because of the complaints from the banking community. Still we managed to download this list in time and use it as a robustness check in our analysis.

tax evasion on money laundering, while negative, is not statistically significant at conventional levels and is rather small.

Estimated coefficients on offshoring and tax evasion in the regression for accounting fraud are also of expected signs. While they are imprecisely measured, implied effects are not negligible in economic sense. Estimated coefficients suggest an increase in the probability of accounting fraud charges by 0.05 and 0.03 for the similar one standard deviation increases in offshoring and tax evasion measures, whereas mean probability of accounting fraud charges is 0.14 with a standard deviation of 0.35.

We also document a robust positive relation between offshoring activity and probability of an opening of a criminal case against individual top managers of a bank.

Thus, these results indicate that there is a robust relation between offshoring and (to a lesser degree) tax evasion which we can measure in early 2000^{s} and subsequent probability of bank failures, and money laundering, accounting fraud charges or even criminal investigation against top managers during 2004-2013. A natural question in this regard is whether these findings are driven by bank failures in early years 2004-2008 or the relation remains robust to the present day. To probe this issue further we construct dummy variables for bank failure, money laundering charges and etc by several cutoff years, to see whether the implied relation becomes weaker over time.

Namely, we consider the following empirical specification

$$Fate_i^{(t^*)}=\alpha^{(t^*)}+\beta^{(t^*)}MOF_i+\gamma^{(t^*)}MTE_i+\varepsilon_i \quad (8)$$

Here $Fate_i^{(t^*)}$ is a dummy variable for whether bank i has experienced a particular outcome (closure, money laundering charges, etc) by a given cutoff year t^*. We present marginal effects from probit estimation of specification (8) in Table 9.

Looking at the coefficients over the years one can conclude that estimated coefficients remain quite stable in magnitude and statistical significance, if anything the implied effects become stronger (particularly for the tax evasion where coefficients sometimes increase by 6-7 times) when the outcome measure include more and more recent years.

Thus, we conclude that the relation between our offshoring and tax evasion measures is not driven by mass bank failures in early years, instead it seems that the

patterns in corrupt bank practices we measured in 2000-2003 seem to be still affecting the fate of the corresponding banks.

5. Robustness.

5.1. Transparency of top management.

In our main text above we used tax evasion measured on the basis of the discrepancy between car values and reported incomes of *all* bank employees. It could be argued that tax evasion of top management might be a more relevant measure for our analysis since top management is making choices directly affecting tax evasion and offshoring activities on the one hand and bank business model and profitability on the other. The drawback of this measure is that being calculated over fewer individual level observations it is more likely to suffer from measurement error issues.

In Table X we report OLS and IV estimations results of the relation between various bank performance measures and tax evasion measured at the top management level. We find that as before higher tax evasion among top management is associated with lower reported return on assets and less financial intermediation. More importantly, these estimates imply even larger effects than the estimates for tax evasion measured over all bank employees in the main text. An increase in tax evasion among top management by one standard deviation (by 2.3) translates into more than 4 percentage points lower fractions of business loans and household deposits, the effect for earning assets is even larger: a decrease of 5.5 percentage points. This happens due to the two effects: on the one hand there is more variation in tax evasion across banks when we look at top managers only; on the other hand, point estimates (at least for bank business model outcomes) are larger. Note also that in Table X point estimates from instrumental variables specifications are considerably higher that OLS ones, suggesting that OLS estimates might suffer from attenuation due to measurement error.

Overall we argue that tax evasion measured over top management has even stronger effect on bank performance than tax evasion measured over all bank employees.

5.2 Robustness to outliers

In our main text we winsorized data on returns on assets and bank business model measures (deposits, business loans, etc) to avoid the impact of extreme outliers on our results. In this section we show that the patterns we document in the main text are also observed in the non-winsorized sample. Table X contains estimation results.

We see that in the non-winsorized sample there is the same negative relation between return on assets and tax evasion and offshoring when banks post positive profits. Similarly, banks doing more offshoring and tax evasion as before do less financial intermediation. If anything, point estimates for offshoring suggest effects of higher magnitudes than in the winsorized sample in section X.[11]

Winsorizing is just one way to deal with extreme outliers. As an alternative we consider specifications where instead of levels of bank level outcomes (return on assets, business loans etc) we use logarithms of corresponding variables. Results are presented in Table A.1.X. The results are again qualitatively the same. Since taking logarithms effectively drops zero observations we also conduct estimation

However, these larger magnitudes might be driven to some extent by the presence of extreme outliers. That is why we choose winsorized sample as our main in our main specification.

Conclusion

In this paper we study the relation between bank performance and its suspicious activities, such as offshoring and tax evasion. First, using a novel dataset on Russian banks' correspondent accounts in foreign banks we construct a measure of offshoring activities.

Second, we document a robust relation between degree of offshoring and bank performance. Namely, we find that banks, which engage more in offshore operations activities tend to engage less in traditional financial intermediation as evidenced by their

[11] We also experiment with different cutoffs for winsorization, we drop 5 percent of observations (top and bottom 2.5 percent), 3 percent. In all cases the results portray the similar story: offshoring and tax evasion seems to be associated with smaller financial intermediation activity and lower profitability conditional on bank's posting positive profits.

smaller business lending portfolios and less active retail deposit-taking. These banks also report lower profitability.

Third, we show a close connection between our bank-level offshoring measure and employee-level tax evasion practices using a measure of hidden earnings from Braguinsky and Mityakov (2013). We find that the relation between hidden earnings and bank offshoring activity is more pronounced stronger revealed in the hidden earnings of a bank's top management.

Finally, we study the effects of offshoring activities, measured over the period of 2000-2003, on subsequent (2004 to the present day) fate of the banks. We show that banks, which engage more actively in offshoring, have considerably higher chances to have their license revoked, are more likely to have a money laundering and accounting fraud charges being brought against them. Moreover, Central Bank is more likely to initiate a criminal investigation against top management of such banks. This result is consistent with a strong role of the regulatory discipline in rstricting banking sector exposire to suspicious and outright illegal operations.

Overall, the main message of our paper is twofold. On the one hand, offshoring activities are strongly related to contemporaneous bank profitability and (lack of) financial intermediation. More importantly, the traces of offshore business practices, which are proxied by our measure (constructed over the period of 2000-2003) still remain strong predictors of present day bank survival and Central Bank administrative and in some cases criminal punishment.

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Tables:

Table 1. Russian banking system development indicators: Selected (sample) years

Source: Central Bank of Russia, annual disclosure and development reports.

	2000	2003	2013
Banking system size and structure:			
Banking system assets ($ billion)	84	190	1,753
Banking system assets to GDP (%)	32%	42%	86%
N of active commercial banks	1,274	1,277	859
% of banks licensed for foreign operations	58%	64%	68%
% of banks headquartered in Moscow	49%	51%	51%
Banks' financial intermediation activity			
Total loans to assets (%)	46%	54%	71%
Business loans to assets (%)	34%	43%	39%
Investment in securities to assets (%)	20%	18%	14%
Total customer deposits to assets	52%	54%	61%
Household deposits to assets (%)	19%	28%	29%
Capital and reserves to assets (%)	14%	15%	11%

Table 2: Summary statistics

Panel A. Offshoring and Tax evasion

Variable	obs	Mean	Std. Dev.	Min	Max
Offshoring using flows					
Offshore fraction tier 1 (flows)	1464	0.011	0.080	0.000	1.000
Offshore fraction tier 2 (flows)	1464	0.003	0.040	0.000	0.845
Offshore fraction tier 3 (flows)	1464	0.096	0.218	0.000	1.000
Offshore fraction (tier 2+3 flows)	1464	0.099	0.221	0.000	1.000
Log foreign transactions (flows)	1447	6.600	3.684	-7.775	14.084
Foreign transactions (flows)	1464	22325	98543	0	1308464
Offshoring using end-of-month balances					
Offshore fraction tier 1 (balances)	1464	0.017	0.102	0.000	1.000
Offshore fraction tier 2 (balances)	1464	0.004	0.051	0.000	1.000
Offshore fraction tier 3 (balances)	1464	0.100	0.227	0.000	1.000
Offshore fraction: (tier 2+3 balances)	1464	0.104	0.233	0.000	1.000
Log foreign transactions (balances)	1464	4.014	3.033	-7.000	12.303
Foreign transactions (balances)	1464	1251	10117	0	220443
Tax evasion					
Tax evasion	1436	18.887	1.878	12.661	27.496
Tax evasion (top management)	936	17.585	2.352	10.661	26.471
Log reported incomes	1436	6.516	1.123	3.290	10.511
Log car values	1436	8.372	0.564	7.094	11.826
Log reported incomes (top management)	936	7.526	1.302	3.290	11.002
Log car values (top management)	936	8.599	0.770	7.095	11.684
Year	1464	2003	1.115	2000	2003

Table 2 (cont'd)

Panel B. Bank financial characteristics

Variable	Obs	Mean	Std. Dev.	Min	Max
Return on assets	1464	0.588	1.694	-9.604	7.635
Return on assets (positive obs only)	1441	0.751	1.109	0.023	7.635
Business loans (as % of net assets)	1464	25.097	19.067	0.305	72.906
Household deposits (as % of net assets)	1464	11.972	11.365	0.042	41.600
Size (log net assets)	1464	12.174	1.487	9.956	15.413
Earning assets (as % of net assets)	1464	57.641	22.507	8.508	95.728
Net assets (in 1000s of RUR)	1464	2147807	4387686	85694	2.48E+07

Table 2 (cont'd)

Panel C. Bank long term outcomes (cross-sectional data)

Variable	Obs	Mean	Std. Dev.	Min	Max
Bank survival					
Bank survival to the present	436	0.573	0.495	0	1
Year of bank closure	186	2007	2.526	2004	2013
Survival by 2005	436	0.897	0.305	0	1
Survival by 2006	436	0.819	0.386	0	1
Survival by 2008	436	0.711	0.454	0	1
Money laundering charges					
Year of money laundering charges	58	2007	2.362	2004	2013
No money laundering charges 2005	436	0.977	0.150	0	1
No money laundering charges by 2006	436	0.920	0.272	0	1
No money laundering charges by 2008	436	0.888	0.316	0	1
No money laundering charges ever	436	0.867	0.340	0	1
Accounting fraud charges					
Year of accounting fraud charges	61	200	2.469	2004	2013
No accounting fraud charges by 2005	436	0.968	0.176	0	1
No accounting fraud charges by 2006	436	0.947	0.224	0	1
No accounting fraud charges by 2008	436	0.908	0.289	0	1
No accounting fraud charges ever	436	0.860	0.347	0	1
Criminal charges					
Criminal charges against top management	436	0.076	0.265	0	1

Table 4: Transparency and Offshoring

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
VARIABLES	*Dependent variable: Bank tax evasion*							
Offshore fraction Type I	0.206	-0.107	0.076	-0.242				
	(0.205)	(0.236)	(0.213)	(0.231)				
Offshore fraction Type II	1.480***	2.407***	1.240***	1.444***				
	(0.342)	(0.369)	(0.435)	(0.549)				
Offshore fraction Type III	0.647***	0.570**	0.641***	0.724***				
	(0.241)	(0.253)	(0.222)	(0.232)				
Offshore fraction Type II-III					0.620***	0.648***	0.648***	0.817***
					(0.229)	(0.237)	(0.206)	(0.213)
Log total foreign transactions		0.031		-0.037		0.031		-0.035
		(0.024)		(0.026)		(0.024)		(0.026)
Log net assets		-0.274***		-0.174***		-0.261***		-0.164***
		(0.055)		(0.052)		(0.053)		(0.051)
Constant	18.967***	22.189***	19.044***	21.493***	19.088***	21.963***	19.092***	21.205***
	(0.161)	(0.630)	(0.170)	(0.607)	(0.106)	(0.540)	(0.105)	(0.546)
Observations	1,436	1,198	1,436	1,212	1,436	1,198	1,436	1,212
R-squared	0.017	0.049	0.017	0.052	0.016	0.047	0.017	0.051
Notes	flows	flows	balances	balances	flows	flows	balances	balances

Notes: Dependent variable is tax evasion, which is the opposite of corporate transparency measure from Braguinsky and Mityakov (2013), calculated as the discrepancy between reported earnings and car values of a given bank employees in a given year. Offshoring is measured as a fraction of total annual flows/ending balances through all accounts in offshore countries of a given Russian bank relative to total flows from all foreign accounts of this bank. In specifications (1)-(4) separate offshoring fractions are calculated for offshores zones from groups I, II, and III of Russian Central Bank offshore list. In specifications (5)-(8) we combine countries from offshore groups II and III. When calculating offshoring fraction specifications (1), (2), (5), and (6) use (annual) flows through bank's correspondent accounts, while specifications (3), (4), (7), and (8) use average annual end-of-month balances on those accounts. All specifications are estimated by OLS. Year fixed effects are included but not reported. Robust standard errors are in parentheses. ***, **, And * indicate statistical significance at 1%, 5%, and 10% respectively.

Table 5: Offshoring vs transparency, mean reported incomes, and car values

VARIABLES	(1) Tax evasion *All*	(2) Mean reported incomes *All*	(3) Mean car values *All*	(4) Tax evasion *Top 10%*	(5) Mean reported incomes *Top 10%*	(6) Mean car values *Top 10%*
Offshoring fraction	0.648***	-0.619***	-0.012	1.035***	-0.953***	0.031
	(0.237)	(0.110)	(0.076)	(0.350)	(0.154)	(0.115)
Log transactions through	0.031	-0.019*	0.008	0.034	-0.024	0.005
foreign banks	(0.024)	(0.011)	(0.008)	(0.036)	(0.015)	(0.012)
Log net assets	-0.261***	0.250***	-0.005	-0.284***	0.375***	0.033
	(0.053)	(0.027)	(0.016)	(0.076)	(0.035)	(0.025)
Constant	21.963***	2.899***	8.166***	20.619***	2.406***	7.850***
	(0.540)	(0.281)	(0.162)	(0.754)	(0.363)	(0.245)
Observations	1,198	1,198	1,198	800	800	800
R-squared	0.047	0.278	0.075	0.041	0.340	0.086
Specification	flows	flows	flows	flows	flows	flows

Notes: Dependent variables are as indicated in respective columns. Tax evasion is the negative of corporate transparency measure from Braguinsky and Mityakov (2013), calculated as the discrepancy between reported earnings and car values of a given bank employees in a given year. "Tax evasion top 10%" is tax evasion measured over the top 10 percent (by reported income) of employees. Mean reported incomes, car values (Top 10%) are calculated over all (or 10 percent) employees of a given bank in a given year. Offshoring is measured as a fraction of total annual flows through a accounts in offshore countries of a given Russian bank relative to total flows from all foreign accounts of this bank. Offshore countries are defined as countries from groups 2 and 3 of offshores zones list published by Russian Central Bank. All specifications are estimated by OLS. Year fixed effects are included but not reported. Robust standard errors are in parentheses. ***, **, And * indicate statistical significance at 1%, 5%, and 10% respectively.

Table 6a: return on assets: OLS: FINAL

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
VARIABLES	*Dependent variable: Return on assets (ROA)*							
Offshoring fraction	-0.255**	-0.258**	-0.333***	-0.331***	-0.270**	-0.276**	-0.338***	-0.347***
	(0.111)	(0.116)	(0.111)	(0.116)	(0.125)	(0.128)	(0.126)	(0.129)
Tax evasion					-0.038**	-0.037**	-0.047***	-0.046***
					(0.016)	(0.016)	(0.015)	(0.016)
Log transactions	0.015	0.017	0.009	0.013	0.015	0.017	0.009	0.012
through foreign banks	(0.011)	(0.011)	(0.011)	(0.011)	(0.012)	(0.012)	(0.012)	(0.012)
Business loans		-0.000		0.000		-0.000		0.000
fraction		(0.002)		(0.002)		(0.002)		(0.002)
Deposits fraction		-0.003		-0.003		-0.002		-0.003
		(0.003)		(0.003)		(0.003)		(0.003)
Earning assets		0.002		0.002		0.001		0.002
fraction		(0.002)		(0.002)		(0.002)		(0.002)
Log net assets	0.015	0.002	0.014	-0.004	0.007	-0.001	0.016	0.000
	(0.030)	(0.033)	(0.029)	(0.032)	(0.035)	(0.037)	(0.033)	(0.035)
Constant	0.274	0.350	0.427	0.534	1.104**	1.159**	1.339***	1.431***
	(0.315)	(0.343)	(0.309)	(0.335)	(0.484)	(0.507)	(0.473)	(0.497)
Observations	1,447	1,447	1,424	1,424	1,198	1,198	1,177	1,177
R-squared	0.058	0.060	0.053	0.056	0.062	0.063	0.064	0.066
Sample	All	All	ROA>0	ROA>0	All	All	ROA>0	ROA>0

Notes: Dependent variable is return on assets in percentage points. Offshoring is measured as a fraction of total annual flows through a accounts in offshore countries of a given Russian bank relative to total flows from all foreign accounts of this bank. Offshore countries are defined as countries from groups 2 and 3 of offshores zones list published by Russian Central Bank. Tax evasion is measured from reported incomes and car values of bank employees as defined in Braguinsky and Mityakov (2013). Log volume of transactions with foreign banks is defined as log of total flows through all accounts in foreign countries of a given Russian bank. Business loans fraction, deposits fractions are a fraction of business loans and deposits as a percentage of net assets respectively. Size is log of bank's net assets. Specifications (1), (2), (5), and (6) are estimated on the sample of all Moscow banks observed dealing with foreign banks over the years 2000-2003. Specifications (3), (4), (7), and (8) further restrict the sample to observations with positive return on assets only. All specifications are estimated by OLS. Year fixed effects are included but not reported. Robust standard errors are in parentheses. ***, **, And * indicate statistical significance at 1%, 5%, and 10% respectively.

Table 6b: Return on assets: Arellano-Bond IV. FINAL

	(1)	(2)	(3)	(4)	(9)	(10)	(11)	(12)
VARIABLES	*Dependent variable: Return on assets (ROA)*							
Offshoring fraction	-0.287	-0.341	-0.341*	-0.418*	-0.232	-0.284	-0.265	-0.350
	(0.204)	(0.219)	(0.204)	(0.220)	(0.244)	(0.259)	(0.244)	(0.260)
Tax evasion					-0.063	-0.065	-0.076*	-0.080*
					(0.045)	(0.045)	(0.045)	(0.046)
Log transactions	-0.001	0.012	-0.009	0.006	0.015	0.023	0.006	0.019
through foreign banks	(0.019)	(0.023)	(0.019)	(0.023)	(0.024)	(0.028)	(0.023)	(0.027)
Business loans		-0.004		-0.004		-0.003		-0.004
fraction		(0.005)		(0.005)		(0.005)		(0.005)
Deposits fraction		-0.005		-0.007		-0.004		-0.006
		(0.005)		(0.005)		(0.005)		(0.005)
Earning assets		0.006		0.007*		0.004		0.006
fraction		(0.004)		(0.004)		(0.005)		(0.005)
Log net assets	0.073	0.033	0.091*	0.042	0.029	0.005	0.050	0.008
	(0.049)	(0.068)	(0.049)	(0.068)	(0.060)	(0.081)	(0.059)	(0.080)
Constant	0.046	0.294	-0.130	0.193	1.700	1.903	1.731	2.112*
	(0.534)	(0.664)	(0.538)	(0.674)	(1.153)	(1.207)	(1.151)	(1.208)
Observations	1,011	1,011	977	977	743	743	718	718
Sample	All	All	ROA>0	ROA>0	All	All	ROA>0	ROA>0
Underidentification								
LM stat	83.68	87.98	84.16	85.69	55.04	78.71	54.89	73.51
Weak identification	121.7	27.50	118.0	26.49	43.28	19.92	44.46	18.07

Notes: Dependent variable is return on assets in percentage points. Offshoring is measured as a fraction of total annual flows through a accounts in offshore countries of a given Russian bank relative to total flows from all foreign accounts of this bank. Offshore countries are defined as countries from groups 2 and 3 of offshores zones list published by Russian Central Bank. Tax evasion is measured from reported incomes and car values of bank employees as defined in Braguinsky and Mityakov (2013). Log volume of transactions with foreign banks is defined as log of total flows through all accounts in foreign countries of a given Russian bank. Business loans fraction, deposits fractions are a fraction of business loans and deposits as a percentage of net assets respectively. Size is log of bank's net assets. Specifications (1), (2), (5), and (6) are estimated on the sample of all Moscow banks observed dealing with foreign banks over the years 2000-2003. Specifications (3), (4), (7), and (8) further restrict the sample to observations with positive return on assets only. All specifications are estimated by instrumental variables where all explanatory variables are treated as endogenous with one year lags used as instruments. Year fixed effects are included but not reported. Robust standard errors are in parentheses. ***, **, And * indicate statistical significance at 1%, 5%, and 10% respectively.

Table 6c: Return on assets: tax office dummies IVs. FINAL

	(5)	(6)	(7)	(8)	(1)	(2)	(3)	(4)
VARIABLES	*Dependent variable: return on assets (ROA)*							
Offshoring fraction	-0.734	-0.851	-0.832	-0.992	-0.225	-0.286	-0.133	-0.270
	(0.788)	(0.880)	(0.745)	(0.829)	(0.805)	(0.879)	(0.744)	(0.820)
Tax evasion					-0.140*	-0.141*	-0.169**	-0.168**
					(0.082)	(0.083)	(0.082)	(0.082)
Log transactions through	0.022	0.026	0.017	0.022	0.016	0.017	0.007	0.010
foreign banks	(0.018)	(0.019)	(0.017)	(0.017)	(0.019)	(0.020)	(0.017)	(0.018)
Business loans		-0.001		-0.001		-0.001		-0.000
fraction		(0.003)		(0.003)		(0.003)		(0.003)
Deposits fraction		-0.003		-0.004		-0.001		-0.003
		(0.003)		(0.003)		(0.004)		(0.004)
Earning assets		0.001		0.002		0.000		0.001
fraction		(0.002)		(0.002)		(0.002)		(0.002)
Log net assets	-0.004	-0.013	-0.004	-0.019	-0.009	-0.011	-0.003	-0.013
	(0.038)	(0.038)	(0.035)	(0.035)	(0.043)	(0.043)	(0.039)	(0.039)
Constant	0.912**	1.023**	0.953**	1.106***	3.625**	3.696**	4.145**	4.254**
	(0.439)	(0.460)	(0.410)	(0.427)	(1.706)	(1.703)	(1.677)	(1.662)
Observations	1,394	1,394	1,340	1,340	1,167	1,167	1,123	1,123
Sample	All	All	ROA>0	ROA>0	All	All	ROA>0	ROA>0
Underidentification LM stat	45.82	38.63	43.01	39.13	36.91	33.04	35.44	30.87
Weak identification	7.704	5.981	9.375	6.080	13.46	7.959	12.94	8.092

Notes: Dependent variable is return on assets in percentage points. Offshoring is measured as a fraction of total annual flows through a accounts in offshore countries of a given Russian bank relative to total flows from all foreign accounts of this bank. Offshore countries are defined as countries from groups 2 and 3 of offshores zones list published by Russian Central Bank. Tax evasion is measured from reported incomes and car values of bank employees as defined in Braguinsky and Mityakov (2013). Log volume of transactions with foreign banks is defined as log of total flows through all accounts in foreign countries of a given Russian bank. Business loans fraction, deposits fractions are a fraction of business loans and deposits as a percentage of net assets respectively. Size is log of bank's net assets. Specifications (1), (2), (5), and (6) are estimated on the sample of all Moscow banks observed dealing with foreign banks over the years 2000-2003. Specifications (3), (4), (7), and (8) further restrict the sample to observations with positive return on assets only. All specifications are estimated by instrumental variables. Tax office dummies to which a given bank reports are used as instruments for offshoring and tax evasion. Year fixed effects are included but not reported. Robust standard errors (in parentheses) are clustered at the bank level. ***, **, And * indicate statistical significance at 1%, 5%, and 10% respectively.

Table 7: Offshoring, tax evasion, and bank business model. FINAL

	(1)	(4)	(7)	(2)	(5)	(8)	(3)	(6)	(9)
	Panel A: OLS regressions								
VARIABLES	*Business loans*			*Deposits*			*Earning assets*		
Offshoring fraction	-9.179***		-8.215***	-5.755***		-5.236***	-9.864***		-5.151
	(2.459)		(2.677)	(1.751)		(1.910)	(3.462)		(3.863)
Tax evasion		-0.795***	-0.539		-0.133	-0.106		-1.034**	-0.845**
		(0.285)	(0.336)		(0.230)	(0.245)		(0.404)	(0.426)
Observations	1,447	1,436	1,198	1,447	1,436	1,198	1,447	1,436	1,198
R-squared	0.259	0.223	0.244	0.041	0.016	0.040	0.135	0.105	0.145
	Panel B: Arellano Bond IV regressions								
VARIABLES	*Business loans*			*Deposits*			*Earning assets*		
Offshoring fraction	-15.349***		-11.855**	-10.197***		-7.673**	-10.708**		-4.341
	(4.065)		(4.921)	(2.811)		(3.483)	(4.972)		(6.212)
Tax evasion		-1.444**	-0.884		-0.895*	-0.972*		-1.478*	-1.312
		(0.669)	(0.864)		(0.478)	(0.571)		(0.850)	(0.965)
Observations	1,038	930	760	1,038	930	760	1,038	930	760
Underidentification LM stat	59.70	71.32	56.95	59.70	71.32	56.95	59.70	71.32	56.95
Weak identification	383.0	226.0	87.61	383.0	226.0	87.61	383.0	226.0	87.61
	Panel C: Tax office IV regressions								
VARIABLES	*Business loans*			*Deposits*			*Earning assets*		
Offshoring fraction	-41.886**		-35.096**	-21.968**		-25.706**	-19.689		-0.621
	(17.997)		(17.696)	(10.796)		(10.736)	(18.765)		(18.958)
Tax evasion		-2.484*	-0.401		-0.697	0.604		-2.450	-2.384
		(1.320)	(1.625)		(0.956)	(1.139)		(1.917)	(1.962)
Observations	1,394	1,389	1,167	1,394	1,389	1,167	1,394	1,389	1,167
Underidentification LM stat	45.82	51.39	36.91	45.82	51.39	36.91	45.82	51.39	36.91
Weak identification	13.46	471.5	7.704	13.46	471.5	7.704	13.46	471.5	7.704

Notes: Dependent variables are business loans, deposits, and earnings assets as a fraction of net assets. Offshoring is measured as a fraction of total annual flows through a accounts in offshore countries of a given Russian bank relative to total flows from all foreign accounts of this bank. Offshore countries are defined as countries from groups 2 and 3 of offshores zones list published by Russian Central Bank. Tax evasion is measured from reported incomes and car values of bank employees as defined in Braguinsky and Mityakov (2013). Bank size (log net assets), log volume of transactions with foreign banks, and year fixed effects are included but not reported. Panel A specifications are estimated by OLS. In Panels B and C offshoring and tax evasion are treated as endogenous. Panel B uses one year lags used as instruments. Panel C specifications use as instruments dummies for a tax office, to which a given bank reports. Robust standard errors (in parentheses) are clustered at the bank level. ***, **, And * indicate statistical significance at 1%, 5%, and 10% respectively.

Table 8: Offshoring, transparency vs bank survival, money laundering and accounting fraud charges

VARIABLES	(2) Survived by 2013	(3) Money Laundering charges	(4) Accounting fraud charges
		Offshoring only	
Mean offshoring fraction: 2000-2003	-0.471**	0.246**	0.202
	(0.229)	(0.123)	(0.145)
		Transparency only	
Mean tax evasion: 2000-2003	-0.027*	0.011	0.015
	(0.015)	(0.009)	(0.010)
		Transparency and offshoring	
Mean offshoring fraction: 2000-2003	-0.436*	0.231*	0.185
	(0.230)	(0.122)	(0.146)
Mean tax evasion: 2000-2003	-0.025	0.010	0.012
	(0.016)	(0.010)	(0.011)

Note: Number of observations is 436. Survived2013 is a dummy variable indicating whether the bank has survived until 2013. Money laundering is a dummy variable for whether money laundering charges were brought against the bank by 2013, Fraud is a dummy variable for whether accounting fraud charges were brought against the bank. Mean offshoring is measured as a fraction of total annual flows through a accounts in offshore countries of a given Russian bank relative to total flows from all foreign accounts of this bank over the period 2000-2003. Offshore countries are defined as countries from groups 2 and 3 of offshores zones list published by Russian Central Bank. Mean tax evasion is measured from reported incomes and car values of bank employees as defined in Braguinsky and Mityakov (2013) averaged over 2000-2003. Mean Bank size (average log net assets over 2000-2003), log volume of transactions with foreign banks (averaged over 2000-2003) are included but not reported. All specifications are estimated by Probit. Marginal effects are reported. ***, **, And * indicate statistical significance at 1%, 5%, and 10% respectively.

Table 9: Bank survival, money laundering, and fraud charges: Effect over different time periods. FINAL

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Panel A: Bank is present at least until year:							
	2005	*2005*	*2006*	*2006*	*2008*	*2008*	*all years*	*all years*
Mean offshoring fraction	-0.169	-0.109	-0.406***	-0.294*	-0.360*	-0.230	-0.436*	-0.317
	(0.121)	(0.109)	(0.157)	(0.157)	(0.193)	(0.198)	(0.230)	(0.235)
Mean tax evasion	0.010	0.007	0.001	0.000	-0.007	-0.005	-0.025	-0.024
	(0.009)	(0.007)	(0.012)	(0.011)	(0.014)	(0.014)	(0.016)	(0.016)
Profitability and business model	N	Y	N	Y	N	Y	N	Y
	Panel B: Money laundering charges brought by year:							
	2005	*2005*	*2006*	*2006*	*2008*	*2008*	*2013*	*2013*
Mean offshoring fraction	0.012	0.007	0.212**	0.172*	0.244**	0.188*	0.231*	0.179
	(0.035)	(0.031)	(0.094)	(0.095)	(0.103)	(0.103)	(0.122)	(0.125)
Mean tax evasion	-0.004	-0.003	-0.001	-0.001	0.004	0.004	0.010	0.009
	(0.003)	(0.002)	(0.008)	(0.008)	(0.008)	(0.008)	(0.010)	(0.009)
Profitability and business model	N	Y	N	Y	N	Y	N	Y
	Panel C: Accounting fraud charges brought against by year:							
	2005	*2005*	*2006*	*2006*	*2008*	*2008*	*2013*	*2013*
Mean offshoring fraction	0.041	0.051	0.081	0.060	0.066	0.081	0.185	0.189
	(0.073)	(0.052)	(0.090)	(0.065)	(0.126)	(0.119)	(0.146)	(0.144)
Mean tax evasion	0.000	0.001	-0.003	-0.001	0.002	0.003	0.012	0.013
	(0.004)	(0.003)	(0.005)	(0.004)	(0.008)	(0.008)	(0.011)	(0.011)
Profitability and business model	N	Y	N	Y	N	Y	N	Y

Notes Dependent variables in Panel A are dummy variables for whether a bank has survived at least until a given year. Dependent variables in Panel B (C) are dummy variables indicating whether money laundering (accounting fraud) charges were brought against a bank by a given year. Mean bank size (measured as average log of net assets over the years 2000-2003), is included but not reported. Additionally specifications (2), (4), (6), and (8) contain controls for bank profitability and business model, namely mean return on assets over 2000-2003, mean percentage of business loans and household deposits as a fraction of net assets are included. All specifications are estimated by probit, marginal effects are reported. ***, **, And * indicate statistical significance at 1%, 5%, and 10% respectively.

Table 10: Offshoring and criminal investigation against top manager.

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	*Dependent variable: Criminal Investigation initiated against top manager by 2013*					
Mean Offshoring	0.214**	0.217**	0.227**	0.231***	0.230***	0.238***
	(0.090)	(0.096)	(0.097)	(0.084)	(0.087)	(0.087)
Mean Log foreign transactions		-0.001	-0.001		-0.001	-0.001
		(0.006)	(0.006)		(0.005)	(0.006)
Mean Business loans fraction			-0.000			-0.000
			(0.001)			(0.001)
Mean Deposits fraction			0.001			0.001
			(0.001)			(0.001)
Mean Log net assets	-0.022**	-0.019	-0.018	-0.024***	-0.022*	-0.020
	(0.009)	(0.012)	(0.016)	(0.009)	(0.012)	(0.016)
Observations	436	413	413	436	413	413
Notes	flows	flows	flows	balance	balance	balance

Notes: Dependent variable is a dummy variables equal to one if a top manager of a bank had criminal charges brought against him, as taken from Central Bank black list. Offshoring is measured as a fraction of total annual flows through a accounts in offshore countries of a given Russian bank relative to total flows from all foreign accounts of this bank. Offshore countries are defined as countries from groups 2 and 3 of offshores zones list published by Russian Central Bank. Log volume of transactions with foreign banks is defined as log of total flows through all accounts in foreign countries of a given Russian bank. Business loans fraction, deposits fractions are a fraction of business loans and deposits as a percentage of net assets respectively. Size is log of bank's net assets. All specifications are estimated by probit, marginal effects are reported. Robust standard errors are reported in parentheses. ***, **, And * indicate statistical significance at 1%, 5%, and 10% respectively.

Table: Tax evasion of top management

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
					Panel A: OLS					
	ROA		*ROA+*		*Business loans*		*Deposits*		*Earning assets*	
Tax evasion:	-0.025*	-0.018	-0.029**	-0.023*	-0.699***	-0.520*	-0.535**	-0.548**	-0.890***	-0.828**
top management	(0.014)	(0.014)	(0.014)	(0.014)	(0.263)	(0.287)	(0.208)	(0.222)	(0.333)	(0.326)
Offshoring fraction		-0.351***		-0.419***		-9.343***		-5.649***		-5.672
		(0.121)		(0.122)		(2.783)		(2.025)		(3.746)
Observations	936	800	901	768	936	800	936	800	936	800
R-squared	0.044	0.064	0.041	0.069	0.257	0.277	0.028	0.053	0.133	0.192
					Panel B: Arellano-Bond IV					
	ROA		*ROA+*		*Business loans*		*Deposits*		*Earning assets*	
Tax evasion:	-0.039	-0.018	-0.041	-0.018	-1.328*	-0.551	-1.511***	-1.270*	-1.547*	-0.909
top management	(0.041)	(0.043)	(0.042)	(0.043)	(0.691)	(0.805)	(0.568)	(0.669)	(0.868)	(0.944)
Offshoring fraction		-0.490		-0.519*		-16.239***		-12.106***		-8.358
		(0.307)		(0.307)		(6.022)		(4.382)		(6.610)
Observations	495	413	481	400	495	413	495	413	495	413
Weak Identification	56.14	38.11	54.54	37.32	56.14	38.11	56.14	38.11	56.14	38.11
					Panel C: Tax office dummies IV					
	ROA		*ROA+*		*Business loans*		*Deposits*		*Earning assets*	
Tax evasion:	-0.065	0.010	-0.057	0.001	-2.972***	-1.891	-2.480***	-1.912**	-2.775**	-2.403*
top management	(0.050)	(0.048)	(0.049)	(0.046)	(1.087)	(1.233)	(0.848)	(0.853)	(1.270)	(1.267)
Offshoring fraction		-1.020		-0.859		-42.874**		-14.547		-10.425
		(0.757)		(0.701)		(18.275)		(12.459)		(19.391)
Observations	901	777	869	747	901	777	901	777	901	777
Weak Identification	57.67	28.32	57.73	27.91	57.67	28.32	57.67	28.32	57.67	28.32

Notes: Dependent variables are return on assets (ROA+ restricts the sample to non negative ROA), business loans, deposits, and earnings assets as a fraction of net assets. Offshoring is measured as a fraction of total annual flows through accounts in offshore countries of a given Russian bank relative to total flows from all foreign accounts of this bank. Offshore countries are defined as countries from groups 2 and 3 of offshores zones list published by Russian Central Bank. Tax evasion is measured from reported incomes and car values of top 10 percent of bank employees, as defined in Braguinsky and Mityakov (2013). Bank size (log net assets), log volume of transactions with foreign banks, and year fixed effects are included but not reported. Panel A specifications are estimated by OLS. In Panels B and C offshoring and tax evasion are treated as endogenous. Panel B uses one year lags used as instruments. Panel C specifications use as instruments dummies for a tax office, to which a given bank reports. Robust standard errors (in parentheses) are clustered at the bank level. ***, **, And * indicate statistical significance at 1%, 5%, and 10% respectively.

Appendix

A1. Subsamples:

Table A1.2. No winsorizing

	(1)	(3)	(4)	(6)	(7)	(9)	(10)	(12)	(13)	(15)
					Panel A: OLS					
VARIABLES	*ROA*		*ROA+*		*Business loans*		*HH deposits*		*Earning assets*	
Offshoring	-0.053	-0.275	-0.596***	-0.583***	-9.225***	-8.130***	-6.364***	-5.925***	-10.193***	-5.343
	(0.403)	(0.512)	(0.159)	(0.175)	(2.506)	(2.777)	(1.854)	(2.019)	(3.436)	(3.853)
Tax evasion		0.230		-0.067**		-0.592		-0.029		-0.969**
		(0.223)		(0.026)		(0.362)		(0.282)		(0.468)
	[1,447,	[1,198,	[1,369,	[1,136,	[1,447,	[1,198,	[1,447,	[1,198,	[1,447,	[1,198,
Observations	0.018]	0.023]	0.027]	0.037]	0.241]	0.225]	0.039]	0.042]	0.139]	0.151]
					Panel B: Arellano-Bond instruments					
VARIABLES	*ROA*		*ROA+*		*Business loans*		*HH deposits*		*Earning assets*	
Offshoring	0.132	-0.994	-0.677*	-0.724	-15.081***	-11.671**	-10.832***	-7.948**	-10.724**	-4.434
	(0.654)	(1.336)	(0.357)	(0.713)	(4.044)	(5.005)	(3.026)	(3.664)	(4.969)	(6.328)
Tax evasion		0.639		0.011		-1.043		-1.130*		-1.601
		(0.594)		(0.212)		(0.929)		(0.631)		(1.077)
	[1,038,				[1,038,		[1,038,		[1,038,	
Observations	59.54]	[760, 56.69]	[988, 59.95]	[720, 54.88]	59.54]	[760, 56.69]	59.54]	[760, 56.69]	59.54]	[760, 56.69]
					Panel C: Tax office dummies as instruments					
VARIABLES	*ROA*		*ROA+*		*Business loans*		*HH deposits*		*Earning assets*	
Offshoring	-19.713	-22.136	-1.718	-0.664	-32.759*	-27.424	-26.118**	-33.407***	-1.799	18.097
	(18.209)	(18.967)	(1.342)	(1.450)	(18.012)	(17.784)	(12.727)	(12.861)	(23.679)	(24.160)
Tax evasion		0.089		-0.359**		-0.169		1.243		-2.836
		(1.006)		(0.161)		(1.680)		(1.317)		(2.199)
	[1,394,	[1,167,	[1,324,	[1,107,	[1,394,	[1,167,	[1,394,	[1,167,	[1,394,	[1,167,
Observations	44.00]	36.41]	41.72]	32.01]	44.00]	36.41]	44.00]	36.41]	44.00]	36.41]

Table A.1.4: log's

	(1)	(3)	(7)	(9)	(10)	(12)	(13)	(15)
					Panel A: OLS			
VARIABLES	*ROA*		*Business loans*		*HH deposits*		*Earning assets*	
Offshoring	-0.757***	-0.795***	-0.493***	-0.442**	-0.874***	-0.744**	-0.374**	-0.205
	(0.214)	(0.238)	(0.165)	(0.175)	(0.314)	(0.329)	(0.151)	(0.160)
Tax evasion		-0.072**		-0.043*		-0.005		-0.035*
		(0.029)		(0.024)		(0.034)		(0.019)
Observations	[1,340, 0.064]	[1,113, 0.081]	[1,351, 0.154]	[1,136, 0.152]	[1,404, 0.027]	[1,168, 0.025]	[1,443, 0.072]	[1,194, 0.088]
					Panel B: Arellano-Bond IV			
VARIABLES	*ROA*		*Business loans*		*HH deposits*		*Earning assets*	
Offshoring	-0.856**	-0.829**	-0.786***	-0.498*	-1.331***	-1.014*	-0.427	0.010
	(0.341)	(0.408)	(0.252)	(0.299)	(0.455)	(0.532)	(0.278)	(0.231)
Tax evasion		-0.088		-0.048		-0.119		-0.050
		(0.071)		(0.063)		(0.079)		(0.044)
Observations	[977, 59.81]	[712, 53.85]	[985, 58.97]	[732, 58.89]	[1,017, 61.14]	[750, 53.43]	[1,036, 59.54]	[760, 56.69]
					Panel C: Tax office dummies IV			
VARIABLES	*ROA*		*Business loans*		*HH deposits*		*Earning assets*	
Offshoring	-1.872	-0.616	-1.673	-1.048	-3.052*	-3.078*	-0.960	-0.273
	(1.277)	(1.324)	(1.026)	(1.027)	(1.819)	(1.794)	(0.797)	(0.721)
Tax evasion		-0.296**		-0.038		-0.009		-0.076
		(0.148)		(0.092)		(0.168)		(0.068)
Observations	[1,300, 41.76]	[1,085, 29.25]	[1,309, 41.12]	[1,107, 35.23]	[1,354, 41.55]	[1,138, 38.00]	[1,391, 44.29]	[1,164, 36.45]

Appendix A2. List of offshore zones classification issued by the Central Bank of Russia on August 7, 2003.

Tier 1: "Civilized" offshores (no additional loss reserve requirement)

1.1. Some areas of UK
- Guernsey, Jersey, Sark
- Isle of Man

1.2. Ireland (Dublin, Shannon)
1.3. Cyprus
1.4. Matla
1.5. China (Hong Kong)
1.6. Luxembrough
1.7. Switzerland
1.8. Singapore

Tier 2: "Grey" offshores (50% loss reserve requirement on all transactions)

2.1. Antigua and Barbuda
2.2. Bahamas
2.3. Barbados
2.4. Bahrain
2.5. Belize
2.6. Brunei-Darussalam
2.7. Dependent territories of UK
- -Anguilla
- - Bermudas
- -British Virgin Islands
- -Montserrat
- - Gibraltar
- -Turks and Caicos islands
- - Cayman islands

2.8. Grenada
2.9. Djibouti
2.10. Dominica
2.11. China (Macao)
2.12. Costa-Rica
2.13. Lebanon
2.14 Mauritius
2.15. Malasia (island Labuan)
2.16. Maldives
2.17. Netherlands Antilles
2.18 Monaco
2.19. New Zealand
- - Cook islands

- Niue

2.20. UAE (Dubai)
2.21. Panama
2.22. Portugal (Madeira island)
2.23. Western Samoa
2.24. Seychelles
2.25. St Kitts and Nevis
2.26. St Lucia
2.27. St Vincent and the Grenadines
2.28. USA
- US virgin islands
- Puerto Rico
- state of Wyoming
- state of Delaware

2.29. Tonga
2.30. Sri Lanka
2.31. Palau

Tier 3: "Black" offshores (100% loss reserve requirement on all transactions)

3.1. Andorra
3.2. Comoros
- Anjouan island

3.3. Aruba
3.4 Vanuatu
3.5. Liberia
3.6. Liechtenstein
3.7. Marshall islands
3.8. Nauru
3.9. Serbia and Montenegro